GAIL FARBER, Director

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

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REFER TO FILE

December 20, 2016

ADOPTED
BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES
40 December 20, 2016
LORI GLASGOW
EXECUTIVE OFFICER

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

CONSTRUCTION-RELATED CONTRACT
PUBLIC BUILDINGS CORE SERVICES AREA
HARBOR-UCLA MEDICAL CENTER MASTER PLAN PROJECT
CERTIFY FINAL ENVIRONMENTAL IMPACT REPORT AND
ADOPT FINDINGS AND THE STATEMENT OF OVERRIDING CONSIDERATIONS;
ADOPT THE MITIGATION MONITORING AND REPORTING PROGRAM;
APPROVE THE MASTER PLAN AND MASTER PLAN PROJECT; AND
AUTHORIZE AWARD OF CONSULTANT AGREEMENT;
SUPERVISORIAL DISTRICT 2
(3 VOTES)

SUBJECT

Approval of the recommended actions will certify the final Environmental Impact Report and adopt the related environmental documentation; approve the Harbor-UCLA Medical Center Campus Master Plan and the Campus Master Plan project; authorize the Chief Deputy Director of Public Works or his designee to execute easements, permits, and utility agreements; and execute a consultant services agreement for the medical planning services required to complete the Harbor-UCLA Medical Center Pre-Planning project.

IT IS RECOMMENDED THAT THE BOARD:

1. Certify that the final Environmental Impact Report for the Harbor-UCLA Medical Center Campus Master Plan has been completed in accordance with the California Environmental Quality Act and reflects the independent judgment and analysis of the County of Los Angeles; find that the Board has reviewed and considered the information contained in the Final Environmental Impact Report, including comments received during the public review period, prior to approving the proposed

project; adopt the Mitigation Monitoring and Reporting Program, finding that the Mitigation Monitoring and Reporting Program is adequately designed to ensure compliance with the mitigation measures during project implementation; and determine that the significant adverse effects of the project have either been reduced to an acceptable level or are outweighed by the specific considerations of the project as outlined in the Findings of Fact and Statement of Overriding Considerations, which findings and statement are adopted and incorporated by reference.

2. Approve the Harbor-UCLA Medical Campus Master Plan dated June 2012 as a foundational policy document to serve as a guideline for future development of facilities and services to implement the Harbor-UCLA Campus Master Plan project.

3. Approve the Harbor-UCLA Campus Master Plan project as described in the Board letter and in the Final Environmental Impact Report.

4. Delegate authority to the Chief Deputy Director of Public Works or his designee to execute any easements, permits, and utility connection agreements necessary for the completion of the project.

5. Award and authorize the Chief Deputy Director of Public Works or his designee to execute an agreement with Jensen Partners, the best qualified proposer, to provide Medical Planning services for a not-to-exceed amount of $500,000. The term of the consultant services agreement shall commence on the date of the full execution of the contract.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Approval of the recommended actions will certify the final Environmental Impact Report (EIR); adopt the related environmental documentation; approve the Harbor-UCLA (H-UCLA) Medical Center Campus Master Plan and the Campus Master Plan project; and authorize the Chief Deputy Director of Public Works or his designee to execute easements, permits, utility agreements, and execute a consultant services agreement for medical planning required to complete the H-UCLA Medical Center Pre-Planning project.

Background

In November 2010, the Board awarded a consultant services agreement to Perkins + Will for the development of the H-UCLA Medical Center Campus Master Plan. In September 2013, the Board approved the award and execution of a consultant services agreement to PCR Services Corporation to prepare an EIR for the proposed campus master plan project to redevelop the H-UCLA campus.

In April 2015, the Board approved a motion to include the creation of up to 250,000 square feet of building(s) in the Bioscience Tech Park as part of the environmental review process for the proposed redevelopment of the H-UCLA campus and a supplemental agreement was executed with PCR Services in June 2015.

Harbor-UCLA Medical Center Campus Master Plan

The Master Plan process began in November 2010 and was completed in June 2012 after meetings with stakeholders, community leaders, residents, and businesses surrounding the H-UCLA Medical Center.

The Master Plan (Enclosure E) is to be used as a foundational policy document to provide technical and procedural guidelines for future land uses and the integration of sustainable design technologies into building and overall site plans that will extend the useful life of the campus.

H-UCLA Campus Master Plan Project

The project comprises a new hospital tower to replace the acute care functions at the existing hospital; new and renovated outpatient care facilities; other services and facilities including administrative offices, warehouse and storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop, etc.); long-term build out of the LA BioMed Campus up to 225,000 square feet; a new Bioscience Tech Park building(s) up to 250,000 square feet; and Medical Center Campus support facilities including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements. The proposed project would add an additional 1,178,071 square feet to the existing 1,279,284 square feet of existing developed floor area, for a total at build out of 2,457,355 square feet of developed floor area on the H-UCLA campus. The number of licensed in-patient hospital beds would decrease slightly from 453 to 446. New building heights across much of the project site would generally be four stories, with the tallest on-site building being the existing eight-story hospital tower and a second new larger eight-story hospital tower to be developed.

Campuswide parking would increase from 3,186 to 4,240 spaces, including the spaces in the Bioscience Tech Park and in the off-site parking lot, due largely to the replacement of several on-site surface parking lots with three- to five-level parking structures.

The project proposes to locate related uses in proximity to one another connected by a network of walkways and landscaped areas. The most publicly accessible zones, including commercial and community-oriented services, would be located along the northern edge of the Medical Center Campus fronting on Carson Street with staff and support services located in the southern half of the Medical Center Campus. The new hospital tower is intended to be the tallest, most visible building on the Medical Center Campus, signaling its location to visitors and identifying the H-UCLA Medical Center Campus to the community. The LA BioMed Campus would continue to occupy the southern-central part of the Medical Center Campus fronting on 220th Street. The Children's Institute, Inc., Burton E. Green Campus would remain in the northwestern corner of the Medical Center Campus at the intersection of Carson Street and Normandie Avenue, but the remainder of the western end of the Medical Center Campus would be retained for the proposed Bioscience Tech Park.

Staff entries and parking would be located in the southeastern corner of the Medical Center Campus, while access for the public would be provided on Carson Street along the northern perimeter. Vehicular access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes on the Medical Center Campus between the main parking areas and the new hospital tower and outpatient buildings. Circular pick-up/drop-off loading zones would be provided at the main entrances to each of the new hospital tower and outpatient buildings. The project would provide sufficient parking to meet or exceed the County's minimum parking code requirement. Buildout of the project is anticipated to take approximately 15 years.

Easements, Permits, and Utility Connection Agreements

In order to implement the project, the County will need to execute easement agreements with various utilities providers. The easement agreements grant access to utility companies to install and repair utility lines on the H-UCLA Medical Center Campus and the agreements are in the best interest of the County.

Consultant Services for H-UCLA Medical Center Pre-Planning

On January 13, 2015, the Board established the H-UCLA Medical Center Campus Pre Planning project, Capital Project No. 67950, to provide pre-planning services to plan and develop the H-UCLA Medical Center Master Plan project.

On March 15, 2016, the Board approved a project budget of $19.9 million to complete the H-UCLA Medical Center Pre Planning project and authorized the Department of Public Works to use various consultant services to complete the pre-planning activities, including site investigations, cost estimating, and other activities.

Public Works has completed the existing underground utility surveying and mapping; the scoping documents for the Hospital Support Services and Mental Health buildings and the parking structure; the exterior design guidelines; the conceptual studies for the central plant, information technology building, and main utility corridor; geotechnical reports and hazardous material survey for the upcoming phase of work; submitted an application to Southern California Edison for the planning and design of a new 66 kVA electrical transformer service; and coordinated with County Sanitation Districts to rehabilitate the main sewer trunk line that will eventually service the future campus master plan development.

Public Works has completed solicitations for the medical planner consultant. We are currently soliciting proposals for the campus architect/engineer, hazardous materials testing, project management and construction management (PM/CM), and project controls consultants. We recommend the Board authorize Public Works to execute an agreement with Jensen Partners for Medical Planning services for a $500,000 not-to-exceed amount.

We will be returning to the Board in the first quarter of 2017 to seek approval to award contracts for the campus architect/engineer, hazardous materials testing, PM/CM, and document control consultants. These consultants are necessary to properly plan the work. We also anticipate returning to the Board in the third quarter of 2017 with the overall program cost estimates and project schedules.

Implementation of Strategic Plan Goals

The approval of the recommended actions will support the Countywide Strategic Plan provisions of Operational Effectiveness/Fiscal Sustainability (Goal 1) by maximizing the effectiveness of processes and operations and support timely delivery of customer–oriented and efficient public services. It will also ensure Community Support and Responsiveness (Goal 2) by strengthening and enhancing the County's capacity to sustain essential County services in a proactive and responsive manner. Lastly, it will support the Countywide Strategic Plan by providing Integrated Services Delivery (Goal 3) by maximizing opportunities to improve client and community outcomes, improving the public healthcare infrastructure, providing high standards of healthcare to the residents of the County, and leveraging resources through the continuous integration of health, community, and public services.

FISCAL IMPACT/FINANCING

On March 15, 2016, the Board approved $19.9 million for the H-UCLA Medical Center Master Plan Pre-Planning activities that included architectural engineering, medical planning, hazardous material testing, and PM/CM services.

Approval of this action will not result in an increase in the previously approved budget. Upon completion of pre-planning activities, we will return to the Board to establish specific capital projects and approve budgets under the project.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

A standard consultant contract, in a form previously approved by County Counsel, will be used for the consultant services agreement to be executed. The consultant services agreement will contain terms and conditions in compliance with the Chief Executive Office and the Board's requirements. The consultant services agreements will contain terms and conditions in compliance with the Board's ordinances, policies, and programs. The agreement will also include a provision requiring the consultant firm to track subcontractor's utilization of Local Small Business Enterprise, Disabled Veterans Business Enterprise, and Social Enterprise businesses.

ENVIRONMENTAL DOCUMENTATION

Pursuant to the California Environmental Quality Act (CEQA), the potential environmental effects of the project have been analyzed in a draft EIR and circulated for public review and comment. A final EIR (Enclosure A) has subsequently been prepared that includes the draft EIR, the comments received, responses to the comments, and the Mitigation Monitoring and Reporting Program (MMRP) (Enclosure B) for the project. The final EIR is now ready for certification. The Environmental Findings of Fact and Statement of Overriding Considerations (SOC) (Enclosure C) are also provided.

Project EIR Public Review Process

An Initial Study was prepared for the project in compliance with CEQA. The Initial Study determined that an EIR would be required. It concluded that the project has the potential for significant impact on the environment in the following areas: aesthetics, air quality, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, geology and soils, recreation, population and housing, public services, utilities and service systems, land use and planning, noise, and transportation and traffic.

The Initial Study also found that the project would have no or less than significant impact on the environment in the following areas: agriculture and forestry resources, biological resources, cultural resources, and mineral resources. Further evaluation in these areas in an EIR was not found to be warranted.

On November 3, 2014, the County distributed a Notice of Preparation (NOP) for the scoping period for a draft EIR to the State Clearinghouse and to applicable Federal, State, regional, and local government agencies and interested parties. The County held the public scoping meeting on November 12, 2014, at the H-UCLA Medical Center. No issues were raised at the meeting. A total of eight agencies, in addition to the State Clearinghouse, and four interested parties submitted comments in response to the NOP and Initial Study. No known areas of controversy were identified.

All comments related to environmental issues received during the public review and scoping meeting were considered in the preparation of the draft EIR.

On April 28, 2015, the Board directed Public Works to include a 250,000-square-foot Bioscience Tech Park in the project scope, another NOP for a new scoping period was distributed to the State Clearinghouse on June 29, 2015. A NOP was published in the Daily Breeze and advertised the public scoping meeting that was held on July 15, 2015, at the medical center. No issues were raised at the meeting. A total of four agencies submitted comments. No known areas of controversy were identified.

The draft EIR was completed and distributed to the State Clearinghouse and other various agencies and organizations on August 17, 2016, for a 45-day public review period that ended on October 3, 2016; a Notice of Availability for the draft EIR was mailed directly to approximately 350 individuals and 37 public agencies as interested parties; and was published in the Daily Breeze and LA Opinion, pursuant to Public Resources Code Section 21092 and posted pursuant to Section 21092.3. In addition, a copy of the draft EIR and technical appendices were made available for viewing on the internet and seven surrounding libraries. A total of nine letters of comment were received in response to the draft EIR, one response was received from the public and eight from public agencies. The most frequently raised concern in the comments received by the County was traffic impacts. The environmental issues and concerns raised through the CEQA process are addressed in detail in the final EIR.

Responses to public agencies that submitted letters were sent pursuant to Public Resources Code Section 21092.5.

Final Environmental Impact Report

The final EIR consists of the draft EIR dated August 17, 2016, including technical appendices and public comment letters and responses. Except for unavoidable impacts related to direct and cumulative construction and operation noise, transportation, and traffic, all identified significant environmental effects of the project can be avoided or reduced to a level of insignificance through the implementation of the mitigation measures identified in the MMRP that addresses the following environmental areas: aesthetics, air quality, biological resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, public services, and solid waste. As stated in the final EIR and the Findings of Fact and SOC, the proposed H-UCLA Master Plan will result in unavoidable significant impacts to direct and cumulative construction and operation noise, transportation, and traffic, but such impacts have been reduced to the extent feasible.

A reasonable range of alternatives to the project was evaluated in the final EIR. The project is recommended as the preferred alternative because none of the alternatives meet the project objectives to the same degree and no feasible alternative will eliminate the significant unavoidable impacts remaining after the incorporation of required mitigation measures.

Consequently, in accordance with Section 15093 of the State CEQA Guidelines, a SOC has been prepared to substantiate the County's decision to accept these unavoidable adverse environmental effects on the grounds that they are outweighed by the benefits afforded by the project. The SOC details the overriding benefits of the project, including but not limited to:

1. Compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill 1953) to maintain critical trauma services in the South Bay service region of the County.

2. Implement the County's strategy for integrated health care delivery to respond to the Affordable Care Act of 2010, and provide community-based, patient-centered outpatient services.

3. Meet the current and projected health care needs in the South Bay service region.

4. Provide for a Bioscience Tech Park and LA BioMed facilities.

5. Encourage a vibrant, mixed-use setting that supports the continuing H-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.

6. Optimize use of public land and buildings and maintain flexibility to respond to future changes in medical care and technology.

7. Develop the campus to ensure environmental quality, social equity, and economic opportunity for future generations by implementing responsible, sustainable, site and building design.

An MMRP consistent with the conclusions and recommendations of the final EIR has been prepared. The MMRP identifies in detail the manner in which compliance with the measures adopted to mitigate or avoid potential adverse impacts of the project to the environment will be ensured and its requirements have been incorporated into the conditions of approval of the project.

The location of the documents and other materials constituting the record of the proceedings upon which the Board's decision is based in this matter is the County of Los Angeles Chief Executive Office located at the Kenneth Hahn Hall of Administration, Room 754, 7th Floor, Capital Programs/Property Development and Financing Section.

The project is not exempt from payment of a fee to the California Department of Fish and Wildlife pursuant to Section 711.4 of the Fish and Game Code to defray the costs of fish and wildlife protection and management incurred by the California Department of Fish and Wildlife. Upon the Board's certification of the final EIR and approval of the recommendations, Public Works will file a Notice of Determination in accordance with Section 21152(a) of the California Public Resources Code and pay the required filing and processing fees with the Registrar-Recorder/County Clerk in the amount of $3,070.

CONTRACTING PROCESS

On September 20, 2016, Public Works issued a Request for Proposals (RFP) for a Medical Planner. The RFP was posted on the "Doing Business with Us" website and the "Public Works Contract Opportunities" website. Also, Public Works informed over 1,200 local small business enterprises about this business opportunity. Public Works reached out to non-Local Small Business Enterprise (LSBE) and/or Small Business Enterprise firms to inform them and their subconsultants of the benefits of being a certified LSBE and to encourage them to become an LSBE, if eligible. Enclosure D reflects the selected and nonselected consultants' utilization participation.

On October 6, 2016, three firms submitted proposals. An evaluation committee consisting of Public Works, Chief Executive Office, and Department of Health Services staff evaluated the proposals as outlined in the RFP. Jensen Partners represent the best qualified firm to provide the required services based upon their technical expertise, proposed work plan, experience, personnel,

qualifications, and understanding of the work requirements. Jensen Partners was selected without regard to race, creed, color, or gender. Public Works has determined that the firm's proposed rates for performing the services are reasonable.

The Community Business Enterprises participation data and 3-year contracting history for Jensen Partners is on file with Public Works.

Public Works has evaluated and determined that the Los Angeles County Code Chapter 2.201 (Living Wage Program) does not apply to the recommended agreements. This consultant services agreement is exempt from the requirements of Proposition A because the services are required on a part-time and intermittent basis. Public Works notified the Union on this solicitation.

The consultant services agreement includes a cost-of-living adjustment provision in accordance with the Board Policy No. 5.070.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Approval of the recommended actions will have no negative impact on current services or projects.

CONCLUSION

Please return one adopted copy of this Board letter to the Department of Public Works, Project Management Division I.

Respectfully submitted,

MARK PESTRELLA

Chief Deputy Director

MP:AM:msEnclosu
res

c: Chief Executive Office (Capital Programs Division)
County Counsel
Executive Office
Department Health Services

Enclosure A

FINAL ENVIRONMENTAL IMPACT REPORT

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT

LOS ANGELES COUNTY, CALIFORNIA

PCR

DECEMBER 2016

FINAL ENVIRONMENTAL IMPACT REPORT

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT

COUNTY OF LOS ANGELES, CALIFORNIA

Prepared For:

County of Los Angeles
c/o Los Angeles County Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91803
Tel: 626-300-2363
Contact: Clarice Nash, Project Manager, Project Management Division I

Prepared By:

ESA PCR
2121 Alton Parkway, Suite 100
Irvine, California 92606

DECEMBER 2016

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1. Introduction

1.0 INTRODUCTION

A. PURPOSE OF THE FINAL EIR

The County of Los Angeles (County), as the Lead Agency under the California Environmental Quality Act (CEQA), has prepared this Final Environmental Impact Report (Final EIR) for the proposed Harbor-UCLA Medical Center Campus Master Plan Project (Master Plan Project or Project). This document, in conjunction with the Draft Environmental Impact Report (Draft EIR), comprises the Final EIR.

As described in Sections 15088, 15089, 15090 and 15132 of the State CEQA Guidelines, the Lead Agency must evaluate comments received on the Draft EIR and prepare written responses and consider the information contained in a Final EIR before approving a project. Pursuant to State CEQA Guidelines Section 15132, a Final EIR consists of: a) the Draft EIR or a revision of the Draft; b) comments and recommendations received on the Draft EIR either verbatim or in summary; c) a list of persons, organizations, and public agencies commenting on the Draft EIR; d) the responses of the Lead Agency to significant environmental points raised in the review and consultation process; and e) any other information added by the Lead Agency.

Accordingly, the Final EIR for the Project comprises two parts as follows:

Part 1: Draft EIR and Technical Appendices

Volume 1: Draft Environmental Impact Report (Chapters 1 to 9 and Appendices A to J)

Part 2: Final EIR and Technical Appendices

Volume 2: Final Environmental Impact Report (described in more detail below.)

B. PROJECT SUMMARY

The Harbor-UCLA Medical Center Campus Master Plan Project would be developed on the 72-acre Harbor-UCLA Medical Center Campus (Harbor-UCLA or Medical Center Campus) located in the unincorporated County of Los Angeles community of West Carson, which roughly encompasses the 2.3-square-mile area between the Harbor Freeway (I-110) on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The existing Medical Center Campus contains approximately 1,279,284 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a new Hospital tower (New Hospital Tower) on schedule to meet increasing state law seismic requirements for acute care facilities, renovation of the existing Hospital building (Existing Hospital Tower) to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Medical Center Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. The Campus-wide floor area would increase from approximately 1,279,284 square feet to approximately 2,457,355 square feet.

The redesigned Medical Center Campus would consolidate outpatient facilities and locate them in proximity to the New Hospital Tower in the north-central portion of the Medical Center Campus. It would also engage Carson Street by orienting hospital-related services used by the community along this major thoroughfare. Courtyards, landscaped areas, and paths and sidewalks for pedestrian circulation would form the core of the Medical Center Campus and connect the New Hospital Tower and outpatient facilities with the other major tenants on the Medical Center Campus, including Los Angeles Biomedical Research Institute (LA BioMed) in the south-central portion of the Medical Center Campus and the Children's Institute International (CII) Burton E. Green Campus in the northwest portion of the Medical Center Campus. Patient and visitor vehicle access and parking would be realigned off Carson Street and staff vehicle access would be concentrated in the eastern and southeastern Medical Center Campus off Vermont Avenue and 220th Street.

The western side of the Medical Center Campus would be used for the development of a new up to 250,000-square-foot biotechnical research campus (Bioscience Tech Park). A bioscience hub at the Medical Center Campus would provide the potential to grow the bioscience industry in the County and take advantage of relationships and research opportunities between the Bioscience Tech Park, the public hospital, and LA BioMed. Implementation of the Master Plan Project is expected to meet short-term needs of the communities served by the Existing Hospital Tower, associated facilities, and other tenants of the Medical Center Campus, as well as long-term needs beyond 2030.

Vehicular access to the Harbor-UCLA Medical Center Campus is provided by a primary driveway on Carson Street, near the Existing Hospital Tower and a second driveway west of the primary driveway; two driveways on Vermont Avenue; five driveways along 220th Street; and one driveway on Normandie Avenue. Only the Carson Street driveways are signalized. Internal circulation on-site follows the original grid layout established on the property, with four east-west roadways and numerous short north-south connector roadways. Most interior intersections of two roadways or drive aisles are stop-sign controlled. To aid wayfinding, most of the internal roadways are named and display street name signs at intersections. In addition, most buildings or modular structures have a building number (consisting of a letter and a number) or a building name, or both, visible to drivers.

C. OVERVIEW OF THE CEQA PUBLIC REVIEW PROCESS FOR THE DRAFT EIR

In compliance with the CEQA Guidelines, the County, as the Lead Agency for the Project, has provided opportunities for the public to participate in the environmental review process. As described below, throughout the environmental review process, an effort was made to inform, contact and solicit input from the public and various Federal, State, regional, and local government agencies and other interested parties on the Project.

Initial Study/Notice of Preparation

At the onset of the environmental review process and pursuant to the provisions of Section 15082 of the State CEQA Guidelines, the County Department Public Works circulated a Notice of Preparation (NOP) to State, regional, and local agencies, and members of the public for a 30-day scoping period, commencing November 3, 2014 and ending December 2, 2014 and for a second 30-day period commencing June 29, 2015 and ending July 29, 2015. Early input was sought from other County departments prior to public circulation of the NOP. The purpose of the NOP was to formally convey that the County was preparing a Draft EIR for the proposed Project, and to solicit input regarding the scope and content of the environmental information to be included in the Draft EIR. Both NOPs included notification that public scoping meetings would be held in

an open house format to inform public agencies and other interested parties of the Project and to solicit input regarding the Draft EIR. The meeting was held November 12, 2014 between 5:30 P.M. and 7:30 P.M. and on July 15, 2015, from P.M. and 7:30 P.M. at the Parlow Library on the Harbor- UCLA Medical Center Campus. The meeting provided interested individuals, groups, and public agencies the opportunity to provide oral and written comments to the Lead Agency regarding the scope and focus of the Draft EIR, as described in the NOPs and Initial Study. The NOPs, public comments on the NOPs, and Scoping Meetings materials are provided in Appendix A, Notice of Preparations (NOPs), Initial Study, Scoping Meetings Materials, and NOPs and Scoping Meetings Comments, of the Draft EIR (Volume 1).

Draft Environmental Impact Report

In accordance with State CEQA Guidelines Section 15085, upon completion of the Draft EIR and publication on August 16, 2016, a Notice of Availability (NOA) as well as CD copies of the Draft EIR were submitted to the State Clearinghouse, Governor's Office of Planning and Research, for distribution to State Agencies. The Draft EIR was circulated for a 45-day public review period between August 17, 2016 and October 3, 2016, in compliance with Section 15105(a) of the State CEQA Guidelines. As required under Section 15086 of the State CEQA Guidelines, a NOA requesting comments on the Draft EIR and CDs of the Draft EIR were distributed to approximately 37 public agencies, utilities, and other organizations. In addition, copies of the NOA were mailed to organizations or individuals who had previously requested notice or expressed an interested in the Project, commented on the Project during the public review period, or attended the public scoping meeting conducted for preparation of the Draft EIR. Furthermore, copies of the NOA were mailed to approximately 1,350 property owners and occupants within a 500-foot radius of the site. Newspaper advertisements of the NOA and Draft EIR comment period and information regarding the public meeting were placed in the Daily Breeze and La Opinión and ran on August 17, 2016.

Hard copies of the Draft EIR were placed at the following locations:

- Carson Library
  151 E. Carson Street, Carson, CA 90745
- Harbor Gateway Library
  24000 S. Western Avenue, Harbor City, CA 90710
- Southeast Branch Library
  23115 Arlington Avenue, Torrance, CA 90501
- Wilmington Library
  1300 N. Avalon Boulevard, Wilmington, CA 90744
- Lomita Library
  24200 Narbonne Avenue, Lomita, CA 90717
- Dr. Martin Luther King, Jr. Library
  17906 S. Avalon Boulevard, Carson, CA 90746
- Katy Geissert Civic Center Library
  3301 Torrance Boulevard, Torrance, CA 90503

- Harbor-UCLA Medical Center Inpatient Tower Information Desk
  1000 Carson Street, Torrance, CA 90509

During the Draft EIR public review period, the Department of Public Works received eight (8) comment letters on the Draft EIR from agencies, organizations, and individuals through written correspondence and emails. A public meeting was held on September 8, 2016 from 5:30 P.M. to 7:30 P.M. at the Harbor-UCLA Medical Center Parlow Library to present Project information, provide a summary of the Draft EIR's analysis and findings regarding the Project, give an overview of the CEQA public review process, and provide instructions on how to submit written comments on the Draft EIR. All written comments received during the public review period are presented and responses provided in Chapter 2.0, Comments and Responses, of this Final EIR.

D. ORGANIZATION OF FINAL EIR

The Final EIR (Volume 6 of the EIR) consists of the following four chapters:

Chapter 1.0, Introduction. This chapter describes the purpose of the Final EIR, provides a summary of the proposed Project, summarizes the Final EIR public review process, and presents the contents of this Final EIR.

Chapter 2.0, Comments and Responses. This chapter presents all comments received by the County during the 45-day public review period of the Draft EIR (August 17, 2016 through October 3, 2016) as well as the responses to those comments.

Chapter 3.0, Revisions, Clarifications and Corrections to the Draft EIR. This chapter includes revisions to the Draft EIR that represent minor changes or additions in response to some of the comments received on the Draft EIR and additional edits to provide clarification. Changes to the Draft EIR are shown with ~~strikethrough~~ text for deletions and double underline text for additions. These changes are minor and do not add significant new information that would affect the analysis or conclusions presented in the Draft EIR.

Chapter 4.0, Mitigation Monitoring and Reporting Program. The Mitigation Monitoring and Reporting Program (MMRP) is the document that will be used by the enforcement and monitoring agencies responsible for the implementation of the Project's mitigation measures and Project Design Features. Mitigation measures and Project Design Features are listed by environmental topic.

2. Comments and Responses

2.0 COMMENTS AND RESPONSES

Section 15088(a) of the State CEQA Guidelines states that: "The lead agency shall evaluate comments on environmental issues received from persons who reviewed the draft EIR and shall prepare a written response. The Lead Agency shall respond to comments that were received during the noticed comment period and any extensions and may respond to late comments." In accordance with these requirements, this Chapter of this Final EIR provides responses to each of the written comments on the Draft EIR received during the public comment period. **Table 2-1**, *Summary of Comments on the Harbor-UCLA Medical Center Campus Master Plan Project Draft EIR*, which starts on page 2-2, provides a list of the comment letters received and a summary of the issues raised in response to the Draft EIR.

The letters received during the public comment period are provided within this section and are summarized below in Table 2-1. Comments were received from State agencies, County agencies and departments or divisions, and City departments, as well as from individuals and organizations. As indicated in Table 2-1, the individual letters are organized by State, Regional, City, organization, and then individuals. Each comment that requires a response is also assigned a number. For example, the first comment later is from the State of California Governor's Office of Planning and Research, which will be labeled "Letter No. 1." Accordingly, the first comment from the letter is labeled "Comment No. 1-1" and the corresponding response provided is labeled "Response No. 1-1". Where responses result in a change to the Draft EIR, it is noted, and the resulting change is identified in Chapter 3.0, Revisions, Clarifications and Corrections to the Draft EIR, of this Final EIR.

As required by the State CEQA Guidelines, Section 15088 (c), the focus of the responses to comments is on "the disposition of significant environmental issues raised." Therefore, detailed responses are not provided to comments that do not relate to environmental issues.

Table 2-1

Summary of Comments on the Harbor-UCLA Medical Center Campus Master Plan Project Draft EIR

Letter No.	SUMMARY OF WRITTEN COMMENTS	Project Description	Aesthetics/Visual Resources	Air Quality/Greenhouse Gas Emissions	Paleontological/ Archeological Resources	Geology and Soils	Historical resources	Hazards	Hydrology/Water Quality	Land use	Noise	Population/Housing/ Employment	Transportation/Parking	Public Services	Utilities	Alternatives	Support	Other Comments
1	State of California Governor's Office of Planning and Research Scott Morgan, Director State Clearinghouse and Planning Unit 1400 10th Street, P.O. Box 3044 Sacramento, CA 95812-3044	**X**																**X**
2	California Department of Transportation Dianna Watson Branch Chief, Community Planning & LD/IGR Review District 7 – Office of Transportation Planning 100 S. Main Street, MS 16 Los Angeles, CA 90012								**X**				**X**					

Table 2-1 (Continued)

Summary of Comments on the Harbor-UCLA Medical Center Campus Master Plan Project Draft EIR

Letter No.	SUMMARY OF WRITTEN COMMENTS	Project Description	Aesthetics/Visual Resources	Air Quality/Greenhouse Gas Emissions	Paleontological/ Archeological Resources	Geology and Soils	Historical resources	Hazards	Hydrology/Water Quality	Land use	Noise	Population/Housing/ Employment	Transportation/Parking	Public Services	Utilities	Alternatives	Support	Other Comments
3	County of Los Angeles Metropolitan Transportation Authority Elizabeth Carvajal Sr. Manager, Transportation Planning Metro Development Review One Gateway Plaza MS 99-23-4 Los Angeles, CA 90012-2952												X					
4	County of Los Angeles Department of Parks and Recreation Kathline J. King, AICP Chief of Planning Planning and Development Agency 510 South Vermont Avenue Los Angeles, CA 90020-1975													X				

Table 2-1 (Continued)

Summary of Comments on the Harbor-UCLA Medical Center Campus Master Plan Project Draft EIR

Letter No.	SUMMARY OF WRITTEN COMMENTS	Project Description	Aesthetics/Visual Resources	Air Quality/Greenhouse Gas Emissions	Paleontological/ Archeological Resources	Geology and Soils	Historical resources	Hazards	Hydrology/Water Quality	Land Use	Noise	Population/Housing/ Employment	Transportation/Parking	Public Services	Utilities	Alternatives	Support	Other Comments
5	County of Los Angeles Fire Department Kevin T. Johnson Acting Chief, Forestry Division Prevention Services Bureau 1320 North Eastern Avenue Los Angeles, CA 90063-3294				X				X					X				X
6	County Sanitation Districts of Los Angeles County Adriana Raza, Customer Service Specialist Facilities Planning Department 1955 Workman Mill Road Whittier, CA 90601-1400														X			
7	City of Carson Zak Gonzalez II, Associate Planner 701 E. Carson Street Carson, CA 90745	X										X	X					X
8	Linda Ko lindako412@gmail.com							X										

LETTER 1

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

September 30, 2016

Clarice Nash
Los Angeles County
Dept. of Public Works
900 S. Fremont Avenue
Alhambra, CA 91803

Subject: Harbor-UCLA Medical Center Campus Master Plan Project
SCH#: 2014111004

Dear Clarice Nash:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on September 29, 2016, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. 1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2014111004
Project Title Harbor-UCLA Medical Center Campus Master Plan Project
Lead Agency Los Angeles County

Type EIR Draft EIR

Description The proposed Harbor UCLA Medical Center Campus Master Plan Project involves the multi-phased development of hospital, outpatient, research, and support facilities through the year 2030. The existing 72-acre Harbor-UCLA Campus, located at 1000 West Carson St in Torrance, CA, currently includes 1,279,284 sf of developed floor area, including a recently completed Surgery and Emergency Room replacement project. The master plan project, which will be developed into a total of approximately 2,457,355 sf of developed floor area, will include development of a new hospital tower to meet increasing state law seismic requirements for acute care facilities, renovation of the existing hospital tower to house non-acute care support uses, and replacement of aging facilities. The western side of the medical center campus is the proposed location for a new Bioscience Tech Park of up to 250,000 sf and would support open space, surface parking, and other similar ancillary short term uses.

Lead Agency Contact

Name Clarice Nash
Agency Los Angeles County
Phone 626 300-2363 **Fax**
email
Address Dept. of Public Works
900 S. Fremont Avenue
City Alhambra **State** CA **Zip** 91803

Project Location

County Los Angeles
City Torrance
Region
Lat / Long
Cross Streets Carson Street at S. Vermont Avenue
Parcel No. 7344-001-901
Township **Range** **Section** **Base**

Proximity to:

Highways I-405, I-110
Airports
Railways UPRR, BNSF
Waterways Dominguez Channel
Schools Several
Land Use GP: Public and Semi-Public
Z: C-3 Unlimited Commercial/TOD

Project Issues Aesthetic/Visual; Air Quality; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 5; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Services, California; California Highway Patrol; Caltrans, District 7; Regional Water Quality Control Board, Region 4; Native American Heritage Commission; Public Utilities Commission

Date Received 08/16/2016 **Start of Review** 08/16/2016 **End of Review** 09/29/2016

LETTER 1

State of California
Governor's Office of Planning and Research
Scott Morgan, Director
State Clearinghouse and Planning Unit
1400 10th Street, P.O. Box 3044
Sacramento, CA 95812-3044
(September 30, 2016)

Response 1-1

Thank you for your letter acknowledging that State OPR received the Draft EIR for review and distribution. The letter further acknowledges that no state agencies had submitted comments by the close of the comment period, and that the County has complied with the State Clearinghouse CEQA review requirements.

DEPARTMENT OF TRANSPORTATION
DISTRICT 7-OFFICE OF TRANSPORTATION PLANNING
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-9140
FAX (213) 897-1337
www.dot.ca.gov

LETTER 2

Serious drought.
Help save water!

October 5, 2016

Ms. Clarice Nash
County of Los Angeles
Department of Public Work
900 S. Fremont Avenue
Alhambra, CA 91803

RE: Harbor-UCLA Medical Center
Campus Master Plan Project
Vic. LA-110/PM 7.02, LA-213/PM 7.98
LA-405/PM 10.54
SCH # 2004111004
Ref. IGR/CEQA No. 141114AL-NOP
LA-2016-00100-AL-DEIR

Dear Ms. Nash:

Thank you for accepting Caltrans' comment per your conversation with Mr. Alan Lin, project coordinator, on October 4, 2016. The proposed project would add an additional 1,178,071 square feet to the existing 1,279,284 square feet of existing developed floor area, for a total at build out of up to 2,457,355 square feet of developed floor area on the Harbor-UCLA Campus. 1

The Project would generate an estimated net external 1,620 daily trips, including 200/197 trips in AM/PM peak hours in the 2023 Project phase. During the 2030 Project phase, the project would generate an estimated net external 6,598 daily trips, including 637/732 trips in the AM/PM peak hours. There are 26 related projects in the project vicinity, therefore cumulative impacts may occur. As a reminder, the decision makers should be aware of this issue and be prepared to mitigate cumulative traffic impacts in the future. 2

The Traffic Impact Study concluded that the proposed project + cumulative will impact the following State intersections:

Location #9 - I-110 Southbound Ramps & Carson St.
Location #15 - Figueroa Street and 220th St. /I-110 Northbound Ramps
Location #20 - I-110 Southbound Ramps and 223rd St.

Location #9 (51.9% Fair share Contribution): The mitigation would involve restriping the southbound approach on the Interstate I-110 off-ramp to convert the left-turn lane to a left-/right-turn lane. Caltrans proposes to convert the southbound off-ramp controlled right-turn lane to a free flow right-turn lane by installing protected raised right-turn median and installing additional westbound travel auxiliary) lane from off-ramp to Vermont Avenue. The traffic signal and ADA 3

access should be upgraded to latest State standards. 3 CONT

Location #15 (31.1% Fair Share Contribution): the mitigation would involve striping an additional northbound through lane and restriping the existing through lane as a through/right-turn lane. The eastbound approach would be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane. Caltrans concurs with the proposed mitigation measure at this location. However, cross walk enhancement is required. 4

Location #20 (75.7% Fair Share Contribution): the mitigation would involve restriping the eastbound and southbound approaches. The southbound approach would be modified from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach would be restriped to change the existing right-turn lane to a through/right-turn lane. Parking would be removed on 223rd St., between the Interstate I-110 Bridge and Figueroa St., and converted to a dedicated right-turn lane. We proposed the possibilities of widening the southbound off-ramp for additional right-turn lane. The eastbound approach proposed restriping to be further investigated based on 3 day traffic counts. The traffic signal and ADA should be upgraded to latest State standards. 5

Storm water run-off is a sensitive issue for Los Angeles and Ventura counties. Please be mindful that projects should be designed to discharge clean run-off water. Additionally, discharge of storm water run-off is not permitted onto State highway facilities without a storm water management plan. 6

Transportation of heavy construction equipment and/or materials, which requires the use of oversized-transport vehicles on State highways, will require a transportation permit from Caltrans. It is recommended that large size truck trips be limited to off-peak commute periods. 7

Caltrans will work with the Lead Agency in an effort to evaluate traffic impacts, identify potential improvements, and establish a funding mechanism that helps mitigate cumulative transportation impacts in the project vicinity. 8

If you have any questions, please feel free to contact Alan Lin the project coordinator at (213) 897-8391 and refer to LA-2016-00100-AL-DEIR.

Sincerely,

DIANNA WATSON
Branch Chief
Community Planning & LD / IGR Review

cc: Scott Morgan, State Clearinghouse

LETTER 2

California Department of Transportation
Dianna Watson
Branch Chief, Community Planning & LD/IGR Review
District 7 – Office of Transportation Planning
100 S. Main Street, MS 16
Los Angeles, CA 90012
(October 5, 2016)

Response 2-1

This introductory comment acknowledges the courtesy of providing the agency a requested two day extension to provide its comment and notes the increase in campus square footage proposed to be built out by the proposed Project .

Response 2-2

This comment summarizes the Project-related overall trip generation and peak hour trips, as well as conclusions regarding cumulative impacts to Caltrans-controlled facilities, as stated in the Draft EIR, and indicates that the County's decision makers should be aware of the determinations regarding cumulative impacts and consider mitigation for future cumulative traffic impacts. Specifically, as noted by the commenter, the Draft EIR concludes in Section 4.L, Transportation and Traffic, that significant unavoidable cumulative traffic impacts would result from Project implementation at three (3) locations partly under the control of Caltrans, including Intersection #9 (I-110 Southbound Ramps at Carson Street), Intersection #15 (220th Street/I-110 Northbound Ramps at Figueroa Street), and Intersection #20 (I-110 Southbound Ramps at 223rd Street). As also noted in Section 4.L, mitigation in the form of intersection-specific improvements (per Mitigation Measures TRAF-1 through TRAF-3) are considered infeasible due to uncertainties regarding their implementation since these facilities are not wholly under the control of the County. Investigation of potential mitigation measures were conducted as described in Section 4.L, including potential fair share contributions, but in the absence of specific improvements linked to a reasonable mitigation plan tied to actual mitigation of the impacts, no fair share contribution can be calculated or made as an adequate mitigation measure. Therefore, impacts to these intersections were concluded to be significant and unavoidable in the EIR. This conclusion does not preclude the County from coordinating with Caltrans regarding potential future improvements at these locations.

Response 2-3

This comment summarizes Mitigation Measure TRAF-1 to address impacts to Intersection #9 at the southbound I-110 off-ramps at Carson Street, which involves restriping to allow additional right turn movements onto westbound Carson Street, subject to approval by Caltrans. The comment further states that Caltrans proposes improvements at this location involve construction of a raised median and provision of a free right-turn lane onto westbound Carson Street and an additional travel lane (an auxiliary lane) for westbound traffic from I-110 to Vermont Avenue. This change would require elimination of on-street parking on the north side of Carson Street at this location. Similar to the proposed mitigation measure, Caltrans' proposal would increase right-turn capacity on the off-ramp. As described, it would preclude implementation of proposed Mitigation Measure TRAF-1. As suggested by the comment, any intersection improvements at this location would also be required to meet current State standards for traffic signals and

ADA access. In light of the uncertainty regarding potential improvements at this location, which is under the partial control of Caltrans, impacts at this location would continue to be considered significant and unavoidable for purposes of a conservative analysis in the Draft EIR. This conclusion does not preclude the County from coordinating with Caltrans regarding potential future improvements at these locations.

Response 2-4

This comment summarizes and concurs with proposed Mitigation Measure TRAF-2 to address impacts to Intersection #15 at the northbound I-110 ramps/220th Street and Figueroa Street, which is subject to approval by Caltrans and the City of Carson, but adds that crosswalk enhancements would also be required. Any such crosswalk enhancements at this location would be required to comply with current ADA or other accessibility standards, as noted by the commenter. While Caltrans concurs with this mitigation measure to address Project-related impacts at this location, in light of uncertainty regarding the timing and feasibility of the improvements, which are under the control of Caltrans and the City of Carson, impacts at this location would continue to be considered significant and unavoidable for purposes of a conservative analysis in the Draft EIR. Nonetheless, despite the conclusion that impacts to these facilities would be significant and unavoidable due to these circumstances, the County may still coordinate with Caltrans in the future regarding potential improvements that Caltrans may undertake to address impacts at this location.

Response 2-5

This comment summarizes proposed Mitigation Measure TRAF-3 to make specific intersection modifications to address impacts to Intersection #20 at the I-110 Southbound Ramps and 223rd Street, subject to approval by Caltrans. While Caltrans does not disagree with this mitigation measure to address Project-related impacts at this location, this comment indicates that Caltrans proposes consideration of constructing an additional right-turn lane on the southbound off-ramp at 223rd Street. The comment further suggests that additional investigation should be conducted to determine the feasibility of modifying the eastbound approach to this intersection. It should be noted that Carson Street at this location is under the control of the County of Los Angeles, and thus Caltrans and the County Department of Public Works, Division of Traffic & Street Lighting, should coordinate regarding future improvements. As suggested by the commenter, however, any intersection improvements at this location would be required to meet current State standards for traffic signals and ADA access. As such, given the uncertainty regarding the timing and feasibility of the improvements, which are under the control of Caltrans, impacts at this location would continue to be significant and unavoidable for purposes of a conservative analysis in the Draft EIR. Nonetheless, despite the conclusion that impacts to these facilities would be significant and unavoidable due to these circumstances, the County may still coordinate with Caltrans in the future regarding potential improvements that Caltrans may undertake to address impacts at this location.

Response 2-6

This comment describes stormwater runoff impacts from development projects as a sensitive issue which needs to be addressed and that storm water runoff may not be discharged onto a state highway facility without a storm water management plan.. Section 4.G, Hydrology and Water Quality, of the Draft EIR provides information regarding the Project's stormwater runoff impacts and relevant regulations about water quality standards. The Project would comply with all applicable requirements and permits related to stormwater management and water quality. Therefore, impacts related to stormwater runoff and discharge would be less than significant. In regards to the discharge of stormwater runoff onto State highway facilities,

according to the Harbor-UCLA Campus Master Plan[8], The County of Los Angeles Flood Control District owns and maintains the 208th Street Storm Drain which runs through Harbor-UCLA in a 15-foot wide easement. This storm drain line runs through the site in the north-south direction as an 8-foot high by 4-foot wide reinforced concrete box culvert (RCB). Near 220th Street, it turns westerly and flows as an open channel in an easement toward Normandie Avenue. It joins with the 15.7-mile-long Dominguez Channel which begins in the City of Hawthorne and eventually discharges to the east basin of the Los Angeles Harbor. Therefore, there will also be no discharge of stormwater runoff onto State highway facilities.

Response 2-7

This comment states that transportation of heavy construction equipment and/or materials that will require over-sized transport vehicles on State highways will require a permit from Caltrans. Section 4.I, Traffic and Transportation, of the Draft EIR provides PDF-TRAF 1: Construction Traffic Management Plan, which states that a detailed Construction Traffic Management Plan will include street closure information, detour plans, and haul routes. All construction-related deliveries, including haul trips, will be scheduled to occur outside of the commuter peak hours to the extent feasible. The Project would comply with County or respective City requirements regarding haul routes. If oversized transport is required, a transportation permit would be obtained from Caltrans.

Response 2-8

This comment offers to continue to work with the lead agency, and the County appreciates the cooperation on this important public Project.

[8] *County of Los Angeles, 2012. Harbor-UCLA Medical Center Campus Master Plan. http://ridley-thomas.lacounty.gov/PDFs/20120630_HARBOR%20UCLA%20MASTER%20PLAN.pdf, accessed 12/11/15*

LETTER 3

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

Metro

September 28, 2016

Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 S. Fremont Ave.
Alhambra, CA 91803-1331

RE: Harbor-UCLA Medical Center Campus Master Plan Project – County of Los Angeles – Notice of Availability of a Draft Environmental Impact Report

Dear Ms. Nash:

Thank you for the opportunity to comment on the Harbor-UCLA Medical Center Campus Master Plan Project located at 1000 West Carson Street in the City of Torrance. This letter conveys recommendations from the Los Angeles County Metropolitan Transportation Authority (Metro) concerning issues that are germane to our agency's statutory responsibility in relation to our facilities and services that may be affected by the proposed project. 1

Project Description:

Los Angeles County proposes the Harbor-UCLA Medical Center Campus Master Plan Project to consider current conditions and future needs of the Harbor-UCLA Medical Center Hospital and Clinics, the LA Biomed Research Foundation, and the Department of Health Services at the Medical Campus. The project would be a redesign of the existing County of Los Angeles Harbor-UCLA Campus to address the future needs of the communities served by the County of Los Angeles Harbor-UCLA Campus. The existing 72-acre Harbor-UCLA Campus, located at 1000 West Carson Street in Torrance, California, currently includes 1,279,284 square feet of developed floor area, including a recently completed Surgery and Emergency Room Replacement Project. The Master Plan Project, which will be developed into a total of approximately 2,457,355 square feet of developed floor area, will include development of a new Hospital tower to meet increasing state law seismic requirements for acute care facilities, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. The redesigned Medical Center Campus would consolidate outpatient facilities and locate them in proximity to the New Hospital Tower in the north-central portion of the Medical Center Campus. The western side of the Medical Center Campus is the proposed location for a new Bioscience Tech Park of up to 250,000 square feet and would support open space, surface parking, and other similar ancillary short-term issues. 2

Metro Comments:

Bus Operations:
Metro bus lines 550 and 205 operate on W Carson St and S Vermont Ave, adjacent to the proposed project. Although the project is not expected to result in any long-term impacts on transit, the developer should be aware of the bus services that are present. Please contact Metro Bus Operations Control Special Events Coordinator at 213-922-4632 regarding construction activities that may Impact Metro bus lines at least 30 days in advance of initiating construction activities. For closures that last more than six months, Metro's Stops and Zones Department will also need to be notified at 213-922-5188, 30 days in advance of initiating construction activities. Other municipal bus operators may also be impacted and should be included in construction outreach efforts. 3

Transit Orientation:
To support first/last mile connections to transit service, LACMTA encourages the installation of pedestrian lighting, shade trees, enhanced crosswalks with ADA-compliant ramps, and other amenities along the primary building frontage to improve pedestrian safety and comfort to access bus stops. The City should consider requesting the installation of such amenities as part of the development of the site. 4

Active Transportation:

1. Provide safe and convenient connections for pedestrians, people riding bicycles, and users of Metro systems and other transit services to and from the project. Consider the following: 5
    a. Add pedestrian crossings at campus entries identified in Figure 2-9 of the DEIR that coincide with pedestrian circulation routes. These may include Normandie Ave/Medical Foundation Dr, 220th St/Research Park Dr, 220th St/Meyler St, Vermont Ave/Lot C driveway, etc.

Congestion Management Program:
Beyond impacts to Metro facilities and operations, Metro must also notify the applicant of state requirements. A Transportation Impact Analysis (TIA), with roadway and transit components, is required under the State of California Congestion Management Program (CMP) statute. The CMP TIA Guidelines are published in the "2010 Congestion Management Program for Los Angeles County", Appendix D (attached). The geographic area examined in the TIA must include the following, at a minimum: 6

1. All CMP arterial monitoring intersections, including monitored freeway on/off-ramp intersections, where the proposed project will add 50 or more trips during either the a.m. or p.m. weekday peak hour (of adjacent street traffic).

2. If CMP arterial segments are being analyzed rather than intersections, the study area must include all segments where the proposed project will add 50 or more peak hour trips (total of both directions). Within the study area, the TIA must analyze at least one segment between monitored CMP intersections.

3. Mainline freeway-monitoring locations where the project will add 150 or more trips, in either direction, during either the a.m. or p.m. weekday peak hour.

4. Caltrans must also be consulted through the NOP process to identify other specific locations to be analyzed on the state highway system.

6 CONT

The CMP TIA requirement also contains two separate impact studies covering roadways and transit, as outlined in Sections D.8.1 – D.9.4. If the TIA identifies no facilities for study based on the criteria above, no further traffic analysis is required. However, projects must still consider transit impacts. For all CMP TIA requirements please see the attached guidelines.

7

If you have any questions regarding this response, please contact Elizabeth Carvajal at 213-922-3084 or by email at DevReview@metro.net. **Metro looks forward to reviewing the Final EIR. Please send it to the following address:**

Metro Development Review
One Gateway Plaza MS 99-23-4
Los Angeles, CA 90012-2952

Sincerely,

Elizabeth Carvajal
Sr. Manager, Transportation Planning

Attachment: CMP Appendix D: Guidelines for CMP Transportation Impact Analysis

APPENDIX

D

GUIDELINES FOR CMP TRANSPORTATION IMPACT ANALYSIS

Important Notice to User: This section provides detailed travel statistics for the Los Angeles area which will be updated on an ongoing basis. Updates will be distributed to all local jurisdictions when available. In order to ensure that impact analyses reflect the best available information, lead agencies may also contact MTA at the time of study initiation. Please contact MTA staff to request the most recent release of "Baseline Travel Data for CMP TIAs."

D.1 OBJECTIVE OF GUIDELINES

The following guidelines are intended to assist local agencies in evaluating impacts of land use decisions on the Congestion Management Program (CMP) system, through preparation of a regional transportation impact analysis (TIA). The following are the basic objectives of these guidelines:

- Promote consistency in the studies conducted by different jurisdictions, while maintaining flexibility for the variety of project types which could be affected by these guidelines.
- Establish procedures which can be implemented within existing project review processes and without ongoing review by MTA.
- Provide guidelines which can be implemented immediately, with the full intention of subsequent review and possible revision.

These guidelines are based on specific requirements of the Congestion Management Program, and travel data sources available specifically for Los Angeles County. References are listed in Section D.10 which provide additional information on possible methodologies and available resources for conducting TIAs.

D.2 GENERAL PROVISIONS

Exhibit D-7 provides the model resolution that local jurisdictions adopted containing CMP TIA procedures in 1993. TIA requirements should be fulfilled within the existing environmental review process, extending local traffic impact studies to include impacts to the regional system. In order to monitor activities affected by these requirements, Notices of Preparation (NOPs) must be submitted to MTA as a responsible agency. Formal MTA approval of individual TIAs is not required.

The following sections describe CMP TIA requirements in detail. In general, the competing objectives of consistency & flexibility have been addressed by specifying standard, or minimum, requirements and requiring documentation when a TIA varies from these standards.

D.3 PROJECTS SUBJECT TO ANALYSIS

In general a CMP TIA is required for all projects required to prepare an Environmental Impact Report (EIR) based on local determination. A TIA is not required if the lead agency for the EIR finds that traffic is not a significant issue, and does not require local or regional traffic impact analysis in the EIR. Please refer to Chapter 5 for more detailed information.

CMP TIA guidelines, particularly intersection analyses, are largely geared toward analysis of projects where land use types and design details are known. Where likely land uses are not defined (such as where project descriptions are limited to zoning designation and parcel size with no information on access location), the level of detail in the TIA may be adjusted accordingly. This may apply, for example, to some redevelopment areas and citywide general plans, or community level specific plans. In such cases, where project definition is insufficient for meaningful intersection level of service analysis, CMP arterial segment analysis may substitute for intersection analysis.

D.4 STUDY AREA

The geographic area examined in the TIA must include the following, at a minimum:

- All CMP arterial monitoring intersections, including monitored freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic).
- If CMP arterial segments are being analyzed rather than intersections (see Section D.3), the study area must include all segments where the proposed project will add 50 or more peak hour trips (total of both directions). Within the study area, the TIA must analyze at least one segment between monitored CMP intersections.
- Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.
- Caltrans must also be consulted through the Notice of Preparation (NOP) process to identify other specific locations to be analyzed on the state highway system.

If the TIA identifies no facilities for study based on these criteria, no further traffic analysis is required. However, projects must still consider transit impacts (Section D.8.4).

D.5 BACKGROUND TRAFFIC CONDITIONS

The following sections describe the procedures for documenting and estimating background, or non-project related traffic conditions. Note that for the purpose of a TIA, these background estimates must include traffic from all sources without regard to the exemptions specified in CMP statute (e.g., traffic generated by the provision of low and very low income housing, or trips originating outside Los Angeles County. Refer to Chapter 5, Section 5.2.3 for a complete list of exempted projects).

D.5.1 Existing Traffic Conditions. Existing traffic volumes and levels of service (LOS) on the CMP highway system within the study area must be documented. Traffic counts must

be less than one year old at the time the study is initiated, and collected in accordance with CMP highway monitoring requirements (see Appendix A). Section D.8.1 describes TIA LOS calculation requirements in greater detail. Freeway traffic volume and LOS data provided by Caltrans is also provided in Appendix A.

D.5.2 Selection of Horizon Year and Background Traffic Growth. Horizon year(s) selection is left to the lead agency, based on individual characteristics of the project being analyzed. In general, the horizon year should reflect a realistic estimate of the project completion date. For large developments phased over several years, review of intermediate milestones prior to buildout should also be considered.

At a minimum, horizon year background traffic growth estimates must use the generalized growth factors shown in Exhibit D-1. These growth factors are based on regional modeling efforts, and estimate the general effect of cumulative development and other socioeconomic changes on traffic throughout the region. Beyond this minimum, selection among the various methodologies available to estimate horizon year background traffic in greater detail is left to the lead agency. Suggested approaches include consultation with the jurisdiction in which the intersection under study is located, in order to obtain more detailed traffic estimates based on ongoing development in the vicinity.

D.6 PROPOSED PROJECT TRAFFIC GENERATION

Traffic generation estimates must conform to the procedures of the current edition of Trip Generation, by the Institute of Transportation Engineers (ITE). If an alternative methodology is used, the basis for this methodology must be fully documented.

Increases in site traffic generation may be reduced for existing land uses to be removed, if the existing use was operating during the year the traffic counts were collected. Current traffic generation should be substantiated by actual driveway counts; however, if infeasible, traffic may be estimated based on a methodology consistent with that used for the proposed use.

Regional transportation impact analysis also requires consideration of trip lengths. Total site traffic generation must therefore be divided into work and non-work-related trip purposes in order to reflect observed trip length differences. Exhibit D-2 provides factors which indicate trip purpose breakdowns for various land use types.

For lead agencies who also participate in CMP highway monitoring, it is recommended that any traffic counts on CMP facilities needed to prepare the TIA should be done in the manner outlined in Chapter 2 and Appendix A. If the TIA traffic counts are taken within one year of the deadline for submittal of CMP highway monitoring data, the local jurisdiction would save the cost of having to conduct the traffic counts twice.

D.7 TRIP DISTRIBUTION

For trip distribution by direct/manual assignment, generalized trip distribution factors are provided in Exhibit D-3, based on regional modeling efforts. These factors indicate Regional Statistical Area (RSA)-level tripmaking for work and non-work trip purposes.

(These RSAs are illustrated in Exhibit D-4.) For locations where it is difficult to determine the project site RSA, census tract/RSA correspondence tables are available from MTA.

Exhibit D-5 describes a general approach to applying the preceding factors. Project trip distribution must be consistent with these trip distribution and purpose factors; the basis for variation must be documented.

Local agency travel demand models disaggregated from the SCAG regional model are presumed to conform to this requirement, as long as the trip distribution functions are consistent with the regional distribution patterns. For retail commercial developments, alternative trip distribution factors may be appropriate based on the market area for the specific planned use. Such market area analysis must clearly identify the basis for the trip distribution pattern expected.

D.8 IMPACT ANALYSIS

CMP Transportation Impact Analyses contain two separate impact studies covering roadways and transit. Section Nos. D.8.1-D.8.3 cover required roadway analysis while Section No. D.8.4 covers the required transit impact analysis. Section Nos. D.9.1-D.9.4 define the requirement for discussion and evaluation of alternative mitigation measures.

D.8.1 Intersection Level of Service Analysis. The LA County CMP recognizes that individual jurisdictions have wide ranging experience with LOS analysis, reflecting the variety of community characteristics, traffic controls and street standards throughout the county. As a result, the CMP acknowledges the possibility that no single set of assumptions should be mandated for all TIAs within the county.

However, in order to promote consistency in the TIAs prepared by different jurisdictions, CMP TIAs must conduct intersection LOS calculations using either of the following methods:

- The Intersection Capacity Utilization (ICU) method as specified for CMP highway monitoring (see Appendix A); or
- The Critical Movement Analysis (CMA) / Circular 212 method.

Variation from the standard assumptions under either of these methods for circumstances at particular intersections must be fully documented.

TIAs using the 1985 or 1994 Highway Capacity Manual (HCM) operational analysis must provide converted volume-to-capacity based LOS values, as specified for CMP highway monitoring in Appendix A.

D.8.2 Arterial Segment Analysis. For TIAs involving arterial segment analysis, volume-to-capacity ratios must be calculated for each segment and LOS values assigned using the V/C-LOS equivalency specified for arterial intersections. A capacity of 800 vehicles per hour per through traffic lane must be used, unless localized conditions necessitate alternative values to approximate current intersection congestion levels.

D.8.3 Freeway Segment (Mainline) Analysis. For the purpose of CMP TIAs, a simplified analysis of freeway impacts is required. This analysis consists of a demand-to-capacity calculation for the affected segments, and is indicated in Exhibit D-6.

D.8.4 Transit Impact Review. CMP transit analysis requirements are met by completing and incorporating into an EIR the following transit impact analysis:

- ❑ Evidence that affected transit operators received the Notice of Preparation.
- ❑ A summary of existing transit services in the project area. Include local fixed-route services within a ¼ mile radius of the project; express bus routes within a 2 mile radius of the project, and; rail service within a 2 mile radius of the project.
- ❑ Information on trip generation and mode assignment for both AM and PM peak hour periods as well as for daily periods. Trips assigned to transit will also need to be calculated for the same peak hour and daily periods. Peak hours are defined as 7:30-8:30 AM and 4:30-5:30 PM. Both "peak hour" and "daily" refer to average weekdays, unless special seasonal variations are expected. If expected, seasonal variations should be described.
- ❑ Documentation of the assumption and analyses that were used to determine the number and percent of trips assigned to transit. Trips assigned to transit may be calculated along the following guidelines:
  - ➢ Multiply the total trips generated by 1.4 to convert vehicle trips to person trips;
  - ➢ For each time period, multiply the result by one of the following factors:

    3.5% of Total Person Trips Generated for most cases, except:

    10% primarily Residential within 1/4 mile of a CMP transit center
    15% primarily Commercial within 1/4 mile of a CMP transit center
    7% primarily Residential within 1/4 mile of a CMP multi-modal transportation center
    9% primarily Commercial within 1/4 mile of a CMP multi-modal transportation center
    5% primarily Residential within 1/4 mile of a CMP transit corridor
    7% primarily Commercial within 1/4 mile of a CMP transit corridor
    0% if no fixed route transit services operate within one mile of the project

  To determine whether a project is primarily residential or commercial in nature, please refer to the CMP land use categories listed and defined in Appendix E, *Guidelines for New Development Activity Tracking and Self Certification*. For projects that are only partially within the above one-quarter mile radius, the base rate (3.5% of total trips generated) should be applied to all of the project buildings that touch the radius perimeter.

- ❑ Information on facilities and/or programs that will be incorporated in the development plan that will encourage public transit use. Include not only the jurisdiction's TDM Ordinance measures, but other project specific measures.

- Analysis of expected project impacts on current and future transit services and proposed project mitigation measures, and;
- Selection of final mitigation measures remains at the discretion of the local jurisdiction/lead agency. Once a mitigation program is selected, the jurisdiction self-monitors implementation through the existing mitigation monitoring requirements of CEQA.

D.9 IDENTIFICATION AND EVALUATION OF MITIGATION

D.9.1 Criteria for Determining a Significant Impact. For purposes of the CMP, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ($V/C \geq 0.02$), causing LOS F ($V/C > 1.00$); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ($V/C \geq 0.02$). The lead agency may apply a more stringent criteria if desired.

D.9.2 Identification of Mitigation. Once the project has been determined to cause a significant impact, the lead agency must investigate measures which will mitigate the impact of the project. Mitigation measures proposed must clearly indicate the following:

- Cost estimates, indicating the fair share costs to mitigate the impact of the proposed project. If the improvement from a proposed mitigation measure will exceed the impact of the project, the TIA must indicate the proportion of total mitigation costs which is attributable to the project. This fulfills the statutory requirement to exclude the costs of mitigating inter-regional trips.
- Implementation responsibilities. Where the agency responsible for implementing mitigation is not the lead agency, the TIA must document consultation with the implementing agency regarding project impacts, mitigation feasibility and responsibility.

Final selection of mitigation measures remains at the discretion of the lead agency. The TIA must, however, provide a summary of impacts and mitigation measures. Once a mitigation program is selected, the jurisdiction self-monitors implementation through the mitigation monitoring requirements contained in CEQA.

D.9.3 Project Contribution to Planned Regional Improvements. If the TIA concludes that project impacts will be mitigated by anticipated regional transportation improvements, such as rail transit or high occupancy vehicle facilities, the TIA must document:

- Any project contribution to the improvement, and
- The means by which trips generated at the site will access the regional facility.

D.9.4 Transportation Demand Management (TDM). If the TIA concludes or assumes that project impacts will be reduced through the implementation of TDM measures, the TIA must document specific actions to be implemented by the project which substantiate these conclusions.

D.10 REFERENCES

1. *Traffic Access and Impact Studies for Site Development: A Recommended Practice*, Institute of Transportation Engineers, 1991.
2. *Trip Generation*, 5th Edition, Institute of Transportation Engineers, 1991.
3. *Travel Forecast Summary: 1987 Base Model - Los Angeles Regional Transportation Study (LARTS)*, California State Department of Transportation (Caltrans), February 1990.
4. *Traffic Study Guidelines*, City of Los Angeles Department of Transportation (LADOT), July 1991.
5. *Traffic/Access Guidelines*, County of Los Angeles Department of Public Works.
6. *Building Better Communities*, Sourcebook, Coordinating Land Use and Transit Planning, American Public Transit Association.
7. *Design Guidelines for Bus Facilities*, Orange County Transit District, 2nd Edition, November 1987.
8. *Coordination of Transit and Project Development*, Orange County Transit District, 1988.
9. *Encouraging Public Transportation Through Effective Land Use Actions*, Municipality of Metropolitan Seattle, May 1987.

LETTER 3

County of Los Angeles Metropolitan Transportation Authority
Elizabeth Carvajal
Sr. Manager, Transportation Planning
Metro Development Review
One Gateway Plaza MS 99-23-4
Los Angeles, CA 90012-2952
(September 28, 2016)

Response 3-1

This comment provides an introduction to the comments contained in this letter. Responses to the comments contained in this letter are provided below in Responses to Comments 3-3 through 3-6.

Response 3-2

This comment provides a summary of the proposed improvements as discussed in the Chapter 2.0, Project Description, of the Draft EIR.

Response 3-3

This comment indicates the County should be aware of adjacent Metro Bus lines 550 and 205, and acknowledges that the Project would not result in any significant long-term impacts on public transit. The EIR describes these lines in the section titled Public Transit and Alternative Transportation Facilities in Section 4.L and Figure 4.L-2 showing Existing Transit Lines includes these along with others from Torrance, Gardena, and Carson serving the Project vicinity.

The comment further suggests that future Project-related construction be coordinated with Metro in order to minimize disruptions or other temporary effects on transit services and facilities in the Project area. As such, prior to implementation of future Project-related improvements that could potentially affect transit services or facilities in the Project area, the County Department of Public Works would coordinate construction activities with Metro. This comment does not raise any substantive issues regarding the analysis or conclusions presented in the Draft EIR, and thus no further responses is necessary.

Response 3-4

This comment suggests that the County consider the installation of pedestrian lighting, shade trees, enhanced crosswalks with ADA-compliant ramps, and other amenities along the primary building frontage to improve pedestrian safety and comfort to access bus stops as part of the development of the site. As discussed on pages 4.L-79 and 4.L-80 in Section 4.L, Transportation and Traffic, of the Draft EIR, the proposed improvements under the Master Plan Project would implement various pedestrian-related features and improve non-vehicular access throughout the Medical Center Campus, which is consistent with Metro's suggestions..

Response 3-5

This comment suggests that in order to provide safe and convenient connections for pedestrians, cyclists, and public transit patrons, the County should consider adding pedestrian crossings at Medical Center Campus entry points identified in Figure 2-9 of the Draft EIR that coincide with pedestrian circulation routes, which could include Normandie Avenue/Medical Foundation Drive, 220th Street/Research Park Drive, 220th Street/Meyler Street, Vermont Avenue/Parking Lot C driveway, or other locations. As discussed on page 4.L-80 in Section 4.L, Transportation and Traffic, of the Draft EIR, the proposed circulation improvements at the Medical Center Campus, both vehicular and non-vehicular, would be designed to provide separation between pedestrians/bicyclist and motor vehicles in order to minimize potential conflicts and associated hazards. As such, given implementation of Master Plan design principles and proposed circulation plan components, it is anticipated that vehicular circulation, bicycle and pedestrian safety, and both vehicular and non-vehicular access and circulation on-site would not only maintained but substantially improved relative to existing conditions as no unified, comprehensive circulation system currently exists on the Medical Center Campus. Furthermore, all access points and on-site circulation improvements, which could include pedestrian crossings and other pedestrian safety improvements at the various Medical Center Campus entry points as suggested by Metro, would be designed in accordance with County standards under the review of County staff. Further, if any of the locations noted in this comment are not controlled by existing or proposed signals, or are at locations where an existing signal would be removed, the frequency of signals in this area would reduce the need for mid-block crossings.

Response 3-6

This comment summarizes the State-mandated analysis requirements regarding the Congestion Management Program (CMP) and consultation with Caltrans. As discussed on pages 4.L-67 and 4.L-68 in Section 4.L of the Draft EIR, the Master Plan Project would not meet the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Accordingly, impacts to regional CMP transportation systems were determined in the Draft EIR to be less than significant. In addition, as suggested by the comment, the Draft EIR evaluated impacts to both CMP facilities (as noted above) and public transit services and facilities, as discussed on pages 4.L-79 and 4.L-80 of the Draft EIR. Therefore, the Draft EIR and the Project Traffic Study (included as Appendix I of the Draft EIR) adequately addressed impacts to CMP facilities and transit services. Caltrans has been consulted as well in the review process.

Response 3-7

Thank you for providing a contact for any follow-up questions. Metro indicates that it looks forward to seeing the Final EIR. As a responding public agency, Metro will receive a copy of responses to its comments in compliance with CEQA as well as instructions on accessing the Final EIR.

LETTER 4

COUNTY OF LOS ANGELES

DEPARTMENT OF PARKS AND RECREATION

"Parks Make Life Better!"

John Wicker, Director | Norma E. Garcia, Chief Deputy Director

September 26, 2016

Sent via e-mail: cnash@dpw.lacounty.gov

TO: Ms. Clarice Nash
Project Management Division
Department of Public Works

FROM: Kathline J. King, AICP
Chief of Planning

SUBJECT: **DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)**
HARBOR/UCLA MEDICAL CENTER MASTER PLAN

1

The proposed Draft EIR for the Harbor/UCLA Medical Center Master Plan has been reviewed for potential impacts on the facilities of the Department of Parks and Recreation (DPR). Please find our comments below:

2

Page No.	Edits/Comments/Questions
4.K.3-1	• DPR does not operate County beaches. The Los Angeles County Department of Beaches and Harbors is responsible for the operation and maintenance of County Beaches. • The source for the Countywide average of 3.3 acres of local parkland per 1,000 residents should be the Los Angeles Countywide Parks and Recreation Needs Assessment. The Parks Needs Assessment Final Report is available at this link: http://lacountyparkneeds.org/wp-content/uploads/2016/06/FinalReport.pdf
4.K.3-2	• It should be clarified that Park Learning Grove County Park is only open two hours a day during the week, from 2:30 to 4:30 pm (Monday through Friday). The park is closed on Saturdays, Sundays, and holidays. This arrangement is based on a Community Recreation Agreement with the Los Angeles Unified School District (LAUSD) for Meyler Street School. • The "new County neighborhood park" referenced on this page is not under construction yet. It is in the environmental review stage, i.e. an Initial Study/Mitigated Negative Declaration is being prepared for the project. Also, we want to clarify that the Los Angeles Neighborhood Land Trust (LANLT), an non-profit organization, will be developing the park. DPR will contribute Quimby (park) funds to assist in the development of this park, pending the approval of a park funding agreement. The park is anticipated to open in September 2018, and will be operated and maintained by DPR, pending the approval of a lease agreement by the Los Angeles County Board of Supervisors.

3

4.K.3-6	• Edit: "Pending approval of a lease agreements with the Del Amo Neighborhood Park LLC by the Los Angeles County Board of Supervisors."	4
4.K.3-9	• The parcel tax measure that will be on the November 2016 ballot should be referred to as "Measure A" (see http://file.lacounty.gov/SDSInter/dpr/249055_MeasureA-InformationSheet.pdf). • Please add a paragraph description for the Los Angeles Countywide Parks and Recreation Needs Assessment (http://lacountyparkneeds.org/final-report/) which was adopted by the Board of Supervisors on July 5, 2016.	5
4.K.3-13	• Please clarify that the new neighborhood park is anticipated to open in September 2018, and will be operated and maintained by DPR, pending the approval of a lease agreement by the Los Angeles County Board of Supervisors.	6
General Comment	• Given the lack of parkland in West Carson and limited availability of vacant land for new park development, would Harbor-UCLA Medical Center be interested in working with DPR to develop a project like the Martin Luther King, Jr. Fitness Garden (http://parks.lacounty.gov/wps/portal/dpr/Parks/Martin_Luther_King_Jr_Fitness_Park)? This garden complements the Martin Luther King, Jr. Center for Public Health building in Willowbrook, and offers a walking path and par course fitness equipment surrounded by beautiful flowers and shrubs. Please contact DPR if you would like to discuss this idea further.	7

Thank you for including this Department in the review of this project. If you have any questions, please contact Clement Lau of my staff at clau@parks.lacounty.gov or (213) 351-5117. 8

c: Parks and Recreation (C. Lau, J. Yom)

LETTER 4

County of Los Angeles Department of Parks and Recreation
Kathline J. King, AICP
Chief of Planning
Planning and Development Agency
510 South Vermont Avenue
Los Angeles, CA 90020-1975
(September 26, 2016)

Response 4-1

This comment provides an introduction to the comments contained in this letter. Responses to the comments contained in this letter are provided below in Responses to Comments 4-2 through 4-7.

Response 4-2

The document will be revised to reflect your comments that the Department of Parks and Recreation does not operate County beaches, and correcting the reference for the Countywide parkland-to-resident ratio on page 4.K.3-1 in Section 4.K.3, Parks and Recreation, of the Draft EIR . as shown in Chapter 3.0, Revisions, Clarifications and Corrections to the Draft EIR, of this Final EIR.

Response 4-3

The clarifications regarding the Park Learning Grove County Park's operating hours and, the comments regarding the construction and operation of the "new County neighborhood park" referenced on page 4.K.3-2 in Section 4.K.3 of the Draft EIR have been reviewed. These clarifications do not affect the analysis or conclusions presented in the Draft EIR regarding Project-related impacts to park and recreational facilities in the Project area.

Response 4-4

This comment provides clarifying edits for text on page 4.K.3-6 in Section 4.K.3 of the Draft EIR. The suggested edits have been made as shown in Chapter 3.0, Revisions, Clarifications and Corrections to the Draft EIR, of this Final EIR.

Response 4-5

This comment requests that additional information regarding Measure A, a parcel tax that will be on the November 2016 ballot, and the Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment, which was adopted by the Board of Supervisors on July 5, 2016, be provided for context on page 4.K.3-9 in Section 4.K.3 of the Draft EIR. The suggested edits have been made as shown in Chapter 3.0, Revisions, Clarifications and Corrections to the Draft EIR, of this Final EIR.

Response 4-6

This comment suggests that clarifying language be added to page 4.K.3-13 in Section 4.K.3 to state that the new neighborhood park is anticipated to open in September 2018, and will be operated and maintained by

DPR, pending the approval of a lease agreement by the Los Angeles County Board of Supervisors. The suggested edits have been made as shown in Chapter 3.0, Revisions, Clarifications and Corrections to the Draft EIR, of this Final EIR.

Response 4-7

This comment suggests that given the lack of parkland in West Carson and limited availability of vacant Comment land for new park development, the County Department of Public Works should consider working with DPR to develop a park facility similar to the existing Martin Luther King, Jr. Fitness Garden. While the ultimate provision of such a facility within the Medical Center Campus may not be precluded by future development under the Master Plan Project, implementation of such improvements has no effect on the analysis and conclusions regarding Project-related impacts to parks and recreational facilities presented in the Draft EIR.

Response 4-8

This comment provides a conclusion to the comments contained in this letter. Responses to the comments contained in this letter are provided above in Responses to Comments 4-2 through 4-7.

LETTER 5

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

September 12, 2016

Clarice Nash, Project Manager
Los Angeles County Department of Public Works
Project Management Division I
900 S. Fremont Avenue
Alhambra, CA 91803

Dear Ms. Nash:

NOTICE OF AVAILABILITY AND PUBLIC MEETING, DRAFT ENVIRONMENTAL IMPACT REPORT, "HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT," TO CONSIDER CURRENT CONDITIONS AND FUTURE NEEDS OF THE MEDICAL CENTER HOSPITAL AND CLINICS, 1000 WEST CARSON STREET, TORRANCE, FFER 201600140

The Notice of Availability and Public Meeting has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department.

The following are their comments:

PLANNING DIVISION:

1. In Table ES 1: Summary of Project Impacts, Project Design Features, and Mitigation Measures, 4.K.1 Fire Protection and Emergency Services, Mitigation Measure MM Fire-2 should be deleted. The Developer Fee Program is only in effect in urban expansion areas of the County and therefore would not apply to the proposed project or surrounding area.

   All other references within the document to Mitigation Measure FIRE-2 should

1

likewise be deleted. 1 CONT

LAND DEVELOPMENT UNIT:

The Land Development Unit does not have any additional information at this time. Land Development Unit comments are addressed in the document, and in the "appendix." If you have any questions regarding the report, please contact FPEA Wally Collins at (323) 890-4243 or at Wally.Collins@fire.lacounty.gov. 2

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS: 3

The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

HEALTH HAZARDOUS MATERIALS DIVISION: 4

The Health Hazardous Materials Division of the Los Angeles County Fire Department has no comment regarding the project at this time.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

KEVIN T. JOHNSON, ACTING CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

KTJ:cc

LETTER 5

County of Los Angeles Fire Department
Kevin T. Johnson
Acting Chief, Forestry Division
Prevention Services Bureau
1320 North Eastern Avenue
Los Angeles, CA 90063-3294
(September 12, 2016)

Response 5-1

This comment is an introduction to the comment provided by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. Responses to these comments are provided below in this Response and Responses to Comments 6-2 through 6-4.

This comment also recommends deleting Mitigation Measure FIRE-2 regarding the Developer Fee Program because it would not apply to the Project location. This revision has been incorporated into Chapter 3.0, Revisions, Clarifications and Corrections to the Draft EIR, in this Final EIR.

Response 5-2

This comment confirms that the Land Development Unit has no additional information and comments regarding the Draft EIR at this time.

Response 5-3

The Forestry Division outlines its statutory responsibilities and requests that any environmental impacts be addressed in the areas of erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. The EIR addresses these areas. Erosion control is addressed in Section 4.G, Hydrology and Water Quality, of the Draft EIR. Compliance with the Construction General Permit, Stormwater Pollution Prevention Plan (SWPPP), and National Pollutant Discharge Elimination System (NPDES) requirements that require construction phase Best Management Practices (BMPs) are considered protective of water quality during construction and would, therefore, prevent a substantial violation of water quality standards and minimize the potential for contributing additional sources of polluted runoff during construction of the Project. These existing regulations, programs, and policies would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. Standard construction phase BMPs required for compliance with NPDES requirements would decrease the potential for any significant erosion or sedimentation from soil disturbance associated with construction. Any potential impacts on water quality arising from erosion and sedimentation are expected to be localized and temporary (i.e. during construction). NPDES compliance would require contractors to implement measures to minimize and contain erosion and sedimentation and be required to submit a grading plan to the County for approval prior to the commencement of any construction activities. During construction, the Project would be required to adhere to the NPDES Construction General Permit to control erosion and protect water quality. Project buildout would not substantially alter the existing drainage

patterns on the Harbor-UCLA Campus, Project area, or receiving waters, or result in substantial erosion or siltation on- or off-site; therefore, there will be no significant operational impacts regarding erosion.

Watershed management is addressed in Section 4.G, Hydrology and Water Quality, of the Draft EIR. As required by the California Water Code, the Los Angeles Regional Water Quality Control Board (LARWQCB) has adopted the "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (LA Basin Plan). Specifically, the LA Basin Plan designates beneficial uses for surface water and groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's Antidegradation policy, and describes implementation programs to protect all waters in the Los Angeles region. In addition, the LA Basin Plan incorporates all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. In addition to the LA Basin Plan, the Project would integrate Low-Impact Development (LID) to conserve watershed resources, reduce impacts of development, and use innovative management practices to meet the stormwater objectives. LID would be implemented along with watershed planning to provide comprehensive watershed management for the Project.

Rare and endangered species, as well as vegetation, are addressed in Section IV, Biological Resources, of the Initial Study Attachment B, Explanation of Checklist Determinations, provided in Attachment A of the Draft EIR. As the Medical Center Campus is located in an urbanized area surrounded by residential uses and commercial development, the Project Site does not contain any rare and endangered species. The Project Site also does not contain any habitats for sensitive natural communities as indicated in the County or in regulations by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. The Project is not located within a Significant Ecological Area ("SEA") or coastal resource area. The Project Site does not support any candidate, sensitive, or special-status wildlife species. No locally protected biological resources, such as Wildflower Reserve Areas, SEAs, sensitive environmental resource areas ("SERAs"), or oak trees protected under the Oak Tree Ordinance (Chapter 22.56 – Part 16) in the County Code, exist on-site.

Fire zones and areas are addressed in Section 4.K.1, Fire Services, of the Draft EIR. Based on Figure 12.5 (Fire Hazard Severity Zones Policy Map) in the County's 2035 General Plan Update Safety Element, the Project Site is not located within a designated Wildland Fire Hazard Area. Therefore, the Project Site is not subject to wildland fires and has no need for fuel modification measures.

Archaeological and cultural resources are addressed in Section V, Cultural Resources, of the Initial Study Attachment B, Explanation of Checklist Determinations, provided in Attachment A of the Draft EIR. The Medical Campus is located within a highly urbanized area and has been subject to physical disruption over the course of several decades since it was first developed in 1943. For this reason, it is likely that any resources that may have been present on the property have been disturbed or removed. Nonetheless, previously undiscovered buried archaeological resources could still exist on the property. Implementation of the Project would require grading, excavation, and trenching into native soils, which could result in direct impacts to undiscovered resources. Mitigation Measures CULT-1, CULT-2, and CULT-3 are therefore recommended to ensure that impacts on any previously unknown archaeological resources discovered during Project construction would remain less than significant. Operations during and following Project buildout would have no impact on archaeological resources. A comprehensive Historic Resource Report was prepared by GPA Consulting for the entire Medical Campus and is included as Appendix A of the Initial Study. The Medical Campus has not been evaluated or identified as significant in any previous historic resource

surveys, nor is it currently designated a landmark at the national, state, or local levels. The property is lacking in integrity – the ability to convey its significance – because there are not enough buildings remaining from the period of significance; the remaining buildings have been altered to the point that they no longer contribute to an historic district; and enough new buildings have been added that the property no longer represents an intact historic environment. With respect to the individual eligibility of buildings, while some buildings retain integrity from the period of significance, they do not effectively convey the history or significance of the Station Hospital on their own. As such, the property is not eligible for listing in the National Register or the California Register as a historic district, and none of the buildings are individually eligible for listing in the National Register or the California Register.

Response 5-4

This comment confirms that the Health Hazardous Materials Division has no additional comments regarding the Draft EIR. This comment also provides a general conclusion to the comments provided in this letter. Responses to these comments are provided above in this Response and Responses to Comments 6-1 through 6-3.

LETTER 6

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

September 30, 2016

Ref. Doc. No.: 3846822

Ms. Clarice Nash, Project Manager
County of Los Angeles
Department of Public Works
Project Management Division I
900 South Fremont Avenue
Alhambra, CA 91803-1331

Dear Ms. Nash:

Response to the DEIR for the Harbor-UCLA Medical Center Campus Master Plan Project

1

The County Sanitation Districts of Los Angeles County (Districts) received a Draft Environmental Impact Report (DEIR) for the subject project on August 17, 2016. The proposed project is located within the jurisdictional boundaries of District No. 8. We offer the following comments:

4. ENVIRONMENTAL IMPACT ANALYSIS M. UTILITIES 1. WATER SUPPLY

2

1. c. Project Characteristics or Design Features, *page 4.M.1-38*, paragraph under the subtitle – The paragraph details the total facilities area planned for year 2030 as 2,457,355 square feet, increasing building space by a net total of 1,178,071 square feet. After the proposed demolition of 759,649 square feet, new construction would be a total 1,937,720 square feet.

4. ENVIRONMENTAL IMPACT ANALYSIS M. UTILITIES 2. WASTEWATER

3

1. (3) Wastewater Conveyance Facilities, *page 4.M.2-2*, paragraph under the subtitle – A series of trunk sewers are identified in the information. The following is a list of the Districts' trunk sewers within that information and their respective service availability.

Name	Location	Size (dia.)*	Trunk Sewer Availability
JOA–1A District 5 Interceptor Relief Trunk Sewer	Along the east side of Normandie Avenue, west of the project site.	90	In service
JOA–1A District 5 Interceptor Trunk Sewer	Along the west side of Normandie Avenue, west of the project site. Continuing eastbound through a private right of way along the southern portion of the project site.	63	Out of service
Joint Outfall D Unit 8 Trunk Sewer	In a vacated public street, near the center of the project site.	54	In service
Joint Outfall D Unit 1D Trunk Sewer	Along the west side of Vermont Avenue, east of the project site.	66	Out of service
Joint Outfall D Unit 1D Replacement Trunk Sewer	Along the east side of Vermont Avenue, east of the project site.	78	In service
Joint Outfall D Unit 1D Trunk Sewer	Along the south side of Carson Street east of Budlong Avenue.	57**	In service

*diameter in inches
**diameter of trunk sewer liner

To obtain copies of as-built drawings of the Districts' facilities within the project limits, please contact the Districts' Engineering Counter at engineeringcounter@lacsd.org or call (562) 908-4288, extension 1205. The eight-inch sewer described in the paragraph is maintained by Department of Public Works Consolidated Sewer and Maintenance District. 3 CONT

2. (3) Wastewater Conveyance Facilities, *page 4.M.2-2*, first paragraph top of page – Direct connections to a Districts' trunk sewer will require submittal of Sewer Plans for review and approval by the Districts. For additional information, please contact the Districts' Engineering Counter at (562) 908-4288, extension 1205. 4

3. c. Project Characteristics, *page 4.M.2-7*, first paragraph – A New Hospital Tower and other ancillary buildings related to the tower are described as part of the proposed project. The proposed project may require an amendment to a Districts' permit for Industrial Wastewater Discharge. Project developers should contact the Districts' Industrial Waste Section at (562) 908-4288, extension 2900, in order to reach a determination on this matter. If this update is necessary, project developers will be required to forward copies of final plans and supporting information for the proposed project to the Districts for review and approval before beginning project construction. 5

4. Table 4.M.2-2, *page 4.M.2-4*, Wastewater Generation During Operations –The expected increase in average wastewater flow derived from the proposed project breakdown described in the table is 176,565 gallons per day, after all structures on the project site are demolished. For a copy of the Districts' average wastewater generation factors, go to www lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link. 6

5. All other information concerning Districts' facilities and sewerage service contained in the document is current. 7

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: M. Sullivan
M. Tatalovich

LETTER 6

County Sanitation Districts of Los Angeles County
Adriana Raza, Customer Service Specialist
Facilities Planning Department
1955 Workman Mill Road
Whittier, CA 90601-1400
(September 30, 2016)

Response 6-1

This comment acknowledges receipt of the Draft EIR on August 17, 2016. This comment also provides an introduction to the comments contained in this letter. Responses to the comments contained in this letter are provided below in Responses to Comments 6-2 through 6-6.

Response 6-2

This comment provides a summary of information provided in Chapter 2.0, Project Description, of the Draft EIR with respect the Project increase in building space.

Response 6-3

This comment provides the name, location, size and availability status of various County Sanitation Districts-owned and operated sewer facilities in the Project area, which expands upon the facilities discussed on page 4.M.2-2 in Section 4.M.2, Wastewater, of the Draft EIR and provides the contact information for obtaining as built drawings of District facilities. The comment also clarifies that the referenced eight inch sewer described in the EIR is maintained by the County Consolidated Sewer and Maintenance District. Although this comment provides additional information regarding sewer facilities in the area, it does not warrant any changes to the analysis or conclusions presented in the Draft EIR regarding Project-related wastewater system analysis which concluded there are no capacity issues for the proposed Project.

Response 6-4

This comment states that future connections to a Districts' trunk sewer will require submittal of Sewer Plans for review and approval by the Districts. It is acknowledged that once detailed building plans for future improvements on the Medical Center Campus are prepared, associated sewer plans would be provided to the Districts for review and approval prior to issuance of sewer connections permits.

Response 6-5

This comment indicates that the various new buildings proposed for development on the Medical Center Campus may require an amendment to a Districts' permit for Industrial Wastewater Discharge and provides follow- up contact information. The Districts suggest that project managers for the Master Plan Project should contact the Districts' Industrial Waste Section in order to reach a determination regarding the need to amend an Industrial Waste Permit. If this update is necessary, copies of final plans and supporting information for the proposed improvements approvals will be required before beginning Project construction. The Project would comply with this requirement, as applicable.

Response 6-6

As acknowledged in this comment, the projected increase in wastewater generation resulting from Project implementation is based on generation factors provided in Table 1, Loadings for Each Class of Land Use, projected wastewater increases are consistent with the generation factors prescribed by the Districts for estimating future wastewater flows from future development.

Response 6-7

Thank you for your comment which acknowledges that, as clarified, all other information in the EIR concerning Districts' facilities is current, and for providing contact information.

LETTER 7

Clarice Nash

From: Zak gonzalez II <zakgII@hotmail.com>
Sent: Monday, October 03, 2016 4:39 PM
To: Clarice Nash
Cc: John Lodge; Zak Gonzalez II
Subject: Fw: Draft EIR Harbor-UCLA Medical Center, 1000 W. Carson Street

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From: Zak gonzalez II
Sent: Monday, October 3, 2016 4:36 PM
To: cnash@dpw.lacounty
Cc: jlodge@dpw.lacounty.gov; zgonzale@carson.ca.us
Subject: Draft EIR Harbor-UCLA Medical Center, 1000 W. Carson Street

October 3, 2016

Ms. Clarice Nash, Project Manager

Re: City of Carson, Planning Division comments on Draft EIR for the Harbor-UCLA Medical Center Campus Master Plan Project

The Carson Planning Division provides the following comments:

- The Harbor-UCLA Medical Center (Campus) improvements would add approximately 1,178,071-squre-feet to an existing 1,279,284-square-foot medical facility; 1
- Campus improvements would increase facility parking from 3,186 spaces to 4,240 spaces;
- Campus employees would increase from 5,464 to 7,494 employees;
- The Draft EIR has identified potential significant adverse impacts to the Caltrans I-110 facility due to expected increases in traffic trips resulting from Campus improvements and has offered a "fair-share" contribution to Caltrans to offset increases in trips; 2
- However, the Draft EIR has not identified the same significant adverse impacts to Carson Street within the City of Carson due to the same expected increases in traffic trips. Furthermore, the Draft EIR has made no reference to a "fair-share" contribution to the City of Carson for potential significant adverse impacts on Carson Street due to expected increases in traffic trips resulting from the culminating completion of the Campus facility additions by 2030; 3
- The Harbor-UCLA Medical Center Campus is currently impacted by a large population of "homeless people/families" that live in front and immediately around the existing Campus facility. However the Draft EIR made no reference to how coordination of "homeless assistance programs" will be implemented with State and County resources to decrease the existing and potential increased homeless population that will be attracted to the new Campus improvements. 4

Thanks for the opportunity to comment on the Draft EIR for the Harbor-UCLA Medical Center Campus project. 5

Sincerely,
Zak Gonzalez II, Associate Planner
701 E. Carson Street, Carson, California, 90745
(310) 952-1700 ext. 1301/ (559) 475-4657 (cell-phone)

LETTER 7

City of Carson
Zak Gonzalez II, Associate Planner
701 E. Carson Street
Carson, CA 90745
(October 3, 2016)

Response 7-1

This comment summarizes data on Project expansion based on the EIR Section 2.0 Project Description. Responses to the comments contained in this letter are provided below in Responses to Comments 7-2 and 7-3.

Response 7-2

This comment summarizes the Draft EIR's findings regarding impacts to the I-110 ramps at Carson Street, which were determined to be significant and unavoidable due to the fact that recommended improvements prescribed by Mitigation Measure TRAF-1, are under the control of Caltrans and thus their implementation cannot be guaranteed.

Response 7-3

This comment states that the Draft EIR did not identify the same significant traffic impacts to Carson Street east of the I-110 Freeway in the City of Carson, and also does not provide any fair-share payments for such impacts. As discussed in Section 4.L, Transportation and Traffic, of the Draft EIR, the Traffic Study, included as Appendix I of the Draft EIR, did not identify significant traffic impacts in the City of Carson along Carson Street. Project-related traffic did not trigger significant delays at any intersections in the City of Carson, including those along Carson Street. Because the Project would not result in potentially significant traffic impacts in the City of Carson, no fair-share contributions or other mitigation measures are necessary or proposed.

Response 7-4

The commenter indicate that the Draft EIR did not address how homeless families currently in front of or around the existing campus will be assisted by State and County resources to decrease this population that will be attracted to the new campus improvements. Purely social effects of a project are beyond the scope of analysis under the California Environmental Quality Act, which focuses on the impacts of the Project on the physical environment. Nonetheless, this comment will be transmitted to the Board of Supervisors prior to their consideration of the Project approval. Independent of the EIR, the County of Los Angeles continues to address improving services to the homeless.

Response7-5

This comment expresses appreciation for the opportunity to comment on the Project.

LETTER 8

Clarice Nash

From: Linda Ko <lindako412@gmail.com>
Sent: Sunday, September 11, 2016 4:28 PM
To: Clarice Nash
Subject: neighbor of Harbor-UCLA Medical Center

Dear Clarice Nash,

Thank you for the notice of the Harbor-UCLA Medical Center Campus Master Plan Project. I could not find information regarding the hazards/hazardous materials to be used on the website provided. 1

Will these materials be exposed to neighbors living within a certain vicinity of the Harbor-UCLA Medical Center Campus? If so, what are the potential consequences?

Thank you for your time.

Best,
Linda Ko

LETTER 8

Linda Ko
(September 11, 2016)

Response 8-1

This comment requests information regarding hazards/hazardous materials to be used. Hazards/hazardous materials are discussed in Section 4.F, Hazards and Hazardous Materials, of the Draft EIR. As stated therein, small quantities of hazardous substances are currently used on the portion of the Project Site occupied by the Harbor-UCLA Medical Center. These substances include common hospital materials (e.g. rubbing alcohol, carbon dioxide cylinders, needles), central plant secondary containment necessities (e.g. anti-foam, bleach, pressure oil), and other cleaning agents (e.g. bleach, clout drums, phosphoric acid drums). Construction also would involve the short-term use and disposal of hazardous substances such as paint, adhesives, surface coatings, finishing materials, and cleaning agents during building finishing activities. The use and disposal of such materials would take place in accordance with applicable federal, state, and local regulations governing health and safety and such activities are not anticipated to create a significant hazard to the public or environment. Project operations would involve the use and storage of limited quantities of hazardous materials such as cleaning solvents, painting supplies, and pesticides used for landscaping. Additionally, waste generated by general hospital operations typically includes regulated medical waste, "sharps" containers, pharmaceutical waste, chemo waste, and pathological waste, and the nature of future hospital operations on the Campus will not significantly differ from existing daily operations. Furthermore, future expanded LA BioMed operations and operation of the proposed Biotech Science Campus on the Harbor-UCLA Campus would involve the use of limited quantities of potentially hazardous materials typical of those used in biomedical research facilities.

All potentially hazardous materials and waste handled on the Harbor-UCLA Campus would be used, stored, and disposed of in accordance with manufacturer instructions and in a regulatory setting with applicable federal, state, and local health and safety regulations which are discussed in the Draft EIR on pages 4.F-10 through 4.F-13 in Section 4.F, Hazards and Hazardous Materials With implementation of Mitigation Measure HAZ-1 and HAZ-2, construction activities regarding hazards and hazardous materials will be less than significant.

Neighbors living within a certain vicinity of the Harbor-UCLA Medical Center Campus will not be exposed to hazards and hazardous materials as a result of Project implementation.

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3. Revisions, Clarifications and Corrections to the Draft EIR

3.0 REVISIONS, CLARIFICATIONS AND CORRECTIONS TO THE DRAFT EIR

In accordance with the CEQA Guidelines § 15132 (a), this Chapter of the Final EIR provides changes to the Draft EIR that have been made to clarify, correct, or supplement the information provided in that document. These changes and additions are due to recognition of inadvertent errors or omissions, and to respond to comments received on the Draft EIR during the public review period. The changes described in this Chapter do not add significant new information to the Draft EIR that would require recirculation of the Draft EIR. More specifically, CEQA requires recirculation of a Draft EIR only when "significant new information" is added to a Draft EIR after public notice of the availability of the Draft EIR has occurred (refer to California Public Resources Code Section 21092.1 and CEQA Guidelines Section 15088.5), but before the EIR is certified. Section 15088.5 of the CEQA Guidelines specifically states: "New information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. 'Significant new information' requiring recirculation includes, for example, a disclosure showing that:

- A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted to reduce the impact to a level of insignificance.
- A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.
- The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded."

CEQA Guidelines Section 15088.5 also provides that "[re]circulation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR... A decision not to recirculate an EIR must be supported by substantial evidence in the administrative record."

As demonstrated in this Final EIR, the changes presented in this Chapter do not constitute new significant information warranting recirculation of the Draft EIR as set forth in CEQA Guidelines Section 15088.5. Rather, the Draft EIR is comprehensive and has been prepared in accordance with CEQA.

Changes to the Draft EIR are indicated below under the respective EIR section heading, page number, and paragraph. Paragraph reference is to the first full paragraph on the page. Deletions are shown with ~~strikethrough~~ and additions are shown with <u>double underline</u>.

Executive Summary

1. Page ES-11, modify text in the last bullet in the second column under Project Design Features (PDF-) as follows:

- To encourage carpooling and the use of electric vehicles by project employees and visitors, the ~~Applicant~~County shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.

2. Page ES-13, modify text in the second bullet in the second column under Project Design Features (PDF-) as follows:

- The ~~Applicant~~County shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits.

3. Page ES-14, modify text in the second bullet in the second column under Project Design Features (PDF-) as follows:

- The ~~Applicant~~County shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust.

4. Page ES-43, modify text for PDF-FIRE-1 in the second column under Project Design Features (PDF-) as follows:

PDF-FIRE-1: The ~~applicants,~~ designers, construction contractors, and tenants for/of development under the Project will implement the conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, which are included in Appendix J-1, Fire Department Correspondence, of this Draft EIR.

5. Page ES-43, delete Mitigation Measure MM-FIRE-2 in the third column under Mitigation Measures (MM-) as follows:

~~**MM FIRE-2:** Prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee.~~

6. Page ES-50, modify Mitigation Measure MM-TRAF-1 in the third column under Mitigation Measures (MM-) as follows:

MM TRAF-1: I-110 Southbound Ramps & Carson Street (Intersection #9) – ~~The~~ Subject to approval by Caltrans, the existing southbound approach on the Interstate I-110 off-ramp shall be restriped to convert the existing left-turn lane to a left-/right-turn lane.

7. Page ES-50, modify Mitigation Measure MM-TRAF-2 in the third column under Mitigation Measures (MM-) as follows:

MM TRAF-2: 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) – ~~An~~ Subject to approval by Caltrans and the City of Carson, an additional northbound through lane shall be striped and the existing through lane shall be restriped as a through/right-turn lane. The eastbound approach shall be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane.

8. Page ES-50, modify Mitigation Measure MM-TRAF-3 in the third column under Mitigation Measures (MM-) as follows:

MM TRAF-3: I-110 Southbound Ramps & 223rd Street (Intersection #20) - ~~The~~ Subject to approval by Caltrans, the southbound approach would be restriped from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach shall be restriped to change the existing right-turn lane to a through/right-turn lane. Under this mitigation, parking shall be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane.

9. Page ES-51, modify text in the in the third column under Mitigation Measures (MM-) as follows:

Not Applicable

~~**MM TRAF-4:** The developer shall contribute a fair share contribution to Caltrans toward an analysis or improvements on I-110 (Harbor Freeway) in the Project vicinity to offset the additional Project-generated trips that would result on the freeway mainline segments and that would pass through the affected Caltrans intersections.~~

4.B Air Quality

1. Page 4.B-37, modify text in the third bullet from the top of the page as follows:

- To encourage carpooling and the use of electric vehicles by project employees and visitors, the ~~Applicant~~ County shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.

2. Page 4.B-37, modify text in the last bullet on the page as follows:

- The ~~Applicant~~ County shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits.

3. Page 4.B-38, modify text in the second to last bullet on the page as follows:

- The ~~Applicant~~ County shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust.

4. Page 4.B-50, modify text in the first paragraph under Cumulative Impacts as follows:

There are a number of related projects in the Project area that have not yet been built or are currently under construction. Since the ~~Applicant~~ County has no control over the timing or sequencing of the related projects, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be speculative. For this reason, the SCAQMD's methodology to assess a project's cumulative impact differs from the cumulative impacts methodology employed elsewhere in this Draft EIR.

4.K.1 Fire Protection and Emergency Services

1. Page 4.K.1-14, modify text in the first paragraph on the page as follows:

The Project would increase the net floor area, employee population, and annual patient visits at the Project Site by 48 percent (1,178,071 sf), 37 percent (2,030 employees), and 34 percent (185,745 patient visits), respectively. These increases could potentially result in an increase in calls for LACFD fire protection and EMS service from the Project Site. However, several factors would minimize any such increase. First, because the Project would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, calls for fire protection service resulting from dangerous or flammable conditions would be expected to decrease. Second, because a portion of the new on-site employees would be expected to be derived from the existing local labor pool, and because patients visiting the Project would already reside in the area, many of the additional employees and most if not all of the additional patients already generate a demand for service from LACFD Fire Stations 36 and 127. Third, the Project Site is already fully developed and already generates service calls from LACFD such that the Project would not generate service demand in an area where service demand does not already exist. Fourth, the Project would include an increase in hospital and other medical uses, such that it is reasonable to assume that a portion of the on-site EMS needs under the Project would be provided by the proposed uses themselves rather than be provided by LACFD. ~~Fifth, per Mitigation Measure FIRE-2, the Project would pay the LACFD Developer Fee which would help pay for any new LACFD equipment/personnel required at LACFD Station 36 to serve the Project.~~ Lastly, the LACFD did not identify the need for new or physically altered fire stations associated with the Project in its comments on the Project's Notice of Preparation or other LACFD correspondence included in Appendix G-1 of this Draft EIR. Therefore, with compliance applicable County Code requirements and implementation of PDF-FIRE 1 ~~and Mitigation Measure FIRE-2~~, Project operation would not be expected to increase calls for LACFD fire protection and EMS service that would require new or physically altered fire stations, and the impact would be less than significant.

2. Page 4.K.1-11, modify text for PDF-FIRE-1 under Project Design Features, as follows:

PDF-FIRE-1: The ~~applicants,~~ designers, construction contractors, and tenants for/of development under the Project will implement the conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, which are included in Appendix G-1, *Fire Department Correspondence*, of this Draft EIR.

4. Page 4.K.1-13, modify text in the last paragraph on the page as follows:

The Project would be subject to the requirements of the County Code (e.g., Building Code, Fire Code, Utilities Code, and Subdivision Code) for new construction that address structural design, building materials, site

access, fire lanes, fire flow requirements, automatic sprinkler systems, alarms, and smoke detectors. Per PDF-FIRE-1, the Project would also implement the LACFD fire protection and EMS conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, including but not limited to: provision multiple ingress/egress for emergency response vehicles; provision of Fire Apparatus Access Roads extending to within 150 feet of all structures; provision of the LACFD-specified fire flow; provision of fire hydrants every 300 feet and no portion of a building exceeding 400 feet from a fire hydrant; and provision of fire sprinklers in all buildings. In addition, the LACFD would review and approve all Project plans at the building permit and plan check phases of the Project to ensure compliance with applicable Fire Code requirements, thereby minimizing the risk of increased operation fire safety hazards. Furthermore, the ~~Applicant~~ County would be required to submit an Emergency Response Plan for review and approval by LACFD to include, but not be limited to, mapping of site access and emergency exits, evacuation routes for vehicles and pedestrians, and locations of the nearest hospitals and fire stations. Finally, because the Project would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, fire safety at the Project Site would be improved. Therefore, with compliance applicable County Code requirements and implementation of Project Design Feature PDF-FIRE-1, Project operation would not have fire safety issues that would require the construction of new or physically altered fire stations, and the impact would be less than significant.

4. Page 4.K.1-17, modify text under heading 4, Mitigation Measures, as follows:

In order to reduce impacts related to fire protection and EMS to less than significant, the following mitigation measures are required:

Mitigation Measure FIRE-1: The Project construction contractors shall regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times.

~~**Mitigation Measure FIRE-2:** Prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee, as applicable.~~

4.K.3 Parks and Recreation

1. Page 4.K.3-1, footnote 2 at the bottom of the page is revised as follows:

[2] ~~*Clement Lau, Department Facilities Planner II, LACDPR, e-mail dated February 22, 2016 and included in Appendix G-3 of this Draft EIR.*~~ *County of Los Angeles. Los Angeles Countywide Parks and Recreation Needs Assessment. http://lacountyparkneeds.org/wp-content/uploads/2016/06/FinalReport.pdf*

2. Page 4.K.3-5, modify footnote b in Table 4.K.3-1, Public Parks and Recreation Facilities in the Project Vicinity, as follows:

[b] *Pending approval of a lease agreement~~s~~ with the Del Amo Neighborhood Park LLC by the Los Angeles County Board of Supervisors.*

3. Page 4.K.3-9, add the following text following subheading (c), Los Angeles County Parks Proposition A:

(d) Los Angeles County Measure A

As discussed above, Los Angeles County communities for the past 20 years have relied on local, voter-approved funding from the Los Angeles County Safe Neighborhood Parks Acts of 1992 and 1996 (Proposition A) to protect and maintain neighborhood parks, outdoor areas and water resources. However, funding from the 1992 Proposition A ended in 2015 and funding from the 1996 Proposition will end in 2019. The Los Angeles County Safe, Clean Neighborhood Parks and Beaches Measure of 2016 (Measure A), which will be on the ballot in November 2016, asks voters to continue their support for local parks, beaches, open space, and water resources by approving an annual parcel tax of 1.5 cents per square foot of development.

If approved, the estimated tax for the owner of a 1,500 square foot home will be $22.50 per year, and will be included on the annual property tax bill. Generating approximately $94 million per year for local parks, beaches, and open space areas, Measure A will replace expiring dedicated funding from the voter-approved Propositions A of 1992 and 1996. Measure A was developed with extensive stakeholder input from throughout Los Angeles County and designed to meet the Countywide Comprehensive Parks & Recreation Needs Assessment of 2016 (see discussion below). The Needs Assessment was an 18-month process which provided detailed information from all 88 cities and unincorporated areas within Los Angeles County about the quality of their local parks, their current access to parks and recreation facilities and overall park needs, including public meetings and project lists developed and prioritized by members of each community.

(e) Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment

In March 2015, the Los Angeles County Board of Supervisors approved a motion to initiate the Countywide Comprehensive Parks and Recreation Needs Assessment. This represented an unprecedented effort to document existing parks and recreation facilities in cities and unincorporated communities and to use these data to determine the scope, scale, and location of park need in Los Angeles County. The Parks Needs Assessment will help local officials, park agencies, and residents understand the future steps that need to be taken to ensure all communities have adequate access to thriving parks. Park projects in Los Angeles County are currently funded in part by Proposition A, the Safe Neighborhoods Park Tax that is set to expire in 2019. Once this tax sunsets, funding for park projects will be greatly reduced. The results of the Parks Needs Assessment will help inform planning and decision-making regarding future funding. In initiating the Parks Needs Assessment, the Board of Supervisors has affirmed the importance of parks as essential infrastructure in the County. Healthy, safe communities have thriving parks that contribute to public health and well-being, create a sense of place, increase community cohesion, improve the environment, and boost the economy. The Parks Needs Assessment proposes a new way to understand and think about parks, recreation, and open space by: (1) Considering parks as key infrastructure needed to maintain and improve the quality of life for all County residents; (2) Using a new series of metrics to determine park need; (3) Supporting a need-based allocation of funding for parks and recreation; and (4) Emphasizing both community priorities and deferred maintenance projects.

4. Page 4.K.3-13, modify text in the second paragraph under subheading e., Cumulative Impacts, as follows:

The development of the 17 related projects within a two-mile radius of the Project Site that are identified in Table 4.K.3-3, along with the proposed Project, would increase the demand for public parks and recreational facilities from the County and the Cities of Los Angeles, Carson and Torrance. However, residential subdivisions in the County and City of Los Angeles are required to dedicate parkland or pay in-lieu fees to serve their respective populations, so that any of the 17 related projects that represent residential subdivisions would not be expected to contribute to the cumulative demand for public parks and recreation facilities. Furthermore, non-residential Projects, such as the proposed Project and roughly half of the related projects, generate an indirect rather than a direct demand for parks and recreational facilities and typically provide on-site parks and recreational facilities to help meet this indirect demand. In addition, the Project and the 17 related Projects would pay property and other taxes and fees which could be used by the County and the Cities of Los Angeles, Carson and Torrance to develop new parks, and voters have approved propositions and bonds (for example, Los Angeles County Proposition A), and potentially Measure A on the November 2016 ballot, to help fund new park development. Furthermore, pending approval of lease agreements with the Del Amo Neighborhood Park LLC and the Los Angeles County Board of Supervisors, the County will ~~shortly~~ be opening a new Neighborhood Park at 1000 W. 204th Street in Carson to serve the West Carson community, anticipated in September 2018, which would be operated and maintained by DPR and would help serve the Project and related projects. Lastly, as indicated in the analysis in Subsection d, *Project Impacts*, above, the Project would not be expected to generate a substantial demand for public parks and recreational facilities for several reasons, such that it would not be expected to contribute substantially to cumulative demand for public parks and recreational facilities. For all these reasons, cumulative parks and recreation impacts would be less than significant.

4.L Transportation and Traffic

1. Page 4.L-84, modify text in Mitigation Measure TRAF-1 as follows:

Mitigation Measure TRAF-1: I-110 Southbound Ramps & Carson Street (Intersection #9) - ~~The~~ Subject to approval by Caltrans, the existing southbound approach on the Interstate I-110 off-ramp shall be restriped to convert the existing left-turn lane to a left-/right-turn lane.

2. Page 4.L-84, modify text in Mitigation Measure TRAF-2 as follows:

Mitigation Measure TRAF-2: 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) – ~~An~~ Subject to approval by Caltrans and the City of Carson, an additional northbound through lane shall be striped and the existing through lane shall be restriped as a through/right-turn lane. The eastbound approach shall be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane.

3. Page 4.L-85, modify text in Mitigation Measure TRAF-3 as follows:

Mitigation Measure TRAF-3: I-110 Southbound Ramps & 223rd Street (Intersection #20) - ~~The~~ Subject to approval by Caltrans, the southbound approach would be restriped from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach shall be restriped to change the existing right-turn lane to a through/right-turn lane. Under this

mitigation, parking shall be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane.

4. Page 4.L-85, modify text under subheading (3), Caltrans Facilities, as follows:

(a) Freeway Mainlines and Intersections (Threshold TRAF-4)

Significant impacts have been identified with regard to freeway segments and intersections under Caltrans jurisdiction. ~~As such, mitigation measures are recommended.~~ Although the Project would increase traffic on the freeway mainline segments, in light of the nature of regional nature of the freeway system, improvements to Caltrans freeway facilities tend to be beyond the feasibility of any individual Project to implement. Thus, Caltrans allows development projects to pay a fair share or an equitable percentage contribution toward the estimated cost of an improvement. However, given the lack of an established program to fund such future improvements, as well as other uncertainties regarding the timing and nature of such improvements, no mitigation regarding fair share payments is proposed for the Project.

~~The following mitigation measure is recommended to address the potentially significant impacts that were identified on the freeway mainline segments and the intersections that are under Caltrans' jurisdiction:~~

> ~~**Mitigation Measure TRAF-4:** The developer shall contribute a fair share contribution to Caltrans toward an analysis or improvements on I-110 (Harbor Freeway) in the Project vicinity to offset the additional Project-generated trips that would result on the freeway mainline segments and that would pass through the affected Caltrans intersections.~~

~~The fair share is calculated as the Project's percentage of the total projected traffic growth on a freeway mainline segment over a 25-year period. The fair share is a contribution toward the improvement and maintenance of a shared facility that benefits the Project and the region.~~

5. Page 4.L-89, modify text under subheading (3), Caltrans Facilities, as follows:

(a) Freeway Mainlines and Intersections (Threshold TRAF-4)

~~Mitigation Measure TRAF-4 requires that the developer make a fair-share contribution to address potentially significant impacts on freeway mainline segments, intersections under Caltrans jurisdiction, and off-ramps.~~ Caltrans generally considers fair share contributions to constitute full mitigation of a significant impact. In addition, under CEQA Guidelines Section 15130(a)(3) fair share contribution could be considered adequate mitigation for cumulative traffic impacts. ~~Options for addressing the impacts were identified, but because there are no existing projects that identified by Caltrans that would lower the impact below the significance threshold, the significant impacts identified above to Caltrans facilities are conservatively determined to be significant and unavoidable.~~ Investigation of potential mitigation measures were conducted as described above, including potential fair share contributions, but in the absence of specific improvements linked to a reasonable mitigation plan tied to actual mitigation of the impacts, no fair share contribution can be calculated or made as an adequate mitigation measure. Therefore, impacts to these intersections are concluded to be significant and unavoidable.

5. Alternatives

1. Page 5-32, modify text under subheading (3), Caltrans Facilities, as follows:

(a) Freeway Mainlines and Intersections

As under the Project, development of Reduced Intensity Alternative A would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic at the northbound I-110 Freeway at 228th Street, the southbound 110 Freeway at El Segundo Boulevard, and the northbound I-405 Freeway at the I-710 Freeway. ~~Potential mitigation measures, which include a contribution of a fair share to proposed Caltrans projects to address congestion in the study area (MM TRAF-4) relies on Caltrans cooperation and approval. Because this is out of the County's control~~ No feasible mitigation exists that could reduce the significance of impacts to these facilities, and thus impacts at the three freeway segments are considered significant and unavoidable. However, because Reduced Intensity Alternative A would have incrementally fewer new vehicle trips than under the Project, impact levels would be less. Reduced Intensity Alternative A would also significantly impact the arterial intersection of Western Avenue (State Route 213) and Carson Street because, as with the Project, it would add more than 50 vehicle trips to this intersection. Although incrementally less under Reduced Intensity Alternative A, the impact at this intersection would be considered significant and unavoidable.

2. Page 5-56, modify text under subheading (3), Caltrans Facilities, as follows:

(a) Freeway Mainlines and Intersections

As under the Project, development of Reduced Intensity Alternative B would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic at the northbound I-110 Freeway at 228th Street, the southbound 110 Freeway at El Segundo Boulevard, and the northbound I-405 Freeway at the I-710 Freeway. ~~Potential mitigation measures, which include a contribution of a fair share to proposed Caltrans projects to address congestion in the study area (MM TRAF-4) relies on Caltrans cooperation and approval. Because this is out of the County's control~~ No feasible mitigation exists that could reduce the significance of impacts to these facilities, and thus impacts at the three freeway segments are considered significant and unavoidable. However, because Reduced Intensity Alternative B would have incrementally fewer new vehicle trips than under the Project, impact levels would be less. Reduced Intensity Alternative B would also significantly impact the arterial intersection of Western Avenue (State Route 213) and Carson Street because, as with the Project, it would add more than 50 vehicle trips to this intersection. Although incrementally less under Reduced Intensity Alternative B, the impact at this intersection would be considered significant and unavoidable.

6. Other CEQA Considerations

1. Page 6-4, modify text in the paragraph under subheading (b) Freeway Mainlines and Intersections, as follows:

~~Mitigation Measure TRAF-4 requires that the developer make a fair-share contribution to address potentially significant impacts on freeway mainline segments, intersections under Caltrans jurisdiction, and off-ramps.~~ Caltrans generally considers fair share contributions to constitute full mitigation of a significant impact. In addition, under CEQA Guidelines Section 15130(a)(3) fair share contribution could be considered adequate mitigation for cumulative traffic impacts. ~~Options for addressing the impacts were identified, but because~~

~~there are no existing projects that identified by Caltrans that would lower the impact below the significance threshold, the significant impacts identified above to Caltrans facilities are conservatively determined to be significant and unavoidable.~~ Investigation of potential mitigation measures were conducted as described in Section 4.L, including potential fair share contributions, but in the absence of specific improvements linked to a reasonable mitigation plan tied to actual mitigation of the impacts, no fair share contribution can be calculated or made as an adequate mitigation measure. Therefore, impacts to these intersections are concluded to be significant and unavoidable.

2. Page 6-8, modify text in the paragraph under subheading (f), Public Services, as follows:

Impacts regarding some public services (e.g., parks and recreation, schools, and libraries) would be less than significant and no mitigation measures are required. Therefore, no significant adverse secondary effects would occur due to the implementation of mitigation measures for these environmental topics. However, with regard to fire protection and emergency services, Mitigation Measure FIRE-1 requires that the County Department of Public Works and/or their contractors regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times. ~~Mitigation Measure FIRE-2 requires that prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee.~~ With regard to Sheriff protection, Mitigation Measure SHER-1 requires that security features and personnel be provided throughout construction, Mitigation Measure SHER-2 requires that emergency access be provided during construction, while Mitigation Measure SHER-3 requires that the Project construction contractors regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times. Thus, implementation of these mitigation measures would not result in additional physical impacts to the environment beyond those already anticipated for the Project as discussed in Chapter 4.0 of this Draft EIR.

3. Page 6-8, delete the last paragraph on the page as follows:

~~Mitigation Measure TRAF-4 requires the developer to contribute fair share funding to Caltrans toward an analysis or improvements on I-110 (Harbor Freeway) in the Project vicinity to offset the additional Project-generated trips that would result on the freeway mainline segments that pass through the affected Caltrans intersection. No physical impacts would occur under this mitigation measure (any future improvement of the I-110 and associated intersections would be subject to separate CEQA review and would be too speculative to evaluate in the current Draft EIR). Therefore, no significant adverse secondary effects would occur.~~

7. References

1. Page 7-1, modify text at the bottom of the page as follows:

~~*Banker's Hill, Hillcrest, Park West Community Preservation Group v. City of San Diego*, 139 Cal. App. 4th 249, 279 (2006).~~

Battelle Technology Partnership Practice, Final Draft Report: Feasibility Assessment and Master Plan for Advancing the Bioscience Industry Cluster in Los Angeles County. Prepared for Los Angeles County – Chief Executive Office. August 2014. Available online at:

http://file.lacounty.gov/SDSInter/bos/bc/217012_REPORTONCONSULTANTEVALUATIONFORAPOTENTIALCOUNTYWIDEBIOTECHNOLOGY.pdf. Accessed November 2016.

Bies & Hansen, Engineering Noise Control, 1988.

4. Mitigation Monitoring and Reporting Program

4.0 MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP), which is provided in **Table 4-1**, *Mitigation Monitoring and Reporting Program,* has been prepared pursuant to Public Resources Code Section 21081.6 and State Guidelines Section 15097, which require adoption of a MMRP for projects in which the Lead Agency has adopted mitigation to avoid significant environmental effects. The County of Los Angeles is the Lead Agency for the proposed Harbor-UCLA Medical Center Campus Master Plan Project (Master Plan Project or Project) and therefore is responsible for implementing the MMRP. The primary purpose of the MMRP is to ensure that the mitigation measures identified in the Initial Study (IS), and Draft and Final EIR (designated by the respective environmental issue within Chapter 4.0 of the EIR) are implemented, thereby minimizing identified environmental effects. For convenience of tracking, this MMRP also includes the proposed Project Design Features (PDFs) identified throughout Chapter 4.0 the Draft EIR. The PDFs are specific design elements that have been incorporated into the Project, or standard procedures, and reflected in the construction specifications and final plans implemented in accordance with County protocol to prevent the occurrence of or to minimize the significance of potential environmental effects. Because PDFs have been incorporated into the Project, they do not constitute mitigation measures, as defined by Section 15126.4 of the State CEQA Guidelines (Title 14 of the California Code of Regulations).

The MMRP for the proposed Project will be in place through all phases of the Project, including design (preconstruction), construction, and operation (both prior to and post-occupancy).

Each mitigation measure is categorized by impact area, with an accompanying identification of:

- The phase of the project during which the measure should be monitored;
  - Pre-construction
  - Construction
  - Prior to occupancy
  - Post-occupancy
- The enforcement agency; and
- The monitoring agency.

Table 4-1

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
4.B AIR QUALITY						
PDF AQ-1: The Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following: ▪ The Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris. ▪ The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code. ▪ The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of	Project Design/Pre-Construction	Los Angeles County Department of Public Works (LACDPW)	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means. ▪ The Project would include lighting controls with occupancy sensors to take advantage of available natural light. ▪ The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent. ▪ Project buildings shall be constructed with solar-ready rooftops that provide for the installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading. ▪ The Project would be designed and						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care. ▪ To encourage carpooling and the use of electric vehicles by project employees and visitors, the County shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces. ▪ The Project shall appropriate incorporate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).						
PDF AQ-2: The Project shall implement the following measures during construction activities: ▪ The Project shall require construction contractor(s) to utilize off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA	Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
Tier 4 off-road emissions standard for equipment rated at 50 hp or greater during Project construction. ▪ To the extent possible, pole power will be made available for use with electric tools, equipment, lighting, etc. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment. ▪ The Project shall encourage construction contractors to apply for SCAQMD "SOON" funds, which provides funds to accelerate the clean-up of off-road diesel vehicles, such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/Implementation/ SOONProgram.htm. ▪ In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
construction shall be limited to five minutes at any location. ▪ The County shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits. ▪ The Project shall comply with the applicable provisions of SCAQMD Rule 403 to minimize generation of fugitive dust. Active demolition or grading construction areas and unpaved roads shall be controlled by temporary covers or wetted sufficiently to reduce dust. ▪ Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation. ▪ On-site vehicles shall be limited to 15 miles per hour on unpaved roadways. ▪ Haul trucks carrying dirt, soil, sand, or other loose material shall be covered and maintain a freeboard height of 12 inches. ▪ Prior to leaving areas of active construction, haul trucks would be inspected and put through procedures as necessary to remove loose debris from tire wells and on the truck exterior to prevent track out. ▪ Construction areas shall install						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
temporary fencing, if necessary, to prevent debris and material movement on the site and into patient care buildings or to off-site areas. ▪ The County shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust. ▪ All coatings used on-site shall comply with SCAQMD Rule 1113, as applicable. The project will strive to utilize material which is pre-primed or pre-painted. Additionally, the project shall limit daily application of architectural coatings applied on-site to 170 gallons per day with an average of 50 grams VOC per liter of coating, less water and less exempt compounds, or equivalent usage resulting in similar or less VOC emissions. For example, stains, specialty primers, and industrial maintenance coatings allowed by Rule 1113 that contain VOCs at a level of 100 grams per liter of coating, less water and less exempt compounds would be limited to 85 gallons per day on site						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
4.D GEOLOGY AND SOILS						
MM-GEO-1: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate potential fault rupture, seismic ground shaking, and liquefaction hazards identified under Impact GEO-1: ▪ *Seismicity:* Structural elements of future improvements shall be designed to resist or accommodate appropriate site-specific ground motions and conform to the current seismic design standards. ▪ *Liquefaction:* An assessment of the liquefaction potential and seismically induced dynamic settlement shall be made prior to detailed design and construction of the proposed Project. Structural design and mitigation techniques, such as in-situ ground modification or supporting	Construction Post-occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
foundations with piles at depths designed specifically for liquefaction, shall be included. To evaluate the potential liquefaction hazard for the Project, a subsurface evaluation could be performed. Site-specific geotechnical evaluations that assess the liquefaction and dynamic settlement characteristics of the on-site soils shall include the drilling of exploratory borings, evaluation of groundwater depths, and laboratory testing of soils. Methods for construction in areas with a potential for liquefaction hazard may include in-situ ground modification, removal of liquefiable layers and replacement with compacted fill, or support of Project improvements on piles at depths designed specifically for liquefaction. Pile foundations can be designed for a liquefaction hazard by supporting the piles in dense soil or bedrock located below the liquefiable zone or other appropriate methods as evaluated during the site-specific evaluation. Additional recommendations for mitigation of liquefaction may include densification by installation of stone columns, vibration, deep dynamic compaction, and/or compaction grouting.						
MM-GEO-2: All recommendations	Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate unstable soil hazards identified under Impacts GEO-3: ▪ *Compressible/Collapsible Soils and Settlement:* An assessment of the potential for soils that are prone to settlement shall be made prior to detailed design and construction of Project improvements, and mitigation techniques shall be developed, as appropriate, to reduce impacts related to settlement to low levels. During the detailed design phase of the Project components, surface reconnaissance and site-specific geotechnical evaluations shall be performed to assess the settlement potential of the on-site natural soils and undocumented fill. This may include detailed surface reconnaissance to evaluate site	Post-occupancy					

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
conditions, drilling of exploratory borings or test pits, and laboratory testing of soils, where appropriate, to evaluate site conditions. Prescribed mitigation measures for soils with the potential for settlement include removal of compressible/collapsible soil layers and replacement with compacted fill; surcharging to induce settlement prior to construction of new fills; and specialized foundation design, including the use of deep foundation systems to support structures. Varieties of in-situ soil improvement techniques are also available, such as dynamic compaction (heavy tamping) or compaction grouting. ▪ *Shallow Groundwater:* A subsurface exploration shall be performed during the detailed design phase of future improvements to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and construction of Project improvements. Assessment of the potential for shallow groundwater would be evaluated during the design phase of the Project and mitigation techniques would be developed, as						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
appropriate, to reduce the impacts related to shallow groundwater to low levels. Therefore, potential impacts due to groundwater would be reduced with incorporation of techniques such as construction dewatering.						
MM-GEO-3: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate expansive soils hazards identified under Impacts GEO-4. ▪ *Expansive Soils:* An assessment of the potential for expansive soils will be conducted during the detailed design and construction phases of the Project. Mitigation techniques such as over excavation and replacement with non-expansive soil, soil treatment, moisture management, and/or specific structural design for	Construction Post-occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
expansive soil conditions would reduce the impact from expansive soils to low levels. ▪ *Corrosive Soils:* An assessment of the potential for corrosive soils will be conducted during the detailed design phase of the Project through a subsurface evaluation including soil testing and analysis of soils at foundation design depths. Laboratory tests would include corrosivity tests to evaluate the corrosivity of the subsurface soils. Data will be reviewed by a corrosion engineer and mitigation techniques suitable for the proposed Project will be implemented as appropriate. Mitigation of corrosive soil conditions could include the use of concrete resistant to sulfate exposure. Corrosion protection for metals used in underground foundations or structures in areas where corrosive groundwater or soil could potentially cause deterioration could include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the appropriate type of cement and water/cement ratio.						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
Specific measures to reduce the potential effects would be developed in the design phase and would reduce impacts related to corrosive soils to low levels.						
4.F HAZARDS AND HAZARDOUS MATERIALS						
MM-HAZ-1: The abatement of ACMs, LBP, and PCBs in existing on-site buildings shall be conducted in accordance with the recommendations of the Hazardous Building Materials Survey prepared for the Harbor-UCLA Campus, which are as follows: ▪ The identified ACMs and surfaces containing LBP should not be disturbed. Prior to renovation or demolition activities which would disturb identified ACMs, and LCSs, a licensed abatement removal contractor shall remove the ACMs and LCS, and perform paint stabilization activities as needed. The licensed abatement contractor shall maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal, or other regulated activities. ▪ The identified surface containing LBP shall not be disturbed. Any LBP in a non-intact condition shall be abated or the component properly removed or	Construction Post-occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
encapsulated. Lead containing ceramic tiles shall be removed prior to demolition activities. Any lead related removal activities shall be performed in accordance with the OSHA Lead in Construction Standard, Title 8 California Code of Regulations (CCR) 1532.1. ▪ Proper LBP waste stream categorization is required. Prior to any demolition activities, a composite sample of the representative LBP material (ceramic tiles and loose and flaking paint) shall be analyzed for total lead for comparison with the Total Threshold Limit Concentration in accordance with EPA reference method SW-846. If the concentration of total lead is greater than or equal to 1,000 milligrams per kilogram (mg/kg), the LBP waste material shall be disposed at a landfill which can receive such wastes. If the concentration is less than 50 mg/kg the sample may be disposed as construction debris, if it is to remain in California. If the total lead result is greater than or equal to 50 mg/kg and less than 1,000 mg/kg, the sample shall be further analyzed for soluble lead by the Waste Extraction Test for comparison with the Soluble Threshold Limit Concentration as described in Title 22 CCR 66261.24a. Additionally, if						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
the result is greater than or equal to 100 mg/kg the sample shall be further analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure for comparison with the Resource Conservation and Recovery Act (RCRA) limits. Based on the results of the soluble and leachable analysis the waste material may require disposal as a RCRA-Hazardous waste or non-RCRA-(California-) Hazardous waste. ▪ Miscellaneous hazardous building materials shall be removed and properly recycled or disposed by the licensed abatement contractor prior to renovation or demolition activities. Contractor shall provide proper manifesting for all hazardous materials removed and recycled to prove the disposal of all materials was completed in accordance with local, state, and federal requirements. ▪ Abatement monitoring consulting services shall be performed by a third-party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances (asbestos and lead), verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
abatement activities.						
MM-HAZ-2: Prior to initiation of excavation and grading activities in the areas identified in the Phase I Assessment as containing potential soil contamination or for which site closure is not confirmed (from either on- or off-site USTs/LUSTs or ASTs), Harbor-UCLA shall retain a qualified environmental consultant to prepare a Soils Management Plan for each development phase to be submitted to the Los Angeles County Fire Department for review and approval. The Soils Management Plan shall be implemented during excavation and grading activities for proposed improvements in the areas identified in the Phase I assessment as containing potential soil contamination to ensure that site closure is property implemented and any contaminated soils encountered are properly identified, removed and disposed of off-site. The plan shall include the following: ▪ A qualified environmental consultant shall be present as necessary during grading and excavation activities to monitor compliance with the Soils Management Plan and to actively monitor the soils and excavations for evidence of contamination. ▪ Any soil encountered during	Construction Post-occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
excavation or grading activities that appears to have been affected by hydrocarbons or any other contamination shall be evaluated, based upon appropriate laboratory analysis, by a qualified environmental consultant prior to off-site disposal at a licensed facility. ▪ All identified contaminated soils shall be properly removed, handled and transported to an appropriately licensed disposal facility, in accordance with the Soils Management Plan prepared for each respective development phase.						
4.I NOISE						
PDF-NOISE-1: The Project contractor(s) will equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards.	Construction	LACDPW	LACDPW			
PDF-NOISE-2: On-site construction equipment staging area shall be located as far as feasible from sensitive uses/hospital patient buildings.	Construction	LACDPW	LACDPW			
PDF-NOISE-3: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited near sensitive uses/patient buildings.	Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
PDF-NOISE-4: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent feasible.	Construction	LACDPW	LACDPW			
PDF NOISE-5: Effective noise barriers will be designed and erected as needed to shield on-site uses from excessive construction-related noise.	Construction	LACDPW	LACDPW			
PDF NOISE-6: To reduce the potential for serious construction-related vibration effects to on-site operating rooms or other vibration sensitive medical uses (such as laboratories), the Project contractor(s) shall perform appropriate study of the potential for peak particle velocities to reach or exceed 0.008 inches per second PPV whenever construction involving the use of heavy duty equipment is planned within 125 feet of such an on- site medical use. If, based on site-specific conditions, this study indicates potential for detrimental effects, strategies to minimize the effects shall be incorporated into the construction plan.	Pre-construction Construction	LACDPW	LACDPW			
PDF-NOISE-7: As required by LACC, an acoustical analysis of the mechanical plans of the proposed buildings will be prepared by a qualified acoustical engineer, prior to issuance of building permits, to ensure that all mechanical equipment would be designed to meet	Prior to Issuance of Building Permits	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
noise limits in Table 4.I-6.						
MM-NOISE-1: Temporary noise barriers shall be used to block the line-of-site between the construction equipment and noise-sensitive receptors during project construction, as follows: ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the southern boundary of the Project construction site to reduce construction noise at the single- and multi-family residential uses across 220th Street during Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed. ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundaries of the Project construction site to reduce construction noise at the multi-family residential uses across Carson Street during Phase 4. ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundary of the Project construction site to reduce construction noise at	Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
the single-family residential uses across Vermont Avenue during Phase 2, Phase 4, and Phase 5.						
4.K.1 FIRE SERVICES						
PDF-FIRE-1: The County's, designers, construction contractors, and tenants for/of development under the Project will implement the conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, which are included in Appendix J-1, *Fire Department Correspondence*, of this Draft EIR. The LACFD conditions of approval referenced above are summarized below and include, but are not limited to, the following: ▪ Provide multiple ingress/egress access for circulation of traffic and emergency response vehicles. ▪ Every building constructed shall be accessible to Fire Department apparatus by way of Fire Apparatus Access Roads of not less than the minimum widths prescribed in Fire Code Section 503.2.1, with roadways extending to within 150 feet of all	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
portions of the exterior walls when measured by an unobstructed route around the exterior of the building. ▪ Fire Apparatus Access Roads shall be a minimum unobstructed width of 28 feet exclusive of shoulders and have unobstructed vertical clearance "clear to sky" ▪ Dead-end Fire Apparatus Access Roads in excess of 150 feet in length shall be provided with an approved Fire Department turnaround. ▪ Provide approved signs or other approved notices or markings that include the words "NO PARKING – FIRE LANE". ▪ Fire Apparatus Access Roads must be installed and maintained in a serviceable manner prior to and during the time of construction. ▪ Approved building address numbers, building numbers, or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property. ▪ The method of gate control shall be						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
subject to review by the Fire Department prior to approval, and shall meet specified width, positioning, emergency power, and emergency access requirements. ▪ The development may require fire flows up to 8,000 gpm at 20 psi residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, the installation of an automatic fire sprinkler system, and type(s) of construction used. ▪ Fire hydrant spacing shall be every 300 feet for both the public and the on-site hydrants, with no portion of a lot frontage more than 200 feet via vehicular access from a public hydrant, and no portion of a building exceeding 400 feet via vehicular access from public fire hydrant. ▪ All required public fire hydrants shall be installed, tested, and accepted prior to beginning construction. ▪ Provide a Fire Department-approved fire sprinkler system in all proposed buildings.						
MM FIRE-1: The Project construction	Pre-construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
contractors will regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times.	Construction					
4.K.2 SHERIFF PROTECTION						
PDF-SHER-1: The County Department of Public Works shall provide the LACSD CSB with the on-site satellite station space, locker space, and associated parking spaces, required to serve the Project. This shall include, at a minimum, the existing amount of satellite station space (927 sf), locker room space (1,672 sf), and associated parking spaces, plus an additional 36 percent (approximately 1,000 sf) of this operational space and associated parking to serve the net increase in on-site employees and patients under the Project.	Pre-construction Construction	LACDPW	LACDPW			
PDF-SHER-2: Project design shall adhere to the Crime Prevention Through Environmental Design (CPTED) principles. This shall include, but not be limited to, the provision of physical design features that discourage crime such as defensible space, territoriality, surveillance, lighting, landscaping, and physical security. The CPTED features shall be identified on the design plans for the Project which shall be	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
provided to the LACSD for review and approval.						
MM SHER-1: During Project construction, construction sites will be fully fenced, lighted with security lighting, and patrolled by either the LACSD on-site satellite station personnel (either sworn officers or contract security guards) or private security hired by DHS.	Pre-construction Construction	LACDPW	LACDPW			
MM SHER-2: Emergency access to the LACSD will be provided and maintained to existing and new uses on-site uses, and to off-site uses, throughout construction.	Pre-construction Construction	LACDPW	LACDPW			
MM SHER-3: The Project construction contractors will regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times.	Pre-construction Construction	LACDPW	LACDPW			
MM SHER-4: The Security Management Plan for the Harbor-UCLA Campus will be updated by DHS, in consultation with the LACSD, to address the proposed physical and operational changes to the Campus	Prior to Occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
under the Project. At a minimum, the primary security features and measures currently in place at the Campus under the Security Management Plan will carried forward under the Project.						
4.K.5 LIBRARIES						
PDF-LIBRARIES-1: The AF Parlow Library of Health Sciences, an existing LACDHS-operated library on the Project Site available for use by doctors, medical students, fellows, faculty, nurses, and allied health professionals affiliated with the medical center, will be retained and relocated to other building space on the HUCLA Campus.	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
4.L TRANSPORTATION AND TRAFFIC						
PDF TRAF-1: Construction Traffic Management Plan: A detailed Construction Traffic Management Plan including street closure information, detour plans, haul routes, and staging plans would be prepared and submitted to the County for review and approval. The Construction Traffic Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements as appropriate: ▪ Prohibition of construction worker parking on nearby residential streets. ▪ Prohibition of construction-related vehicles parking or staging on surrounding public streets. ▪ Temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
▪ Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate. ▪ Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible.						
PDF TRAF-2: Pedestrian Safety: The construction contractor(s) would plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. The contractor(s) would maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. Temporary pedestrian facilities would be adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. Covered walkways would be provided where pedestrians are exposed to potential injury from falling objects. The contractor would keep sidewalks open during construction except when it	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
is absolutely required to close or block the sidewalks for construction staging. Sidewalks shall be reopened as soon as reasonably feasible taking construction and construction staging into account.						
MM TRAF-1: I-110 Southbound Ramps & Carson Street (Intersection #9) - Subject to approval by Caltrans, the existing southbound approach on the Interstate I-110 off-ramp shall be restriped to convert the existing left-turn lane to a left-/right-turn lane.	Pre-construction Construction	LACDPW	LACDPW			
MM TRAF-2: 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) - Subject to approval by Caltrans and the City of Carson, an additional northbound through lane shall be striped and the existing through lane shall be restriped as a through/right-turn lane. The eastbound approach shall be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane.	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
MM TRAF-3: I-110 Southbound Ramps & 223rd Street (Intersection #20) - Subject to approval by Caltrans, the southbound approach shall be restriped from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach shall be restriped to change the existing right-turn lane to a through/right-turn lane. Under this mitigation, parking shall be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane.	Pre-construction Construction	LACDPW	LACDPW			

Enclosure A

DRAFT ENVIRONMENTAL IMPACT REPORT

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT

LOS ANGELES COUNTY, CALIFORNIA

PCR

AUGUST 2016

Enclosure A

DRAFT ENVIRONMENTAL IMPACT REPORT

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT

COUNTY OF LOS ANGELES, CALIFORNIA

Prepared For:

County of Los Angeles
c/o Los Angeles County Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91803
Tel: 626-300-2363
Contact: Clarice Nash, Project Manager, Project Management Division I

Prepared By:

ESA PCR
2121 Alton Parkway, Suite 100
Irvine, California 92606

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EXECUTIVE SUMMARY

This chapter of the Draft Environmental Impact Report (Draft EIR) is prepared pursuant to the California Environmental Quality Act (CEQA) for the proposed Harbor-UCLA Medical Center Campus Master Plan Project (Project or proposed Project). In accordance with State CEQA Guidelines Section 15123, this chapter provides a brief description of the Project; identifies significant environmental impacts and proposed mitigation measures or alternatives that would reduce or avoid those impacts; describes areas of controversy known to the lead agency; and presents issues to be resolved.

A. PROJECT LOCATION

The Project is located on a County-owned 72-acre property at 1000 West Carson Street in Torrance, California called the Medical Center Campus. The Project Site is located in the unincorporated County of Los Angeles community of West Carson, which roughly encompasses the 2.3-square-mile area between the Harbor Freeway (I-110) on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Center Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located one block (approximately 800 feet) east of the Medical Center Campus and the San Diego Freeway (I-405) is located approximately two miles to the north and northeast. The Harbor Freeway is accessed via Carson Street and the San Diego Freeway is accessed via Carson Street to the east and Vermont and Normandie Avenues to the north. Harbor-UCLA Medical Center was founded in 1943 as the U.S. Army's Port of Embarkation Station Hospital, a receiving point and hospital for servicemen returning from the Pacific during World War II (WWII). Harbor General Hospital began its affiliation with the University of California Los Angeles (UCLA) School of Medicine in 1948 and became the southern campus of the UCLA School of Medicine in 1951. Construction of the existing eight-story, 450,000-square-foot hospital called the Existing Hospital Tower was completed in 1962 in the eastern portion of the Medical Center Campus and replaced a number of the original Army facility's wooden barracks and cottages. In 1978, the name of the hospital was changed to Los Angeles County Harbor-UCLA Medical Center to highlight its working relationship with the David Geffen School of Medicine at UCLA.

B. PROPOSED PROJECT

Proposed Project components include the following: 1) a New Hospital Tower; 2) new and renovated outpatient care facilities to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower; 3) other services and facilities, including administrative offices, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop, etc.); 4) long-term buildout of the LA BioMed Campus; 5) a new Bioscience Tech Park; and 6) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements. The Project would add an additional 1,178,071 square feet to the existing 1,279,284 square feet of existing developed floor area, for a total at buildout of up to 2,457,355 square feet of developed floor area on the Harbor-UCLA Campus. The average campus-wide floor-area ratio (FAR) would increase from 0.40:1 to 0.78:1. The number of licensed in-patient hospital beds would decrease slightly from 453 to 446. New building heights across much of the Project Site would generally be four stories, with the tallest existing on-site building (the existing eight-story Hospital Tower) to be retained and a second building (New Hospital Tower) up to eight stories to be developed. Campus-wide parking would increase from 3,186 spaces

(including 281 spaces in an off-site parking lot) to up to 4,240 spaces (including the spaces in the Bioscience Tech Park and in the off-site parking lot), due largely to the replacement of several on-site surface parking lots with three- to five-floor parking structures. The number of Campus-wide employees would increase from approximately 5,464 to 7,494.

The Project proposes to locate related uses in proximity to one another, connected by a network of walkways and landscaped areas. The most publicly accessible zones, including commercial and community-oriented services, would be located along the northern edge of the Medical Center Campus fronting on Carson Street, with staff and support services located in the southern half of the Medical Center Campus. The New Hospital Tower would be centrally located within the Project site and is intended to be the most visible building on the Medical Center Campus, and therefore its primary focal point, signaling its location to visitors and identifying the Harbor-UCLA Medical Center Campus to the community. The LA BioMed Campus would continue to occupy the southern-central part of the Medical Center Campus, fronting on 220th Street. The Children's Institute, Inc.'s (CII) Burton E. Green Campus would remain in the northwestern corner of the Medical Center Campus at the intersection of Carson Street and Normandie Avenue, but the balance of the western end of the Medical Center Campus is the proposed site for a new Bioscience Tech Park.

Master Plan Project implementation would create clear distinctions between Harbor-UCLA Medical Center Campus access and on-site circulation and parking facilities for the general public and staff. Staff entries and parking would be located in the southeastern corner of the Medical Center Campus, while access for the public would be provided on Carson Street along the northern perimeter. Vehicular access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes on the Medical Center Campus between the main parking areas and the New Hospital Tower and Outpatient buildings. Circular pick-up/drop-off loading zones would be provided at the main entrances to each of the New Hospital Tower and Outpatient buildings. The Master Plan Project would provide sufficient parking to meet or exceed the County's minimum code parking requirement. Buildout of the Project is anticipated to occur in eight main phases, culminating in 2030.

Discretionary and administrative land use approvals required for the Project are anticipated to include, but may not be limited to, the following:

- Certification of the Final EIR
- Approval of demolition, excavation, and building permits for component buildings and other structures
- California Office of Statewide Health Planning and Development (OSHPD) Approval
- Caltrans Division of Aeronautics Helistop Permit Approval

C. PUBLIC REVIEW PROCESS

As further described in Chapter 1.0, Introduction, the County circulated a Notice of Preparation (NOP) and Initial Study to State, regional, and local agencies, and members of the public for a 30-day scoping and early consultation period, commencing November 3, 2014 and ending December 2, 2014 to receive input on the issues to be addressed in an Draft EIR. Following the subsequently proposed inclusion of a Bioscience Tech Park within the Master Plan Project, a revised NOP and Initial Study were circulated for a second 30-day

scoping period commencing June 29, 2015 and ending July 29, 2015. Both NOPs were based on Initial Study determinations that the Project had the potential to result in significant impacts to the environment.

In addition, both NOPs included notification that public scoping meetings would be held in an open house format to further inform public agencies and other interested parties of the Project and to solicit input regarding the Draft EIR. The meetings were held November 12, 2014 between 5:30 P.M. and 7:30 P.M. and on July 15, 2015, from 5:30 p.m. to 7:30 p.m. at Parlow Library on the Harbor UCLA Campus. In addition, early input was sought from County departments prior to public circulation of the NOPs. Both NOPs and Initial Studies, scoping materials from both meetings, and letters and comments received by the County during the two NOP comment periods are provided in Appendix A of this Draft EIR. This Draft EIR will be released for a minimum 45-day public comment period, which will include a community meeting on the Draft EIR.

The Draft EIR is subject to a minimum 45-day public review period in which the document is made available to responsible and trustee agencies, interested parties and members of the public. In compliance with the provision of Sections 15085(a) and 15087(a)(1) of the State CEQA Guidelines, the County, serving as the Lead Agency: (1) published a Notice of Completion and Availability (NOCA) of a Draft EIR in two (2) newspapers of general circulation, including the Daily Breeze (English language) and La Opinión (Spanish language), which indicated that the Draft EIR was available for review at the Harbor-UCLA Medical Center, (2) provided copies of the NOCA and Draft EIR to seven (7) local libraries, including the Carson Library, Harbor Gateway City Library, Southeast Branch Library, Lomita Library, Dr. Martin Luther King, Jr. Library, the Katy Geissert Civic Center Library, and the Wilmington Library, (3) posted the NOCA and the Draft EIR on the County website (http://dpw.lacounty.gov/landing/publicBuildings.cfm), (4) prepared and transmitted a NOCA to the State Clearinghouse; (5) mailed a NOCA to all property owners within 500 feet of the Project Site; and (6) sent a NOCA to the last-known name and address of all organizations and individuals who previously requested such notice in writing or attended one or both of the public scoping meetings about the Project. Proof of mailing is available at the County. The public review period commenced on August 17, 2016, and will end on October 3, 2016, for a total of 48 days.

Following the public comment period, a Final EIR will be prepared that includes responses to the comments on the Draft EIR.

D. AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

The following summarizes the areas of environmental concern known to the County including those raised during the NOP circulation period. The public and agency scoping period comments are included in Appendix A-4. The County decision makers will need to resolve choices between the project and alternatives and whether or how significant effects might be mitigated:

- Construction hours and associated noise in the Project vicinity, in addition to existing operational ambulance and helicopter noise
- Construction and operational traffic impact potential at area intersections
- Potential for impacts on City of Carson police and fire services, traffic, and infrastructure

- Air quality impacts resulting from Project-related vehicle trips and need to encourage use of public transit
- Potential to connect Blue Line and proposed South Bay Metro Green Line extension through the City of Carson
- Potential transit impacts
- Potential impacts on Caltrans facilities

E. SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

Significant unavoidable impacts even with mitigation measures could occur as a result of Project impacts. Based on the analysis contained in Chapter 4.0, Environmental Impact Analysis, the Project would result in significant and unavoidable impacts. The proposed findings for the project will include a Statement of Overriding Considerations for the Board of Supervisors to consider to address these impacts, which are as follows:

- Construction noise impacts
- Operational noise impacts for temporary interim helistops
- Construction traffic impacts for both Project-level and cumulative conditions
- Operational traffic impacts at twelve (12) intersections and three (3) Caltrans facilities

F. PROJECT OBJECTIVES

Section 15124(b) of the State CEQA Guidelines requires that an EIR Project Description contain a statement of objectives for the proposed project and recommends that the statement of objectives include the underlying purpose of the project.

The overall goal of the Master Plan Project is to redevelop the County-owned Harbor-UCLA Medical Center Campus to support a modern, integrated healthcare delivery system. It will provide a New Hospital Tower to replace the acute care functions in the Existing Hospital Tower before the state law deadline to meet seismic standards for critical trauma/tertiary acute care services so that the South Bay service region and the County seamlessly retain this key link in the County-wide trauma hospital safety net which features biomedical research and development facilities and integrates inpatient and outpatient services in a renovated and expanded setting.

The goal is supported by the following Master Plan Project objectives:

1. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital Tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.

2. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.

3. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways;

4. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.

5. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as up to 225,000 square feet of expanded LA BioMed facilities.

6. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.

7. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.

8. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."

G. ALTERNATIVES TO REDUCE SIGNIFICANT IMPACTS

The State CEQA Guidelines, Section 15126.6(a) require an EIR to "describe the range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but will avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." The State CEQA Guidelines emphasize that the selection of project alternatives be based primarily on the ability to reduce significant impacts relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."[1] The State CEQA Guidelines further direct that the range of alternatives

[1] *State CEQA Guidelines, Section 15126.6(b).*

be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are analyzed.[2]

As described in Chapter 5.0, Alternatives, of this Draft EIR, seven alternatives to the Proposed Project were analyzed. Four alternatives to the Project were analyzed in detail: the No Project/No Build Alternative, Reduced Density Alternative A: Acute Bed and Other Plan Reductions, Reduced Intensity Alternative B: Further Acute Bed and Other Plan Reductions, and Reduced Intensity Alternative C: New Acute Bed Hospital Tower Only. The other three alternatives that were considered but rejected after initial analysis included Alternative Off-Site Locations, Alternative On-Site Uses, and a No Bioscience Tech Park Alternative. These considered but rejected alternatives failed to meet basic project objectives, were infeasible and/or did not avoid significant project impacts. Based on an analysis of these alternatives, the No Project/No Build Alternative was identified as the environmentally superior alternative. In accordance with the State CEQA Guidelines requirement to identify an environmentally superior alternative other than the No Project/No Build Alternative, a comparative evaluation of the remaining alternatives indicates that the Reduced Intensity Alternative C would be the environmentally superior alternative.

H. SUMMARY OF ENVIRONMENTAL IMPACTS

This section provides a summary of impacts, Project Design Features, Mitigation Measures, and level of impact after implementation of mitigation measures associated with Project. The summary is provided by environmental issue area below in **Table ES-1**, *Summary of Project Impacts, Project Design Features, and Mitigation Measures*.

[2] *Ibid., Section 15126.6(f).*

Table ES-1

Summary of Project Impacts, Project Design Features and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.A Aesthetics			
Impact Statement AES-1: The Master Plan Project would generate adverse visual character impacts resulting from construction and landscaping activities, as well as off-site infrastructure improvements. Construction would occur in specified phases that would be temporary in nature and not encompass the site at any one time, construction is not considered to substantially degrade the existing visual character of the site and surrounding area. During operation, the visual character of the Medical Center Campus would be enhanced by high quality architecture and landscaping, including landscaping improvements along the public sidewalks. The Project would also be consistent with aesthetic policies of the Los Angeles County General Plan. Because of improvements in the public realm and consistency with the General Plan, operation is not considered to substantially degrade the existing visual character of the site and surrounding area. Therefore, impacts related to visual character would be less than significant.	Not Applicable	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Impact Statement AES-2: The Master Plan Project would not substantially obstruct focal or panoramic views across the Medical Center Campus or substantially alter an existing recognized scenic vista or valued publicly available view as a result of view obstruction. The Project's tallest building would be visible from 220th Street. However, the deep setback of more than 200 feet from the nearest building corner to the street, the northwest orientation of the building, and new perimeter streetscape along 220th Street would reduce the visual effect to a less than significant level. Impacts related to views and view resources would be less than significant.	Not Applicable	Not Applicable	Less than Significant
Impact Statement AES-3: New light sources associated primarily with any new entrance/wayfinding signs, light spill from taller buildings, landscape lighting, and security lighting. All light sources would be low-level and directed downward to maintain ambient and point source lighting consistent with the on-site hospital use. As such, the Master Plan Project would not substantially alter the character of off-site areas surrounding the Medical Center Campus or result in substantial	Not Applicable	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
light spill and/or glare onto adjacent light-sensitive residential uses. The Harbor-UCLA Master Plan Design Guidelines would require that buildings be compatible with the style, materials, and massing of other Project buildings, the function of which are to serve as a medical campus. It is not anticipated that expanses of reflective glass and metals would be implemented in building design. As such, the Project would not cause adverse glare impacts. Therefore, potential impacts associated with nighttime illumination and/or glare from reflected sunlight would be less than significant.			
4.B Air Quality			
Impact Statement AQ-1: Construction and operation of the Project would not conflict with the growth projections in the SCAQMD AQMP and would comply with applicable control measures. As a result, the Project would not conflict with or obstruct implementation of the Plan and impacts would be less than significant.	Not Applicable	Not Applicable	Less than Significant
Impact Statement AQ-2: Construction of the Project would not exceed the applicable SCAQMD daily numeric indicators for VOC,	**PDF AQ-1:** The Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. As a result, construction and operations of the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and operational impacts would be less than significant.	Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following: ▪ The Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris. ▪ The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code. ▪ The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means. ▪ The Project would include lighting controls with occupancy sensors to take advantage of available natural light. ▪ The Project shall install cool roofs for heat island reduction and strive to meet the		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent. ▪ Project buildings shall be constructed with solar-ready rooftops that provide for the installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading. ▪ The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care. ▪ To encourage carpooling and the use of electric vehicles by project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	The Project shall appropriate incorporate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225). **PDF AQ-2:** The Project shall implement the following measures during construction activities: ▪ The Project shall require construction contractor(s) to utilize off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 4 off-road emissions standard for equipment rated at 50 hp or greater during Project construction. ▪ To the extent possible, pole power will be made available for use with electric tools, equipment, lighting, etc. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment. ▪ The Project shall encourage construction contractors to apply for SCAQMD "SOON" funds, which provides funds to accelerate the clean-up of off-road diesel vehicles,		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/Implementation/SOONProgram.htm. ▪ In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location. ▪ The Applicant shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits. ▪ The Project shall comply with the applicable provisions of SCAQMD Rule 403 to minimize generation of fugitive dust. Active demolition or grading construction areas and unpaved roads shall be controlled by temporary covers or wetted sufficiently to reduce dust. ▪ Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation. ▪ On-site vehicles shall be limited to 15 miles per hour on unpaved roadways. ▪ Haul trucks carrying dirt, soil, sand, or other loose material shall be covered and maintain a freeboard height of 12 inches. ▪ Prior to leaving areas of active		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	construction, haul trucks would be inspected and put through procedures as necessary to remove loose debris from tire wells and on the truck exterior to prevent track out. ▪ Construction areas shall install temporary fencing, if necessary, to prevent debris and material movement on the site and into patient care buildings or to off-site areas. ▪ The Applicant shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust. ▪ All coatings used on-site shall comply with SCAQMD Rule 1113, as applicable. The project will strive to utilize material which is pre-primed or pre-painted. Additionally, the project shall limit daily application of architectural coatings applied on-site to 170 gallons per day with an average of 50 grams VOC per liter of coating, less water and less exempt compounds, or equivalent usage resulting in similar or less VOC emissions. For example, stains, specialty primers, and industrial maintenance coatings allowed by Rule 1113 that contain VOCs at a level of 100 grams per liter of coating, less water and less exempt compounds would be limited to 85 gallons per day on site		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Impact Statement AQ-3: Construction of the Project would not exceed the SCAQMD daily regional numeric indicators. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational emissions at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. Thus, construction and operations of the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment and impacts would be less than significant.	See **PDF-AQ-1, Green Building Measures** and **PDF-AQ-2, Construction Measures**	Not Applicable	Less than Significant
Impact Statement AQ-4: Construction of the Project would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Project at full build-out would not exceed SCAQMD localized significance	See **PDF-AQ-1, Green Building Measures** and **PDF-AQ-2, Construction Measures**	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of the Project would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks that exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of the Project would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. As a result, construction and operation of the Project would not expose sensitive receptors to substantial pollutant concentrations, and localized emissions during construction and interim operations would result in a less than significant impact.			
Impact Statement AQ-5: Construction and operation of the Project would not create or introduce objectionable odors affecting a substantial number of people. Therefore, odor impacts would be less than significant.	Not Applicable	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.C Energy			
Impact Statement EN-1: Impacts regarding the wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preemption of future energy conservation would be less than significant. The Project would incorporate energy efficiency measures and comply with applicable measure to reduce energy consumption and would allow for future energy conservation.	See **PDF-AQ-1, Green Building Measures**	Not Applicable	Less than Significant
4.D Geology and Soils			
Impact Statement GEO-1: The Harbor-UCLA Campus is subject to seismic shaking due to its location in the seismically active southern California region. Based on subsurface geologic conditions and the depth to groundwater, the potential for substantial adverse effects due to fault rupture and ground failure are relatively low, but impacts are potentially significant.	Not Applicable	**MM-GEO-1:** All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		include the following measures to mitigate potential fault rupture, seismic ground shaking, and liquefaction hazards identified under Impact GEO-1: ▪ *Seismicity:* Structural elements of future improvements shall be designed to resist or accommodate appropriate site-specific ground motions and conform to the current seismic design standards. ▪ *Liquefaction:* An assessment of the liquefaction potential and seismically induced dynamic settlement shall be made prior to detailed design and construction of the proposed Project. Structural design and mitigation techniques, such as in-situ ground modification or supporting foundations with piles at depths designed specifically for liquefaction, shall be included. To evaluate the potential liquefaction hazard for the	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		Project, a subsurface evaluation could be performed. Site-specific geotechnical evaluations that assess the liquefaction and dynamic settlement characteristics of the on-site soils shall include the drilling of exploratory borings, evaluation of groundwater depths, and laboratory testing of soils. Methods for construction in areas with a potential for liquefaction hazard may include in-situ ground modification, removal of liquefiable layers and replacement with compacted fill, or support of Project improvements on piles at depths designed specifically for liquefaction. Pile foundations can be designed for a liquefaction hazard by supporting the piles in dense soil or bedrock located below the liquefiable zone or other appropriate methods as evaluated during the site-specific evaluation. Additional recommendations	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		for mitigation of liquefaction may include densification by installation of stone columns, vibration, deep dynamic compaction, and/or compaction grouting.	
Impact Statement GEO-2: Compliance with the County's National Pollutant Discharge Elimination System through implementation of a Storm Water Pollution Prevention Program for erosion control would be required during Project construction and with County's Low Impact Development (LID) ordinance requirements during operations. Impacts related to soil erosion and loss of soil would be less than significant.	Not Applicable	Not Applicable	Less than Significant
Impact Statement GEO-3: Buildout of the Harbor-UCLA Campus could result in potentially significant impacts related to differential soil settlement and liquefaction beneath proposed buildings, due to the presence of alluvium and possible undocumented fill, and relatively shallow depths to groundwater beneath the Campus. Subsidence hazards would be less than significant.	Not Applicable	**MM-GEO-2:** All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		design and construction. The geotechnical evaluation shall include the following measures to mitigate unstable soil hazards identified under Impacts GEO-3: ▪ *Compressible/Collapsible Soils and Settlement:* An assessment of the potential for soils that are prone to settlement shall be made prior to detailed design and construction of Project improvements, and mitigation techniques shall be developed, as appropriate, to reduce impacts related to settlement to low levels. During the detailed design phase of the Project components, surface reconnaissance and site-specific geotechnical evaluations shall be performed to assess the settlement potential of the on-site natural soils and undocumented fill. This may include detailed surface reconnaissance to evaluate site conditions, drilling of	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		exploratory borings or test pits, and laboratory testing of soils, where appropriate, to evaluate site conditions. Prescribed mitigation measures for soils with the potential for settlement include removal of compressible/collapsible soil layers and replacement with compacted fill; surcharging to induce settlement prior to construction of new fills; and specialized foundation design, including the use of deep foundation systems to support structures. Varieties of in-situ soil improvement techniques are also available, such as dynamic compaction (heavy tamping) or compaction grouting. ▪ *Shallow Groundwater:* A subsurface exploration shall be performed during the detailed design phase of future improvements to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		construction of Project improvements. Assessment of the potential for shallow groundwater would be evaluated during the design phase of the Project and mitigation techniques would be developed, as appropriate, to reduce the impacts related to shallow groundwater to low levels. Therefore, potential impacts due to groundwater would be reduced with incorporation of techniques such as construction dewatering.	
Impact Statement GEO-4: Buildout of the Harbor-UCLA Campus could result in potentially significant impacts related to expansive and corrosive soils beneath proposed buildings, based on the underlying soil type(s).	Not Applicable	**MM-GEO-3:** All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		to mitigate expansive soils hazards identified under Impacts GEO-4. ▪ *Expansive Soils:* An assessment of the potential for expansive soils will be conducted during the detailed design and construction phases of the Project. Mitigation techniques such as over excavation and replacement with non-expansive soil, soil treatment, moisture management, and/or specific structural design for expansive soil conditions would reduce the impact from expansive soils to low levels. ▪ *Corrosive Soils:* An assessment of the potential for corrosive soils will be conducted during the detailed design phase of the Project through a subsurface evaluation including soil testing and analysis of soils at foundation design depths. Laboratory tests would include corrosivity tests to evaluate the corrosivity of the	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		subsurface soils. Data will be reviewed by a corrosion engineer and mitigation techniques suitable for the proposed Project will be implemented as appropriate. Mitigation of corrosive soil conditions could include the use of concrete resistant to sulfate exposure. Corrosion protection for metals used in underground foundations or structures in areas where corrosive groundwater or soil could potentially cause deterioration could include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the appropriate type of cement and water/cement ratio. Specific measures to reduce the potential effects would be developed in the design phase and would reduce impacts related to corrosive soils to low levels.	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.E Greenhouse Gas Emissions			
Impact Statement GHG-1: Impacts from short- and long-term increases in GHG emissions would be less than significant. The Master Plan Project would generate GHG emissions due to construction and operational activities; however, the net increase in annual GHG emissions, directly and indirectly, would be consistent with the Los Angeles County *Community Climate Action Plan.*	See **PDF-AQ-1, Green Building Measures**	Not Applicable	Less than Significant
Impact Statement GHG-2: Construction and operation of the Master Plan Project would not conflict with applicable GHG emissions reductions plans, policies, or regulations. As a result, construction and operation of the Project would not have a significance impact with respect to consistency with GHG reduction plans, and impacts would be less than significant.	See **PDF-AQ-1, Green Building Measures**	Not Applicable	Less than Significant
4.F Hazards and Hazardous Materials			
Impact Statement HAZ-1: Project construction involves the demolition of existing buildings, grading, and excavation, which could result in the potential release into the environment of hazardous materials during	Not Applicable	**MM-HAZ-1:** The abatement of ACMs, LBP, and PCBs in existing on-site buildings shall be conducted in accordance with the recommendations of the Hazardous Building Materials	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
removal and/or remediation of existing on-site USTs, ASTs, PCBs, ACMs, and LBP, or the disturbance of on-site soil that may be contaminated by past USTs on the Campus or underlying groundwater that may be contaminated by nearby off-site LUSTs. These represent potential environmental concerns on the Harbor-UCLA Campus and their disturbance is considered a potentially significant impact. Project operations would require the storage, use, and disposal of limited quantities of hazardous materials and waste routinely used in hospitals and related facilities, in a manner consistent with manufacturer's recommendations and applicable regulatory requirements. The potential for upset and accidental conditions resulting in the release of these materials is low and related impacts are considered less than significant.		Survey prepared for the Harbor-UCLA Campus, which are as follows: ▪ The identified ACMs and surfaces containing LBP should not be disturbed. Prior to renovation or demolition activities which would disturb identified ACMs, and LCSs, a licensed abatement removal contractor shall remove the ACMs and LCS, and perform paint stabilization activities as needed. The licensed abatement contractor shall maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal, or other regulated activities. ▪ The identified surface containing LBP shall not be disturbed. Any LBP in a non-intact condition shall be abated or the component properly removed or encapsulated. Lead containing ceramic tiles shall be removed prior to	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		demolition activities. Any lead related removal activities shall be performed in accordance with the OSHA Lead in Construction Standard, Title 8 California Code of Regulations (CCR) 1532.1. ▪ Proper LBP waste stream categorization is required. Prior to any demolition activities, a composite sample of the representative LBP material (ceramic tiles and loose and flaking paint) shall be analyzed for total lead for comparison with the Total Threshold Limit Concentration in accordance with EPA reference method SW-846. If the concentration of total lead is greater than or equal to 1,000 milligrams per kilogram (mg/kg), the LBP waste material shall be disposed at a landfill which can receive such wastes. If the concentration is less than 50 mg/kg the sample may be disposed as construction debris, if it is to remain in California. If the total lead	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		result is greater than or equal to 50 mg/kg and less than 1,000 mg/kg, the sample shall be further analyzed for soluble lead by the Waste Extraction Test for comparison with the Soluble Threshold Limit Concentration as described in Title 22 CCR 66261.24a. Additionally, if the result is greater than or equal to 100 mg/kg the sample shall be further analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure for comparison with the Resource Conservation and Recovery Act (RCRA) limits. Based on the results of the soluble and leachable analysis the waste material may require disposal as a RCRA-Hazardous waste or non-RCRA- (California-) Hazardous waste. ▪ Miscellaneous hazardous building materials shall be removed and properly recycled or disposed by the licensed abatement contractor prior to	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		renovation or demolition activities. Contractor shall provide proper manifesting for all hazardous materials removed and recycled to prove the disposal of all materials was completed in accordance with local, state, and federal requirements. ▪ Abatement monitoring consulting services shall be performed by a third-party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances (asbestos and lead), verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the abatement activities. **MM-HAZ-2:** Prior to initiation of excavation and grading activities in the areas identified in the Phase I Assessment as containing potential soil contamination or for which site	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		closure is not confirmed (from either on- or off-site USTs/LUSTs or ASTs), Harbor-UCLA shall retain a qualified environmental consultant to prepare a Soils Management Plan for each development phase to be submitted to the Los Angeles County Fire Department for review and approval. The Soils Management Plan shall be implemented during excavation and grading activities for proposed improvements in the areas identified in the Phase I assessment as containing potential soil contamination to ensure that site closure is property implemented and any contaminated soils encountered are properly identified, removed and disposed of off-site. The plan shall include the following: ▪ A qualified environmental consultant shall be present as necessary during grading and excavation activities to monitor compliance with the Soils	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		Management Plan and to actively monitor the soils and excavations for evidence of contamination. ▪ Any soil encountered during excavation or grading activities that appears to have been affected by hydrocarbons or any other contamination shall be evaluated, based upon appropriate laboratory analysis, by a qualified environmental consultant prior to off-site disposal at a licensed facility. ▪ All identified contaminated soils shall be properly removed, handled and transported to an appropriately licensed disposal facility, in accordance with the Soils Management Plan prepared for each respective development phase.	
Impact Statement HAZ-2: As discussed under Threshold/Impact Statement HAZ-1, Project construction has the potential to	Not Applicable	See **MM-HAZ-1** and **MM-HAZ-2**	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
result in the accidental release of hazardous materials related to the removal and/or remediation of existing on-site USTs, ASTs, PCBs, ACMs, and LBP, as well as the disturbance of on-site soil and/or groundwater that may be contaminated by nearby off-site LUSTs, which represent potential recognized environmental concerns on the Harbor-UCLA Campus. There are no schools within a quarter-mile of the Harbor-UCLA Campus and impacts related to the emissions or handling of hazardous materials in close proximity to schools would be less than significant. However, a child care facility located immediately north of the Medical Center Campus, which could be potentially affected by accidental releases of hazardous materials. As such, impacts in this regard are considered potentially significant.			
Impact Statement HAZ-3: Harbor-UCLA is listed on several environmental databases due to inconclusive documentation regarding proper remediation and site closure following 1994 removal of five on-site USTs, as well as the presence of Large and Small Quantity Generators of hazardous waste on the Campus. Four adjacent off-site properties to	Not Applicable	See **MM-HAZ-1** and **MM-HAZ-2**	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
the east were also listed due to the potential for LUST petroleum hydrocarbon contamination of underlying groundwater. As stated under Threshold/Impact Statement HAZ-1, construction could result in the release of hazardous materials due to disturbance of potentially contaminated on-site soil and/or groundwater; this is a potentially significant impact. Hazardous waste generated during Project operations is not considered a hazard to human health or the environment and related impacts would be less than significant.			
Impact Statement HAZ-4: Harbor-UCLA is not located within an airport land use plan or the vicinity of a private airstrip; the nearest public airports are between four and 11 miles away. The Project proposes relocation of the existing helistop to a temporary and, ultimately, permanent location on the Harbor-UCLA Campus during Master Plan Project buildout. Helistop operations during construction and following buildout would not differ substantively from existing helistop operations in terms of the number of flights, composition of the helicopter fleet, or proposed flight paths. Project-related safety	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
hazards due to airport or helistop operations would be less than significant.			
Impact Statement HAZ-5: Impacts regarding emergency response plans would be less than significant. The Project would not use hazardous materials or have on-site hazardous conditions that would conflict with or obstruct implementation of any emergency response plans. Further, the Project would not interfere with emergency access routes.	Not Applicable	Not Applicable	Less Than Significant
4.G Hydrology and Water Quality			
Impact Statement HWQ-1: With compliance with regulatory requirements governing stormwater management and water quality during construction and following buildout of master Plan Project components, impacts on water quality or related to waste discharge (i.e., construction dewatering) would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement HWQ-2: Project-related excavation is not expected to extend to the depth of groundwater beneath the Harbor-UCLA Campus, with only temporary dewatering anticipated in the event seepage is encountered at shallower depths	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
than anticipated. Project implementation would increase pervious area on the Campus over existing conditions through the introduction of more landscaped area and does not propose withdrawal of groundwater to meet water demand. The Project's indirect employment-related population growth would not substantially increase demand on groundwater supplies serving the Project Site, thus impacts regarding groundwater supplies would be less than significant.			
Impact Statement HWQ-3: The Project would redevelop the already fully developed Harbor-UCLA Campus, and, with compliance with NPDES regulations and County LID requirements governing construction and post-project stormwater management and water quality, would not substantially alter existing drainage patterns in a manner that would result in substantial erosion or siltation.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement HWQ-4: The Project would redevelop the already fully developed Harbor-UCLA Campus and would not substantially alter existing topography or affect the course of	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
any streams or rivers. Neither construction nor operations would increase surface runoff in a manner that would result in flooding. Therefore, impacts on existing drainage patterns of the Project site would be less than significant.			
Impact Statement HWQ-5: With adherence to County connection permit requirements and compliance with County LID requirements, the volumes of runoff discharged to the County's storm drain system following Project buildout would be similar or reduced compared to existing conditions and would not provide additional sources of polluted runoff; impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement HWQ-6: With compliance with County NPDES and LID requirements, the Project is not anticipated to substantially degrade water quality.	Not Applicable	Not Applicable	Less Than Significant
4.H Land Use and Planning			
Impact Statement LU-1: The Project would be substantially consistent with applicable land use plans, policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, land use impacts associated with	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Project consistency with applicable land use plans, policies and regulations would be less than significant.			
Impact Statement LU-2: The Project would be compatible with existing adjacent off-site land uses because the nature (type, scale, height, location) of the existing on-site land uses would not substantially change under the Project, nor would the character of the area as perceived by the existing adjacent off-site land uses. Therefore, land use compatibility impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.I Noise			
Impact Statement NOISE -1 On-site construction noise associated with the Project would increase noise levels at nearby residential uses in excess of established thresholds. Therefore, impacts would be significant without implementation of mitigation measures.	**PDF-NOISE-1:** The Project contractor(s) will equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards. **PDF-NOISE-2:** On-site construction equipment staging area shall be located as far as feasible from sensitive uses/hospital patient buildings. **PDF-NOISE-3:** Engine idling from construction equipment such as bulldozers and haul trucks shall be limited near sensitive uses/patient buildings. **PDF-NOISE-4:** Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent	**MM-NOISE-1:** Temporary noise barriers shall be used to block the line-of-site between the construction equipment and noise-sensitive receptors during project construction, as follows: ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the southern boundary of the Project construction site to reduce construction noise at the single- and multi-family residential uses across 220th Street during Phase C, Phase 2, Phase 3, Phase 5, Phase 6,	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	feasible. **PDF NOISE-5:** Effective noise barriers will be designed and erected as needed to shield on-site uses from excessive construction-related noise. **PDF-NOISE-7:** As required by LACC, an acoustical analysis of the mechanical plans of the proposed buildings will be prepared by a qualified acoustical engineer, prior to issuance of building permits, to ensure that all mechanical equipment would be designed to meet noise limits in Table 4.I-6.	and Phase LA Biomed. ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundaries of the Project construction site to reduce construction noise at the multi-family residential uses across Carson Street during Phase 4. ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundary of the Project construction site to reduce construction noise at the single-family residential uses across Vermont Avenue during Phase 2, Phase 4, and Phase 5.	
Impact Statement NOISE-2: Off-site construction traffic would not exceed the significance thresholds at off-site noise sensitive receptor locations. Therefore, impacts to off-site sensitive receptors would be less than significant.	See **PDF-NOISE-1**, **PDF-NOISE-2**, **PDF-NOISE-3**, **PDF-NOISE-4**, **PDF-NOISE-5**, and **PDF-NOISE-7**	See **MM-NOISE-1**	Less Than Significant
Impact Statement NOISE-3: Project implementation would increase noise levels at adjacent noise-sensitive receptors in the Project area as the result of increased Project traffic and temporary helicopter activity during use of the proposed interim helistop. Project-related noise	Not Applicable	See **MM-NOISE-1**	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
from traffic would not exceed established thresholds. Project-related noise from helicopter activity would only be significant when using the temporary interim helistops. Project-related noise from helicopter activity when using the permanent helistop after it is built will be less than significant. Therefore, the temporary interim helistops would result in a temporary and periodic significant impact but the permanent helistop would result in a less than significant permanent impact.			
Impact Statement NOISE-4: Project implementation would not increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. Therefore, impacts would be less than significant.	Not Applicable	See **MM-NOISE-1**	Less Than Significant
Impact Statement NOISE-5: Project implementation, including noise from the parking structure, would increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. However, Project-related noise generation would not exceed established thresholds and therefore impacts would be less than significant.	Not Applicable	See **MM-NOISE-1**	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Impact Statement NOISE-6: Construction activities would result in sporadic, temporary vibration effects adjacent to the Project area. However, ground-borne vibration levels would not exceed established thresholds. Thus, construction vibration impacts would be less than significant and no mitigation measures are required.	**PDF NOISE-6:** To reduce the potential for serious construction-related vibration effects to on-site operating rooms or other vibration sensitive medical uses (such as laboratories), the Project contractor(s) shall perform appropriate study of the potential for peak particle velocities to reach or exceed 0.008 inches per second PPV whenever construction involving the use of heavy duty equipment is planned within 125 feet of such an on- site medical use. If, based on site-specific conditions, this study indicates potential for detrimental effects, strategies to minimize the effects shall be incorporated into the construction plan.	See **MM-NOISE-1**	Less Than Significant
Impact Statement NOISE-7: Project implementation would not generate excessive vibration levels to nearby sensitive receptors. Thus, construction and long-term vibration impacts would be less than significant and no mitigation measures are required.	Not Applicable	See **MM-NOISE-1**	Not Applicable
4.J Population and Housing			
Impact Statement PH-1: Given the temporary nature of the construction activity, the mobility of construction workers, and availability of a labor pool to draw upon in the area, construction workers would not have a notable impact on the demand for housing, nor affect general housing occupancy and population patterns. Thus, construction	**PDF TRAF-1, Construction Traffic Management Plan**	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
activities would not cause growth (i.e. new housing or employment generators) or accelerate development that exceeds projected/planned levels for the year of the Project occupancy/buildout, as compared to growth otherwise occurring, and would not result in a significant adverse physical change in the environment. Operation of the Master Plan Project would create new employment opportunities. The Project's contributions to employment would be consistent with SCAG's short-term and long-term growth projections for the South Bay Cities Subregion, unincorporated Los Angeles County communities and all of Los Angeles County, and would help the County meet or exceed its economic development objectives per the General Plan Economic Development Element, and housing allocation established in the SCAG RHNA. Overall, construction-related and long-term operational impacts regarding the relationship of the Project to growth projections would be less than significant.			
	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.K Public Services			
4.K.1 Fire Protection and Emergency Services			
Impact Statement FIRE-1: The Project would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing fire station to maintain service due to compliance with County Code and LACFD requirements that address fire safety, emergency access, emergency response times, and fire flow. Therefore, construction and operational impacts would be less than significant.	**PDF-FIRE-1:** The applicants, designers, construction contractors, and tenants for/of development under the Project will implement the conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, which are included in Appendix J-1, *Fire Department Correspondence*, of this Draft EIR. The LACFD conditions of approval referenced above are summarized below and include, but are not limited to, the following: ▪ Provide multiple ingress/egress access for circulation of traffic and emergency response vehicles. ▪ Every building constructed shall be accessible to Fire Department apparatus by way of Fire Apparatus Access Roads of not less than the minimum widths prescribed in Fire Code Section 503.2.1, with roadways extending to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building. ▪ Fire Apparatus Access Roads shall be a minimum unobstructed width of 28 feet exclusive of shoulders and have	**MM FIRE-1:** The Project construction contractors will regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times. **MM FIRE-2:** Prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	unobstructed vertical clearance "clear to sky" ▪ Dead-end Fire Apparatus Access Roads in excess of 150 feet in length shall be provided with an approved Fire Department turnaround. ▪ Provide approved signs or other approved notices or markings that include the words "NO PARKING – FIRE LANE". ▪ Fire Apparatus Access Roads must be installed and maintained in a serviceable manner prior to and during the time of construction. ▪ Approved building address numbers, building numbers, or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property. ▪ The method of gate control shall be subject to review by the Fire Department prior to approval, and shall meet specified width, positioning, emergency power, and emergency access requirements. ▪ The development may require fire flows up to 8,000 gpm at 20 psi residual pressure for up to a five-hour duration.		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	Final fire flows will be based on the size of buildings, the installation of an automatic fire sprinkler system, and type(s) of construction used. ▪ Fire hydrant spacing shall be every 300 feet for both the public and the on-site hydrants, with no portion of a lot frontage more than 200 feet via vehicular access from a public hydrant, and no portion of a building exceeding 400 feet via vehicular access from public fire hydrant. ▪ All required public fire hydrants shall be installed, tested, and accepted prior to beginning construction. Provide a Fire Department-approved fire sprinkler system in all proposed buildings.		
4.K.2 Sheriff Protection			
Impact Statement SHER-1: The Project would not require the addition of a new police station or the expansion, consolidation, or relocation of an existing police station to maintain service due to compliance with applicable requirements and Project Design Features that address police protection service, response times, and Crime Prevention Through Environmental Design (CPTED). Therefore, construction and operational impacts would be less	**PDF-SHER-1:** The County Department of Public Works shall provide the LACSD CSB with the on-site satellite station space, locker space, and associated parking spaces, required to serve the Project. This shall include, at a minimum, the existing amount of satellite station space (927 sf), locker room space (1,672 sf), and associated parking spaces, plus an additional 36 percent (approximately 1,000 sf) of this operational space and associated parking to serve the net increase in on-site employees and patients under the Project.	**MM SHER-1:** During Project construction, construction sites will be fully fenced, lighted with security lighting, and patrolled by either the LACSD on-site satellite station personnel (either sworn officers or contract security guards) or private security hired by DHS. **MM SHER-2:** Emergency access to the LACSD will be provided and	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
than significant.	**PDF-SHER-2:** Project design shall adhere to the Crime Prevention Through Environmental Design (CPTED) principles. This shall include, but not be limited to, the provision of physical design features that discourage crime such as defensible space, territoriality, surveillance, lighting, landscaping, and physical security. The CPTED features shall be identified on the design plans for the Project which shall be provided to the LACSD for review and approval.	maintained to existing and new uses on-site uses, and to off-site uses, throughout construction. **MM SHER-3:** The Project construction contractors will regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times. **MM SHER-4:** The Security Management Plan for the Harbor-UCLA Campus will be updated by DHS, in consultation with the LACSD, to address the proposed physical and operational changes to the Campus under the Project. At a minimum, the primary security features and measures currently in place at the Campus under the Security Management Plan will carried forward under the Project.	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.K.3 Parks and Recreation			
Impact Statement PARKS-1: Project construction and operation would not create a demand for parks and recreational facilities that would require new or physically altered parks and recreational facilities or result in substantial physical deterioration of such facilities. In addition, the Project would not include new recreational facilities or require the construction or expansion of existing facilities. Therefore, the impact would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.K.4 Schools			
Impact Statement SCHOOLS-1: Project construction and operation would not be expected to create a demand for schools that would require new or physically altered public schools, the construction of which would result in a substantial adverse physical impact. Therefore, the impact would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.K.5 Libraries			
Impact Statement LIBRARIES-1: Project construction and operation would not be expected to create a demand for libraries that would require new or physically altered public libraries, the construction of which would result in a substantial	**PDF-LIBRARIES-1:** The AF Parlow Library of Health Sciences, an existing LACDHS-operated library on the Project Site available for use by doctors, medical students, fellows, faculty, nurses, and allied health professionals affiliated with the medical center, will be retained and relocated to	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
adverse physical impact. Therefore, the impact would be less than significant.	other building space on the HUCLA Campus.		
4.L Transportation and Traffic			
Impact Statement TRAF-1: With the implementation of PDF TRAF-1, Construction Traffic Management Plan, and PDF TRAF-2, Pedestrian Safety, potential construction impacts associated with hauling, deliveries and worker vehicles would be reduced. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance with the two Project Design Features would minimize the potential for the Project to result in substantial disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the Project area's commercial zones and residential neighborhoods. However, given the potential addition of construction-related vehicle trips during peak construction periods, transportation and parking impacts related to construction would be considered significant	**PDF TRAF-1: Construction Traffic Management Plan:** A detailed Construction Traffic Management Plan including street closure information, detour plans, haul routes, and staging plans would be prepared and submitted to the County for review and approval. The Construction Traffic Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements as appropriate: ▪ Prohibition of construction worker parking on nearby residential streets. ▪ Prohibition of construction-related vehicles parking or staging on surrounding public streets. ▪ Temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.	No feasible mitigation measures.	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
and unavoidable, though such impacts would only occur on a temporary basis while construction activities are occurring on-site.	▪ Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate. ▪ Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible. **PDF TRAF-2: Pedestrian Safety:** The construction contractor(s) would plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. The contractor(s) would maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. Temporary pedestrian facilities would be adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. Covered walkways would be provided where pedestrians are exposed to potential injury from falling objects. The contractor would keep sidewalks open during construction except when it is absolutely required to close or block the sidewalks for construction staging. Sidewalks shall be reopened as soon as		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	reasonably feasible taking construction and construction staging into account.		
Impact Statement TRAF-2: Implementation of the Master Plan Project would result in a net increase in traffic generation on the Project Site of 1,640 daily trips under Interim Year (2023) conditions and 6,598 daily trips at Full Buildout (2030). Project-related operational traffic impacts on study area intersections would be considered potentially significant under Existing With Project Conditions, Future Interim Year (2023) conditions, and Full Buildout (2030) conditions.		**MM TRAF-1: I-110 Southbound Ramps & Carson Street (Intersection #9)** - The existing southbound approach on the Interstate I-110 off-ramp shall be restriped to convert the existing left-turn lane to a left-/right-turn lane. **MM TRAF-2: 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15)** - An additional northbound through lane shall be striped and the existing through lane shall be restriped as a through/right-turn lane. The eastbound approach shall be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane. **MM TRAF-3: I-110 Southbound Ramps & 223rd Street (Intersection #20)** - The southbound approach would be restriped from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach shall be restriped to change the existing right-turn lane to a through/right-turn lane.	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		Under this mitigation, parking shall be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane.	
Impact Statement TRAF-3: The Project would not meet the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement TRAF-4: The Project would increase traffic on the Caltrans facilities. With regard to freeway segments and intersections, while the County would make a fair-share contribution to offset increases in trips that would occur as a result of Project traffic, the Project could have a significant impact on Caltrans facilities. While the County would contribute a fair-share contribution for future improvements, this impact is considered potentially significant.	Not Applicable	**MM TRAF-4:** The developer shall contribute a fair share contribution to Caltrans toward an analysis or improvements on I-110 (Harbor Freeway) in the Project vicinity to offset the additional Project-generated trips that would result on the freeway mainline segments and that would pass through the affected Caltrans intersections.	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Impact Statement TRAF-5: The Project would increase traffic on the Caltrans facilities. However, with regard to off-ramps, the Project would not contribute traffic such that off-ramp queues would extend beyond the length of the ramp itself onto the mainline of a freeway during peak arrival periods. Thus, impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement TRAF-6: Transit ridership generated by the Project would not exceed the residual capacity of the public transit system under Future Interim (2023) and Buildout (2030) conditions. Therefore, impacts with respect to transit would be less than significant. With regard to other alternative transportation modes, the Project would be supportive of and would not conflict with applicable alternative transportation policies, plans, and programs. Thus, impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement TRAF-7: Site access would be provided via seven driveways designed to County standards that would accommodate left and right ingress/egress turning movements. The existing network	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. Impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant.			
Impact Statement TRAF-8: The Project would provide vehicle parking sufficient to meet projected demand. Therefore, impacts related to parking would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.M Utilities and Service Systems			
4.M.1 Water Supply			
Impact Statement WS-1: Construction of the water infrastructure required to serve the Master Plan Project would not result in significant environmental effects. Impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement WS-2: Implementation of the proposed Master Plan Project would not result in a demand for water that would exceed projected available	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
supplies. As such, impacts would be less than significant.			
4.M.2 Wastewater			
Impact Statement WW-1: Although construction and operation of the Project would result in an increase in wastewater generation that would increase the overall demands on wastewater conveyance and treatment facilities in the area, this increase would not exceed the available capacity of affected wastewater facilities and thus would not, directly or indirectly, result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Therefore, impacts related to wastewater conveyance and treatment would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.M.3 Solid Waste			
Impact Statement SW-1: The Project would generate construction debris due to demolition and removal of multiple buildings throughout the	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Campus, grading and excavation, and construction of new buildings. Disposal of waste materials would achieve a minimum diversion or recycling rate of 50 percent, as required by County regulations, and adequate capacity exists at the County's C&D disposal sites. As such, impacts related to solid waste disposal capacity due to construction activities would be less than significant.			
Impact Statement SW-2: Impacts on waste disposal facilities from operations would be less than significant because the County has sufficient landfill capacity to accommodate residual waste generation. The Project would generate solid waste as the result of operation of Project Site, but there will not be a substantial increase in operations and solid waste generation. Waste disposal would include design features and compliance with County waste disposal procedures for recycling and diversion of waste from County landfills.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement SW-3: The Project would be implemented in compliance with all applicable Federal, State and local regulatory requirements regarding diversion of landfill materials and efficient	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
use of County landfill facilities. Thus, impacts would be less than significant.			

1. Introduction

1.0 INTRODUCTION

This Draft Environmental Impact Report (EIR) has been prepared for the proposed Harbor-UCLA Medical Center Campus Master Plan Project (Master Plan Project or Project). The Project would be a redesign of the existing County of Los Angeles Harbor-UCLA Campus to address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Harbor-UCLA Campus or Medical Center Campus). The existing 72-acre Harbor-UCLA Campus, located at 1000 West Carson Street in Torrance, California, currently includes 1,279,284 square feet of developed floor area, including a recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project, which will be developed into a total of approximately 2,457,355 square feet of developed floor area, will include development of a new Hospital tower (New Hospital Tower) on schedule to meet increasing state law seismic requirements for acute care facilities, renovation of the existing Hospital tower (Existing Hospital Tower) to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. The redesigned Medical Center Campus would consolidate outpatient facilities and locate them in proximity to the New Hospital Tower in the north-central portion of the Medical Center Campus. The western side of the Medical Center Campus would be utilized for the development of a biotechnical research campus (Bioscience Tech Park) and would support open space, surface parking, and other similar ancillary short-term uses.

The Project Site is currently developed with multiple facilities throughout the Campus. The Existing Hospital Tower, related treatment facilities, and the majority of Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Campus, while buildings occupied by LA BioMed take up a portion of the central Campus, and outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Campus. Patient diagnostic facilities, administration offices, and additional facilities management functions are scattered throughout the Campus.

The Project would remove many of the existing original and older buildings, including the original WWII barracks and modular structures. However, several existing buildings would remain, including the Existing Hospital Tower, which would be decommissioned and reused to provide non-acute care support services. Other major facilities to remain include the PCDC and the CII Burton E. Green Campus building at the western end of the Campus. The Campus's emergency generator would also remain in its current location.

The Project would provide a continuous pedestrian circulation network throughout the Harbor-UCLA Campus. Multiple north/south walks and promenades would connect the center of the Campus with the public edge along Carson Street. Landscaped outdoor spaces would accommodate active social gatherings and passive gardens for contemplation and relaxation. Landscaped areas for exercise would be provided to help maintain staff's endurance during long shifts and educate the public regarding preventative healthcare. Landscaped courtyard gardens and plazas and a network of walkways or trails that form a continuous circulation system will allow staff and guests to reach their destinations with minimal opportunities for pedestrian/vehicular conflicts.

Vehicle access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. Staff entries and parking would be located in the southeastern corner of the Campus, while access for the public would be provided on Carson Street along

the northern perimeter. Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes on the Campus between the main parking areas and the New Hospital Tower and Outpatient buildings.

The Master Plan Project will provide a long-term guide for future development throughout the Harbor-UCLA Campus. Although the actual timing, phasing, and scheduling of future construction projects comprising Master Plan Project buildout has not been precisely determined, at this time it is reasonably anticipated that development would occur in an estimated six main construction phases, culminating in 2030.

Discretionary actions that would be required for the Project are anticipated to include certification of the Final EIR; approval of demolition, excavation, and building approvals for non-acute care buildings and ancillary structures; review and approval of proposed acute care facilities (i.e., New Hospital Tower) by the California Office of Statewide Health Planning and Development (OSHPD); approval of the haul route; helistop permit approval by the California Department of Transportation (Caltrans) Division of Aeronautics; and other entitlements and approvals as may be required.

A. PURPOSE OF THE DRAFT EIR

The purpose of this Draft EIR is to inform decision-makers and the general public of the environmental impacts resulting from the proposed Project. The County is the Lead Agency under the California Environmental Quality Act (CEQA) responsible for preparing an EIR. This Draft EIR has been prepared in conformance with CEQA (California Public Resources Code Section 21000 et seq.), and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). The principal State CEQA Guidelines sections governing content of this document are Sections 15120 through 15132 (Contents of an EIR), and Section 15161 (Project EIR). This is a Project EIR, in accordance with Section 15161 of the State CEQA Guidelines, and in accordance with that Section is intended to "examine the environmental impacts of a specific development project" – in this instance, all phases of the proposed Harbor-UCLA Medical Center Master Plan Project.

The County will consider the information in this Draft EIR, along with other information that may be presented during the CEQA process, including the Final EIR prior to making any decisions to implement the Project. The EIR will be used in connection with all other permits and all other approvals necessary for the construction and operation of the Project. The EIR will be used by the County's Department of Public Works, including the Divisions of Land Development, Geotechnical and Materials Engineering, Traffic and Lighting, Environmental Programs, Sewer Maintenance, and Land Development to provide CEQA clearance in support of future improvements on the Medical Center Campus. The EIR will also be relied upon by OSHPD in the review and approval process for proposed acute care facilities, which require its approval, as well as by the California Department of Transportation, Division of Aeronautics as part of its review and approval of proposed temporary and proposed helistop facilities on the Medical Center Campus.

In accordance with Section 15121 of the State *CEQA Guidelines*, this Draft EIR provides specific information regarding the environmental effects associated with development of the Project Site, and ways to minimize any significant environmental effects through mitigation measures or reasonable alternatives to the Project. For some effects, significant environmental impacts cannot be mitigated to a level considered less than significant; in such cases, impacts are considered significant and unavoidable. In accordance with Section 15093(b) of the State CEQA Guidelines, if a public agency approves a project that has significant unavoidable impacts where impacts cannot be mitigated to less than significant levels, the agency must state

in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is known as a "statement of overriding considerations."

This document analyzes the environmental effects of the Project to the degree of specificity appropriate to the underlying actions described in the EIR, as required under Section 15146 of the State CEQA Guidelines. This analysis considers the actions associated with the Project, to determine the short-term and long-term effects. This EIR discusses both the direct and indirect impacts of this Project, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects. CEQA requires the preparation of an objective, full disclosure document to inform agency decision-makers and the general public of the direct and indirect environmental effects of the proposed action, including mitigation measures and reasonable alternatives that can reduce or eliminate any identified significant adverse effects.

B. EIR SCOPING PROCESS

In compliance with the State CEQA Guidelines, the County has taken steps to provide opportunities for public participation in the environmental process. During the preparation of the Draft EIR various federal, state, regional, and local government agencies and other interested parties were notified to solicit comments on the contents of a Draft EIR and inform the public of the Project. As further described below, early consultation with the public included the distribution of an Initial Study and Notice of Preparation (NOP), and noticing for and conducting of a Public Scoping Meeting.

1. Initial Study

In accordance with Section 15063(a) of the State CEQA Guidelines, the County prepared an Initial Study. The Initial Study, provided in Appendix A of the Draft EIR, determined that the Project had the potential to result in significant impacts associated with a number of environmental issues. As a result, this Draft EIR addresses those issues where the Project potentially could result in significant environmental impacts and proposes feasible mitigation measures.

The Draft EIR focuses on changes in the environment that would result from the Project, individually and cumulatively with other development projects. The EIR identifies potentially significant direct and indirect impacts resulting from construction and operation of the Project, and provides Project Design Features and mitigation measures to reduce or avoid such effects. This Draft EIR addresses environmental effects in the following areas:

- Aesthetics
  - Visual Character
  - Views
  - Light and Glare
  - Shading
- Air Quality
- Energy
- Geology and Soils

- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
  - Fire Protection and Emergency Services
  - Sheriff Protection
  - Parks and Recreation
  - Schools
  - Libraries
- Traffic and Transportation
- Utilities and Services Systems
  - Water Supply
  - Wastewater
  - Solid Waste

Based on the Initial Study, issues for which no significant impacts are anticipated to occur are addressed in Chapter 6.0, Other CEQA Considerations, of this Draft EIR. Those include Aesthetics (scenic resources within a scenic corridor); Agriculture and Forestry Resources and Mineral Resources; Biological Resources (riparian habitat or other sensitive natural community, federally protected wetlands, conflicts with local policies or ordinance protecting biological resources, and conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan): Geology and Soils (rupture of a known earthquake fault within an Alquist-Priolo Earthquake Fault Zoning Map, landslides, or soils capable of supporting a septic tank or alternative wastewater disposal system); Hydrology and Water Quality (placement of housing or other structures within a 100-year flood hazard area, exposure of people or structures to significant risk of flooding, or inundation by tsunami, seiche or mudflow); Land Use (physical division of an established community or conflict with any applicable habitat conservation plan or natural community conservation plan); and Population and Housing (displacement of existing housing or people requiring housing elsewhere). See also the Initial Studies in Appendix A of this Draft EIR.

2. Notice of Preparation for Scoping Process

Pursuant to the provision of Section 15082 of the State CEQA Guidelines, the County circulated an NOP to state, regional, and local agencies, and members of the public for a 30-day scoping period commencing November 3, 2014 and ending December 2, 2014 and for a second 30-day period commencing June 29, 2015 and ending July 29, 2015. The purposes of the NOPs were to formally convey that the County was preparing

a Draft EIR for the Project, and to solicit input regarding the scope and content of the environmental information to be included in the Draft EIR. See Appendix A1, NOP and Initial Study, of this Draft EIR.

3. Public Scoping Meeting

Both NOPs included notification that public scoping meetings would be held in an open house format to further inform public agencies and other interested parties of the Project and to solicit input regarding the Draft EIR. The meetings were held November 12, 2014 between 5:30 p.m. and 7:30 p.m. and on July 15, 2015, from 5:30 p.m. to 7:30 p.m. at the Parlow Library on the Harbor- UCLA Campus. The meetings provided interested individuals, groups, and public agencies the opportunity to view materials, ask questions, and provide comments to the Lead Agency regarding the scope and focus of the Draft EIR as described in the respective NOPs and Initial Studies. See Appendix A-2 of this Draft EIR for Scoping Meeting Materials from both meetings.

4. Scoping Comments Received

Seven written comment letters responding to the NOP were submitted to the County by public agencies, interested parties, and individuals. Comment letters were received from the following: State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit; State of California, Department of Transportation (Caltrans); State of California, Native American Heritage Commission; Metropolitan Transportation Authority (Metro); the Southern California Association of Governments (SCAG); South Coast Air Quality Management District (SCAQMD); Los Angeles Unified School District (LAUSD); the County of Los Angeles Fire Department; the County Sanitation Districts; the City of Carson; and two individuals. Comments were also received orally on the scope and contents of the Draft EIR at the public scoping meeting. Public comments received during the NOP circulation period are provided in Appendix A-3 of this Draft EIR and are summarized in the Executive Summary, Subsection D, Areas of Controversy/Issues to be Resolved, in this Draft EIR. These comments are also addressed in general throughout this Draft EIR where applicable.

C. FORMAT OF THE DRAFT EIR

The Draft EIR includes an Executive Summary, nine Chapters, and appendices, which are organized as follows:

Executive Summary. This section of the Draft EIR provides a brief summary of the proposed actions and environmental consequences. It briefly recaps the proposed Project location and key characteristics; summarizes the environmental review process including opportunities for public input and review; summarizes areas of controversy raised by agencies and the public; provides a summary of Project impacts and required mitigation measures that would reduce or avoid significant Project impacts; and identifies the level of impact significance following implementation of mitigation measures for each significant effect.

1.0 Introduction. This section provides a summary of the Project; describes the CEQA process undertaken for the Project to date; and summarizes the Draft EIR organization and contents and discusses opportunities for public review of the Draft EIR.

2.0 Project Description. This section describes and depicts the Project Site location; defines the Project's underlying purpose lists the specific Project objectives; provides a general description of the Project's technical, economic, and environmental characteristics; describes the intended uses of the EIR, including a list of agencies expected to use the EIR in decision making, a list of permits and other approvals required to implement the Project; and a list of environmental review and consultation requirements required.

3.0 General Description of Environmental Setting. This section presents an overview of the Project's environmental setting, including on-site and surrounding land uses. This section also provides a list and mapped locations of past, present, and probable future projects considered in the analysis of potential Project contributions to cumulative impacts.

4.0 Environmental Impact Analysis. This section provides a description of the physical conditions in the Project vicinity at the time the Notice of Preparation was published, which serves as the baseline physical conditions against which a Lead Agency determined whether an impact is significant. Each technical section within this chapter describes, for the environmental resource in question, existing conditions, the pertinent regulatory framework, the technical methodology employed to determine impacts, the applicable thresholds of significance, relevant Project characteristics for purposes of analysis, Project Design Features (PDFs) and/or regulatory compliance measures that serve to avoid potential impacts, Project and cumulative impact analyses, mitigation measures, and conclusions regarding the level of significance after mitigation.

Prior to the environmental impact analysis for each technical section in this chapter, PDFs, if applicable, are listed and numbered. PDFs are specific design elements or other requirements incorporated into the Project that are included in the Project's contractor specifications and final plans, which are implemented in accordance with County protocol to prevent the occurrence of, or reduce the significance of, potential environmental effects. Because PDFs have been incorporated into the Project, they do not constitute mitigation measures as defined by CEQA. However, PDFs are identified in the Mitigation Monitoring and Reporting Program (MMRP) for convenience of tracking to ensure compliance monitoring. In addition, various regulatory requirements, which are summarized in each section under Regulatory Framework Summary, include applicable local, State, or federal regulations that are required independently of CEQA review and also serve to prevent the occurrence of, or reduce the significance of, potential environmental effects. Typical regulatory requirements include compliance with the provisions of the California Building Code, South Coast Air Quality Management District rules, local agency requirements, and other regulations and standards. An analysis of the potential environmental impacts that may result from the Project and any related improvements follows in each section. This impact analysis assumes the implementation of PDFs and regulatory requirements. The analysis addresses each applicable impact threshold, and includes a discussion of cumulative impacts at the end.

Where a potentially significant environmental effect has been identified, Project-specific mitigation measures are included. Section 15126.4(a) of the State CEQA Guidelines requires lead agencies to consider feasible to avoid or substantially reduce a project's significant environmental impacts. A summary of the significance of environmental impacts after

compliance with the PDFs and regulatory requirements and implementation of the mitigation measures, if any, are then stated for each environmental issue.

This discussion of impacts is provided in the Draft EIR for each of the following environmental issues: (1) Aesthetics – Visual Character, Views, Light and Glare, Shading; (2) Air Quality; (3) Energy, (4) Geology and Soils; (5) Greenhouse Gas Emissions; (6) Hazards and Hazardous Materials; (7) Hydrology and Water Quality; (7) Land Use and Planning; (8) Noise and Vibration; (9) Population and Housing; (10) Public Services – Fire Protection and Emergency Services, Sheriff Protection, Parks and Recreation, Schools, Libraries; (11) Transportation and Parking; and (12) Utilities and Service Systems – Water Supply, Wastewater, Solid Waste.

5.0 Alternatives. This section describes a reasonable range of alternatives to the Project, including the No Project/No Build Alternative, Reduced Intensity Alternative A (Acute Bed and Other Plan Reductions), Reduced Intensity Alternative B (Further Acute Bed and Other Plan Reductions), and Reduced Intensity Alternative C (New Acute Bed Hospital Tower Only Alternative). This section also evaluates the environmental effects of the alternatives for each issue area analyzed in the Draft EIR.

6.0 Other CEQA Considerations. This section includes a discussion of issues required by CEQA that are not covered in other chapters or technical sections. This includes significant unavoidable impacts, reasons why the Project is being proposed notwithstanding significant unavoidable impacts, growth-inducing impacts, potential secondary effects caused by the implementation of the mitigation measures for the Project, and effects found not to be significant.

7.0 References. This section lists the references and sources used in the preparation of this Draft EIR.

8.0 List of EIR Preparers. This section lists the persons who contributed to the preparation of this Draft EIR and their professional qualifications.

9.0 Standard Terms, Definitions, and Acronyms. This section provides a listing of the common acronyms and abbreviations used throughout this document.

The Environmental Analyses in this Draft EIR are supported by the following appendices:

- Appendix A – Notice of Preparation (NOP), Initial Study, Scoping Meeting Materials, and NOP and Scoping Meeting Comments
  - A-1 November 2014 Initial Study/NOP, Scoping Materials, and Comments
  - A-2 June 2015 Initial Study/NOP, Scoping Materials, and Comments
- Appendix B – Air Quality Data Worksheets
- Appendix C – Preliminary Geotechnical Evaluation
- Appendix D – Greenhouse Gas Emissions Data Worksheets
- Appendix E – Hazardous Materials Assessments
  - E-1 Phase I Hazardous Materials Assessment

  - E-2 Hazardous Building Materials Survey Report
- Appendix F – Energy Data Worksheets
- Appendix G – Service Provider Correspondence
  - G-1 Fire Department Correspondence
  - G-2 Sheriff's Department Correspondence
  - G-3 Parks and Recreation Department Correspondence
  - G-4 School District Correspondence
  - G-5 Library Correspondence
- Appendix H – Noise Data and Reports
  - H-1 Noise Data Worksheets
  - H-2 Helicopter Noise Impact Study
  - H-3 Helistop Relocation and Operations Study
- Appendix I – Transportation and Traffic
  - I-1 Traffic Impact Analysis Report
  - I-2 Traffic Impact Analysis Report Appendices
- Appendix J – Water Supply Assessment

D. PUBLIC REVIEW OF THE DRAFT EIR

The Draft EIR is subject to a minimum 45-day public review period in which the document is made available to responsible and trustee agencies, interested parties and members of the public. In compliance with the provision of Sections 15085(a) and 15087(a)(1) of the State CEQA Guidelines, the County, serving as the Lead Agency: (1) published a Notice of Completion and Availability (NOCA) of a Draft EIR in two (2) newspapers of general circulation, including the Daily Breeze (English language) and La Opinión (Spanish language), which indicated that the Draft EIR was available for review at the Harbor-UCLA Medical Center, (2) provided copies of the NOCA and Draft EIR to seven (7) local libraries, including the Carson Library, Harbor Gateway City Library, Southeast Branch Library, Lomita Library, Dr. Martin Luther King, Jr. Library, the Katy Geissert Civic Center Library, and the Wilmington Library, (3) posted the NOCA and the Draft EIR on the County website (http://dpw.lacounty.gov/landing/publicBuildings.cfm), (4) prepared and transmitted a NOCA to the State Clearinghouse; (5) mailed a NOCA to all property owners within 500 feet of the Project Site; and (6) sent a NOCA to the last-known name and address of all organizations and individuals who previously requested such notice in writing or attended one or both of the public scoping meetings about the Project. Proof of mailing is available at the County. The public review period commenced on August 17, 2016, and will end on October 3, 2016, for a total of 48 days.

Any public agency or members of the public desiring to comment on the Draft EIR must submit their comments in writing by mail or email to the following address prior to the end of the public review period:

Mail: Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 S. Fremont Ave.
Alhambra, CA 91803-1331

Email: cnash@dpw.lacounty.gov

Phone: (626) 300-2363

Upon the close of the public review period, the County will proceed to evaluate and prepare responses to all written comments received from public agencies and other interested parties during the public review period. A Final EIR will then be prepared. The Final EIR will consist of the Draft EIR, possible revisions to the Draft EIR, comments submitted by responsible agencies or reviewing parties during the public circulation period for the Draft EIR, and County responses to those comments. After the Final EIR is completed and at least 10 days prior to its presentation to the County Board of Supervisors for consideration of certification of the Final EIR and action on the Project, responses to comments made by public agencies on the Draft EIR will be provided to the commenting agencies.

2. Project Description

2.0 PROJECT DESCRIPTION

A. INTRODUCTION

Los Angeles County proposes the Harbor-UCLA Medical Center Campus Master Plan Project (Master Plan Project or Project) to address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Harbor-UCLA or Medical Center Campus).

The existing Medical Center Campus contains approximately 1,279,284 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a new Hospital tower (New Hospital Tower) on schedule to meet increasing state law seismic requirements for acute care facilities, renovation of the existing Hospital building (Existing Hospital Tower) to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Medical Center Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. The Campus-wide floor area would increase from approximately 1,279,284 square feet to approximately 2,457,355 square feet.

The redesigned Medical Center Campus would consolidate outpatient facilities and locate them in proximity to the New Hospital Tower in the north-central portion of the Medical Center Campus. It would also engage Carson Street by orienting hospital-related services used by the community along this major thoroughfare. Courtyards, landscaped areas, and paths and sidewalks for pedestrian circulation would form the core of the Medical Center Campus and connect the New Hospital Tower and outpatient facilities with the other major tenants on the Medical Center Campus, including Los Angeles Biomedical Research Institute (LA BioMed) in the south-central portion of the Medical Center Campus and the Children's Institute International (CII) Burton E. Green Campus in the northwest portion of the Medical Center Campus. Patient and visitor vehicle access and parking would be realigned off Carson Street and staff vehicle access would be concentrated in the eastern and southeastern Medical Center Campus off Vermont Avenue and 220th Street.

The western side of the Medical Center Campus would be used for the development of a new 250,000-square-foot biotechnical research campus (Bioscience Tech Park). A bioscience hub at the Medical Center Campus would provide the potential to grow the bioscience industry in the County and take advantage of relationships and research opportunities between the Bioscience Tech Park, the public hospital, and LA BioMed. Implementation of the Master Plan Project is expected to meet short-term needs of the communities served by the Existing Hospital Tower, associated facilities, and other tenants of the Medical Center Campus, as well as long-term needs beyond 2030.

B. HARBOR-UCLA MEDICAL CENTER LOCATION AND SURROUNDING USES

The 72-acre Medical Center Campus is located in the unincorporated County of Los Angeles community of West Carson, which roughly encompasses the 2.3-square-mile area between the Harbor Freeway (I-110) on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Center Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located

one block (approximately 800 feet) east of the Medical Center Campus and the San Diego Freeway (I-405) is located approximately two miles to the north and northeast. The Harbor Freeway is accessed via Carson Street and the San Diego Freeway is accessed via Carson Street to the east and Vermont and Normandie Avenues to the north. The Harbor-UCLA Medical Center Campus location is illustrated in **Figure 2-1**, *Project Site and Regional Location Map*.

Surrounding communities include the cities of Gardena, Lawndale, and Hawthorne to the north; the city of Carson, east of the Harbor Freeway; the Harbor Gateway community, part of the city of Los Angeles, and the city of Torrance to the west; and to the south, the Harbor City community, part of the city of Los Angeles, and the city of Lomita.

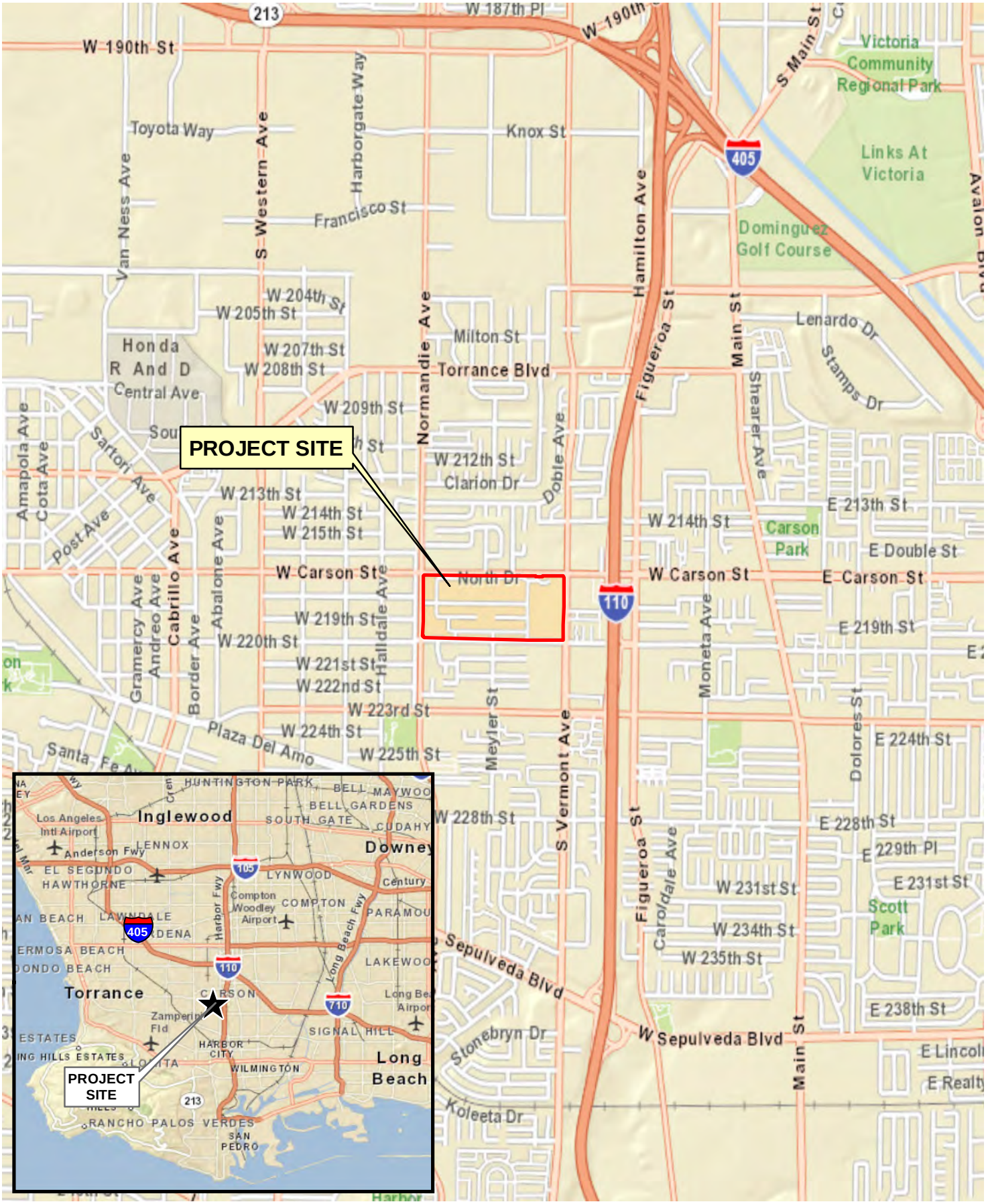
Figure 2-2, *Surrounding Land Uses*, is an aerial photograph of the Medical Center Campus and vicinity, with nearby land uses identified. Carson Street, to the north, is largely developed with commercial uses, primarily neighborhood retail businesses and medical/dental services. The Harbor UCLA Medical Center Employee Children's Center (Child Care Center) and a multifamily residential apartment complex, Harbor Cove Villa, are located outside the Harbor-UCLA Medical Center Campus on Carson Street just west of the intersection with Vermont Avenue. The area north of Carson Street is a predominantly single-family residential neighborhood. Vermont Avenue, bordering the Harbor-UCLA Medical Center Campus to the east, is developed with a mix of neighborhood retail uses and medical services just north and south of Carson Street, while the southern half of the block facing the Harbor-UCLA Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and Starlite Trailer Park and Rainbow Mobile Home Park, which back up to the Harbor Freeway on the west. Wholesale and light industrial uses, primarily warehouses and truck distribution centers, are located to the southeast along 220th Street. Single-family and multi-family residential neighborhoods border the Harbor-UCLA Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles; the abandoned Union Pacific Railroad right-of-way area along the west side of Normandie Avenue serves as a setback for residential uses to the west. An off-site surface parking lot serving LA BioMed is located across 220th Street from the Harbor-UCLA Medical Center Campus.

C. HARBOR-UCLA MEDICAL CENTER BACKGROUND AND EXISTING CONDITIONS

1. History and Background

(a) History of Harbor-UCLA Medical Center

The first hospital uses at the Harbor-UCLA Medical Center Campus were established in 1943 when the property was used as the U.S. Army's Port of Embarkation Station Hospital, a receiving point and hospital for servicemen returning from the Pacific during World War II (WWII). Facilities included an administration building and a collection of Army barracks and cottages; the hospital also provided medical services for servicemen and their families living in the area. By 1946, the facility was no longer needed and was sold as war surplus by the federal government to the County for the development of Los Angeles County Harbor General Hospital (Harbor General Hospital), to provide County-based medical care and hospital services to the increasingly populous southwestern part of the County.



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0 2,000 4,000 Feet

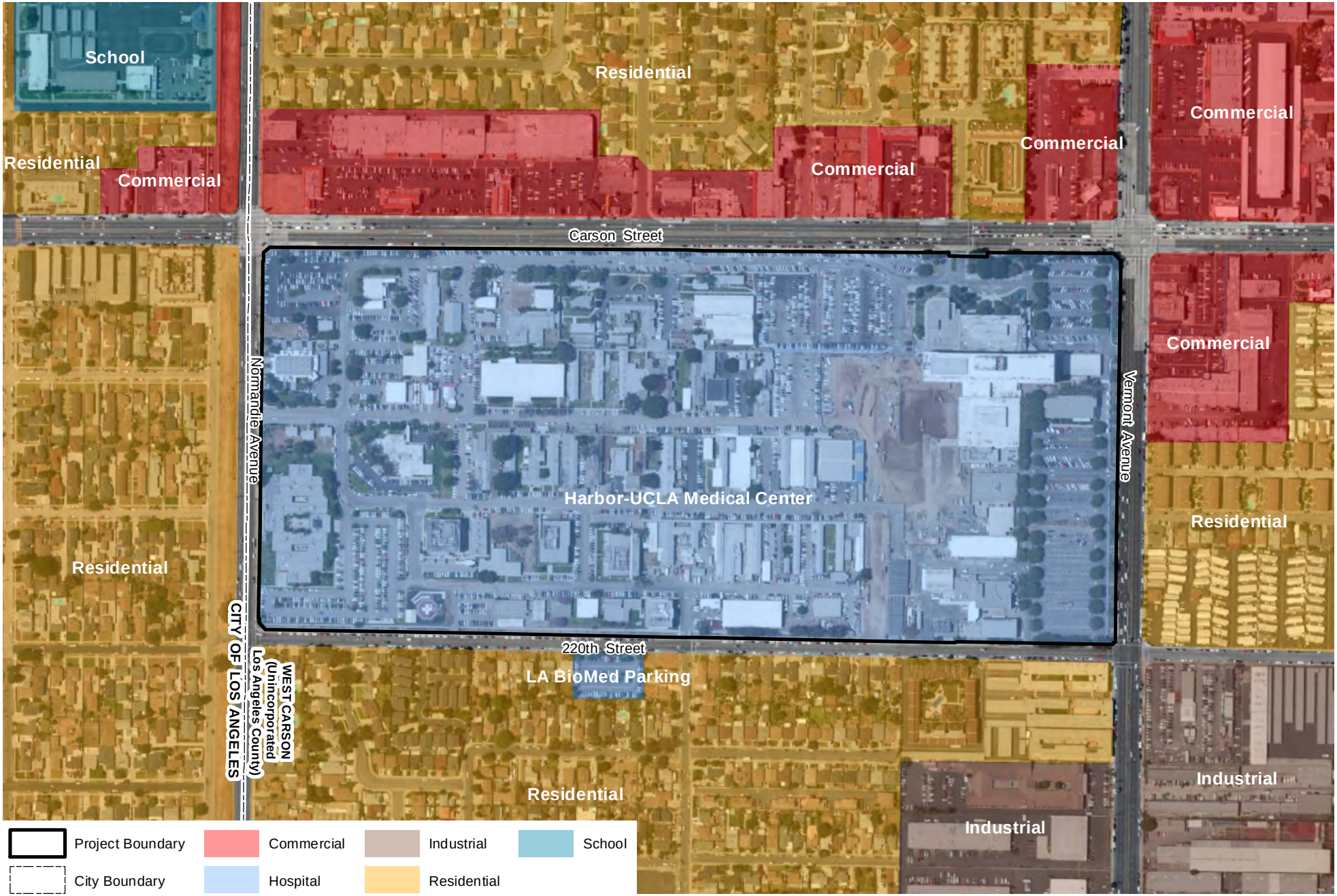
Regional and Vicinity Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, 2014.

FIGURE

2-1



PCR

Aerial Photograph with Surrounding Land Uses

Harbor-UCLA Medical Center Master Plan

Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2014.

FIGURE

2-2

Harbor General Hospital began its affiliation with the University of California Los Angeles (UCLA) School of Medicine in 1948 and became the southern campus of the UCLA School of Medicine in 1951. Construction of the existing eight-story, 450,000-square-foot Existing Hospital Tower was completed in 1962 in the eastern portion of the Medical Center Campus and replaced a number of the original Army facility's wooden barracks and cottages. Despite a design life of seven years, nearly one-third of the original barracks built in the 1940s still remain in use today as clinics, offices, shops, storage, laboratories and related facilities, augmented by temporary modular buildings and trailers. In 1978, the name of the hospital was changed to Los Angeles County Harbor-UCLA Medical Center to highlight its working relationship with the David Geffen School of Medicine at UCLA. An affiliation with the UCLA School of Dentistry was established in 1972.

The historical development of the Medical Center Campus is illustrated in **Figure 2-3**, *Harbor-UCLA Medical Center Campus Development History*.

(b) Harbor-UCLA Medical Center Today

Today, Harbor-UCLA Medical Center is a County-owned and operated tertiary-care medical center and one of two Level 1 Trauma Centers that the County operates, and one of five in the County. Tertiary care hospitals generally refer to major facilities with specialized facilities and personnel which can provide a comprehensive range of medical treatments, usually through referral from primary or secondary medical care providers, including general medicine, pediatrics, obstetrics, surgery, and various subspecialties. Trauma centers are equipped and staffed to provide comprehensive emergency medical services to patients suffering traumatic injuries, as opposed to illness. Level 1 centers provide the highest level of surgical trauma care and have a full range of specialist and equipment available for 24-hour coverage. Harbor-UCLA Medical Center serves southwestern Los Angeles County and plays a particularly critical role in meeting the healthcare needs of the more than 700,000 residents of the greater South Bay region within 15 miles of the Medical Center Campus, the catchment or service region for the medical center.

The Existing Hospital is licensed for 453 inpatient beds, of which 373 beds (or 82% of the licensed beds) are budgeted/staffed beds, while the larger Harbor-UCLA Medical Center Campus houses more than 70 primary and secondary care clinics. There are approximately 340,000 patient visits to the Campus annually, including admittances and discharges, diagnostics and treatment, and patient exam visits. A premiere teaching hospital with residency and fellowship programs in many medical and surgical specialties and a strong research focus, the Existing Hospital employs approximately 300 full-time faculty physicians, more than 120 part-time faculty physicians, and 360 volunteer faculty physicians, with more than 500 residents and fellows completing graduate studies at the Existing Hospital. Total employment for the entire Harbor-UCLA Medical Center Campus (including the Existing Hospital and other tenants) is approximately 5,500.

Three major tenants are co-located on the Medical Center Campus together with the Existing Hospital and outpatient clinics. LA BioMed, the largest tenant, was founded as the Harbor-UCLA Research and Education Institute in 1952. It conducts and supports research, training, and education activities, provides community services including childhood immunization and nutrition assistance, and maintains an affiliation with the Existing Hospital, with many faculty members serving as both researchers and clinicians; this affiliation helps attract top residency candidates to the Existing Hospital. The Harbor-UCLA Medical Foundation, Inc. (MFI) was founded in 1963 as a nonprofit organization dedicated to clinical patient care, the revenue from which is used to fund clinical, research, and educational activities at the Harbor-UCLA Medical Center. Children's Institute International (CII), which specializes in the treatment and prevention of child abuse and

neglect, operates its Burton E. Green Campus within the Harbor-UCLA Medical Center Campus and provides services to families throughout the South Bay and adjacent communities. CII is headquartered near downtown Los Angeles and operates several facilities throughout the region. A number of other County departments, including an outpatient mental health clinic operated by the Department of Mental Health, occupy buildings on the Medical Center Campus.

(c) Market Projections and Future Demand for Healthcare Services

Harbor-UCLA Medical Center has evaluated anticipated changes in demand for its services over the Master Plan Project buildout timeline. It expects increasing demand in its service area, which currently encompasses 10 million people and is expected to grow by an estimated 600,000, through 2030. The population served includes a large proportion of uninsured, underinsured, or those otherwise dependent on the County Department of Health Services (DHS). It is projected that the service area will include an additional 190,000 Medicare-eligible patients by the buildout horizon, an assumption based on an anticipated increase in the service area population and aging, as more baby boomers move into the age 75+ cohort. This is expected to affect demand for certain services as well as the overall volume of patient visits, which is expected to increase by an estimated 20 percent by 2030, even assuming some percentage of future patients transfer back to Martin Luther King Hospital, which reopened in July 2015, or other hospitals. Moreover, as the healthcare industry transitions to a more standardized, collaborative, and preventative care model of health care delivery, and away from reliance on acute-care inpatient treatment, there will be an increasing need for Harbor-UCLA to enhance its outpatient programs and other patient support services. In light of the expected increase in its service area population and increased demand for its services, a physician workforce shortage in Los Angeles, and the lack of plans for the new construction of other acute care hospital facilities in the region by the Master Plan Project buildout horizon, Harbor-UCLA sees a clear need to invest in its facilities and programs to continue to fulfill its role as a strategic piece of the healthcare "safety net" of Los Angeles County in general and for South Bay communities in particular.

(d) Compliance with Senate Bill 1953: The Alquist Hospital Facilities Seismic Safety Act

As a result of the 1994 Northridge earthquake, the State of California enacted Senate Bill (SB) 1953, the Alquist Hospital Facilities Seismic Safety Act, in September 1994, (California Health & Safety Code Sections 130000 et seq.) to ensure that all acute care hospitals in California built before 1973 remain operational after a major seismic event. SB 1953 directed hospitals in California to evaluate the seismic performance of their acute care facilities and perform upgrades, in accordance with standards developed by the California Office of Statewide Health Planning and Development (OSHPD), by specific deadlines.[1,2] SB 1953 established two deadlines: by 2013 (or 2015 or beyond under certain circumstances), hospitals are required to demonstrate compliance with specific seismic criteria intended to allow acute care facilities to remain standing after a major seismic event, and by 2030, hospitals are required to implement the necessary upgrades to remain fully operational after a major seismic event.

The seismic strength of hospital buildings is measured in accordance with Federal Emergency Management Agency's (FEMA's) HAZARDS U.S. (HAZUS) Assessment Program, a seismic evaluation program developed

[1] *SB 1953, Hospital Facilities Seismic Safety Act, Chapter 740, Statutes of 1994.*

[2] *Office of Statewide Health Planning & Development,* California's Hospital Seismic Safety Law: Its History, Implementation and Progress*, http://www.oshpd.ca.gov/FDD/SB1953/SeismicReport.PDF. 2005.*

LEGEND

- TEMPORARY / MODULAR
- 1940-1950
- 1960-1970
- 1980-1990
- 2000-PRESENT
- LABIOMED SITE BOUNDARY
- PROPERTY LINE

PCR

N

0 400 Feet

Harbor-UCLA Medical Center Campus Development History

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE **2-3**

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for hospitals to implement the seismic safety requirements of SB 1953 to determine the probability of collapse. Under the HAZUS Program, hospital buildings fall into one of five structural and nonstructural (e.g., utility infrastructure, communications systems, and emergency power supply) performance categories, with SPC 1 buildings representing those most at risk and SPC 5 buildings representing those fully compliant with structural safety requirements.

Harbor-UCLA performed a structural and nonstructural performance assessment of its Existing Hospital Tower (including the central tower, north and south wings, cafeteria, Primary Care and Diagnostics Center (PCDC), and communications building), the only acute care facility on the Medical Center Campus and therefore the only building subject to SB 1953. The survey determined that, with the exception of the recently constructed Replacement Project buildings, all of the Existing Hospital Tower components (i.e., central tower, north and south wings, cafeteria, PCDC, and communications building) required some level of seismic upgrades to comply with SB 1953 and remain operational until 2030, at which time nonconforming buildings would no longer be used for acute care service, but could instead be repurposed and renovated for other non-acute care, administrative, or support services. Seismic upgrades were carried out for the Existing Hospital Tower (including the central tower, north and south wings, cafeteria, PCDC, and communications building) such that it meets SPC 2/NPC 3 standards, meaning the Existing Hospital Tower may not be reparable or functional after a major seismic event, but would not significantly jeopardize life safety, and critical care systems are properly braced or anchored and could remain operational. Even with further upgrades, the Existing Hospital Tower would not meet SB 1953 standards for continued operation as an acute care facility after 2030, and the current compliance plan prepared for the Existing Hospital Tower indicates that it is expected to be repurposed for non-acute care activities by that date while acute care functions will be moved to a New Hospital Tower.

2. Existing Conditions

(a) Current Facilities Layout

The existing Harbor-UCLA Medical Center Campus layout is illustrated in **Figure 2-4**, *Existing Medical Center Campus Buildings*. The physical layout of the Medical Center Campus still closely follows the east–west-oriented street grid established when the property was laid out as a military installation in the 1940s. The Existing Hospital Tower, related treatment facilities, and the majority of Medical Center Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Medical Center Campus, while buildings occupied by LA BioMed take up the majority of the central Medical Center Campus, and outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Medical Center Campus. Patient diagnostic facilities, administration offices, and additional facilities management functions are scattered throughout the Medical Center Campus.

Most of the facilities in the central Medical Center Campus were constructed prior to 1960, including numerous small wood-frame barracks and temporary/modular buildings that collectively occupy the majority of the Medical Center Campus land area. The first major expansion of the 1963 Existing Hospital Tower, the Surgery and Emergency Room Replacement Project, was completed in 2013. This project increased the size of the existing emergency room from 25,000 square feet with 42 emergency bays, to 75,000 square feet with 80 emergency bays and added 190,000 square feet of space containing surgery suites, adult and pediatric triage, and a new entrance lobby, and waiting area. A new helistop and 544-space parking structure were also constructed.

LA BioMed, which employs approximately 700, presently occupies a number of older World War II–era structures scattered- throughout an approximately 16.5-acre area encompassing the central portion of the Harbor-UCLA Medical Center Campus, and is proposing to consolidate its operations within a smaller 11.4-acre leasehold (LA BioMed Campus) in the south-central portion of the Medical Center Campus. Four new buildings have been constructed on the LA BioMed Campus since 2000, and LA BioMed will eventually vacate approximately 95,000 square feet of floor area within the buildings it occupies elsewhere on the larger Medical Center Campus as it consolidates.

Other newer facilities constructed on the Harbor-UCLA Medical Center Campus since the 1980s include buildings housing hospital-related outpatient services and the buildings housing major tenants MFI and CII at the western end of the Medical Center Campus. Since 1989, MFI has occupied the Harbor UCLA Professional Building (also known as the MFI Professional Building) at the west end of the Medical Center Campus, with related outpatient services housed in nearby buildings. While MFI's utilization of the MFI Professional Building and related outpatient services has decreased over the last several years, it is still considered a major tenant on the Medical Center Campus. The Harbor UCLA Professional Building houses nine clinical departments that provide a range of clinical subspecialties, a laboratory, radiology, nuclear medicine and a pharmacy. CII occupies a 23,435-square-foot facility known as its Burton E. Green Campus in the northwestern corner of the Harbor-UCLA Medical Center Campus, near the intersection of Carson Street and Normandie Avenue.

Overall, the existing layout of the Harbor-UCLA Medical Center Campus reflects its piecemeal growth over time, and the scattered, aging buildings and infrastructure have become inefficient to operate and maintain, contributing to serious logistical obstacles and service deficiencies. The Existing Hospital Tower (including the PCDC) and outpatient clinics are currently running at or near capacity, and existing facilities provide no physical room for growth. Other facility and programmatic shortfalls include a lack of on-site amenities for patients and visitors and a shortage of adequate teaching space for the medical school internship and continuing education programs.

(b) Circulation and Parking

Vehicular access to the Harbor-UCLA Medical Center Campus is provided by a primary driveway on Carson Street, near the Existing Hospital Tower and a second driveway west of the primary driveway; two driveways on Vermont Avenue; five driveways along 220th Street; and one driveway on Normandie Avenue. Only the Carson Street driveways are signalized. Internal circulation on-site follows the original grid layout established on the property, with four east-west roadways and numerous short north-south connector roadways. Most interior intersections of two roadways or drive aisles are stop-sign controlled. To aid wayfinding, most of the internal roadways are named and display street name signs at intersections. In addition, most buildings or modular structures have a building number (consisting of a letter and a number) or a building name, or both, visible to drivers. However, few directory boards are located within the Medical Center Campus, and wayfinding for motorists as well as pedestrians can be confusing. Contributing to this confusion is the lack of distinctions between Medical Center Campus entrances and parking areas for Harbor-UCLA staff and those for the general public.

LEGEND

- LA BIOMED
- OUTPATIENT
- HOSPITAL
- TREATMENT
- DIAGNOSTICS
- ADMINISTRATION
- MATERIALS MANAGEMENT
- FACILITIES MANAGEMENT
- UTILITIES
- CHILDREN'S INSTITUTE INT.
- LABIOMED SITE BOUNDARY
- PROPERTY LINE

PCR

N

0 400 Feet

Existing Medical Center Campus Buildings

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE 2-4

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Figure 2-5, *Existing Parking Supply*, depicts on- and off-site parking facilities. The larger parking lots are generally distributed along the Medical Center Campus perimeter, with smaller lots throughout the Medical Center Campus interior; parking is allowed on one or both sides of internal roadways, though incidental on-street parking also occurs in areas not officially designated as parking areas, as discussed below.

The on-site parking supply totals 2,905 spaces, which exceeds the County's parking code requirement of 2,709 spaces. Specifically, Los Angeles County Code, Chapter 122.52.1120, Hospitals, Convalescent Hospitals, Adult Residential Facilities, and Group Homes for Children, requires 2 spaces per bed, 1 space per 250 square feet for outpatient facilities, and 1 space per 400 square feet for research use. This supply includes 2,168 standard spaces and 124 American with Disabilities Act (ADA) spaces in designated surface parking lots and the new parking structure in the southeastern corner of the Harbor-UCLA Medical Center Campus, and 596 standard spaces and 17 ADA spaces along the internal streets. An additional 281 spaces (278 standard spaces and three ADA spaces) are provided in off-site parking facilities, and street parking is permitted along all or portions of the four public streets surrounding the Medical Center Campus. However, parking is not uniformly used, with parking for the Existing Hospital Tower and other facilities near the eastern end of the Medical Center Campus and along the northern perimeter experiencing severe localized shortfalls, while in other locations, designated parking for specific facilities is underused. A considerable number of makeshift parking spaces have been created along internal roadways to accommodate localized demand, though many of these areas are not designated for on-street parking. Moreover, most of the interior roadways do not provide sidewalks or curbs and pedestrians must share the roadways with vehicle traffic, adversely affecting access, including disabled access, to facilities throughout the Harbor-UCLA Medical Center Campus.

(c) Central Plant, Infrastructure, and Materials Management

A number of infrastructure systems on the Harbor-UCLA Medical Center Campus are at the end of their useful life or inadequate for current needs and require increasing maintenance or replacement. These include portions of the electrical system (normal and emergency power), which includes 40-year-old substations throughout the Medical Center Campus and some inadequate distribution systems; lighting systems, many of which are original and require replacement for reasons of energy-efficiency; security systems, which are lacking and needed to accommodate the different tenants on the Medical Center Campus; the domestic water supply system and periodically nonoperational backup water supply system, which will require upgrades to accommodate new construction under Master Plan Project buildout; no reclaimed water system infrastructure; unknown future capacity in the single wastewater main known to serve the Medical Center Campus; and an aging and fragile storm drain network and other infrastructure, facilities, and equipment that will require significant overhauling to accommodate planned Master Plan Project buildout. New construction would also require compliance with the County's Low Impact Development (LID) requirements for stormwater management. Additionally, Central Plant upgrades are needed to serve the newly expanded New Hospital Tower and related facilities. Finally, with respect to Information Technology (IT) services, there is no publicly available WIFI on the Harbor-UCLA Medical Center Campus; there is little or no documentation for underground cabling infrastructure that has developed over time; improvements to the current Voice over IP telephone infrastructure are needed; and additional data storage space may be needed.

Materials management throughout the Harbor-UCLA Medical Center Campus – encompassing everything from loading dock design to the handling and provision of medical supplies and equipment, technology,

linens, and food – also requires overhauling and centralization for reasons of efficiency and improved service delivery; waste management operations also require improvements in collection, staging, and processing, to allow for more efficiency and sustainable practices in compliance with increasingly stringent mandatory state and local regulations.

(d) Landscaping

Landscaping throughout the Harbor-UCLA Medical Center Campus is limited and discontinuous. There are several landscaped courtyards, predominantly at the western end of the Medical Center Campus, surrounding the MFI and CII buildings, and on the LA BioMed Campus, and in scattered locations in the north-central Medical Center Campus, but the remainder of the Medical Center Campus does not have a discernible landscape plan and there are very few places for patients or visitors to congregate outdoors. With the exception of the main entrance to the Medical Center Campus on Carson Street, which is planted with mature trees, shrubs, and a lawn setback, the perimeter of the Medical Center Campus does not have a coherent visual identity or connection to the surrounding community, and landscaping is lacking at secondary Medical Center Campus entrances and for long stretches of the perimeter. For the most part, the perimeter of the Medical Center Campus is demarcated with chain- link fences and concrete block walls, with limited landscape screening. The western half of the block fronting on Carson Street, a portion of the Normandie Avenue frontage, and the western two-thirds of the 220th Street perimeter are currently enclosed with chain link fence planted with bougainvillea vines, which serve as a low, partial buffer along the public streets. The side of the Medical Center Campus has portions of open fence and solid concrete block wall framing both sides of the entry. The Vermont Avenue frontage, adjacent to the new parking structure and Existing Hospital Tower parking lot, and the corner of the Medical Center Campus at Carson Street and Vermont Avenue, are the most heavily landscaped portions of the Medical Center Campus perimeter, with mature trees and a landscape setback from the sidewalk. There are no landscaped parkways or street trees along any of the Medical Center Campus street frontages.

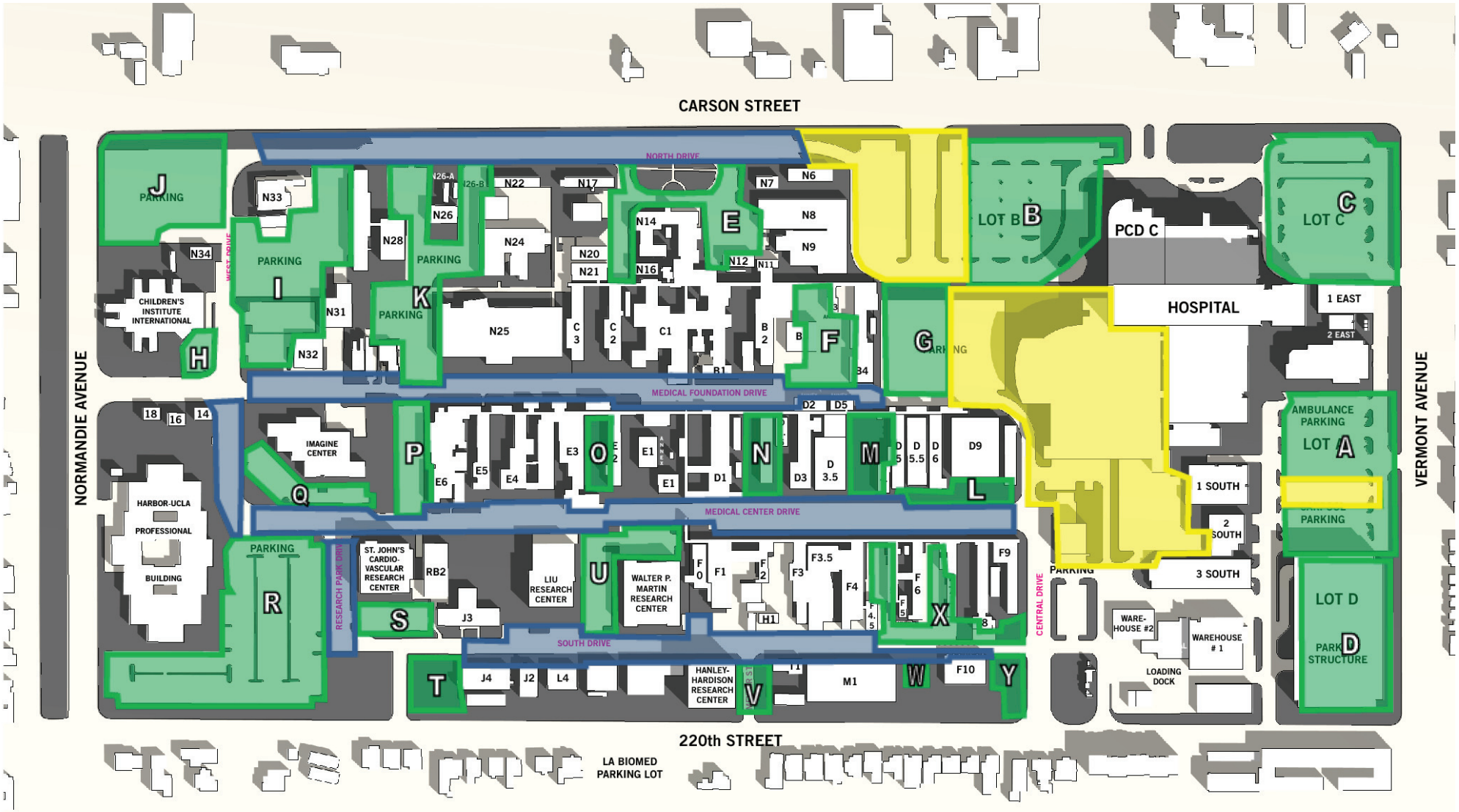
D. PLANNING AND ZONING

The Harbor-UCLA Medical Center Campus is designated for Public and Semi-Public use in the Los Angeles County General Plan, and has a zoning designation of C-3 (Unlimited Commercial). The C-3 designation allows a broad range of commercial uses and allows the maximum floor:area ratio (FAR) of 0.5:1. The Existing Hospital Tower and ancillary uses on the Medical Center Campus are consistent with the current zoning. In addition, the eastern two-thirds of the Medical Center Campus is designated as a Transit Overlay District (TOD) due to proximity to the Metro Transit Station at Carson Street approximately 0.10 miles to the east, adjacent to the Harbor Freeway. The purpose of the TOD zone designation is to create a pedestrian-friendly and community-serving uses near transit stops that encourage walking, bicycling, and transit use.

E. STATEMENT OF PROJECT OBJECTIVES

Section 15124(b) of the State CEQA Guidelines requires that an EIR Project Description contain a statement of objectives for the proposed project and recommends that the statement of objectives include the underlying purpose of the project.

The overall goal of the Master Plan Project is to redevelop the County-owned Harbor-UCLA Medical Center Campus to support a modern, integrated healthcare delivery system. It will provide a New Hospital Tower to replace the acute care functions in the Existing Hospital Tower before the state law deadline to meet seismic



LEGEND

- OFF-STREET PARKING
- ON-STREET PARKING
- CONSTRUCTION ZONE (PARKING UNAVAILABLE)

PCR

N

0 400 Feet

Existing Parking Supply

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE **2-5**

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standards for critical trauma/tertiary acute care services so that the South Bay service region and the County seamlessly retain this key link in the County-wide trauma hospital safety net which features biomedical research and development facilities and integrates inpatient and outpatient services in a renovated and expanded setting.

The goal is supported by the following Master Plan Project objectives:

1. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital Tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.

2. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.

3. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways;

4. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.

5. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as up to 225,000 square feet of expanded LA BioMed facilities.

6. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.

7. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.

8. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."

F. DESCRIPTION OF THE PROPOSED PROJECT

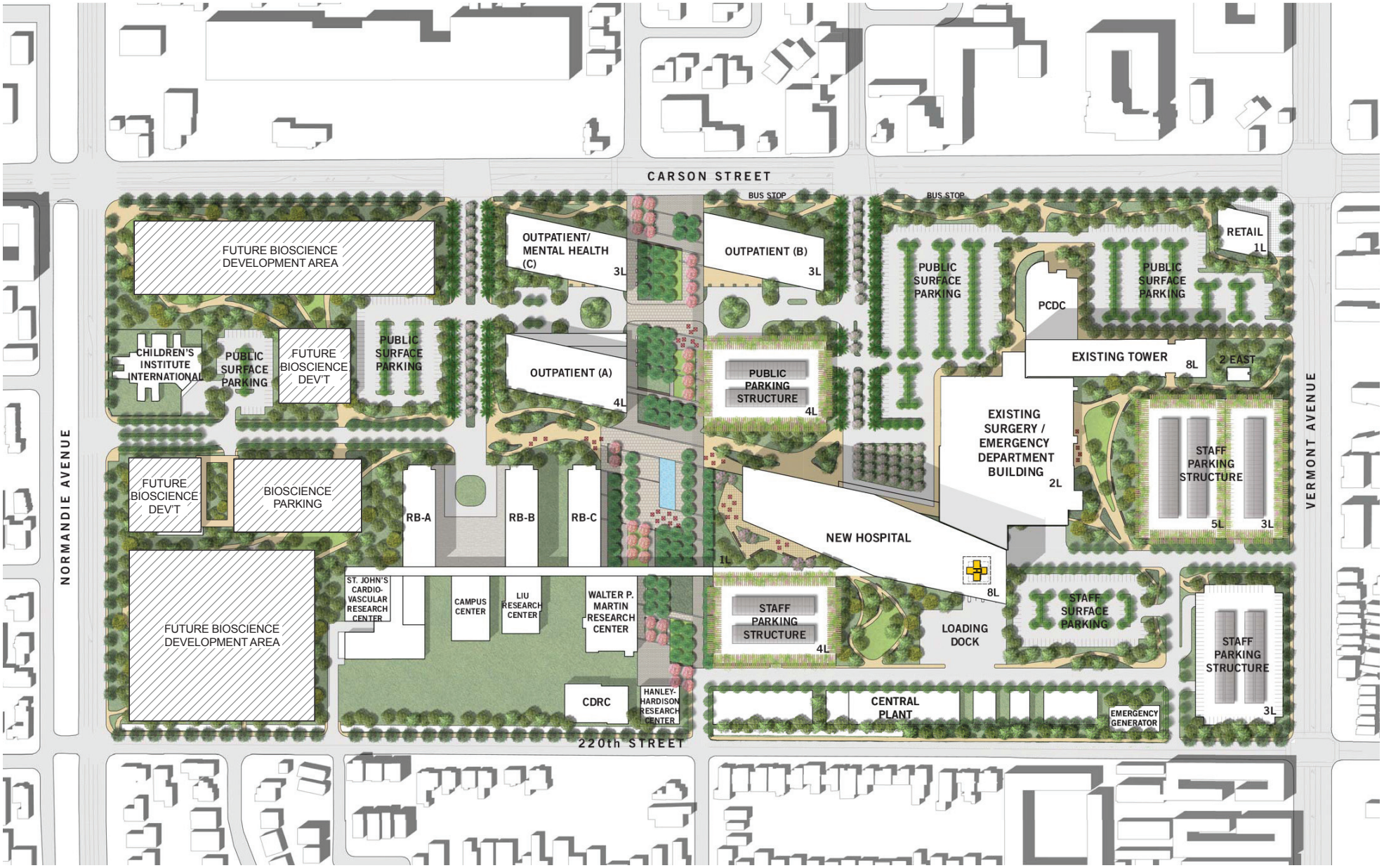
1. Project Characteristics

Proposed Master Plan Project components include the following: (1) a New Hospital Tower; (2) new and renovated outpatient care facilities (to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower); (3) other services and facilities, including administrative office, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop); (4) long-term buildout of the LA BioMed Campus; (5) new Bioscience Tech Park; and (6) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements. These proposed uses are itemized in **Table 2-1**, *Harbor-UCLA Master Plan Project Existing and Proposed Land Use Summary*, below. The major design principles underlying the Master Plan Project include organizational clarity, community interaction, the creation of an iconic identity for a replacement hospital, pedestrian and wellness features, and development flexibility. **Figure 2-6**, *Harbor-UCLA Medical Center Master Plan Project Site Plan*, illustrates the proposed conceptual layout of existing buildings to be retained and proposed new development, the pedestrian circulation network, vehicular access and circulation, parking, and landscaping. **Figure 2-7**, *Master Plan Project Massing Diagram*, depicts the programmed locations of proposed uses at Master Plan Project buildout. As future buildings are developed, the distribution of programmed uses would be revised as needed.

The Project assumes a total of approximately 2,457,355 square feet of developed floor area on the Harbor-UCLA Campus, an increase of approximately 1,178,071 square feet over the existing approximately 1,279,284 square feet. This increase is due largely to the development of a new hospital tower, three new outpatient buildings, and the Bioscience Tech Park. The campus-wide floor:area ratio (FAR) would increase from 0.40:1 to 0.78:1. The number of licensed in-patient hospital beds would decrease slightly from 453 to 446. New buildings would be up to four stories in height compared to the existing buildings, which are predominantly one story; the tallest existing on-site building (the existing eight-story Hospital Tower) would be retained and a second eight-story building (New Hospital Tower) would be constructed. Campus-wide parking would increase from 3,186 spaces (including 281 spaces in an off-site parking lot) to 4,240 spaces (including spaces in the Bioscience Tech Park and in the off-site parking lot), due largely to the replacement of several on-site surface parking lots with three- to five-level parking structures. The number of Campus-wide employees would increase from approximately 5,464 to approximately 7,494.

(a) Proposed Medical Center Campus Organization

The Master Plan Project proposes to locate related uses in proximity to one another, connected by a network of walkways and landscaped areas. The most publicly accessible zones, including commercial and community-oriented services, would be located along the northern edge of the Medical Center Campus fronting on Carson Street, with staff and support services located in the southern half of the Medical Center Campus. The New Hospital Tower is intended to be the tallest, most visible building on the Medical Center Campus, and therefore its primary focal point, signaling its location to visitors and identifying the Harbor-UCLA Medical Center Campus to the community. The LA BioMed Campus would continue to occupy the southern-central part of the Medical Center Campus, fronting on 220th Street. The CII Burton E. Green Campus will remain in the northwestern corner of the Medical Center Campus at the intersection of Carson Street and Normandie Avenue, but the remainder of the western end of the Medical Center Campus would be retained for the proposed Bioscience Tech Park, potentially beyond the approximate 2030 Master Plan Project buildout horizon. Until such time as programmatic needs for that portion of the Medical Center Campus are defined, it would be developed with open space, surface parking, and other short-term uses, as needed.



Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

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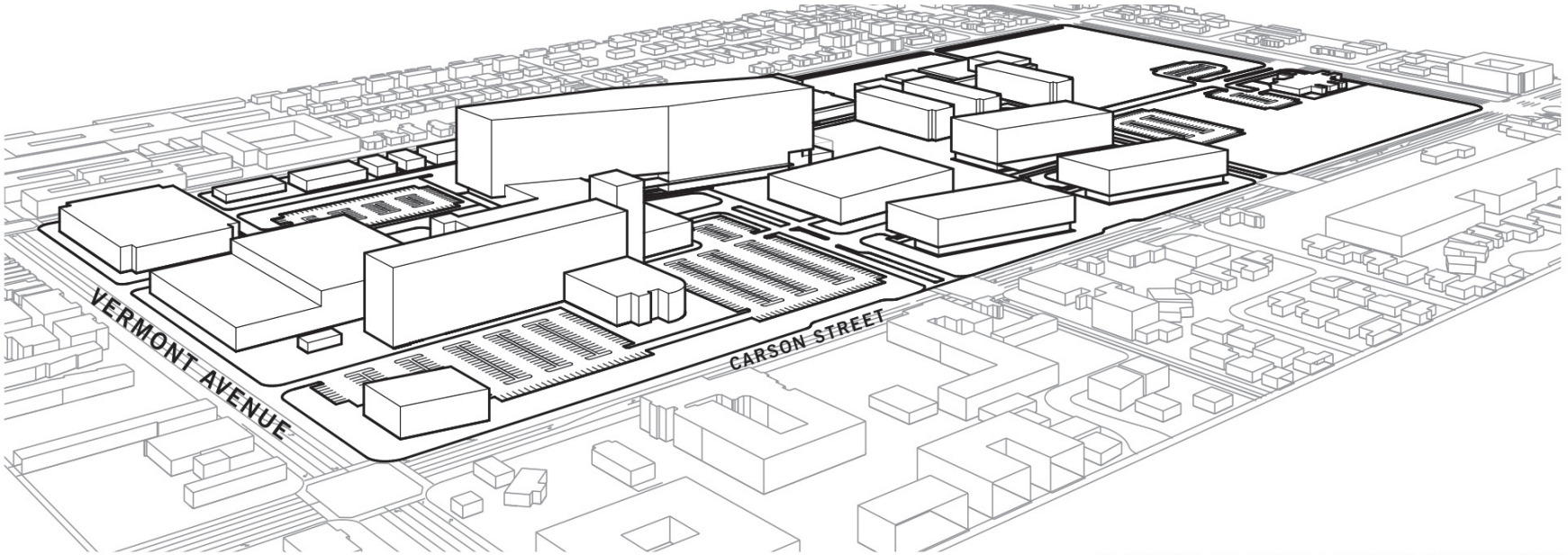
Harbor-UCLA Medical Campus Master Plan Site Plan

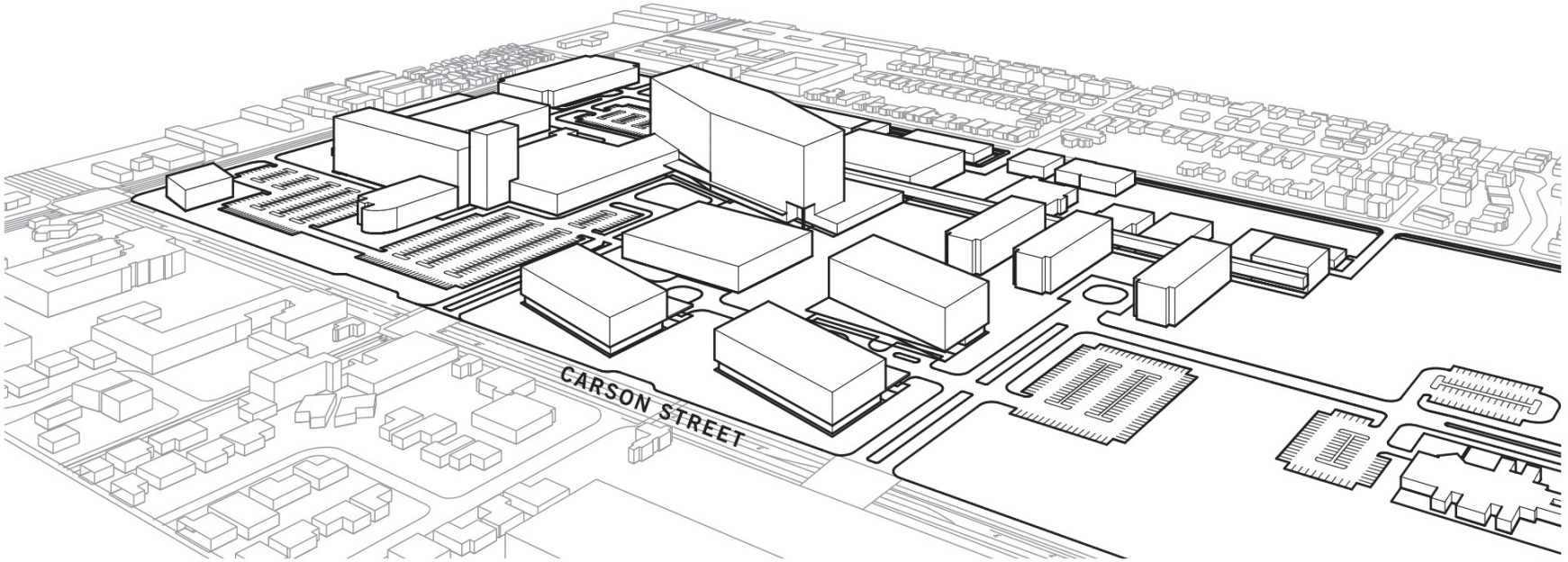
Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE **2-6**



MASSING DIAGRAM LOOKING SOUTHWEST



MASSING DIAGRAM LOOKING SOUTHEAST

Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

Master Plan Project Massing Diagram

Harbor-UCLA Medical Center Master Plan
Source: Perkins+Will, 2012.

FIGURE
2-7

Table 2-1

Harbor-UCLA Master Plan Project
Existing and Proposed Land Use Summary

Land Use [a]	Existing		To Be Demolished		Proposed New Construction			Master Plan Project at Interim Year 2023 (Existing – Demolition + New)			Master Plan Project at Buildout 2030 (Existing – Demolition + New)		
	HUCLA	LA BioMed	HUCLA	LA BioMed	HUCLA	LA BioMed [b]	Bioscience Tech Park	HUCLA	LA BioMed [b]	Bioscience Tech Park	HUCLA	LA BioMed [b]	Bioscience Tech Park
Administrative Office	23,435	-	-	-	-	-	-	52,635	-	-	130,635	-	-
Day-Care Center	4,360	-	-	-	-	-	-	4,360	-	-	4,360	-	-
Central Utilities/Industrial /Infrastructure	112,719	-	102,434	-	118,920	-	-	118,920	-	-	129,205	-	-
Hospital/Inpatient	648,810	-	167,255	-	955,100	-	-	648,810	-	-	1,202,655	-	-
Hospital Beds	453	-	453	-	446	-	-	453	-	-	446	-	-
Library	22,500	-	22,500	-	-	-	-	22,500	-	-	-	-	-
Medical Office/Outpatient	327,304	-	327,304	-	324,500	-	-	338,700 [c]	-	-	480,500 [d]	-	-
Biomedical Research & Development	-	94,754	-	94,754	-	225,000	250,000	-	112,500	125,000	-	225,000	250,000
Warehouse/Storage	45,402	-	45,402	-	-	-	-	45,402	-	-	-	-	-
Retail	-	-	-	-	35,000	-	-	-	-	-	35,000	-	-
TOTAL:		**1,279,284**		**759,649**			**1,908,520**			**1,400,425**			**2,457,355**
NET NEW										**121,141**			**1,178,071**

[a] *Square footages do not include parking structures or surface parking areas.*
[b] *The total development for the LA BioMed Campus represents net new square footage anticipated to be developed on the 11.4-acre LA BioMed Campus leasehold within the HUCLA Medical Center Campus within the timeframe of HUCLA Master Plan buildout. In addition, the development of 70,700 net new square feet of floor area on the LA BioMed Campus, intended to consolidate existing LA BioMed facilities elsewhere on the HUCLA Medical Center Campus, was approved in September 2014 through separate County environmental review.*
[c] *Total Medical Office Uses at Interim Year 2023 includes 227,500 square feet of medical office uses for the Outpatient Mental Health Building and Outpatient Building A, as well as 111,200 square feet of modular medical office space (constructed in Phase M) that would be removed from the Medical Center Campus during Phase 6 and thus is not included in the Medical Office totals at Project buildout.*
[d] *Medical Office space at Project buildout would include 227,500 square feet of medical office uses for the Outpatient Mental Health Building and Outpatient Building A, 97,000 square feet for Outpatient Building B, and 156,000 square feet of medical office, campus support and other "back of house" uses within the renovated Existing Hospital Tower, less 111,200 square feet of modular medical office space placed on-site during Phase M.*

Source: PCR Services Corporation, 2015

(b) New Hospital Tower and Inpatient Care Facilities

A New Hospital Tower will be constructed as part of the Master Plan Project and will house the acute care functions that previously existed in the Existing Hospital Tower. As shown in Table 2-1, the New Hospital Tower/inpatient facilities would contain a total floor area of approximately 1,202,655 square feet and 446 staffed patient beds, interventional services, and an inpatient imaging department at Project buildout. Similar to the Existing Hospital Tower, the total number of budgeted/staffed inpatient beds in the New Hospital Tower would be 379 beds, or approximately 85% of the 446 licensed beds. The New Hospital Tower will be constructed to meet increasing state law seismic requirements for acute care facilities as mandated by SB 1953.

The Existing Hospital Tower will be decommissioned before January 1, 2030 due to the SB 1953 mandates that acute care services can no longer be provided in buildings built before 1973. Changes for the Existing Hospital Tower will be discussed in the section below.

(c) Existing Hospital Tower and Outpatient Care Facilities

The Existing Hospital Tower and PCDC department would be retained and used for outpatient and hospital support, outpatient imaging, administrative offices, and other related uses. An additional 156,000 square feet of medical office and other outpatient services would also be accommodated in the renovated Existing Hospital tower. Renovation of the 1963 portions of the Existing Hospital tower by repurposing the building for non-acute care and other activities, including administrative office, outpatient services, storage and other Medical Center Campus support services would comply with this requirement since the Existing Hospital Tower would no longer require licensing as an acute care facility. This action would not affect the newer portions of the Existing Hospital Tower, including the PCDC and new Replacement Project facilities, which added 190,000 square feet of outpatient clinical space between 2010 and 2013.

To improve operational efficiency, proposed outpatient services would be clustered in an outpatient "zone" in up to three outpatient buildings occupying a total floor area of approximately 324,500 square feet at Project buildout, including medical offices, primary and specialty medical clinics, classrooms, labs, a library, and outpatient imaging including MRI and CT, as well as mental health and social services. Two temporary modular outpatient buildings totaling 111,200 square feet would be placed on the Medical Center Campus following demolition of various existing structures during the initial phases of Project implementation in order to allow outpatient services to continue to be provided on the Medical Center Campus until later phases when permanent outpatient buildings are completed as discussed under subsection G, Construction Phasing, of this chapter. The outpatient buildings would also have allocated space for other program uses including community support functions.

Other new facilities would total approximately 62,795 square feet and provide space, for example, for meetings, wellness training, post-medical care, nutrition classes, and similar uses. These uses could be located in a new two-story building or in the ground floors of the new outpatient building(s), the renovated lobby of the Existing Hospital Tower and/or at ground levels of the new parking structures. Medical Center Campus support facilities including a Central Plant (heat and cooling), water treatment, warehouses/material management, a new Southern California Edison (SCE) electrical substation, and loading dock would total approximately 129,205 square feet. The proposed new SCE substation would require installation of a new, approximately two-mile-long 66-kV circuit connection to an existing off-site SCE substation east of the Medical Center Campus. The new circuit would be installed on above ground

power poles along existing public street rights-of-way, starting on Grace Avenue near the existing substation and proceeding east down 223rd Street, and would be undergrounded between the intersection of Vermont Avenue and 223rd Street and the Harbor-UCLA Medical Center Campus to connect to the proposed new substation. The new circuit would result in the installation 46 replacement and new power poles along the proposed route. Trenching and other construction activities related to the new circuit would occur within the public right-of-way on the affected roadways, while construction of the new substation would occur near the new Central Plant area within the Medical Center Campus, and would take approximately 24 months to complete.

(d) Technology Systems

Medical Center Campus technology systems would be upgraded to allow for the County's migration to a County-wide Electronic Medical Record. A Technology Equipment Room (TER) would be located within the Central Plant adjacent to 220th Street. This site would have power and cooling to support the equipment in the TER. The TER would be approximately 2,000 square feet (assuming the County houses its Electronic Medical Record systems in one or more off-site enterprise Data Centers) and would be supported by dedicated generator-backed Uninterruptible Power Supplies (UPSs), specifically designed cooling, and augmented fire protection systems. Associated space for a Network Operations Center of approximately 200 square feet plus sufficient storage, burn-in/maintenance and other support spaces would be provided adjacent to the TER.

The Medical Center Campus technology system would be designed to support remaining facilities while parts of the Medical Center Campus would be demolished and/or repurposed through phasing of construction. Phasing of construction would ensure that the technology infrastructure and support spaces are constructed at the appropriate point of each stage of work, taking advantage of modular design principles to minimize investment in the full build-out of these spaces until they are needed.

(e) Materials and Waste Management

The Project would incorporate new Materials and Waste Management facilities, including (1) a Materials Management Storeroom, (2) a Loading Dock, and (3) a Waste Management Center. The new loading dock and Waste Management Center would be located at the back of the New Hospital Tower, with the new storeroom located on the lower level of the tower. This location would be in proximity to the majority of the Harbor-UCLA Medical Center Campus's inpatient operations, which require more supplies and linens and generate the greatest volume of medical waste. The new storeroom would replace the functions of the existing Warehouse #1 and #2 functions. Outgoing shipping would occur at the new storeroom and all supplies delivered to the new dock, would be received and stored in the new storeroom building. Supplies would be distributed to the New Hospital Tower, Surgery and Emergency Room Replacement Project, Outpatient buildings and all other ancillary departments from this centralized location. The storeroom would include bulk supply holding, small unit of measure supply holding, secure stores, appropriate warehouse management software, computers and work stations. The new storeroom and loading dock would support all departments and buildings. Supplies and clean linen would be distributed from the storeroom, and all waste and soiled linen would be returned to the loading dock/Waste Management Center.

(f) Biomedical Research Facilities

(1) Bioscience Tech Park

The Harbor-UCLA Medical Center Master Plan Project proposes the development of up to 250,000 square feet of new biomedical research facilities, collectively referred to as the Bioscience Tech Park, on the western end of the Medical Center Campus (refer to Figure 2-6 for the location of the Bioscience Tech Park within the larger Harbor-UCLA Medical Center Campus). Bioscience Tech Park facilities would be physically separated from, and not affiliated with, LA BioMed Campus facilities. It is assumed that development of the Bioscience Tech Park would be implemented over an approximately 10-year period between 2020 and Master Plan Project buildout in 2030, and would consist of multiple buildings and associated surface and structured parking. It is further assumed, for the purposes of the analysis presented in this Draft EIR, that approximately 50 percent of the Bioscience Tech Park, or approximately 125,000 square feet, would be constructed by the year 2023, with the remainder constructed by 2030.

(2) LA BioMed Campus

LA BioMed's programs and approximately 700 full-time and part-time employees have historically been housed in scattered buildings throughout the central portion of the Harbor-UCLA Medical Center Campus. LA BioMed is currently in the process of consolidating its operations within an 11.4-acre leasehold campus (LA BioMed Campus) encompassing the south-central portion of the larger Harbor-UCLA Medical Center Campus, fronting on 220th Street. The new LA BioMed Campus is currently developed with 20 existing buildings ranging in age, including four buildings already constructed by LA BioMed. LA BioMed is undertaking additional near-term improvements on its campus, including the construction of two new buildings, renovation of an existing building, and demolition of three existing buildings, for an overall net increase of approximately 70,700 square feet of developed floor area within the LA BioMed campus. The majority of LA BioMed employees are already housed on its campus and no net increase in the number of LA BioMed employees, research personnel, or visitors are proposed as part of the consolidation of its operations. Construction of these near-term improvements is expected to be completed in the first half of 2017, pending final County approvals. These near-term improvements were the subject of separate review by the County completed in 2014 and are not part of the Harbor-UCLA Medical Center Master Plan Project.

However, to accommodate future expansion of LA BioMed programs, the Master Plan Project anticipates construction of up to 225,000 square feet of additional floor area on the LA BioMed Campus as part of Project buildout, which is addressed in this Draft EIR. Moreover, as LA BioMed consolidates operations on its new 11.4-acre campus, it will vacate buildings it currently occupies elsewhere on the Harbor-UCLA Medical Center Campus. These buildings, totaling approximately 95,000 square feet, and their ultimate disposition (i.e., demolition and replacement with new facilities), are also considered part of the Master Plan Project and are addressed in this Draft EIR. It is assumed for the purposes of the analysis in this Draft EIR that up to 50 percent of LA BioMed's projected expansion (or approximately 112,500 square feet) would be constructed by 2023, with the remainder constructed by Master Plan Project buildout in 2030.

(g) Circulation and Parking

Master Plan Project implementation would create clear distinctions between Harbor-UCLA Medical Center Campus access and on-site circulation and parking facilities for the general public and staff. Staff entries and parking would be located in the southeastern corner of the Medical Center Campus, while access for the public would be provided on Carson Street along the northern perimeter. Vehicular access would be

improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes on the Medical Center Campus between the main parking areas and the New Hospital Tower and Outpatient buildings. Circular pick-up/drop-off loading zones would be provided at the main entrances to each of the New Hospital Tower and Outpatient buildings. A comprehensive signage and wayfinding plan would be developed to aid visitors and patients in finding ultimate destinations and parking intended for those uses. The Master Plan Project would provide sufficient parking to meet or exceed the County's minimum code parking requirement. Proposed access and parking are illustrated in **Figure 2-8**, *Vehicular Circulation Plan*.

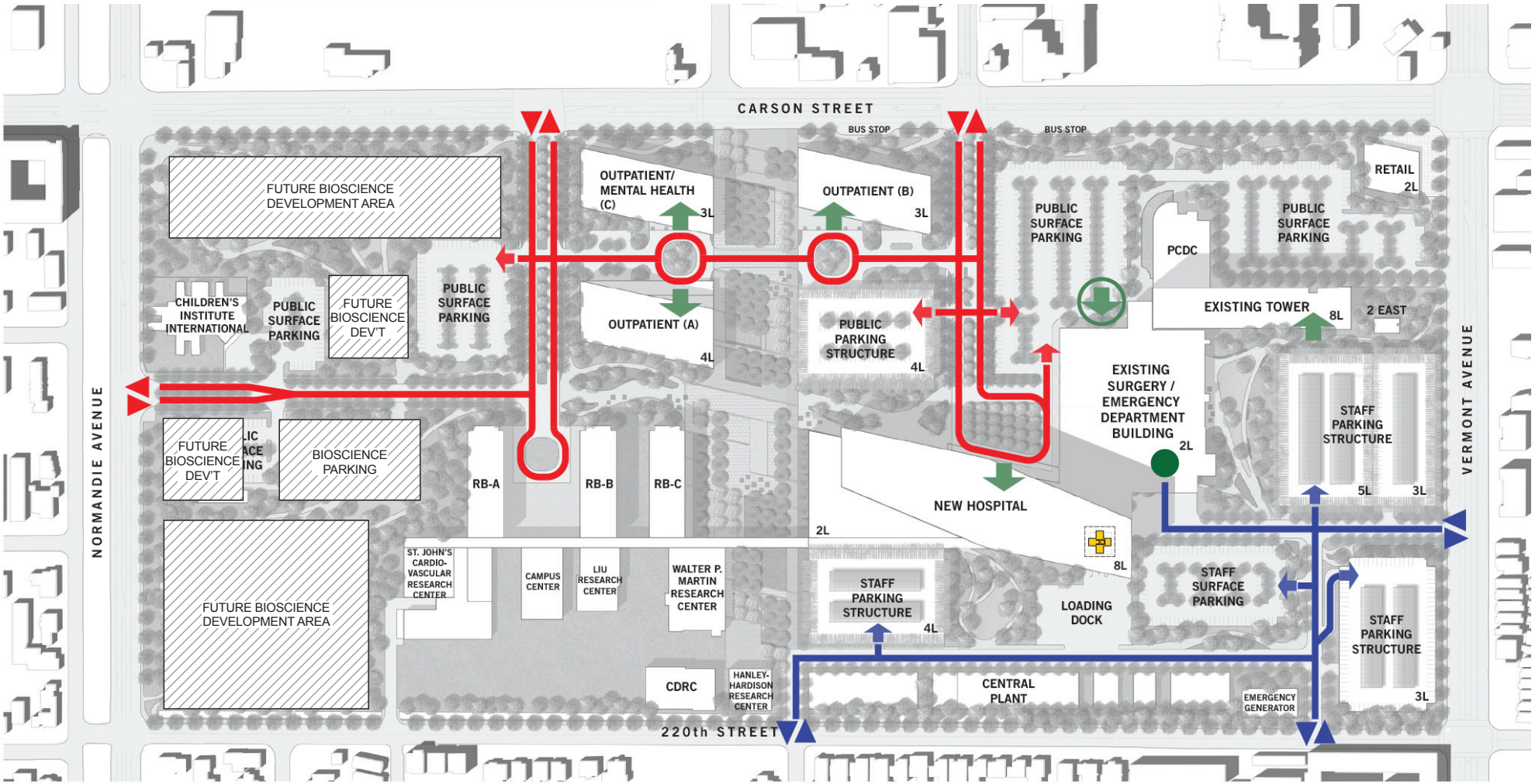
(h) Landscaping and Public Art

A continuous pedestrian circulation network is planned as part of the Master Plan Project which would provide connectivity throughout the Medical Center Campus and shared use by the general public and staff. Several north/south walks and promenades would connect the center of the Medical Center Campus with the public edge along Carson Street, while a comprehensive network of walks and trails would direct pedestrians east/west through the Medical Center Campus. The planned pedestrian circulation system would allow for direct access between parking areas and facilities, with a secondary system connecting courtyards and plazas. **Figure 2-9**, *Pedestrian Circulation Plan*, illustrates the proposed pedestrian circulation plan.

The Landscape Master Plan, which is included in the Harbor-UCLA Medical Center Campus Master Plan, would provide a campus-like setting where the use of landscape would help reduce dependency on natural resources by capturing and cleaning stormwater runoff and shading buildings to help reduce cooling demands, which is consistent with the County's Low Impact Development (LID) strategies and requirements as well as the sustainability principles of the Harbor-UCLA Medical Center Campus Master Plan. Landscaped outdoor spaces would accommodate active social gatherings and passive gardens for contemplation and relaxation. Landscaped areas for exercise would be provided to serve staff and educate the public regarding preventative healthcare.

The Landscape Master Plan recommends the planting of a landscape buffer using 35-foot to 45-foot-tall evergreen/semi-evergreen trees along the Harbor-UCLA Medical Center Campus perimeter that includes trees lining the Medical Center Campus street frontages and major landscape groupings identifying entrances to the Medical Center Campus. The two main entries off Carson Street will be highlighted using a mix of palm trees and flowering deciduous trees. Throughout the Medical Center Campus interior, the Master Plan Project proposes landscaped courtyard gardens and plazas and a network of walkways or trails that form a continuous circulation system, allowing staff and guests to reach their destinations with minimized opportunities for pedestrian/vehicular conflicts. A number of existing mature ornamental (non-native) specimen trees are proposed to be salvaged and relocated within the Medical Center Campus, as visual accents and to provide shade in the western portion of the Campus and within new courtyards and garden areas east and west of the proposed new central spine. **Figure 2-10**, *Landscape Master Plan*, depicts the proposed landscape program.

Master Plan Project implementation would include a public art program in accordance with the County's art policy that provides for civic art in capital improvement projects. Visitors can benefit from the role of art in the creation of successful and engaging public spaces, wayfinding, and providing opportunities for education and learning.



LEGEND

- PUBLIC ENTRY/EXIT TO CAMPUS
- STAFF ENTRY/EXIT TO CAMPUS
- PUBLIC ENTRY/EXIT TO PARKING
- STAFF ENTRY/EXIT TO PARKING
- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- PRIMARY PUBLIC VEHICULAR CIRC.
- PRIMARY STAFF VEHICULAR CIRC.
- AMBULANCE EMERGENCY ENTRY

Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

N

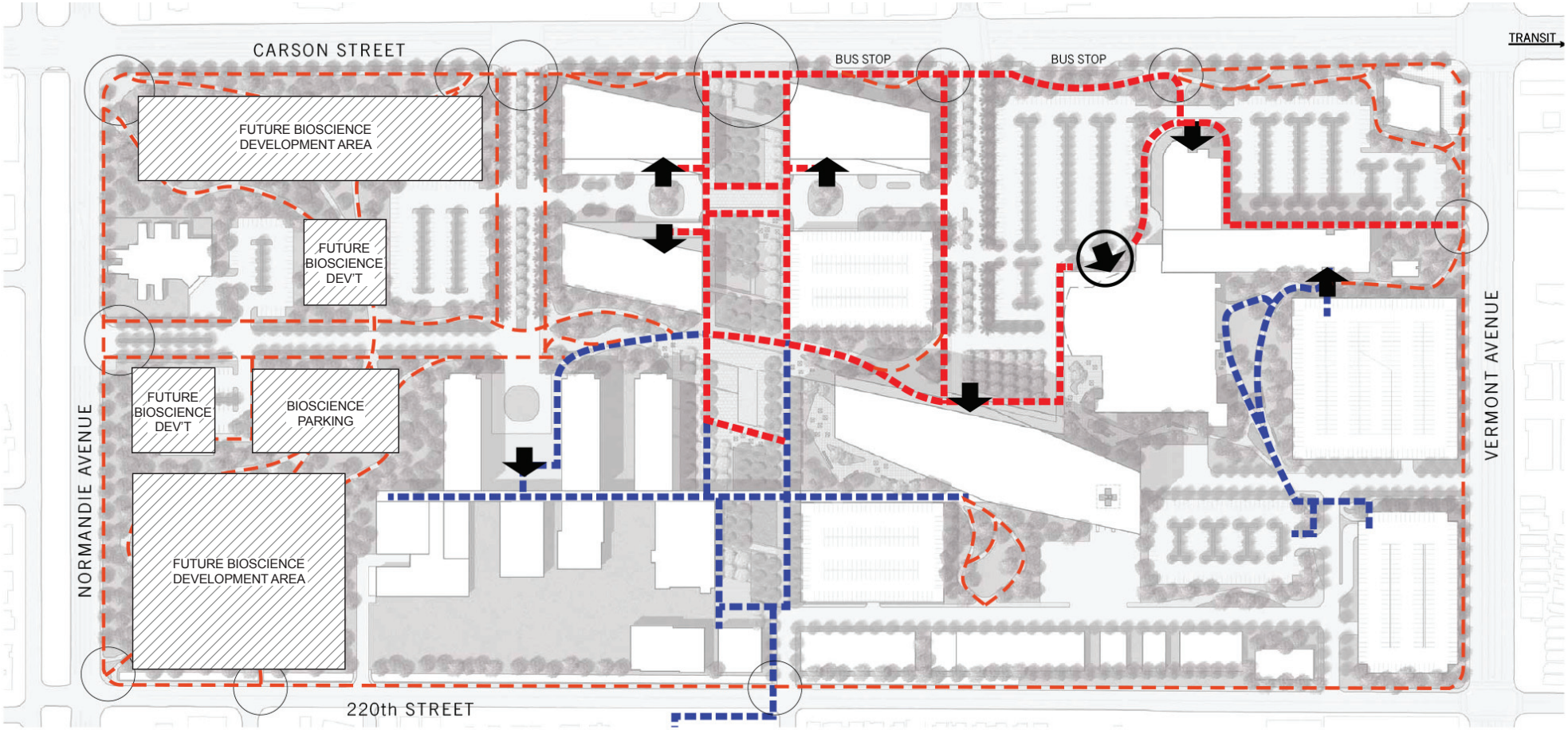
0 400 Feet

Vehicular Circulation Plan

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE **2-8**



LEGEND

- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- CAMPUS ENTRIES
- PRIMARY PUBLIC PEDESTRIAN CIRCULATION
- PUBLIC PEDESTRIAN CIRCULATION
- PRIMARY STAFF PEDESTRIAN CIRCULATION

Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

N

0 400 Feet

Pedestrian Circulation

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE 2-9

Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

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0 400 Feet

Landscape Master Plan

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE **2-10**

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(i) Sustainability

Long-term sustainability is an important principle guiding the Master Plan Project. The current County policy requires LEED Silver-level certification, or the equivalent, for any public facility over 10,000 square feet in floor area. Green building practices would be integrated into all building design, construction, and operation and would be integrated with Medical Center Campus infrastructure and include integrated stormwater and wastewater treatment. Sustainability criteria include: (1) green building metrics, (2) reduction of energy demand, (3) reduction of thermal energy needs, (4) water balance, and (5) use of healthy building materials. As the Master Plan Project is implemented, one or more of the following systems would be used for environmental performance certification.

- LEED for Healthcare Rating System/Green Guide for Healthcare: Medical Center Campus Buildings are designed to meet the requirements of the USGBC's LEED for Healthcare, Silver certification and incorporates LEED Pilot credits on healthy materials selection.
- LEED Application Guide for Multiple Buildings and On-Campus Building Projects: Utilize to exploit economies of scale and the unique challenges and opportunities inherent in Medical Center Campus projects.
- Living Building Challenge: Achieve a majority of "petals" of the International Living Building Institute's Living Building Challenge 2.0.
- 2030 Challenge: Goals of each project to meet the 2030 Challenge relative to reduction requirements for the year constructed.
- Targeting 100!: Utilize tools and approaches from research to meet the 2030 Challenge for the Medical Center Campus.

2. Existing Building Disposition

In order to accommodate the proposed new facilities, circulation, and open space, many of the existing original and older buildings would be removed. This includes all of the original WWII barracks and modular structures. However, several existing buildings would remain, including the Existing Hospital Tower, which would be renovated and repurposed for outpatient services and support and administrative functions, and would also contain the renovated lobby. Other major facilities to remain include the PCDC and the CII Burton E. Green Campus building at the western end of the Medical Center Campus. The Medical Center Campus' emergency generator would also remain in its current location.

Additional buildings to be removed include the Harbor-UCLA Professional Building and the Imaging Center at the western end of the Medical Center Campus, Parlow Library, Warehouses #1 and #2, the Central Plant, and smaller support buildings located throughout the Harbor-UCLA Medical Center Campus. A summary of the existing buildings to remain and to be removed is provided in **Table 2-2**, *Disposition of Existing Buildings*.

G. CONSTRUCTION PHASING

Although the actual timing and phasing of construction projects comprising the Master Plan Project has not been precisely determined, it is reasonably anticipated that buildout would occur in eight main phases (Phases M, C, and 1 through 6), culminating in approximately 2030. In order to make space for new development and to upgrade existing buildings, Master Plan Project implementation would

Table 2-2

Disposition of Existing Buildings

Existing Buildings to Remain	Square Feet
Existing Hospital Tower (to be re-used for outpatient support and administration)	234,000 square feet
Primary Care and Diagnostics Center	57,555 square feet
Surgery and Emergency Room Replacement Project	190,000 square feet
Children's Institute International	23,435 square feet
Cooling Towers	3,750 square feet
Emergency Generator	6,535 square feet
Child Care Center (off-site)	4,360 square feet
Existing Buildings to Be Removed	**Square Feet**
Phase M: Buildings N6, N7, N8, N9, N11, N12	11,578 square feet
Phase M: Buildings F4.5 Trailer, F5, F5 Trailer, F6, F7, F8, F9, F9 Annex	23,452 square feet
Phase 1: Buildings B1, B2, B2 West, B3, B3 Annex, B4, B4 Annex, C1, C1 Annex, C2, C3, N14, N16, N17, N18, N20, N21	75,828 square feet
Phase 1: D2 Annex, D5 Annex	2,962 square feet
Phase C: Buildings F10, M1, T1	8,007 square feet
Phase C: Buildings D2.5, D3, F2, H1	9,661 square feet
Phase C: Storage Containers	3,200 square feet
Phase 3: Buildings D3.5, D4, D4.5, D5, D5.5, D6, D6 Ramp Office, D9, F3, F3.5, F4, F9, F9 Annex	44,128 square feet
Phase 5: Existing Hospital Tower North and South Wings	167,255 square feet
Phase 5: Parlow Library	22,500 square feet
Phase 5: Building 1 East	6,600 square feet
Phase 5: Building 2 East	1,500 square feet
Phase 5: Building 1 South	9,850 square feet
Phase 5: Building 2 South	5,385 square feet
Phase 5: Building 3 South	12,240 square feet
Phase 5: Building Warehouse 1/Central Plant	37,075 square feet
Phase 5: Building Warehouse 2	5,127 square feet
Phase 6: Hazardous Materials Storage, Paint Shop, Buildings N22, N24, N25, N26, N26A Trailer, N26B Trailer, N26C, N28, N31, N32, N33, N34, 14, 16, 18, Imaging Center, Storage Containers	102,434 square feet
Phase 6: Harbor-UCLA Professional Building	54,087 square feet

Source: PCR Services Corporation, 2016.

result in the demolition of existing buildings as set forth in Table 2-2. Construction activities associated with each Project phase would include demolition, excavation and/or grading, construction, and building finishing. Material storage and equipment staging areas would be located on-site, while permitted. Shuttle service for construction workers for transportation between off-site parking areas and the Medical Center Campus temporary construction worker parking would be provided either on-site or at one or more off-site facilities, the specific location(s) of which would be determined prior to the start of individual construction phases. The location of off-site parking areas would be limited to off-street lots or parking structures in the Project vicinity with adequate capacity to accommodate the parking demands of both the existing uses at each respective location and the demands of construction worker vehicles such that parking shortages do not occur. No on-street construction worker parking, material storage, or equipment staging outside the Medical Center Campus would be would be provided by Harbor-UCLA during construction activities.

The following discussion defines the anticipated phases and associated durations of Master Plan Project implementation. Although specific Master Plan Project components to be constructed in each phase are subject to change over time as circumstances dictate, the proposed phasing serves to define the maximum acreage that can be disturbed and the maximum developed floor area that can be constructed at one time, for purposes of properly evaluating the associated impacts on air quality, noise, traffic and parking, and other resources. This allows flexibility in the construction of specific facilities over time while still ensuring that all associated impacts are adequately evaluated pursuant to CEQA.

Phase M

A preliminary phase of the Master Plan Project would involve the demolition of existing medical office buildings, as previously noted in Table 2-2 for Phase M. In addition, this phase would also entail the placement of two temporary, modular medical office buildings on the Medical Center Campus in order to maintain outpatient services while permanent buildings are being constructed during subsequent phases. These temporary buildings would be removed from the Medical Center Campus during Phase 6 of Project implementation (see discussion on the following pages) following completion of Outpatient Building B. Phase M is anticipated to be implemented over the course of a single year beginning in approximately 2017.

Phase C

Demolition of existing medical office uses and storage containers would occur during Phase C as shown above in Table 2-2 for Phase C, followed by construction of the Central Plant, Central Information Technology (IT) Building, SCE service yard, utility tunnel, and related surface parking areas. Phase C is anticipated to be implemented over approximately four years between late 2018 and early 2023.

Phase 1

A new Staff Parking Structure and associated infrastructure would be constructed during Phase 1 of Project implementation, which would require the demolition and temporary relocation of various existing buildings on the proposed site of the structure as previously noted in Table 2-2 for Phase 1. Some of the buildings to be demolished are currently vacant, but occupants of some buildings would need to be temporarily relocated to other buildings within the Medical Center Campus. Two new buildings would be constructed on the LA BioMed Campus. Phase 1 is anticipated to be implemented over approximately three years between 2018 and 2021.

Phase 2

During Phase 2 of Project implementation, the Outpatient Mental Health Building, Outpatient Building A, and a bridge connecting the two buildings, as well as associated infrastructure, some of which is expected to be rerouted from the buildings to be demolished in this area, would be constructed on the north side of the Medical Center Campus. No demolition would occur as part of Phase 2 of the Project. Phase 2 of the Master Plan Project is anticipated to be constructed over approximately three years between 2021 and 2023.

Phase 3

Under Phase 3 of Master Plan Project buildout, the remaining buildings in the proposed New Outpatient Zone that are currently occupied by LA BioMed would be demolished as shown in Table 2-2 for Phase 3, and these LA BioMed programs would be relocated to the LA BioMed Campus. The remaining medical clinics in the new Outpatient Zone would be demolished and their programs relocated into the new Outpatient Clinical Building A constructed as part of Phase 2. Phase 3 improvements would involve the construction of a new staff parking structure immediately north of the proposed new Central Plan location and a temporary helistop in one of two locations near the southwest corner of the Medical Center Campus to allow for continued patient air transport throughout construction activities near the existing Emergency Department helistop. It is also assumed that up to 50 percent of biomedical research uses within both the proposed Bioscience Tech Park and LA BioMed Campus would be constructed during Phase 3, which would represent approximately 125,000 square feet for Bioscience Tech Park uses and 112,500 square feet of new LA BioMed Campus uses. Phase 3 of Master Plan Project buildout is anticipated to be constructed over approximately two years between early 2021 and early 2023.

Phase 4

Under Phase 4, no demolition would occur and both the New Hospital Tower and Diagnostic and Treatment Center would be constructed near the center of the Harbor-UCLA Medical Center Campus, and the main entry plaza would be re-configured along with the adjacent surface parking lot. The second half of the new Central Plant and Cooling Towers (which were begun in Phase C) would be constructed to meet the demand of the New Hospital Tower and Diagnostic and Treatment Center. The remainder of necessary infrastructure west of the existing Surgery/Emergency Department Building to support the New Hospital Tower would be constructed, which would also complete the new infrastructure network for buildings constructed during previous phases. In addition, a new permanent helistop would be constructed on the roof of the New Hospital Tower, and thus the temporary helistop in the southwestern portion of the Medical Center Campus would be removed. As the New Hospital Tower would need to be occupied prior to the year 2030, it is anticipated that it would be constructed over approximately four years between 2023 and 2027, overlapping with construction of some Phase C, Phase 3, and Phase 6 (Bioscience Tech Park) improvements. Vacant land in the northwest portion of the Harbor-UCLA Medical Center Campus not occupied by Bioscience Tech Park improvements would be used as interim staff/public parking as needed.

Phase 5

The South Wing attached to the Existing Hospital Tower would be demolished to accommodate the new Staff Parking Structure. The North Wing would be demolished after the Existing Hospital Tower is renovated, and Parlow Library and existing warehouse space within the Central Plant would also be demolished.

The final Staff Parking Structure at the east end of the Medical Center Campus would be constructed along with a staff surface parking lot, and internal roadways in this area of the Medical Center Campus would be reconfigured. The Existing Hospital Tower would be remodeled floor by floor, and the public parking lot on the north side of the Medical Center Campus reconfigured to accommodate limited commercial uses near the intersection of Carson Street and Vermont Avenue. The renovated Existing Hospital Tower could contain up to 156,000 square feet of medical office and other outpatient services as well as up to approximately 78,000 square feet of administrative office or other campus support facilities. The final Medical Center Campus Support buildings would be completed in the southeastern portion of the Medical Center Campus, and new infrastructure would be constructed off Vermont Avenue to support development of the eastern Medical Center Campus. Phase 5 is anticipated to be constructed over approximately six years between late 2024 and early 2030. The remainder of biomedical research uses within both the proposed Bioscience Tech Park and the LA BioMed Campus would be constructed during Phase 5 and built out by approximately 2030, for a total of approximately 250,000 square feet and 225,000 square feet, respectively, of net new floor area.

Phase 6

During Phase 6 of the Master Plan Project, the existing Harbor-UCLA Professional Building on the western side of the Harbor-UCLA Medical Center Campus would be demolished after the New Hospital Tower is built and the Existing Hospital Tower is remodeled, and the associated operations would be relocated to the existing renovated and repurposed Existing Hospital Tower. Phase 6 would also include demolition of remaining existing medical office buildings, storage containers, and the Imaging Center, as well as removal of temporary modular medical office buildings place on-site during Phase M, surface parking lot, and temporary helistop. Construction of Outpatient Building B, as well as associated roadway/access and landscape/hardscape improvements, would occur under this Phase. Phase 6 implementation is expected to occur over an approximately 2.5-year period between late 2021 and mid-2024.

H. REQUIRED APPROVALS

Implementation of the Master Plan Project would include but not be limited to the following approvals:

1. State of California

- California Office of Statewide Health Planning and Development
- Caltrans Division of Aeronautics Helistop Permit Approval

2. County of Los Angeles

- Certification of the Final EIR
- Project approval
- Approval of permits as may be required for component buildings and other structures
- Funding approval

3. Other Approvals

- Approval of permits for temporary construction activities associated with off-site infrastructure and/or traffic system improvements within other jurisdictions (if such improvements are ultimately necessary), including the cities of Los Angeles, Carson, and Torrance.

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3. General Description of Environmental Setting

3.0 GENERAL DESCRIPTION OF ENVIRONMENTAL SETTING

Section 15125 of the State *CEQA Guidelines* requires that an EIR include a description of the existing environment. This chapter provides a general overview of the environmental setting for the Project, however, detailed information on existing conditions is provided for each environmental topic studied in Chapter 4.0, Environmental Impact Analysis. This chapter also provides an overview of related projects that are considered in evaluating cumulative impacts.

A. OVERVIEW OF ENVIRONMENTAL SETTING

1. On-Site Conditions

The Harbor-UCLA Medical Center Campus is located on a 72-acre property at 1000 West Carson Street in Torrance, California. The Medical Center Campus is located in the unincorporated County of Los Angeles community of West Carson, which roughly encompasses the 2.3-square-mile area between the Harbor Freeway (I-110) on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Center Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located one block (approximately 800 feet) east of the Medical Center Campus and the San Diego Freeway (I-405) is located approximately two miles to the north and northeast. The Site is located within a network of regional transportation facilities providing connectivity to the larger region. The Metro Transit Station at Carson Street is located approximately 0.1 miles to the east, adjacent to the Harbor Freeway.

Surrounding communities include the cities of Gardena, Lawndale, and Hawthorne to the north; the City of Carson, east of the Harbor Freeway; the Harbor Gateway community, part of the City of Los Angeles, and the City of Torrance to the west; and to the south, the Harbor City community, part of the City of Los Angeles, and the City of Lomita. The Existing Hospital, related treatment facilities, and the majority of Medical Center Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Medical Center Campus, while buildings occupied by LA BioMed take up the majority of the central Medical Center Campus, and outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Medical Center Campus. Patient diagnostic facilities, administration offices, and additional facilities management functions are scattered throughout the Medical Center Campus.

2. Surrounding Uses

The Project vicinity is highly urbanized and generally built-out. Carson Street, to the north, is largely developed with commercial uses, primarily neighborhood retail businesses and medical/dental services. The Harbor-UCLA Medical Center Employee Children's Center (Child Care Center) and a multifamily residential apartment complex, Harbor Cove Villa, are located outside the Harbor-UCLA Medical Center Campus on Carson Street just west of the intersection with Vermont Avenue. The area north of Carson Street is a predominantly single-family residential neighborhood. Vermont Avenue, bordering the Harbor-UCLA Medical Center Campus to the east, is developed with a mix of neighborhood retail uses and medical services just north and south of Carson Street, while the southern half of the block facing the Harbor-UCLA Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and Starlite Trailer Park and Rainbow Mobile Home Park, which back up to the Harbor Freeway on the west. Wholesale

and light industrial uses, primarily warehouses and truck distribution centers, are located to the southeast along 220th Street. Single-family and multi-family residential neighborhoods border the Harbor-UCLA Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles; the abandoned Union Pacific Railroad right-of-way along the west side of Normandie Avenue serves as a setback for residential uses to the west. An off-site surface parking lot serving LA BioMed is located across 220th Street from the Harbor-UCLA Medical Center Campus.

3. Existing Conditions

The existing Harbor-UCLA Medical Center Campus was originally laid out as a military installation in the 1940s. The Existing Hospital Tower, related treatment facilities, and the majority of Medical Center Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Medical Center Campus, while LA BioMed takes up the majority of the central Medical Center Campus, and outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Medical Center Campus. Patient diagnostic facilities, administration offices, and additional facilities management functions are scattered throughout the Medical Center Campus. The facilities on the Medical Center Campus total approximately 1,279,284 square feet.

LA BioMed presently occupies a number of older buildings (World War II-era structures) scattered throughout the central portion of the Harbor-UCLA Medical Center Campus and is proposing to consolidate its operations within a 11.4-acre leasehold (LA BioMed Campus) in the south-central portion of the Medical Center Campus. Four new buildings have been constructed on the LA BioMed Campus since 2000 and LA BioMed will eventually vacate approximately 94,754 square feet of floor area it occupies elsewhere on the larger Medical Center Campus as it consolidates.

The Harbor-UCLA Professional Building houses nine clinical departments that provide a range of clinical subspecialties, a laboratory, radiology, nuclear medicine and a pharmacy.

CII occupies a 23,435-square-foot facility known as its Burton E. Green Campus in the northwestern corner of the Harbor-UCLA Medical Center Campus, near the intersection of Carson Street and Normandie Avenue.

The existing layout of the Harbor-UCLA Medical Center Campus reflects its piecemeal growth over time, and the aging buildings and infrastructure have become inefficient to operate and maintain, contributing to serious logistical obstacles and service deficiencies. The Existing Hospital Tower (including the PCDC) and outpatient clinics are currently running at or near capacity, with no physical room for growth. Other facility and programmatic shortfalls include a lack of on-site amenities for patients and visitors and a shortage of adequate teaching space for the medical school internship and continuing education programs.

Detailed descriptions of the environmental settings have been prepared for each of the environmental topics in this Draft EIR. For more detailed descriptions of existing conditions that are specific to each of the environmental issues analyzed in this Draft EIR, see Chapter 4.0, Sections 4.A. through 4.M.3.

B. RELATED PROJECTS

CEQA requires that EIRs analyze cumulative impacts. As defined in the State CEQA Guidelines Section 15355, a cumulative impact refers to "two or moreindicidua effects which, when considered together, are considerable or which compound or increase other environmental impacts." State CEQA Guidelines Section 15130(a) states that an EIR must discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065 (a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR must briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant.

In addition, State CEQA Guidelines Section 15130(b) states that the analysis of cumulative impacts shall reflect the severity of the impacts and the likelihood of occurrence, but the discussion need not provide as great of detail as provided for the effects attributable to the project alone. Instead, the discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of the other projects which do not contribute to the cumulative impact.

A project has "cumulatively considerable" or significant cumulative impacts, when its incremental effects "are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

For an adequate discussion of significant cumulative impacts, the State *CEQA Guidelines* (Section 15130(b)(1)(A) and (B)) allow an EIR to determine cumulative impacts and reasonably foreseeable growth based on either of the following methods:

- A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, projects outside of the County's jurisdiction or control;
- A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental planning document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

For the purposes of the cumulative impacts analysis for the proposed Master Plan Project, the County has incorporated into its analyses the method of a list of related projects for evaluating cumulative effects. Based on information provided by the County of Los Angeles Department of Public Works, Traffic and Lighting Division (LACDPW Traffic and Lighting Division) and the neighboring jurisdictions of Los Angeles, Carson, and Torrance, a list of past, present and probable future projects in the Project vicinity has been prepared for this Draft EIR. Specifically, data describing cumulative projects in the area was developed using information obtained from Los Angeles County Department of Regional Planning (LACDRP), City of Los Angeles Department of Transportation (LADOT), City of Carson Department of Planning and City of Torrance Department of Planning. The list of identified related projects is provided in **Table 3-1**, *Related Projects List*, with the locations of each of the related projects listed in **Figure 3-1**, *Related Projects Map*. The radius was

developed by the Project traffic engineer in consultation with the LACDPW Traffic and Lighting Division in the course of preparing the Memorandum of Understanding that defines the traffic analysis procedures. Although the projects listed in Table 3-1 serve as the primary bases for evaluation of cumulative impacts, the approach to these analyses vary for certain environmental issues. The cumulative analyses for each environmental issue are provided in their applicable sections in Chapter 4.0, Environmental Impact Analysis, of this Draft EIR.

Table 3-1

Related Projects List

ID	JURISDICTION	PROJECT LOCATION	LAND USE	SIZE
1	County	24500 Normandie Ave	Apartments Retail	112 du 3.900 ksf
2	County	1028 W 223rd St	Condos	19 du
3	County	22700 Meyer St	Condos	60 du
4	County	19208 S Vermont Ave	Condos	20 du
5	Carson	440 Sepulveda Blvd	Apartments	11 du
6	Carson	628 Lincoln St	Single Family	3 du
7	Carson	616 E Carson	Apartments Retail	152 du 13.000 ksf
8	Carson	19220 S Main St	Driver Training Facility	65.000 ksf
9	Carson	402 E Sepulveda Blvd	Apartments Retail	65 du 3.000 ksf
10	Carson	21521 S Avalon Blvd	Apartments Retail	357 du 32.000 ksf
11	Carson	23401 S Avalon Blvd	Retail	6.300 ksf
12	Carson	21791 Moneta Ave	Apartments	13 du
13	Carson	20920 Chico St	Medical	11.340 ksf
14	Carson	22303 Avalon	Automated Car Wash Office Space	4.673 ksf 0.480 ksf
15	Carson	Carson Marketplace	Regional Retail Neighborhood Retail Residential Hotel Restaurants Commercial Recreational	1,370.000 ksf 130.000 ksf 1550 du 300 rooms 81.125 ksf 214.000 ksf
16	Los Angeles	1311 W Sepulveda Blvd	Apartments Retail	352 du 17.904 ksf
17	Los Angeles	21176 S Western Ave	Retail	0.836 ksf
18	Los Angeles	20805-22341 S. Normandie Ave	Single Family	63 du
19	Torrance	1640 Cabrillo Ave	Apartments Retail	44 du 3.700 ksf
20	Torrance	1752 Border Ave	Warehouse Automobile Care Center	10.000 ksf 3.000 ksf
21	Torrance	570 Alaska Ave	Warehouse	31.015 ksf
22	Torrance	2540 Sepulveda Blvd	Automobile Care Center	2.525 ksf

Table 3-1 (Continued)

Related Projects List

ID	JURISDICTION	PROJECT LOCATION	LAND USE	SIZE
23	Torrance	465 Crenshaw Blvd	Transit Center	17.800 ksf
24	Torrance	23625 Arlington Ave	Apartments	14 du
25	Torrance	20405 Gramercy Place	Light Industrial	17.000 ksf
26	Torrance	1750 214th St/1600 Abalone St	Warehouse Manufacturing	30.000 ksf 13.000 ksf

Source: Fehr and Peers Traffic Study, 2016

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PCR

Related Projects Map

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers Traffic Study, 2016.

FIGURE

3-1

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4. Environmental Impact Analysis

4. ENVIRONMENTAL IMPACT ANALYSIS
A. AESTHETICS

1. INTRODUCTION

This section addresses the potential aesthetic and visual resource impacts that could result from the Project with regard to visual quality, views, light/glare, and shading. This section is based, in part, on information provided in the Harbor-UCLA Master Plan (Perkins+Will, 2012) and also incorporates relevant information from the Los County 2035 General Plan Update and associated EIR (2015).

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Visual Character and Views

(a) Visual Character of the Medical Center Campus

(i) General Medical Center Campus Character

The Medical Center Campus is fully developed with the range of uses illustrated in Figure 2-4, *Existing Medical Center Campus Buildings*, in Chapter 2.0, Project Description, of this Draft EIR. Taller buildings, including the existing eight-story Hospital Tower, surface parking lots, and street edge landscaping, walls, and fences are visible from adjacent streets and properties. Existing landscaping within the Medical Center Campus is illustrated in **Figure 4.A-1**, *Existing Landscaping*.

The Medical Center Campus extends approximately one-half mile along its Carson Street and 220th Street frontages and, as such, has the aspect of a very large property related by common, medical-related uses and continuous hedges, walls, and fences. The street-facing landscaping features and walls are largely uninterrupted along the majority of the street frontages. The Medical Center Campus is characterized by generally flat topography, varying approximately one foot from north to south between Carson and 220th Streets, and less than 10 feet from east to west, between Vermont and Normandie Avenues. This topography, lack of elevated vantage points, and density of existing development, as is also characteristic of the surrounding community, prevents panoramic views within the Project area from adjacent and surrounding streets.

Medical Center Campus as Viewed from Carson Street

The visual character of the Site derives from views from adjacent public streets and low-rise land uses. As viewed from Carson Street approaching from the east, the eight-story Existing Hospital Tower is visible above street landscaping to pedestrians and vehicles approaching from the east. Three low monument signs identifying the Harbor-UCLA Medical Center are located at the intersection of Carson Street and Vermont Avenue. Landscaping including mature pine trees and lawn line the Carson Street frontage from the intersection to the Medical Center Campus' landscaped entrance area (a distance of approximately 600 feet). Surface parking lots B and C are visible behind the exiting large pine trees and landscaped strip. The street frontage from the Medical Center Campus entrance beyond Parking Lot B, to past Berendo Avenue (also a distance of approximately 600 feet) is characterized by a landscaped strip of lawn and recently planted

street trees and flower beds. Parking lot B and the single-story Building N6 are visible beyond the landscaping. Although one of the original 1943 barracks, Building N6 is in poor physical condition and does not constitute a distinctive visual resource. A bougainvillea hedge intended for screening surface parking is planted along the south side of the Carson Street frontage extending from beyond Building N6 to approximately 540 feet from the corner of Carson Street and Normandie Avenue (a distance of approximately 800 feet). Several breaks for entrance gates or that were caused by plant die-back occur within this hedge, and a surface parking strip fronting the street are intermittently visible. Mature trees within the grounds are also visible beyond the surface parking area. Landscaping from the west edge of the hedge to the corner of Carson Street and Normandie Avenue (approximately 540 feet) consists of sparser bougainvillea shrubs that allow a full view into the site and the adjacent parking lot at the northwest corner of the Medical Center Campus. A few mature trees are located in the parking lot.

Medical Center Campus as Viewed from Normandie Avenue

Landscaping along the Normandie Avenue frontage (the west edge of the Medical Center Campus) includes a general continuation of the sporadic bougainvillea hedge, beyond which the corner parking lot at the Normandie Avenue and Carson Street intersection is highly visible. In the approximate location of the Children's Institute International building, a concrete block wall and hedge is present along the frontage. The landscaping extends to the west entrance of the Medical Center Campus. To the south of the west entrance, the street edge is lined with an open (not landscaped) eight-foot-high chain link fence that extends to the southwest corner of the Medical Center Campus at Normandie Avenue and 220th Street. The loading area for the single-story Harbor-UCLA Professional Building is visible through the fencing. To the south of the loading area, the configuration of the Harbor-UCLA Professional Building allows an approximately 50-foot deep landscaped setback (lawn) at the edge of the building. A surface parking lot with a minimal, ten-foot lawn setback is located along the street edge to 220th Street. The surface parking lot and buildings within the Medical Center Campus are visible from Normandie Avenue and residential neighborhoods to the east; however, the eight-story Existing Hospital Tower is minimally visible from this area.

Medical Center Campus as Viewed from 220th Street

The street frontage along 220th Street is lined with a bougainvillea hedge, which obscures views of the open drainage channel that runs along the street frontage to the Medical Center Campus entrance driveway. A stand of mature trees is located to in the easterly sector of this frontage. The main driveway is landscaped with lawns and flower beds. A segment of screened construction fencing is located to the east of the driveway and, to the east of the fencing, landscaping consists of mature eucalyptus trees that extend to the corner of 220th Street and Vermont Avenue. The Lot D parking structure is located near the sidewalk and is partially visible through the lower levels of the trees. The eight-story Existing Hospital Tower is visible from 220th Street and residential neighborhoods to the south.

Medical Center Campus as Viewed from Vermont Avenue

The street frontage along Vermont Avenue is landscaped with street trees on approximately 100-foot centers and low evergreen shrubs. The Medical Center Campus is also bordered by an approximately three-foot-high masonry wall, topped by approximately three feet of chain link fencing. The Lot D parking structure and surface parking lots are visible from the street. The eight-story Existing Hospital Tower is also visible from

EXISTING LANDSCAPE PLAN

LEGEND

- EXISTING TURF AREA - 260,095 SF
- EXISTING TREE
- 1 - FLOSS SILK TREE
- 2 - NAKED CORAL TREE
- 3 - WEEPING FIG
- 4 - EVERGREEN ASH
- 5 - JACARANDA
- 6 - AMERICAN SWEET GUM
- 7 - CANARY ISLAND PINE
- 8 - LONDON PLANE TREE
- 9 - BALD CYPRESS
- 10 - CHINESE ELM

PCR

N

0 400 Feet

Existing Landscaping

Harbor-UCLA Medical Center Master Plan

Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

FIGURE

4.A-1

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street, although it is partially obscured by the A.F. Parlow Library when viewed from the south. The latter is located closer to the street front.

Overall, existing open landscaping and chain link fencing allow views into the site from the surrounding streets and neighborhoods. The visible aspect of the Medical Center Campus is mixed, varying from loading areas, older warehousing and service buildings to modern and architecturally notable buildings such as the A.F. Parlow Library. As viewed from surrounding streets and neighborhoods, the mixture of building types, visible parking lots and vehicles, and variations in the amount and type of landscaping, creates an overall visual discontinuity.

(b) Visual Character of the Project Vicinity

The visual character of the Medical Center Campus vicinity is defined by the mix of land uses along the street front in the Medical Center Campus vicinity. The Harbor (I-110) Freeway is located less than 1/8th mile to the east. Because the freeway is primarily below grade, it is not a prominent feature of the local landscape. A mix of gas stations, restaurants, fast food restaurants, retail uses and small professional services are located between Vermont Avenue and the freeway. Two gas stations and a fast food restaurant occupy the corners of Carson Street and Vermont Avenue, opposite the Medical Center Campus. The street front along Vermont Avenue across from the Medical Center Campus contains restaurants, mini-malls with shops and services, three-story multi-family residences and a mobile home park. Uses along Carson Street across from the Medical Center Campus include a three-story multi-family residential complex, several small grocery stores, retail stores, services, and restaurants. A large mall with a broad surface parking lot and very limited landscaping is located along the north side of Carson Street and at the northeast corner of Carson Street and Normandie Avenue across from the Medical Center Campus. The overall commercial district (Carson Street and Vermont Avenue) is low-rise and contains no distinctive plazas, parks, public art, or distinctive landscaped features. Signage consists largely of pole and pylon signs, and a few billboards (large advertising signs) are present. Although utilities are underground, landscaping is minimal. A few palm trees are randomly located near the streets, but no street tree program has been implemented along the respective frontages.

Residential neighborhoods that combine single- and multi-family homes are located to the west and south of the Medical Center Campus. A large three-story multi-family building is located near the southwest corner of Carson Street and Normandie Avenue and single-story duplex units are located between this building and single-family residences to the south along Normandie Avenue. Normandie Avenue comprises a four-lane segment, which is separated by an approximately 60-foot-wide grassy, but otherwise barren, strip of land from a parallel access road used by the residential neighborhood to the west. The strip was created by the removal of the former Union Pacific Railroad tracks that formerly ran along Normandie Avenue. The homes along Normandie Avenue have no access to Normandie Avenue's four-lane component and take access along the parallel access road to the west of the 60-foot-wide separation strip. The residences face the residential streets intersecting the access road and are not directly facing the Medical Center Campus. Normandie Avenue's four-lane road component and access road do not contains trees or other landscape features. Landscaping, such as trees, in the residential neighborhoods to the west is also minimal. The four-lane road component is characterized by a row of tall utility poles lining both sides of the roadway. With the combined four-lane component, grassy strip, and access road, the setback between the residential neighborhood (at property lines) and the Medical Center Campus is approximately 160 feet.

Residential neighborhoods to the south of the Medical Center Campus along 220th Street are a combination of single-family residences, condominium uses, and two- and three-story multi-family complexes. The older, and larger, multi-family complexes are two story and located nearer the Vermont Avenue and 220th intersection. Most of the residences along 220th Street directly face the Medical Center. The setback between the Medical Center Campus and the residential properties to the south is approximately 45 feet. Because of greater proximity to the Medical Center Campus, residences along 220th Street have broader views of the existing eight-story Hospital Tower and other buildings in the Medical Center Campus. More landscaping, lawn trees, and street trees occur along the south side of 220th Street than in the Normandie Avenue area; however, there are no consistent types or character of landscaping, or program of uniform street trees. Above-ground utility lines are located along the south edge of the street.

(2) Views

The Medical Center Campus is located within a highly urbanized area surrounded by residential uses and commercial development. As with the blocks and communities immediately surrounding the site, the 72-acre Medical Center Campus varies very little in elevation from approximately 46 feet to 50 feet site above mean sea level (AMSL). Because of the flat topography and density of development on the Medical Center Campus and in the area, panoramic views across the Medical Center Campus are unavailable. The nearby Harbor Freeway, which is less than one-eighth of a mile to the east, is generally below-grade and also has no views across the Medical Center Campus The commercial and residential neighborhoods surrounding the Medical Center Campus are primarily low-rise. New development is generally multi-family or larger strip malls, such as the strip mall at the northeast corner of Normandie Avenue and Carson Street. There are no distinctive taller buildings or groups of buildings that would create a unique skyline and, because of the flat terrain in the area, no distinctive long-range views are available in the area. The Medical Center Campus would be a minor element in the view field of distant buildings or viewing areas that would have long-range views of the site.

(3) Light and Glare

Existing nighttime lighting within the Project vicinity consists of light from commercial buildings, illuminated building identification signs, streetlights, vehicle lights, illuminated billboards, and surface parking lot lights that occur within commercial areas along Carson Street to the east and west of the Medical Center Campus and Vermont Avenue to the north and south of the Medical Center Campus. Nighttime illumination is lowest in the area's residential neighborhoods to the west and south of the Medical Center Campus. Residential uses located on Vermont Avenue and Carson Street would have higher light exposure because of greater traffic activity and commercial uses with illuminated signs on these streets.

The Medical Center Campus also features light fixtures and poles in parking areas and security lighting. Light spillage from the windows of taller buildings would be visible from adjacent residential areas, particularly along 220th Street. The Medical Center Campus would also generate low-level lighting from identification signs at the intersection of Carson Street and Vermont Avenue. However, this light source is minimal at this intersection compared to the existing illuminated pole lights and on-site lighting at the Shell gas station, Union 76 gas station, and Jack-in-the-Box restaurant at the other three corners of the intersection. Residential neighborhoods on all four streets bordering the Medical Center Campus have varying levels of light exposure from the commercial streets because of intervening development from the Medical Center Campus. However, the Medical Center Campus's parking lot lights are visible to all adjacent residential neighborhoods.

Daytime glare is generally associated with sunlight reflected from mobile and parked vehicles and building walls. Activities that would be sensitive to daytime glare from reflected sunlight include motorists traveling north, east, or west on the adjacent roadways. Free standing, illuminated signage also has the potential to generate glare. Because of the east/west orientation of Carson Street and 220th Street, the potential exists during some seasons for reflected glare from the east, west, and south façades of buildings along these streets. However, no notable highly reflective glare is evident in the area.

b. Regulatory Framework Summary

No federal or regional agency regulations are applicable to aesthetics and visual resources.

(1) State

(a) Senate Bill No. 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under CEQA for several categories of development projects including the development of infill projects in transit priority areas. The bill adds to the CEQA Statute, California Public Resources Code Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, Section 21099. Pursuant to Section 21099(d)(1) "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."[1] The provisions of SB 743 apply to projects located on a "lot within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by, an improved public right-of-way from, parcels that are developed with qualified urban uses….and it is located within one-half mile of a major transit stop."[2] The Project would meet the criteria set forth in SB 743 because it (1) is located within a transit priority area less than one-half mile from the Harbor Freeway/Carson Station TOD (connection to Metro Silver Line) and (2) comprises an employment center within an established urban area. Under SB 743, the Project would be exempt from findings of significance related to aesthetic effects, including view, visual quality, and light and glare that exceed CEQA Guidelines, Appendix G, criteria. However, for the purpose of this EIR, aesthetic effects are evaluated with respect to the County's impact thresholds.

(2) Local

(a) County of Los Angeles General Plan 2035

Guiding principles of the Los Angeles County General Plan include promoting smart growth through strategies that are tailored to each community. According to General Plan, strategies, such as transit-oriented development, will create vibrant centers around transit stations that promote neighborhoods where people can live, work, and shop without the need to drive to each destination. Another smart growth strategy is to facilitate the creation of vibrant and active corridors that connect major centers and destinations, and thriving neighborhood centers within the unincorporated areas. The General Plan states that these work in conjunction with other smart growth strategies to "green" streets and buildings, and

[1] *Section 21009(2)(B) clarifies that "For the purposes of this subdivision, aesthetic impacts do not include impacts on historical or cultural resources."*

[2] *Per definitions included in Section 21099(a).*

protect and conserve the County's natural resources. A Guiding Principal latter is to design communities that incorporate their cultural and historic surroundings, are not overburdened by nuisance and negative environmental factors. The General Plan also promotes the creation of communities that foster physical activity and create pedestrian-friendly environments and complete streets that are accessible to all users to produce positive outcomes from a land use and public health perspective.[3]

The Land Use Element of the General Plan (Chapter 6) sets forth policies that support aesthetic goals. These include Goal LU 7 to provide compatible land uses that complement neighborhood character and the natural environment. Goal LU 10 is to provide well-designed and healthy places that support a diversity of built environments. Policies to support Goal LU 10 include Policy LU 10.3 to consider the built environment of the surrounding area in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color, detailing or ornament.

Other policies supporting Policy LU 10 include Policy LU 10.4 to promote environmentally-sensitive and sustainable design and Policy LU 10.10 to promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces. Policy LU 10.5: Encourage the use of distinctive landscaping, signage and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction. Policy LU 10.6: Encourage pedestrian activity through the following: (i) Designing the main entrance of buildings to front the street; (ii) Incorporating landscaping features; (iii) Limiting masonry walls and parking lots along commercial corridors and other public spaces; (iv) Incorporating street furniture, signage, and public events and activities; and (v) Using wayfinding strategies to highlight community points of interest.

Policy LU 10.8 is to promote public art and cultural amenities that support community values and enhance community context; and Policy LU 10.9 is to encourage land uses and design that stimulate positive and productive human relations and foster the achievement of community goals; and Policy LU 10.10: Promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces. The Project is compared to the applicable policies of the Land Use Element in Subsection 3.d, Project Impacts, below.

The Conservation and Natural Resources Element of the General Plan (Chapter 9) also sets forth policies related to aesthetic values. The primary focus of this chapter, however, is the County's role in the protection, conservation and preservation of natural resources and open space areas. Because the Project is located within an area that is entirely urbanized, the goals and policies of the Conservation and Natural Resources Element would not be applicable.

(b) County of Los Angeles Code

(i) Title 26 – Sign Regulations

Title 26, Chapter 65 of the LACC further establishes development standards for signs within unincorporated communities of Los Angeles County. The LACC sign regulations, apply to all types of commercial signs,

[3] *Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 3, Guiding Principles, adopted October 6, 2015, pages 16 and 17.*

including ground signs, projecting signs, roof signs, wall signs. The LACC defines wall signs as a sign attached to or erected against a wall of a building, with the plane of the sign parallel to the plane of the building. Projecting signs are defined as signs suspended from or supported by a building (but not a wall sign). Roof signs are defined as a sign erected upon or above a roof or parapet wall of a building. Ground signs are defined as signs detached from the building and supported by the ground. Under LACC Section 6502.2, a building permit is required for every sign and sign structure regulated under the LACC. Under Section 6502.7, no sign shall be erected that would interfere with, mislead or confuse traffic. Section 6502.10 requires that signs and sign structures be maintained at all times in a state of good repair and be able to withstand wind pressure.

(ii) Title 31 – Green Building Standards

Title 31 sets forth County regulations pertinent to landscape design. LACC Section 4.106.5 of the LACC for post-construction landscape design requires that a project shall not provide more than 25 percent turf within the total landscaped area; non-invasive drought-tolerant plant and tree species appropriate for the climate zone shall be utilized in at least 75 percent of the total landscaped area; and hydrozoning irrigation techniques shall be incorporated into the landscape design. Title 31 also requires energy efficiency, which applies to the design of interior and exterior lighting fixtures.

(iii) Title 12 – Environmental Protection Pertinent to Lighting

Title 12 of the LACC establishes certain controls on exterior lighting. In particular, the regulations require that display lighting (defined as the use of artificial light for decorative purposes or to direct attention to the providers of goods or services or to illuminate direct attention to signs advertising goods or services, display of goods, objects or designs symbolic of commercial enterprises or trademarks, or landscaping or other exterior effect) shall not be permitted during an electrical power shortage pursuant to Section 12.40.030 of the LACC. The aesthetic policies of the LACC applicable to the Project (as well as an analysis of project consistency) are presented in Subsection 3.d, Project Impacts, below.

3. ENVIRONMENTAL IMPACTS

a. Methodology

(1) Visual Character

The evaluation of visual character pertains to the degree and nature of contrast between the Master Plan Project and its surroundings. In the analysis of visual character, the existing visual properties of the Medical Center Campus are compared to the expected appearance of the Medical Center Campus under the Master Plan Project and the surrounding area to determine whether the visual character of the area would be degraded. Factors such as changes in the appearance of the Medical Center Campus, building height and massing, setbacks, landscape buffers, and other features are taken into account. The evaluation, therefore, considers the amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, which would be removed, altered or demolished. It takes into consideration the degree of contrast between proposed features and existing features that represent the area's valued aesthetic image, the degree to which the Project would contribute to the area's aesthetic value, and applicable guidelines and regulations.

(2) Views

The analysis of view impacts is based on the evaluation of field surveys and topography of the Medical Center Campus, surrounding area, and region to determine any broad views of visual resources that would be available across the Medical Center Campus. The intent of the evaluation of views is to determine if valued visual resources exist across the site and whether valued visual resources would be blocked or diminished as a result of Project development. The evaluation further considers whether the Master Plan Project would enhance viewing conditions through the creation of new resources and whether the Project includes design characteristics that would offset or mitigate specific impacts.

(3) Light and Glare

The effects of a project's artificial light sources are contextual and depend upon the existing lighting environment, light intensity, and proximity to light sources. Light impacts may include visual prominence, decrease of available views, alterations to the nature of a community or neighborhood character, or illumination of a sensitive land use. The analysis of light and glare identifies the location of light-sensitive land uses and describes the existing ambient conditions on the Medical Center Campus and in the Project vicinity. The analysis describes the Master Plan Project's proposed light and glare sources, and the extent to which Project lighting, including illuminated signage, would spill off the Medical Center Campus onto light-sensitive areas. The analysis also describes the affected street frontages, the direction in which the light would be focused, and the extent to which the Project would illuminate sensitive land uses. The analysis also considers the potential for sunlight to reflect off building surfaces (glare) and the extent to which such glare would interfere with the operation of motor vehicles or other activities.

b. Thresholds of Significance

The potential for aesthetic impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines.* These questions are as follows:

(I) Aesthetics. Would the project:

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings or other locally recognized desirable aesthetic natural feature within a state-designated scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The County determined in the NOP/IS (see Appendix A of this Draft EIR) that the proposed Project would result in a less than significant impact with respect to checklist question b). Accordingly, this environmental topic is not evaluated in this EIR.

Based on the above factors, the Project would have a potentially significant impact on Aesthetics if it would:

AES-1 Substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features.

AES-2 Substantially obstruct or alter an existing, recognized valued public view or scenic vista.

AES-3 Create a new source of substantial light, or glare which would adversely affect day or nighttime views in the area.

c. Project Characteristics or Design Features

(1) Project Characteristics

(a) Construction Activities

Construction activities associated with each proposed new component would entail the phased demolition of existing buildings or facilities and excavation, grading, construction, and finishing of new buildings or facilities. Construction is expected to occur in at least six main phases, some of which are anticipated to overlap, culminating in 2030. During construction, material storage and equipment staging areas would be located on-site. Temporary construction worker parking would be provided either on-site or at one or more off-site parking facilities. No on-street construction worker parking, material storage, or equipment staging would be permitted.

The actual timing, phasing, and scheduling of future construction projects has not been precisely determined; however, the proposed phasing discussed in Chapter 2.0, Project Description, of this Draft EIR, describes the affected portions of the Medical Center Campus that would be disturbed at one time. With the exception of the initial construction phase, as noted above, several phases have the potential to overlap.

As discussed in Chapter 2.0, the preliminary phase (Phase M) would involve the demolition of existing medical office buildings, and locating two temporary, modular medical office buildings. Phase M is expected to be implemented over approximately one year between late 2016 and late 2017. Phase 1 would involve demolition or temporary relocation of buildings and construction of a new Staff Parking Structure and associated infrastructure. Phase 1 is expected to be implemented over three years between 2018 and 2021.

Phase C would require the demolition of existing medical office buildings and storage containers, followed by construction of the Central Utility Plant, IT Building, SCE service yard, utility tunnel, and related surface parking areas. Phase C is expected to be completed over approximately four years between late 2018 and early 2023.

Phase 2 involves the construction of the Outpatient Mental Health Building, Outpatient Building A, and a bridge connecting the two buildings, as well as associated infrastructure on the north side of the Medical Center Campus. Phase 2 of the Master Plan is expected to occur over three years between 2021 and 2023. Phase 3 would require the completion of demolition of existing LA BioMed buildings and relocation of the LA BioMed programs to the LA BioMed Campus. The remaining medical clinics in the new Outpatient Zone would be demolished and their programs relocated into the new Outpatient Clinical Building A constructed as part of Phase 2.

Phase 3 improvements include the construction of a new staff parking structure immediately north of the proposed new Central Plant location and a temporary helistop. Half of new LA BioMed research uses would be constructed in the proposed Bioscience Tech Park and LA BioMed Campus. Phase 3 of Master Plan buildout is expected to be completed in approximately two years between early 2021 and early 2023.

Under Phase 4, the New Hospital Tower and Diagnostic and Treatment Center would be constructed near the center of the Medical Center Campus. The main entry plaza would be re-configured along with the adjacent surface parking lot. The second half of the new Central Plant and Cooling Towers would be completed the New Hospital Tower would need to be occupied prior to the year 2030, and it is expected to be constructed over approximately four years between 2023 and 2027, overlapping with construction of some Phase C, Phase 3, and Phase 6 (Bioscience Tech Park) improvements.

During Phase 5, the South Wing of the existing Hospital would be demolished for the new Staff Parking Structure. The North Wing would be demolished after the existing Hospital is renovated, and Parlow Library and existing warehouse space within the Central Plant area would also be demolished. The final Staff Parking Structure would be constructed at the east end of the Medical Center Campus along with a staff surface parking lot, and configuration of internal roadways. The existing Hospital would be remodeled floor by floor, and the public parking lot on the north side of the Medical Center Campus would be reconfigured to accommodate a new retail anchor at the intersection of Carson Street and Vermont Avenue. The final Campus Support buildings would be completed in the southeastern portion of the Medical Center Campus, and new infrastructure would be constructed off Vermont Avenue. Phase 5 is expected to be constructed over approximately six years between late 2024 and early 2030.

During Phase 6, the existing Harbor-UCLA Professional Building and remaining existing medical office buildings, storage containers, Imaging Center, temporary modular medical office buildings place, surface parking lot, and temporary helistop would be demolished. Construction of Outpatient Building B, as well as associated roadway/access and landscape/hardscape improvements, would occur under this Phase. Phase 6 implementation is expected to occur over an approximately 2.5-year period between late 2021 and mid-2024.

In addition to the on-site improvements under the Master Plan Project, several off-site utility and/or other infrastructure improvements may also be necessary to serve future uses on the Medical Center Campus, including water, sewer, electrical, or other such facilities. Such off-site improvements would be implemented, as necessary, along affected portions of street rights-of-way, particularly along the Medical Center Campus street frontages, or other areas as determined by affected agencies and service providers. Such improvements would result in limited construction activities that would be temporary in nature and are not expected to affect a substantial number of people, disturb a large portion of land, or result in notable changes in visual resources in the Project area.

(b) Project Characteristics

The Master Plan Project includes the construction of a New Hospital Tower for 446 beds, the re-use of the Existing Hospital Tower, detached structures consisting of three Outpatient Clinical Buildings and retail space, as well as planned improvements on the LA BioMed Campus, and incremental development of biomedical research uses within the proposed Bioscience Tech Park portion of the Medical Center Campus. The proposed conceptual Site Plan provided in Figure 2-6 in Chapter 2.0 of this Draft EIR illustrates the

expected location of new and remaining buildings and facilities under the eventual build-out of the Master Plan Project. The proposed conceptual massing diagram presented in Figure 2-7 in Chapter 2.0 illustrates the approximate organization of the programing. As shown in Figure 2-7, the New Hospital Tower and Outpatient facilities would be rotated off the north/south grid to better align with the appropriate solar orientation and to maximize the amount of natural daylight that penetrates the buildings. The New Hospital Tower would be the tallest and most distinctive structure in the Master Plan Project and the visual focus of the site. Although larger in floor area, the new buildings would be scaled for the existing site, and would be consistent with height of the Existing Hospital Tower. Approximate building heights according to uses (but not relative locations) are represented in **Figure 4.A-2**, *Stacking Diagram*, below.

Design Principles set forth in Master Plan Project would apply to individual building projects within the Medical Center Campus and must be taken into consideration during development of architectural plans. These include the following:

- Potential to complement the character of surrounding spaces, streets, and walks;
- View corridors, both to and from buildings;
- Alignment of axis, cornice lines, and features of neighboring buildings and spaces;
- Overall heights, massing, styles, and materials of neighboring buildings;
- Overall scale, styles, and materials of existing buildings;
- Screening of unsightly views of service areas and mechanical equipment located both on grade and on building roofs;
- Campus circulation;
- Solar orientation and other environmental influences.

Under the design guidelines set forth in the Master Plan Project, the New Hospital would become the dominant architectural element in the center of the Medical Center Campus. It is expected to convey the openness, accessibility, and human scale inherent on a campus, as well as an underlying progressive medical theme.

One purpose of the Master Plan Project is to consolidate the scattering of programs across the site, while also softening the built environment through the addition of gardens and plazas for patients, staff and public. Within the Medical Center Campus, building mass would be articulated through ground floor arcades and covered pathways, which would offer a pedestrian scale to the site. A continuous pedestrian circulation network would provide connectivity throughout the Medical Center Campus and shared use by the general public and staff. Several north/south walks and promenades would connect the center of the Medical Center Campus with the public edge along Carson Street, while a comprehensive network of walks and trails would direct pedestrians east/west through the Medical Center Campus. The planned pedestrian circulation system would allow for direct access between parking areas and facilities, with a secondary system connecting courtyards and plazas. Shaded pathways would also allow pedestrian connection between buildings without interruption by automobile traffic.

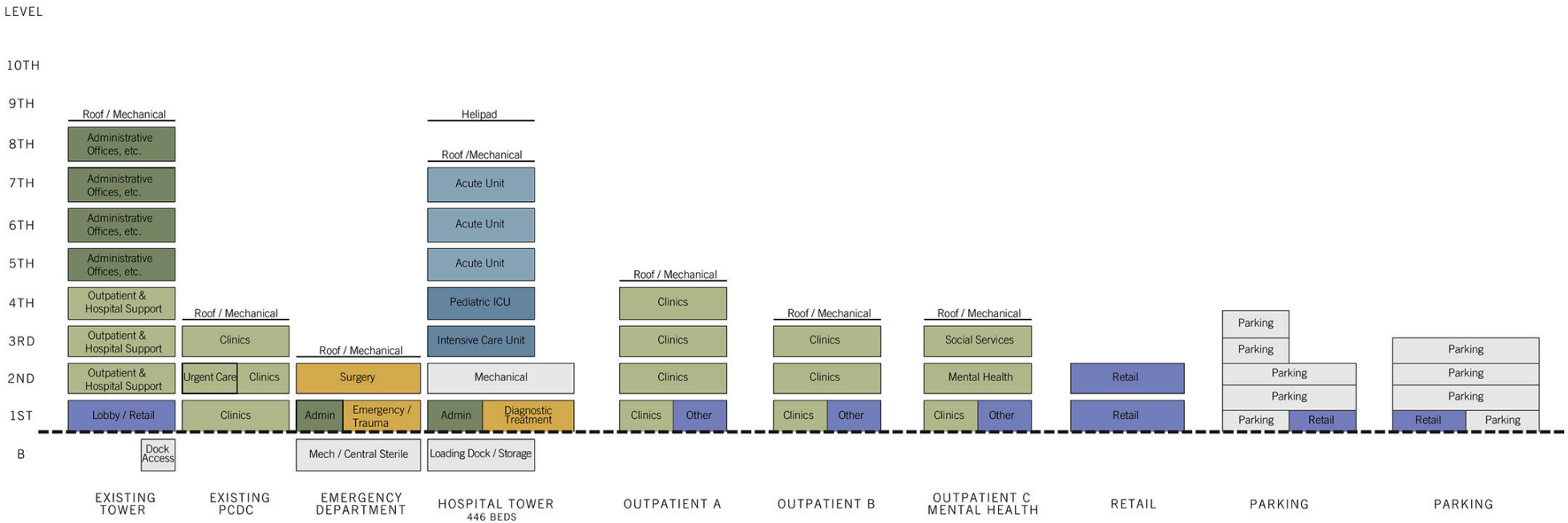
The Master Plan Project would create outdoor spaces that can accommodate both active social gatherings and passive gardens. These spaces would serve as a unique amenity that would maximize the opportunity

for meeting, while also providing more intimate areas for contemplation and relaxation. For instance, the garden benches, café tables, shaded tree bosques, and large open plazas in the Central Garden Spine would allow staff, patients, and visitors to relax and socialize in a garden setting. The conceptual planting zones comprising the park and trail, perimeter, demonstration garden, parking lot, entry, and rooftop planting zones are illustrated in **Figure 4.A-3**, *Planting Zones*, below. **Figure 4.A-4,** *Landscape Program*, illustrates specific locations of recommended landscaping features, such as the Carson Street Landscape Edge, Central Spine Gardens, and other features presented in the Figure 4.A-3. The Pedestrian Circulation and Landscape Master Plans for the Master Plan Project are presented in Figure 2-9, Pedestrian Circulation Plan, and Figure 2-10, Landscape Master Plan, in Chapter 2.0 of this Draft EIR. Utilizing a strong landscape framework and pedestrian circulation system, the Landscape Master Plan would provide a variety of open space courtyards, gardens, and plazas that would collectively define Master Plan Project. It is also anticipated that roof gardens, where implemented, would feature flowering canopy trees with perennial shrubs and planter pots with annual color that would be visible from surrounding streets.

The Landscape Master Plan, as shown in Figure 2-10, recommends consistent 35-foot to 45-foot high evergreen/semi-evergreen trees along the Medical Center Campus periphery. These would have an upright formal character that maintains views into the Medical Center Campus from surrounding streets. The next landscaping layer would consist of highlighting the two main entries off Carson Street by using a mix of palm trees and flowering deciduous trees. The palm trees would be the tallest trees on the Medical Center Campus and establish a clear visual gateway while the flowering canopy trees would provide a pedestrian scale. The final layer of landscaping would consist of courtyard gardens and plazas that provide a diverse spatial quality throughout the site. The use of medium sized trees along the perimeter, which would be highlighted by taller trees at the entry, would visually integrate the Medical Center Campus into the surrounding residential community while maintaining the Medical Center Campus's identity. Along Carson Street the perimeter tree would be centered in a hedged parkway with a second hedge at the back of walk. The low hedge in the parkway along Carson Street would buffer vehicle traffic to further improve the pedestrian experience. Along Normandie and Vermont Avenues, the perimeter tree would be planted in landscaped tree wells within the perimeter walk with the perimeter hedge occurring at the back of walk. Any perimeter hedges would be maintained below three and one-half feet in height to allow for sight lines into the Medical Center Campus. Along 220th Street, the narrow sidewalk (public right-of-way) would require the use of in-sidewalk tree grates. **Figure 4.A-5**, *Perimeter Streetscape*, illustrates the configuration of landscaping with respect to public sidewalks.

The single row of trees along Carson Street would be planted in a ten-foot-wide planter at the curb edge which buffer pedestrians from the busy traffic street. The existing chain link fence around the perimeter of the Medical Center Campus would be removed to help create a sense of openness and accessibility for nearby residents. The new ornamental fence planted with vines will be placed around the perimeter of the Project Site with breaks for pedestrian and vehicular access. The fencing along 220th Street would help ensure pedestrian safety adjacent to the existing open drainage channel. There will be prime aesthetic fencing along Carson Street, secondary fencing along Normandie and Vermont Avenues, and tertiary fencing along 220th Street.

The two Medical Center Campus entry drives would be easily recognizable and would visually connect to the main hospital and adjacent parking areas, helping to simplify wayfinding within the Medical Center Campus. The tallest trees on Medical Center Campus, Hybrid Fan Palms, would be spaced 30 feet on center and would create an iconic entry experience. To ensure spatial scale as the palm trees grow to over 60 feet high,



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Stacking Diagram

Harbor-UCLA Medical Center Master Plan

Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

FIGURE

4.A-2

LEGEND

- PARK AND TRAIL LANDSCAPE
- PERIMETER LANDSCAPE
- DEMONSTRATION GARDEN
- PARKING LOT LANDSCAPE
- ENTRY LANDSCAPE
- CENTRAL SPINE LANDSCAPE
- ROOF TOP GARDENS

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0 400 Feet

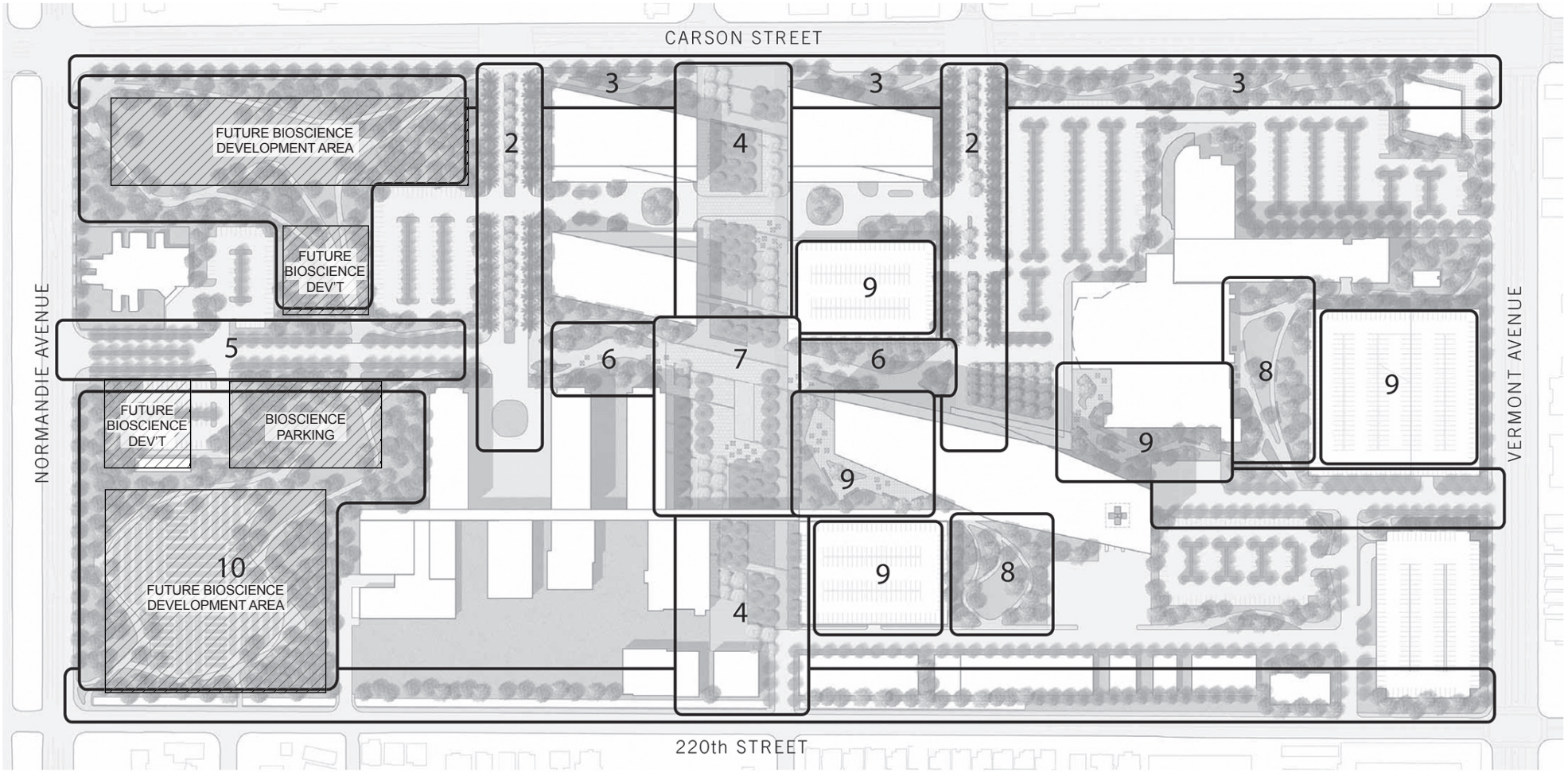
Planting Zone

Harbor-UCLA Medical Center Master Plan

Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

FIGURE

4.A-3



1. WEST PARK
2. MAIN CAMPUS ENTRY
3. CARSON STREET LANDSCAPE EDGE
4. CENTRAL SPINE GARDENS
5. LA BIOMED ENTRY
6. PARK PLAZA
7. CENTRAL PLAZA
8. COURTYARD GARDENS
9. ROOF TOP GARDENS
10. EDUCATIONAL GARDEN

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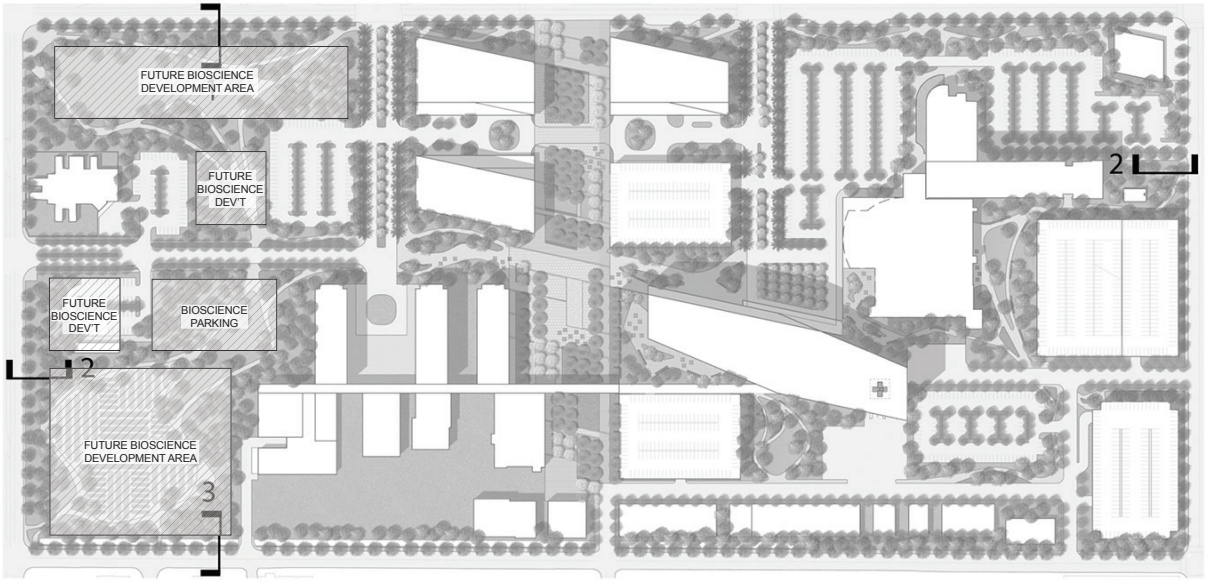
Landscape Program

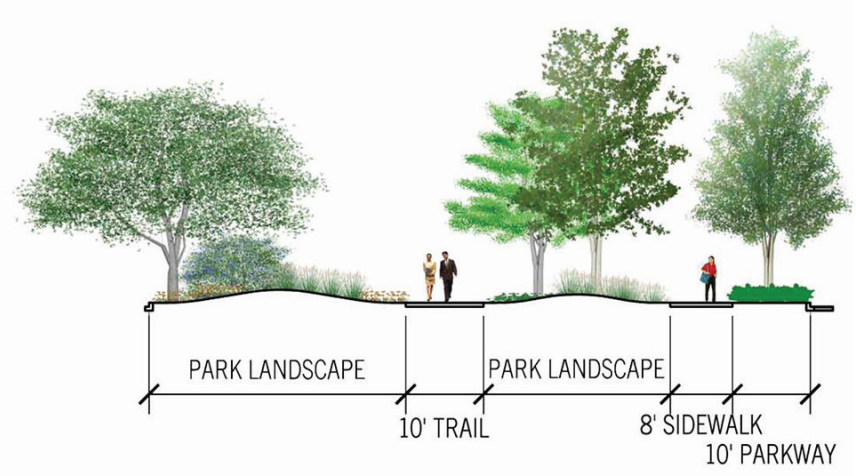
Harbor-UCLA Medical Center Master Plan

Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

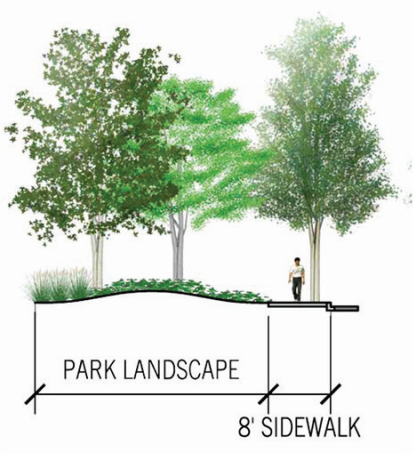
FIGURE

4.A-4

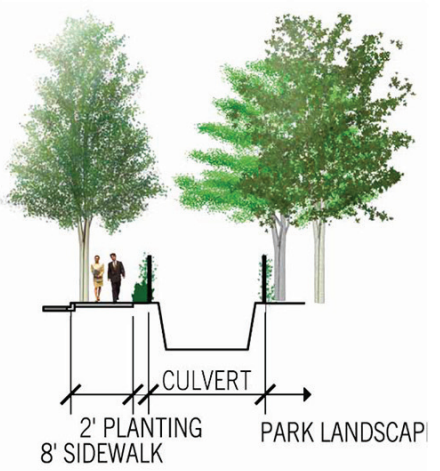




SECTION 1 -
CARSON STREET



SECTION 2 -
NORMANDIE &
VERMONT STREETS



SECTION 3 -
220th STREET

PCR

Perimeter Streetscape

Harbor-UCLA Medical Center Master Plan
Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

FIGURE
4.A-5

flowering canopy trees are planted in the median and 30 feet on center between each palm tree. As these trees mature, the canopies would grow over the entry drive and create a unique gateway experience.

The combination of trees would also create seasonal color and the formality of the entries would be broken up by informal placement of deciduous and evergreen trees throughout the Medical Center Campus.

Under the proposed Landscape Master Plan, parking lot landscaping would consist of two planting types: a bio-swale planting and a perimeter planting. Both of which consist of plants that are native or climate appropriate and adaptable to the unique conditions found in each of the planting area. The bio-swale planting areas would occur at the interior of each lot. All parking lot runoff should be directed to the planting areas which act as a detention basin for storm run-off. Due to seasonal conditions the trees, shrubs, and groundcover selected for these areas would be selected to accommodate periodic submersions and long periods of saturated soil. The perimeter planting would consist of a single hedge species that wraps the parking lot and screens parked cars from the adjacent areas. The trees in each parking lot should consist of a single tree species that is adaptable to the parking lot conditions (swale or no swale). Trees would be planted at a size and spacing that minimizes the heat island effect creating by the parking lots.

As recommended under the Landscape Master Plan, species will be predominately native or culturally native (adapted) that help further create a unique campus setting. These plants would require less water and routine maintenance than the existing landscape. The Medical Center Campus has several mature tree specimens that were cataloged during early site analysis studies for the Harbor-UCLA Medical Center Master Plan with recommendations to salvage and relocate for future use. Most of the trees selected are suitable for helping to establish the western open space area landscape, in those portions of this area not developed with Bioscience Tech Park uses, which calls for a rich variety of tree types. This area would be used as a staging ground until other areas on the Medical Center Campus become available for relocations. Other areas on the Medical Center Campus suitable for relocating existing trees are the courtyards and garden areas to the east and west of the central spine. Evergreen Ash is selected as a preferred street tree species; however, many of the existing Evergreen Ash Trees could be located along the periphery of the Central Spine to extend the garden character to the public edge. Other existing accent specimens such as the Jacaranda, Coral Tree, and Silk Tree are suitable for relocation to the courtyard gardens. **Figure 4.A-6**, *Salvaged and Relocated Trees*, illustrates the locations of existing trees and recommended relocation sites.

Most of the exterior improvements on the Medical Center Campus would use cast-in-place concrete paving, including perimeter sidewalks, entries, and major east/west sidewalks. Integral color, hand seeded aggregate and sand blast finishes that would create variety in the paving type and define different areas of the Medical Center Campus, such as the east/west/ plazas that feed off the Central Garden Spine are recommended. Precast concrete unit pavers area recommended as the predominant paving type with the Central Garden Spine. Decomposed granite paths are recommended along the west side of the Medical Center Campus and support a park-like setting. As these trails extend east along Carson Street, recommended paving material would be cast-in-place concrete.

With consolidation of larger buildings, the west side of the Medical Center Campus would become available for future hospital expansion and development. The Master Plan Project proposes interim uses that would provide aesthetic benefits. Under the interim plan, the west side of the Medical Center Campus would be divided by the west entry road into two parcels which collectively contain a 14 acre urban park. The

northwest parcel would feature a diverse network of paths and trails through undulating landforms planted with an eclectic mix of trees and shrubs. The large central lawn space could stage both Medical Center Campus-related and other community events creating a medium for better engagement with the local community. The southwest parcel would continue the open landscape space quality and a fitness trail around a smaller turf area and demonstration garden could showcase native plants or small agricultural plots.

The Master Plan Project also recommends a public art program in accordance with the County's art policy, which provides for civic art in capital improvement projects. For the purposes of the Master Plan Project, art would include, but would not be limited to, sculpture, murals, portable paintings, earth works and water works, neon, mosaics, photographs, prints, film, sound, video, and combinations or forms of media and new genres, plus Medical Center Campus fixtures such as grates, street lights, seating, and other design enhancements. Several sites have been identified as potential locations for permanent public artworks including major commissions of outdoor sculpture. The main pedestrian plaza area in the center of the Medical Center Campus can also be utilized for temporary installations and performances. **Figure 4.A-7**, *Public Art Plan*, below, illustrates the potential locations for installations of public art.

(2) Project Design Features

The Master Plan Project does not include any specific Project Design Features (PDFs) that would apply to aesthetics and visual resources.

d. Project Impacts

(1) Visual Character

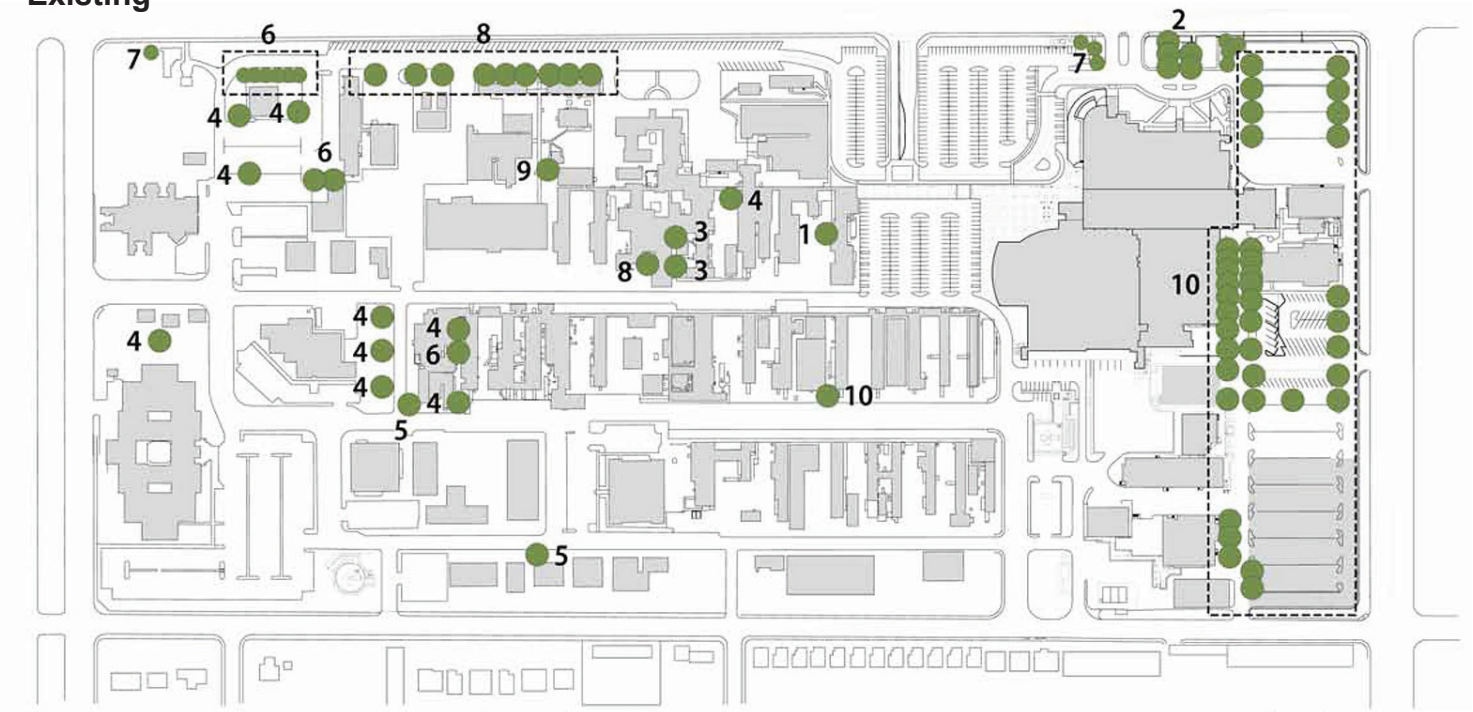
Threshold AES-1: Would the Project substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features?

Impact Statement AES-1: *The Master Plan Project would generate adverse visual character impacts resulting from construction and landscaping activities, as well as off-site infrastructure improvements. Construction would occur in specified phases that would be temporary in nature and not encompass the site at any one time, construction is not considered to substantially degrade the existing visual character of the site and surrounding area. During operation, the visual character of the Medical Center Campus would be enhanced by high quality architecture and landscaping, including landscaping improvements along the public sidewalks. The Project would also be consistent with aesthetic policies of the Los Angeles County General Plan. Because of improvements in the public realm and consistency with the General Plan, operation is not considered to substantially degrade the existing visual character of the site and surrounding area. Therefore, impacts related to visual character would be less than significant.*

(a) Construction

Construction activities, which would entail the demolition of the existing buildings, surface parking lots, and sidewalks, would give an unfinished or disturbed appearance to areas within the Medical Center Campus subject to these activities. Demolition would involve clearance of existing vegetation, hauling of debris, and grading of the development sites. Excavation would be required for some building foundations. During building construction, the use of cranes would be required for the construction of the Project's multi-story

Existing



Existing tree exhibit illustrating which trees on campus should be protected and preserved prior to new construction work

Proposed

PCR

N

0 400 Feet

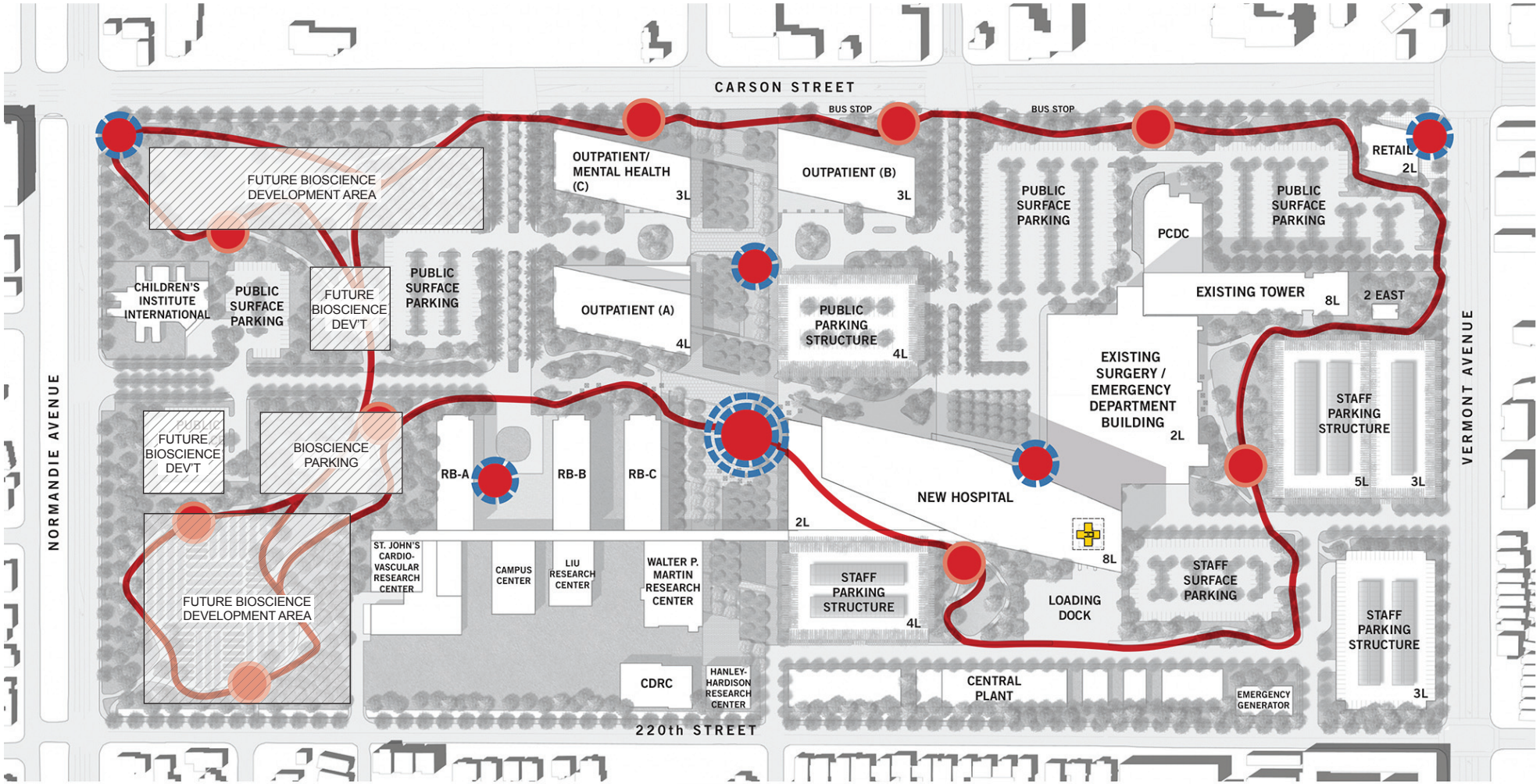
Salvaged and Relocated Trees

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE

4.A-6



LANDMARK ART INSTALLATION

IDENTITY ART INSTALLATION

DISCOVERY ART INSTALLATION

PCR

N

0 400 Feet

Public Art Plan

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE

4.A-7

components. The activity caused by excavators, dump trucks, and other hauling has the potential to impact the visual character of the area. Demolition and construction activities, however, would occur within defined areas of the Medical Center Campus and would be generally shielded by existing walls, buildings, peripheral landscaping, and other features.

Construction would also involve construction of new sidewalks, curbs, and any new utility line connections in the street rights-of-way, and planting of formal landscaping along Carson Street, Vermont Avenue, 220th Street, and Normandie Avenue. Utility poles within the Medical Center Campus would be removed and new lines would be located underground. Where construction projects would occur along the edges of the Medical Center Campus and result in the removal of landscaping and other amenities during specific construction phases, these areas would have an unfinished appearance. Because of proximity to the Medical Center Campus, residents along 220th Street would be the most visually affected by construction activity, particularly construction within the south sector of the Medical Center Campus. Construction projects in the south portion of the Medical Center Campus, including the construction of the Staff Parking Structure, the LA BioMed Campus buildings, and the New Central Plant would have the greatest visual effect on the adjacent residential neighborhood to the south. Installation of new sidewalks and peripheral landscaping, which would take place from approximately late 2021 and mid-2024 (during Phase 6), would be the most visible from adjacent streets and surrounding uses and would have the greatest effect on the overall surrounding streets and neighborhoods.

Construction activities would occur over the course of several years and within specific areas of the half-mile-long Medical Center Campus, as well as in limited off-site areas related to infrastructure and utility improvements necessary to serve the Master Plan Project. As such, visual character impacts experienced at any single viewing location, for both on-site and off-site construction activities, would be intermittent and temporary. Because adverse visual effects would be temporary and would be confined to portions of the Medical Center Campus or distinct off-site areas at any one time, such effects would not be experienced by nearby viewers continually during the buildout of the Master Plan Project, and further, because construction activities would not be dissimilar to building projects that have occurred within the Medical Center Campus in recent years (i.e., the Surgery and Emergency Room Replacement Project), visual impacts would not be considered to substantially alter, degrade, or eliminate the visual character of the area. Therefore, construction activities would have a less than significant effect with respect to visual character.

The effects of demolition on on-site historical buildings are discussed in Chapter 6.0, Other CEQA Considerations, of this Draft EIR. As discussed therein and in the Initial Study prepared for this Project (provided in Appendix A), Project impacts on historic resources would be less than significant. As such, this construction activity would not adversely affect the visual character of the Harbor-UCLA Campus.

(b) Project Operation

The development of the Master Plan Project would substantially alter the existing visual character of the Medical Center Campus. The Master Plan Project would result in denser and taller development than currently exists on the Medical Center Campus. The area as a whole, which is located within the Harbor Freeway/Carson Station TOD, is undergoing a transition to greater urbanization. This is characterized by the recent development of higher density multi-family residential uses immediately to the west of the Medical Center Campus and the construction of the Carson Street/Normandie Avenue Mall to the north of the Medical Center Campus. The Medical Center Campus, itself, has been developed, including the prior

construction of the eight-story Existing Hospital Tower, other medical uses, and surface parking lots, for several decades. The transition of the Medical Center Campus to greater densification would be consistent with growth trends and buildout in the surrounding area. In addition, the Master Plan Project would be contained within the existing Medical Center Campus, aside from temporary off-site improvements, as noted above, and would not directly adjoin any other existing neighborhood or community uses.

New buildings under the Master Plan Project would be required to implement the Harbor-UCLA Master Plan Design Guidelines, in which individual buildings must complement each other and the character of surrounding spaces, streets, and walks; maintain view corridors, both to and from buildings; and align axes, corner lines and features of neighboring buildings and spaces. Under the Design Guidelines, overall heights, massing, styles, and materials of neighboring buildings within the Medical Center Campus must be compatible. Views of service areas and mechanical equipment located both on grade and on building roofs must be screened. With the implementation of the Design Guidelines, the massing of buildings within the site would create a visually pleasant skyline effect (cluster) that would contribute to the visual character of the community.

The existing pedestrian experience along Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street would be improved by landscaping and streetscape, including the installation of canopy trees, provision of a landscaped parkway between the sidewalk and Carson Street, the removal of chain link fencing and walls along Vermont and Normandie Avenues and 220th Street, and other improvements in visual character and safety along 220th Street. These new streetscape components were illustrated in Figure 4.A-5, Perimeter Streetscape, above. Under the recommended streetscape program, perimeter trees would be centered in a hedged parkway with a second hedge at the back of walk. The low hedge in the parkway along Carson Street would buffer vehicle traffic to further improve pedestrian comfort. At present, no sidewalk trees are present along the four street frontages.

The Medical Center Campus currently features many high-quality tree specimens that contribute to the visual character of the area. Figure 4.A-6, above, illustrates on-site trees that would be relocated to allow for development. As shown in Figure 4.A-6, relocated trees would be primarily replanted in the western sector of the Medical Center Campus. Also, as shown in the Landscape Master Plan, Figure 2-10 in Chapter 2.0 of this Draft EIR, the western sector and southwest edge of the Medical Center Campus would be more lushly landscaped than under existing conditions, even when accounting for the potential development of Bioscience Tech Park uses within this area. The improvements in perimeter landscaping and locations of gardens in the western portion of the Medical Center Campus, where not displaced in distinct locations by future Bioscience Tech Park improvements, would improve the visual character of the Medical Center Campus as experienced by adjacent residential neighborhoods to the south and west.

Sidewalk and landscape improvements along Carson Street would also enhance the pedestrian experience between the transit station and multi-family residential uses to the west and, thus, promote greater pedestrian activity. Lower hedges along the Medical Center Campus periphery would provide visibility into the Medical Center Campus' gardens, specimen trees, and new, high-quality architecture. Gardens and other open space areas within the Medical Center Campus would provide for public access. The removal of surface parking facing Carson Street would also enhance the visual character of the Medical Center Campus. The Master Plan Project's public art program, much of which would near and visible from Carson Street frontage would also provide an aesthetic benefit to pedestrians and site visitors.

Overall, the Master Plan Project would create a more aesthetic public environment than under existing conditions. Because it would introduce elements that would enhance the public interface along all adjacent streets, as well as public access to gardens, public art, and other benefits, and maintain a high architectural standard, the Master Plan Project is not considered to substantially degrade the visual character of the Site or its surroundings because of height, bulk, pattern, scale, character, and other features. Impacts with respect to visual character would be less than significant.

(c) Policy Consistency

(i) County of Los Angeles General Plan

Table 4.A-1, *Comparison of the Project to Applicable Aesthetic Policies of the Los Angeles County General Plan,* compares the Project to applicable implementation policies contained in the Land Use Element of the General Plan. As shown in Table 4.A-1, the Master Plan Project would be substantially consistent with the goals of the General Plan related to aesthetic values. Because the Project would densify development within an existing developed site and area, it would be consistent with General Plan General Plan Policy LU 10.3 to consider the surrounding urban environment and its own existing and proposed built environment through the implementation of the Master Plan Design Guidelines, which require that individual buildings be compatible with each other in relation to massing, materials, design, building orientation, detailing, and other features. The Master Plan Project would be consistent with Policy LU 10.5 to encourage the use of distinctive landscaping, signage and other features to define the unique character of the area and would encourage pedestrian activity by orienting the main entrance to Carson Street, incorporating an extensive landscaping program, including street trees and low hedges along public sidewalks, and providing gardens and walkways for public access. The Project would be consistent with Policy LU 10.8 to promote public art by providing for public art installations throughout the Medical Center Campus along pathways, in gardens, and at building entrances and interiors to enhance the community context of the Medical Center Campus. The Project would also be consistent with Policy LU 10.10 to promote architecturally distinctive buildings and focal points in an area served by the Harbor Freeway/Carson Transit Station TOD (West Carson TOD Specific Plan). Because of improvements in the public realm and consistency with the General Plan, operation of the Master Plan Project is not considered to substantially degrade the existing visual character of the site and surrounding area.

Table 4.A-1

Consistency of the Project with Applicable Aesthetics Policies of the Los Angeles General Plan

Policy	Evaluation of Consistency
Goal LU 3: A development pattern that discourages sprawl and protects and conserves greenfield areas, natural resources, and SEAs.	**Consistent**: The Master Plan Project would densify development within an existing developed site. The concentration of uses within an area that is already urbanized would reduce pressure to extend urban uses to natural or other open areas.
Policy LU 9.3: Consider the built environment of the surrounding area in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color,	**Consistent**: The built environment surrounding the Medical Center Campus is currently urbanized and located within the Harbor Freeway/Carson Station TOD. Densification of the area is evident in recently constructed retail malls and multi-family housing in proximity to the

Table 4.A-1 (Continued)

Consistency of the Project with Applicable Aesthetics Policies of the Los Angeles General Plan

Policy	Evaluation of Consistency
detailing or ornament.	Medical Center Campus. Because the Medical Center Campus is already developed and contains a high-rise element (existing eight-story Hospital Tower), and is located within an existing urbanized area, it would be consistent with the character of the existing, surrounding built environment. The Medical Center Campus is an approximately one-half-mile-long block, abutting three major roadways (Carson Street, and Normandie and Vermont Avenues) and is self-contained with respect to building design and interface with on-site structures. Under the Master Plan Design Guidelines, individual buildings must be compatible with each other in relation to massing, materials, design, building orientation, detailing, and other features.
Policy LU 9.5: Encourage the use of distinctive landscaping, signage and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction.	**Consistent**: The Master Plan Project would implement an extensive landscaping and public art program that would provide for public access, which would encourage community interaction. The Project's architectural guidelines, which would result in high-quality building design, and recommended improvements, such as canopy trees along public sidewalks, distinguished plantings at the primary gateways, removal of street-facing surface parking lots, and other features would further define the unique character of the site.
Policy LU 9.6: Encourage pedestrian activity through the following: ▪ Designing the main entrance of buildings to front the street; ▪ Incorporating landscaping features; ▪ Limiting masonry walls and parking lots along commercial corridors and other public spaces; ▪ Incorporating street furniture, signage, and public events and activities; and ▪ Using wayfinding strategies to highlight community points of interest.	**Consistent**: ▪ The main visitor entrance to the Medical Center Campus would be located on Carson Street, a major highway serving the Harbor Freeway/Carson transit station (approximately 0.25-mile to the east). Carson Street, which would provide primary vehicle access to the Medical Center Campus would also serve as the primary pedestrian route. ▪ The Master Plan Project incorporates an extensive landscaping program, including street trees and low hedges along public sidewalks. Gardens and walkways within the Medical Center Campus would allow for public access. ▪ All existing masonry walls along public streets, including masonry walls along Normandie Avenue would be removed and replaced with street trees and low hedges. ▪ Garden areas within the Medical Center Campus would accommodate and, in part, are intended for public events and activities. ▪ The design of the main visitor entrance would be distinguished by distinctive trees, lighting, art, and other features to enhance wayfinding and to create

Table 4.A-1(Continued)

Consistency of the Project with Applicable Aesthetics Policies of the Los Angeles General Plan

Policy	Evaluation of Consistency
	a point of interest.
Policy LU 9.8: Promote public art and cultural amenities that support community values and enhance community context.	**Consistent**: The Master Plan Project would provide for public art installations throughout the Medical Center Campus along pathways, in gardens, and at building entrances and interiors to enhance the community context of the Medical Center Campus.
Policy LU 9.10: Promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces.	**Consistent**: The implementation of the Master Plan Design Guidelines would provide for high architectural quality and compatibility between the new buildings, in which the New Hospital Tower would be the Medical Center Campus' focal point. The compatibility between buildings would create a visually distinctive cluster that would be visible from Harbor Freeway/Carson transit station, approximately ¼ mile to the east.

Source: PCR Services Corporation, 2016.

(ii) County of Los Angeles Code

The LACC contains regulations regarding visual character, sign regulations, landscape design, and lighting. **Table 4.A-2**, *Comparison of the Project to Applicable Aesthetic Policies of the Los Angeles County Code*, compares the Project to applicable policies. As shown in Table 4.A-2, the Project would comply with applicable regulations related to signs, landscaping, and display lighting. Because the Project would be in compliance with applicable aesthetic requirements of the LACC, visual character impacts related to LACC requirements would be less than significant.

(2) Views

Threshold AES-2: Would the Project substantially obstruct or alter an existing, recognized valued public view or scenic vista?

Impact Statement AES-2: *The Master Plan Project would not substantially obstruct focal or panoramic views across the Medical Center Campus or substantially alter an existing recognized scenic vista or valued publicly available view as a result of view obstruction. The Project's tallest building would be visible from 220th Street. However, the deep setback of more than 200 feet from the nearest building corner to the street, the northwest orientation of the building, and new perimeter streetscape along 220th Street would reduce the visual effect to a less than significant level. Impacts related to views and view resources would be less than significant.*

Table 4.A-2

Comparison of the Project to Applicable Aesthetic Policies of the Los Angeles County Code

Policy	Analysis of Consistency
Title 26. - Sign Regulations:	
Section 6502.2. A building permit is required for every sign and sign structure regulated under the LACC. Where signs are illuminated by electricity, a separate electrical permit shall be obtained as required by the Electrical Code, Title 27 of the Los Angeles County Code.	**Consistent:** The Master Plan Project would increase wayfinding signs and other potential signage. Any sign program would be would be submitted for approval to the Department of Public Works for compliance with Section 6502.2. Permits would be obtained for signs and electrical permits for lighting in accordance with the Code.
Section 6502.7: No sign shall be erected that would interfere with, mislead or confuse traffic.	**Consistent:** All signs would be reviewed by the Department of Public Works to ensure that signs would not interfere with, mislead, or confuse traffic.
Section 6502.10. Signs and sign structures shall be maintained at all times in a state of good repair and be able to withstand wind pressure.	**Consistent:** The development must abide by County building and maintenance codes, including maintenance of facilities and signs. The enforcement of this code requirement by the County would ensure that signs would be maintained in a state of good repair.
Title 31. Green Code	
Section 4.106.5. A project shall not provide more than 25 percent turf within the total landscaped area; non-invasive drought-tolerant plant and tree species appropriate for the climate zone shall be utilized in at least 75 percent of the total landscaped area; and hydrozoning irrigation techniques shall be incorporated into the landscape design. Title 31 also requires energy efficiency, which applies to the design of interior and exterior lighting fixtures.	**Consistent:** The Master Plan Project would reduce turf compared to existing conditions. As illustrated in Figure 2-10, Landscape Master Plan, in Chapter 2.0 of this Draft EIR, turf would comprise a small portion of total landscaping. Under the Landscape Master Plan, three acres of existing turf areas would be converted to low water use plants. The Master Plan Project must also abide by Title 31 energy efficiency requirements enforced by the Los Angeles County Department of Public Works for all building designs and enforced by the County Department of Health Services for ongoing operation. County policy requires LEED Silver-level certification or the equivalent, larger projects, including green practices for landscaped areas. Respectively, hydrozoning irrigation techniques and stormwater treatment would be integrated into the proposed development.
Title 12. Environmental Protection	
Section 12.40.040. In an electrical power shortage emergency, no display lighting, including landscaping or the outside of a building shall be permitted.	**Consistent:** The Project would abide by County requirements to cease landscaping and building lighting during an electrical power shortage, as enforced by the County Department of Public Works and/or Department of Health Services, as appropriate. Non-essential lighting will be shut off, but the emergency entrance sign and essential building lighting will remain on.

Source: PCR Services Corporation, 2016.

View resources in the region include long-distance views of the Los Angeles Basin from the San Gabriel Mountains, and Santa Monica Mountains, and Palos Verdes Hills. Views of distant mountains and hills from some street corridors in the area would also be considered view resources. Other common view resources in the Los Angeles Basin, such as views of the Downtown Los Angeles skyline, or high-rise clusters in Westwood or Santa Monica are generally too far from the Project vicinity to constitute view resources. Because of the flat terrain in the local area, views of aesthetic resources, such as the Pacific Ocean, are not available. Also because of the area's relatively flat topography, other view locations, such as the nearest

public park to the Medical Center Campus, do not have views of, or across, the Medical Center Campus. The only public park within a one mile radius of the Medical Center Campus is the Normandale Recreation Center, located approximately 0.33 mile to the southwest. Therefore, no panoramic views of scenic resources are available across the existing Medical Center Campus from surrounding streets and parks.

The Medical Center Campus is, however, visible from the Carson Street overcrossing over the Harbor Freeway and adjacent streets, including Carson Street, Normandie and Vermont Avenues, and 220th Street. The Harbor Freeway is recessed in the Project area and provides no views of the Medical Center Campus.

Other than original and newer buildings and existing landscaping associated with the Medical Center Campus, the local area is not distinguished by historical or architecturally notable buildings or natural areas, focal views of which would be considered visual resources.

The new buildings of the Master Plan Project would be minimally visible in panoramic views of the Los Angeles Basin and, as such, would not cause any adverse view effects. However, development of the Project has the potential to affect existing views of the Medical Center Campus from adjacent public streets. The views of the Medical Center Campus from Carson Street would be improved by new, high quality construction, removal of hedging and fencing materials and surface parking lots facing Carson Street, and installation of evergreen/semi-evergreen trees along the Medical Center Campus periphery that allow views into the Project's gardens, paths, buildings and public art. Views from Carson Street would also be upgraded by the streetscape program, shown in Figure 4.A-10, Perimeter Streetscape, above. The recommended streetscape includes trees within a parkway between the sidewalk and the street and along the edge of the Medical Center Campus. Views of the main entrance areas would be upgraded by the recommended landscape program, which suggests tall palm trees to establish a clear visual gateway with the flowering canopy trees to provide a pedestrian scale.

Views of the Medical Center Campus from Normandie Avenue and 220th Street would be improved with the installation of perimeter landscaping, development of lusher gardens and landscaping in the west and south edges of the Medical Center Campus and removal of walls and chain link fencing. The perimeter trees would be spaced to allow views into the garden areas of the Medical Center Campus. The construction of the Master Plan Project's tallest component in the eastern sector of the Medical Center Campus would be more visible from 220th Street because of proximity. Although visible, the new building would not block views of any scenic vistas across the Medical Center Campus. Also, perimeter landscaping in the foreground (along the sidewalk and south edge of the Medical Center Campus), in combination with the building's deep setback of more than 200 feet from 220th Street at its closest point and the northwest orientation of the building would soften the character of the view. As such, the effect of the view of the Medical Center Campus from 220th Street would be less than significant.

Along the Vermont Avenue frontage several trees would be removed to allow for construction of a parking structure in the current location of Parking Lot A. Many of these trees would be relocated, as shown above in Figure 4.A-6, Salvaged and Relocated Trees. The existing A.F. Parlow Library and the Existing Hospital Tower, which impart an attractive aspect to the Vermont Avenue frontage, would remain. With the implementation of the Perimeter Streetscape Plan, which recommends double rows of trees on the inside of a sidewalk and a third row of trees in the parkway between the sidewalk and the roadway; the removal of

the existing wall and chain link fencing; and the removal of the existing surface parking lot would upgrade the existing views of the Medical Center Campus from this street.

Under existing conditions, no recognized valued publicly available views or scenic vistas are currently evident across the Medical Center Campus and, as such, the Master Plan Project would not block views of existing scenic resources. In addition, the Project would upgrade overall views of the Medical Center Campus, while providing for deeper views into the proposed garden areas. Therefore, the Project would not substantially obstruct or alter an existing, recognized valued public view or scenic vista, and impacts related to views would be less than significant.

(3) Light and Glare

Threshold AES-3: Would the Project create a new source of substantial light, or glare which would adversely affect day or nighttime views in the area?

Impact Statement AES-3: *New light sources associated primarily with any new entrance/wayfinding signs, light spill from taller buildings, landscape lighting, and security lighting. All light sources would be low-level and directed downward to maintain ambient and point source lighting consistent with the on-site hospital use. As such, the Master Plan Project would not substantially alter the character of off-site areas surrounding the Medical Center Campus or result in substantial light spill and/or glare onto adjacent light-sensitive residential uses. The Harbor-UCLA Master Plan Design Guidelines would require that buildings be compatible with the style, materials, and massing of other Project buildings, the function of which are to serve as a medical campus. It is not anticipated that expanses of reflective glass and metals would be implemented in building design. As such, the Project would not cause adverse glare impacts. Therefore, potential impacts associated with nighttime illumination and/or glare from reflected sunlight would be less than significant.*

(a) Construction

Lighting needed during Project construction would generate minor light spillover in the vicinity of the Medical Center Campus including residential uses to the south, east, and west. However, construction activities would occur primarily during daylight hours and any construction-related illumination would be used for safety and security purposes only. Construction lighting would take place in specific locations within the approximately 72-acre site and would not be experienced by any sensitive, off-site receptors for a long duration. Any construction lighting would limited and directed onto specific locations within construction sites to avoid impacting on-site medical patients. Similarly, with regard to off-site construction activities that may be necessary to address infrastructure improvements, such activities would be temporary, would only occur in one given location for a limited time, and would occur during daylight hours. Because artificial light associated with construction activities would be limited to security lighting and specific construction tasks, it would not be expected to cause any significant off-site spillage or glare, particularly in the context of the highly urbanized nature of the surrounding area and associated existing light sources. As such, construction lighting would not adversely impact off-site sensitive receptors. Such lighting would not substantially alter the character of off-site areas surrounding the Medical Center Campus. Therefore, artificial light impacts associated with construction would be less than significant. Construction activities are not anticipated to result in flat, shiny surfaces that would reflect sunlight or cause other natural glare. As such, construction glare impacts would be considered less than significant.

(b) Operation

(i) Artificial Light

Light-sensitive land uses in the area include residential uses to the west of Normandie Avenue, to the east of Vermont Avenue, and to the south of 220th Street. The Project has the potential to introduce new point source lighting, including architectural lighting, security and way-finding lights, landscape lighting, and visible interior light emanating from the windows of the Project's new multi-story buildings. Emergency service locations would be interior to the Medical Center Campus and shielded by intervening buildings and landscaping from adjacent residential neighborhoods. Any illuminated identification or wayfinding signs would be located on Carson Street near the main entry areas and would not be visible from the residential neighborhoods. These signs are not expected to be as bright as existing commercial signs that are located along Carson Street, at the northeast corner of Normandie Avenue and Carson Street; at the northeast, northwest, and southeast corners of Carson Street and Vermont Avenue (the Project is located at the southwest corner of Carson Street and Vermont Avenue); and along the east side of Vermont Avenue to the south of Carson Street.

Security lighting and landscape lighting would be located at ground level, low-level, and generally shielded from adjacent uses by landscaping. Lighting would be directed downward to avoid glare at on-site occupied hospital rooms and to maintain a calm ambience for on-site visitors and employees. Landscaping and rooftop garden lighting would be low-level consistent with the proposed hospital use. Any illumination associated with rooftop gardens, illustrated in Figure 4.A-3 above, would be located in the center of the Medical Center Campus and shielded from off-site residential areas by intervening buildings. Light spillage from the Project's multi-story components would not be dissimilar from existing conditions and would not be disruptive of off-site residential uses, the nearest of which would be more than 200 feet to the south of the New Hospital Tower.

The Project would contain no signage, flood lighting, or other strong point source lighting on the south side of the building interfacing residential uses to the south of 220th Street. The Project's lighting would not significantly intensify ambient or point source lighting that currently occurs during the evening hours along 220th Street

The removal of surface parking lots, including Parking Lot A, which is visible from residential uses to the east and the surface parking lot in the southwest corner of the Medical Center Campus, which is visible to uses at the south side of 220th Street, would reduce vehicle light sources and security lights currently visible from these residential areas. Direct headlight glare from vehicles leaving the new parking structures would not be visible from residential neighborhoods or adjacent residential uses. Therefore, the Project's new lighting sources are not expected to substantially increase ambient light or cause light spill onto adjacent light-sensitive receptors. The Master Plan Project would not substantially alter the character of the off-site areas surrounding the Medical Center Campus and artificial lighting impacts would be considered less than significant.

(ii) Glare

Daytime glare can result from sunlight reflecting from a shiny surface that would interfere with the performance of an off-site activity, such as the operation of a motor vehicle or cause glare at nearby uses. Sun reflection occurs when the sun is behind the viewer and reflected back. The proposed development

(new buildings) would be visible from Carson Street, 220th Street, and Vermont Avenue and, to a lesser degree, from Normandie Avenue (due to lower-scale development in this area which would generally be up to two stories in height, included future Bioscience Tech Park uses). During the morning and afternoon hours, the sun would be located behind drivers and pedestrians on Carson Street and 220th Street and from northbound drivers on Vermont Avenue and could reflect off the façades of the multi-story buildings. The buildings would not be visible from the northbound or southbound Harbor Freeway. Reflective surfaces can be associated with window glass and polished surfaces, such as metallic or glass curtain walls and trim. Glare can also occur between neighboring buildings when expanses of glass and metals are used for building sheathing. Under the Master Plan Design Guidelines, building materials, massing, and styles must be consistent with neighboring buildings, including the Existing Hospital Tower, and to complement the character of the surrounding Medical Center Campus buildings. Buildings using expanses of metals and reflective glass would not meet these criteria, nor would such materials be consistent with the overall use of the Project Site as a medical campus. As such, it is not anticipated that the Project would generate glare from reflected sunlight that would alter the character of the off-site areas surrounding the Medical Center Campus. Therefore, glare impacts would be considered less than significant.

e. Cumulative Impacts

Table 3-1, *Related Projects List*, in Chapter 3.0, General Description of Environmental Setting, of this Draft EIR identifies related projects that are planned or are under construction in the Project study area. The related projects reflect infill development within the larger, built out community. As such they contribute to a variety of local settings with varied aesthetic characteristics. The majority of the related projects are located in different viewsheds from the Master Plan Project when viewed at the pedestrian level within the area's flatter, urban areas of Hollywood. From distant locations at higher elevations, especially hillside areas, the related projects and proposed Project would be too minor in the view field to contribute cumulatively to effects on the form of the viewshed, including the Los Angeles Basin. The cumulative effects of related projects with the Project are discussed below for each of the aesthetic categories addressed above.

(1) Visual Character

The analysis of visual character addresses the impact of development on the appearance of new buildings and their relationship to changes in the nearby settings in which they are located. Because of the flat topography of the area, related projects that would be visible in the same view field or along a similar roadway, would in combination with the project have the greatest effect on cumulative visual character impacts. As shown in Figure 3-1 in Chapter 3.0 of this Draft EIR, no related projects are in the immediate vicinity of the Medical Center Campus. The nearest related project along the Carson Street frontage is Related Project No. 7, which consists of 152 apartment units and retail mixed use at 616 East Carson Street. This project is located approximately 0.7 mile to the east, east of the Harbor Freeway. As with many related projects listed in Table 3-1, Related Project No. 7 is a residential mixed use that would contribute to the urbanized landscape already exemplified by multi-family residential uses and retail centers along Carson Street and other major thoroughfares in the area. The largest of the related projects is Related Project No. 15, the Carson Marketplace, which comprises regional and neighborhood retail, 1,550 residential units, a 300-room hotel, restaurants, and commercial recreational uses. This related project is located approximately two miles to the northeast of the Project Site in the vicinity of Del Amo Boulevard. Although the scale of the Carson Marketplace in combination with the Project would be the largest component in changing the visual character of the region, because of the distance of the Carson Marketplace from the Project, it would not occur within the same view field or along the same street frontage and, thus, would not

cumulatively contribute to a strong change in the visual character as experienced by residents or visitors to the area. Because related projects in combination with the Project would not degrade the existing visual character or quality of the site and its surroundings, visual character impacts would not be cumulatively significant.

(2) Views

As discussed above and illustrated in Figure 3-1, related projects do not lie within the same view field as the Project and, therefore, would not cumulative contribute to any view blockages. Also, because of the built-out character of the region and the flat topography, public views of broad vistas are generally unavailable. Because related projects, in combination with the Project, would not obstruct or alter an existing, recognized valued public view or scenic vista, view impacts would not be cumulatively significant.

(3) Light and Glare

The West Carson area is urbanized and within the proximity of the Harbor Freeway. The retail development, including gas stations, restaurant, and malls along major streets, such as Carson Street, generates a relatively high level of ambient light. Related projects listed in Table 3-1, are typical of the residential and commercial development that currently occurs in the area and, as such, would not cause light and glare that would be excessive or inappropriate for the setting. The combination of related projects and the Project has the potential to increase ambient lighting. However, because the area is already highly urbanized, it would not be a discernable increase. Because the Project in combination with related projects would not create a new source of light or glare that would substantially alter the character of the area, or result in substantial light spill/or glare, impacts with respect to light and glare would not be cumulatively significant.

4. MITIGATION MEASURES

With the implementation of the Master Plan Project's architectural and landscape designs recommendations, impacts related to aesthetics, including visual character, views, and light and glare, would be less than significant and no mitigation measures are required. In addition, no significant impacts with respect to cumulative impacts are anticipated that would require mitigation.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project-specific and cumulative impacts regarding visual character, views, and light and glare would be less than significant. Therefore, no mitigation measures would be implemented or required.

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4.0 ENVIRONMENTAL IMPACT ANALYSIS
B. AIR QUALITY

1. INTRODUCTION

This section addresses potential effects on air quality associated with air emissions generated by the construction and operation of the proposed uses pursuant to the Harbor-UCLA Medical Campus Master Plan. The analysis also addresses the consistency of the Project with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan and the County of Los Angeles General Plan. The analysis of Project-generated air emissions focuses on whether the Project would cause exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in Appendix B of this Draft EIR.

2. ENVIRONMENTAL SETTING

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified as criteria air pollutants and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following criteria pollutants are regulated by the U.S. Environmental Protection Agency (USEPA) and are subject to emissions control requirements adopted by federal, state and local regulatory agencies.

Ozone (O_3): Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds and nitrogen oxides (NO_X) under favorable meteorological conditions such as high temperature and stagnation episodes. An elevated level of ozone irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower the lung efficiency.

Volatile Organic Compounds (VOCs): These are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons, as are architectural coatings. Emissions of VOCs themselves are not "criteria" pollutants; however, they contribute to formation of O_3 and are regulated as O_3 precursor emissions.

Nitrogen Dioxide (NO_2): Nitrogen dioxide is a reddish-brown, reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). The principle form of NO_2 produced by combustion is NO, but NO reacts quickly to form NO_2, creating the mixture of NO and NO_2 referred to as nitrogen oxides (NO_X). Major sources of NO_X include power plants, large industrial facilities, and motor vehicles. Emissions of NO_X can potentially irritate the nose and throat and may increase susceptibility to respiratory infections, especially in people with asthma. According to the California Air Resources Control Board (CARB), "NO_2 is an oxidizing gas capable of damaging cells lining the respiratory tract. Exposure to NO_2 along with other traffic-related pollutants, is associated with respiratory symptoms, episodes of respiratory illness and impaired lung

functioning. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children."[1]

Carbon Monoxide (CO): Carbon monoxide is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Sulfur Dioxide (SO_2): Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Particulate Matter (PM_{10} and $PM_{2.5}$): The human body naturally prevents the entry of larger particles into the body. However, small particles including fugitive dust, with an aerodynamic diameter equal to or less than ten microns (PM_{10}) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Lead (Pb): Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

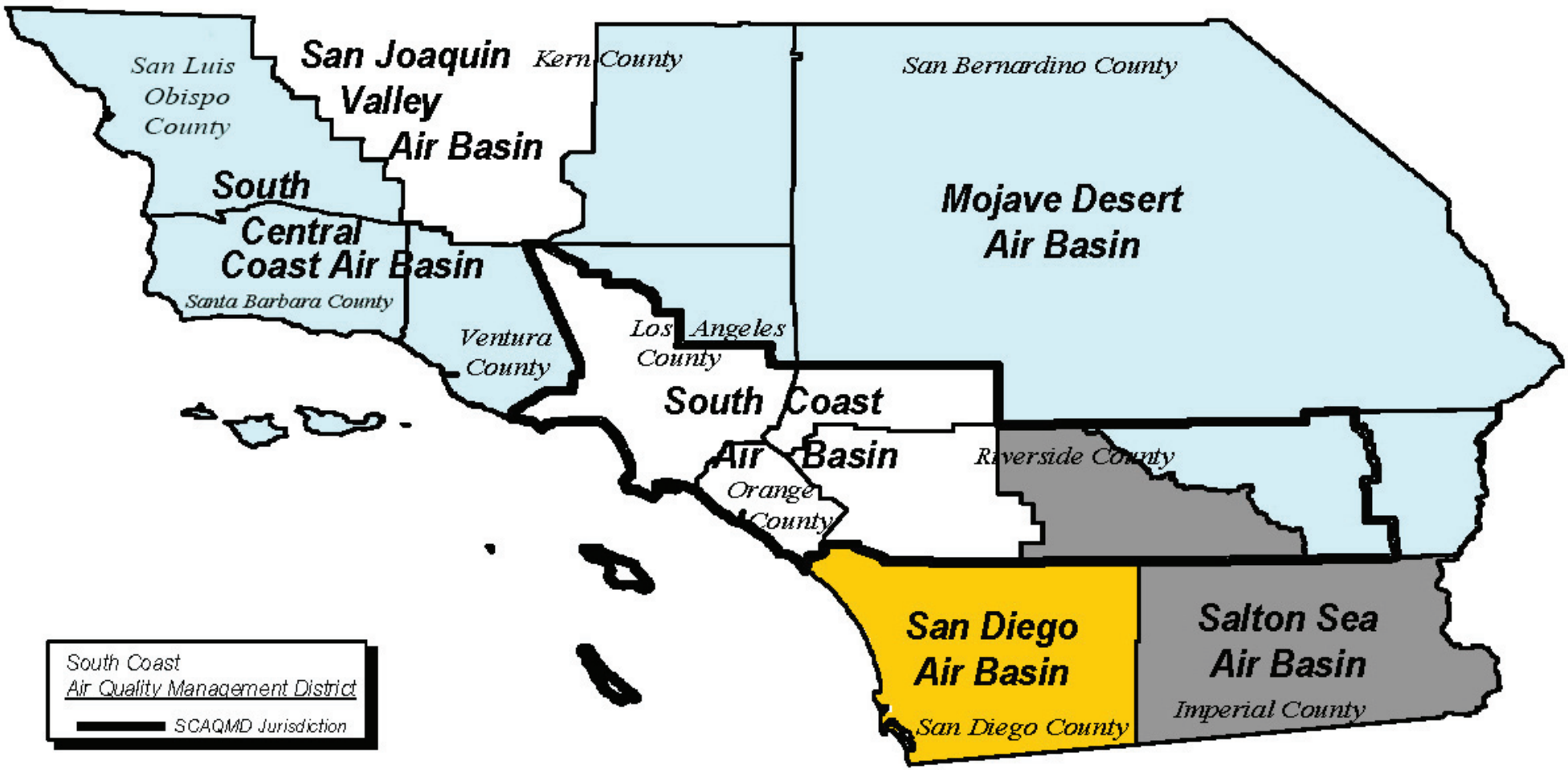
a. Existing Conditions

(1) Regional Conditions

(a) Criteria Pollutants

The Project Site is located within the South Coast Air Basin (Air Basin), which is shown in **Figure 4.B-1**, *Boundaries of the South Coast Air Quality Management District and Federal Planning Areas*. The Air Basin is

[1] *California Air Resources Board, "Nitrogen Dioxide – Overview," July 21, 2011, http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm. Accessed March 2015.*



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Boundaries of the South Coast Air Quality Management District and Federal Planning Areas

Harbor-UCLA Medical Center Master Plan

Source: South Coast Air Quality Management District, 2014.

FIGURE

4.B-1

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an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Air Basin consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Air Basin, as it is a coastal plain with connecting broad valleys and low hills.

The Air Basin lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. The usually mild climatological pattern is interrupted by periods of hot weather, winter storms, or Santa Ana winds. The extent and severity of criteria pollutant concentrations in the Air Basin is a function of the area's natural physical characteristics (weather and topography) and man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential. The Air Basin's meteorological conditions, in combination with regional topography, are particularly conducive to the formation and retention of O_3, which is a secondary pollutant that forms through photochemical reactions in the atmosphere. Thus, the greatest air pollution impacts throughout the Air Basin typically occur from June through September. This condition is generally attributed to the emissions occurring in the Air Basin, light winds, and shallow vertical atmospheric mixing. These factors reduce the potential for pollutant dispersion causing elevated air pollutant levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. Concentrations of O_3, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert.

(b) Air Toxics

In addition to criteria pollutants, the SCAQMD periodically assesses levels of toxic air contaminants (TACs) in the Air Basin. A TAC is defined by California Health and Safety Code Section 39655:

> *"Toxic air contaminant" means an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant.*

During July 2012 and June 2013, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES IV), which is a follow-up to previous air toxics studies conducted in the Air Basin. The MATES IV Final Report was issued in October 2014. The study, based on actual monitored data throughout the Air Basin, consisted of several elements a monitoring program, an updated emissions inventory of TACs, and a modeling effort to characterize carcinogenic risk across the Air Basin from exposure to TACs. The study applied a two-kilometer (1.24-mile) grid over the Air Basin and reported carcinogenic risk within each grid space (covering an area of four square kilometers or 1.54 square miles). The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the Air Basin equates to a background cancer risk of approximately 418 in 1,000,000 primarily due to diesel exhaust, which is about 65 percent lower than the previous MATES III cancer risk.[2] The California Environmental Protection Agency

[2] *South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2014) ES-2.*

Office of Environmental Health Hazard Assessment (OEHHA) is in the process of updating the methods for estimating cancer risks.[3] The proposed new method utilized higher estimates of cancer potency during early life exposures and uses different assumptions for breathing rates and length of residential exposures. When combined together, SCAQMD staff estimates that risks for the same inhalation exposure level will be about 2.7 times higher using the proposed updated methods.[4] This would be reflected in the average lifetime air toxics cancer risk estimated from the monitoring sites data going from 418 per million to 1,128 per million. The updated OEHHA methodology has not yet been formally adopted for use in risk assessments; therefore, discussion of risk utilizes the approved methodology from the 2003 OEHHA guidance.[5] However, even under the updated methodology, the relative reduction in risk from the MATES IV results compared to MATES III would be the same (about 65 percent).

Approximately 68 percent of the risk is attributed to diesel particulate emissions, approximately 22 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 10 percent of all airborne carcinogenic risk is attributed to stationary sources (which include industries and other certain businesses, such as dry cleaners and chrome plating operations).[6] The study also found lower ambient concentrations of most of the measured air toxics compared to the levels measured in the previous study conducted during 2004 and 2006. Specifically, benzene and 1,3-butadiene, pollutants generated mainly from vehicles, were down 35 percent and 11 percent, respectively.[7] The reductions were attributed to air quality control regulations and improved emission control technologies. In addition to air toxics, MATES IV included continuous measurements of black carbon and ultrafine particles (particles smaller than 0.1 microns in size), which are emitted by combustion of diesel fuels. Sampling sites located near heavily-trafficked freeways or near industrial areas were characterized by increased levels of black carbon and ultrafine particles compared to more rural sites.

As part of MATES IV, the SCAQMD prepared maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps represent the estimated number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years). The Project site spans across portions of two MATES IV grid spaces. The grids, in which the Project site is located, are shown in **Figure 4.B-2**, *Background Inhalation Cancer Risk for Project Site Area*. As shown, the potential cancers per million people for the two grids are estimated at 1,033 to 1,210 per million (the majority of the Project site is in the grid with a risk of

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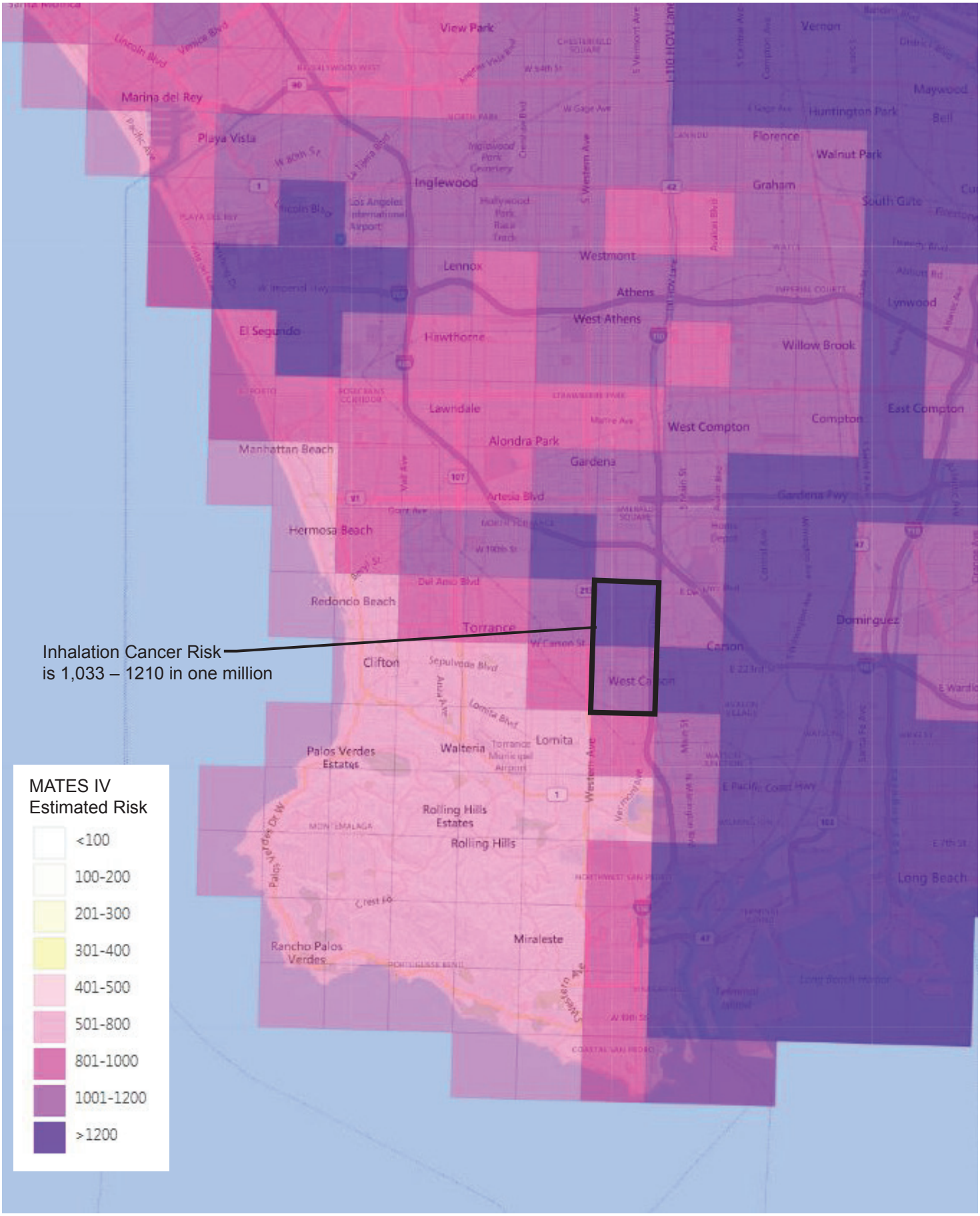
[3] *California Environmental Protection Agency, Office of Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines – The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, June Review Draft, (June 2014).*

[4] *South Coast Air Quality Management District, Agenda No. 8b, Potential Impacts of New OEHHA Risk Guidelines on SCAQMD Programs, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2014/may-specsess-8b.pdf?sfvrsn=4. Accessed March 2015.*

[5] *California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (2003).*

[6] *South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2014) ES-2.*

[7] *South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2014) 6-1.*



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Background Inhalation Cancer Risk for Project Site Area

Harbor-UCLA Medical Center Master Plan

Source: South Coast Air Quality Management District, 2016.

FIGURE

4.B-2

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1,033 per million).[8] This is in the general range of the Basin average of 1,128 in a million. Generally, the risk from air toxics is lower near the coastline: it increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

(2) Local Conditions

(a) Existing Pollutants Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The monitoring station most representative of the Project site is the Southwest Los Angeles County Coastal Monitoring Station. Criteria pollutants monitored at this station include O_3, NO_2, CO, and PM_{10}. The next most representative station is the South Los Angeles County Coastal Monitoring Station. Criteria pollutants monitored at this station include SO_2 and $PM_{2.5}$. The most recent data available from the SCAQMD for these monitoring stations are from years 2010 to 2014.[9] The pollutant concentration data for these years are summarized in **Table 4.B-1**, *Ambient Air Quality Data*.

Table 4.B-1

Ambient Air Quality Data

Pollutant/Standard	2010	2011	2012	2013	2014
O_3 (1-hour)					
Maximum Concentration (ppm)	0.089	0.078	0.106	0.105	0.114
Days > CAAQS (0.09 ppm)	0	0	1	1	1
O_3 (8-hour)					
Maximum Concentration (ppm)	0.070	0.067	0.075	0.081	0.080
4th High 8-hour Concentration (ppm)	0.059	0.062	0.059	0.060	0.075
Days > CAAQS (0.070 ppm)	1	0	1	1	6
Days > NAAQS (0.075 ppm)	0	0	0	0	3
NO_2 (1-hour)					
Maximum Concentration (ppm)	0.076	0.098	0.062	0.078	0.087
98th Percentile Concentration (ppm)	0.061	0.065	0.055	0.058	0.066
Days > CAAQS (0.18 ppm)	0	0	0	0	0
NO_2 (Annual)					
Annual Arithmetic Mean (0.030 ppm)	0.012	0.013	0.010	0.012	0.012

[8] *South Coast Air Quality Management District, Multiple Air Toxics Exposure Study, MATES IV Carcinogenic Risk Interactive Map, http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iv. Accessed March 2015.*

[9] *South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. Accessed February 2016.*

Table 4.B-1 (Continued)

Ambient Air Quality Data

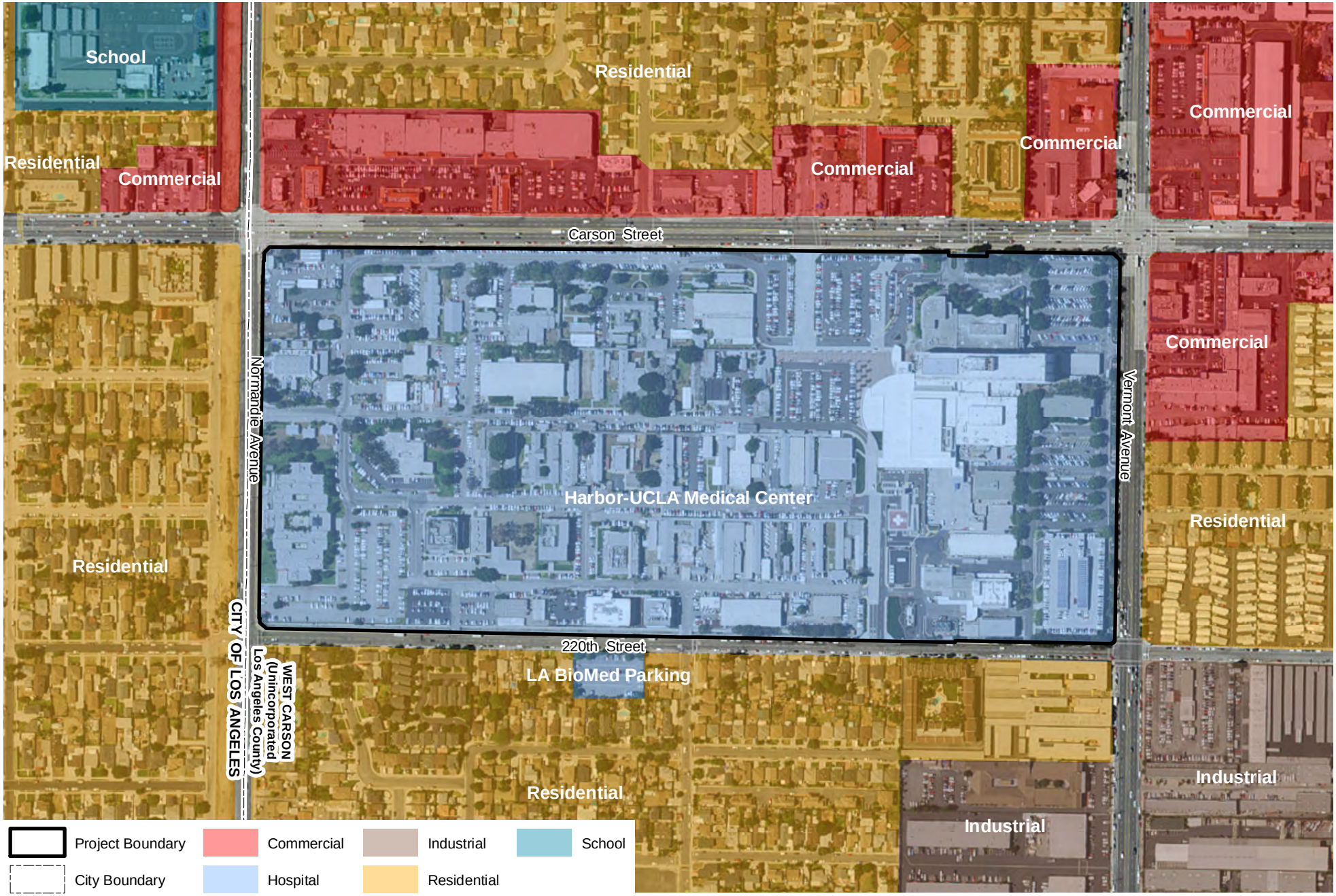
Pollutant/Standard	2010	2011	2012	2013	2014
CO (1-hour)					
Maximum Concentration (ppm)	3	2.3	2.8	3.1	3
Days > CAAQS (20 ppm)	0	0	0	0	0
Days > NAAQS (35 ppm)	0	0	0	0	0
CO (8-hour)					
Maximum Concentration (ppm)	2.2	1.8	2.5	2.5	1.9
Days > CAAQS (9 ppm)	0	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0	0
SO_2 (1-hour)					
Maximum Concentration (ppm)	0.026	0.012	0.005	0.010	0.015
99th Percentile Concentration (ppm)	–	0.008	0.005	0.007	0.009
Days > CAAQS (0.25 ppm)	0	0	0	0	0
Days > NAAQS (0.075 ppm)	–	0	0	0	0
PM_{10} (24-hour)					
Maximum Concentration (µg/m³)	37	41	31	38	46
Samples > CAAQS (50 µg/m³)	0	0	0	0	0
Samples > NAAQS (150 µg/m³)	0	0	0	0	0
PM_{10} (Annual Average)					
Annual Arithmetic Mean (20 µg/m³)	20.6	21.7	19.8	20.8	22
$PM_{2.5}$ (24-hour)					
Maximum Concentration (µg/m³)	33.7	42	46.7	42.9	52.2
98th Percentile Concentration (µg/m³)	26.5	26.6	25.1	24.6	27.2
Samples > NAAQS (35 µg/m³)	0	3	4	1	2
$PM_{2.5}$ (Annual)					
Annual Arithmetic Mean (12 µg/m³)	10.4	10.7	10.57	10.97	10.72
Lead					
Maximum 30-day average (µg/m³)	0.01	0.008	0.005	0.005	0.012
Samples > CAAQS (1.5 µg/m³)	0	0	0	0	0

Notes: ppm = parts per million; µg/m3 = micrograms per cubic meter

Sources: South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. Accessed February 2016.

(b) Sensitive Receptors and Locations

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. Sensitive land uses in close proximity to the Project site are shown in **Figure 4.B-3**, *Sensitive Receptor Locations Nearest to the Project Site*, and include the following:



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Sensitive Receptor Locations Nearest to the Project Site

Harbor-UCLA Medical Center Master Plan
Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2016.

FIGURE
4.B-3

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- The Harbor-UCLA Medical Center Employee Children's Center (Child Care Center) and a multifamily residential apartment complex, Harbor Cove Villa, are located on Carson Street just west of the intersection with Vermont Avenue.

- The area north of Carson Street is a predominantly single-family residential neighborhood.

- Vermont Avenue, the southern half of the block facing the Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and mobile home parks, Starlite Trailer Park and Rainbow Mobile Home Park.

- Single-Family and multi-family residential neighborhoods border the Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles.

- Halldale Avenue Elementary School is located to the northwest of the Medical Center Campus west of Normandie Avenue and north of 216th Street.

- White Middle School is located to the southeast of the Medical Center Campus east of Interstate 110 and Figueroa Street and south of 220th Street.

(c) Existing Site Emissions

The Project site is currently developed with approximately 1,279,284 square feet of differentiated buildings including the Existing Hospital Tower and the recent hospital expansion in the east sector of the site; LA Biomed facilities in the central portion of the site; administration and facilities management buildings in various locations of the site; and large tenants, such as the Children's Institute International and MFI's Harbor-UCLA Professional Building (outpatient care) and Imaging Center, in the west sector of the site. The existing site generates mobile source emissions from vehicle trips to and from the site and from the operation of medical helicopters. The existing site generates on-site stationary source emissions from the combustion of natural gas from the existing Central Plant for building cooling and heating. The Central Plant consists of a Boiler Plant and Chiller Plant. The site also maintains six two-megawatt (MW) emergency generators that would result in stationary source emissions from the combustion of fuel oil when required to operate. Other existing emissions include on-site combustion and evaporative area source emissions from fossil-fueled landscaping equipment and evaporative losses associated with cleaning and maintenance activities (consumer product usage, solvents, adhesives, coatings, etc.). The Project would not result in changes in emissions associated with the operation of the Central Plant or emergency generators. In addition, the operation of medical helicopters under existing conditions is expected to be similar under the Project on a daily basis. In order to compare the change in emissions from the existing site to Project implementation, this analysis estimates emissions from existing uses that would be demolished, replaced, or renovated under the Project. Mobile source emissions from visitors and employees traveling to and from the site are also included in the emissions estimate.

The existing operational emissions were estimated using the California Emissions Estimator Model (CalEEMod) (Version 2013.2.2) software, an emissions inventory model recommended by the SCAQMD for land use development projects. CalEEMod was used to forecast the daily regional emissions from mobile and area sources. In calculating mobile source emissions, an operational year of 2015 was used and the trip length values were based on the distances provided in CalEEMod. The trip distances were applied to the maximum daily trip estimates, based on standard Institute of Transportation Engineers (ITE) trip generation

rates, for each existing land use provided by the Project traffic study[10] to estimate the total vehicle miles traveled (VMT). Area source emissions from landscaping equipment and evaporative losses associated with cleaning and maintenance activities are based on usage rates and emission factors specific to the Air Basin as provided in CalEEMod. Helicopter emissions from take-offs and landings are generated by the existing Emergency Department helistop. The helistop would remain operational after the Project build-out and be temporarily relocated during construction of Phases 3 through 6. Patient air transport is not predicted to increase due to the similar capacity of the Project compared to existing. The maximum daily air lifts would continue to be one helicopter take-off and landing, thus helicopter emissions were not evaluated due to there being no net change in helistop usage.

The estimated existing site emissions from uses and elements that would be demolished, replaced, or renovated under the Project are summarized in **Table 4.B-2**, *Existing Site Emissions*. Detailed emissions calculations are provided in Appendix B of this Draft EIR.

Table 4.B-2

Existing Site Emissions (pounds per day) [a]

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Coating, Consumer Products, Landscaping)	23	<1	0.1	<1	<1	<1
Energy (Natural Gas)	1	8	6	<1	1	1
Motor Vehicles	77	211	834	2	127	36
Total Existing Emissions	**102**	**219**	**841**	**2**	**128**	**37**

[a] *Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B.*

Source: PCR Services Corporation, 2016

b. Regulatory Framework

A number of statutes, regulations, plans, and policies have been adopted that address air quality issues. The Project is subject to air quality regulations developed and implemented at the federal, state, and local levels. This section provides a summary of pertinent air quality regulations affecting the Project at the federal, state, and local levels.

(1) Federal

The federal Clean Air Act of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. At the federal level, the USEPA is responsible for implementation of certain portions of the Clean Air Act including mobile source requirements. Other portions of the Clean Air Act, such as stationary source requirements, are implemented by state and local agencies.

[10] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, (2016).*

The Clean Air Act establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The Clean Air Act also mandates that the state submit and implement a State Implementation Plan for areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The 1990 amendments to the Clean Air Act identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the Clean Air Act which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions). Title I requirements are implemented for the purpose of attaining NAAQS for the following criteria pollutants: (1) O_3; (2) NO_2; (3) CO; (4) SO_2; (5) PM_{10}; and (6) lead. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. The NAAQS were last amended in September 2006 to include an established methodology for calculating $PM_{2.5}$ as well as revoking the annual PM_{10} threshold. **Table 4.B-3**, *Ambient Air Quality Standards*, shows the NAAQS currently in effect for each criteria pollutant.

Table 4.B-3

Ambient Air Quality Standards

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
O_3 [h]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
NO_2 [i]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m³)	None	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m³)		9 ppm (10 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
SO_2 [j]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)[9]
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[j]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) [j]	—	
PM_{10} [k]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		

Table 4.B-3 (Continued)

Ambient Air Quality Standards

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
$PM_{2.5}$ [k]	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³ [k]	15 µg/m³	
Lead [l,m]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[m]	Same as Primary Standard	
	Rolling 3-Month Average [m]	--		0.15 µg/m³		
Visibility Reducing Particles [n]	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates (SO_4)	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride [l]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

[a] *California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.*

[b] *National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m³) is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.*

[c] *Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.*

[d] *Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.*

[e] *National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.*

[f] *National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.*

[g] *Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.*

[h] *On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.*

Table 4.B-3 (Continued)

Ambient Air Quality Standards

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]

[i] *To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.*

[j] *On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.*

[k] *On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3.*

[l] *The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.*

[m] *The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.*

[n] *In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.*

Source: California Air Resources Board, Ambient Air Quality Standards (10/1/15), http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed January 2016.

The Project is located within the South Coast Air Basin, which is an area designated as non-attainment because it does not currently meet NAAQS for certain pollutants regulated under the Clean Air Act according to the February 2016 designations[11]. The Clean Air Act sets certain deadlines for meeting the NAAQS within the Air Basin including the following: (1) 1-hour O_3 by the year 2010 (however, this deadline was not attained, the new deadline is 2023); (2) 8-hour O_3 by the year 2024;[12] (3) PM_{10} by the year 2006[13]; and (4) $PM_{2.5}$ by the year 2019[14]. Nonattainment designations are categorized into seven levels of severity: (1) basic, (2) marginal, (3) moderate, (4) serious, (5) severe-15, (6) severe-17, and (7) extreme.[15] On June 11, 2007, the USEPA reclassified the Air Basin as a federal "attainment" area for CO and approved the CO maintenance

[11] *South Coast Air Quality Management District, National Ambient Air Quality Standards and California Ambient Air Quality Standards Attainment Status for South Coast Air Basin, February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2. Accessed February 2016.*

[12] *The 8-hour ozone attainment deadline for the 1997 standard of 80 parts per billion is 2024. The 8-hour ozone attainment deadline for the 2008 standard of 75 parts per billion is 2032 and the 8-hour ozone attainment deadline for the 2015 standard of 70 parts per billion is 2037.*

[13] *Annual PM_{10} standard was revoked, effective December 18, 2006; 24-hour PM_{10} NAAQS deadline was December 31, 2006; SCAQMD request for attainment redesignation and PM_{10} maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.*

[14] *Attainment deadline for the 2006 24-hour $PM_{2.5}$ NAAQS (designation effective December 14, 2009) is December 31, 2019 (end of the 10th calendar year after effective date of designations for Serious nonattainment areas). Annual $PM_{2.5}$ standard was revised on January 15, 2013, effective March 18, 2013, from 15 to 12 µg/m^3. Designations effective April 15, 2015, so Serious area attainment deadline is December 31, 2025.*

[15] *The "-15" and "-17" designations reflect the number of years within which attainment must be achieved.*

plan for the Air Basin.[16] The Air Basin previously exceeded the NAAQS for PM_{10}, but has met the NAAQS at all monitoring stations and the USEPA approved the request for re-designation to attainment effective July 26, 2013.[17] The Air Basin does not meet the NAAQS for O_3 and $PM_{2.5}$ and is classified as being in non-attainment for these pollutants. The Los Angeles County portion of the Air Basin is designated as non-attainment for lead under the NAAQS; however, this is due to localized emissions from one source-specific lead monitoring station in Vernon.[18] However, this lead battery recycling facility has agreed to shut down as of March 2015.[19] The attainment status of the Los Angeles County portion of the Air Basin with respect to the NAAQS is summarized in **Table 4.B-4**, *South Coast Air Basin Attainment Status (Los Angeles County)*.

Table 4.B-4

South Coast Air Basin Attainment Status (Los Angeles County)

Pollutant	National Standards	California Standards
O_3 (1-hour standard)	Non-attainment - Extreme [a]	Non-attainment
O_3 (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment (Maintenance)	Attainment
NO_2	Attainment (Maintenance)	Attainment
SO_2	Unclassifiable/Attainment	Attainment
PM_{10}	Attainment (Maintenance)	Non-attainment
$PM_{2.5}$	Non-attainment (Serious)	Non-attainment
Lead	Non-attainment (Partial)	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Attainment
Vinyl Chloride	N/A	Attainment

N/A = not applicable

[a] *The NAAQS for 1-hour ozone was revoked on June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data and is still subject to anti-backsliding requirements.*

[b]

Source: South Coast Air Quality Management District, National Ambient Air Quality Standards and California Ambient Air Quality Standards Attainment Status for South Coast Air Basin, February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2. Accessed February 2016. United States Environmental Protection Agency, The Green Book Non-attainment Areas for Criteria Pollutants, http://www.epa.gov/oaqps001/greenbk/index.html. Accessed February 2016; California Air Resources Board, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm. Accessed February 2016.

Title II of the federal Clean Air Act pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a

[16] *"Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California, Final Rule." Federal Register 72 (11 May 2007):26718-26721*

[17] *Federal Register, Vol. 78, No. 123, June 26, 2013, 38223-38226.*

[18] *South Coast Air Quality Management District, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.*

[19] *Los Angeles Times, Regulators detail Exide battery plant closure after decades of pollution, http://www.latimes.com/local/lanow/la-me-ln-exide-plant-closure-20150312-story.html#page=1 , Accessed August 2015*

few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially, and the specification requirements for cleaner burning gasoline are more stringent.

(2) State

(a) California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include State-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act,[20] responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. Table 4.B-3 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the state. As shown in Table 4.B-3, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. Table 4.B-4 provides a summary of the attainment status of the Los Angeles County portion of the Air Basin with respect to the state standards. The Air Basin is designated as attainment for the California standards for sulfates, hydrogen sulfide, and vinyl chloride and unclassified for visibility-reducing particles.

(b) California Air Resources Board Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook* in April 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit toxic air contaminant (TAC) emissions.[21] The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

(c) California Air Resources Board On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs. The measure applies to diesel-fueled

[20] *Chapter 1568 of the Statutes of 1988.*

[21] *California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, (2005).*

commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_X, PM_{10}, and $PM_{2.5}$ emissions from existing diesel vehicles operating in California. The requirements were amended in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds, there are two methods to comply with the requirements. The first way is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet or exceed the 2010 engine emission standards for NO_X and PM by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016 their entire fleet is equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NO_X emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance by January 1, 2014. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (e.g., engine retrofits) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

(3) Local

(a) South Coast Air Quality Management District

The SCAQMD has jurisdiction over air quality planning for all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Air Basin is a subregion within SCAQMD jurisdiction. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards.

(i) Air Quality Management Plan

The SCAQMD has adopted a series of AQMPs to meet the CAAQS and NAAQS. In December 2012, the SCAQMD adopted the *2012 Air Quality Management Plan*, which incorporates the latest scientific and

technological information and planning assumptions, including growth projections from the Southern California Association of Government's (SCAG) *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy*, and updated emission inventory methodologies for various source categories.[22] The 2012 AQMP is the most recent plan to achieve air quality attainment within the region and builds upon other agencies' plans to achieve federal standards for air quality in the Air Basin. It incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, and on-road and off-road mobile sources. The 2012 AQMP builds upon improvements in previous plans, and includes new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. In addition, it highlights the significant amount of emission reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the federal Clean Air Act.

The key undertaking of the 2012 AQMP is to bring the Air Basin into attainment with the NAAQS for the 24-hour $PM_{2.5}$ standard by 2014. It also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 8-hour O_3 standard deadline with new measures designed to reduce reliance on the federal Clean Air Act Section 182(e)(5) long-term measures for NO_X and VOC reductions. The SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The control measures in the 2012 AQMP consist of four components: (1) Air Basin-wide and Episodic Short-term $PM_{2.5}$ Measures; (2) Contingency Measures; (3) 8-hour O_3 Implementation Measures; and (4) Transportation and Control Measures provided by the SCAG. The 2012 AQMP includes eight short-term $PM_{2.5}$ control measures, 16 stationary source 8-hour O_3 measures, 10 early action measures for mobile sources and seven early action measures proposed to accelerate near-zero and zero emission technologies for goods movement related sources, and five on-road and five off-road mobile source control measures. In general, the SCAQMD's control strategy for stationary and mobile sources is based on the following approaches: (1) available cleaner technologies; (2) best management practices; (3) incentive programs; (4) development and implementation of zero- near-zero technologies and vehicles and control methods; and (5) emission reductions from mobile sources.

The SCAQMD is currently working on the 2016 AQMP and expects to have a draft available by Spring 2016. The upcoming 2016 AQMP will develop integrated strategies and measures to meet the following NAAQS: 8-hour Ozone (75 ppb) by 2032, Annual PM2.5 (12 µg/m3) by 2021-2025, 8-hour Ozone (80 ppb) by 2024, 1-hour Ozone (120 ppb) by 2023, and 24-hour PM2.5 (35 µg/m3) by 2019. The 2016 AQMP will also take an initial look at the new 2015 federal 8-hour ozone standard (70 ppb), as well as incorporate energy, climate, transportation, goods movement, infrastructure and other planning efforts that affect future air quality.

(ii) SCAQMD Air Quality Guidance Documents

The *CEQA Air Quality Handbook* was published by the SCAQMD in November 1993 to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in

[22] *South Coast Air Quality Management District, 2012 Air Quality Management Plan, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan. Accessed March 2015.*

EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* with the *Air Quality Analysis Guidance Handbook*. While this process is underway, the SCAQMD recommends that lead agencies avoid using the screening tables in Chapter 6 (Determining the Air Quality Significance of a Project) of the *CEQA Air Quality Handbook*, because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory, and the trip generation characteristics of the land uses identified in these screening tables were based on the fifth edition of the Institute of Transportation Engineer's *Trip Generation Manual*, instead of the most current edition. Additionally, the lead agency should avoid using the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L (EMFAC7EP Emission Factors for Passenger Vehicles and Trucks, Emission Factors for Estimating Material Hauling, and Emission Factors for Oxides of Sulfur and Lead).[23]

The SCAQMD has published a guidance document called the *Localized Significance Threshold Methodology* for CEQA Evaluations that is intended to provide guidance in evaluating localized effects from mass emissions during construction.[24] The SCAQMD adopted additional guidance regarding $PM_{2.5}$ in a document called *Final Methodology to Calculate Particulate Matter ($PM_{2.5}$) and $PM_{2.5}$ Significance Thresholds*.[25] This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and *Localized Significance Threshold Methodology*.

The SCAQMD has also adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TACs.[26] The SCAQMD's distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity of freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The guidance document introduces land use related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. The SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

(iii) SCAQMD Rules and Regulations

Several SCAQMD rules adopted to implement portions of the AQMP may apply to the proposed Project. For example, SCAQMD Rule 403 requires implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads. The Project may be subject to the following SCAQMD rules and regulations:

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[23] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993), http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). Accessed March 2015.*

[24] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

[25] *South Coast Air Quality Management District, Final Methodology to Calculate Particulate Matter (PM)2.5 and PM2.5 Significance Thresholds, (2006).*

[26] *South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, (2005).*

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which may apply to the Project:

- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM_{10} emissions to less than 50 micrograms per cubic meter ($\mu g/m^3$) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for different specific sources. The following is a list of rules which may apply to the Project:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule (greater than 2 million British thermal units [Btu] per hour and less than 5 million Btu per hour).
- **Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule (less than or equal to 2 million Btu per hour).
- **Rule 1186 – PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations:** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM_{10} emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XI sets emissions standards for TACs and other non-criteria pollutant emissions. The following is a list of rules which may apply to the Project:

- **Rule 1402 – Control of Toxic Air Contaminants from Existing Sources:** This rule sets standards for health risk associated with emissions of TACs from existing sources by specifying limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic hazard index (HI) applicable to total facility emissions and by requiring facilities to implement risk reduction plans to achieve specified risk limits, as required by the AB 2588 Air Toxics Hot Spots Program and this rule. The rule also specifies public notification and inventory requirements.
- **Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:** This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.
- **Rule 1404 – Hexavalent Chromium Emissions from Cooling Towers:** This rule sets limits and restrictions on hexavalent chromium in cooling tower circulating water.
- **Rule 1472 – Requirements for Facilities with Multiple Stationary Emergency Standby Diesel-Fueled Internal Combustion Engines:** This rule regulated diesel particulate matter emissions from facilities with three or more stationary emergency standby diesel-fueled internal combustion engines. Facilities which comply with all applicable requirements of Rule 1402, including emissions from diesel engines at the facility, may be exempt from this rule.

(b) Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization for the majority of the Southern California region and is the largest Metropolitan Planning Organization in the nation. With regard to air quality planning, SCAG adopted the 2016 RTP/SCS in April 2016, which addresses regional development and growth forecasts and forms the basis for the land use and transportation control portions of the AQMP. The growth forecasts are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. The Regional Transportation Plan/Sustainable Communities Strategy and AQMP are based on projections originating within local jurisdictions.

SCAG's 2016 RTP/SCS provides specific strategies for successful implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

In 2008, SCAG released the Regional Comprehensive Plan which addresses regional issues such as housing, traffic/transportation, water, and air quality. The Regional Comprehensive Plan serves as an advisory document to local agencies in the Southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance. The Regional Comprehensive Plan

presents a vision of how southern California can balance air quality with growth and development by including goals such as: reducing emissions of criteria pollutants to attain federal air quality standards by prescribed dates and stated ambient air quality standards as soon as practicable; reverse current trends in greenhouse gas emissions to support sustainability goals for energy, water supply, agriculture, and other resource areas; and to minimize land uses that increase the risk of adverse air pollution-related health impacts from exposure to TACs, particulates (PM_{10} and $PM_{2.5}$) and CO.

(c) County of Los Angeles General Plan

Local jurisdictions, such as the County, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the County is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The County is also responsible for the implementation of transportation control measures as outlined in the AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the County assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits and monitors and enforces implementation of such mitigation measures.

The Los Angeles County General Plan 2035 (March 2015) provides the fundamental basis for the County's land use and development policy, and represents the basic community values, ideals, and aspirations to govern a shared environment through 2035. The General Plan addresses all aspects of development including public health, land use, community character, transportation, economics, housing, air quality, and other topics. The General Plan sets forth objectives, policies, standards, and programs for land use and new development, Circulation and Public access, and Service Systems for the Community as a whole.

The applicable measures of the Los Angeles County General Plan Air Quality element are specified below as being the most current standards. These measures will be implemented in connection with development of the Project.[27]

Goal AQ 1 Protection from exposure to harmful air pollutants.

- **Policy AQ 1.1** Minimize health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.
- **Policy AQ 1.2** Encourage the use of low or no volatile organic compound (VOC) emitting materials.
- **Policy AQ 1.3** Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.

[27] *Los Angeles County Department of Regional Planning, 2014. Public Review Draft Los Angeles County General Plan 2035, Chapter 8 – Air Quality. http:// http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter8_2014.pdf. Accessed March 2015.*

- **Policy AQ 1.4** Work with local air quality management districts to publicize air quality warnings, and to track potential sources of airborne toxics from identified mobile and stationary sources.

Goal AQ 2 The reduction of air pollution and mobile source emissions through coordinated land use, transportation and air quality planning.

- **Policy AQ 2.1** Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.

- **Policy AQ 2.2** Participate in, and effectively coordinate the development and implementation of community and regional air quality programs.

3. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

The potential for air quality impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines.* These questions are as follows:

(III) Air Quality. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people.

The State CEQA Guidelines (Section 15064.7) provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make determinations of significance. The potential air quality impacts of the Project are, therefore, evaluated according to thresholds developed by SCAQMD in the CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent guidance, discussed below. These thresholds generally incorporate the checklist questions contained in Appendix G of the State CEQA Guidelines. Greenhouse Gas Emissions and related "climate change" issues are addressed in Section 4.E., Greenhouse Gas Emissions, of this Draft EIR.

Based on the above factors, the Project would have a potentially significant impact on Air Quality if it would result in any of the following:

AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

The SCAQMD is required, pursuant to the CAA to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of Federal standards. The future development pursuant to the proposed Specific Plan would be subject to the SCAQMD's 2012 AQMP.[28] The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by SCAG.

With regard to air quality planning, SCAG has prepared the RCPG, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the AQMP, and are utilized in the preparation of air quality forecasts and consistency analysis included in the AQMP. Both the RCPG and AQMP strategy incorporate projections from local planning documents.

The 2012 AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact of reduced air quality on the economy. Projects that are considered to be consistent with the AQMP would not interfere with attainment, because this growth is included in the projections used during the preparation of the AQMP. The 2012 AQMP relies on assumptions and data regarding County of Los Angeles growth consistent with the applicable zoning under the existing General Plan. The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by SCAG.

Projects that are consistent with the employment and population projections identified in the Growth Management Chapter of the RCPG prepared by SCAG are considered consistent with the AQMP growth projections, since the Growth Management Chapter forms the basis of the land use and transportation control portions of the AQMP. SCAG's RCP and Guide provide growth forecasts that are used in the development of air quality-related land use and transportation control strategies. The RCP provided control strategies introduce enforceable measures by which area wide reductions in annual vehicle miles traveled can be achieved. The reduction in vehicle miles traveled correlates with a reduction in emissions of criteria pollutants.

A project is consistent with the AQMP if it is consistent with the applicable rules and regulations and the population, housing and employment assumptions which were used in the development of the AQMP.

AQ-2 Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Because of the SCAQMD's regulatory role in the Air Basin, the significance thresholds and analysis methodologies in the SCAQMD *CEQA Air Quality Handbook* guidance document was used in evaluating Project impacts. The SCAQMD has established mass emission thresholds below which it is unlikely that an

[28] *South Coast Air Quality Management District, AQMD Website, http://www.aqmd.gov/aqmp/2012aqmp/index.htm.*

individual project's incremental increase in emissions could cause or contribute substantially to an exceedance of applicable ambient air quality standards. Based on these criteria, the Project would result in a potentially significant impact if any of the following would occur:

(1) Construction Thresholds

A potentially significant impact may occur if regional emissions during construction from both direct and indirect sources would exceed any of the following SCAQMD mass emission threshold levels listed below. If so, air quality dispersion modeling may be used determine if the emissions would cause an exceedance of applicable air quality standards. The numerical thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.[29]

- 550 pounds per day CO;
- 75 pounds per day of VOC;
- 100 pounds per day of NO_X;
- 150 pounds per day of SO_X;
- 150 pounds per day of PM_{10}; and
- 55 pounds per day of $PM_{2.5.}$

Exceedance of SCAQMD mass emission thresholds does not explicitly mean an exceedance of applicable air quality standards is expected. Refined air quality dispersion modeling should be performed to predict impacts to ground level ambient pollutant levels, as discussed below under subsection (3), Localized Significance Thresholds.

(2) Operation Thresholds

A potentially significant impact may occur if regional emissions during operations from both direct and indirect sources would exceed any of the following SCAQMD mass emission threshold levels listed below. The numerical thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.[30] The SCAQMD has established numeric thresholds for operation in part based on Section 182(e) of the Clean Air Act which identifies 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone.[31] As shown in Table 4.B-4, the Air Basin is designated as extreme non-attainment for ozone. The SCAQMD converted this significance level to pounds per day for ozone precursor emissions (10 tons per year × 2,000 pounds per ton ÷ 365 days per year = 55 pounds per day). The numeric indicators for other pollutants are also based on federal stationary source significance levels. If the thresholds are exceeded, air quality dispersion modeling may be used to determine if the emissions would cause an exceedance of applicable air quality standards.

[29] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.*

[30] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.*

[31] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-1.*

- 550 pounds per day of CO;
- 55 pounds per day of VOC;
- 55 pounds per day of NO_X;
- 150 pounds per day of SO_X;
- 150 pounds per day of PM_{10}; and
- 55 pounds per day of $PM_{2.5}$.

Exceedance of SCAQMD mass emission thresholds does not explicitly mean an exceedance of applicable air quality standards is expected. Refined air quality dispersion modeling should be performed to predict impacts to ground level ambient pollutant levels.

(3) Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to the SCAQMD Governing Board's Environmental Justice Enhancement Initiative (I-4). The LST methodology was provisionally adopted by the SCAQMD Governing Board in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the local ambient concentrations of that pollutant and distance to the nearest sensitive receptor.

LSTs, which are voluntary, only apply to CO, NO_2, PM_{10}, and $PM_{2.5}$ emissions during construction and operation at the discretion of the lead agency. Screening-level analysis of LSTs is only recommended for construction activities at project sites that are 5 acres or less. The SCAQMD recommends that operational activities and construction for any project over 5 acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. Dispersion modeling would be required for CO_2, NO_X, PM_{10}, and $PM_{2.5}$ emissions during construction and for operational activities. NO_X to NO_2 conversion would be accounted for during the modeling to determine the maximum NO_2 concentrations at the nearest sensitive receptors.

The SCAQMD has developed methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. Impacts would be considered significant if the following would occur:

- Maximum daily localized emissions would be greater than the LSTs, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO and NO_2.[32]
- Maximum localized PM_{10} or $PM_{2.5}$ emissions during construction would be greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 50 $\mu g/m^3$ over five hours (SCAQMD Rule 403 control requirement).

[32] *South Coast Air Quality Management District, LST Methodology, http://www.aqmd.gov/ceqa/handbook/lst/Method_fina.pdf.*

- Maximum localize PM_{10} or $PM_{2.5}$ emissions during operations would be greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 2.5 $\mu g/m^3$ over a 24-hour period or 1.0 $\mu g/m^3$ over an annual period.

Based on criteria set forth in the SCAQMD *CEQA Air Quality Handbook*, the proposed project would have a significant impact with regard to operational emissions if any of the following would occur:

- Traffic generated by the project causes an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively, at an intersection or roadway within one-quarter mile of a sensitive receptor.
- The project would not be compatible with County of Los Angeles, SCAQMD and SCAG air quality policies.

AQ-3 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The Air Basin fails to meet national and state standards for O_3 (for both the 1-hour and 8-hour standard), PM_{10} (24 hour and annual) and $PM_{2.5}$, and therefore is considered a federal and state "non-attainment" area for these pollutants. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant.

AQ-4 Would the project expose sensitive receptors to substantial pollutant concentrations?

The SCAQMD *CEQA Air Quality Handbook* states that the determination of the significance of TACs shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the toxic material(s) and process(es) involved
- The proximity of the TACs to sensitive receptors
- The quantity, volume and toxicity of the contaminants expected to be emitted
- The likelihood and potential level of exposure
- The degree to which the design of the proposed project will reduce the risk of exposure

Impacts from TAC emissions may be assessed via a health risk assessment (HRA). The California Air Pollution Control Officers Association (CAPCOA) has provided general guidance for preparing HRAs. CAPCOA's *Health Risk Assessments for Proposed Land Use Projects* describes significance levels that have been used by various air districts in California as enumerated below:[33]

[33] *California Air Pollution Control Officers Association, Health Risk Assessments for Proposed Land Use Projects, (2009) 12.*

- Thresholds can be based on a specific risk level such that a 10 per million excess cancer risk and an acute and chronic hazard index of one should not be exceeded. These thresholds tend to be consistent with the Hot Spot Program thresholds.
- Thresholds can also be based on the region's existing background cancer risk value if one exists.
    - One option is to establish a risk level equal to a region's background risk level.
    - Another option is to establish a risk level equal to twice a region's background risk level.
    - Still another option is to look at the ambient risk in the immediate vicinity of the project area rather than the regional risk level.
- Case by case thresholds may also be defined.

The SCAQMD *CEQA Handbook* recommends: (a) a lifetime probability of contracting cancer greater than 10 in one million (10×10^{-6}) as a significance threshold for evaluating cancer impacts from a facility, and (b) a health hazard index of 1.0 as a significance threshold for evaluating non-carcinogenic impacts from a facility.[34] These thresholds are normally applied to new facilities that emit TACs into the surrounding environment and potentially impact off-site sensitive receptors. In this case, the Project involves locating a new sensitive receptor rather than a new source of TACs. According to SCAQMD Staff, projects that would locate sensitive receptors within 500 feet of a freeway should also utilize these thresholds when assessing impacts to the project site from motor vehicles traveling on the freeway. Based on these guidelines, the Project would have a significant impact from TACs, if:

- On-site stationary sources emit carcinogenic air contaminants or TACs that individually or cumulatively exceed the maximum individual cancer risk of ten in one million or an acute or chronic hazard index of 1.0.[35]
- Hazardous materials associated with on-site stationary sources result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.

In addition, since the project introduces potentially sensitive populations to the area, CARB's siting guidelines for TAC emissions (as discussed above under the Regulatory Framework section) will be used in addition the SCAQMD criteria listed above.

AQ-5 Would the project create objectionable odors affecting a substantial number of people?

The SCAQMD *CEQA Air Quality Handbook* contains secondary thresholds consistent with Appendix G CEQA guidelines regarding odors. More specifically, the Project would have a significant impact if it has the potential to create, or be subjected to, an objectionable odor that could impact a substantial number of sensitive receptors.

[34] *South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (2011).*

[35] *SCAQMD Risk Assessment Procedures for Rules 1401 and 212, November 1998.*

b. Methodology

The evaluation of potential impacts to local and regional air quality that may result from the construction and long-term operations of the Project is conducted as follows:

(1) Consistency with Air Quality Management Plan

The 2012 AQMP was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are consistent with the assumptions used in the AQMP do not interfere with attainment because the growth is included in the projections utilized in the formulation of the AQMP, as discussed above. Thus, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's numeric indicators.

(2) Construction Impacts

Construction of the proposed uses pursuant to the Harbor-UCLA Medical Campus Master Plan has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project site. Mobile source emissions, primarily NO_X, would result from the use of construction equipment such as bulldozers, wheeled loaders, cranes, and haul trucks. Workers commuting to and from the site would also generate mobile source emissions from passenger vehicles. Fugitive dust emissions would result from demolition, grading soil movement and excavation activities. Evaporative emissions of VOCs would be generated from the application of architectural coatings (i.e., paints) and asphalt paving. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Build-out of the Campus Master Plan is expected to occur in eight phases, with each phase lasting several years. Construction is anticipated to begin as early as late-2016 and full build-out of all phases is expected in 2030. From 2020 through the end of construction, phases may overlap; therefore, the emissions are estimated assuming overlapping phases in order to evaluate the maximum daily emissions. The amount of construction equipment used and the duration of construction activity could have a substantial effect upon the amount of construction emissions, concentrations and the resulting impacts occurring at any one time. As such, the emission forecasts provided reflect a set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. There are typically four major types of construction activities for development projects: demolition, site preparation, grading, and building construction. The building construction phase can typically be broken down into three sub-categories: building construction, architectural painting, and asphalt paving. The emissions from construction equipment that would be used during each activity were modeled assuming that several activities would occur simultaneously (i.e., overlap) within each of the phases. This would ensure that the analysis provides a reasonably conservative estimate of the maximum daily regional emissions.

Mass daily emissions during construction were calculated using CalEEMod, which is an emissions estimation/evaluation model developed in conjunction with SCAQMD and other California Air Districts.

CalEEMod was used to assist in quantifying emissions from construction activities for build-out of the proposed Campus Master Plan. The output values used in this analysis were adjusted to be Project-specific, based on construction equipment types and the construction schedule. For fugitive dust, consistent with Rule 403, water would be applied to disturbed areas of the site with a control efficiency of 61 percent. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in Appendix B of this Draft EIR.

The potential for localized effects from the on-site portion of daily emissions are evaluated at nearby sensitive receptor locations that could be impacted by the Project based on the SCAQMD's LST methodology, which utilizes on-site mass emission rate look-up tables and project-specific modeling, where appropriate. LSTs are applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. For NO_X and CO emissions, LSTs are developed based on the local ambient concentrations of that pollutant and distance to the nearest sensitive receptor. For PM_{10} and $PM_{2.5,}$ LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the project is located, (2) the size of the project site, and (3) the distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals). The screening criteria are generally applicable to projects five acres or less in disturbed area. If a project exceeds five acres or any applicable LST when the mass rate look-up tables are used as a screening analysis, then project specific air quality modeling model may be performed. Construction of the proposed uses pursuant to the Campus Master Plan would potentially disturb more than five acres. Therefore, Project-specific dispersion modeling was conducted for NO_2, CO, PM_{10}, and $PM_{2.5}$ using the USEPA AERMOD dispersion model with meteorological data from the applicable SCAQMD monitoring station (i.e., LAX Airport).[36] Maximum on-site emissions from the various phases and activities were modeled at locations on the Campus where the construction activities would take place. Nearby receptors representing locations of off-site sensitive uses (i.e., residential uses) were placed in all directions around the Project site in order to estimate maximum impacts. The results of the LST dispersion modeling analysis are provided in Appendix B of this Draft EIR.

(3) Operational Impacts

Operation of the Project has the potential to generate criteria pollutant emissions through vehicle trips traveling to and from the site. In addition, emissions would result from stationary and area sources such as fossil fuel combustion for cooling and heating and from landscaping equipment, and evaporative loss emissions associated with cleaning and maintenance activities (consumer product usage, solvents, adhesives, coatings, etc.).

The operational emissions were estimated for an interim build-out year (2023) and full build-out year (2030). The mobile and area source emissions were estimated using CalEEMod. In calculating mobile source

[36] *The Project site is located in SRA 3 and the meteorological station in SRA 3 is located at Los Angeles International Airport. However, the site is located on the border of SRA 4 and is physically closer to the meteorological station for that region. Therefore, the meteorological data from the Long Beach station in SRA 4 is used for dispersion modeling purposes.*

emissions, the trip length values were based on the distances provided in CalEEMod. The trip distances were applied to the maximum daily trip estimates, based on trip generation rates provided by the Project traffic study[37] to estimate the total vehicle miles traveled (VMT). Stationary and area source emissions from fossil fuel combustion for heating and cool and landscaping equipment, and evaporative losses associated with cleaning and maintenance activities are based on usage rates and emission factors specific to the Air Basin as provided in CalEEMod.

Regional operational air quality impacts are assessed based on the incremental increase in emissions compared to baseline conditions. CEQA established the baseline environmental setting at the time that environmental assessment commences. For purposes of the operational emissions analysis, the existing baseline year is assumed to be 2015. Therefore, the incremental change in operational emissions is based on the Project emissions minus the existing baseline emissions.

The potential for localized effects from the on-site portion of daily operation emissions were evaluated at sensitive receptor locations that could be impacted by the Project based on the SCAQMD's LST methodology. Maximum on-site emissions were compared to applicable LST using the mass rate look-up tables. The screening criteria were for a project site greater than 5 acres with a receptor distance of less than 25 meters in Source Receptor Area 3 (Southwest Los Angeles County Coastal). Localized CO concentrations are evaluated based on prior dispersion modeling of the four busiest intersections in the Basin that has been conducted by the SCAQMD for its CO Attainment Demonstration Plan in the AQMP. The analysis compares the intersections with the greatest peak-hour traffic volumes that would be impacted by the Project to the intersections modeled by the SCAQMD. Project-impacted intersections with peak-hour traffic volumes that are lower than the intersections modeled by the SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations compared to the SCAQMD modeled values in its AQMP.

(4) Toxic Air Contaminants (TAC) Impacts (Construction and Operations)

TAC emissions sources during construction consist of diesel particulate matter (DPM) from construction equipment and operations consist of chemicals from aircraft maintenance and fueling. Sensitive receptor locations are identified and site-specific dispersion modeling was conducted to determine Project impacts. Potential TAC impacts are evaluated by conducting a detailed analysis using AERMOD dispersion modeling.

The OEHHA is responsible for developing and revising guidelines for performing HRAs under the State's Air Toxics Hot Spots Program Risk Assessment (AB 2588) regulation. In March 2015, OEHHA adopted new guidelines that update the previous guidance by incorporating advances in risk assessment with consideration of infants and children using Age Sensitivity Factors (ASF). These changes also take into account the sensitivity of children to TAC emissions, different breathing rates, and time spent at home. Children have a higher breathing rate compared to adults and would likely spend more time at home resulting in longer exposure durations. On June 5, 2015, SCAQMD incorporated these guidelines in to

[37] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, 2016.*

relevant rules designed for permitting of stationary sources.[38] Although construction would be temporary, construction impacts associated with TACs are addressed quantitatively in a refined HRA.

The HRA was performed in accordance with the OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA Guidance).[39] The analysis incorporates the estimated construction emissions, as previously discussed, and dispersion modeling using the USEPA AERMOD model with meteorological data from the closest SCAQMD monitoring station. Sensitive receptors used for modeling were placed at the location of sensitive receptor (i.e., residential) buildings near to the subject property. Heavy-duty equipment and trucks were modeled as volume sources and were located on the subject property and on roadways that trucks would potentially travel on within a 0.25 mile distance of the subject property. Health risk calculations were performed using a spreadsheet tool consistent with the OEHHA Guidance and CARB Hotspots Analysis and Reporting Program (HARP) version 2 spreadsheet methodology. Detailed information about the HRA is provided in Appendix B of this Draft EIR.

Potential TAC impacts for operations are evaluated by conducting a qualitative screening-level analysis. The screening-level analysis consists of identification of new or modified TAC emissions sources. If it is determined that a project would introduce a potentially significant new source, or modify an existing TAC emissions source, then downwind sensitive receptor locations are identified and site-specific dispersion modeling is conducted to determine project impacts.

(5) Odor Impacts (Construction and Operations)

Potential odor impacts are evaluated by conducting a screening-level analysis followed by a more detailed analysis (i.e., dispersion modeling) as necessary. The screening-level analysis consists of reviewing the project's site plan and project description to identify new or modified odor sources. If it is determined that the proposed Project would introduce a potentially significant new odor source, or modify an existing odor source, then downwind sensitive receptor locations are identified and site-specific dispersion modeling is conducted to determine proposed Project impacts.

c. Project Characteristics or Design Features

(1) Project Characteristics

The Project includes characteristics consistent with the CAPCOA guidance document[40] for mitigating or reducing emissions from land use development projects. The Project would provide and encourage employees and visitors to utilize alternative modes of transportation which would reduce vehicle trips and VMT. More specifically, the Project would be located within a quarter-mile of public transportation, including existing Torrance Transit System bus routes (e.g., routes 1 and 3) with stops on South Vermont Street and West Carson Street, and Los Angeles Metro bus routes (e.g., routes 205 and 550) with stops on South Vermont Street. While the Project site's transit accessibility would result in a corresponding reduction

[38] *South Coast Air Quality Management District, Minutes of the June 5, 2015 Meeting, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2015/2015-Jul10-001.pdf?sfvrsn=8, Accessed September 28, 2015*

[39] *Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (2015).*

[40] *California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010).*

in transportation-related emissions, the emissions calculations do not incorporate reductions from the transit accessibility characteristics. As a result, the emissions calculations are considered to be conservative and may overestimate actual emissions.

(2) Project Design Features

The Project would achieve the applicable objectives of the Los Angeles County General Plan Framework Element, SCAG Regional Transportation Plan, and SCAQMD Air Quality Management Plan for establishing a regional land use pattern that promotes sustainability. The Project would support pedestrian activity on the Project site, and incorporate energy efficient and water efficient measures.

The Project would be designed to meet the standards for Leadership in Energy and Environmental Design (LEED) Silver Certification by the U.S. Green Building Council (USGBC) through the incorporation of green building techniques and other sustainability features. A sustainability program would be prepared and monitored by a LEED-accredited design consultant to provide guidance in Project design, construction and operations; and to provide performance monitoring during Project operations to reconcile design and energy performance and enhance energy savings. The Project would also be designed to comply with the Los Angeles County Green Building Standards Code. The following Project Design Features would reduce air pollutant emissions as well as greenhouse gas emissions, which would be incorporated into the bid document requirements for the design and construction of future development projects under the Master Plan Project:

PDF AQ-1: Green Building Measures: The Master Plan Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following:

- The Project would implement a construction waste management plan to recycle and/or salvage nonhazardous construction debris that meets or exceeds the County's adopted Construction and Demolition Debris Recycling and Reuse ordinance.
- The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code.
- The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means.
- The Project would include lighting controls with occupancy sensors to take advantage of available natural light.
- The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent.

- Project buildings shall be constructed with solar-ready rooftops that would allow for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.
- The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care.
- To encourage carpooling and the use of electric vehicles by project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.
- The Project shall appropriate incorporate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).

PDF AQ-2: Construction Measures: The Project shall implement the following measures during construction activities:

- The Project shall require construction contractor(s) to utilize off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 4 off-road emissions standard for equipment rated at 50 hp or greater during Project construction. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment.
- To the greatest extent possible, electric power will be made available for use for electric tools, equipment, lighting, etc.
- The Project shall encourage construction contractors to apply for SCAQMD "SOON" funds, which provides funds to accelerate the use of less polluting off-road diesel vehicles, such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/Implementation/SOONProgram.htm.
- In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.
- The Applicant shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits.

- The Project shall comply with the applicable provisions of SCAQMD Rule 403 to minimize generation of fugitive dust. Active demolition or grading construction areas and unpaved roads shall be controlled by temporary covers or wetted sufficiently to reduce dust.
- Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation.
- On-site vehicles shall be limited to 15 miles per hour on unpaved roadways.
- Haul trucks carrying dirt, soil, sand, or other loose material shall be covered and maintain a freeboard height of 12 inches.
- Prior to leaving areas of active construction, haul trucks would be inspected and put through procedures as necessary to remove loose debris from tire wells and on the truck exterior to prevent track out.
- Construction areas shall install temporary fencing, if necessary, to prevent debris and material movement on the site and into patient care buildings or to off-site areas.
- The Applicant shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust.
- All coatings used on-site shall comply with SCAQMD Rule 1113, as applicable. The project will strive to utilize material which is pre-primed or pre-painted. Additionally, the project shall limit daily application of architectural coatings applied on-site to 170 gallons per day with an average of 50 grams VOC per liter of coating, less water and less exempt compounds, or equivalent usage resulting in similar or less VOC emissions. For example, stains, specialty primers, and industrial maintenance coatings allowed by Rule 1113 that contain VOCs at a level of 100 grams per liter of coating, less water and less exempt compounds would be limited to 85 gallons per day on site.

d. Project Impacts

(1) Consistency with Air Quality Management Plan

Threshold AQ-1:	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact Statement AQ-1: *Construction and operation of the Project would not conflict with the growth projections in the SCAQMD AQMP and would comply with applicable control measures. As a result, the Project would not conflict with or obstruct implementation of the Plan and impacts would be less than significant.*

(a) Construction

Under this criterion, the SCAQMD recommends that lead agencies demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or residential units) upon which the air quality plan are based. The Project would result in an increase in short-term employment compared to

existing conditions. Being relatively small in number and temporary in nature, construction jobs under the Project would not conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include strategies denoted in the AQMP as ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. The Project would not conflict with implementation of these strategies. Additionally, the Project would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment. The Project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403.

Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Project would not conflict with the control strategies intended to reduce emissions from construction equipment, the Project would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

(b) Operation

The 2012 AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP.

As discussed in Section 4.H., *Land Use*, of this Draft EIR, the Project site is designated "P" (Public and Semi-Public) by the County of Los Angeles 2035 General Plan Update. The "P" General Plan Land Use (GPLU) designation permits a broad range of public and semi-public facilities and community-serving uses, including public buildings and campuses, schools, hospitals, cemeteries, fairgrounds, airports and other major transportation facilities, landfills, solid and liquid waste disposal sites, multiple use storm water treatment facilities, and major utilities at a maximum FAR of 3:1.[41] As such, the Project would be consistent with the growth projections as contained in the County's General Plan and thus be consistent with the growth projections in the AQMP.

The AQMP includes Transportation Control Measures that are intended to reduce regional mobile source emissions. While the majority of the measures are implemented by cities, counties, and other regional agencies such as SCAG and SCAQMD, the Project would be supportive of measures related to reducing vehicle trips for patrons and employees and increasing commercial density near public transit (see discussion under Subsection 4.C.3.c, *Project Design Features*).

As the Project would be consistent with the growth projections in the AQMP and would be supportive of relevant Transportation Control Measures aimed at reducing vehicle trips, impacts would be less than significant.

[41] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

(2) Violation of Air Quality Standards

Threshold AQ-2: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact Statement AQ-2: *Construction of the Project would not exceed the applicable SCAQMD daily numeric indicators for VOC, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. As a result, construction and operations of the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and operational impacts would be less than significant.*

(a) Construction

Construction of the proposed uses has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project site. In addition, fugitive dust emissions would result from excavation and debris removal. The maximum daily regional construction emissions were calculated for the eight phases of construction. It should be noted that the maximum daily emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day within the construction period. Detailed emissions calculations are provided in Appendix B of this Draft EIR. Results of the criteria pollutant calculations are presented in **Table 4.B-5**, *Maximum Unmitigated Regional Construction Emissions*. As shown therein, construction-related daily emissions for the criteria and precursor pollutants would not exceed the SCAQMD regional thresholds of significance for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Therefore, with respect to regional emissions, impacts would be less than significant during construction of the Project.

These calculations include appropriate dust control measures that would be implemented during each phase of construction, as required by SCAQMD Rule 403 (Control of Fugitive Dust). All construction equipment with a rating of 50 horsepower or greater was assumed to have an engine that meets CARB and USEPA Tier 4 Final off-road emissions standard. Low-VOC coatings, as specified in PDF AQ-1, were utilized for architectural coatings phases.

(b) Operation

Operational emissions were assessed for mobile, area, and stationary sources. Operational criteria pollutant emissions were calculated for the Project for an interim build-out year (2023) and the full build-out year (2030). Based on the Project Design Features incorporated into the Project, the energy usage rate and the number of vehicle trips from the Project would be reduced compared to the appropriate baseline level (see discussed under Subsection 4.C.3.c, *Project Design Features*). Daily trip generation rates for the Project were provided by the Project traffic study[42] and include trips associated with the hospital and research and development uses. Detailed emissions calculations are provided in Appendix B of this Draft EIR. Results of the criteria pollutant calculations are presented in **Table 4.B-6**, *Maximum Unmitigated Regional Operational Emissions*. Table 4.B-6 also shows the existing emissions from the existing uses on the site. The evaluation of

[42] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, (2016).*

Table 4.B-5

Maximum Unmitigated Regional Construction Emissions [a]
(pounds per day)

Construction Year	Maximum Daily Regional Emissions [b]					
	VOC	NO_X	CO	SO_X	PM_{10} [c]	$PM_{2.5}$ [c]
Construction Year 1	1	24	50	<1	5	1
Construction Year 2	1	10	39	<1	5	1
Construction Year 3	2	46	114	<1	12	4
Construction Year 4	2	20	112	<1	11	4
Construction Year 5	51	26	149	<1	18	6
Construction Year 6	52	92	210	1	31	10
Construction Year 7	16	46	225	1	45	13
Construction Year 8	54	49	276	1	52	15
Construction Year 9	29	52	351	1	83	23
Construction Year 10	64	46	229	1	73	20
Construction Year 11	64	31	220	1	67	19
Construction Year 12	2	13	89	<1	22	6
Construction Year 13	2	13	79	<1	21	6
Construction Year 14	14	13	82	<1	22	6
Construction Year 15	14	9	55	<1	8	2
Maximum Regional Emissions	**64**	**92**	**351**	**1**	**83**	**23**
Regional Significance Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Over (Under)	(11)	(8)	(199)	(149)	(67)	(32)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the CalEEMod printout sheets and/or calculation worksheets that are presented in Appendix B.*

[b] *Shaded values indicate maximum emissions.*

[c] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

Source: PCR Services Corporation, 2016

the Project's significance with respect to the SCAQMD thresholds of significance is based on the net change in operational emissions from the existing site and the Project. As shown therein, the net operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed the threshold of significance during interim operations when combined with on-going construction emissions. Additionally at full build-out, operation of the Project would not exceed the SCAQMD numeric indicators. Therefore, with respect to regional emissions from operations, impacts would be less than significant during the interim year and at full build-out.

Table 4.B-6

Maximum Unmitigated Regional Operational Emissions – Interim and Build-Out [a]
(pounds per day)

Operational Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Emissions	**102**	**219**	**841**	**2**	**128**	**37**
Project Interim Year						
Area (Coating, Consumer Products, Landscaping)	29	<1	0.1	<1	<1	<1
Energy (Natural Gas)	1	6	5	<1	0.5	0.5
Motor Vehicles	58	132	611	2	143	40
Construction (Interim Year)	54	49	276	1	52	15
Total Project Interim Year Emissions	**142**	**188**	**892**	**3**	**195**	**56**
Total Net Increase/(Decrease) in Emissions (Total Interim – Existing)	**40**	**(31)**	**51**	**1**	**67**	**19**
SCAQMD Significance Threshold	55	55	550	150	150	55
Over/(Under)	(15)	(86)	(499)	(149)	(83)	(36)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Project Build-Out						
Area (Coating, Consumer Products, Landscaping)	40	<1	0.2	<1	<1	<1
Energy (Natural Gas)	1	8	6	<1	0.6	0.6
Motor Vehicles	63	148	666	3	183	52
Total Project Build-Out Emissions	**104**	**156**	**672**	**3**	**184**	**53**
Total Net Increase/(Decrease) in Emissions (Project Build-Out - Existing)	**2**	**(63)**	**(169)**	**1**	**56**	**16**
SCAQMD Significance Threshold	55	55	550	150	150	55
Over/(Under)	(53)	(118)	(719)	(149)	(94)	(39)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the CalEEMod printout sheets and/or calculation worksheets that are presented in Appendix B.*

Source: PCR Services Corporation, 2016

(3) Non-Attainment Pollutants

Threshold AQ-3: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Impact Statement AQ-3: *Construction of the Project would not exceed the SCAQMD daily regional numeric indicators. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational emissions at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. Thus, construction and operations of the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment and impacts would be less than significant.*

(a) Construction

Construction of the Project would not result in the emission of criteria pollutants for which the region is in nonattainment. The Los Angeles County portion of the Air Basin is designated non-attainment for ozone and $PM_{2.5}$ NAAQS and non-attainment for ozone, NO_2, PM_{10}, and $PM_{2.5}$ CAAQS. As shown in Table 4.B-5, maximum daily emissions from construction of the Project would not exceed the numeric indicator of significance for any of these pollutants nor their precursors. Project compliance with CARB and SCAQMD control measures and Project Design Features would be implemented to minimize and reduce construction emissions. As a result, the Project would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment. Therefore, construction impacts would be less than significant.

(b) Operation

Operation of the Project would not result in the emission of criteria pollutants for which the region is in nonattainment. As shown in Table 4.B-6, maximum daily emissions from operation of the Project would not exceed the threshold of significance for any of pollutants in nonattainment nor their precursors. During interim operations that overlap with construction emissions and at full build-out, operation of the Project would not exceed the applicable thresholds of significance. Therefore, operational impacts would be less than significant.

(4) Substantial Pollutant Concentrations

Threshold AQ-4: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact Statement AQ-4: *Construction of the Project would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Project at full build-out would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of the Project would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks that exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of the Project would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. As a result, construction and operation of the Project would not expose sensitive receptors to substantial pollutant concentrations, and localized emissions during construction and interim operations would result in a less than significant impact.*

(a) Construction

(i) Localized Impacts

The localized construction air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008).[43] The screening criteria provided in the *Localized Significance Threshold Methodology* were used to determine localized

[43] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

construction emissions thresholds for the Project. The maximum daily localized emissions for each of the construction phases and localized significance thresholds are presented in **Table 4.B-7**, *Maximum Unmitigated Localized Significance Threshold Analysis – Construction*. As shown therein, maximum localized concentrations during construction activities would not exceed the allowable thresholds at the closest sensitive receptors for the relevant standards. Therefore, with respect to localized construction emissions, impacts would be less than significant.

Table 4.B-7

Maximum Unmitigated Localized Significance Threshold Analysis – Construction

Pollutant [a]	Averaging Period	Project Concentration (ug/m^3)	Ambient Background [b] (ug/m^3)	Total (ug/m^3)	Threshold (ug/m^3)	Exceed Threshold?
CO	1-hr	273.1	3,548	3,821	23,000	No
CO	8-hr	42.7	2,862	2,904	10,000	No
NO_2	1-hr	86.1	163.6	249.7	339	No
NO_2	1-hr (98th percentile) [c]	50.9	112.2	163.1	188	No
PM_{10}	24-hr	0.87	—	0.87	10.4	No
$PM_{2.5}$	24-hr	0.34	—	0.34	10.4	No

[a] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

[b] *Background concentrations are based on the maximum of the most recent three years for which data is available from the SCAQMD for the Long Beach Monitoring Station (2011-2013). See SCAQMD website: http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. The 1-hour CO concentration is based on data from the same time period from the USEPA. See USEPA website: http://www.epa.gov/airdata/ad_rep_mon.html. Accessed March 2015.*

[c] *Based on the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations.*

Source: PCR Services Corporation, 2016

(ii) Toxic Air Contaminants

The greatest potential for TAC emissions would be related to diesel particulate matter emissions associated with heavy equipment operations during demolition, grading and excavation, and building construction activities. In addition, incidental amounts of toxic substances such as oils, solvents, and paints would be used. These products would comply with all applicable SCAQMD rules for their manufacture and use. The Project will be subject to several SCAQMD rules designed to limit exposure to TACs during construction activities. The Project would be required to comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. The Project would also comply with the requirements of SCAQMD Rule 1403 if asbestos is found during the renovation and construction activities. Furthermore, the Project would voluntarily implement the construction control measures described in PDF-AQ-2.

Health risk impacts (cancer risk) were assessed for nearby existing and future off-site sensitive receptors (residential and school uses). **Table 4.B-8**, *Maximum Carcinogenic Risk for Off-Site Sensitive Receptors from Construction*, summarizes the carcinogenic risk for representative receptors located throughout the site vicinity. For carcinogenic exposures, the cancer risk from DPM emissions from construction of the project is estimated to result in a maximum carcinogenic risk of 4.1 per one million. The maximum impact would

Table 4.B-8

Maximum Carcinogenic Risk from Project Construction

Sensitive Receptor	Maximum Cancer Risk (# in one million)	
	Starting Exposure Age: 3rd Trimester	Starting Exposure Age: Adult (16 and over)
North of Project Site	2.2	0.2
South of Project Site	4.1	0.4
East of Project Site	2.2	0.2
West of Project Site	0.6	0.1
Maximum Individual Cancer Risk Threshold	*10*	*10*
Exceeds Threshold?	*No*	*No*

Source: PCR Services Corporation, 2016.

occur at sensitive land uses (residences) directly south of the site. As discussed previously, the lifetime exposure under OEHHA guidelines takes into account early life (infant and children) exposure. It should be noted that the calculated cancer risk conservatively assumes sensitive receptors (residential school uses) would not have any mitigation such as mechanical filtration. As the maximum impact would be less than the risk threshold of 10 in one million, impacts would be considered less than significant.

Potential non-cancer effects of chronic (i.e., long term) DPM exposures were evaluated using the Hazard Index approach as described in the OEHHA Guidance. A hazard index equal to or greater than 1.0 represents a significant chronic health hazard. As shown in **Table 4.B-9**, *Maximum Non-Cancer Chronic Impacts for Off-Site Sensitive Receptors,* nearby off-site sensitive receptors would not be exposed to chronic impacts that would exceed the threshold of 1.0. The maximum impact would occur at sensitive receptors directly east of the site. Therefore, non-cancer chronic impacts would be considered less than significant.

Table 4.B-9

Maximum Non-Cancer Chronic Impacts from Project Construction

Sensitive Receptor	Chronic Hazard Index
North of Project Site	0.002
South of Project Site	0.007
East of Project Site	0.002
West of Project Site	0.001
Total Hazard Index	*1.0*
Exceeds threshold?	*No*

Source: PCR Services Corporation, 2016.

The process of assessing health risks and impacts includes a degree of uncertainty. The level of uncertainty is dependent on the availability of data and the extent to which assumptions are relied upon in cases where

the data are incomplete or unknown. All HRAs rely upon scientific studies in order to reduce the level of uncertainty; however, it is not possible to completely eliminate uncertainty from the analysis. Where assumptions are used to substitute for incomplete or unknown data, it is standard practice in performing HRAs to err on the side of health protection in order to avoid underestimating or underreporting the risk to the public. In general, sources of uncertainty that may lead to an overestimation or an underestimation of the risk include extrapolation of toxicity data in animals to humans and uncertainty in the exposure estimates. In addition to uncertainty, there exists "a natural range or variability in the human population in such properties as height, weight, and susceptibility to chemical toxicants."[44] As mentioned previously, it is typical to err on the side of health protection by assessing risk on the most sensitive populations, such as children and the elderly.

(b) Operation

(i) Localized Impacts

The localized operational air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008).[45] The screening criteria provided in the *Localized Significance Threshold Methodology* were used to determine localized operational emissions thresholds for the Project. The maximum daily localized emissions and localized significance thresholds are presented in **Table 4.B-10**, *Maximum Unmitigated Localized Operational Emissions – Interim and Build-Out*. Emissions were evaluated for the interim and full build-out operational phases of the Project. Existing emissions were deducted from Project emissions and the net (incremental) emissions were compared to the screening thresholds. For some pollutants, existing operational emissions are greater than Project emissions resulting in negative net emissions. As shown therein, maximum localized operational emissions for sensitive receptors would not exceed the localized thresholds for NO_X, CO, PM_{10} and $PM_{2.5}$. Therefore, with respect to localized operational emissions, impacts would be less than significant.

(ii) Carbon Monoxide Hotspots (Construction and Operations)

The potential for the Project to cause or contribute to CO hotspots is evaluated by comparing Project intersections (both intersection geometry and traffic volumes) with prior studies conducted by the SCAQMD in support of their AQMPs and considering existing background CO concentrations. As discussed below, this comparison provides evidence that the Project would not cause or contribute to the formation of CO hotspots, that CO concentrations at Project impacted intersections would remain well below the ambient air quality standards, and that no further CO analysis is warranted or required.

As shown previously in Table 4.B-1, CO levels in the Project area are substantially below the federal and state standards. Maximum CO levels in recent years are 3 ppm (one-hour average) and 2.5 ppm (eight-hour average) compared to the thresholds of 20 ppm (one-hour average) and 9.0 (eight-hour average). Carbon monoxide decreased dramatically in the Air Basin with the introduction of the catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Air Basin for some time and the Air Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. Thus, it is not

[44] *OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (August 2003) 1-4.*

[45] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

expected that CO levels at Project-impacted intersections would rise to the level of an exceedance of these standards.

Table 4.B-10

Maximum Unmitigated Localized Operational Emissions – Build-Out [a]
(pounds per day)

Operational Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Emissions	**24.2**	**7.7**	**6.6**	**<1**	**0.6**	**0.6**
Project Build-Out						
Area (Coating, Consumer Products, Landscaping)	39.8	0.0	0.2	<1	<0.1	<0.1
Energy (Natural Gas)	0.8	7.5	6.3	<1	0.6	0.6
Total Project Build-Out Emissions	**40.6**	**7.5**	**6.5**	**<1**	**<1**	**<1**
Total Net Increase/(Decrease) in Onsite Emissions (Project Build-Out– Existing)	**16.4**	**(0.2)**	**(0.1)**	**<1**	**<0.1**	**<0.1**
SCAQMD Significance Threshold	–	197	1,796	–	4.0	2.0
Over/(Under)	–	(197)	(1,796)	–	(4)	(2)
Exceed Threshold?	**–**	**No**	**No**	**–**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the CalEEMod printout sheets and/or calculation worksheets that are presented in Appendix B.*

Source: PCR Services Corporation, 2016

The SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin. These include: (a) Wilshire Boulevard and Veteran Avenue; (b) Sunset Boulevard and Highland Avenue; (c) La Cienega Boulevard and Century Boulevard; (d) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, the SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County with an average daily traffic volume of about 100,000 vehicles per day.[46] This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (one-hour average) and 3.2 (eight-hour average) at Wilshire Boulevard and Veteran Avenue.[47] When added to the existing background CO concentrations, the screening values would be 7.6 ppm (one-hour average) and 5.7 ppm (eight-hour average).

Based on the Project traffic study, of the studied intersections that are predicted to operate at a Level of Service ("LOS") of D, E, or F under interim year 2023 and future year 2030 plus Project conditions, multiple intersections would potentially have peak traffic volumes greater than 100,000 per day.[48] However, these intersection already operate at LOS of D, E, or F under existing conditions. The net change in peak traffic

[46] *South Coast Air Quality Management District, 2003 Air Quality Management Plan, Appendix V: Modeling and Attainment Demonstrations, (2003) V-4-24.*

[47] *The eight-hour average is based on a 0.7 persistence factor, as recommended by the SCAQMD.*

[48] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, 2016.*

volumes would be less than 100,000 per day; as a result, CO concentrations are expected to remain below thresholds. Thus, this comparison provides evidence that the Project would not contribute to the formation of CO hotspots and no further CO analysis is required. Therefore, the Project would result in less than significant impacts with respect to CO hotspots.

(iii) Toxic Air Contaminants

The SCAQMD recommends that a health risk assessment (HRA) be conducted for substantial sources of diesel particulates (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[49] The CARB siting guidelines, *Air Quality and Land Use Handbook*,[50] which the SCAQMD cites in its own guidelines, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (May 2005), defines a warehouse as having more than 100 truck trips or 40 refrigerated truck trips per day. While the Project would generate minor amounts of diesel emissions from delivery trucks and incidental maintenance activities, the Project would not result in daily truck trips at the level of a warehouse facility. Trucks would comply with the applicable provisions of the CARB Truck and Bus regulation to minimize and reduce PM and NO_X emissions from existing diesel trucks. The Project would not generate diesel emissions equivalent to 100 or more truck trips per day. Therefore, the Project would not be considered a substantial source of diesel particulates.

In addition, typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. The Project does not propose these activities on-site. Minimal emissions of air toxics may result from maintenance, such as from the use of architectural coatings and other products. Toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed land uses within the Project site. Based on the uses expected on the Project site, potential long-term operational impacts associated with the release of TACs would be less than significant.

(5) Odors

Threshold AQ-5: Would the project create objectionable odors affecting a substantial number of people?

Impact Statement AQ-5: *Construction and operation of the Project would not create or introduce objectionable odors affecting a substantial number of people. Therefore, odor impacts would be less than significant.*

(a) Construction

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. SCAQMD Rule 1113 limits the allowable amount of VOCs from architectural coatings and solvents. Since compliance with SCAQMD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Therefore, no significant impact would occur and no mitigation is required.

[49] *South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.*

[50] *California Air Resources Board,* Air Quality and Land Use Handbook: A Community Health Perspective*, (2005).*

(b) Operations

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Long-term Project operations would not introduce new sources of odors and would not be create objectionable odors that could affect nearby sensitive receptors. The Project does not include any uses identified by the SCAQMD as being typically associated with objectionable or nuisance odors. Waste collection areas and disposal for the Project would be covered and situated away from the property line and sensitive off-site uses. Medical waste would be properly sealed and stored in accordance with applicable rules to ensure that no objectionable medical waste-related odors would be created. Best management and good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less-than-significant and no mitigation is required.

(6) On-Site Sensitive Uses

Hospital uses are normally considered sensitive receptors. However, potential effects resulting from a Project on sensitive populations on the Project-site are not considered an impact to the environment under CEQA. Nonetheless, due to the sensitivity of on-site receptors, the potential for air pollutant emissions to affect on-site receptors is disclosed herein.

As required in PDF-AQ-2, construction of the Project would utilize heavy-duty construction equipment that meet the most stringent USEPA and CARB certified Tier 4 standards, which would result in substantially reduced combustion emissions of NO_X, PM_{10}, and $PM_{2.5}$ as compared to the statewide fleet average. PDF-AQ-2 requires the Project to comply with strict idling limits in accordance with Section 2485 in Title 13 of the California Code of Regulations and to prohibit the queuing and staging of heavy-duty equipment and trucks in front of on-site building entrances and exits and as far away as possible from patient rooms and building air intake systems, which would minimize the potential for exposure of construction emissions to on-site sensitive receptors. The Project would also implement numerous fugitive dust control measures as best management practices in compliance with SCAQMD Rule 403, which would include, but is not limited to, the use of covers and watering, limiting on-site vehicles speeds on unpaved roads, requiring haul trucks to be covered with adequate freeboard space, and implementing haul truck procedures to prevent the track out of dust and debris. Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation. The Project would install temporary fencing around active construction areas as needed to prevent debris and material movement on the site and into patient care buildings or to off-site areas. Furthermore, the Project would ensure building air filtration media and HVAC systems are serviced, maintained, and replaced to ensure a high level of indoor air quality. As listed in PDF-AQ-1, the Project buildings would be designed and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a MERV of 15 as required for hospital inpatient care. Per ASHRAE Standard 52.2 (2012), MERV 15 would result in a removal efficiency of at least 85 percent for particles from 0.3 to 1.0 micrometers (µm), 90 percent for 1.0 to 3.0 µm, and 95 percent for 3.0 to 10.0 µm.[51] As such, the use of MERV 15 air filtration media or better would achieve

[51] *ASHRAE, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size. https://www.ashrae.org/File%20Library/docLib/StdsAddenda/52_2_2012_2015Supplement.pdf. Accessed March 2016.*

substantial reductions in PM_{10} and $PM_{2.5}$ from outdoor air concentrations, including from construction-related DPM concentrations and associated health risks. Implementation of PDF-AQ-1 and PDF-AQ-2 and compliance with applicable regulations and other construction best management practices in accordance with SCAQMD Rule 403 would ensure that construction-related emissions would not adversely affect on-site sensitive receptors.

Operation of the Project would not introduce new substantial sources of emissions. The Existing Hospital has 373 budgeted/staffed beds. The Project would result in 379 budgeted/staffed beds, which is an increase of 6 budgeted/staffed beds over existing conditions. As a result, the Project would not result in substantial changes to hospital operations and would not result in a substantial increase in the number of vendor and service trucks and emergency vehicles visiting the site. As discussed previously, CARB adopted an ATCM to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to DPM and other TACs and air pollutants. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds, licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time. Potential localized net changes in air quality impacts from on-site sources of emissions, including DPM, would be minimal since hospital operations and the number of vendor and service trucks and emergency vehicles visiting the site under the Project would be generally similar to existing conditions. Typical sources of acutely and chronically hazardous toxic air contaminants include industrial manufacturing processes, automotive repair facilities, and dry cleaners. The Project would not introduce new sources of these types. Minimal emissions may result from use of consumer and cleaning products; however, usage of these products under the Project would be similar to existing conditions. As such, the Project would not result in a substantial net change in localized on-site emissions, including DPM and other TACs. Therefore, operation of the Project would not adversely affect on-site sensitive receptors.

4. CUMULATIVE IMPACTS

a. Construction

There are a number of related projects in the Project area that have not yet been built or are currently under construction. Since the Applicant has no control over the timing or sequencing of the related projects, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be speculative. For this reason, the SCAQMD's methodology to assess a project's cumulative impact differs from the cumulative impacts methodology employed elsewhere in this Draft EIR.

With respect to the Project's short-term construction-related air quality emissions and cumulative conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the federal Clean Air Act mandates. As such, construction of the Project would comply with SCAQMD Rule 403 requirements and the ATCM to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time. In addition, the Project would utilize a construction contractor(s) that complies with required and applicable Best Available Control Technology ("BACT") and the In-Use Off-Road Diesel Vehicle Regulation. Per SCAQMD rules and mandates as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects in the Air Basin, which would include each of the related projects in the Project area. As shown above in Table 4.B-5 and Table 4.B-7, regional and

localized construction emissions associated with the Project would not exceed the SCAQMD numeric indicators. As such, the Project's contribution to cumulatively significant construction impacts to air quality would be less than significant.

b. Operation

The SCAQMD's approach for assessing cumulative impacts related to operations or long-term implementation is based on attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. As discussed earlier, the SCAQMD has developed a comprehensive plan, the AQMP, which addresses the region's cumulative air quality condition.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Los Angeles County portion of the Air Basin is currently in nonattainment for ozone, PM_{10}, and $PM_{2.5}$, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, Section 15064(h)(3) of the CEQA *Guidelines* provides guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that:

> *"A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency…"*

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the Project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2012 AQMP. The Project would not conflict with or obstruct implementation of AQMP and would be consistent with the growth projections in the AQMP.

Nonetheless, SCAQMD no longer recommends relying solely upon consistency with the AQMP as an appropriate methodology for assessing cumulative air quality impacts. The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed previously, the Project would not exceed the SCAQMD regional numeric indicators. Therefore, the Project's incremental contribution to long-term emissions of non-attainment pollutants and ozone precursors, considered together with related projects, would not be cumulatively considerable, and therefore impacts would be less than significant.

5. MITIGATION MEASURES

The Project would result in less-than-significant impacts with respect to emissions of construction and operational emissions and consistency with applicable air quality plans, policies, or regulations. Therefore, no mitigation measures would be required.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts regarding construction and operational emissions and consistency with applicable air quality plans, policies, or regulations would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
C. ENERGY

1. INTRODUCTION

In accordance with Appendix F of the State CEQA Guidelines, this Draft EIR includes relevant information and analyses that address the energy implications of the Project. This section represents a summary of the Project's anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the Project's energy implications, are discussed in greater detail elsewhere in this Draft EIR, including in Chapter 2.0, *Project Description*, and Sections 4.E., *Greenhouse Gas Emissions*, 4.H., *Land Use and Planning*, and 4.L., *Transportation and Traffic*. Additional supporting calculations for the analysis presented in this section are provided in Appendix F of this Draft EIR.

2. ENVIRONMENTAL SETTING

Section 21100(b) of the State CEQA Guidelines requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. CEQA Guidelines Appendix F of the State CEQA Guidelines states that in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. CEQA Guidelines Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting, and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives and potentially in other required sections of this Draft EIR.

a. Existing Conditions

(1) Existing On-Site Improvements

Most of the facilities in the central Campus were designed and constructed prior to 1960, prior to modern energy standards. Many of the existing buildings on the Campus date back to the 1940s, including numerous small wood-frame barracks and temporary/modular buildings that collectively occupy the majority of the Medical Center Campus land area. Further, the existing layout of the Medical Center Campus reflects its piecemeal growth over time, and the scattered, aging buildings and infrastructure have become inefficient to operate and maintain, contributing to serious logistical obstacles and service deficiencies.

The existing Central Plant provides and maintains 24-hour utility generation, transmission, and distribution to on-site buildings. As described in the Campus Master Plan, the Central Plant consists of a Boiler Plant and Chiller Plant. The Boiler Plant consists of three natural gas-fired steam boilers that are permitted by the South Coast Air Quality Management District (SCAQMD). Boilers H-1 and H-2 are rated at 400 horsepower with a steam capacity of 13,800 pounds per hour and Boiler H-3 is rated at 300 horsepower with a steam capacity of 10,400 pounds per hour. The Chiller Plant consists of four chillers with a total capacity of 3,814 tons with chilled water pumping capacity of 6,065 gallons per minute. From the Central Plant, low-pressure

steam with condensate return (for research equipment), compressed air (for instrumentation and automation functions), hot water (for building heating and domestic hot water), and chilled water (for cooling) are distributed though on-site infrastructure throughout the Campus. Thus, the Central Plant operates as the primary component of the Campus's heating, ventilation, and air conditioning (HVAC) system. Electricity is primarily distributed via overhead powerlines to transformers located at the individual buildings, while steam, compressed air, and heated/cooled water is distributed through an underground pipe system. The Campus also maintains six 2 megawatt (MW) emergency generators.

As the distribution systems were designed and implemented in a piecemeal fashion as demand warranted, they do not achieve optimal operating efficiency. Further, the generation and distribution infrastructure is reaching the end of its service life and requires continually increased levels of maintenance to remain operational.

A number of infrastructure systems on the Medical Center Campus are at the end of their service life or inadequate for current needs and require increasing maintenance or replacement. These include portions of the electrical system (normal and emergency power), which includes 40-year-old substations throughout the Campus and some inadequate distribution systems; lighting systems, many of which are original and require replacement for reasons of energy-efficiency.

Materials management throughout the Medical Center Campus—encompassing everything from loading dock design to the handling and provision of medical supplies and equipment, technology, linens, and food—also requires overhauling and centralization for reasons of efficiency and improved fulfillment of requests. At the other end of that continuum, waste management operations also require improvements in collection, staging, and processing, to allow for more efficiency and sustainable practices for compliance with increasingly stringent mandatory state and local regulations.

b. Regulatory Framework Summary

No federal or regional regulations are applicable to the analysis of energy resources impacts. As such, only State and local regulations are discussed below.

(1) State

(a) State CEQA Guidelines

Section 21100(b) of the CEQA Statute requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting, and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives and potentially in other required sections of this Draft EIR.

Section 21100(b) of the CEQA Statute requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize a project's significant effects on the environment, including but not limited to measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives and potentially in other required sections of this Draft EIR. In accordance with Appendix F of the State CEQA Guidelines, this Draft EIR includes relevant information and analyses that address the energy implications of the Project. This section provides a summary of the Project's anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the Project's energy implications, are also discussed elsewhere in this Draft EIR including in Chapter 2.0, Project Description, Section 4.E., *Greenhouse Gas Emissions*, Section 4.H., *Land Use and Planning*, and Section 4.L., *Transportation and Traffic*.

(b) Senate Bill 375 (SB 375, Steinberg) (Chapter 728, Statutes of 2008)

Senate Bill (SB) 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions and was adopted by the State on September 30, 2008. Under SB 375, the target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS. On April 7, 2016, the Southern California Association of Governments (SCAG) adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS).[1] Using growth forecasts and economic trends, the 2016 RTP/SCS provides a vision for transportation throughout the region for the next 25 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The 2016 RTP/SCS successfully achieves and exceeds the greenhouse gas (GHG) emission-reduction targets set by CARB by demonstrating an eight percent reduction by 2020, 18 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level on a per capita basis.

SCAG's 2016 RTP/SCS provides specific strategies for successful implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

[1] *Southern California Association of Governments, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 20126 http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. Accessed June 2016.*

(c) Title 24, Building Standards Code and CALGreen Code

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) environmental air quality."[2] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. When the CALGreen Code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the State. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. The CALGreen Code was most recently updated in 2013 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2014 (the energy provisions took effect on July 1, 2014).[3]

(d) Senate Bill 1078(SB 1078, Sher) (Chapter 516, Statutes of 2002) and Senate Bill 107 (SB 107, Simitian) (Chapter 464, Statutes of 2006) and Executive Order S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the State's Renewables Portfolio Standard (RPS) to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the RPS with a Renewable Energy Standard that would result in a total renewable energy requirement for utilities of 33 percent by 2020. However, on April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's RPS to 33 percent by 2020. SB 350 (Chapter 547, Statues of 2015) further increased the RPS to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 was signed into law on October 7, 2015.

(e) California Senate Bill 1368 (Perata, Chapter 598, Statutes of 2006)

California SB 1368, a companion bill to the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), requires the California Public Utilities Commission (CPUC) and the CEC to establish GHG emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for

[2] *California Building Standards Commission, Title 24, California Code of Regulations, Part 11, 2010 California Green Building Standards Code (CalGreen), 2010.*

[3] *California Energy Commission, Building Standards Information Bulletin 13-07, December 18, 2013.*

reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO_2 per megawatt-hour.

(f) Executive Order B-30-15

On April 29, 2015, Governor Jerry Brown issued Executive Order B-30-15, which:

- Established a new interim Statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030,
- Ordered all State agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets, and
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

CARB subsequently expressed its intention to initiate the Climate Change Scoping Plan update during the summer of 2015, with adoption scheduled for 2016.

(2) Local

The Los Angeles County General Plan provides the fundamental basis for the County's land use and development policy, and addresses all aspects of development including public health, land use, community character, transportation, economics, housing, air quality, and other topics. The General Plan sets forth objectives, policies, standards, and programs for land use and new development, Circulation and Public access, and Service Systems for the Community as a whole. Measures related to energy usage that would be applicable to the Project are contained in the Los Angeles County 2035 General Plan Update Land Use Element and the County of Los Angeles Community Climate Action Plan (CCAP). Project consistency with the General Plan is discussed in Section 4.H., *Land Use and Planning*, of this Draft EIR, while Project consistency with the CCAP is discussed in Section 4.E., *Greenhouse Gas Emissions*.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The evaluation of potential impacts related to energy usage that may result from the construction and long-term operations of the Project has been conducted as described below.

(1) Construction

Build-out of the Campus Master Plan is expected to occur in eight phases, with each phase lasting several years. Construction is anticipated to begin as early as late 2016/early 2017 and full build-out of all phases is expected in 2030. The energy usage required for Project construction has been estimated based on the

number and type of construction equipment that would be used during Project construction, the extent that various equipment are utilized in terms of equipment operating hours or miles driven, and the estimated duration of construction activities. Energy for construction worker commuting trips has been estimated based on the predicted number of workers for the various phases of construction and the vehicle miles traveled (VMT). The assessment also includes a discussion of the Project's compliance with relevant energy-related regulatory measures and Project Design Features that would minimize the amount of energy usage during construction. These measures are also discussed in Chapter 2.0, Project Description, Section 4.E., *Greenhouse Gas Emissions*, Section 4.H., *Land Use and Planning*, and Section 4.L., *Transportation and Traffic*.

(2) Operations

The energy usage required for Project operations has been estimated based on the net change in energy demand from the new buildings and facilities compared to the existing Campus. The energy usage takes into account building energy standards pursuant to the Title 24 Building Standards Code. Energy for transportation from Campus employees, patients, and visitors has been estimated based on the predicted number of trips to and from the Campus and the VMT. Energy usage from water demand (e.g., electricity used to supply, convey, treat, and distribute) has been estimated based on the net change from the new buildings and facilities compared to the existing Campus. The assessment also includes a discussion of the Project's compliance with relevant energy-related regulations and Project Design Features that would minimize the amount of energy usage during operations. These measures are also discussed in Chapter 2.0, *Project Description*, Section 4.E., *Greenhouse Gas Emissions*, Section 4.H., *Land Use and Planning*, and Section 4.L., *Transportation and Traffic*, of this Draft EIR.

b. Thresholds of Significance

The potential for energy usage impacts is based on thresholds derived from Appendix F of the State *CEQA Guidelines*. These questions are as follows:

Would the project:

- Result in wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preempt future energy development or future energy conservation?

In consideration of the above factors, the following threshold is utilized to determine if the Project would result in potentially significant impacts on energy resources:

EN-1 Would the Project result in wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preempt future energy development or future energy conservation?

c. Project Characteristics or Design Features

(1) Project Characteristics

The Project would renovate the existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings that meet or exceed the energy standards in the Title 24

Building Standards Code and repurposing/remodeling existing buildings on the campus to improve operational efficiencies.

The Project would replace outdated and inadequate infrastructure systems throughout the Campus with newer systems designed in compliance with current standards of efficiency. Systems that would be replaced include portions of the electrical system (operational and emergency power), which includes 40-year-old substations throughout the Campus and some inadequate distribution systems; and lighting systems, many of which are original. The Central Plant, which provides for heating and cooling for the eastern portion of the Medical Center Campus distributed through an on-site infrastructure system, would be replaced with new more efficient systems. The Central Plant's on-site distribution system would also be improved as each phase is developed, with the entirety of the Medical Center Campus (except LA BioMed uses and proposed future Bioscience Tech Park uses) being served by the Central Plant.

The Central Plant would be replaced during Phase C (anticipated between 2018/2019 and 2023). The Campus's emergency generators would also remain in its current location.

Long-term sustainability is an important principle guiding the Master Plan Project. Green building practices would be incorporated into new construction. The current County policy requires LEED Silver-level certification, or the equivalent, for any public facility over 10,000 square feet in floor area. Green building practices would be integrated into all building design, construction, and operation and would be integrated with Campus infrastructure. Sustainability criteria would include (1) green building metrics, (2) reduction of energy demand, (3) reduction of thermal energy needs, (4) water balance, and (5) use of healthy building materials. As the Master Plan Project is implemented, one or more of the following systems would be utilized for environmental performance certification.

- U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) for Healthcare Rating System / Green Guide for Healthcare: Campus Buildings are designed to meet the requirements of the USGBC's LEED for Healthcare Silver Certification.
- LEED Application Guide for Multiple Buildings and On-Campus Building Projects: Utilize to take advantage of economies of scale and the unique challenges and opportunities inherent in Campus projects.
- Living Building Challenge: Achieve a majority of "petals" of the International Living Building Institute's Living Building Challenge 2.0.
- 2030 Challenge: Goals of each project to meet the 2030 Challenge relative to reduction requirements for the year constructed.
- Targeting 100!: Utilize tools and approaches from research to meet the 2030 Challenge for the Hospital.

In addition to the above, new construction associated with the Project would be designed with infrastructure in compliance with the County's Low Impact Development (LID) requirements for stormwater management.

The Project would be located in close proximity to existing and future public transit stops, including existing Torrance Transit System bus routes (e.g., routes 1, 3, and Rapid 3) with stops on South Vermont Street and West Carson Street, and Los Angeles Metro bus routes (e.g., routes 205 and 550) with stops on South

Vermont Street, which would result in reduced vehicle trips and VMT. In addition, the western two-thirds of the Campus is designated as a Transit Overlay District (TOD) due to proximity to the Metro Transit Station on Carson Street approximately 0.10 miles to the east, adjacent to the Harbor Freeway. The Project would provide an on-site pedestrian network that integrates the Campus with Carson Street activity and with transit-oriented development along Vermont Avenue and Carson Street The pedestrian network would provide improved circulation and ingress/egress through the site and form a continuous circulation system, allowing staff and guests to reach their destinations more efficiently. Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes on the Campus between the main parking areas and the New Hospital Tower and Outpatient buildings. Several north/south walks and promenades would connect the center of the Campus with the public edge along Carson Street, while a comprehensive network of walks and trails would direct pedestrians east/west through the Campus. The planned pedestrian circulation system would allow for direct access between parking areas and facilities, with a secondary system connecting courtyards and plazas. As such, the Project would result in a reduction in transportation-related energy efficiency compared to the existing Campus.

(2) Project Design Features

The Project would achieve the applicable objectives of the Los Angeles County General Plan Framework Element, SCAG Regional Transportation Plan, and SCAQMD Air Quality Management Plan for establishing a regional land use pattern that promotes sustainability. The Project would support pedestrian activity on the Campus, and incorporate energy efficient and water efficient measures.

The Project would be designed to meet the standards for LEED Silver Certification by the USGBC through the incorporation of green building techniques and other sustainability features. A sustainability program would be prepared and monitored by a LEED-accredited design consultant to provide guidance in project design, construction and operations; and to provide performance monitoring during Project operations to reconcile design and energy performance and enhance energy savings. The Project would also be designed to comply with the Los Angeles County Green Building Standards Code. Project Design Features would be incorporated into the bid document requirements for the design and construction of future development projects under the Master Plan Project, and implemented to enhance energy efficiency and meet County sustainability requirements. These measures are provided in Section 4.B, Air Quality, and are repeated below for convenience:

PDF-AQ-1, Green Building Measures: The Master Plan Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following:

- The Project would implement a construction waste management plan to recycle and/or salvage nonhazardous construction debris that meets or exceeds the County's adopted Construction and Demolition Debris Recycling and Reuse ordinance.
- The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for

major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code.

- The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means.
- The Project would include lighting controls with occupancy sensors to take advantage of available natural light.
- The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent.
- Project buildings shall be constructed with solar-ready rooftops that would allow for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.
- The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care.
- To encourage carpooling and the use of electric vehicles by Project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.
- The Project shall incorporate appropriate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).

d. Project Impacts

(1) Energy Consumption

Threshold EN-1: Would the Project result in wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preempt future energy development or future energy conservation?

Impact Statement EN-1: *Impacts regarding the wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preemption of future energy conservation would be less than significant. The Project would incorporate energy efficiency measures and comply with applicable measure to reduce energy consumption and would allow for future energy conservation.*

(a) Construction

(i) Anticipated Energy Consumption

As discussed in Chapter 2, Project Description, of the Draft EIR, the Master Plan Project would be constructed in overlapping phases over a period of approximately 15 years starting as early as late 2016 and 2030. Approximately 295,000 cubic yards of demolition debris would be exported from the site and 430,000 cubic yards of soil would be imported and exported from the site. Although the specific Master Plan projects to be constructed in each phase are subject to change over time as circumstances dictate, the proposed phasing serves to define the maximum construction activity at one time and the maximum developed floor area that can be constructed at one time for the purposes of evaluating the associated impacts on energy consumption, among other resources.

Based on the proposed development program and engineering estimates that form the basis of the construction-related impact analyses, it is estimated that a maximum of approximately 80,600 one-way truck trips would be required to haul the material to off-site reuse and disposal facilities over the 15 year construction period. It is conservatively estimated that a maximum of approximately 460,000 one-way vendor truck trips would be required to deliver building materials and supplies to the Campus over the 15 year construction period. According to the California Air Resources Board (CARB) on-road vehicle emissions model, EMFAC2014, heavy-duty trucks operating in the South Coast Air Basin would have an average fuel economy of 6.31 miles per gallon averaged over the 2016 through 2030 construction timeframe. Based on the information described above, construction of the Project would use a total of approximately 758,000 gallons of diesel fuel for haul truck and vendor delivery trips.[4] On an annual average basis, haul trucks and vendor delivery trips associated with construction would use approximately 50,600 gallons of diesel fuel per year.

Heavy-duty construction equipment associated with demolition, grading, utilities, paving, and building construction would include equipment such as excavators, graders, tractors/loaders/backhoes, dozers, scrapers, air compressors, cranes, forklifts, generators, pumps, welders, rollers, trenchers and pavers. The majority of the equipment would likely be diesel-fueled; however, smaller equipment, such as air compressors and forklifts may be electric-, gasoline-, or natural gas-fueled and tower cranes would likely be electric. For the purposes of this assessment, it is assumed equipment would be diesel-fueled, due to the speculative nature of specifying the amounts and types of non-diesel equipment that might be used, and the difficulties in calculating the energy which would be consumed by this non-diesel equipment. This also represents a worst-case scenario intended to represent the maximum potential energy use during construction. Based on the number and type of construction equipment that would be used during Project construction, and based on the estimated duration of construction activities, the Project would use approximately 971,400 gallons of diesel fuel for heavy-duty construction equipment.[5] On an annual average basis, heavy-duty construction equipment would use approximately 64,800 gallons of diesel fuel per year.

The number of construction workers that would be required would vary based on the phase of construction and activity taking place. The transportation fuel required by construction workers to travel to and from the

[4] *Fuel consumption is estimated based on fuel consumption factors in the EMFAC2014 on-road vehicle emissions model for heavy-heavy-duty construction trucks and trip distances in the California Emissions Estimator Model (CalEEMod).*

[5] *Fuel consumption is estimated based on fuel consumption factors in the OFFROAD2011 emissions model and the equipment horsepower and load factor ratings in CalEEMod.*

Project site would depend on the total number of worker trips estimated for the duration of construction activity. According to the EMFAC2014 model, passenger vehicles operating in the South Coast Air Basin would have an average fuel economy of 28.26 miles per gallon averaged over the 2016 through 2030 construction timeframe. Assuming construction worker automobiles have an average fuel economy consistent with the EMFAC2014 model and given the total vehicle miles traveled for construction workers, based on engineering estimates provided in the California Emissions Estimator Model (CalEEMod) used for the air quality and greenhouse gas emissions assessment, workers would travel a total of 96.9 million miles and would use approximately 3.43 million gallons of fuel (primarily gasoline) for construction worker trips. On an annual average basis, construction workers would use approximately 228,500 gallons of fuel (primarily gasoline) per year.

In 2014, California consumed a total of 343,568 thousand barrels of gasoline for transportation, which is equivalent to a total annual consumption of 14.4 billion gallons by the transportation sector.[6] For diesel, California consumed a total of 79,756 thousand barrels for transportation, which is equivalent to a total annual consumption of 3.3 billion gallons by the transportation sector.[7]

Based on the conservatively estimated fuel usage amounts presented above, construction of the Project would use approximately 228,500 gallons of gasoline and 115,400 gallons of diesel on an annual average basis, assuming worker automobiles are gasoline fueled and heavy-duty construction equipment is primarily diesel-fueled. To put these numbers into perspective, the estimated annual average construction fuel usage would represent a very small fraction of the state's annual fuel usage (about 0.002 percent of the statewide annual gasoline consumption and 0.003 percent of the statewide annual diesel consumption).

Electricity used during construction to provide temporary power for lighting and electronic equipment (e.g., computers, etc.) and to power certain construction equipment would generally not result in a substantial increase in on-site electricity use. Certain heavy-duty construction could be electric or alternatively fueled, such as tower cranes, based on commercial availability. The Project would utilize electric or alternatively fueled equipment as available and as feasible. Electricity use during construction would be variable depending on lighting needs and the use of electric-powered equipment and would be temporary for the duration of construction activities. In addition, the electricity supply for buildings and facilities that would be demolished would be shut off as a safety measure. Therefore, it is expected that construction electricity use would be offset by the shutting off of the electricity supply in buildings to be demolished during construction. Thus, electricity use during construction would generally be considered as negligible.

As discussed in Chapter 2, Project Description, of the Draft EIR, the Harbor-UCLA Medical Center Master Plan Project proposes the development of up to 250,000 square feet of new biomedical research facilities (the Bioscience Tech Park) on the western end of the Medical Center Campus. Approximately 50 percent, or approximately 125,000 square feet, is assumed to be constructed by the year 2023, with the remainder constructed by 2030.

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[6] *U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2014, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=US. Accessed March 2016.*

[7] *U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2012, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_df.html&sid=US. Accessed March 2016.*

Based on the proposed development program and engineering estimates that form the basis of the construction-related impact analyses, it is estimated that a maximum of approximately 7,700 one-way truck trips would be required over the construction period. Based on the number of truck trips described above, construction would use a total of approximately 8,400 gallons of diesel fuel for truck trips.[8] On an annual average basis, haul trucks and vendor delivery trips associated with construction would use approximately 560 gallons of diesel fuel per year (averaged over the assumed 15-year Master Plan Project duration).

Based on the number and type of construction equipment that would be used during construction, and based on the estimated duration of construction activities, approximately 73,900 gallons of diesel fuel would be used for heavy-duty construction equipment.[9] On an annual average basis, heavy-duty construction equipment would use approximately 4,900 gallons of diesel fuel per year (averaged over the 15-year Master Plan Project duration).

With respect to construction workers, energy consumption is based on the transportation fuel required by construction workers to travel to and from the site. According to the EMFAC2014 model, passenger vehicles operating in the South Coast Air Basin would have an average fuel economy of 28.26 miles per gallon averaged over the 2016 through 2030 construction timeframe. Assuming construction worker automobiles have an average fuel economy consistent with the EMFAC2014 model and given the total vehicle miles traveled for construction workers, based on engineering estimates provided in CalEEMod, which is used for the air quality and greenhouse gas emissions assessment, workers would travel a total of 504,670 miles and would use approximately 17,900 gallons of fuel (primarily gasoline) for construction worker trips. On an annual average basis, construction workers would use approximately 1,200 gallons of fuel (primarily gasoline) per year (averaged over the 15-year Master Plan Project duration).

Based on the estimated fuel usage amounts presented above, construction of the Bioscience Tech Park would use approximately 1,200 gallons of gasoline and 5,460 gallons of diesel on an annual average basis, assuming worker automobiles are gasoline fueled and heavy-duty construction equipment is primarily diesel-fueled (averaged over the 15-year Master Plan Project duration). To put these numbers into perspective, the estimated annual average construction fuel usage would represent a very small fraction of the state's annual fuel usage (about 0.000008 percent of the statewide annual gasoline consumption and 0.0002 percent of the statewide annual diesel consumption).

Electricity used during construction to provide temporary power for lighting and electronic equipment (e.g., computers, etc.) and to power certain construction equipment would generally not result in a substantial increase in on-site electricity use. It is expected that construction electricity use would be offset by the shutting off of the electricity supply in buildings to be demolished during construction. Thus, electricity use during construction would generally be considered as negligible.

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8 *Fuel consumption is estimated based on fuel consumption factors in the EMFAC2014 on-road vehicle emissions model for heavy-heavy-duty construction trucks and trip distances in the California Emissions Estimator Model (CalEEMod).*

9 *Fuel consumption is estimated based on fuel consumption factors in the OFFROAD2011 emissions model and the equipment horsepower and load factor ratings in CalEEMod.*

(ii) Regulatory Compliance

The Project would utilize construction contractors who demonstrate compliance with applicable CARB regulations governing the accelerated retrofitting, repowering, or replacement of heavy duty diesel on- and off-road equipment. As discussed in Section 4.B., *Air Quality*, of this Draft EIR, CARB has adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants. This measure prohibits diesel-fueled commercial vehicles greater than 10,000 pounds from idling for more than five minutes at any given time. CARB has also approved the Truck and Bus regulation (CARB Rules Division 3, Chapter 1, Section 2025, subsection (h)) to reduce NO_X, PM_{10}, and $PM_{2.5}$ emissions from existing diesel vehicles operating in California; this regulation will be phased in, with full implementation for large and medium fleets by 2023 and for small fleets by 2028. In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower. The regulation aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. Implementation began January 1, 2014, and the compliance schedule requires that best available control technology turnovers or retrofits be fully implemented by 2023 for large and medium equipment fleets and by 2028 for small fleets.

While intended to reduce construction emissions, compliance with the above anti-idling and emissions regulations would also result in efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy. It is not possible to accurately quantify the amount of energy that construction of a project would save by complying with these regulations due to the difficulties in estimating idling times and technology turnovers in the absence of the regulations. Nonetheless, idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

With respect to solid waste, the County of Los Angeles Construction and Demolition Debris Recycling and Reuse ordinance (Title 20, Division 4, Chapter 20.87) generally requires that at least 50 percent of construction and demolition debris be recycled or reused. The County is in the process of developing a roadmap to increase the target to 70 percent for mixed debris and 100 percent for asphalt and concrete.[10] Overall, the County has proposed long-term disposal reduction targets of 80 percent diversion from landfills by 2025 and 95 percent by 2045. The Project would utilize construction contractors in compliance with applicable County waste-reduction ordinances. Through compliance with applicable County regulations and contracting with approved waste haulers, the Project would meet or exceed the required level of waste recycling and reuse rate for construction and demolition debris.

Construction of the Bioscience Tech Park would also utilize construction contractors who demonstrate compliance with applicable CARB regulations and applicable County waste-reduction ordinances. Compliance with the above anti-idling and emissions regulations and waste-reduction ordinances would result in efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy.

[10] *County of Los Angeles, Department of Public Works, Roadmap to a Sustainable Waste Management Future,(2014).*

(iii) Conclusion

Construction would utilize energy for necessary on-site activities and to transport buildings materials, soil, and debris to and from the Campus. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, compliance with the previously discussed anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy. The Project would also meet or exceed the County's waste diversion targets as specified in PDF-AQ-1. Idling restrictions, the use of newer engines and equipment, and diverting waste would result in less fuel combustion and energy consumption. The Project would also utilize newer equipment that meet stringent emissions standards and provide opportunities for future energy efficiency by using electric or alternatively-fueled equipment as available and feasible. Therefore, construction of the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy and would not preempt future energy conservation. As a result, impacts would be less than significant.

(b) Operation and Maintenance

(i) Anticipated Energy Consumption

The Master Plan Project must comply with the portions of County's Green Building Standards, LID Code, and CCAP applicable to nonresidential healthcare facilities. The Project would incorporate Project Design Features in a manner to achieve the equivalent of USGBC LEED® Silver Certification. Additionally, physical and operational Project characteristics for which sufficient data are available to quantify the reductions from building energy and resource consumption have been included in the quantitative analysis, and include but are not limited to the following measures: optimizing energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations; reducing indoor and outdoor water use by a minimum of 20 percent; and designating a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and pre-wiring, or installing conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces. A sustainability program would be prepared and monitored by a LEED-accredited design consultant to provide guidance in project design, construction and operations; and to provide performance monitoring during Master Plan Project operations to reconcile design and energy performance and enhance energy savings.

The daily operation of the Project would generate demand for electricity, natural gas, and water supply, as well as generating wastewater requiring conveyance, treatment, and disposal off-site, and solid waste requiring disposal off-site. Based on engineering estimates used as the basis for GHG emissions calculations, the initial operational year of the Project would have an electricity demand of approximately 20.91 million kilowatt-hours (kWh), which is inclusive of approximately 3.56 million kWh for water supply and wastewater treatment.[11] To put this number into perspective, the value is compared to the Southern California Edison network demand, which is a regional utility provider for much of Southern California, including Los Angeles County. In 2015, Southern California Edison had total system sales of 87,544 million

[11] *Values are based on the Title 24(2013) standards. Compliance with future updated Title 24 standards in effect at the time of building permit issuance could result in reduce energy demand.*

kWh.[12] The Project represents approximately 0.02 percent of the Southern California Edison network demand for the 2015 year, which is a very small fraction of the Southern California Edison network.

Based on engineering estimates used as the basis for GHG emissions calculations, the initial operational year of the Project would have a natural gas demand of approximately 23.64 million kilo British thermal units (kBtu) per year.[13] To put this number into perspective, the value is compared to the Southern California Gas Company network demand, which is a regional utility provider for much of Southern California, including Los Angeles County. In 2015, the Southern California Gas Company had natural gas sales of approximately 291 billion cubic feet, equivalent to approximately 306 billion kBtu.[14] The Project represents approximately 0.008 percent of the Southern California Gas Company network demand for the 2015 year, which is a very small fraction of the Southern California Gas Company network.

As discussed in Section 4.E., *Greenhouse Gas Emissions*, of this Draft EIR, Executive Orders S-3-05 and B-30-15 are orders from the State's Executive Branch for the purpose of reducing statewide GHG emissions. These Executive Orders establish the goals to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. These goals have not yet been codified. However, in order to meet the 2030 and 2050 targets, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its *Climate Change Scoping Plan*, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail."[15] Although the State has yet to identify specific technologies and measures, in particular for meeting the 2050 target, it is reasonable to conclude that the Project's post-2020 emissions trajectory, and associated energy use, is expected to follow a declining trend, consistent with Statewide efforts to meet these future year targets.

Based on engineering estimates used as the basis for GHG emissions calculations, full buildout of the Bioscience Tech Park would have an electricity demand of approximately 5.11 million kWh, which is inclusive of approximately 1.84 million kWh for water supply and wastewater treatment. This represents approximately 0.006 percent of the Southern California Edison network demand for the 2015 year, which is a very small fraction of the Southern California Edison network.

Based on engineering estimates used as the basis for GHG emissions calculations, full buildout of the Bioscience Tech Park would have a natural gas demand of approximately 4.38 million kBtu per year. This represents approximately 0.001 percent of the Southern California Gas Company network demand for the 2015 year, which is a very small fraction of the Southern California Gas Company network.

(ii) Alternative Energy Considerations

The use of energy provided by alternative (i.e., renewable) resources, off-site and on-site, to meet the Master Plan Project's operational demands is constrained by the energy portfolio mix managed by Southern

[12] *Edison International, Edison International and Southern California Edison 2015 Annual Report,(2016).*

[13] *Values are based on the Title 24(2013) standards. Compliance with future updated Title 24 standards in effect at the time of building permit issuance could result in reduce energy demand.*

[14] *Sempra Energy, 2015 Annual Report,(2016).*

[15] *California Air Resources Board, Climate Change Scoping Plan,(2008), page 117.*

California Edison, the service provider for the Project site, and limitations on the availability or feasibility of on-site energy generation.

Southern California Edison is required to commit to the use of renewable energy sources for compliance with the Renewables Portfolio Standard. Southern California Edison is required to meet the requirement to procure at least 33 percent of their energy portfolio from renewable sources by 2020 through the procurement of energy from eligible renewable resources, to be implemented as fiscal constraints, renewable energy pricing, system integration limits, and transmission constraints permit. SB 350 (Chapter 547, Statues of 2015) further increased the Renewables Portfolio Standard to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. Eligible renewable resources are defined in the Renewable Portfolio Standard to include biodiesel; biomass; hydroelectric and small hydro (30 Mega Watts [MW] or less); Los Angeles Aqueduct hydro power plants; digester gas; fuel cells; geothermal; landfill gas; municipal solid waste; ocean thermal, ocean wave, and tidal current technologies; renewable derived biogas; multi-fuel facilities using renewable fuels; solar photovoltaic; solar thermal electric; wind; and other renewables that may be defined later. In 2014, Southern California Edison served approximately 23.2 percent of its retail electricity sales with renewable power.[16] This represents the available off-site renewable sources of energy that would meet Project demand.

With respect to on-site renewable energy sources, because of the Project's location, there are no local sources of energy from the following sources: biodiesel, biomass hydroelectric and small hydro, digester gas, fuel cells, geothermal energy, landfill gas, municipal solid waste, ocean thermal, ocean wave, and tidal current technologies, or multi-fuel facilities using renewable fuels.

Solar and wind power represent variable-energy, or intermittent, resources that are generally used to augment, but not replace, natural gas-fired (or other non-renewable fuel) energy power generation, since reliability of energy availability and transmission is necessary to meet demand, which is constant.

Wind-powered energy is not feasible on the Project site due to the lack of sufficient wind in the Los Angeles basin. The California Energy Commission (CEC) studied the State's high wind resource potential. Based on a map of California's wind resource potential, the Project site is not identified as an area with wind resource potential. Wind resource areas with winds above 12 mph within Los Angeles County are located in relatively remote areas in the northwestern portion of the County.

Similarly, solar energy is highly variable in the Los Angeles area, particularly in proximity to the coastline where there is increased cloud cover and an intermittent marine layer, and is therefore not cost-effective or reliable as a primary source of energy. The CEC has identified areas within the State with high potential for viable solar, wind, and geothermal energy production. The CEC rated California's solar potential by county using insolation values available to typical photovoltaic system configurations, as provided by the National Renewable Energy Laboratory. Although Los Angeles as a County has a relatively high photovoltaic potential of 3,912,346 megawatt-hours (MWh)/day, inland counties such as Inyo (10,047,177 MWh/day), Riverside (7,811,694 MWh/day), and San Bernardino (25,338,276 MWh/day) are more suitable for large-scale solar power generation. In addition, most of the high potential areas of greater than 6 KWh/sqm/day in Los

[16] *California Public Utilities Commission, California Renewables Portfolio Standard, http://www.cpuc.ca.gov/renewables/. Accessed April 2016.*

Angeles County are concentrated in the northeastern corner of the county around Lancaster, approximately 60 miles to the north of the Project site. These facts alone do not preclude its use in the Project area or on the Project site. The Project would support the County's CCAP to promote solar installations by incorporating building design elements that includes solar ready rooftops for solar collectors or photovoltaic panels. As such, the Project would promote solar electrical systems. It is not possible to accurately quantify the energy savings from the use of solar collectors or photovoltaic panels since it is unknown the extent that such equipment would be required to be installed.

The Bioscience Tech Park would also utilize renewable energy as part of Southern California Edison requirement to use renewable energy sources for compliance with the Renewables Portfolio Standard. With respect to on-site renewable energy sources, there are no local sources of energy from the following sources: biodiesel, biomass hydroelectric and small hydro, digester gas, fuel cells, geothermal energy, landfill gas, municipal solid waste, ocean thermal, ocean wave, and tidal current technologies, or multi-fuel facilities using renewable fuels. Wind-powered energy is not feasible on the Project site due to the lack of sufficient wind in the Los Angeles basin as discussed previously. Similarly, solar energy is highly variable in the Los Angeles area, particularly in proximity to the coastline where there is increased cloud cover and an intermittent marine layer, and is therefore not cost-effective or reliable as a primary source of energy. Nonetheless, solar energy would be promoted consistent with the County's CCAP by incorporating building design elements that includes solar ready rooftops for solar collectors or photovoltaic panels.

(iii) Energy Conservation: Regulatory Compliance

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code. The purpose of the California Green Building Standards Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings, which includes requirements for energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.[17] The CALGreen Code was most recently updated in 2013 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2014 (the energy provisions took effect on July 1, 2014).[18] The Project would comply with or exceed the applicable provisions of Title 24 and the California Green Buildings Standards in affect at the time of building permit issuance. According to the CEC, the Title 24 (2013) standards use 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 Title 24 (2008) standards. It is expected that future updates to the Title 24 standards would result in increased energy efficiency. However, it is not possible to accurately predict the increased level of energy efficiency associated with future updates to the Title 24 standards; therefore, the energy estimates provided

[17] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

[18] *California Energy Commission, Building Standards Information Bulletin 13-07, December 18, 2013.*

in this Draft EIR represent the current Title 24 (2013) standards. It is reasonable to conclude that the Master Plan Project would achieve greater levels of energy efficiency than provided herein.

With respect to solid waste, the Project is required to comply with applicable regulations, including those pertaining to waste reduction and recycling. Waste haulers serving the Project site would divert Project-generated municipal waste in accordance with applicable County ordinances as well as future updates to the County ordinances in effect at the time of construction and operations.

The Bioscience Tech Park would comply with or exceed the applicable portions of the Title 24 standards in affect at the time of building permit issuance. As discussed previously, future updates to the Title 24 standards would result in increased energy efficiency. The energy estimates provided in this Draft EIR represent the current Title 24 (2013) standards. Although it is not possible to accurately predict the increased level of energy efficiency associated with future updates to the Title 24 standards, it is reasonable to conclude that the Bioscience Tech Park would achieve greater levels of energy efficiency than provided herein. Similar to the Master Plan Project, solid waste disposal would comply with the applicable County ordinances as well as future updates to the County ordinances in effect at the time of construction and operations.

(iv) Transportation Estimated Energy Consumption

Operation of the Project would result in transportation energy use primarily from Campus employees, patients, and visitors traveling to and from the Project site. Transportation fuels, primarily gasoline and diesel, would be provided by local or regional suppliers and vendors. As discussed previously, in 2014, California consumed a total of 14.4 billion gallons of gasoline and 3.3 billion gallons of diesel in the transportation sector.[19, 20] Project-related vehicles would require a fraction of a percent of the total state's transportation fuel consumption. According to the EMFAC2014 model, the vehicle fleet average fuel economy in the South Coast Air Basin in 2030 is predicted to be 31.67 miles per gallon for gasoline and 13.38 miles per gallon for diesel with gasoline vehicles accounting for 85.1 percent of the total VMT and diesel vehicles accounting for 8.2 percent of the total VMT. Electric vehicles are predicted to account for 6.7 percent of the total VMT.

Based on the Project's estimated vehicle miles traveled of 75.93 million miles per year, and assuming the Project's mix of vehicle types is similar to the Basin-wide fleet average, approximately 2.04 million gallons of gasoline and 465,400 gallons of diesel fuel would be required in a year. This would represent about 0.01 percent of the statewide gasoline consumption and about 0.01 percent of the statewide diesel consumption, which represents a very small fraction of the state's annual fuel usage. As stated in Section 4.E., *Greenhouse Gas Emissions*, the Project would include pre-installation or installation of electric vehicle supply equipment (EVSE) consistent with the County's CCAP, which would eliminate infrastructure roadblocks for Campus employees, patients, and visitors that purchase electric or electric-hybrid vehicles. As a result, the Project would support statewide efforts to improve transportation energy efficiency and reduce wasteful or inefficient transportation energy consumption with respect to private automobiles.

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[19] *U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2014, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=US. Accessed March 2016.*

[20] *U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2012, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_df.html&sid=US. Accessed March 2016.*

Alternative-fueled, electric, and hybrid vehicles, to the extent these types of vehicles would be utilized by Campus employees, patients, and visitors, would reduce the Project's consumption of gasoline and diesel; however, the effect may be minimal in current vehicle market. According to the EMFAC2014 model, electric vehicles are predicted to account for 6.7 percent of the total VMT in 2030 in the South Coast Air Basin. Campus employees, patients, and visitors that utilize alternative-fueled (electric) vehicles would be expected to result in fuel savings up to about 6.7 percent. Based on the estimate above, this would translate to a fuel savings of up to about 160,600 gallons of fuel (primarily gasoline, assuming electric vehicles replace gasoline-fueled passenger vehicles) per year.

Operation of the Bioscience Tech Park would result in an estimated vehicle miles traveled of 8.43 million miles per year. Assuming the Project's mix of vehicle types is similar to the Basin-wide fleet average, approximately 226,500 gallons of gasoline and 51,700 gallons of diesel fuel would be required in a year. This represents about 0.002 percent of the statewide gasoline consumption and about 0.002 percent of the statewide diesel consumption, which represents a very small fraction of the state's annual fuel usage.

Bioscience Tech Park employees and visitors that utilize alternative-fueled (electric) vehicles would be expected to result in fuel savings up to about 6.7 percent. Based on the estimate above, this would translate to a fuel savings of up to about 17,800 gallons of fuel (primarily gasoline, assuming electric vehicles replace gasoline-fueled passenger vehicles) per year.

(v) Conclusion

Operation of the Project would utilize energy for necessary on-site activities and off-site transportation associated with Campus employees, patients, and visitors traveling to and from the site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, the Project would meet or exceed energy standards by incorporating green building measures consistent with County policy that requires LEED Silver-level certification and the County's CCAP. Overall, the Master Plan Project would replace aging facilities and infrastructure with new ones providing considerably higher efficiency in terms of energy and water demands; as such, while the Project would increase the overall intensity of land uses on the Medical Center Campus, it would use less energy per square foot of development compared to existing conditions. The Project would also provide opportunities for future energy efficiency by promoting solar power and electric or alternatively-fueled vehicles. Therefore, operation of the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy and would not preempt future energy conservation. As a result, impacts would be less than significant.

e. Cumulative Impacts

Under CEQA, individually small project-level contributions to environmental impacts may be potentially considerable in the aggregate or cumulative level. A cumulatively considerable impact is the impact of a project in addition to the related projects. In the case of energy, the proximity of the project to other energy-demanding projects or activities is typically not directly relevant to the determination of a cumulative impact. Energy is generally regulated on regional, state, federal, or even global scales. Currently, no established non-speculative method exists to assess the cumulative energy impact of a proposed independent development project.

As discussed previously, the State has adopted numerous regulations to improve energy efficiency from a variety of sectors including residential, commercial, and industrial buildings, transportation, utility providers, and others. Individual projects located within the State would be required to comply with these regulations. End-users of energy would be required to incorporate mandated building strategies and techniques to ensure energy use from building systems meet established efficiency targets. Transportation energy end-users would be required to utilize vehicles that meet increasingly stringent fuel economy standards. Utility providers would be required to provide an increasing fraction of energy from renewable sources in accordance with the State's Renewables Portfolio Standard. Compliance with these regulations would ensure cumulative projects achieve improved energy efficiency and minimize the wasteful and inefficient use of energy.

At the local level, the County of Los Angeles has adopted a Green Building Standards Code and Low Impact Development Ordinance that includes mandatory efficiency measures more stringent than State requirements, further improving energy efficiency for projects in the County. The County's CCAP includes additional measures that would reduce the wasteful and inefficient use of energy by requiring a reduction in GHG emissions, which is inherently related to energy use. While a quantitative metric has not been established to evaluate cumulative energy impacts, because the County has adopted standards that would improve energy efficiency beyond State requirements applicable to all projects located in the County, it is determined that energy impacts would not be cumulatively considerable.

4. MITIGATION MEASURES

The Project would result in less than significant impacts with respect to the wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preemption of future energy conservation. Therefore, no mitigation measures would be required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant and no mitigation measures would be required.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
D. GEOLOGY AND SOILS

1. INTRODUCTION

This section describes existing conditions and the regulatory framework associated with geology and soils and analyzes the potential impacts of the Project regarding fault rupture, seismic hazards, ground shaking, liquefaction, soil erosion or the loss of topsoil, expansive soils, and landform/landslide in the unincorporated Los Angeles community of West Carson and in the Project vicinity. Information in this section is based on the analysis and findings provided in the Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan (Geotechnical Report), prepared by Ninyo & Moore, April 2015. The Geotechnical Report is included in Appendix C of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Regional Geology

The Project Site is located within the Peninsular Ranges Geomorphic Province of southern California. This geomorphic province encompasses an area that extends approximately 125 miles from the Transverse Ranges and the Los Angeles River Basin south to the Mexican border and beyond another approximately 775 miles to the tip of Baja California. The Peninsular Ranges province varies in width from approximately 30 to 100 miles is characterized by northwest-trending mountain range blocks separated by similarly trending faults.

The predominant rock type that underlies the Peninsular Ranges province is a Cretaceous age igneous rock (granitic rock) referred to as the Southern California batholith. Older Jurassic age metavolcanic and metasedimentary rocks and older Paleozoic limestone, altered schist, and gneiss are present within the province. Cretaceous-age marine sedimentary rocks and younger Tertiary-age rocks comprised of volcanic, marine, and non-marine sediments overlie the older rocks. More recent Quaternary sediments, primarily of alluvial origin, comprise the low-lying valley and drainage areas within the region, including the area where the Harbor-UCLA Medical Center Project Site is located.

The Project is situated in the Los Angeles Basin, a region divided into four structural blocks that include uplifted zones and synclinal depressions. The structural blocks are generally bounded by fault systems. The Project site is situated in the southwestern block of the seaward part of the basin which is bounded by the Newport-Inglewood zone of deformation. This block is a combination of folds and faults and is characterized by overlapping staggering anticlinal hills. Newport-Inglewood and Palos Verdes are the major active fault systems located in proximity to the Project site. The predominant tectonic activity associated with these and other faults within the regional tectonic framework is right-lateral, strike-slip and/or reverse movement.

b. Site Geology

Regional geologic maps indicate that the Project site is underlain by late to middle Pleistocene age alluvial flood plain deposits generally comprised of dissected gravel, sand, silt and clay-bearing alluvium.

(1) Groundwater

The site is located within the west coast sub-basin of the Los Angeles Coastal Groundwater Basin. Historic groundwater monitoring well data from the State of California Water Resources Control Board's GeoTracker Website[1] were reviewed for wells located on adjacent properties east and north of the Project site. Based on the groundwater measurements in these wells from 2007 to 2014, groundwater levels at these locations have ranged from approximately 48 to 60 feet below the ground surface. The Los Angeles County Safety Element indicates that the historic high groundwater in the vicinity of the Project site is approximately 30 feet deep. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. Shallow perched conditions may be present onsite.

(2) Faulting and Seismicity

The Project site is located in a seismically active area, as is the majority of southern California and the potential for strong ground motion at the site is considered significant. Surface fault rupture is the offset or rupturing of the ground surface by relative displacement across a fault during an earthquake. According to the preliminary Geotechnical Report (Appendix C), the Project site is not transected by any known active or potentially active faults. However, earthquake events on one of the active or potentially active faults near the Project Site could result in strong ground shaking, which could affect the Harbor-UCLA Medical Center campus.

The Project is not located within a State of California Earthquake Fault Zone, although the active Newport-Inglewood fault is located approximately 3.4 miles northeast. **Figure 4.D-1,** *Regional Fault Locations***,** shows the Project location relative to the principal faults in the region. Blind thrust faults are low-angle faults at depths that do not break the surface and are, therefore, not shown on Figure 4.D-1. **Table 4.D-1,** *Principal Regional Active Faults*, lists selected principal known active faults, including blind thrust faults, within approximately 30 miles of the center of the Project area and their maximum moment magnitude (M_{max})[2].

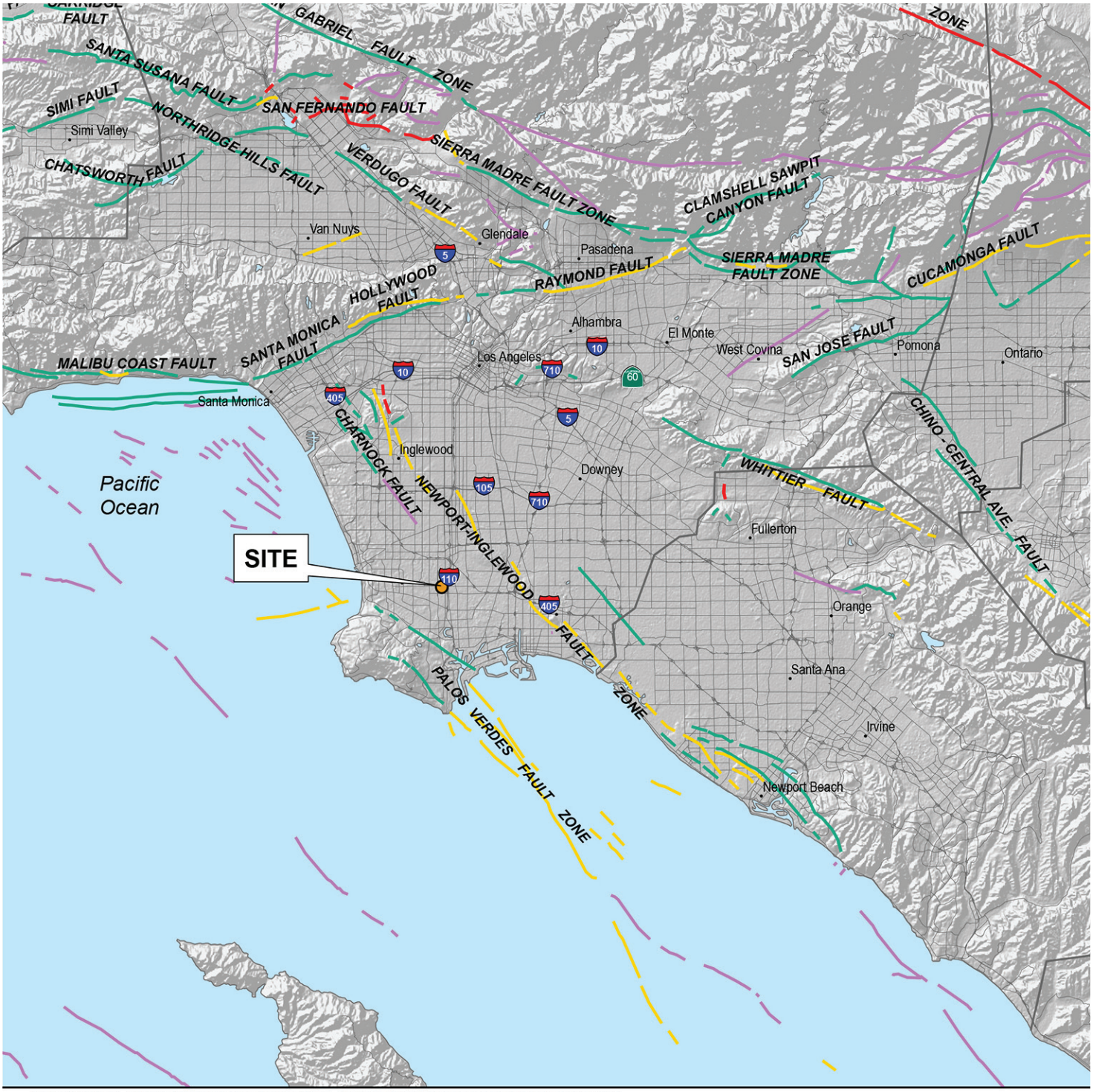
According to the Geotechnical Report prepared for the proposed Project, the site is not located within an area considered susceptible to liquefaction (**Figure 4.D-2**, *Liquefaction Seismic Hazar*d Zones). In addition, the potential for liquefaction at the site is considered relatively low based on recent groundwater depths of 48 to 60 feet in the site vicinity.

(3) Landslides

Landslides, slope failures, and mudflows of earth materials generally occur where slopes are steep and/or the earth materials are too weak to support themselves. Earthquake-induced landslides may also occur due to seismic ground shaking. A review of geologic maps did not reveal any past landslides at the Project site. In addition, the Project Site has been extensively developed and is primarily covered with pavement, hardscape, and buildings and structures. The Project Site also includes some small graded slopes associated

[1] *State of California Water Resources Control Board. http://geotracker.waterboards.ca.gov/gama/gamamap/public/default.asp?CMD=runreport&myaddress=harbor+ucla+medical+center%2C+carson%2C+ca. Accessed, April, 2015*

[2] *Cao, et al., 2003. The Revised 2002 California Probabilistic Seismic Hazard Maps. http://www.conservation.ca.gov/cgs/rghm/psha/ofr9608/Pages/Index.aspx, Accessed, April 2015*



GIS DATA SOURCE: CALIFORNIA GEOLOGICAL SURVEY (CGS); ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)
REFERENCE: JENNINGS, 2010, FAULT ACTIVITY MAP OF CALIFORNIA.

LEGEND

FAULT ACTIVITY:

- HISTORICALLY ACTIVE
- LATE QUATERNARY
- HOLOCENE ACTIVE
- QUATERNARY
- COUNTY BOUNDARIES

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE

PCR

N

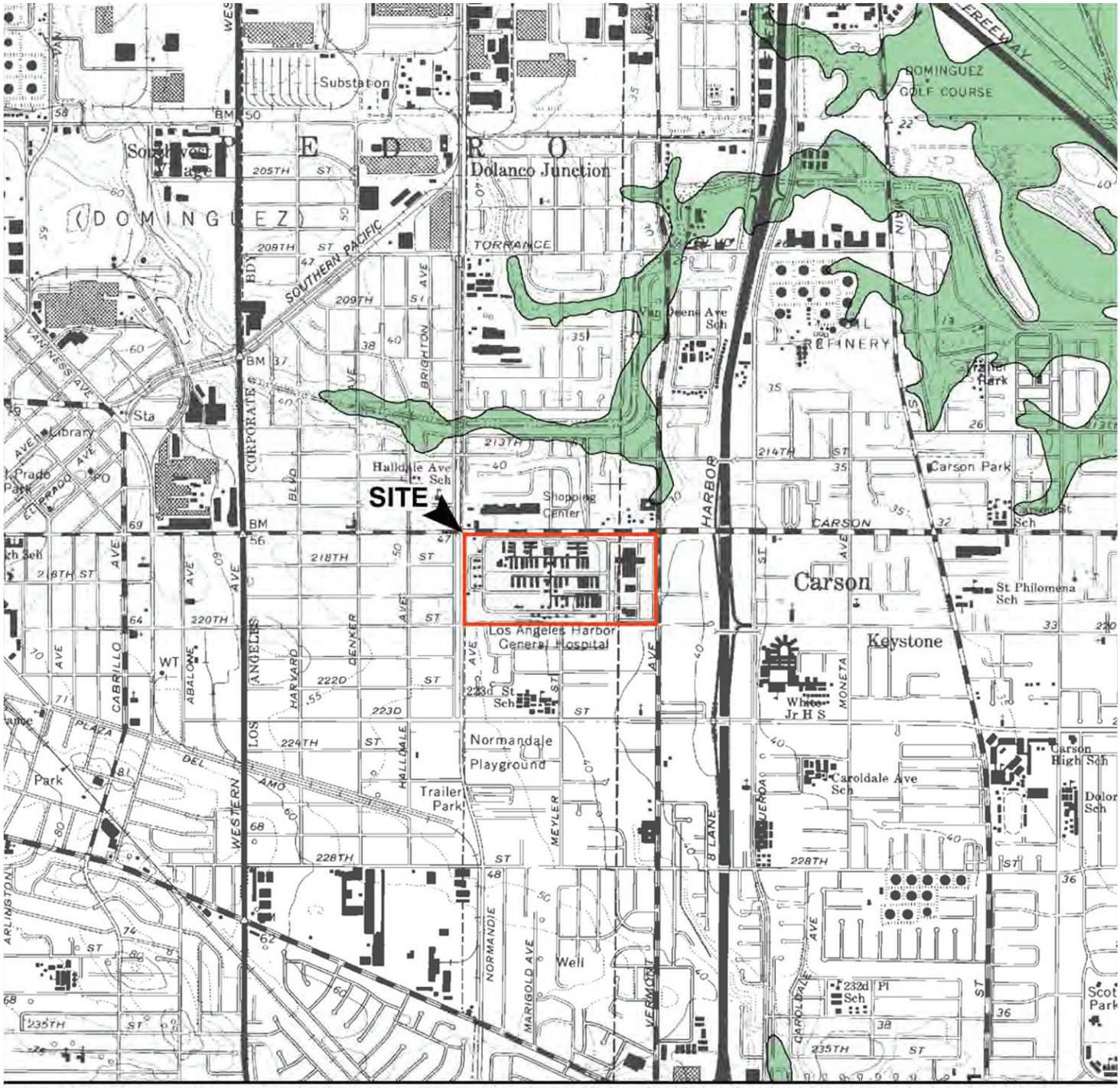
0 10 Miles

Regional Fault Locations

Harbor-UCLA Medical Center Master Plan

Source: Ninyo and Moore Geotechnical and Environmental Sciences Consultants, April 2015.

FIGURE
4.D-1



REFERENCE: CALIFORNIA DEPARTMENT OF CONSERVATION, DIVISION OF MINES AND GEOLOGY, STATE OF CALIFORNIA, 1999, SEISMIC HAZARD ZONES MAP OFFICIAL REVISED MAP TORRANCE QUADRANGLE, 7.5-MINUTE SERIES: SCALE 1:24,000.

LEGEND

LIQUEFACTION:
Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

PCR

N

0 2000 Feet

Liquefaction Seismic Hazards Zone Map

Harbor-UCLA Medical Center Master Plan

Source: Ninyo and Moore Geotechnical and Environmental Sciences Consultants, April 2015.

FIGURE
4.D-2

Table 4.D-1

Principal Regional Active Faults

Fault	Approximate Fault Distance[a] to Site Miles (Kilometers)	Maximum Moment Magnitude (M_{max})
Newport-Inglewood (Los Angeles Basin)	3.4 (5.5)	7.1
Palos Verdes	307 (5.9)	7.3
Puente Hills Blind Thrust	10.3 (16.5)	7.1
Upper Elysian Park Blind Thrust	16.7 (26.8)	6.4
Santa Monica	16.9 (27.1)	6.6
Elsinore	18.1 (29.1)	6.7
Hollywood	18.6 (30.0)	6.4
Malibu	19.1 (30.7)	6.7
Anacapa-Dume	19.8 (31.9)	7.5
Raymond	20.5 (32.9)	6.5
Verdugo	22.2 (35.7)	6.9
San Joaquin Hills Blind Thrust	22.7 (36.5)	6.6
Sierra Madre	26.9 (43.3)	7.2
San Jose	27.8 (44.7)	6.4
Clamshell-Sawpit	29.3 (47.1)	6.5

[a] *USGS, 2008*

Source: Ninyo & Moore, 2015

with landscaping and pedestrian areas. An on-site area northwest of the Existing Hospital Tower contains a slope that descends approximately 25 feet toward the edge of the building. This slope is landscaped and lined at the bottom edge with a drainage system. According to the Geotechnical Report, the potential for future landslides or mudflows to affect developments within the Project area is relatively low.

(4) Site Soils

Exposed materials at the surface of the Project site include clays and silty sandy soils. Sandy soils typically have low cohesion, and have a relatively higher potential for erosion from surface runoff when exposed in cut slopes or utilized near the face of fill embankments. Surface soils with higher amounts of clay tend to be less erodible as the clay acts as a binder to hold the soil particles together.

Soil erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in the Project area where bare soil is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, and general land uses.

(5) Subsidence

Subsidence is characterized as a sinking of ground surface relative to surrounding areas, and can generally occur where deep soil deposits are present. Subsidence in areas of deep soil deposits is typically associated with regional groundwater withdrawal or other fluid withdrawal from the ground such as oil and natural gas. Subsidence can result in the development of ground cracks and damage to subsurface vaults, pipelines and other improvements.

Historically, subsidence has occurred in the City of Long Beach, but is not known to have occurred at the Project site. The County of Los Angeles Safety Element (1990) does not indicate mapped areas of subsidence. According to the Geotechnical Report, the potential for subsidence in the Project area is low.

(6) Compressible/Collapsible Soils

Compressible soils are generally comprised of soils that undergo consolidation when exposed to new loading, such as fill or foundation loads. Soil collapse is a phenomenon where the soils undergo a significant decrease in volume upon increase in moisture content, with or without an increase in external loads. Buildings, structures, and other improvements may be subject to excessive settlement-related distress when compressible soils or collapsible soils are present.

The Geotechnical Report states that the Project area is underlain by older alluvial deposits which are generally unconsolidated, reflecting a depositional history without substantial loading, and may be subject to collapse. Older, undocumented fill soils related to previous development may be present at the Project Site and, if so, may be potentially compressible or collapsible. Due to the presence of potentially compressible or collapsible soils at the site, the potential exists for differential settlement, which can destabilize areas of hardscape or building components.

(7) Expansive Soils

Expansive soils include clay minerals that are characterized by their ability to undergo significant volume change (shrink or swell) due to variation in moisture content. Sandy soils are generally not expansive. Changes in soil moisture content can result from rainfall, irrigation, pipeline leakage, surface drainage, perched groundwater, drought, or other factors. Volumetric change of expansive soil may cause excessive cracking and heaving of structures with shallow foundations, concrete slabs-on-grade, or pavements supported on these materials.

According to the Geotechnical Report, near-surface soils in the Project site are generally clayey and sandy silt soils. Sandy soils typically have a low expansion potential. However, clayey soils are typically expansive.

(8) Corrosive Soils

The geologic environment of the Project site could include soil conditions potentially corrosive to concrete and metals. Corrosive soil conditions may exacerbate the corrosion hazard to buried conduits, foundations, and other buried concrete or metal improvements. Corrosive soils could cause premature deterioration of these underground structures or foundations.

c. Regulatory Setting

The following subsections discuss the various codes, regulations and policies applicable to geology and soils at the federal, state and local levels.

(1) Federal

(a) National Earthquake Hazards Reduction Program Reauthorization Act of 2004

The Earthquake Hazards Reduction Act {(Public Law 95-124, 42 U.S.C. 7701 et. seq.), as amended by Public Laws 101614, 105-47, 106-503, and 108-360.} was enacted in 1977 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). The program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives. NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigation and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, reports, and coordinating responsibilities. Programs under NEHRP inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the Project would be required to adhere.

In October 2004, NEHRP was reauthorized to develop effective measures for earthquake hazard reduction; promote the adoption of earthquake hazards reduction measures by government agencies, standards and codes organizations, and others involved in planning and building infrastructure; improve the understanding of earthquakes and their effects through interdisciplinary research; and, develop, operate, and maintain both the Advanced National Seismic System (ANSS) and the George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES). The act also directed that NEHRP support development and application of performance-based seismic design (PBSD). It also established an Advisory Committee on Earthquake Hazards Reduction (ACEHR) that will assess scientific and engineering trends; program effectiveness; and program management, coordination, and implementation. A NEHRP Interagency Coordinating Committee (ICC) was also established to oversee NEHRP planning, management, and coordination.

(2) State

(a) Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621-2624, Division 2, Chapter 7.5) was enacted in 1972 to address the hazard of surface faulting to structures for human occupancy.[3] The primary purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the construction of buildings intended for human occupancy on the surface traces of active faults. The Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to establish regulatory zones, known as "earthquake fault zones", around the surface traces of active faults and to issue maps to assist cities and counties in planning, zoning, and building regulation functions. Local agencies must enforce the Alquist-

[3] *The Act was originally entitled the Alquist-Priolo Geologic Hazards Zone Act.*

Priolo Earthquake Fault Zoning Act in the development permit process, where applicable, and may be more restrictive than state law requires. The Act requires that, prior to approval of a project, a geologic study be conducted to define and delineate any hazards from surface rupture. A geologist registered by the State of California, within the lead agency's organization or retained by the lead agency for the project, must prepare this geologic report. A 50-foot building setback from any known trace of an active fault is required. The Alquist-Priolo Earthquake Fault Zoning Act and its regulations are presented in California Department of Conservation, California Geological Survey, Special Publications (SP) 42, Fault-rupture Hazard Zones in California.

(b) Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Section 2690-2699) addresses the effects of strong ground shaking, liquefaction, landslides, and other ground failures due to seismic events. Under the Seismic Hazards Mapping Act, the State Geologist is required to delineate "seismic hazard zones." The State Mining and Geology Board provides additional regulations and policies to assist municipalities in preparing the Safety Element of their General Plan and encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety. Under Public Resources Code Section 2697, cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.

State publications supporting the requirements of the Seismic Hazards Mapping Act include the California Geological Survey SP 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, and SP 118, *Recommended Criteria for Delineating Seismic Hazard Zones in California*. The objectives of SP 117 are to assist in the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations and to promote uniform and effective statewide implementation of the evaluation and mitigation elements of the Seismic Hazards Mapping Act. SP 118 implements the requirements of the Seismic Hazards Mapping Act in the production of Probabilistic Seismic Hazard Maps for the State.

(c) Title 24 California Building Standards Code

The California Buildings Standards Commission (Commission) is responsible for coordinating, managing, adopting, and approving building codes in California. On July 1 2014, the 2013 California Building Standards Code (CBSC) became effective and updated all prior codes under California Code of Regulations (CCR) Title 24. The State of California provides minimum standards for building design through the 2013 California Building Code (CBC), a component of the 2013 CBSC. Chapters 16 through 18 of the 2013 CBC regulate structural design, structural tests and inspections, and soils and foundations. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC), which is used widely throughout the country (generally adopted on a state by state or district by district basis). The CBC, which has been modified for California conditions, contains numerous provisions that are more stringent than those in the UBC because of California's seismic and environmental conditions. According to Section 1613 of the CBC, "[e]very structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7."[4]

[4] *ASCE 7 is a document published by the American Society of Civil Engineers (ASCE) that specifies minimum design loads for buildings and other structures.*

(d) Senate Bill 1953: The Alquist Hospital Seismic Safety Act

Senate Bill (SB) 1953, signed into law on September 21, 1994, is an amendment to the Alfred E. Alquist Hospital Seismic Safety Act of 1983 and is California's Hospital Seismic Safety Law.[5] The 1983 Act was a response to the damage to hospitals in the 1971 Sylmar quake, and the amendment resulted from assessment of damage to hospitals following the 1994 Northridge earthquake. SB 1953 (Chapter 740) as amended is chaptered into statute in Sections 130000 through 130070 of the California Health and Safety Code. SB 1953 was a result of failures to nonstructural components of hospitals that were built in accordance with the structural provisions of the Act. SB 1953 amended the Act to address the issues of survivability of both structural and nonstructural components of hospital buildings after a seismic event. SB 1953 ensures that by 2030 California hospitals must be capable of remaining operational after a seismic event or other natural disaster. Consisting of two parts, the law requires hospitals to fix or replace buildings with structural problems that may cause them to collapse in an earthquake. Secondly, non-structural features such as electrical, mechanical, plumbing and fire safety systems must be anchored and braced so they do not become falling hazards and a threat to life in the event of a disaster. Licensed acute care facilities such as the Existing Hospital Tower have more stringent rules regarding meeting seismic standards by 2030 than sub-acute care facilities. To achieve compliance with the requirements of SB 1953 before 2030, the Project is proposed to build a New Hospital Tower compliant with SB 1953 to house acute care functions.

(3) Local

(a) Los Angeles County General Plan Update (2035)

California Government Code Section 65300 requires general plans to include "a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides, subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires." As such, the Los Angeles County General Plan Update (2035) Safety Element (Chapter 12) addresses hazards which must be considered in the physical development of the County, including seismic, geologic, erosion; flooding; hazardous materials; noise control; and emergency/disaster preparedness. Applicable goals and polices from the Safety Element are identified below:

> **Goal S1:** An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.
>
> - **Policy S1.1:** Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.
> - **Policy S1.2:** Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive fault study that addresses the potential for fault rupture has been completed.
> - **Policy S1.3:** Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards.

[5] *Office of Statewide Health Planning & Development. California's Hospital Seismic Safety Law (2005). Available at http://www.oshpd.ca.gov/fdd/seismic_compliance/SB1953/SeismicReport.pdf, accessed on July 19, 2016.*

- **Policy S1.4:** Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

Goal S2: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to flood and inundation hazards.

- **Policy S2.1:** Discourage development in the County's Flood Hazard Zones.
- **Policy S2.2:** Discourage development from locating downslope from aqueducts.
- **Policy S2.3:** Consider climate change adaptation strategies in flood and inundation hazard planning.
- **Policy S2.4:** Ensure that developments located within the County's Flood Hazard Zones are sited and designed to avoid isolation from essential services and facilities in the event of flooding.
- **Policy S2.7:** Locate essential public facilities, such as hospitals and fire stations, outside of Flood Hazard Zones, where feasible.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The technical analyses supporting the impact conclusions in the following section are based on the analysis contained in the Preliminary Geotechnical Evaluation Report prepared by Ninyo & Moore (Appendix C of this Draft EIR). The conclusions in the Preliminary Geotechnical Evaluation Report were primarily derived from the following tasks:

- Review of readily available topographic and geologic maps, published geotechnical literature, geologic and seismic data, soil data, groundwater data, aerial photographs, and in-house information;
- Review of geotechnical aspects of Project plans and documents pertaining to the site;
- Geotechnical site reconnaissance by a representative of Ninyo & Moore conducted on February 16, 2015, to observe and document the existing site conditions at the Project site;
- Compilation and analysis of existing geotechnical data pertaining to the site;
- Assessment of the general geologic conditions and seismic hazards affecting the area and evaluation of their potential impacts on the Project;
- Preparation of report presenting the results, as well as conclusions regarding the Project's geologic and seismic impacts, and recommendations to address the impacts to be included in the environmental planning documents; and
- Report preparation presenting results and conclusions regarding the Project's geologic and seismic impacts, and recommendations to address the impacts to be included in the environmental planning documents.

Data and conclusions from the analyses in the Preliminary Geotechnical Evaluation Report were used to determine potential impacts from the Project to and from the site geology and soils parameters. These

impacts were compared against the Thresholds of Significance set forth below to determine the level of significance of potential impacts.

b. Thresholds of Significance

The potential for geologic impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines.* These questions are as follows:

(VI) Geology and Soils. Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:

   1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to *Division of Mines and Geology Special Publication 42*);

   2) Strong seismic ground shaking;

   3) Seismically related ground failure, including liquefaction; or

   4) Landslides.

b) Result in substantial soil erosion or the loss of topsoil.

c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

d) Be located on expansive soils, as defined in Table 18-1-B of the UBC (1994), or corrosive soils, creating substantial risk to life or property.

e) Have soils that would be incapable of adequately supporting the use of septic tanks or alternative waste disposal systems where sewers are not available for the disposal of wastewater.

The Initial Study determined that the Project would have a less than significant impact with respect to Checklist question VI.e). Accordingly, this environmental topic is not evaluated in this EIR.

Based on the above factors, the Project would have a potentially significant impact on Geology and Soils if it would:

GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:

   1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to *Division of Mines and Geology Special Publication 42*).

2) Strong seismic ground shaking.

3) Seismically related ground failure, including liquefaction.

4) Landslides.

GEO-2: Result in substantial soil erosion or the loss of topsoil.

GEO-3: Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

GEO-4: Be located on expansive soils, as defined in Table 18-1-B of the UBC (1994), or corrosive soils, creating substantial risk to life or property.

c. Project Characteristics or Design Features

There are no specific Project Design Features that relate to geology and soils on the Project Site. However, the Project would comply with all applicable building requirements related to geology and soil conditions. Recommendations from the Geotechnical Report would be incorporated into the Project. In addition, the construction plans for acute care facilities proposed as part of the Project would be reviewed and approved by the California Office of Statewide Health Planning and Development (OSHPD).

Also, with regard to impacts pertaining to soil erosion or the loss of topsoil, the Project would implement numerous BMPs as detailed in the Water Quality Management Plan (WQMP) for the Project. The analysis below refers to Section 4.G., *Hydrology and Water Quality*, of this Draft EIR for a listing of the BMPs proposed for the Project.

d. Project Impacts

Threshold GEO-1: Would the Project expose people or structures to potential substantial adverse effects, including the risk or loss, injury, or death, involving earthquake fault rupture, seismic shaking, ground failure, or landslides?

Impact Statement GEO-1: *The Harbor-UCLA Campus is subject to seismic shaking due to its location in the seismically active southern California region. Based on subsurface geologic conditions and the depth to groundwater, the potential for substantial adverse effects due to fault rupture and ground failure is relatively low, but impacts are nonetheless potentially significant.*

(1) Fault Rupture

As previously stated, the Project site is not transected by any known active or potentially active faults. The active Newport-Inglewood fault is located approximately 3.4 miles northeast and the active Palos Verdes fault is located approximately 3.7 miles southwest of the estimated center of the Project site. The Project is not located within a State of California Earthquake Fault Zone; therefore, the potential for surface rupture at the site is relatively low and is considered a less than significant impact. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible. This is a potentially significant impact.

(2) Seismic Ground Shaking

The Harbor-UCLA Campus is located within a seismically active region, and thus the potential for seismic ground shaking exists at the site. However, the level of ground shaking at a given location depends on many factors, including the size and type of earthquake, the distance from the earthquake, and subsurface geologic conditions. The type of construction also affects how particular structures and improvements perform during ground shaking.

A site-specific analysis was conducted to evaluate the potential levels of ground shaking that could occur. The 2013 CBC recommends that the design of structures be based on spectral response accelerations in the direction of maximum horizontal response (5 percent damped) having a 1 percent probability of collapse in 50 years. These spectral response accelerations represent the Risk-Targeted Maximum Considered Earthquake (MCE_R) ground motion. The horizontal peak ground acceleration (PGA) that corresponds to the MCE_R for the site was calculated at 0.65g using the USGS web-based seismic design tool (USGS, 2014). The mapped and design PGA were estimated to be 0.62g and 0.43g, respectively, using the USGS (2014) calculator and the American Society of Civil Engineers 7-10 Standard. These ground motion estimates do not include near-source factors that may be applicable to the design of the structures on-site. Based on these PGA estimates, ground shaking at the Harbor-UCLA Campus could have a potentially significant impact on people and proposed buildings on the Harbor-UCLA Campus.

(3) Liquefaction

According to the Seismic Hazard Zones Map, the Harbor-UCLA Campus is not in an area susceptible to liquefaction; historic high groundwater depths of 48 to 60 feet in the Project vicinity limit the potential for liquefaction that could adversely affect Project buildings and structures. However, the site could be subject to seismically-induced soil settlement, which could have a significant impact on people and proposed buildings on the Harbor-UCLA Campus.

(4) Landslides

The Project Site has been extensively developed and is primarily covered with pavements, hardscape, and structures. It also includes some graded slopes associated with landscaping. An area northwest of the Existing Hospital Tower contains a landscaped slope that descends approximately 25 feet toward the edge of the building and is lined at the bottom edge with a drainage system. In addition, there have been no historic landslides at the site. Therefore, the potential for future landslides or mudflows to affect developments within the Project site are not anticipated and no significant impacts are expected. Slopes created for future developments within the Project area will be designed to reduce the potential for landslides or mudflows.

Threshold GEO-2: Would the Project result in a significant impact if it would result in substantial soil erosion or the loss of topsoil?

Impact Statement GEO-2: *Compliance with the County's National Pollutant Discharge Elimination System through implementation of a Storm Water Pollution Prevention Program for erosion control would be required during Project construction and with County's Low Impact Development (LID) ordinance requirements during operations. Impacts related to soil erosion and loss of soil would be less than significant.*

As previously stated, the materials exposed at the surface of the Project site include clays and silty sand soils. Sandy soils typically have low cohesion, and have a relatively higher potential for erosion from surface runoff when exposed in cut slopes or utilized near the face of fill embankments. Surface soils with higher amounts of clay tend to be less erodible as the clay acts as a binder to hold the soil particles together.

Future construction at the Project site would result in ground surface disruption during excavation, grading, and trenching that would create the potential for erosion to occur. However, as described in Section 4.G., Hydrology and Water Quality, any project involving grading of an area greater than one acre is required to apply for a National Pollutant Discharge Elimination System permit from the Los Angeles Regional Water Quality Control Board. This permit requires preparation and implementation of a Storm Water Pollution Prevention Program (SWPPP) incorporating Best Management Practices (BMPs) for erosion control. Specifically, construction activity resulting in a land disturbance of one acre or more, or less than one acre but part of a larger common plan of development, must obtain the Construction Activities Stormwater General Permit. Construction activities include clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. Positive surface drainage should be accommodated at project construction sites to allow surface runoff to flow away from site improvements or areas susceptible to erosion. To reduce wind-related erosion, wetting of soil surfaces and/or covering exposed round areas and soil stockpiles could be considered during construction operations, as appropriate. The use of soil tackifiers may also be considered to reduce the potential for wind related soil erosion. Implementation of BMPs would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. In addition, the topographic gradients at the Project Site are relatively gentle. Therefore, potential soil erosion impacts during construction would be less than significant and no mitigation is required.

BMPs related to ongoing drainage design and maintenance practices would be included in the SWPPP and implemented to reduce soil erosion during operation of the proposed Project. Examples of these procedures could include surface drainage measures for erosion due to water, such as the use of erosion prevention mats or geofabrics, silt fencing, sandbags and plastic sheeting, and temporary devices. Soil erosion during operation can also be mitigated through design procedures such as appropriate surface drainage design of roadways and facilities to provide for positive surface runoff. These design procedures would address reducing concentrated run-off conditions that could cause erosion and affect the stability of Project improvements.

Additionally, as discussed in more detail in Section 4.G., Hydrology and Water Quality, of this Draft EIR, buildout of the Harbor-UCLA Master Plan Project would increase the amount of pervious area on the Campus. However, the Project would be built out in compliance with the County's Low Impact Development (LID) ordinance, which requires new development to include features and practices that provide physical, biological, and chemical controls that remove pollutants from stormwater runoff generated on a project site. Typical LID features include bioretention or infiltration, which are intended to reduce and slow peak stormwater flows discharged off-site compared to existing conditions. Since these and other LID compliance practices and feature area intended to prevent, among other potential impacts, erosion and sedimentation conveyed by stormwater and discharged to off-site storm drain infrastructure and receiving water bodies, compliance with County LID requirements would prevent erosion of soil on the Project Site. Accordingly, following Project buildout, operational impacts related to erosion of on-site soil would be less than significant.

Threshold GEO-3: Would the Project result in a significant impact if it would be located on a geologic unit or soil that is unstable or that would become unstable, potentially resulting in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Impact Statement GEO-3: *Buildout of the Harbor-UCLA Campus could result in potentially significant impacts related to differential soil settlement and liquefaction beneath proposed buildings, due to the presence of alluvium and possible undocumented fill, and relatively shallow depths to groundwater beneath the Campus. Subsidence hazards would be less than significant.*

(1) Subsidence

As previously stated, historic subsidence is not known to have occurred on the Harbor-UCLA Campus and it does not lie within a mapped subsidence area according to the County of Los Angeles Safety Element. Therefore, the potential for subsidence on the Project site is relatively low. Subsidence hazards during construction and operation would be a less than significant impact.

(2) Compressible/Collapsible Soils

The Project area is underlain by older alluvial deposits which are generally unconsolidated, reflecting a depositional history without substantial loading, and may be subject to collapse. Older undocumented fill soils related to the previous development at the Project Site may also be potentially compressible or collapsible. Due to the presence of potentially compressible/collapsible soils at the site, there is a potential for differential settlement, which could cause damage to Project improvements. This is a potentially significant impact.

(3) Shallow Groundwater

Proposed construction activities in the Project area would include excavation and site grading for new medical, office and retail structures, pedestrian areas, landscaping, open space areas, and parking area improvements. Areas of shallower perched groundwater may be encountered during excavations. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. If wet or saturated soil conditions are encountered during excavation, instability could occur and present a constraint to the construction of foundations. This is a potentially significant impact.

Threshold GEO-4: Would the Project result in a significant impact if it would be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), or corrosive soils, creating substantial risk to life or property?

Impact Statement GEO-4: *Buildout of the Harbor-UCLA Campus could result in potentially significant impacts related to expansive and corrosive soils beneath proposed buildings, based on the underlying soil type(s).*

(1) Expansive Soils

As previously stated, the near-surface soils in the Project site are generally clayey and sandy silt soils. Clayey soils are typically expansive when wetted, and could have an adverse effect on proposed Project buildings. This is a potentially significant impact.

(2) Corrosive Soils

The Project site is located in a geologic environment that could potentially contain soil conditions that are corrosive to concrete and metal, which could cause premature deterioration of underground structures or foundations. This is a potentially significant impact.

4. CUMULATIVE IMPACTS

The study area considered for cumulative impacts encompasses the areas that could be affected by Harbor-UCLA Master Plan Project activities as well as by other projects whose activities could directly or indirectly affect the geology and soils of the Project Site. All of the identified related projects would be built in the same seismically active region and could experience ground shaking and other seismically related hazards, similar to the Project. Those projects would also be subject to applicable seismic standards, safety requirements and, standard design specification to keep potential risk of damage from seismic and other geologic hazards to an acceptable level. Geologic and soil impacts are generally site-specific and there is little, if any, cumulative relationship between development projects. Adherence to all relevant plans, codes, and regulations with respect to project design and construction would reduce project-specific and cumulative geologic impacts. Therefore, the Harbor-UCLA Medical Center Campus Master Plan Project, considered together with related projects, would not result in a cumulatively considerable contribution to cumulatively significant geology and seismicity impacts.

During construction of the proposed and related projects, grading and excavation have the potential to expose soils in the area to wind and water erosion, resulting in a loss of soils. As discussed above under Impact Statement GEO-2, any project involving grading of an area greater than one acre is required to apply for a NPDES permit, which requires the use of BMPs for erosion control. Compliance with NPDES requirements would minimize potential soil erosion impacts for the proposed and related projects. Moreover, compliance with the County's LID ordinance would ensure features and practices intended to reduce, among other impacts, sedimentation in stormwater discharge, would be incorporated into Project design and operations. Therefore, the Harbor-UCLA Medical Center Campus Master Plan Project, considered together with related projects, would not result in a cumulatively considerable contribution to cumulatively significant soil erosion impacts.

Operation of the proposed and related projects would not change the geologic properties of the Project area. Seismic and other geologic hazards could still potentially impact the proposed and related projects as they are located in a seismically active region. However, these risks would not increase or decrease as a result of the proposed and/or related projects. Therefore, operation of the Harbor-UCLA Medical Center Master Plan Project, considered together with the related projects, would not result in a cumulatively considerable contribution to cumulatively significant impacts with respect to geology, soils and seismicity.

5. MITIGATION MEASURES

The following measure is required to mitigate Impact GEO-1:

MM-GEO-1: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate potential fault rupture, seismic ground shaking, and liquefaction hazards identified under Impact GEO-1:

- *Seismicity:* Structural elements of future improvements shall be designed to resist or accommodate appropriate site-specific ground motions and conform to the current seismic design standards.
- *Liquefaction:* An assessment of the liquefaction potential and seismically induced dynamic settlement shall be made prior to detailed design and construction of the proposed Project. Structural design and mitigation techniques, such as in-situ ground modification or supporting foundations with piles at depths designed specifically for liquefaction, shall be included.

  To evaluate the potential liquefaction hazard for the Project, a subsurface evaluation could be performed. Site-specific geotechnical evaluations that assess the liquefaction and dynamic settlement characteristics of the on-site soils shall include the drilling of exploratory borings, evaluation of groundwater depths, and laboratory testing of soils.

  Methods for construction in areas with a potential for liquefaction hazard may include in-situ ground modification, removal of liquefiable layers and replacement with compacted fill, or support of Project improvements on piles at depths designed specifically for liquefaction. Pile foundations can be designed for a liquefaction hazard by supporting the piles in dense soil or bedrock located below the liquefiable zone or other appropriate methods as evaluated during the site-specific evaluation. Additional recommendations for mitigation of liquefaction may include densification by installation of stone columns, vibration, deep dynamic compaction, and/or compaction grouting.

The following measure is required to mitigate Impact GEO-3:

MM-GEO-2: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate unstable soil hazards identified under Impacts GEO-3:

- *Compressible/Collapsible Soils and Settlement:* An assessment of the potential for soils that are prone to settlement shall be made prior to detailed design and construction of Project improvements, and mitigation techniques shall be developed, as appropriate, to reduce impacts related to settlement to low levels.

During the detailed design phase of the Project components, surface reconnaissance and site-specific geotechnical evaluations shall be performed to assess the settlement potential of the on-site natural soils and undocumented fill. This may include detailed surface reconnaissance to evaluate site conditions, drilling of exploratory borings or test pits, and laboratory testing of soils, where appropriate, to evaluate site conditions.

Prescribed mitigation measures for soils with the potential for settlement include removal of compressible/collapsible soil layers and replacement with compacted fill; surcharging to induce settlement prior to construction of new fills; and specialized foundation design, including the use of deep foundation systems to support structures. Varieties of in-situ soil improvement techniques are also available, such as dynamic compaction (heavy tamping) or compaction grouting.

- *Shallow Groundwater:* A subsurface exploration shall be performed during the detailed design phase of future improvements to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and construction of Project improvements. Assessment of the potential for shallow groundwater would be evaluated during the design phase of the Project and mitigation techniques would be developed, as appropriate, to reduce the impacts related to shallow groundwater to low levels. Therefore, potential impacts due to groundwater would be reduced with incorporation of techniques such as construction dewatering.

The following measure is required to mitigate Impact GEO-4:

MM-GEO-3: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate expansive soils hazards identified under Impacts GEO-4.

- *Expansive Soils:* An assessment of the potential for expansive soils will be conducted during the detailed design and construction phases of the Project. Mitigation techniques such as over excavation and replacement with non-expansive soil, soil treatment, moisture management, and/or specific structural design for expansive soil conditions would reduce the impact from expansive soils to low levels.
- *Corrosive Soils:* An assessment of the potential for corrosive soils will be conducted during the detailed design phase of the Project through a subsurface evaluation including soil testing and analysis of soils at foundation design depths. Laboratory tests would include corrosivity tests to evaluate the corrosivity of the subsurface soils. Data will be reviewed by a corrosion engineer and mitigation techniques suitable for the proposed Project will be implemented as appropriate. Mitigation of corrosive soil conditions could include the use of concrete resistant to sulfate exposure. Corrosion protection for metals used in underground foundations or structures in areas where corrosive groundwater or soil could potentially cause deterioration could include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the appropriate type of cement and water/cement ratio. Specific measures to reduce the potential effects would be developed in the design phase and would reduce impacts related to corrosive soils to low levels.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Given compliance with applicable building codes and seismic safety requirements, as well as implementation of applicable mitigation measures, impacts related to geology and soils would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
E. GREENHOUSE GAS EMISSIONS

1. INTRODUCTION

This section addresses greenhouse gas (GHG) emissions generated by the construction and operation of the Project inclusive of mandatory and voluntary energy and resource conservation measures that have been incorporated into the Project to reduce GHG emissions and associated impacts. The analysis also addresses the consistency of the Project with applicable regulations, plans, and policies set forth by the State of California and the County to reduce GHGs. The Project's potential contributions to global climate change impacts are identified. GHG emission calculations prepared for the Project are provided in Appendix D of this Draft EIR.

2. ENVIRONMENTAL SETTING

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however current data increasingly indicate that the current global conditions differ from past climate changes in rate and magnitude. Global climate change attributable to anthropogenic (human) GHG emissions is currently one of the most important and widely debated scientific, economic and political issues in the United States and the world. The extent to which increased concentrations of GHGs have caused or will cause climate change and the appropriate actions to limit and/or respond to climate change are the subject of significant and rapidly evolving regulatory efforts at the federal and state levels of government.

GHGs are those compounds in the Earth's atmosphere which play a critical role in determining temperature near the Earth's surface. More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Not all GHGs possess the same ability to induce climate change; as a result, GHG contributions are commonly quantified in the units of equivalent mass of carbon dioxide (CO_2e). Mass emissions are calculated by converting pollutant specific emissions to CO_2e emissions by applying the proper global warming potential (GWP) value.[1] These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories; however, the resulting difference in CO_2e emissions is relatively minor. By applying the GWP ratios, project-related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The CO_2e values are calculated for construction years as well as Existing Hospital and Master Plan Project buildout conditions in order to generate a net change in GHG emissions for construction and operation. Compounds that are regulated as GHGs are discussed below.

[1] *GWPs and associated CO_2e values were developed by the Intergovernmental Panel on Climate Change.*

Carbon Dioxide (CO_2): CO_2 is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO_2 is the reference gas (GWP of 1) for determining the GWPs of other GHGs.

Methane (CH_4): CH_4 is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The GWP of CH_4 is 21 in the IPCC SAR and 25 in the IPCC AR4.

Nitrous Oxide (N_2O): N_2O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N_2O is 310 in the IPCC SAR and 298 in the IPCC AR4.

Hydrofluorocarbons (HFCs): HFCs are fluorinated compounds consisting of hydrogen, carbon, and fluorine. They are typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems. The GWPs of HFCs ranges from 140 for HFC-152a to 11,700 for HFC-23 in the IPCC SAR and 124 for HFC-152a to 14,800 for HFC-23 in the IPCC AR4.

Perfluorocarbons (PFCs): PFCs are fluorinated compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. The GWPs of PFCs range from 6,500 to 9,200 in the IPCC SAR and 7,390 to 17,700 in the IPCC AR4.

Sulfur Hexafluoride (SF_6): SF_6 is a fluorinated compound consisting of sulfur and fluoride. It is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF_6 has a GWP of 23,900 in the IPCC SAR and 22,800 in the IPCC AR4.

a. Existing Conditions

(1) Greenhouse Gas Emissions Inventory

Worldwide man-made emissions of GHGs were approximately 49,000 million metric tons (MMT) CO_2e annually including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation).[2] Emissions of CO_2 from fossil fuel use and industrial processes accounts for 65 percent of the total while CO_2 emissions from all sources accounts for 76 percent of the total. Methane emissions account for 16 percent and N_2O emissions for 6.2 percent. In 2013, the United States was the world's second largest emitter of carbon dioxide at 5,300 MMT (China was the largest emitter of carbon dioxide at 10,300 MMT).[3]

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on the 2013 GHG inventory data (i.e., the latest year for which data are available from CARB), California emitted 459.3 $MMTCO_2e$ including emissions resulting from imported electrical power and 419.3 $MMTCO_2e$

[2] *Intergovernmental Panel on Climate Change, Fifth Assessment Report - Synthesis Report, 2014.*

[3] *PBL Netherlands Environmental Assessment Agency and the European Commission Joint Research Center, Trends in Global CO_2 Emissions 2014 Report, 2014.*

excluding emissions related to imported power.[4] Between 1990 and 2013, the population of California grew by approximately 8.2 million (from 29.8 to 38.0 million).[5] This represents an increase of approximately 27.5 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from $773 billion in 1990 to $2.21 trillion in 2013 representing an increase of approximately 186 percent.[6] Despite the population and economic growth, California's net GHG emissions only grew by approximately 9.5 percent between 1990 and 2013. The California Energy Commission (CEC) attributes the slow rate of growth to the success of California's renewable energy programs and its commitment to clean air and clean energy.[7] **Table 4.E-1**, *State of California Greenhouse Gas Emissions,* identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2011 (i.e., the most recent year in which data are available from CARB). As shown in the table, the transportation sector is the largest contributor to statewide GHG emissions at 37 percent in 2013.

(2) Existing Site Greenhouse Gas Emissions

The Medical Center Campus is currently developed with approximately 1.3 million square feet of differentiated buildings including the hospital and the current hospital expansion in the east sector of the Medical Center Campus; LA Biomed facilities in the central portion of the Medical Center Campus; administration and facilities management buildings in various locations of the Medical Center Campus; and large tenants, such as the Children's Institute International and MFI's Harbor-UCLA Professional Building (outpatient care) and Imaging Center, in the west sector of the Medical Center Campus. The existing Medical Center Campus generates mobile source emissions from vehicle trips to and from the Medical Center Campus and from the operation of medical helicopters. The Existing Hospital generates on-site area and stationary source emissions from the combustion of natural gas from the existing Central Plant for cooling and heating. As described in the Campus Master Plan, the Central Plant consists of a Boiler Plant and Chiller Plant. The Medical Center Campus also maintains six 2-megawatt (MW) emergency generators that would result in stationary source emissions from the combustion of fuel oil when required to operate. Other existing emissions include on-site combustion area source emissions from fossil-fueled landscaping equipment. The Master Plan Project would not result in changes in GHG emissions associated with the operation of the Central Plant or emergency generators. In addition, the operation of medical helicopters under Existing Hospital conditions is expected to be similar under the Master Plan Project. In order to compare the change in GHG emissions from implementation of the Project, this analysis estimates GHG emissions from Existing Hospital uses that would be demolished, replaced, or renovated under the Project. Mobile source emissions from visitors and employees traveling to and from the Medical Center Campus are also included in the GHG emissions estimate. The estimated Existing Hospital emissions from uses and elements that would be demolished, replaced, or renovated under the Project are summarized in **Table 4.E-2**, *Estimated Existing*

[4] *California Air Resources Board, "California Greenhouse Gas 2000-2013 Inventory by Scoping Plan Category - Summary," http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_2000-13_20150831.pdf. Accessed February 2016.*

[5] *U.S. Census Bureau, "California, Population of Counties by Decennial Census: 1900 to 1990," http://quickfacts.census.gov/qfd/states/06000lk.html. Accessed November 2015; California Department of Finance, "E-5 Population and Housing Estimates for Cities, Counties and the State, January 2011-2015, with 2010 Benchmark," http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php. Accessed November 2015.*

[6] *California Department of Finance, "Financial & Economic Data: Gross Domestic Product, California," http://www.dof.ca.gov/HTML/FS_DATA/LatestEconData/FS_Misc.htm. Accessed November 2015. Amounts are based on current dollars as of the date of the report (June 2015).*

[7] *California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004, (2006).*

Table 4.E-1

State of California Greenhouse Gas Emissions

Category	Total 1990 Emissions using IPCC SAR ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2013 Emissions using IPCC AR4 ($MMTCO_2e$)	Percent of Total 2013 Emissions
Transportation	150.7	35%	169.0	37%
Electric Power	110.6	26%	90.5	20%
Commercial and Residential	44.1	10%	43.5	9%
Industrial	103.0	24%	92.7	20%
Recycling and Waste [a]	–	–	8.9	2%
High GWP/Non-Specified [b]	1.3	<1%	18.5	4%
Agriculture/Forestry	23.6	6%	36.2	8%
Forestry Sinks	-6.7		-- [c]	--
Net Total (IPCC SAR)	**426.6**	**100%**	--	--
Net Total (IPCC AR4) [c]	**431**	**100%**	**459.3**	**100%**

[a] *Included in other categories for the 1990 emissions inventory.*

[b] *High GWP gases are not specifically called out in the 1990 emissions inventory.*

[c] *CARB revised the State's 1990 level GHG emissions using GWPs from the IPCC AR4.*

Sources: California Air Resources Board, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, (2007); California Air Resources Board, "California Greenhouse Gas 2000-2013 Inventory by Scoping Plan Category – Summary," http://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed February 2016.

Hospital Greenhouse Gas Emissions. Detailed emissions calculations are provided in Appendix D of this Draft EIR.

(3) Effects of Global Climate Change

The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system and inability to accurately model it, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC, in its *Fifth Assessment Report, Summary for Policy Makers*, stated that "it is *extremely likely* that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forcings together."[8] A report from the National Academy of Sciences concluded that 97 to 98 percent of the climate researchers most actively publishing in

[8] *Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, (2013) 15.*

Table 4.E-2

Estimated Existing Hospital Greenhouse Gas Emissions

Emissions Sources	CO_2e (Metric Tons per Year) [a]
Existing Hospital	
Mobile Sources	26,255
Area	< 1
Energy (Electricity and Natural Gas)	5,959
Water/Wastewater Conveyance	867
Waste	2,209
Subtotal	**35,290**

[a] *Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix D.*

Source: PCR Services Corporation, 2016

the field support the tenets of the IPCC in that climate change is very likely caused by human (i.e., anthropogenic) activity.[9]

According to CARB, the potential impacts in California due to global climate change may include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; more large forest fires; more drought years; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation.[10] Below is a summary of some of the potential effects, reported by an array of studies that could be experienced in California as a result of global warming and climate change.

(a) Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore, its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state.[11]

[9] *Anderegg, William R. L., J.W. Prall, J. Harold, S.H., Schneider, Expert Credibility in Climate Change, Proceedings of the National Academy of Sciences of the United States of America. 2010;107:12107-12109.*

[10] *California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, (2006).*

[11] *California Energy Commission, Scenarios of Climate Change in California: An Overview, February 2006. http://www.energy.ca.gov/2005publications/CEC-500-2005-186/CEC-500-2005-186-SF.PDF. Accessed March 2015.*

In 2009, the California Natural Resources Agency (CNRA) published the *California Climate Adaptation Strategy*[12] as a response to the Governor's Executive Order S-13-2008. The CNRA report lists specific recommendations for state and local agencies to best adapt to the anticipated risks posed by a changing climate. In accordance with the *California Climate Adaptation Strategy*, the CEC was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers.[13] The website, known as Cal-Adapt, became operational in 2011.[14] The information provided from the Cal-Adapt website represents a projection of potential future climate scenarios. The data are comprised of the average values from a variety of scenarios and models and are meant to illustrate how the climate may change based on a variety of different potential social and economic factors. According to the Cal-Adapt website, the portion of the County of Los Angeles in which the Medical Center Campus is located (near Carson, CA) could result in an average increase in temperature of approximately 5 to 9 percent (about 3.2 to 5.7°F) by 2070-2090, compared to the baseline 1961-1990 period.

(b) Water Supply

Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, "Considerable uncertainty about precise impacts of climate change on California hydrology and water resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change."[15] For example, some studies identify little change in total annual precipitation in projections for California while others show significantly more precipitation.[16] Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff would occur at a time when some basins are either being recharged at their maximum capacity or are already full.[17] Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.[18]

The California Department of Water Resources report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta, concludes that "climate change will likely have a significant effect on California's future water resources…[and] future water demand." It also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain." It also reports that the relationship between climate change and its potential effect on water demand is not well understood, but "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future." Still, changes in water supply are expected to occur, and many

[12] *California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, (2009).*

[13] *Ibid.*

[14] *The Cal-Adapt website address is: http://cal-adapt.org.*

[15] *Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature, July 2003. http://www.pacinst.org/reports/climate_change_and_california_water_resources.pdf. Accessed March 2015.*

[16] *Ibid*.

[17] *Ibid.*

[18] *Ibid.*

regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows.[19] In its *Fifth Assessment Report*, the IPCC states "Changes in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions."[20]

(c) Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

(d) Agriculture

California has a $30 billion agricultural industry that produces half the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thus affect their quality.[21]

(e) Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise by 2-11.5°F (1.1-6.4°C) by 2100, with significant regional variation.[22] Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as two feet along most of the U.S. coast. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes such as carbon cycling and storage.[23, 24]

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[19] *California Department of Water Resources Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources, July 2006. http://baydeltaoffice.water.ca.gov/climatechange/DWRClimateChangeJuly06_update8-2-07.pdf. Accessed March 2015.*

[20] *Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, (2013) 20.*

[21] *California Climate Change Center, Our Changing Climate: Assessing the Risks to California, (2006).*

[22] *National Research Council, Advancing the Science of Climate Change, (2010).*

[23] *Parmesan, C., 2004. Ecological and Evolutionary Response to Recent Climate Change.*

[24] *Parmesan, C and Galbraith, H, 2004. Observed Ecological Impacts of Climate Change in North America. Arlington, VA: Pew. Cent. Glob. Clim. Change.*

b. Regulatory Framework

(1) Federal

The USEPA is responsible for implementing federal policy to address GHGs. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO_2 gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the Energy Star labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), the United States Supreme Court held in April of 2007 that the USEPA has statutory authority under Section 202 of the federal Clean Air Act to regulate GHGs. The Court did not hold that the USEPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare.

On May 19, 2009, the President announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The adopted federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpasses the prior Corporate Average Fuel Economy standards and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016, based on USEPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.[25]

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act. The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) on December 7, 2009. The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the Clean Air Act consistently with the United States Supreme Court decision. The USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not themselves impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

[25] *United States Environmental Protection Agency, "EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks," August 2012, http://www.epa.gov/oms/climate/documents/420f12051.pdf. Accessed March 2015.*

(2) State

California has promulgated a series of executive orders, laws, and regulations aimed at reducing both the level of GHGs in the atmosphere and emissions of GHGs from commercial and private activities within the State.

(a) California Air Resources Board

The CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's State Implementation Plan, for which it works closely with the federal government and the local air districts. The State Implementation Plan is required for the State to take over implementation of the federal Clean Air Act.

(b) Executive Order S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

The Secretary of CalEPA is required to coordinate efforts of various agencies in order to collectively and efficiently reduce GHGs. Some of the agency representatives involved in the GHG reduction plan include the Secretary of the Business, Transportation and Housing Agency, the Secretary of the Department of Food and Agriculture, the Secretary of the Resources Agency, the Chairperson of CARB, the Chairperson of the California Energy Commission, and the President of the Public Utilities Commission. Representatives from these agencies comprise the California Climate Action Team (CAT).

The CAT provides biennial reports to the Governor and Legislature on the state of GHG reductions in the state as well as strategies for mitigating and adapting to climate change. The first CAT Report to the Governor and the Legislature in 2006 contained recommendations and strategies to help meet the targets in Executive Order S 3-05.[26] The 2010 CAT Report, finalized in December 2010, expands on the policy oriented 2006 assessment.[27] The new information detailed in the CAT Report includes development of revised climate and sea-level projections using new information and tools that have become available in the last two

[26] *California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, (2006).*

[27] *California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, (2010).*

years; and an evaluation of climate change within the context of broader social changes, such as land-use changes and demographic shifts.

(c) California Assembly Bill 32 (AB 32, Nunez) (Chapter 488, Statutes of 2006)

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006, focusing on reducing GHG emissions in California to 1990 levels by 2020. As required by AB 32, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 $MMTCO_2e$ using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under business-as-usual (BAU) conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). Therefore, under the original projections, the state must reduce its 2020 BAU emissions by 28.4 percent in order to meet the 1990 target of 427 $MMTCO_2e$. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 $MMTCO_2e$. CARB also updated the State's 2020 BAU emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently adopted for motor vehicles and renewable energy.[28] CARB's revised 2020 BAU emissions estimate using the GWP values from the IPCC AR4 is 509.4 $MMTCO_2e$. Therefore, the emission reductions necessary to achieve the 2020 emissions target of 431 $MMTCO_2e$ would be 78.4 $MMTCO_2e$, or a reduction of GHG emissions by approximately 15.4 percent. A summary of the GHG emissions reductions required under AB 32 is provided in **Table 4.E-3**, *Estimated Greenhouse Gas Emissions Reductions Required by AB 32*.

AB 32 defines GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under AB 32, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020. On or before June 30, 2007, CARB was required to publish a list of discrete early action GHG emission reduction measures that would be implemented to be made enforceable by 2010. In 2007, CARB published its Final Report for Proposed Early Actions to Mitigate Climate Change in California.[29] This report described recommendations for discrete early action measures to reduce GHG emissions as part of California's AB 32 GHG reduction strategy. Resulting from this are three new regulations proposed to meet the definition of "discrete early action greenhouse gas reduction measures," including the following: a low carbon fuel standard; reduction of HFC 134a (HFC used in automobile air-conditioning systems) emissions from non-professional servicing of motor vehicle air conditioning systems; and improved landfill gas capture. CARB estimates that by 2020, the reductions from those three measures would range from 13 to 26 $MMTCO_2e$. Six additional early-action regulations were adopted on October 25, 2007 that targeted: motor vehicles; auxiliary engines from docked ships; PFCs from the semiconductor industry; propellants in consumer products; automotive maintenance; and SF_6 from non-electricity sectors.

[28] *California Air Resources Board, "2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition," http://www.arb.ca.gov/cc/inventory/data/bau.htm. Accessed March 2015.*

[29] *California Air Resources Board, Proposed Early Actions to Mitigation Climate Change in California, (2007).*

Table 4.E-3

Estimated Greenhouse Gas Emissions Reductions Required by AB 32

Emissions Category	GHG Emissions ($MMTCO_2e$)
2008 Scoping Plan (IPCC SAR)	
2020 BAU Forecast (CARB 2008 Scoping Plan Estimate)	596
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	427
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	**169 (28.4%)** [a]
2011 Scoping Plan (IPCC AR4)	
2020 BAU Forecast (CARB 2011 Scoping Plan Estimate)	509.4
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	431
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	**78.4 (15.4%)** [b]

$MMTCO_2e$ = million metric tons of carbon dioxide equivalents

[a] *596 – 427 = 169 / 596 = 28.4%*
[b] *509.4 – 431 = 78.4 / 509.4 = 15.4%*

Source: California Air Resources Board, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D, August 19, 2011; California Air Resources Board, "2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition," http://www.arb.ca.gov/cc/inventory/data/bau.htm. Accessed March 2015.

(d) California Assembly Bill No. 1493 (AB 1493, Pavley), (Chapter 200, Statutes of 2002)

In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. The State of California in 2004 submitted a request for a waiver from federal clean air regulations, which ordinarily preempts state regulation of motor vehicle emission standards, to allow the state to require reduced tailpipe emissions of CO_2. In late 2007, the USEPA denied California's waiver request. In early 2008, the state brought suit against USEPA related to this denial. In January 2009, the President directed the USEPA to assess whether its denial of the waiver was appropriate under the federal Clean Air Act. In June 2009, the USEPA granted California the waiver.

However, as discussed previously, the USEPA and USDOT have adopted federal standards for model year 2012 through 2016 light-duty vehicles. In light of the USEPA and USDOT standards, California - and states adopting California emissions standards - have agreed to defer to the proposed national standard through model year 2016. The 2016 endpoint of the federal and state standards is similar, although the federal standard ramps up slightly more slowly than required under the state standard. The state standards (called the Pavley standards) require additional reductions in CO_2 emissions beyond model year 2016 (referred to as Pavley Phase II standards). As noted above, the USEPA and USDOT have adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the Pavley Phase II standards, but the State of California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly less reductions in California, it would achieve greater

reductions nationally and is stringent enough to meet state GHG emission reduction goals.[30] On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017-2025 national standards to meet state law.

(e) Executive Order S-01-07

Executive Order S-01-07 was enacted by the Governor on January 18, 2007. The order mandates the following: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established in California.

(f) Senate Bill 97 (SB 97, Dutton) (Chapter 185, Statutes of 2007)

Senate Bill (SB) 97 (Chapter 185, Statutes of 2007), enacted in 2007, amended CEQA to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directed the California Office of Planning and Research to develop revisions to the State CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the Resources Agency to certify and adopt these revised State CEQA Guidelines by January 2010. The revisions were completed in March 2010 and codified into the California Code of Regulations and became effective within 120 days pursuant to CEQA. The amendments provide regulatory guidance for the analysis and mitigation of the potential effects of GHG emissions. The CEQA Guidelines require:

- Inclusion of GHG analyses in CEQA documents;
- Determination of significance of GHG emissions; and
- If significant GHG emissions would occur, adoption of mitigation to address significant emissions.

(g) Senate Bill 375 (SB 375, Steinberg) (Chapter 728, Statutes of 2008)

SB 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions, was adopted by the State on September 30, 2008. Under SB 375, CARB is required, in consultation with the Metropolitan Planning Organization , to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. On September 23, 2010, CARB adopted the vehicular GHG emissions reduction targets for the Southern California Association of Governments (SCAG), which is the Metropolitan Planning Organization for the region in which the County of Los Angeles is located. The target is a per capita reduction of 8 percent for 2020 and 13 percent for 2035 compared to the 2005 baseline. Of note, the proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and the low carbon fuel standard regulations.

Under SB 375, the target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS;

[30] *California Air Resources Board, "Advanced Clean Cars Summary," http://www.arb.ca.gov/msprog/clean_cars/acc%20summary-final.pdf. Accessed March 2015.*

however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS. On April 7, 2016, SCAG adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS).[31] Using growth forecasts and economic trends, the 2016 RTP/SCS provides a vision for transportation throughout the region for the next 25 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The 2016 RTP/SCS successfully achieves and exceeds the GHG emission-reduction targets set by CARB by demonstrating an eight percent reduction by 2020, 18 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level on a per capita basis.

SCAG's Sustainable Communities Strategy provides specific strategies for successful implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

(h) Title 24, Building Standards Code and CALGreen Code

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[32] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. When the CALGreen Code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental

[31] *Southern California Association of Governments, 2016-2040 RTP/SCS, http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. Accessed June 2016.*

[32] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

quality.[33] The CALGreen Code was most recently updated in 2013 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2014 (the energy provisions took effect on July 1, 2014).[34]

(i) Senate Bill 1078 (SB 1078, Sher) (Chapter 516, Statutes of 2002) and Senate Bill 107 (SB 107, Simitian) (Chapter 464, Statutes of 2006) and Executive Order S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the State's Renewables Portfolio Standard to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the Renewables Portfolio Standard with a Renewable Energy Standard that will result in a total renewable energy requirement for utilities of 33 percent by 2020. But on April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's RPS to 33 percent by 2020.

(j) California Senate Bill 1368

California SB 1368, a companion bill to AB 32, requires the California Public Utilities Commission (CPUC) and the CEC to establish GHG emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO_2 per megawatt-hour.

(k) Executive Order B-30-15

On April 29, 2015, Governor Jerry Brown issued Executive Order B-30-15, which:

- Established a new interim Statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030,
- Ordered all State agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets, and
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

CARB subsequently expressed its intention to initiate the Climate Change Scoping Plan update during the summer of 2015, with adoption scheduled for 2016.

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[33] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

[34] *California Energy Commission, Building Standards Information Bulletin 13-07, December 18, 2013.*

(I) Cap-and-Trade Program

The Climate Change Scoping Plan identifies a Cap-and-Trade Program as one of the strategies California will employ to reduce GHG emissions. CARB asserts that this program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020, and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors is established and facilities subject to the cap will be able to trade permits to emit GHGs.

CARB designed and adopted a California Cap-and-Trade Program[35] pursuant to its authority under AB 32. The development of this Program included a multi-year stakeholder process and consideration of potential impacts on disproportionately impacted communities. The Cap-and-Trade Program is designed to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors[36] (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the Program's duration.

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities that emit more than 25,000 $MTCO_2e$ per year must comply with the Cap-and-Trade Program.[37] Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or "MRR").[38]

Each covered entity with a compliance obligation is required to surrender "compliance instruments"[39] for each $MTCO_2e$ of GHG they emit. Covered entities are allocated free allowances in whole or part (if eligible), buy allowances at auction, purchase allowances from others, or purchase offset credits. A "compliance period" is the time frame during which the compliance obligation is calculated. The years 2013 and 2014 are the first compliance period, the years 2015–2017 are the second compliance period, and the third compliance period is from 2018–2020. At the end of each compliance period, each facility will be required to surrender compliance instruments to CARB equivalent to their total GHG emissions throughout the compliance period. There also are requirements to surrender compliance instruments covering 30 percent of the prior year's compliance obligation by November of each year. For example, in November 2014, a covered entity was required to submit compliance instruments to cover 30 percent of its 2013 GHG emissions.

The Cap-and-Trade Regulation provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions

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35 *17 CCR §§ 95800 to 96023.*

36 *See generally 17 CCR §§ 95811, 95812.*

37 *17 CCR § 95812.*

38 *17 CCR §§ 95100-95158.*

39 *Compliance instruments are permits to emit, the majority of which will be "allowances," but entities also are allowed to use CARB-approved offset credits to meet up to 8 percent of their compliance obligations.*

reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in its First Update to the Climate Change Scoping Plan:

> *The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances.* ***But as the cap declines, aggregate emissions must be reduced.***[40]

In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program. However, as climate change is a global phenomenon and the effects of GHG emissions are considered cumulative in nature, a focus on aggregate GHG emissions reductions is warranted.

Further, the reductions in GHG emissions that will be achieved by the Cap-and-Trade Program inherently are variable and, therefore, impossible to quantify with precision:

> *The Cap-and-Trade Regulation is different from most of the other measures in the Scoping Plan. The [R]egulation sets a hard cap, instead of an emission limit, so the emission reductions from the program vary as our estimates of "business as usual" emissions in the future are updated. In addition, the Cap-and-Trade Program works in concert with many of the direct regulatory measures—providing an additional economic incentive to reduce emissions. Actions taken to comply with direct regulations reduce an entity's compliance obligation under the Cap-and-Trade Regulation. So, for example, increased deployment of renewable electricity sources reduces a utility's compliance obligation under the Cap-and-Trade Regulation.*[41]

If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. In other words, the Cap-and-Trade Program functions sort of like an insurance policy for meeting California 2020's GHG emissions reduction mandate:

> *The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together,*

[40] *CARB, First Update to the Climate Change Scoping Plan: Building on the Framework, at 86 (May 2014) (emphasis added).*

[41] *Ibid.*

> *direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap.*[42]
>
> *[T]he Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions.*[43]

In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by CARB under AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures.

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported.[44] Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program.

The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.[45] While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015:

> *Suppliers of natural gas, suppliers of RBOB [Reformulated Gasoline Blendstock for Oxygenate Blending] and distillate fuel oils, suppliers of liquefied petroleum gas, and suppliers of liquefied natural gas specified in sections 95811(c), (d), (e), (f), and (g) that meet or exceed the annual threshold in section 95812(d)* ***will have a compliance obligation beginning with the second compliance period****.*[46]

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions.

The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). However, transportation fuels that are "supplied" in California, but can be demonstrated to have a final destination outside California, do not generate a compliance obligation. The underlying concept here is that CARB is seeking to capture tailpipe GHG emissions from the combustion of transportation fuels supplied to California end-users. Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of

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[42] *CARB, First Update to the Climate Change Scoping Plan: Building on the Framework, at 88 (May 2014)*

[43] *Id. at 86-87.*

[44] *17 CCR § 95811(b).*

[45] *17 CCR §§ 95811, 95812(d).*

[46] *Id. at § 95851(b)(emphasis added).*

GHG emissions from CEQA projects associated with vehicle-miles traveled (VMT) are covered by the Cap-and-Trade Program.

(3) Regional

The Medical Center Campus is located in the South Coast Air Basin (Air Basin), which consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties, in addition to the San Gorgonio Pass area in Riverside County. The South Coast Air Quality Management District (SCAQMD) is responsible for air quality planning in the Air Basin and developing rules and regulations to bring the area into attainment of the ambient air quality standards. This is accomplished though air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles. After AB 32 was passed, SCAQMD formed a Climate Change Committee along with a Greenhouse Gases CEQA Significance Thresholds Working Group and the SoCal Climate Solutions Exchange Technical Advisory Group. On September 5, 2008, the SCAQMD Board approved the SCAQMD Climate Change Policy, which outlines actions the SCAQMD will take to assist businesses and local governments in implementing climate change measures, decrease the agency's carbon emissions, and provide information to the public regarding climate change. On December 5, 2008, the Board approved interim CEQA GHG significance thresholds for stationary source projects where it is the lead agency. The threshold is a tiered approach to determine a project's significance, with 10,000 metric tons (MT) of CO_2e as a screening numerical threshold for stationary source projects. In order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents, the GHG CEQA Significance Threshold Working Group drafted thresholds with the intent of capturing 90 percent of development projects.[47] Under Tiers 1 and 2, projects that are exempt from CEQA or consistent with an approved local GHG reduction plan can be found to be less than significant. Under Tier 3, a project's GHG emissions are compared to the draft screening thresholds. At present, the SCAQMD has not formally adopted thresholds for use by other lead agencies, but recommends that industrial projects utilize the 10,000 $MTCO_2e$ screening level that has been adopted for SCAQMD projects. The GHG CEQA Significance Threshold Working Group has drafted a significance indicator of 3,000 $MTCO_2e$ for mixed-use or all land use projects, but it has not been formally adopted. Under Tier 4, a project's GHG emissions are compared to a performance standard, such as achieving a percentage reduction in GHG emissions from a base case scenario or achieving a project-level efficiency target of 4.8 $MTCO_2e$ per service population.

(4) Local

(a) County of Los Angeles General Plan

The Los Angeles County 2035 General Plan provides the fundamental basis for the County's land use and development policy, and addresses all aspects of development including public health, land use, community character, transportation, economics, housing, air quality, and other topics. The General Plan sets forth objectives, policies, standards, and programs for land use and new development, Circulation and Public access, and Service Systems for the Community as a whole. Measures related to GHG emissions that would

[47] *South Coast Air Quality Management District, "Greenhouse Gases (GHG) CEQA Significance Thresholds," GHG Meeting 15 Main Presentation, September 28, 2010, http://www.aqmd.gov/ceqa/handbook/GHG/2010/sept28mtg/sept29.html. Accessed March 2015.*

be applicable to the Master Plan Project are contained in the Los Angeles County 2035 General Plan Conservation and Open Space element. Project consistency with the General Plan is discussed in Section 4.H., Land Use and Planning.

(b) County of Los Angeles Community Climate Action Plan

The County of Los Angeles has adopted a Community Climate Action Plan (CCAP),[48] a component of the General Plan, which sets a target to reduce GHG emissions from community activities in the unincorporated areas of Los Angeles County by at least 11 percent below 2010 levels by 2020. The CCAP shows clearly that the reductions are not expected to occur uniformly from all sources or sectors of GHG emissions (refer to Table 4-1 of the CCAP). The CCAP describes the County's plan for achieving this goal, including specific strategy areas for each of the major emissions sectors, and provides details on the 2010 and projected 2020 emissions in the unincorporated areas. The actions in the CCAP are priority actions and intended for near-term implementation, such that the County can achieve its GHG reduction goal for 2020 for the unincorporated areas of Los Angeles County.

The CCAP includes 26 local actions to reduced GHG emissions and are grouped into the following five strategy areas. The percent of the local emissions reductions from 2010 levels are also provided (reductions achieved by state programs are not included in the percentages):

- Green Building and Energy (approximately 36 percent of local emissions reductions);
- Land Use and Transportation (approximately 34 percent of local emissions reductions);
- Water Conservation and Wastewater (approximately 4 percent for the water sector and 22 percent for the building energy sector of local emissions reductions);
- Waste Reduction, Reuse, and Recycling (approximately 3 percent of local emissions reductions); and
- Land Conservation and Tree Planting (less than 1 percent of local emissions reductions).

The County considers many of the local actions to be cost effective, particularly in the green building and energy strategy area. In addition to reducing GHG emissions, all local actions have many co-benefits, such as improved public health, improved air quality, energy savings, increased mobility, and enhanced community well-being.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The evaluation of potential impacts to GHG emissions that may result from the construction and long-term operations of the Master Plan Project is conducted as follows:

[48] *County of Los Angeles, Final Unincorporated Los Angeles County Community Climate Action Plan 2020, (August 2015).*

(1) Greenhouse Gas Emissions

(a) Existing Project Site Emissions

Existing Hospital operational emissions have been estimated using CalEEMod (Version 2013.2.2) software, an emissions inventory model recommended by the SCAQMD for land use development projects. CalEEMod was used to forecast the daily regional emissions from mobile, area, and stationary sources. In calculating mobile-source emissions, an operational year of 2015 was used in the Master Plan Project traffic study[49] and the trip length values were based on the distances provided in CalEEMod. The trip distances were applied to the maximum daily trip estimates, based on standard Institute of Transportation Engineers (ITE) trip generation rates, for each Existing Hospital land use provided by the Project traffic study[50] to estimate the total vehicle miles traveled (VMT).

Emissions of GHGs from on-site natural gas combustion and off-site electricity generation are based on usage data from the CEC's *California Commercial End Use Survey* (CEUS), which lists energy demand by building type.[51] The data from the CEUS is from 2002 and represents actual usage rates from survey respondents, covering a wide range of building ages. Since 1978, the CEC has established building energy efficiency standards, which are updated periodically. As discussed previously, the Existing Hospital buildings on the Medical Center Campus were built in 1943 and 1962. Thus, the use of the CEUS 2002 survey data to represent the electrical demand for the existing Medical Center Campus is appropriate and represents the best available data. The CEUS provides data on a limited statewide basis or for each of the four largest investor- or publicly-owned utilities (Pacific Gas & Electric, Southern California Edison (SCE), Sacramento Municipal Utility District, and San Diego Gas & Electric). For the purposes of this assessment, natural gas usage factors for SCE were used as most representative of the existing Medical Center Campus. Emission factors for GHGs due to electrical generation to serve the demands of the existing Medical Center Campus were obtained from the Los Angeles Department of Water and Power (LADWP) *2012 Power Integrated Resource Plan*, which accounts for the generation mix using renewable and non-renewable sources.[52] LADWP provides 20 percent of electricity via renewable sources.[53]

Emissions of GHGs from solid waste disposal are calculated using the CalEEMod software. The emissions are based on the waste disposal rate for the land uses, the waste diversion rate, and the GHG emission factors for solid waste decomposition. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, are used in this assessment.

Emissions of GHGs from water and wastewater are due to the energy required to supply, distribute and treat. Wastewater also results in emissions of GHGs from wastewater treatment systems. Emissions are calculated using the CalEEMod tool and are based on the water usage rate for the land uses, the electrical intensity

[49] *Fehr & Peers, Traffic Impact Analysis for the Harbor-UCLA Medical Center Master Plan Project, (2016).*

[50] *Ibid.*

[51] *California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/Chart.aspx. Accessed November 2013.*

[52] *Los Angeles Department of Water and Power, 2012 Power Integrated Resource Plan, (2012) C-11.*

[53] *Los Angeles County Department of Water and Power, 2012 Power Integrated Resource Plan, (2012) 111.*

factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the emission factors for the wastewater treatment process. The CalEEMod software uses the electrical intensity factors from the 2006 CEC report *Refining Estimates of Water-Related Energy Use in California*.[54] The emissions of GHGs associated with the wastewater treatment process emissions are also calculated using the CalEEMod software as described in the *California Emissions Estimator Model User's Guide, Appendix A*.[55] As stated in the *User's Guide*, the GHGs emitted from each type of wastewater treatment are based on the CARB's *Local Government Operations Protocol*,[56] which are in turn based on USEPA methodologies.[57]

(b) Project-Related Emissions (Provided for Informational Purposes)

For the purposes of this EIR, total GHG emissions from the Master Plan Project were quantified for disclosure purposes to provide information to decision makers and the public regarding the level of the Project's annual GHG emissions.

The CCAR has prepared the General Reporting Protocol for calculating and reporting GHG emissions from a number of general and industry-specific activities.[58] No specific protocols are available for land use projects, so the General Reporting Protocol has been adapted to address GHG emissions from the Project. The information provided in this section is consistent with the General Reporting Protocol minimum reporting requirements. The General Reporting Protocol recommends the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions. They include:

- Scope 1: Direct, on-site combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, off-site emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy.[59]

CARB believes that consideration of so-called indirect emissions provides a more complete picture of the GHG footprint of a facility: "As facilities consider changes that would affect their emissions – addition of a cogeneration unit to boost overall efficiency even as it increases direct emissions, for example – the relative impact on total (direct plus indirect) emissions by the facility should be monitored. Annually reported indirect energy usage also aids the conservation awareness of the facility and provides information" to CARB to be considered for future strategies by the industrial sector.[60] For these reasons, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements.

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[54] *California Energy Commission, Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report, CEC-500-2006-118, (2006).*

[55] *California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, (2013).*

[56] *California Air Resources Board, Local Government Operations Protocol, Chapter 10: Wastewater Treatment Facilities, (2008).*

[57] *United States Environmental Protection Agency, Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006, Chapter 8: Waste, (2008).*

[58] *California Climate Action Registry, General Reporting Protocol Version 3.1, (2009).*

[59] *Embodied energy includes energy required for water pumping and treatment for end-uses.*

[60] *California Air Resources Board, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), (2007).*

Additionally, the Office of Planning and Research directs lead agencies to "make a good-faith effort, based on available information, to calculate, model, or estimate…GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities."[61] Therefore, direct and indirect emissions have been calculated for the Master Plan Project.

For purposes of this analysis, it is considered reasonable and consistent with criteria pollutant calculations to consider those GHG emissions resulting from Project-related incremental (net) increase in the use of on-road mobile vehicles, electricity, and natural gas compared to existing conditions. This includes Project construction activities such as demolition, hauling, and construction worker trips. This analysis also considers indirect GHG emissions from water conveyance, wastewater generation, and solid waste handling. Since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions are calculated on an annual basis. In order to report total GHG emissions using the CO_2e metric, the GWP ratios corresponding to the warming potential of CO_2 over a 100-year period is used in this analysis.

(i) Construction Emissions

Construction emissions are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source emissions factors. The emissions are estimated using the CalEEMod (Version 2013.2.2) software, an emissions inventory software program recommended by the SCAQMD. CalEEMod is based on outputs from OFFROAD2011 and EMFAC2011, which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on- and off-road vehicles. The output values used in this analysis were adjusted to be Project-specific based on equipment types and the construction schedule. These values were then applied to the same construction phasing assumptions used for the criteria pollutant analysis (see Section 4.B., *Air Quality*, in this Draft EIR) to generate GHG emissions values for each construction year for CO_2, CH_4, N_2O, and CO_2e. The values are derived from factors published in the *2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories*.[62] These values are then converted to metric tons for consistency. The CO_2e emissions are calculated for the construction period and future Master Plan Project buildout conditions in order to estimate the net change in GHG emissions for Project construction and operation. In accordance with SCAQMD guidance, GHG emissions from construction have been amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions). Detailed construction GHG emissions calculations are provided in Appendix D of this Draft EIR.

(ii) Operational Emissions

Mobile source emission calculations associated with operation of the Master Plan Project are also calculated using the CalEEMod model. In calculating mobile-source emissions, the trip length values for the Project are based on CalEEMod provided defaults for the relevant land uses (e.g., hospital land uses). The trip distances for the various operational activities were multiplied by the average daily trip estimates for each land use based on the data provided by the Project traffic study to estimate the average daily VMT.[63] Since GHG

[61] *Office of Planning and Research, Technical Advisory, p. 5.*

[62] *Intergovernmental Panel on Climate Change, 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories, (2006).*

[63] *Fehr & Peers, Traffic Impact Analysis for the Harbor-UCLA Medical Center Master Plan Project, (2016).*

emission impacts are assessed on an annual basis, the average daily VMT for each land use were multiplied by the number of days each land use would be in operation in a year. CalEEMod may not adequately reflect future year GHG emissions because it does not incorporate the emission factors for the 2017-2025 vehicle emissions standards. The national policy for fuel efficiency and emissions standards for the United States auto industry requires that new passenger cars and light-duty trucks achieve an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016 (Phase I standards), based on USEPA calculation methods. In August 2012, more stringent phased-in standards were adopted for new model year 2017 through 2025 passenger cars and light-duty trucks. By 2020, new vehicles are projected to achieve 41.7 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 213 grams of CO_2 per mile (Phase II standards). By 2023, new vehicles are projected to achieve 49.4 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 180 grams of CO_2 per mile (Phase II standards). By 2025, new vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile (Phase II standards). CARB staff has provided future year CO_2 emission factors for on-road mobile sources in California that may be used if the project's mobile sources include "all vehicle classifications."[64] With respect to the Project, all vehicle types including passenger vehicles, light-duty trucks, and vendor/delivery trucks, would visit the Medical Center Campus. Therefore, this assessment uses the CO_2 emission factors provided by CARB staff to estimate the future year interim and buildout (2023 and 2030) GHG emissions from mobile sources. Emissions of CH_4 and N_2O were estimated based on the direct result outputs from the CalEEMod tool for years 2023 and 2030. The CO_2, CH_4, and N_2O mobile source emissions were added together, using the appropriate GWP values, to obtain emissions in units of $MTCO_2e$.

With regard to energy usage, the consumption of fossil fuels to generate electricity and to provide heating and hot water generates GHG emissions. Future fuel consumption rates are estimated based on specific square footage of the hospital land uses, as well as predicted water supply needs of the Master Plan Project. Energy usage (off-site electricity generation and on-site natural gas consumption) for the Project is calculated within CalEEMod using the CEC's CEUS data set.[65] This data set provides energy intensities of different land uses throughout the state and different climate zones. However, since the data from the CEUS is from 2002, the CalEEMod software incorporates correction factors to account for compliance with the Title 24 Building Standards Code. This assessment also includes electricity-related GHG emissions from the proposed enclosed parking structure, which would include elevators, lighting, and a ventilation system.

Water and wastewater generated from the Master Plan Project require energy to supply, distribute and treat. The CalEEMod software uses the electrical intensity factors from the 2006 CEC report *Refining Estimates of Water-Related Energy Use in California*.[66] The emissions of GHGs associated with the wastewater treatment process emissions are also calculated using the CalEEMod software as described in the *California Emissions Estimator Model User's Guide, Appendix A*.[67]

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64 *California Air Resources Board, Statewide Emission Factors (EF), March 2014.*

65 *California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/Chart.aspx. Accessed December 2013.*

66 *California Energy Commission, Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report, CEC-500-2006-118, (2006).*

67 *California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, (2013).*

Emissions from solid waste handling generated from the Project are also accounted for in the GHG emissions inventory. The GHG emission factors, particularly for CH_4, are based on default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery).

Other sources of GHG emissions from operation of the Project include equipment used to maintain landscaping, such as lawnmowers and trimmers. The CalEEMod tool uses landscaping equipment GHG emission factors from the CARB OFFROAD2011 model and the CARB *Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003)*.[68] The CalEEMod software estimates that landscaping equipment operate for 250 days per year in the South Coast Air Basin.

(2) Consistency with Greenhouse Gas Reduction Plans

The CCAP is a resource for the unincorporated areas of the County. Public agencies and private developers can also use the CCAP to comply with project-level review requirements pursuant to CEQA. CEQA Guidelines specify that CEQA project evaluation of GHG emissions can "tier off" a programmatic analysis of GHG emissions, provided that the programmatic analysis (or climate action plan) does the following (CEQA Guidelines Section 15183.5):

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Monitor the plan's progress.
- Adopt the GHG Reduction Strategy in a public process following environmental review.

The CCAP meets CEQA Guidelines Section 15183.5 listed above by: (1) quantifying all primary sectors of GHG emissions within the unincorporated areas for 2010 and 2020; (2) including a reduction target that is consistent with the recommendations in the AB 32 Scoping Plan for municipalities to support the overall AB 32 reduction targets; (3) analyzing community emissions for the unincorporated areas as a whole and including predicted growth expected by 2020; (4) including specific measures to achieve the overall reduction target; (5) including periodic monitoring of plan progress; and (6) submitting the CCAP to be adopted in a public process following compliance with CEQA. Therefore, the Project is evaluated for consistency with the CCAP.

[68] *California Air Resources Board, OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment, (6/13/2003), http://www.arb.ca.gov/msei/2001_residential_lawn_and_garden_changes_in_eqpt_pop_and_act.pdf. Accessed November 2013.*

As discussed previously, the County adopted Title 31 of the County's Code of Ordinances (the Los Angeles County Green Building Standards Code) in November 2013, which adopts by reference the CALGreen code except as changed or modified in Title 31. The County Department of Regional Planning is working on an ordinance to repeal the Green Building and Drought Tolerant Landscaping requirements from Title 22 (Planning and Zoning Code). Additionally, the ordinance will update the Green Building Program's tree requirements in order to increase shade to sidewalks and parking lots for human comfort, and to shade buildings to conserve energy used for air conditioning. In addition, the County of Los Angeles General Plan provides recommendations for emission reduction strategies for reducing GHG emissions. Thus, if the Master Plan Project is designed in accordance with these policies and regulations, it would result in a less than significant impact, since it would be consistent with the overarching local and regional plans and regulations for reducing GHG emissions.

b. Thresholds of Significance

The potential for greenhouse gas emissions impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State CEQA Guidelines. These questions are as follows:

(VII) Greenhouse Gas Emissions. Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

(1) Direct or Indirect Project GHG Emissions

The *State CEQA Guidelines* do not provide numeric or qualitative thresholds of significance for GHG emissions. However, AB 32 requires GHGs emitted in California to be reduced to 1990 levels by 2020 and 80% below 1990 levels by 2050. The Technical Advisory on CEQA and Climate Change from OPR suggests that, in absence of regulatory guidance or standards, lead agencies, such as the County, must undertake project-by-project analyses consistent with available guidance and current CEQA practice to ascertain project impacts under CEQA. In the latest *State CEQA Guidelines* amendments, which went into effect on March 18, 2010, OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. The County has prepared a CCAP which meets *State CEQA Guidelines* Section 15183.5 and provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County, which is consistent with the recommendations in the AB 32 Scoping Plan.[69]

Although GHG emissions can be quantified, CARB, SCAQMD and the County have yet to adopt project-level numerical significance thresholds for GHG emissions that would be applicable to the Master Plan Project. Assessing the significance of a project's contribution to cumulative global climate change involves: (1)

[69] *County of Los Angeles, Department of Regional Planning, Final Unincorporated Los Angeles County Community Climate Action Plan, (August 2015).*

developing pertinent inventories of GHG emissions, and (2) considering project consistency with applicable emission reduction strategies and goals, such as those set forth in the County of Los Angeles CCAP. Because the CCAP meets CEQA Guidelines Section 15183.5, project-specific environmental documents that incorporate applicable CCAP actions may "tier off" the EIR certified for the County General Plan and CCAP to meet project-level CEQA evaluation requirements for GHG emissions. Projects that demonstrate consistency with applicable CCAP actions can be determined to have a less than significant cumulative impact on GHG emissions and climate change (notwithstanding substantial evidence that warrants a more detailed review of project-level GHG emissions). Based on the above factors, a project that generates GHG emissions, either directly or indirectly, would have a significant impact on GHG Emissions if it would result in the following:

GHG-1 Would the Project result in GHG emissions that are not consistent with the County of Los Angeles *Community Climate Action Plan*?

(2) Consistency with Greenhouse Gas Reduction Plans

As part of AB 32, the County and State recommend general policies and measures to minimize and reduce GHG emissions from land use development project. Thus, if the project is designed in accordance and not in conflict with these policies and measures, it would result in a less than significant impact since it would be consistent with the County's strategies and local actions on reducing GHG emissions (County of Los Angeles CCAP). Therefore, a significant impact would occur if:

GHG-2 The Project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

c. Project Characteristics or Design Features

(1) Project Characteristics

The Master Plan Project includes characteristics consistent with the CAPCOA guidance document[70] for mitigating or reducing emissions from land use development projects. The Project would renovate the existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings that meet or exceed the energy standards in the Title 24 Building Standards Code and repurposing/remodeling existing buildings on the campus to improve operational efficiencies. The Project would provide and encourage employees, patients, and visitors to utilize alternative modes of transportation which would reduce vehicle trips and VMT. More specifically, the Project would be located within a quarter-mile of public transportation, including existing Torrance Transit System bus routes (e.g., routes 1, 3, and Rapid 3) with stops on South Vermont Street and West Carson Street, and Los Angeles Metro bus routes (e.g., routes 205 and 550) with stops on South Vermont Street. In addition, the western two-thirds of the Campus is designated as a Transit Overlay District (TOD) due to proximity to the Metro Silver Line Transit Station on Carson Street approximately 0.10 miles to the east, adjacent to the Harbor Freeway. While the Medical Center Campus' transit accessibility would result in a corresponding reduction in transportation-related GHG emissions, the emissions calculations do not incorporate reductions from the transit accessibility characteristics. As a result, the emissions calculations are considered to be conservative and may overestimate actual emissions.

[70] *California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010).*

(2) Project Design Features

The Master Plan Project would achieve the applicable objectives of the Los Angeles County General Plan Framework Element, SCAG Regional Transportation Plan, and SCAQMD Air Quality Management Plan for establishing a regional land use pattern that promotes sustainability. The Project would support pedestrian activity on the Medical Center Campus, and incorporate energy efficient and water efficient measures.

The Project would be designed to meet the standards for Leadership in Energy and Environmental Design (LEED) Silver Certification by the U.S. Green Building Council (USGBC) through the incorporation of green building techniques and other sustainability features. A sustainability program would be prepared and monitored by a LEED-accredited design consultant to provide guidance in project design, construction and operations; and to provide performance monitoring during Master Plan Project operations to reconcile design and energy performance and enhance energy savings. The Project would also be designed to comply with the Los Angeles County Green Building Standards Code. The following Project Design Features would be incorporated into the bid document requirements for the design and construction of future development projects under the Master Plan Project, implementation of which would reduce GHG emissions as well as air pollutant emissions:

PDF-AQ-1, Green Building Measures: The Master Plan Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following:

- The Project would implement a construction waste management plan to recycle and/or salvage nonhazardous construction debris that meets or exceeds the County's adopted Construction and Demolition Debris Recycling and Reuse ordinance.
- The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code.
- The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means.
- The Project would include lighting controls with occupancy sensors to take advantage of available natural light.
- The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent.
- Project buildings shall be constructed with solar-ready rooftops that would allow for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically

designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.

- The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care.
- To encourage carpooling and the use of electric vehicles by Project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.
- The Project shall incorporate appropriate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).

d. Project Impacts

(1) Greenhouse Gas Emissions

Threshold GHG-1: Would the Project result in GHG emissions that are not consistent with the Los Angeles County *Community Climate Action Plan*?

Impact Statement GHG-1: *Impacts from short- and long-term increases in GHG emissions would be less than significant. The Master Plan Project would generate GHG emissions due to construction and operational activities; however, the net increase in annual GHG emissions, directly and indirectly, would be consistent with the Los Angeles County* Community Climate Action Plan.

(a) Project Consistency with CCAP

The Master Plan Project's significance with respect to GHG emissions is evaluated based on its consistency with applicable GHG reduction strategies in the County of Los Angeles CCAP. **Table 4.E-3**, *Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies*, contains a list of GHG-reducing strategies applicable to the Project. The project-level analysis describes the consistency of the Project with these GHG emissions reduction strategies. As discussed in Table 4.E-3, the Master Plan Project is consistent with the applicable strategies in the County of Los Angeles CCAP. Therefore, in accordance with CEQA Guidelines Section 15183.5, which specifies that CEQA project evaluation of GHG emissions can "tier off" a programmatic analysis of GHG emissions such as the Los Angeles County *Community Climate Action Plan*, the Master Plan Project would result in less than significant GHG emissions.

Table 4.E-3

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
Green Building and Energy		
BE-1: Green Building Development	Promote and incentivize at least Tier 1 voluntary standards within CALGreen for all new residential and nonresidential buildings. Develop a heat island reduction plan and facilitate green building development by removing regulatory and procedural barriers.	**Consistent.** According to the County's CCAP, adoption of the CALGreen Tier 1 standards is voluntary, but would result in approximately 10 percent less energy use than the 2013 Title 24 standard for commercial development, which is prerequisite for LEED for typical commercial buildings. However, for health care facilities, LEED requires a 5 percent reduction in energy for new construction, in consideration of the specific electricity needs of hospitals and other health care facilities. Therefore, the Project would be considered to be generally consistent with this measure as the Project would achieve at a minimum the LEED prerequisite for health care facilities as required in PDF-AQ-1, which states that the Project would be designed to optimize energy performance and reduce building energy cost by 5 percent for new construction and 3 percent for major renovations compared to ASHRAE 90.1-2010, Appendix G, and the Title 24 Building Standards Code. The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent. The Project is consistent with the GHG reductions under this strategy.
BE-2: Energy Efficiency Programs	Energy efficiency retrofits for at least 25 percent of existing commercial buildings over 50,000 square feet and at least 5 percent of existing single family residential buildings.	**Not Applicable.** The proposed Project is not an existing building; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for existing buildings.
BE-3: Solar Installations	Promote and incentivize solar installations for new and existing homes, commercial buildings, carports and parking areas, water heaters, and warehouses. (Emissions reductions assume implementation of solar photovoltaics; however, project applicants can install other solar technologies, such as solar thermal, as feasible, which may increase GHG reductions, relative to standard photovoltaics systems.)	**Consistent.** Project buildings shall be constructed with solar-ready rooftops that provide for the installation of on-site solar PV or SWH systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.
BE-4: Alternative Renewable Energy	Implement pilot projects for currently feasible wind, geothermal, and other	**Not Applicable.** The proposed Project is not a utility project; therefore, this strategy does not

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
Programs	forms of alternative renewable energy. (Potential future forms of non-GHG energy could include nuclear fusion, which is being researched by many parties, including the Lockheed Martin Skunk Works in Palmdale, but which has not yet been experimentally proven as a viable commercial energy source. As new technologies become proven, the County will consider how they can support further development and deployment of such technologies.) Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for utility pilot projects.
BE-5: Wastewater Treatment Biogas	Encourage renewable biogas projects. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The proposed Project is not a biogas project; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for biogas projects.
BE-6: Energy Efficiency Retrofits of Wastewater Equipment	Encourage the upgrade and replacement of wastewater treatment and pumping equipment. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The proposed Project is not a wastewater treatment or pumping project; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for wastewater treatment and pumping projects.
BE-7: Landfill Biogas	Partner with the owners and operators of landfills with at least 250,000 tons of waste-in-place to identify incentives to capture and clean landfill gas to beneficially use the biogas to generate electricity, produce biofuels, or otherwise offset natural gas or other fossil fuels. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The proposed Project is not a landfill project; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for landfill projects.
Land Use and Transportation		
LUT-1: Bicycle Programs and Supporting Facilities	Construct and improve bicycle infrastructure to increase biking and bicyclist access to transit and transit stations/hubs. Increase bicycle parking	**Consistent.** The Project would promote and support local, regional, and State mobility objectives to reduce vehicle miles traveled and infrastructure costs. Bicycle infrastructure

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
	and "end-of-trip" facilities.	including bicycle parking and "end-of-trip" facilities would comply with the applicable portions of the County's HDO (Los Angeles County Code, Title 22, Section 22.52.1225). The HDO requires the following number of bicycle parking spaces for commercial buildings: ▪ Short-term (two hours or less): o General Retail/Restaurants: One space per each 5,000 square feet of gross floor area (two space minimum). o Office: One space per each 20,000 square feet of gross floor area (two space minimum). ▪ Long-term (two hours or longer): o General Retail/Restaurants: One space per each 12,000 square feet of gross floor area (two space minimum). o Office: One space per each 10,000 square feet of gross floor area (two space minimum). In addition, the HDO requires that all new commercial and industrial buildings with 75,000 or more square feet of gross floor area install showers and changing facilities that shall at a minimum be accessible to employees.
LUT-2: Pedestrian Network	Construct and improve pedestrian infrastructure to increase walking and pedestrian access to transit and transit stations/hubs. Program the construction of pedestrian projects toward the goal of completing 15,000 linear feet of new pedestrian improvements/amenities per year.	**Consistent.** The Project would locate related hospital uses in close proximity to each other, which would encourage pedestrian activity. The Project would enhance the pedestrian experience through the provision of landscaped pedestrian walkways through the Medical Center Campus.
LUT-3: Transit Expansion	Collaborate with the Los Angeles County Metropolitan Transportation Authority (Metro) on a transit program that prioritizes transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations. Construct and improve bicycle, pedestrian and transit infrastructure to increase bicyclist and pedestrian access to transit and transit stations/hubs.	**Not Applicable.** The Project is not a transit expansion project; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for transit expansion projects.
LUT-4: Travel Demand Management	Encourage ride- and bike-sharing programs and employer-sponsored vanpools and shuttles. Encourage market-based bike sharing programs	**Consistent.** The Project would provide on-site bicycle parking and end-of-trip facilities are required by County's HDO. The Project would also provide parking spaces designed for carpool

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
	that support bicycle use around and between transit stations/hubs. Implement marketing strategies to publicize these programs and reduce commute trips.	or alternative fueled vehicles which will encourage Project employees and visitors to carpool or use less emitting vehicles.
LUT-5: Car-Sharing Program	Implement a car-sharing program to allow people to have on-demand access to a shared fleet of vehicles.	**Consistent.** The Project would provide parking spaces designed for carpool or alternative fueled vehicles which will encourage Project employees and visitors to carpool or use less emitting vehicles.
LUT-6: Land Use Design and Density	Promote sustainability in land use design, including diversity of urban and suburban developments.	**Consistent.** The Project would be designed to incorporate sustainability and energy efficiency measures and achieve LEED certification. The Project would promote and support local, regional, and State mobility objectives to reduce vehicle miles traveled by providing bicycle parking and end-of-trip facilities. The Medical Center Campus is also accessible to existing public transportation routes.
LUT-7: Transportation Signal Synchronization Program	Improve the network of traffic signals on the major streets throughout LA County.	**Consistent.** The Project's traffic impact analysis includes an impact assessment of Project traffic. Details of the analysis are provided in Section 4.L**.,** *Transportation and Traffic*, and in Appendix I of this Draft EIR. Required improvements to the network of traffic signals in the Project area would be made in accordance with the findings and recommendations of the traffic impact analysis.
LUT-8: Electric Vehicle Infrastructure	Install 500 electric vehicle (EV) charging facilities at County-owned public venues (e.g., hospitals, beaches, stand-alone parking facilities, cultural institutions, and other facilities) and ensure that at least one-third of these charging stations will be available for visitor use.	**Consistent.** The Project shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.
LUT-9: Idling Reduction Goal	Encourage idling limits of 3 minutes for heavy-duty construction equipment, as feasible within manufacturer's specifications.	**Consistent.** Section 2485 in Title 13 of the California Code of Regulations limits the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction to five minutes at any location. The Project shall comply with this regulatory requirement and would encourage construction contractors to further limit idling to 3 minutes or less when practicable and feasible. Construction contractors shall be required to submit a construction vehicle management plan that includes the following information: idling time goals; requiring hour meters on equipment; and documenting the serial number, horsepower, age, and fuel of all onsite

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
		equipment.
LUT-10: Efficient Goods Movement	Support regional efforts to maximize the efficiency of the goods movement system throughout the unincorporated areas. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The Project is not a goods movement project; therefore, this strategy does not apply to the Project. This emission reduction strategy would primarily be implemented by Los Angeles County's Department of Public Works by supporting efforts to evaluate zero and/or near-zero emission freight corridors and working with appropriate agencies and partners to identify and replace at-grade railroad crossings to reduce freight delay and vehicle idling (CCAP, p. C-13). The Project would not conflict with or impede the County's ability to implement this strategy to maximize the efficiency of the goods movement system.
LUT-11: Sustainable Pavements Program	Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Consistent.** Although the County has indicated this measure has not been quantified or counted toward attainment of the County's CCAP target, the Project would strive to reduce waste from the re-pavement/maintenance of roadways directly adjacent to Project construction site areas that are degraded by construction activity and heavy-duty equipment usage. Recycled/reused materials shall be used to the extent available and feasible.
LUT-12: Electrify Construction and Landscaping Equipment	Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Consistent.** Although the County has indicated this measure has not been quantified or counted toward attainment of the County's CCAP target, the Project would utilize electric equipment for construction equipment where feasible. Candidate equipment includes electric cranes, which have been demonstrated as feasible and have been used in other construction projects in the region. The Project shall also prioritize the use of landscaping contractor(s) with electric-powered equipment where available and feasible.
Water Conservation and Wastewater		
WAW-1: Per Capita Water Use Reduction Goal	Meet the State established per capita water use reduction goal as identified by SB X7-7 for 2020. (The State goal is a 20 percent reduction in per capita water use compared to baseline levels.)	**Consistent.** As stated in PDF-AQ-1, the Project would reduce indoor water use by a minimum of 20 percent by installing water fixtures that exceed applicable standards.
WAW-2: Recycled Water Use, Water Supply Improvement Programs, and Stormwater Runoff	Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes consistent with the appropriate provisions of Title 22 and approval of the California Department of Health Services. Manage stormwater, reduce potential treatment, and protect local	**Not Applicable.** As noted by the County, this measure has not been quantified or counted toward attainment of the County's CCAP target.

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
	groundwater supplies. Note: GHG emissions reductions of larger efforts to promote the use of wastewater and gray water have not been quantified or counted toward attainment of the County's CCAP target.	
Waste Reduction, Reuse, and Recycling		
SW-1: Waste Diversion Goal	For the County's unincorporated areas, adopt a waste diversion goal to comply with all state mandates to divert at least 75 percent of waste from landfill disposal by 2020.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and recycle or reuse 75 percent of nonhazardous construction and demolition debris. Project-generated solid waste would be collected by private waste services providers that would process mixed waste that yields diversion results comparable to source separation and would achieve the County's goal of 75 percent waste diversion by 2020. Medical waste would be disposed of in accordance with applicable regulations.
Land Conservation and Tree Planting		
LC-1: Develop Urban Forests	Support and expand urban forest programs within the unincorporated areas.	**Consistent.** The Landscape Master Plan, which is included in the Harbor-UCLA Medical Center Campus Master Plan, would provide a campus-like setting where the use of landscape would help reduce dependency on natural resources by capturing and cleaning stormwater runoff and shading buildings to help reduce cooling demands. Landscaped outdoor spaces would accommodate active social gatherings and passive gardens for contemplation and relaxation. Landscaped areas for exercise would be provided to serve staff and educate the public regarding preventative healthcare. The Landscape Master Plan recommends the planting of a landscape buffer along the Harbor-UCLA Medical Center Campus perimeter that includes trees lining the Medical Center Campus street frontages and major landscape groupings identifying entrances to the Medical Center Campus. Throughout the Medical Center Campus interior, the Master Plan Project proposes landscaped courtyard gardens and plazas and a network of walkways or trails that form a continuous circulation system, allowing staff and

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
		guests to reach their destinations with minimized opportunities for pedestrian/vehicular conflicts. The Project would also use drought-tolerant and water-efficient landscaping.
LC-2: Create New Vegetated Open Space	Restore and revegetate previously disturbed land and/or unused urban and suburban areas.	**Consistent.** See discussion under LC-1.
LC-3: Promote the Sale of Locally Grown Foods and/or Products	Establish local farmers markets and support locally grown food. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** As noted by the County, this measure has not been quantified or counted toward attainment of the County's CCAP target.
LC-4: Protect Conservation Areas	Encourage the protection of existing land conservation areas. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The Medical Center Campus is not an existing land conservation area; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for existing land conservation areas.

Source: PCR Services Corporation, 2016

(b) Construction Emissions

In order to provide additional information to decision makers and the public, the emissions of GHGs associated with construction of the Master Plan Project were calculated for each year of construction activity. Detailed emissions calculations are provided in Appendix D. Results of the GHG emissions calculations are presented on **Table 4.E-4**, *Unmitigated Construction Greenhouse Gas Emissions*. Although GHGs generated during construction are considered one-time emissions, it is important to include them when assessing all of the long-term GHG emissions associated with a project. The CCAP includes goals and strategies that address construction-related GHG emissions including LUT-9 (idling reduction goal) and LUT-12 (electrification of equipment as feasible). As previously discussed in Table 4.E-3, the Project would be consistent with these measures. As a result, while the Project would result in one-time construction GHG emissions, the Project would be consistent with applicable measures and would therefore not conflict with achievement of the County's GHG emissions reduction target.

(c) Operations

In order to provide additional information to decision makers and the public, the emissions of GHGs associated with operation of the Master Plan Project were calculated. The Project must comply with the portions of the County's Green Building Standards applicable to health care facilities. The Project would incorporate Project Design Features in a manner to achieve the USGBC LEED Silver Certification or equivalent. Additionally, physical and operational Project characteristics for which sufficient data are

Table 4.E-4

Unmitigated Construction Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons) [a]
Construction Phase M	742
Construction Phase C	5,597
Construction Phase 1	1,845
Construction Phase 2	1,563
Construction Phase 3	2,707
Construction Phase 4	12,008
Construction Phase 5	11,342
Construction Phase 6	7,607
Construction Phase LA Biomed	1,017
Total	**44,428**

[a] *Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix D.*

Source: PCR Services Corporation, 2016

available to quantify the reductions from building energy and resource consumption have been included in the quantitative analysis. However, specific measures for achieving LEED Silver Certification are not finalized; therefore, the Project's GHG emissions analysis provided herein does not fully account for all GHG reductions that would occur from Project implementation. Therefore, the GHG emissions analysis conservatively overestimates the Project's emissions and it is likely that actual GHG emissions from the Project would be lower than shown in this analysis. The conservatively estimated maximum annual net GHG emissions resulting from motor vehicle, energy (i.e., electricity, natural gas), water conveyance, and waste sources were calculated for Project buildout and are shown in **Table 4.E-5**, *Annual Greenhouse Gas Emissions*. The net annual emissions from the Project amounts to approximately 0.09 percent of the County's total estimated GHG emissions target for 2020 (6,440 $MTCO_2e$ for the Project compared to 7,104,621 $MTCO_2e$ for the County).

The County's CCAP provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County. The reduction target is specifically a County-wide target and not a mandated reduction target for individual projects. The CCAP does not require reductions to occur uniformly from all sources or sectors of GHG emissions. Based on the conservatively estimated GHG emissions, the Project would result in a net increase in GHG emissions from 2010 levels. However, the potential increase is extremely small compared to the County's total inventory. As discussed in Table 4.E-3, the Project would be consistent with applicable CCAP measures, which would minimize the increase in GHG emissions that would otherwise occur without implementation of the various sustainability, energy efficiency, water efficiency, solid waste, and transportation reduction measures. Furthermore, one of the Project objectives is to secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles. Achieving this objective by redeveloping an existing hospital site would be more GHG efficient (i.e., result in fewer GHG emissions) than developing a new hospital campus on a greenfield site. Therefore, while the Project results is conservatively estimated to result in a minimal net increase in GHG emissions, the Project would be consistent with applicable CCAP measure to minimize its GHG emissions and the Project would not be expected to conflict with the County's ability to achieve the CCAP target reduction.

Table 4.E-5

Annual Greenhouse Gas Emissions (2030)

Emissions Sources	CO_2e (Metric Tons per Year) [a]		
	Existing	**Project**	**Net Change**
Mobile Sources	26,255	29,551	3,296
Area	< 1	< 1	—
Energy (Electricity and Natural Gas)	5,959	7,428	1,469
Water/Wastewater Conveyance	867	2,030	1,163
Waste	2,209	2,721	512
Subtotal	**35,290**	**41,730**	**6,440**

[a] *Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix D of this Draft EIR.*

[b]

Source: PCR Services Corporation, 2016

(2) Greenhouse Gas Reduction Plans

Threshold GHG-2: Would the Project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Statement GHG-2: *Construction and operation of the Master Plan Project would not conflict with applicable GHG emissions reductions plans, policies, or regulations. As a result, construction and operation of the Project would not have a significance impact with respect to consistency with GHG reduction plans, and impacts would be less than significant.*

Due to the complex physical, chemical, and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the Project's GHG emissions would actually cause a measurable increase in global GHG emissions necessary to influence global climate change. Newer construction materials and practices, current energy efficiency requirements, and newer appliances tend to emit lower levels of air pollutant emissions, including GHGs, as compared to those built years ago; however, the net effect is difficult to quantify. Thus, the estimated net increase in emissions resulting from implementation of the Project presented above may be an over- or underestimation. The GHG emissions of the Project alone would not likely cause a direct physical change in the environment.

According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective."[71] It is global GHG emissions in their aggregate that contribute to climate change, not any single source of GHG emissions alone. However, given 1) the lack of evidence indicating that those emissions would cause a measurable increase in global GHG emissions necessary to exacerbate global climate change and 2) the fact that the Project incorporates physical and operational

[71] *California Air Pollution Control Officer's Association, CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008.*

Project characteristics and Project Design Features that would reduce potential GHG emissions to a less-than-significant level, the Project is considered not to conflict with the GHG reduction goals of AB 32.

As discussed previously, the Project incorporates a Project Design Feature (PDF-AQ-1) that would reduce GHG emissions by increasing energy-efficiency beyond requirements, reducing indoor and outdoor water demand, and incorporating waste reduction measures. The Project would also incorporate characteristics that would reduce transportation-related GHG emissions by providing bicycle and end-of-trip facilities, and by being located within one-quarter mile of transit, thereby encouraging alternative forms of transportation.

The Project would be constructed and operated in a manner consistent with a Silver Certification from the USGBC's LEED program. The LEED features that would be incorporated in the Project would include building efficiency measures to reduce energy consumption, water-saving measures, and waste reduction measures. The Project would be designed to optimize energy performance and reduce building energy cost by a minimum of 5 percent for new construction and 3 percent for major renovations. Trees planted on the Medical Center Campus as part of the planned landscaping would sequester CO_2 as they age (not included in the quantitative analysis). The average tree can sequester approximately 330 pounds of carbon dioxide from the atmosphere every year. The Project would reduce indoor water use by a minimum of 20 percent with water fixtures that exceed applicable standards.

In accordance with the County's Green Building Program and CALGreen, the Project would incorporate the following features supportive of goals to reduce GHG emissions:

- **Energy Conservation:** Buildings must reduce energy demand at least 15 percent below Title 24 (2008 State of California Energy Efficiency Standards). The Project would meet this objective by achieving LEED Silver Certification and exceeding the Title 24 (2013) standards.
- **Outdoor Water Conservation:** A smart irrigation controller must be installed for any landscaped area of the Project. Sixty-five percent of the total landscaped areas shall use drought-tolerant plant species selected from the County's Drought-Tolerant Plant List.
- **Resource Conservation:** At least 65 percent of construction waste (by weight) must be recycled, reused, or diverted. The project would recycle, reuse, or divert 75 percent of its non-hazardous construction waste.
- **Tree Planting**: A minimum of one 15-gallon tree must be planted and maintained for every 10,000 square feet of developed area. At least 65 percent of the trees must be listed on the County's Drought Tolerant Plant List.
- **High-Efficiency Toilets**: New toilets must be rated high efficiency.

Consistency with GHG reduction strategies is an important priority, and reasonable reduction efforts should be taken. As discussed previously in Table 4.E-3, the Master Plan Project is consistent with the applicable GHG reductions strategies and local actions in the County of Los Angeles CCAP. Additionally, the Project is consistent with GHG reduction measures from other applicable plans. **Table 4.E-6**, *Consistency with Applicable Greenhouse Gas Reduction Strategies*, contains a list of GHG-reducing strategies potentially applicable to the Project. The Project-level analysis describes the consistency of the Project with these strategies.

Table 4.E-6

Consistency with Applicable Greenhouse Gas Reduction Strategies

Source	Category / Description	Consistency Analysis
AB 1493 (Pavley Regulations)	Reduces greenhouse gas emissions in new passenger vehicles from 2012 through 2016. Also reduces gasoline consumption to a rate of 31 percent of 1990 gasoline consumption (and associated GHG emissions) by 2020.	**Consistent.** The Project would be consistent with this regulation and would not conflict with implementation of the vehicle emissions standards.
SB 1368	Establishes an emissions performance standard for power plants within the State of California.	**Consistent.** The Project would be consistent with this regulation and would not conflict with implementation of the emissions standards for power plants.
Low Carbon Fuel Standard	Establishes protocols for measuring life-cycle carbon intensity of transportation fuels and helps to establish use of alternative fuels.	**Consistent.** The Project would be consistent with this regulation and would not conflict with implementation of the transportation fuel standards.
California Green Building Standards Code Requirements	All bathroom exhaust fans shall be ENERGY STAR compliant.	**Consistent.** The Project would utilize energy efficiency appliances and equipment and would exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Standards Code.
	HVAC Systems will be designed to meet ASHRAE standards.	**Consistent.** The Project would utilize energy efficiency appliances and equipment and would exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Standards Code.
	Energy commissioning shall be performed for buildings larger than 10,000 square feet.	**Consistent.** The Project would be commissioned as part of its USGBC LEED Silver Certification process.
	Air filtration systems are required to meet a minimum of MERV 8 or higher.	**Consistent.** The Project would meet or exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Refrigerants used in newly installed HVAC systems shall not contain any CFCs.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Parking spaces shall be designed for carpool or alternative fueled vehicles. Up to eight percent of total parking spaces will be designed for such vehicles.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Long-term and short-term bike parking shall be provided for up to five percent of vehicle trips.	**Consistent.** The Project would provide bicycle parking and end-of-trip facilities in accordance with the applicable portion of the County's HDO.
	Stormwater Pollution Prevention Plan (SWPPP) required.	**Consistent.** The Project would meet this requirement.

Table 4.E-6 (Continued)

Consistency with Applicable Greenhouse Gas Reduction Strategies

Source	Category / Description	Consistency Analysis
	Indoor water usage must be reduced by 20% compared to current California Building Code Standards for maximum flow.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and reduce indoor water usage by a minimum of 20 percent.
	All irrigation controllers must be installed with weather sensing or soil moisture sensors.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Wastewater usage shall be reduced by 20 percent compared to current California Building Standards.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and reduce indoor water usage by a minimum of 20 percent.
	Requires a minimum of 50% recycle or reuse of nonhazardous construction and demolition debris.	**Consistent.** The Project would exceed this requirement as part of its USGBC LEED Silver Certification process and recycle or reuse 75 percent of nonhazardous construction and demolition debris.
	Requires documentation of types of waste recycled, diverted or reused.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Requires use of low VOC coatings consistent with AQMD Rule 1168.	**Consistent.** The Project would be consistent with this regulation and would meet or exceed the low VOC coating requirements.
	100 percent of vegetation, rocks, soils from land clearing shall be recycled or stockpiled on-site.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process. The Project would recycle or reuse 75 percent of total nonhazardous construction and demolition debris (including 100 percent of nonhazardous vegetation, rocks, and soils).
Climate Action Team	Reduce diesel-fueled commercial motor vehicle idling.	**Consistent.** The Project would be consistent with the CARB Air Toxics Control Measure (ATCM)) to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time (see Section 4.B., *Air Quality*, of this Draft EIR).

Table 4.E-6 (Continued)

Consistency with Applicable Greenhouse Gas Reduction Strategies

Source	Category / Description	Consistency Analysis
	Achieve California's 50 percent waste diversion mandate (Integrated Waste Management Act of 1989) to reduce GHG emissions associated with virgin material extraction.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and recycle or reuse 75 percent of nonhazardous construction and demolition debris. Project-generated solid waste would be collected by private waste services providers that would process mixed waste that yields diversion results comparable to source separation and would achieve the County's goal of 75 percent waste diversion by 2020. Medical waste would be disposed of in accordance with applicable regulations.
	Plant five million trees in urban areas by 2020 to effect climate change emission reductions.	**Consistent.** The Project would provide appropriate landscaping on the Medical Center Campus including vegetation and trees.
	Implement efficient water management practices and incentives, as saving water saves energy and GHG emissions.	**Consistent.** The Project would, as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process, reduce indoor water usage by a minimum of 20 percent.
	Reduce GHG emissions from electricity by reducing energy demand. The California Energy Commission updates appliance energy efficiency standards that apply to electrical devices or equipment sold in California. Recent policies have established specific goals for updating the standards; new standards are currently in development.	**Consistent.** The Project would utilize energy efficiency appliances and equipment and would exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Standards Code.
	Apply strategies that integrate transportation and land-use decisions, including but not limited to promoting jobs/housing proximity, high-density residential/ commercial development along transit corridors, and implementing intelligent transportation systems.	**Consistent.** The Project would incorporate physical and operational Project characteristics that would reduce vehicle trips and VMT and encourage alternative modes of transportation for patrons and employees.
	Reduce energy use in private buildings.	**Consistent.** The Project would utilize energy efficiency appliances and equipment and would exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Standards Code.
Los Angeles County Green Building Ordinance	Install a smart irrigation controller and require 65 percent of the landscaped area to use drought-tolerant plant species.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver certification.

Table 4.E-6 (Continued)

Consistency with Applicable Greenhouse Gas Reduction Strategies

Source	Category / Description	Consistency Analysis
	Achieve 65 percent waste diversion for construction waste.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and recycle or reuse 75 percent of nonhazardous construction and demolition debris.
	Minimum of one 15-gallon tree must be planned for every 10,000 feet of developed area.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements.
	Install high efficiency toilets	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and reduce indoor water usage by a minimum of 20 percent.
Los Angeles County Low Impact Development (LID) Standards	All Designated Projects (required) must retain 100 percent of Stormwater Design Volume on-site through infiltration, evapotranspiration, stormwater runoff harvest, or a combination thereof.	**Consistent.** The Project would implement stormwater BMPs consistent with the County's requirements.

Source: PCR Services Corporation, 2016

Since the Project would implement Project Design Features intended to achieve the equivalent of LEED Silver Certification and would incorporate water conservation, energy conservation, tree planting, and other features consistent with the County's Green Building Standards Code, the Project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions and impacts would be less than significant.

(a) Consistency with Executive Orders S-3-05 and B-30-15

At the State level, Executive Orders S-3-05 and B-30-15 are orders from the State's Executive Branch for the purpose of reducing statewide GHG emissions. Executive Orders S-3-05's goal to reduce GHG emissions to 1990 levels by 2020 was codified by the Legislature as the 2006 Global Warming Solutions Act (AB 32). As analyzed above, the Master Plan Project is consistent with AB 32. Therefore, the Project does not conflict with this component of the Executive Orders.

The Executive Orders also establish the goals to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. These goals have not yet been codified. However, studies have shown that, in order to meet the 2030 and 2050 targets, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its *Climate Change Scoping Plan*, CARB acknowledged that the "measures needed to meet the 2050 are too far in the

future to define in detail."[72] In the First Update, however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately."[73] Due to the technological shifts required and the unknown parameters of the regulatory framework in 2030 and 2050, quantitatively analyzing the Project's impacts further relative to the 2030 and 2050 goals currently is speculative for purposes of CEQA. Moreover, CARB has not calculated and released the BAU emissions projections for 2030 or 2050, which are necessary data points for quantitatively analyzing a CEQA project's consistency with these targets.

Although the Project's emissions levels in 2030 and 2050 cannot yet be reliably quantified, Statewide efforts are underway to facilitate the State's achievement of those goals and it is reasonable to expect the Project's incremental emissions to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Project's emissions total at New Hospital Tower buildout represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project is consistent with the Executive Orders' goals.

As discussed previously, CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions. While the 2020 cap would remain in effect post-2020,[74] the Cap-and-Trade Program is not currently scheduled to extend beyond 2020 in terms of additional GHG emissions reductions. However, CARB has expressed its intention to extend the Cap-and-Trade Program beyond 2020 in conjunction with setting a mid-term target. The "recommended action" in the First Update to the Climate Change Scoping Plan for the Cap-and-Trade Program is: "Develop a plan for a post-2020 Cap-and-Trade Program, including cost containment, to provide market certainty and address a mid-term emissions target."[75] The "expected completion date" for this recommended action is 2017.[76] In addition to CARB's First Update, in January 2015, during his inaugural address, Governor Jerry Brown expressed a commitment to achieve "three ambitious goals" that he would like to see accomplished by 2030 to reduce the State's GHG emissions: (1) increasing the State's Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030, (2) cutting the petroleum use in cars and

[72] *California Air Resources Board, Climate Change Scoping Plan, December 2008, page 117.*

[73] *California Air Resources Board, First Update to the Climate Change Scoping Plan, May 2014, page 32.*

[74] *California Health & Safety Code § 38551(a) ("The Statewide greenhouse gas emissions limit shall remain in effect unless otherwise amended or repealed.").*

[75] *CARB, First Update to the Climate Change Scoping Plan, op. cit,. page 98.*

[76] *Ibid.*

trucks in half, and (3) doubling the efficiency of existing buildings and making heating fuels cleaner.[77] These expressions of Executive Branch policy may be manifested in adopted legislative or regulatory action through the State agencies and departments responsible for achieving the State's environmental policy objectives, particularly those relating to global climate change.

Further, recent studies shows that the State's existing and proposed regulatory framework can allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the Statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study could allow the State to meet the 2030 and 2050 targets.[78]

For the reasons described above, the Project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the establishment of the 2030 and 2050 targets.

4. CUMULATIVE IMPACTS

The emissions of a single project will not cause or exacerbate global climate change. It is possible that a substantial increase in GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs from even relatively small (on a global basis) increases in GHG emissions. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and therefore significant. A cumulatively considerable impact is the impact of a proposed project in addition to the related projects. However, in the case of global climate change, the proximity of the project to other GHG-generating activities is not directly relevant to the determination of a cumulative impact. Although the State requires Metropolitan Planning Organizations and other planning agencies to consider how region-wide planning decisions can impact global climate change, there is currently no established non-speculative method to assess the cumulative impact of proposed independent private-party development projects.

The land use sector can accommodate growth and still be consistent with statewide plans to reduce GHG emissions. To that end, various agencies have developed programs to guide future building and transportation development towards minimized resource consumption and lowered resultant pollution. The County's CCAP provides goals and strategies that would achieve a reduction target of at least 11 percent

[77] *Transcript: Governor Jerry Brown's January 5, 2015, Inaugural Address, www.latimes.com/local/political/la-me-pc-brown-speech-text-20150105-story.html#page=1. Accessed March 2, 2015.*

[78] *Energy and Environmental Economics (E3), "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios," April 2015; Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions," Vol. 78, pages 158-172. The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation, and electricity sectors.*

below 2010 levels for unincorporated areas of the County, although the reductions are not expected to occur uniformly from all sources or sectors of GHG emissions (refer to Table 4-1 of the CCAP). This target is consistent with the recommendations in the AB 32 Scoping Plan. Additionally, the County continues to develop programs to reduce GHG emissions including the Green Building Code and LID Ordinance.

Additionally, CARB has set targets specific to the transportation sector (land use-related transportation emissions), for example, and under SB 375 SCAG must incorporate these GHG-reduction goals into the Regional Transportation Plan and demonstrate that its Sustainable Communities Strategy or Alternative Planning Strategy is consistent with the Regional Housing Needs Assessment. One of the goals of this process is to ensure that the efforts of State, regional and local planning agencies accommodate the contemporaneous increase in population and employment with a decrease in overall GHG emissions. For example, adopting zoning designations that reduce density in areas which are expected to experience growth in population and housing needs, is seen as inconsistent with anti-sprawl goals of sustainable planning. Although development under a reduced density scenario results in lower GHG emissions from the use of that land compared to what is currently or hypothetically allowed (by creating fewer units and fewer attributable vehicle trips), total regional GHG emissions will likely fail to decrease at the desired rate or, worse, increase if regional housing and employment needs of an area are met with a larger number of less-intensive development projects. Additionally, many of the Project-related GHG emissions source sectors, such as electricity generated in-state or imported and combustion of transportation fuels, are covered-entities under the Cap-and-Trade Program and would be reduced sector-wide. Therefore, it is not simply a cumulative increase in regional development or the resultant GHG emissions that threatens GHG reduction goals.

As discussed in Table 4.E-3 and Table 4.E-6, the Project would be consistent with applicable GHG reduction strategies recommended by the County and State. In addition, the project would support and be consistent with relevant and applicable GHG emission reduction strategies in SCAG's Sustainable Communities Strategy. These strategies include locating uses within a relatively short distance of existing transit stops; providing employment near current transit stops; and improving the Medical Center Campus to be more pedestrian and bicycle friendly. As a result, the project would be consistent with the County and State goals. Furthermore, the overwhelming majority of the Project-related GHG emissions are from source sectors that include electricity generated in-state or imported and the combustion of transportation fuels. These sectors are already covered entities under the Cap-and-Trade Program and as such would be reduced sector-wide in accordance with the goals of AB 32, in addition to the previously discussed GHG emissions reductions from the Project-specific energy efficiency design features and VMT-reducing characteristics. Given that the Project would generate GHG emissions that are less than significant, and given that GHG emission impacts are cumulative in nature, the project's incremental contribution to cumulatively significant GHG emissions would be less than cumulatively considerable, and impacts would be less than significant.

5. MITIGATION MEASURES

The Master Plan Project would result in less than significant impacts with respect to emissions of GHGs and consistency with applicable GHG emissions reductions plans, policies, or regulations. Therefore, no mitigation measures would be required.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts regarding emissions of GHGs and consistency with applicable GHG emissions reductions plans, policies, or regulations would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
F. HAZARDS AND HAZARDOUS MATERIALS

1. INTRODUCTION

This section analyzes the potential impacts associated with hazards and hazardous materials that could result from implementation of the Project. The analysis considers potential impacts associated with the historical use of hazardous materials on the Project Site and the transport, use, or disposal of hazardous materials that could occur during construction and operation of the Project. The analysis included in this section is based on the Phase I Environmental Site Assessment (Phase I Assessment) and Hazardous Building Material Survey prepared for the Project, which collectively identify the potential environmental concerns (PECs) and recognized environmental conditions (RECs), as defined in established professional standards, on the Project Site. The Phase I Assessment and Hazardous Building Material Survey contain more detailed information than is summarized below and are provided in Appendix E of this Draft EIR.

One other hazards-related topic, groundwater, is addressed in detail in Section 4.G., Hydrology and Water Quality, of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Historical Site Uses

The Harbor-UCLA Medical Center, originally named the Los Angeles County Harbor General Hospital from 1951 to 1978, was founded in 1943 as the U.S. Army's Port of Embarkation Station Hospital, a receiving point and hospital for servicemen returning from the Pacific during World War II. Facilities included an administration building, a collection of Army barracks and cottages, and a hospital that provided medical services for servicemen and their families living in the area. By 1946, the facility was sold as war surplus by the federal government to the County for the development of Los Angeles County Harbor General Hospital (Harbor General Hospital), to provide County-based medical care and hospital services to the increasingly populous southwestern part of the County.

The existing hospital building (Existing Hospital Tower), located in the eastern portion of the Campus, was developed on previously vacant land and completed in 1962. The Hospital replaced a number of the original Army facility's wooden barracks and cottages. Nearly one-third of the original barracks remain in use today as clinics, offices, shops, storage, laboratories and related facilities, augmented by temporary modular buildings and trailers.

The first major expansion of the 1962 Hospital building, the Surgery and Emergency Room Replacement Project, was completed in 2013. The Project increased the size of the existing emergency room and added surgery suites, adult and pediatric triage, a new entrance lobby, and a waiting area, as well as a new helistop and 544-space parking structure.

b. Existing Conditions

The existing 72-acre Harbor-UCLA Campus is currently developed with approximately 1,279,284 square feet of developed floor area. The central campus facilities were constructed prior to 1960, including the wood-frame barracks and temporary buildings. The Project Site still closely follows the original east-west-oriented street grid established in the 1940s. The Hospital, related treatment facilities, and the majority of Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Campus, while outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Campus. Patient diagnostic facilities, administration offices, and facilities management functions are scattered throughout the Campus.

Tenants on the Harbor-UCLA Campus include LA BioMed, the Harbor-UCLA Professional Building, and the Children's Institute, Inc. (CII). LA BioMed occupies a number of older buildings throughout the 16.5-acre area encompassing the central portion of the Harbor-UCLA Campus and is consolidating its operations within a smaller 11.4-acre leasehold (LA BioMed Campus) in the south-central portion of the Campus. The Harbor-UCLA Professional Building houses nine clinical departments that provide a range of clinical specialties, a laboratory, radiology, nuclear medicine and a pharmacy. CII occupies a 23,435-square-foot facility known as the Burton E. Green Campus in the northwestern corner of the Campus.

Harbor-UCLA Medical Campus is surrounded by urban uses. Commercial uses (mostly neighborhood retail businesses), medical/dental services, the Harbor-UCLA Medical Center Employee Children's Center, a multifamily residential apartment complex, and single-family residential neighborhoods ate located to the north, across Carson Street. Neighborhood retail uses, medical services, condominium complexes, two mobile home parks, and wholesale and light industrial uses are located east of the Project Site. Single-family and multi-family residential neighborhoods, the abandoned Union Pacific Railroad right-of-way, and an off-site surface parking lot serving LA BioMed are to the south and west of the Project Site.

(1) Hazardous Materials Database Site Listings

As part of the Phase I Assessment, environmental agency databases that log known hazardous site conditions were reviewed to ascertain whether the Project Site or any adjacent properties were listed on Federal, State, or local databases. These databases list properties by location and provide historic information regarding past use and presence of hazardous conditions. Identification of the databases searched and the findings regarding the Project Site and adjacent sites follows.

(a) Project Site

The Harbor-UCLA Medical Center was listed in the Federal Resource Conservation and Recovery Act (RCRA) Large-Quantity Generator (LQG) list in 2008 for several chemicals including metals, nitroglycerine, formaldehyde, ignitable hazardous wastes, acids, and non-halogenated solvents. There were no violations for this listing. Harbor-UCLA Diagnostic Imaging at 21828 South Normandie Avenue, which is on the Harbor-UCLA Campus, was listed as a small quantity generator (SQG) by RCRA in 1996. The listing showed no violations.

The State Water Resources Control Board GeoTracker lists several Leaking Underground Storage Tanks (LUSTs) on the Harbor-UCLA Campus. Regulatory activities related to these LUSTs, including tank removals,

UST sampling reports, soil and water investigation work plans, and site assessment reports, date back to 1994 and continued until 2000.

Specifically, the GeoTracker database identifies a site on the eastern side of the Harbor-UCLA Campus, near the central plant (aka power plant) with a cleanup status of "Open – Site Assessment" as of March 17, 2015. Additional reports and investigations cited in the database between 1994 and 2000 identify additional soil contamination associated with diesel USTs near the then-proposed Emergency Room expansion loading dock; at a fuel station near Building T-1; near the diesel and amber fuel USTs associated with the central plant; near five USTs located near the Hospital's hazardous waste storage area that were removed in 1994; and in several other on-site locations. Soil detection levels ranged from non-detect to low to moderate, and while site closures, soil excavations, and soil vapor remediation were recommended for some of these sites in the regulatory documentation cited by the GeoTtracker database, it is not known whether all recommended actions were taken and therefore the closure status of these sites is uncertain, as discussed further below.

The Emergency Response Notification System (ERNS) List cites two listings for an approximately 30-gallon gasoline storage tank leak in 1994. Based on the date and activity, it is assumed these were related to the removal of five USTs in 1994.[1]

The Harbor-UCLA Medical Center was listed in the following non-ASTM databases: Historical UST, California Hazardous Material Incident Report System (CHMIRS), Hazardous Waste Information System (HAZNET) Facility and Manifest Data, California Facility Information Database (FID) UST, and Statewide Environmental Evaluation and Planning System (SWEEPS) UST. Based on the listings in multiple environmental databases, primarily for USTs and hazardous waste, the Phase I Assessment concluded that the LUSTs cited in these databases, and the uncertain status of related cleanup and closure, constitute recognized environmental conditions on the Harbor-UCLA Campus.

The HAZNET database lists that Harbor-UCLA had over 1,000 listings from 1993 to 2013 of various chemicals being removed from the site under hazardous waste manifests. HAZNET does not track violations and the presence of a facility on the database does not necessarily indicate that a concern exists at the Project Site at this time. Accordingly, the Phase I Assessment determined the HAZNET listing is not, in itself, considered to represent an environmental concern.

According to information contained on the South Coast Air Quality Management District (SCAQMD) Facility INformation Detail (FIND) Database,[2] Harbor-UCLA's address is listed as LA Co Harbor-UCLA Medical Center with an active status. Equipment with an active permit status include two emergency generators, three low nitrogen oxide burners, and three boilers, all of which had an issued date in 2013. The site address is also listed as LA Co Dept Health Srv, UCLA Harbor Med Ho., with active permits for two "Ethylene Oxide (ETO) Sterilization Hospital" issued in 2000, four emergency generators issued in 1999, and a "Control ETO Sterilization Hospital" issued in 2000. No violations regarding use of this equipment have been recorded.

[1] *See Section 7.2, State Water Resources Control Board GeoTracker Website, in the Phase I Hazardous Materials Assessment Report, provided in Appendix E, for a more detailed summary on the actions taken between 1994 and 2000.*

[2] *http://www.aqmd.gov/home/tools/public/find*

Based on the nature of the equipment and regulatory status, SCAQMD records did not reveal the presence of recognized environmental conditions at the property.

(b) Adjacent Properties

The State Leaking Underground Storage Tank (LUST) database lists four out of 10 facilities adjacent to the Harbor-UCLA Medical Center Campus as potential environmental concerns due to the presence of gasoline in underlying soil and/or groundwater:

- Unocal #4944 at 1259 West Carson Street, located adjacent to the northwest, is reported to have groundwater flow towards the site.
- Tony's Unocal at 1259 West Carson Street, located adjacent to the northwest, is reported to have groundwater flow away from the site.
- Mobil #11-MAF at 21700 South Vermont Avenue, located adjacent to the east, is reported to have soil and groundwater data that shows low to non-detect concentrations of total petroleum hydrocarbons (TPHs) and volatile organic compounds (VOCs).
- Shell at 911 West Carson Street, located adjacent to the northeast, is reported to have groundwater flowing tangential to the site.

Based on the varying groundwater flow directions and proximity of several LUST cases to the site, there is a possibility that groundwater beneath the site is impacted with petroleum hydrocarbons from off-site facilities. Groundwater depths beneath the Harbor-UCLA Campus are between 48 and 60 feet below grade surface (bgs), with a historic high groundwater depth of 30 feet bgs; shallower perched groundwater may periodically be encountered in the area. The remaining six sites are reported as not being an environmental concern to the site. For addresses and listings of the sites, refer to Section 6.14, State Leaking Underground Storage Tank (LUST) Lists: Distance Searched – ¼ mile, of the Phase 1 Hazardous Materials Assessment Report, provided in Appendix E.

Several properties in the Project vicinity were listed on the RCRA database. ExxonMobil Oil Corp. at 21700 South Vermont Avenue, to the east and down-gradient of the site, was listed as a LQG in 2002 and a SQG in 2009. Norge Village Cleaners, located at 1161 West Carson Street, adjacent to the northwest and up to cross-gradient of the site, and Shell Service Station, located at 911 West Carson Street, adjacent to the north and cross-gradient of the site, were listed as SQGs in 1993 and 2002. Violations were not found for any of these three facilities. Based on the absence of reported violations, the Phase I Assessment determined that presence of the property on the RCRA database was not considered to represent a concern to the Project Site.

Several adjacent properties were also listed on the UST Registration List. Tosco/Unocal #30769 at 1259 West Carson Street, located adjacent to the northwest and cross-gradient of the site (e.g., at the same elevation), Mobil Oil Corp S/S #18-MAG at 21700 South Vermont Avenue located adjacent to the northeast and downgradient of the site, and Torrance Harbor Shell at 911 West Carson Street located adjacent to the northeast of the site are all listed on the UST database. These listings alone are not indicative of a release and would not be considered a recognized environmental concern to the site.

(2) Potentially Hazardous Materials on the Project Site

Small quantities of hazardous substances are currently used on the portion of the Project Site occupied by the Harbor-UCLA Medical Center. These substances include common hospital materials (e.g. rubbing alcohol, carbon dioxide cylinders, needles), central plant secondary containment necessities (e.g. anti-foam, bleach, pressure oil), and other cleaning agents (e.g. bleach, clout drums, phosphoric acid drums). Significant evidence of releases or spills was not observed at the site and is therefore not considered an environmental concern. See **Table 4.F-1**, *Hazardous Materials Stored at the Harbor-UCLA Campus*, for a detailed list of hazardous materials and their locations.

Table 4.F-1

Hazardous Materials Stored at the Harbor-UCLA Campus

Building	Location	Storage	Contents	Comments
Hospital	Pharmacy (1st floor)	Small fire closet	Rubbing alcohol	Used to clean surfaces
		RCRA container	Needles	
	Pathology lab (2nd floor)	Fire closets	Bleach, alcohols, reaction buffers, diaminobenzene, acids, methanol	
		Lab area	Three carbon dioxide cylinders	
	Dark room (Basement)	10-gallon bucket	Film fixer	Used for radiation therapy
	In-patient pharmacy (basement)	RCRA containers	Epinephrine, Coumadin, chemotherapy chemicals	Restricted area, pictures not allowed
	Stock room (basement)	Fire closet	Phenol solution, acetic acid, tincture benzoin, isopropyl alcohol	Small quantity (less than 5-gallon) containers
	Loading dock	Enclosure	CO_2, oxygen, medical oxygen, medical nitrogen, empty cylinders	
		Exterior	Approximately 80 new car batteries	Placed on pallets, no secondary containment
Power Plant	Medical gas storage area	Enclosure	NOS, CO_2, helium, argon, sulfur	hexafluoride, nitrogen, oxygen cylinders
	Nitrogen and NOS room S	Enclosure	Nitrogen and NO cylinders	
	Boiler room	Corner of room	Oxygen/acetylene cylinders, 5-gallon buckets and 30- to 55- gallon drums of potassium hydroxide, boiler antifoam, chemical cleaner, corrosion inhibitor, oxygen scavenger	Secondary containment
	Boiler chemical storage area	ASTs	Morpholine, sodium glucoheptonate, sodium metabisulfite	See Section 3.5

Table 4.F-1 (Continued)

Hazardous Materials Stored at the Harbor-UCLA Campus

Building	Location	Storage	Contents	Comments
	Equipment room	Corner of room	5-gallon bucket of pressure oil, 10 50-lb bags of absorbent	Secondary containment
	Exterior	Fire closet	Alcohols	Secondary containment
	Cooling tower	Storage shed	Anti-foam, pressure oil, microbicide, degreaser, bleach, lighter fluid, sulfuric acid	Secondary containment
		Chemical storage area (ASTs)	Microbicide, polymaleic acid, sodium hydroxide	See Section 3.5
LA BioMed	Buildings B1, C1, C3, E1, E6, F1, RB2, RB2 annex, RB3 (2nd floor), HH	Fire closets	Alcohols, acids, acetone, xylenes, chloroform, petroleum ether, hexanes, toluene, 2-propanol, ethanol, film fixer, potassium chloride, glycerin, pyridine, bleach	Small quantity (less than 5-gallon) containers, two 5-gallon buckets of ethyl alcohol in Building HH,
	Building F1	Chemical storage area	Two 135-pound hydrogen peroxide containers	Secondary containment
	Building RB2 annex	Cage washing area	Two 30-gallon clout (soap) drums, two 30 gallon phosphoric acid drums, four 2-gallon spray buckets of bleach and acid	Used to sterilize animal cages, secondary containment
	Buildings C1, C3, D1, E1, RB2, RB3 (2nd floor), HH	Gas cylinders	Oxygen, argon, nitrogen, CO_2, NOS, helium	

ASTs – aboveground storage tanks
CO_2 – carbon dioxide
NOS – nitrous oxide
RCRA – Resource Conservation and Recovery Act

Source: Ninyo & Moore, 2015

Small quantities of hazardous waste were observed in designated buildings on the site. Six storage sheds with secondary containment were labeled for flammable, corrosive, oxidizing, and poisonous materials. Five of the sheds contained fire closets with small quantities of acid, ammonium sulfate, methanol, etc. The last shed contained used fluorescent light bulbs. Several gasoline canisters and, empty drums, an empty nitrogen tank, and an electrical transformer were seen on the site. Staining or signs of release were not observed in or adjacent to the hazardous waste storage area and is therefore not considered an environmental concern.

(a) Underground Storage Tanks (USTs)

Four USTs are present in the central plant area of the Campus; two supply boilers and hold amber fuel and two support emergency backup generators and hold diesel fuel. A fifth UST identified as an interceptor is located beneath the helistop and is used as an emergency spill collection system for potential helicopter fuel release. The presence of these USTs at the central plant represents a potential environmental concern for the site. Details about these USTs can be found in **Table 4.F-2**, *USTs on the Harbor-UCLA Campus*.

Table 4.F-2

USTs on the Harbor-UCLA Campus

Area	Location	Tank Capacity (Gallons)	Contents	Construction	Comments
Power Plant	Northern portion	10,000	Amber Fuel	Double-walled fiberglass	Used for boilers, installed in 1999
		25,000		Single-walled fiberglass	
	Southern portion	15,000	Diesel Fuel	Double-walled fiberglass	Used for emergency backup generators, installed in 1999
		15,000			
Helistop	Adjacent to the south	Unknown	Two empty interceptors	Unknown	Emergency spill collection system for potential helicopter fuel release, no staining observed

Source: Ninyo & Moore, 2015

(b) Aboveground Storage Tanks (ASTs)

ASTs were observed in the central plant area and adjacent to LA BioMed buildings. A total of 12 ASTs were observed in the central plant's boiler chemical storage area, cooling tower chemical storage area, cooling tower storage shed, adjacent to the cooling tower storage shed, the eastern edge, and outside the power station. The contents varied from sulfuric acid to liquid oxygen. The ASTs adjacent to the LA BioMed buildings contained diesel fuel. Detailed AST information can be found in **Table 4.F-3**, *ASTs on the Harbor-UCLA Campus*. No indications of spills, leaks, or staining were observed.

(c) Polychlorinated Biphenyls (PCBs)

PCBs are hazardous materials that were formerly used in such applications as hydraulic fluids, plasticizers, adhesives, fire retardants, etc. Several on-site facilities are considered potential contenders for containing PCBs. Pole-mounted transformers were observed along Medical Foundation Drive, Medical Center Drive, South Drive, and between several buildings at the site. Pad-mounted transformers were also observed at the power station and adjacent to LA BioMed buildings. Staining or signs of release was not observed.

Table 4.F-3

ASTs on the Harbor-UCLA Campus

Area	Location	Tank Capacity (Gallons)	Contents	Comments
Power Plant	Boiler Chemical Storage Area	75	Morpholine	Chemicals used for maintaining boilers, secondary containment, no staining observed
		100	Sodium Glucoheptonate	
		75	Sodium Metabisulfite	
		Unknown	Empty	Empty propane tanks, no secondary containment, no staining observed
	Cooling Tower Chemical Storage Area	75	Microbicide	Chemicals used for corrosion protection, secondary containment, no staining observed
		75	Polymaleic Acid	
		75	Sodium Hydroxide	
	Cooling Tower Storage Shed	300	Sulfuric Acid	Planned to be removed this year, secondary containment, no staining observed
	Adjacent to Cooling Tower Storage Shed	4,000	Empty	Baker tank, originally planned to store water, never used
	Eastern edge	9,000	Liquid Oxygen	No secondary containment, no staining observed
		900		
	Outside Power Station	N/A	Two Autoclaves	One of the autoclave was never put into use, no staining observed
LA BioMed Buildings	Various	Approximately 200 to 250, one is 500	Diesel Fuel	Eight exterior emergency generators, no staining observed, no secondary containment [a]

Notes:

[a] *Secondary containment is a means of surrounding one or more primary storage containers to collect any potential hazardous material spillage in the event of loss of integrity or container failure. Hazardous materials are stored in secondary containment to prevent or minimize the possibility of accidental release.*

Source: Ninyo & Moore, 2015

Transformers were observed in the power station building of the power plant. According to Mr. Juan Oliva of the Los Angeles County Department of Public Works, PCBs are not used in the power station transformers.

Light ballasts, used as building material for the site, manufactured until the late 1970s commonly contained PCBs. Because the building was constructed before the 1970s, it is assumed that there will be PCBs present in the light ballasts on the site. No leaks or damage was observed in association with the electrical equipment. The LADWP would be responsible for the clean-up of any PCBs on the site.

(d) Asbestos-Containing Materials (ACMs)

Asbestos is a naturally-occurring mineral made up of microscopic fibers that has been widely used in the building industry for a variety of uses. Such uses include acoustic and thermal insulation and fireproofing. It is often found in ceiling and floor tiles, linoleum, and pipes, as well as on structural beams and asphalt. However, asbestos can become a hazard when the fibers separate and become airborne. Asbestos has been linked with lung diseases caused by inhalation of airborne asbestos fibers, and its use in building was banned by 1978.

Based on the age of the building construction (prior to 1980), it is possible that ACM is present in the structures. ACMs observed at the Harbor-UCLA Medical Center includes drywall, joint compound, vinyl floor tile, mastic, insulation, cloth tape, coating, caulking, acoustic ceiling tile, gray carpet, buttonboard, transite pipe, linoleum, duct tape, vent tape, white cove base, glue, asphalt shingles, thermal system insulation, silver paint, and sealant. (Detailed results from an asbestos survey are provided in Table 1 of the Harbor-UCLA Hazardous Building Material Survey in Appendix E.) Prior to renovation or demolition activities which would disturb identified ACMs, a licensed abatement removal contractor shall be contacted to remove the ACMs and perform stabilization activities as required.

(e) Lead-Based Paint (LBP)

Lead is a naturally occurring element and heavy metal that was widely used as a major ingredient in most interior and exterior oil-based paints prior to 1950. Lead compounds continued to be used as corrosion inhibitors, pigments, and drying agents from the early 1950s to 1972, when the Consumer Products Safety Commission specified limits on lead content in such products. Lead-based paint (LBP) is of concern both as a source of exposure and as a major contributor to lead in interior dust and exterior soil. Based on the date of building construction, it is possible that LBP has been used on the property in the past. For the purposes of identifying LBP on the site and for the Lead-Containing Surfaces (LCS) Survey, any lead-based surface is considered a LCS. (Detailed results from the LCS survey are provided in Table 2 of the Harbor-UCLA Hazardous Building Material Survey in Appendix E.) Identified LCSs shall not be disturbed. Prior to renovation or demolition activities which would disturb identified LCSs, a licensed abatement removal contractor should be contacted to remove the LCSs and perform stabilization activities as required.

(f) Mold

Review of site documentation revealed no documented cases of mold or water intrusion events occurring at the Project Site, and no mold was observed during site reconnaissance.

(3) Other Potential Hazardous Materials on the Project Site

The Phase I Assessment also analyzed potential hazards related to radon and lead in drinking water. Radon is a naturally-occurring, colorless, odorless gas that is a by-product of the decay of radioactive materials potentially present in bedrock and soil. Based on a review of statistical and testing data in Los Angeles

County, radon is not considered to represent an environmental concern at the Project Site and no additional investigation was recommended. Potable water supplied to the Project Site meets or exceeds all drinking water standards, including those for lead, in accordance with applicable drinking water quality standards (refer to Section 4.M.1, Water Supply, of this Draft EIR for further discussion). As such, lead in drinking water testing was not conducted.

According to the City of Los Angeles Department of Building and Safety, the Project is not located within a methane hazard site or buffer zone.[3] Furthermore, according to the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) records, no oil wells are located on the Project Site.[4]

c. Regulatory Setting

(1) Federal

(a) Hazardous Materials Management

The use, storage, and disposal of hazardous materials are subject to Federal, State, and local regulations as further discussed below.

The Federal Resource Conservation and Recovery Act (RCRA) (42 U.S.C. secs. 6901-6992k) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. Under RCRA regulations, generators of hazardous waste must register and obtain a hazardous waste activity identification number. RCRA allows individual states to develop their own program for the regulation of hazardous waste as long as it is at least as stringent as RCRA. The State of California has developed the California Hazardous Waste Control Law (HWCL) (Health and Safety Code sec. 25100 et seq. and 22 California Code of Regulations [CCR] sec. 66260.1 et seq.) and the U.S. Environmental Protection Agency (USEPA) has authorized RCRA enforcement to the State of California. Primary authority for the statewide administration and enforcement of HWCL rests with California EPA's (Cal-EPA) Department of Toxic Substances Control (DTSC).

The Federal Occupational Safety and Health Act of 1970, which is implemented by the Federal Occupational Safety and Health Administration (OSHA), contains provisions with respect to hazardous materials handling. Federal OSHA requirements, as set forth in 29 Code of Federal Regulations (CFR) Section 1910, et. seq., are designed to promote worker safety, worker training, and a worker's right–to-know. The U.S. Department of Labor has delegated the authority to administer OSHA regulations to the State of California. The California OSHA program (Cal-OSHA) (codified in the CCR, Title 8, or 8 CCR generally and in the Labor Code secs. 6300-6719) is administered and enforced by the Division of Occupational Safety and Health (DOSH). Cal-OSHA is very similar to the Federal OSHA program. Among other provisions, Cal-OSHA requires employers to implement a comprehensive written Injury and Illness Prevention Program (IIPP) for potential workplace hazards, including those associated with hazardous materials.

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[3] *City of Los Angeles Department of Public Works, LAMC, Methane Ordinance Map A-20960. City Ordinance No. 175,790. (February 4, 2004).*

[4] *California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOC) http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx, Accessed January 12, 2016.*

The Safe Drinking Water and Toxic Enforcement Act (22 CCR sec. 12000 et seq.), Proposition 65, lists chemicals and substances believed to have the potential to cause cancer or deleterious reproductive effects in humans, restricts the discharges of listed chemicals into known drinking water sources at levels above the regulatory levels of concern, requires public notification of any unauthorized discharge of hazardous waste, and requires that a clear and understandable warning be given prior to a known and intentional exposure to a listed substance.

At the local level, the County of Los Angeles Fire Department Health Hazardous Materials Division administrates hazardous waste inspections for generators and monitors their activities, including handling, storage, transportation, and disposal. Specifically, business and facilities that handles hazardous waste and/or materials at any one time during a year equal to, or greater than a total volume of 55 gallons, a total weight of 500 pounds, or 200 cubic feet of a compressed gas will be constituted as a hazardous materials handler and must report hazardous waste information to the California Environmental Reporting System (CERS).[5] The Health Hazardous Materials Division's Hazardous Waste Program provides a detailed Generator Requirements Summary Chart to give inspectors a list of requirements as they apply to Large Quantity Generators (LQGs), Small Quantity Generators (SQGs), and more.[6] Different documentation required include manifests, biennial reports, personnel training plans, and contingency plans.

(b) Polychlorinated Biphenyls

PCBs are regulated by the EPA under the Toxic Substances Control Act (TSCA). These regulations ban the manufacture of PCBs although the continued use of existing PCB-containing equipment is allowed. TSCA also contains provisions controlling the continued use and disposal of existing PCB-containing equipment. The disposal of PCB wastes is also regulated by TSCA (40 CFR 761), which contains life cycle provisions similar to those in RCRA. In addition to TSCA, provisions relating to PCBs are contained in the HWCL, which lists PCBs as hazardous waste.

(c) Airport Safety Provisions

The Federal Aviation Administration (FAA) has established an advisory circular with regard to safety concerns associated with the construction of high-rise buildings since such buildings may present a hazard to aircraft operations.[7] Federal Aviation Regulations Title 14 Part 77, Objects Affecting Navigable Airspace, establishes minimum standards to ensure air safety by regulating the construction or alteration of buildings or structures that may affect airport operations.[8]

The FAA requires that Form 7460-1, Notice of Proposed Construction or Alteration be filed with the FAA regional office prior to construction of buildings that are 200 feet or greater in height from the graded terrain. Any structure that exceeds an overall height of 200 feet above ground level should generally be

[5] *http://cers.calepa.ca.gov/*
[6] *http://www.fire.lacounty.gov/wp-content/uploads/2014/03/Hazardous-Waste-Generator-Summary-Requirements.pdf*
[7] *FAA Advisory Circular 70/7460-1L (December 4, 2015).*
[8] *14 C.F.R. Part 77 (2001).*

marked and/or lighted.[9] However, this determination is made by FAA and depends on terrain features, weather patterns, geographic location, number of structures, and overall layout of design.[10]

(2) State

(a) Underground Storage Tanks (USTs)

Underground Storage Tanks are regulated under Subtitle I of RCRA and its regulations which establish construction standards for new UST installations (those installed after December 22, 1988), as well as standards for upgrading existing USTs and associated piping. Since 1998, all non-conforming tanks were required to be either upgraded or closed.

The State regulates USTs pursuant to Health and Safety Code, Division 20, Chapter 6.7, and CCR Title 23, Division 3, Chapter 16 and Chapter 18. The State's UST program regulations include among others, permitting USTs, installation of leak detection systems and/or monitoring of USTs for leakage, UST closure requirements, release reporting/corrective action, and enforcement. Oversight of the statewide UST program is assigned to the State Water Resources Control Board (SWRCB) which has delegated authority to the Regional Water Quality Control Board (RWQCB) and typically on the local level, to the fire department. The LAFD administers and enforces Federal and State laws and local ordinances for USTs at the Project Site. Plans for the construction/installation, modification, upgrade, and removal of USTs are reviewed by LAFD inspectors. If a release is documented that affects groundwater, the project file is transferred to the RWQCB for oversight.

(b) Oil and Gas Fields

The California Division of Oil, Gas and Geothermal Resources (DOGGR) is the State agency responsible for the oversight of drilling, operation, maintenance, plugging and abandonment of gas, oil and geothermal wells. DOGGR established a regulatory program for the management of these resources, emphasizing their responsible development through sound engineering practices that protect the environment, prevent pollution and ensure public safety. DOGGR recommends that construction of buildings over or in the proximity of plugged and abandoned oil wells should be avoided, and if not feasible, then plugging or re-plugging wells should be performed to current DOGGR standards. The Project Site does not contain active or abandoned gas, oil or geothermal wells.

(c) Asbestos-Containing Materials

In California, any facility known to contain asbestos is required to have a written asbestos management plan (also known as an Operations and Maintenance Program [O&M Program]). Removal of ACMs must be conducted in accordance with the requirements of South Coast Air Quality Management District (SCAQMD) Rule 1403. Rule 1403 regulations require that the following actions be taken: (1) a survey of the facility prior to issuance of a permit by SCAQMD; (2) notification of SCAQMD prior to construction activity; (3) asbestos removal in accordance with prescribed procedures; (4) placement of collected asbestos in leak-tight containers or wrapping; and (5) proper disposal.

[9] *FAA Advisory Circular 70/7460-1L (December 4, 2015).*
[10] *Ibid.*

(d) Lead-based Paint

Cal-OSHA has established limits of exposure to lead contained in dusts and fumes. Specifically, CCR Title 8, Section 1532.1 establishes the rules and procedures for conducting demolition and construction activities and establishes exposure limits, exposure monitoring, and respiratory protection for workers exposed to lead.

(3) Local

(a) Methane Gas

The County of Los Angeles Methane Gas Mitigation Standards, Title 26, Ordinance 110.3 and Ordinance 110.4 establishes requirements for buildings and enclosed structures located in areas classified as being either in a methane zone or methane buffer zone. The Landfill Gas Protection System ensures the safety of buildings and their occupants from gas generation/migration that exists on a site. Requirements for new construction within such zones include a gas control system, gas monitoring system, gas monitoring program, contingency plan, and a covenant and agreement. The County has prepared a Methane Package that details the codes and laws that pertain to methane gas for the County of Los Angeles.[11] The County also provides maps of major waste systems and oil/gas well locations within the County of Los Angeles. Pursuant to the County mapping, the Project Site is not located in a methane zone or methane buffer zone.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The evaluation of hazardous conditions and materials associated with construction and/or operation of the Project is based on the Project's Phase I Hazardous Materials Assessment, contained in Appendix E, prepared by Ninyo & Moore in April 2015. The Phase I Assessment identified the potential presence of hazardous materials occurring on the Project Site. The Phase I Assessment methodology included a site survey, visual observation, interviews regarding current property usage and conditions, review of historical information (historic records sources, historic aerial photographs and topographic maps, historic city directories, property tax files, Los Angeles County Department of Public Works (Building and Safety Division) records, and Sanborn Fire Insurance Rate Maps) and review of regulatory agency databases and files pertaining to the Project Site. The findings of the various reports and data base searches were reviewed to identify the potential hazardous impacts for construction and/or operation of the Project.

Impacts regarding potential impacts associated with oil fields and methane were evaluated by review of State regulatory guidelines and mapping of the location of such fields and zones. Impacts regarding high-rise building effects on air operations were based on review of FAA regulations.

b. Thresholds of Significance

The potential for hazards and hazardous materials impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State CEQA Guidelines. These questions are as follows:

(IX) Hazards and Hazardous Materials. Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release ot hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The County determined in the NOP/IS prepared for the Project (see Appendix A of this Draft EIR) that the proposed Project would have no impact with respect to Checklist question h). Accordingly, this environmental topic is not evaluated in this EIRBased on the above factors, the Project would have a potentially significant impact on Hazards and Hazardous Materials if it would:

HAZ-1 Ccreate a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

HAZ-2 Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

HAZ-3 Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

[11] *https://dpw.lacounty.gov/epd/swims/docs/pdf/methane/Methane%20Packet.pdf*

HAZ-4 Result in a safety hazard for people residing or working in the project area, for projects located within an airport land use plan; or where such a plan has not been adopted, within two miles of a public airport or public use airport; or within the vicinity of a private airstrip.

HAZ-5 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

c. Project Characteristics or Design Features

The Project would include demolition and renovation activities associated with different buildings on the Harbor-UCLA Medical Center Campus, leading to an increase of approximately1,178,071 square feet of developed floor area. The Project would also introduce ongoing operations that would involve the use of common chemicals/materials associated with normal hospital and medical research uses. As cited in the Regulatory Section above, improvements to the Harbor-UCLA Medical Center Campus would be implemented in compliance with regulatory compliance measures that provide safety from potential contact with hazardous materials. Demolition/construction activities would be implemented pursuant to compliance measures that address potential contamination of earth and other on-site utility facilities, and Project operations would be subject to compliance measures for the handling of common household hazardous waste materials, and non-use of hazardous materials.

See Chapter 2.0, Project Description, in this Draft EIR for more information, including but not limited to: Figure 2-4, Existing Campus Buildings; Figure 2-6, Harbor-UCLA Medical Campus Master Plan Site Plan; and Table 2-1, Harbor-UCLA Master Plan Project - Existing and Proposed Land Use Summary.

d. Project Impacts

(1) Hazardous Materials Management

Threshold HAZ-1: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact Statement HAZ-1: *Project construction involves the demolition of existing buildings, grading, and excavation, which could result in the potential release into the environment of hazardous materials during removal and/or remediation of existing on-site USTs, ASTs, PCBs, ACMs, and LBP, or the disturbance of on-site soil that may be contaminated by past USTs on the Campus or underlying groundwater that may be contaminated by nearby off-site LUSTs. These represent potential environmental concerns on the Harbor-UCLA Campus and their disturbance is considered a potentially significant impact. Project operations would require the storage, use, and disposal of limited quantities of hazardous materials and waste routinely used in hospitals and related facilities, in a manner consistent with manufacturer's recommendations and applicable regulatory requirements. The potential for upset and accidental conditions resulting in the release of these materials is low and related impacts are considered less than significant.*

The Harbor-UCLA Medical Center Campus Master Plan Project would include the following: (1) a New Hospital Tower; (2) new and renovated outpatient care facilities (to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower); (3) other services and facilities, including

administrative office, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop); (4) long-term buildout of the LA BioMed Campus; (5) new Bioscience Tech Park; and (6) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements. Some existing buildings would be demolished and replaced while others, such as the Existing Hospital Tower, would be modified for different uses. Project construction, to be implemented in phases over the course of approximately 15 years, would require the remediation of buildings and equipment identified as having ACMs, LPB, and PCBs; the removal and/or relocation of USTs and ASTs that presently contain, or have contained in the past, fuels and other potentially hazardous materials; and the disturbance of soil potentially contaminated with hazardous materials as the result of on-site or off-site LUSTs. Remediation of these materials would be conducted by qualified professionals in accordance with regulations governing these activities, including SCAQMD's Rule 1403 (ACBMs); Cal-OSHA rules (LBP); the federal Toxics Substances Control Act (PCBs); and, for USTs, RCRA Subtitle I, the State Health and Safety Code, and LAFD's enforcement of the State's applicable CCR regulations, with oversight by the RWQCB where groundwater may be affected. Nonetheless, construction-related activities have the potential to result in accidental upset and release of hazardous materials into the environment, which is a potentially significant impact.

Construction also would involve the short-term use and disposal of hazardous substances such as paint, adhesives, surface coatings, finishing materials, and cleaning agents during building finishing activities. The use and disposal of such materials would take place in accordance with applicable federal, state, and local regulations governing health and safety and such activities are not anticipated to create a significant hazard to the public or environment. Related impacts would be less than significant.

Project operations would involve the use and storage of limited quantities of hazardous materials such as cleaning solvents, painting supplies, and pesticides used for landscaping. Additionally, wast generated by general hospital operations typically includes regulated medical waste, "sharps" containers, pharmaceutical waste, chemo waste, and pathological waste, and the nature of future hospital operations on the Campus will not significantly differ from existing daily operations. Furthermore, future expanded LA BioMed operations and operation of the proposed Biotech Science Campus on the Harbor-UCLA Campus would involve the use of limited quantities of potentially hazardous materials typical of those used in biomedical research facilities. All potentially hazardous materials and waste handled on the Harbor-UCLA Campus would be used, stored, and disposed of in accordance with manufacturer instructions and applicable federal, state, and local health and safety regulations. Accordingly, impacts related to the routine transport, use, and disposal of such materials would be less than significant.

Mold, radon, and lead in drinking water were not considered to represent an environmental concern at the Project Site. The Project Site is also not located within a methane hazard site or buffer zone. Project implementation would, therefore, result in less than significant impacts with respect to these hazards.

Threshold HAZ-2: Would the Project emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school?

Impact Statement HAZ-2: *As discussed under Threshold/Impact Statement HAZ-1, Project construction has the potential to result in the accidental release of hazardous materials related to the removal and/or remediation of existing on-site USTs, ASTs, PCBs, ACMs, and LBP, as well as the disturbance of on-site*

soil and/or groundwater that may be contaminated by nearby off-site LUSTs, which represent potential recognized environmental concerns on the Harbor-UCLA Campus. There are no schools within a quarter-mile of the Harbor-UCLA Campus and impacts related to the emissions or handling of hazardous materials in close proximity to schools would be less than significant. However, a child care facility located immediately north of the Medical Center Campus, which could be potentially affected by accidental releases of hazardous materials. As such, impacts in this regard are considered potentially significant.

There are 11 public schools within a three-mile radius of the Harbor-UCLA Campus, but no public or private schools within a quarter-mile. Although Project construction activities could result in the release of hazardous materials, such releases would not take place within a quarter-mile of an existing or proposed school and the potential for impacts on schools would be less than significant. Although no public or private schools are located in proximity to the Medical Center Campus, the Harbor-UCLA Kindercare child care center is located along the north side of Carson Street approximately 200 feet north of the Medical Center Campus. Since construction activities would have a limited potential to result in the incidental release of existing sources of contamination, and thus could affect children and staff at the facility, impacts to the existing child care facility would be considered potentially significant. However, implementation of applicable mitigation measures identified below would reduce the potential for adverse effects on the existing child care center to acceptable levels.

Threshold HAZ-3: Would the Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment?

Impact Statement HAZ-3: *Harbor-UCLA is listed on several environmental databases due to inconclusive documentation regarding proper remediation and site closure following 1994 removal of five on-site USTs, as well as the presence of Large and Small Quantity Generators of hazardous waste on the Campus. Four adjacent off-site properties to the east were also listed due to the potential for LUST petroleum hydrocarbon contamination of underlying groundwater. As stated under Threshold/Impact Statement HAZ-1, construction could result in the release of hazardous materials due to disturbance of potentially contaminated on-site soil and/or groundwater; this is a potentially significant impact. Hazardous waste generated during Project operations is not considered a hazard to human health or the environment and related impacts would be less than significant.*

At the locations of five USTs removed in 1994, some staining and moderate hydrocarbon contamination of nearby soil samples were observed, according to the Phase I Assessment prepared for the Harbor-UCLA Campus. Documentation of cleanup activities at this location does not extend past 2000 and it is not clear whether proper soil excavation, soil vapor remediation, and site closure were completed. Moreover, the potential extent of possible contamination of underlying groundwater with petroleum hydrocarbons originating with nearby off-site LUSTs is not known, although the potential for Project-related excavation to intercept groundwater at depths of 48-60 feet bgs, or historic high groundwater at 30 bgs, is low. Nonetheless, Project construction activities have the potential to result in a significant hazard to the public or environment as the result of disturbance of potentially contaminated soil and groundwater due to the unknown cleanup status of the documented USTs. This is considered a potentially significant impact.

(2) Airport Safety Provisions

Threshold HAZ-4: Would the Project result in a safety hazard for people residing or working in the project area if the Project Site is located within an airport land use plan; or where such a plan has not been adopted, within two miles of a public airport or public use airport; or within the vicinity of a private airstrip?

Impact Statement HAZ-4: *Harbor-UCLA is not located within an airport land use plan or the vicinity of a private airstrip; the nearest public airports are between four and 11 miles away. The Project proposes relocation of the existing helistop to a temporary and, ultimately, permanent location on the Harbor-UCLA Campus during Master Plan Project buildout. Helistop operations during construction and following buildout would not differ substantively from existing helistop operations in terms of the number of flights, composition of the helicopter fleet, or proposed flight paths. Project-related safety hazards due to airport or helistop operations would be less than significant.*

The nearest airports to the Harbor-UCLA Campus include Zamperini Field in Torrance (four miles away), Hawthorne Municipal Airport (seven miles away), Compton/Woodley Airport (nine miles away), and Los Angeles International Airport (eleven miles away). Because of this distance, Project operations, including helicopter operations, are not anticipated to interfere with operations of these or any other airports or airstrips.

(3) Emergency Response Plans

Threshold HAZ-5: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Statement HAZ-5: *Impacts regarding emergency response plans would be less than significant. The Project would not use hazardous materials or have on-site hazardous conditions that would conflict with or obstruct implementation of any emergency response plans. Further, the Project would not interfere with emergency access routes.*

There are no current or anticipated future conditions on the Harbor-UCLA Campus that would impair implementation of any existing emergency response plans or evacuation plans. The presence of potential and recognized environmental conditions such as PCBs, ACMs, and LBP in on-site buildings and the removal of ASTs and USTs and any associated soil or groundwater contamination, would be adequately addressed through required compliance with regulations governing public health and safety, as previously discussed under Threshold/Impact Statement HAZ-1.

The Project would not require the use of hazardous materials for construction, other than such materials as as paint, surface coatings, and other materials during building finishing activities, as discussed under Threshold/Impact Statement HAZ-1. With respect to operations, the use and disposal of such hazardous materials as cleaning solvents, painting supplies, and pesticides, as well as medical waste and hazardous materials associated with biomedical operations, would take place in accordance with applicable federal, state, and local regulations governing health and safety and such activities are not anticipated to create a significant hazard to the public or environment. Related impacts would be less than significant.

The Project would implement on-site provisions for public safety, including plans to address on-site emergency incidents. For further discussion, refer to Section 4.K.1, Fire Protection and Emergency Medical Services, and Section 4.K.2, Police Protection.

Implementation of the Master Plan Project would not adversely affect existing emergency access routes. Although Campus ingress and egress would be modified to create distinctions between access and parking for the general public and staff, including a new signalized public entrance on Carson Street as well as an unsignalized staff entrance on Vermont Avenue would be created. Vehicular access and circulation would avoid conflicts with traffic movements on local roadways and would facilitate the provision of on-site emergency services. During construction, adjacent streets may be temporarily affected due to construction activity, such as temporary lane closures. Such occurrences would be implemented in accordance with a construction traffic management plan, as stated in Section 4.L., Transportation and Traffic, of this Draft EIR which would allow for responses to emergency accessibility needs. The existing helistop would be temporarily relocated to the western end of the Campus during construction of the New Hospital Tower, and accommodations would be made to patient transport between the temporary helistop and Existing Hospital, until such time as the new permanent helistop is operational as part of the New Hospital Tower.

These Project features, together with regulatory compliance, would avoid the need to generate new emergency plans beyond those that would normally be implemented to address on-site emergency situations, and would avoid adverse impacts regarding the implementation of existing evacuation plans. Related impacts would be less than significant.

e. Cumulative Impacts

As described under Existing Conditions, the Phase I Assessment identified all potentially hazardous conditions in the Project vicinity and concluded that based on distance, topography, assumed groundwater gradient, current regulatory status, and/or the absence of reported releases, none of the sites surrounding the Project Site listed in agency databases are considered to represent a likely past, present, or material threat of release that would adversely affect the Project Site. This would also be the case for development on nearby properties.

All development in the Project vicinity would be subject to the same local, regional, State, and Federal regulations pertaining to hazards and hazardous materials as the Harbor-UCLA Master Plan. Therefore, with adherence to such regulations, the Project's incremental contribution to cumulatively significant impacts, considered together with related projects, would be less than cumulatively considerable.

Implementation of Project Design Feature PDF-TRAF-1, which requires the development of a construction traffic management plan for Project components that could require off-site lane closures and traffic detours, would ensure the Project's contribution to cumulatively significant emergency or evacuation plans would be less than cumulatively considerable.

4. MITIGATION MEASURES

The following mitigation measures are required to reduce potential impacts described in the Impact Statements HAZ-1, HAZ-2, and HAZ-3 to a less than significant level.

MM-HAZ-1: The abatement of ACMs, LBP, and PCBs in existing on-site buildings shall be conducted in accordance with the recommendations of the Hazardous Building Materials Survey prepared for the Harbor-UCLA Campus, which are as follows:

- The identified ACMs and surfaces containing LBP shall not be disturbed. Prior to renovation or demolition activities which would disturb identified ACMs, and LCSs, a licensed abatement removal contractor shall remove the ACMs and LCS, and perform paint stabilization activities as needed. The licensed abatement contractor must maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal, or other regulated activities.
- The identified surface containing LBP shall not be disturbed. Any LBP in a non-intact condition shall be abated or the component properly removed or encapsulated. Lead containing ceramic tiles shall be removed prior to demolition activities. Any lead related removal activities shall be performed in accordance with the OSHA Lead in Construction Standard, Title 8 California Code of Regulations (CCR) 1532.1.
- Proper LBP waste stream categorization is required. Prior to any demolition activities, a composite sample of the representative LBP material (ceramic tiles and loose and flaking paint) shall be analyzed for total lead for comparison with the Total Threshold Limit Concentration in accordance with EPA reference method SW-846. If the concentration of total lead is greater than or equal to 1,000 milligrams per kilogram (mg/kg), the LBP waste material must be disposed at a landfill which can receive such wastes. If the concentration is less than 50 mg/kg the sample may be disposed as construction debris, if it is to remain in California. If the total lead result is greater than or equal to 50 mg/kg and less than 1,000 mg/kg, the sample must be further analyzed for soluble lead by the Waste Extraction Test for comparison with the Soluble Threshold Limit Concentration as described in Title 22 CCR 66261.24a. Additionally, if the result is greater than or equal to 100 mg/kg the sample must be further analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure for comparison with the Resource Conservation and Recovery Act (RCRA) limits. Based on the results of the soluble and leachable analysis the waste material may require disposal as a RCRA-Hazardous waste or non-RCRA- (California-) Hazardous waste.
- Miscellaneous hazardous building materials shall be removed and properly recycled or disposed by the licensed abatement contractor prior to renovation or demolition activities. Contractor shall provide proper manifesting for all hazardous materials removed and recycled to prove the disposal of all materials was completed in accordance with local, state, and federal requirements.
- Abatement monitoring consulting services shall be performed by a third-party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances (asbestos and lead), verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the abatement activities.

MM-HAZ-2 Prior to initiation of excavation and grading activities in the areas identified in the Phase I Assessment as containing potential soil contamination or for which site closure is not confirmed (from either on- or off-site USTs/LUSTs or ASTs), Harbor-UCLA shall retain a

qualified environmental consultant to prepare a Soils Management Plan for each development phase to be submitted to the Los Angeles County Fire Department for review and approval. The Soils Management Plan shall be implemented during excavation and grading activities for proposed improvements in the areas identified in the Phase I assessment as containing potential soil contamination to ensure that site closure is property implemented and any contaminated soils encountered are properly identified, removed and disposed of off-site. The plan shall include the following:

- A qualified environmental consultant shall be present as necessary during grading and excavation activities to monitor compliance with the Soils Management Plan and to actively monitor the soils and excavations for evidence of contamination.
- Any soil encountered during excavation or grading activities that appears to have been affected by hydrocarbons or any other contamination shall be evaluated, based upon appropriate laboratory analysis, by a qualified environmental consultant prior to off-site disposal at a licensed facility.
- All identified contaminated soils shall be properly removed, handled and transported to an appropriately licensed disposal facility, in accordance with the Soils Management Plan prepared for each respective development phase.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potentially significant impacts related to hazards and hazardous materials would be less than significant with compliance with applicable regulatory requirements and implementation of the required mitigation measures.

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4.0 ENVIRONMENTAL IMPACT ANALYSIS
G. HYDROLOGY AND WATER QUALITY

1. INTRODUCTION

This section describes the affected environment and regulatory framework associated with hydrology and water quality on the Harbor-UCLA Campus and in the Project vicinity. It also describes impacts on hydrology and water quality that would result from implementation of the proposed project. Since plans for buildout of the Master Plan Project are presently conceptual, analysis and determination of potential impacts are based on the general concept and layout described in Section 2.0, Project Description, of this Draft EIR rather than a detailed, fixed plan. Information in this section is based on documents including the Harbor-UCLA Master Plan (2012), Los Angeles County General Plan Update (2015) and associated EIR (2015).

2. ENVIRONMENTAL SETTING

a. Surface Water Quality

The Project site is currently developed with a 72-acre Medical Center Campus which includes the Harbor-UCLA Medical Center and three other major tenants; LA BioMed, the largest tenant, the Harbor-UCLA Medical Foundation, Inc., and the Children's Institute International. A number of other County departments, including offices of the Department of Mental Health, occupy buildings on the Medical Center Campus. Land cover on-site consists primarily of buildings and pavement with limited and discontinuous landscaping located throughout the campus. Land uses at the site include a mix of commercial, transportation, institutional and landscape. Land uses around the medical center include commercial uses, primarily neighborhood retail businesses and medical/dental services. The Harbor-UCLA Medical Center Employee Children's Center and a multifamily residential apartment complex are located on Carson Street. The area north of Carson Street is a predominantly single-family residential neighborhood. Vermont Avenue is developed with a mix of neighborhood retail uses and medical services just north and south of Carson Street, while the southern half of the block is developed with a condominium complex and mobile home parks. Wholesale and light industrial uses, primarily warehouses and truck distribution centers, are located to the southeast. Single-family and multi-family residential neighborhoods border the Medical Center Campus to the south as well as to the west. The abandoned Union Pacific Railroad right-of-way area along the west side of Normandie Avenue serves as a setback for residential uses to the west. An off-site surface parking lot serving LA BioMed is located across 220th Street from the Medical Center Campus.

The Project site does not appear to include water quality or Stormwater controls, such as Stormwater BMPs, LID features, or hydromodification management facilities. According to the Harbor-UCLA Master Plan, previously approved drainage plans for the emergency/surgery replacement indicate that several dry wells are utilized in the new development area. Rainfall and stormwater runoff on-site are managed by roof drains, catch basins, drain inlets, underground pipes, curbs, gutters, overland sheet flows, driveways, or other means of conveyance to the on-site storm drain system.

(1) Stormwater Runoff (Typical Pollutants from Project Site)

Stormwater runoff from the Project site is typical of urbanized areas and includes pollutants from motor vehicles and other transportation related uses (parking lots). Pollutants include hydrocarbons, oil, grease, sediment and heavy metals. Pollutants associated with landscape maintenance are also likely to be present in Stormwater runoff. These pollutants include nutrients from fertilizers and herbicides and pesticides. As the site is a medical center, and has a high volume of visitors, trash is also expected to be a potential pollutant. Fecal coliform bacteria and other pollutants are typically found in Stormwater runoff from land uses similar to those at the site.

Landscaping throughout the Medical Center Campus is limited and discontinuous. There are several landscaped courtyards, predominantly at the western end of the Campus, surrounding the MFI and CII buildings, and on the LA BioMed Campus, and in scattered locations in the north-central Campus. In addition, the main entrance to the Hospital on Carson Street is planted with mature trees, shrubs, and a lawn setback. The Vermont Avenue frontage, adjacent to the new parking structure and Hospital parking lot, and the corner of the Campus at Carson Street and Vermont Avenue, are the most heavily landscaped portions of the Medical Center Campus perimeter, with mature trees and a landscape setback from the sidewalk.

Table 4.G-1, *Pollutants of Concern by Land Use*, summarizes typical pollutants of concern according to land use. The majority of the pollutants listed are from the February 2014 County of Los Angeles Department of Public Works *Low-Impact Development Standards Manual*. Other pollutants the EPA recognizes as typically associated with the land uses present on the Project site are also included in the table.

(2) Pollutants of Concern Based on Receiving Water Impairment

The Project site is located within Region 4 (Los Angeles Region) of the RWQCB. The Los Angeles Region encompasses all coastal drainages flowing to the Pacific Ocean between Rincon Point (on the Coast of Western Ventura County) and the eastern Los Angeles County line, as well as the drainages of five coastal islands (Anacapa, San Nicolas, Santa Barbara, Santa Catalina, and San Clemente). The region also includes all coastal waters within three miles of the continental and island coastlines. The Project site falls within the Dominguez Watershed which encompasses approximately 133 square miles in southwestern Los Angeles; 120 square miles is land and the rest is the Los Angeles/Long Beach Harbors. The watershed is composed of three subwatershed drainage areas; Upper Dominguez Channel, Lower Dominguez Channel and Estuary, and Los Angeles and Long Beach Harbors including Machado Lake[1]. The subwatersheds drain primarily via an extensive network of underground storm drains. The Upper Dominguez Channel drains into the Dominguez Channel while the Lower Dominguez Channel drains directly into the Los Angeles and Long Beach Harbor Area. The headwaters of the Dominguez Channel consist of an underground storm drain system which daylights approximately 0.25 miles north of the Hawthorne Municipal Airport. The Dominguez Channel drains approximately 62 percent of the watershed before discharging to Los Angeles Harbor. Within the watershed, approximately 93 percent of the land is developed. Residential development covers nearly 40 percent of the watershed with another 41 percent is covered with industrial, commercial, and transportation

[1] *Dominguez Channel Watershed Management Area Group, 2014. Draft Coordinated Integrated Monitoring Program For The Dominguez Channel Watershed Management Area Group. http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/dominguez_channel/DominguezChannel_CIMP.pdf, accessed 12/12/15.*

Table 4.G-1

Pollutants of Concern by Land Use

Land Use	Pollutants of Concern													
	Suspended Solids	Total Phosphorus	Total Nitrogen	Total Kjeldahl Nitrogen[b]	Cadmium, Total[b]	Chromium, Total[b]	Copper, Total[b]	Lead, Total[b]	Zinc, Total[b]	Biological Oxygen Demand (BOD)[d]	Chemical Oxygen Demand (COD)[d]	Fecal Coliform[d]	Hydrocarbons[d]	Trash[d]
Commercial	X	X	X	X	[c]	[c]	X	X	X					
Industrial	X	X	X	X	[c]	[c]	X	X	X					
Streets, Roads	X	X	X	X	[c]	[c]	X	X	X					
Educational Facilities	X				[c]	[c]	X		X					
Project Site	X	X	X	X	X	X	X	X	X	X	X	X	X	X

[a] *Adapted from Table A-3 of the Technical Manual for Stormwater Best Management Practices in the County of Los Angeles (February 2004) and the Southern California Coastal Water Research Project Land Use-Specific Stormwater Monitoring Data. X = exceedance of "standard" by observed median/average concentration; blank = no exceedance of "standard" by observed median/average concentration.*

[b] Derived from *Table* 11 of the 2012 Los Angeles County ms4 permit (page 104).

[c] No available data to determine if these pollutants of concern originate from land use. Pollutant is assumed to be produced by this land use unless otherwise proven by the project applicant.

[d] Based on 2006 EPA Guide to Stormwater Pollutant Concentrations.

Source: PCR Services Corporation, Inc., 2015

uses. With a population of nearly one million, water supply is limited and the majority of water use is from imported sources.

There are several pollutants of concern related to the receiving body of water. The Project site is located in the lower Dominguez Channel and Estuary subwatershed drainage area. Water quality in the watershed was assessed using available monitoring data, Total Maximum Daily Loads (TMDLs), 303(d) listed impairments, water quality thresholds listed in the Basin Plan for the Coastal Watersheds of the Los Angeles and Ventura Counties (Basin Plan) and the California Toxics Rule (CTR). Water-body pollutant combinations (WBPCs) were then categorized using the TMDLs, 303(d) listed impairments, and exceedance data for the Dominguez

Channel Estuary. WBPCs for which there were monitoring data were placed into one of the following three categories as outlined in the NPDES Permit:

- **Category 1 (Highest Priority):** Water body-pollutant combinations for which TMDLs have been established.
- **Category 2 (High Priority):** Pollutants for which data indicate water quality impairment in the receiving water according to the State's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State Listing Policy).
- **Category 3 (Medium Priority):** Pollutants for which there are insufficient data to indicate water quality impairment in the receiving water according to the State's Listing Policy, but which exceed applicable receiving water limitations.

Table 4.G-2, *Dominguez Estuary Water Body Pollutant Categorization*, lists the categorized WBPCs.

Table 4.G-2

Dominguez Estuary Water Body Pollutant Categorization[a]

	Category 1	Category 2	Category 3
Dominguez Estuary (Unlined portion below Vermont)	Cadmium (sed.), Copper (diss. & sed.), Lead (diss., sed., & tissue), Zinc (diss. & sed.) DDT (tissue & sed.) PCBs (sed.) Chlordane (tissue & sed.) PAHs (sed.) Benthic Community Effects Sediment Toxicity	Ammonia Coliform Bacteria	Arsenic (sed.) Chromium (sed.) Silver (diss. & sed.) Nickel (diss.) Mercury (sed.) Thallium (diss.)

[a] *Adapted from Table A-6 Water Body Pollutant Categorization. Dominguez Channel Watershed Management Area Group, 2014. Draft Coordinated Integrated Monitoring Program For The Dominguez Channel Watershed Management Area Group. http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/dominguez_channel/DominguezChannel_CIMP.pdf, accessed 12/12/15.*

Source: PCR Services Corporation, Inc., 2015

(3) Water Supply

Based on the information included in the master plan, there are three water providers in the vicinity of the Harbor-UCLA Medical Center Campus; the Metropolitan Water District (MWD), the California Water Service Company's Rancho Dominguez District (CWS), and the City of Los Angeles Department of Water and Power (LADWP). The CWS owns and maintains distribution mains within the roadways around the Campus that range from six inches to 33 inches in diameter. CWS currently provides water to the Project site from CWS mains at four connection points, with a backup system connection off of the LADWP main that is not

continuously operational. CWS uses a combination of local groundwater and water purchased from MWD, which is imported from the Colorado River and the State Water Project in northern California. Reclaimed water is currently not provided to the Project site and the three area water suppliers do not have reclaimed water pipelines in the area.

(4) Hydrology

Based on information included in the *Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan*, prepared by Ninyo & Moore (Appendix C), the project site is located in the Torrance coastal plain west of the Los Angeles River and north of the Los Angeles Harbor. Topography of the site slopes gently down toward the east ranging from an approximate elevation of 40 feet above mean sea level (MSL) near the eastern portion of the project area to an approximate elevation of 50 feet above MSL in the western part of the project area. Off-site flows into and through the site are minimal as are ponding and flooding on-site. Natural surface waters are not located on-site. The Dominguez Channel is located approximately 2.7 miles north of the site and runs southeast.

The site does not appear to have water quality or stormwater controls, such as stormwater BMPs, LID features, or hydromodification management facilities. Stormwater detention via dry wells was implemented for the emergency/surgery replacement project. Rainfall and other stormwater runoff are managed by existing roof drains, catch basins, drain inlets, underground pipes, curbs, gutters, overland sheet flows, driveways, or other means of conveyance to the on-site storm drains.

(5) Storm Drainage

Rainfall and other stormwater runoff are managed by existing roof drains, catch basins, drain inlets, underground pipes, curbs, gutters, overland sheet flows, driveways, or other means of conveyance to the on-site storm drains. According to the Harbor-UCLA Campus Master Plan[2], The County of Los Angeles Flood Control District owns and maintains the 208th Street Storm Drain which runs through Harbor-UCLA in a 15-foot wide easement. This storm drain line runs through the site in the north-south direction as an 8-foot high by 4-foot wide reinforced concrete box culvert (RCB). Near 220th Street, it turns westerly and flows as an open channel in an easement toward Normandie Avenue. It joins with the 15.7 mile long Dominguez Channel which begins in the City of Hawthorne and eventually discharges to the east basin of the Los Angeles Harbor. Staining was not observed at the catch basins, drains, or channel on a site visits by Nino & Moore on March 4 and 18, 2015 as discussed in the Phase 1 Hazardous Materials Assessment Harbor-UCLA Medical Center (Appendix E of this Draft EIR).

On-site storm drain systems flow into the box culvert discussed above. The on-site storm drain network is operated and maintained by site staff. There are currently minimal problems with ponding and flooding. There were drainage issues previously in the southwest corner of the campus that were alleviated by a new connection to the County channel and some re-routing of the on-site drains. Staff has indicated that the on-site drainage system is very brittle and difficult to connect to. It is likely that proposed project would require an overhaul of the on-site drainage system. New connection to the RCB or open channel owned by the Flood Control District will require a connection permit. This permit will require a proposed hydrology analysis

[2] *County of Los Angeles, 2012. Harbor-UCLA Medical Center Campus Master Plan. http://ridley-thomas.lacounty.gov/PDFs/20120630_HARBOR%20UCLA%20MASTER%20PLAN.pdf, accessed 12/11/15*

and a comparison with the design peak flow rate of the existing facility. If the calculated peak flow rate exceeds the design peak flow rate of the facility, the District will generally require detention to mitigate the increase in peak flow rates.

(6) Groundwater

The Coastal Plain of Los Angeles County is made up of two groundwater basins, the Central Basin and the West Coast Basin. These basins are comprised of Quaternary age sediments of gravel, sand, silt, and clay that were deposited from the erosion of nearby hills and mountains, and from beaches and shallow ocean floors that covered the area in the past. Underlying these sediments are basement rocks such as the Pliocene Pico Formation that generally do not provide sufficient quantities of groundwater. Separating the Central Basin from the West Coast Basin is the Newport-Inglewood Uplift, a series of discontinuous faults and folds that form a prominent line of northwest trending hills including the Baldwin Hills, Dominguez Hills, and Signal Hill.[3] The Project site is located within the West Coast sub-basin of the Los Angeles Coastal Groundwater Basin.

The West Coast Basin covers approximately 140 square miles and is bounded on the north by the Baldwin Hills and the Ballona Escarpment, on the east by the Newport-Inglewood Uplift, to the south by San Pedro Bay and the Palos Verdes Hills, and to the west by the Santa Monica Bay. Aquifers in the West Coast Basin are generally confined and receive the majority of their natural recharge from adjacent groundwater basins or from the Pacific Ocean (seawater intrusion). Groundwater flow in the vicinity of the site is generally towards the East.[4] The Project site is not located near existing stormwater spreading grounds as shown in **Figure 4.G-1**, *Stormwater Spreading Grounds*. As such, stormwater runoff from the site would not recharge the existing stormwater spreading ground or introduce pollutants into the spreading ground.

(a) Depth to Groundwater

According to the *Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan*, prepared by Ninyo & Moore (Appendix C), historic groundwater monitoring well data from the State of California Water Resources Control Board's GeoTracker Website[5] were reviewed for wells located on adjacent properties east and north of the Project site. Based on the groundwater measurements in these wells from 2007 to 2014, groundwater levels at these locations have ranged from approximately 48 to 60 feet below the ground surface. The Los Angeles County Safety Element indicates that the historic high groundwater in the vicinity of the Project site is approximately 30 feet deep. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. Shallow perched conditions may be present on-site.

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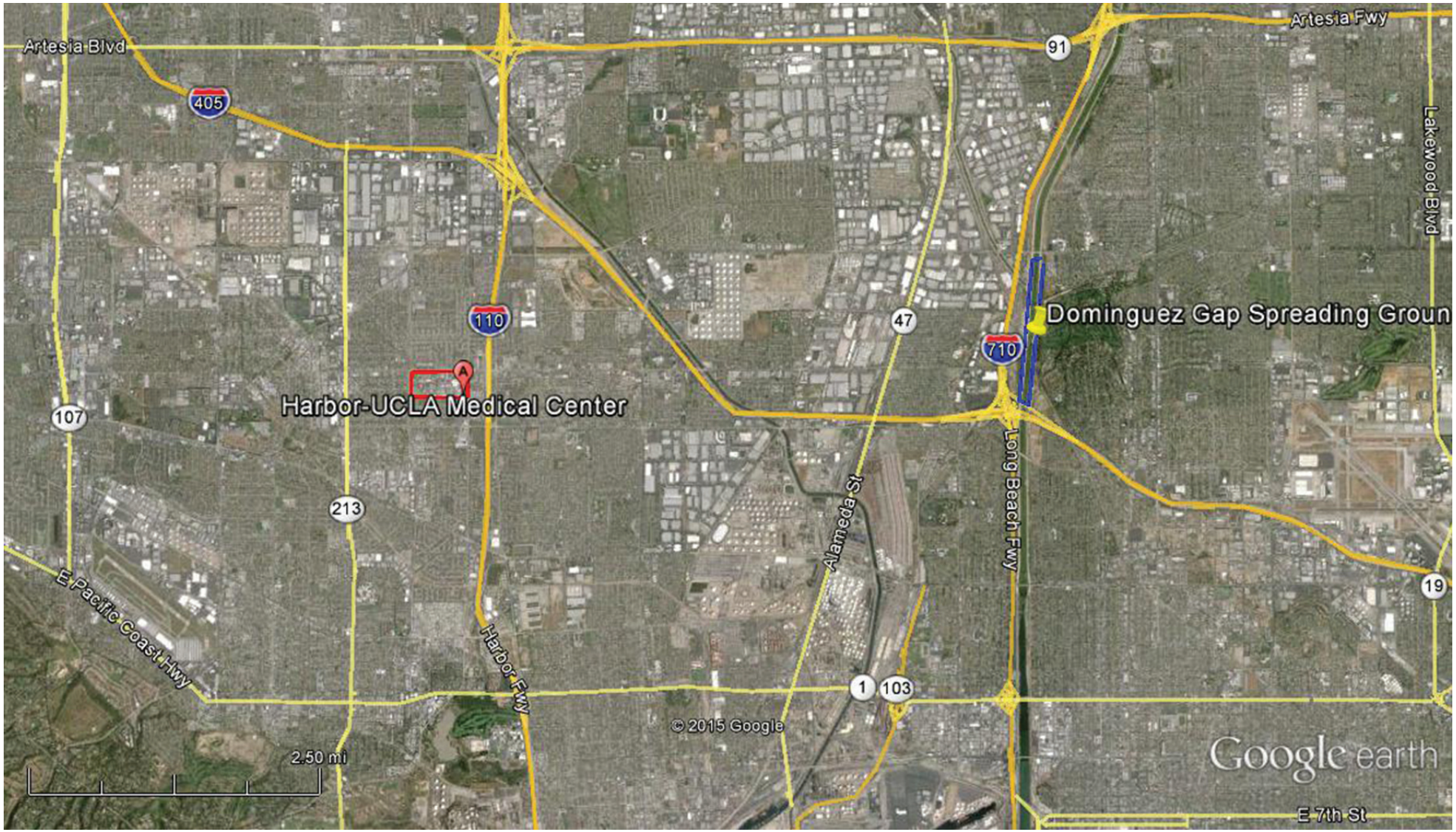
[3] *http://www.wrd.org/engineering/introduction-groundwater-basins-los-angeles.php. Accessed 12/13/15.*

[4] *Ibid.*

[5] *State of California Water Resources Control Board. http://geotracker.waterboards.ca.gov/gama/gamamap/public/default.asp?CMD=runreport&myaddress=harbor+ucla+medical+center%2C+carson%2C+ca. Accessed, April, 2015*



PCR

N

0 2.50 Miles

Stormwater Spreading Grounds

Harbor-UCLA Medical Center Master Plan

Source: Google Earth, Data: Los Angeles County Department of Public Works http://dpw.lacounty.gov/wrd/spreadingground/SpreadingGroundMap.pdf.

FIGURE

4.G-1

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(b) Groundwater Contamination

According to the April 2015 Phase I Hazardous Materials Assessment Harbor-UCLA Medical Center prepared by Nino & Moore, based on the varying groundwater flow directions and proximity of several closed leaking underground storage tank cases adjacent to the site, there is a possibility that groundwater beneath the site is impacted with petroleum hydrocarbons from off-site facilities. This is considered a recognized environmental condition for the site.

(c) Groundwater Recharge

According to the *Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan*, prepared by Ninyo & Moore (Appendix C), exposed materials at the surface of the Project site include clays and silty sandy soils. Sandy soils typically have low cohesion, and have a relatively higher potential for erosion from surface runoff when exposed in cut slopes or utilized near the face of fill embankments. Surface soils with higher amounts of clay tend to be less erodible as the clay acts as a binder to hold the soil particles together. Based on this report, soil textures appear to be in the Type C soil group. This classification has typically low saturated hydraulic conductivity rates, normally in the range of 0.04 to 0.13 inch per hour. With the site's impervious cover, minimal recharge to the West Coast Basin occurs.

(7) Flooding/Dam Failure/Tsunamis/Seiches

Based on the *Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan*, prepared by Ninyo & Moore (Appendix C), and maps on the California Department of Conservation website[6], the project site is not located in a potential inundation area resulting from a dam failure, tsunami or seiche, nor is it located in a landslide/mudslide hazard zone. The proposed Project is not within a 100 year flood hazard area. A tsunami is a series of ocean waves caused by a sudden displacement of the ocean floor, most often due to earthquakes. The Project site is located approximately 5.3 miles inland from the Pacific Ocean and 4.1 miles inland from the Los Angeles/Long Beach Harbor area. A seiche is a wave that oscillates in an enclosed water body, such as a reservoir, lake, or pond. There are no enclosed water bodies close to the Project site. The Project site is not located close to a dam, so dam failure is not an issue.

b. Regulatory Setting

The following subsections discuss the various codes, regulations and polices applicable to hydrology and water quality at the federal, state and local levels.

(1) Federal

(a) Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It is based on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit. Permit review is the CWA's primary regulatory tool. The CWA requires states to adopt water quality standards for receiving waters. Water quality standards designate beneficial uses for receiving waters (e.g., wildlife habitat, agricultural supply, fishing), and include the criteria required to support those uses. Water quality criteria are either narrative

[6] *http://www.conservation.ca.gov/cgs/maps/Pages/Maps.aspx. Landslide and Tsunami Inundation Maps accessed 12/13/15.*

statements related to the quality of the water that support a particular use or maximum concentration levels for pollutants (i.e., lead, suspended sediment, bacteria, etc.). As part of the CWA, when monitoring data indicate that a concentration level for a pollutant has been exceeded, the receiving water is classified as impaired and placed on the CWA Section 303(d) List of Water Quality–Limited Segments Requiring TMDLs (303[d] list). A Total Maximum Daily Load (TMDL) is then developed for the pollutant(s) that caused the impairment. A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (plus a "margin of safety"). The purpose of the TMDL is to limit the volume of pollutants discharged into the receiving water from all sources (i.e., Stormwater runoff, wastewater, agriculture).

(b) National Pollutant Discharge Elimination System Construction General Permit

The National Pollutant Discharge Elimination System (NPDES) was established per 1972 amendments to the Federal Water Pollution Control Act to control discharges of pollutants from point sources[7] (Section 402). The 1987 amendments to the CWA created a section devoted to Stormwater permitting (Section 402[p]), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The State Water Resources Control Board (SWRCB) issues both Construction General Permits and Individual Permits under this program.

Projects that will disturb more than one acre of land during construction are required to file a Notice of Intent (NOI) with the SWRCB to be covered under the NPDES Construction General Permit for discharges of Stormwater associated with construction activity. The project proponent must develop measures that are consistent with the Construction General Permit. Furthermore, a Stormwater Pollution Prevention Plan (SWPPP) must be developed and implemented for each site covered under the Construction General Permit. The SWPPP describes the best management practices (BMPs) the discharger will use to protect Stormwater runoff and reduce potential impacts on surface water quality through the construction period. The SWPPP must contain the following:

- A visual monitoring program
- A chemical monitoring program for nonvisible pollutants (to be implemented if a BMP failure occurs)
- A sediment monitoring plan if the site discharges directly to a water body on the 303(d) list for sediment

The area that would be disturbed under the proposed Project exceeds one acre; therefore, the project would be required to comply with the Construction General Permit.

(c) Federal Antidegradation Policy

The Federal Antidegradation Policy was released in 1968 and was included in the USEPA's first Water Quality Standards Regulation. The Antidegradation Policy represents a three-tiered approach to maintaining and protecting water quality. First, all existing beneficial uses and levels of water quality necessary to protect those uses must be preserved and protected from degradation. Second, water quality must be protected in areas where the quality cannot support the propagation of fish, shellfish, and wildlife and recreation ("fishable/swimmable"). Third, the policy provides special protection of waters for which the

[7] *Point sources are discrete water conveyances such as pipes or man-made ditches.*

ordinary water quality criteria are not sufficient. These waters are called "Outstanding National Resources Waters" and have been designated as unique or ecologically sensitive.

If an activity is going to be allowed to degrade or lower water quality (in situations where existing water quality is higher than that needed to maintain established beneficial uses), the Antidegradation Policy requires that proposed projects meet the criteria below:

- The activity is necessary to accommodate important economic or social development in the area.
- Water quality is adequate to protect and fully maintain existing beneficial uses.

(d) National Flood Insurance Act

The National Flood Insurance Act of 1968 established the National Flood Insurance Program, which is based on the minimal requirements for floodplain management and is designed to minimize flood damage within Special Flood Hazard Areas. FEMA is the agency that administers the National Flood Insurance Program. Special Flood Hazard Areas (SFHA) are defined as areas that have a one-percent chance of flooding within a given year, also referred to as the 100-year flood. Flood Insurance Rate Maps were developed to identify areas of flood hazards within a community.

(2) State

(a) Porter-Cologne Water Quality Act

California's Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act) established the SWRCB and divided the state into nine regional basins, each with a Regional Water Quality Control Board (RWQCB). The Project site is located within the jurisdiction of the Los Angeles RWQCB. The SWRCB is the primary state agency with responsibility to protect surface water and groundwater quality. The Porter-Cologne Act authorizes the SWRCB to draft policies regarding water quality in accordance with CWA Section 303. In addition, the Porter-Cologne Act authorizes the SWRCB to issue waste discharge requirements (WDRs) for projects that would discharge to state waters. These requirements regulate discharges of waste to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

The Porter-Cologne Act requires the SWRCB or the RWQCBs to adopt water quality control plans (basin plans) and policies for the protection of water quality. The Basin Plan must conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State Water Policy. The Basin Plan must:

- Identify beneficial uses for the water to be protected,
- Establish water quality objectives for the reasonable protection of the beneficial uses, and
- Establish an implementation program for achieving the water quality objectives.

Basin plans also provide the technical basis for determining WDRs, taking enforcement actions, and evaluating clean water grant proposals. Basin plans are updated and reviewed every 3 years in accordance with Article 3 of Porter-Cologne and CWA Section 303(c).

(b) California Toxics Rule

The California Toxics Rule (40 CFR 131.38) is a USEPA-issued federal regulation that provides water quality criteria for potentially toxic constituents in California surface waters with designated uses related to human health or aquatic life. The rule fills a gap in California water quality standards that was created in 1994 when a State court overturned the State's water quality control plans containing water quality criteria for priority toxic pollutants. These federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA. The California Toxics Rule establishes two types of aquatic life criteria:

- Acute criteria represent the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time8 without harmful effects, and
- Chronic criteria equal the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects.

Due to the intermittent nature of stormwater runoff (especially in southern California), the acute criteria are considered to be more applicable to stormwater conditions than chronic criteria.

(c) State Antidegradation Policy

Under the State's Antidegradation Policy (as set forth in SWRCB Resolution No. 68-16), whenever the existing quality of waters is better than what is needed to protect present and future beneficial uses, such existing quality must be maintained. This State policy has been adopted as a water quality objective in all the State's Basin Plans. The State policy establishes a two-step process to determine if discharges with the potential to degrade the water quality of surface or groundwater will be allowed.

The first step requires that, where a discharge would degrade high-quality water, the discharge may be allowed only if any change in water quality would:

- Be consistent with the maximum benefit to the people of the State;
- Not reasonably affect present and anticipated beneficial uses of such water;
- Result in water quality that is not less than that which is prescribed in State policies (i.e., Basin Plans).

The second step (as set forth in SWRCB Resolution No. 68-16) states that any activity resulting in discharge to high-quality waters is required to use the best practicable treatment or control of the discharge necessary in order to avoid the occurrence of pollution or nuisance and to maintain the "highest water quality consistent with the maximum benefit to the people of the state". The State policy applies to both surface and groundwater, as well as to both existing and potential beneficial uses of the applicable waters.

In 1999, the SWRCB issued and subsequently amended the General Construction Storm Water Permit (Water Quality Order 99-08-DWQ), which governs discharges from construction sites that disturb one acre or more of surface area. Again, on September 2, 2009, the SWRCB adopted a new General Construction Permit that substantially alters the approach taken to regulate construction discharges through (1) requiring the

[8] *The rule does not specify timeframe for "acute". Standard practice would likely imply that any condition that is permanent or semi-permanent is chronic; all else would be short-term.*

determination of risk levels posed by a project's construction discharges to water quality and (2) establishing numerical water quality thresholds that trigger permit violations. These new permit regulations took effect on July 1, 2010.

(3) Local

(a) Water Quality Control Plan, Los Angeles Region

As required by the California Water Code, the LARWQCB has adopted the "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (LA Basin Plan). Specifically, the LA Basin Plan designates beneficial uses for surface water and groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's Antidegradation ppolicy, and describes implementation programs to protect all waters in the Los Angeles region. In addition, the LA Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the LA Basin Plan.[9]

(b) Municipal Storm Water Permitting

As part of its NPDES Program, the Los Angeles RWQCB adopted a new Municipal Separate Storm Sewer Permit (MS4 Permit, sometimes referred to as a Stormwater Permit) in 2012. MS4 Permits were issued in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES stormwater permits for medium (between 100,000 and 250,000 people) and large (more than 250,000 people) municipalities. As part of Phase II, the SWRCB adopted a General Permit for small MS4s (than 100,000 people) and non-traditional small MS4s including governmental facilities such as military bases, public campuses, and prison and hospital complexes (WQ Order No. 2003-0005-DWQ).

The Los Angeles RWQCB's 2012 MS4 Permit named 84 incorporated cities, the County, and the Los Angeles County Flood Control District as permittees. The MS4 Permit imposes a number of basic programs, called Minimum Control Measures, on all permittees in order to maintain a level of acceptable runoff conditions through the implementation of practices, devices, or designs generally referred to as BMPs, that mitigate stormwater quality problems. As an example, the development construction program requires the implementation of temporary BMPs during a project's construction phase to protect water resources by preventing erosion, controlling runoff, protecting natural slopes and channels, storing fluids safely, managing spills quickly, and conserving natural areas.

(c) Los Angeles County Low-Impact Development Ordinance

In December 2012, the Los Angeles County Board of Supervisors updated the County Low Impact Development (LID) Ordinance (Chapter 12.84 of the County Code [LACC]) for compliance with the 2012 LARWQCB MS4 Permit. The updated LID Ordinance requires the integration into project design an array of feasible design features and operational practices for the retention, detention, storage, and filtration of stormwater and urban runoff, prior to discharge off-site. LID generally relies on an integrated system of

[9] *California Regional Water Quality Control Board, Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted June 13, 1994 http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/. Accessed June 16, 2015.*

decentralized, small-scale control measures that can be implemented at a project site, using structural devices, engineered systems, vegetated natural designs, and other techniques to control stormwater and urban runoff on-site and not solely through off-site conveyance or at an off-site collection point.

(d) Los Angeles County General Plan Update (2035)

The California Government Code Section 65300 requires general plans to include "a conservation element, which includes evaluation of water resources for supply and demand. As such, the Los Angeles County General Plan Update (2035) Conservation and Natural Resource Element (Chapter 9, Section IV, Local Water Resources) addresses water management as an invaluable resource and effective management and preservation of local water resources are vital to preserving a high quality of life for residents and businesses, as well as for sustaining the functioning of watersheds and the natural environment. Applicable goals and polices from the Safety Element are identified below:

Goal C/NR 5: Protected and useable local surface water resources.

- **Policy C/NR 5.1:** Support the Low Impact Development (LID) philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limits to straightening and channelizing natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at regional, neighborhood, and parcel-level scales.

- **Policy C/NR 5.3:** Actively engage with stakeholders in the formulation and implementation of surface water preservation and restoration plans, including plans to improve impaired surface water bodies by retrofitting tributary watersheds with LID types of BMPs.

- **Policy C/NR 5.4:** Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

Goal C/NR 6: Protected and usable local groundwater resources.

- **Policy C/NR 6.1:** Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.

- **Policy C/NR 6.2:** Protect natural groundwater recharge areas and regional spreading grounds.

- **Policy C/NR 6.3:** Actively engage in stakeholder efforts to disperse rainwater and stormwater infiltration BMPs at regional, neighborhood, infrastructure, and parcel-level scales.

- **Policy C/NR 6.5:** Prevent stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, and in contaminated soils.

Goal C/NR 7: Protected and usable local groundwater resources.

- **Policy C/NR 7.1:** Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.

- **Policy C/NR 7.3:** Actively engage with stakeholders to incorporate the LID philosophy in the preparation and implementation of watershed and river master plans, ecosystem restoration projects, and other related natural resource conservation aims, and support the implementation of existing efforts, including Watershed Management Programs and Enhanced Watershed Management Programs.

3. ENVIRONMENTAL IMPACTS

a. Methodology

(1) Surface Hydrology and Drainage

The analysis of hydrology impacts is based on post project runoff rates during storm events calculated for the Harbor-UCLA Master Plan. Potential impacts to the storm drain system were analyzed by comparing the calculated pre-project runoff rates to the calculated post-project runoff rates, taking into consideration the capacity of the existing storm drain systems serving the site.

(2) Water Quality

Water quality impacts were assessed by considering the types of pollutants and/or effects on water quality likely to be associated with construction and operation of the project, project design features to treat contaminants, and expected contaminant flows with project implementation. Project consistency with relevant regulatory permits/requirements, including BMPs and applicable plans, is evaluated to demonstrate how compliance would ensure that the project would not significantly degrade existing water quality.

(3) Flooding

Flooding impacts were addressed in consideration of applicable safety policies of the County's General Plan Safety Element and the design requirements within the County's Municipal Code. A determination was made as to whether such policies, procedures, and regulatory requirements would adequately address potential flooding hazards on the site.

(4) Groundwater

Groundwater impacts were evaluated by estimating the domestic water demands of the proposed project, a portion of which is provided by local groundwater basins, relative to the safe yield of affected aquifers.

b. Thresholds of Significance

The potential for hydrology and water quality impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are in part based on Appendix G of the State CEQA Guidelines. These questions are as follows:

(IX) Hydrology and Water Quality. Would the project:

a) Violate any water quality standards or waste discharge requirements?

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alternation of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100 year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow?

The Initial Study determined that the Project would have less than significant impacts with respect to Checklist questions IX.g), h), i), and j. Accordingly, these environmental topics are not evaluated in this EIR.

Based on the above factors, the Project would have a potentially significant impact on Hydrology and Water Quality if it would:

HWQ-1: Violate any water quality standards or waste discharge requirements.

HWQ-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to

a level which would not support existing land uses or planned uses for which permits have been granted)

HWQ-3: Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

HWQ-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

HWQ-5: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

HWQ-6: Otherwise substantially degrade water quality.

c. Project Characteristics or Design Features

The Project would comply with all applicable requirements and permits related to stormwater management and water quality. As part of this, construction plans for individual components of the Harbor-UCLA Medical Center Master Plan Project would be reviewed by the County to confirm implementation of the appropriate temporary construction and permanent operational BMPs for compliance with the SWRCB's Construction General Permit, the County-administered MS4 permit, and the County's LID ordinance.

d. Project Impacts

Threshold HWQ-1: Would the Project violate any water quality standards or waste discharge requirements?

Impact Statement HWQ-1: *With compliance with regulatory requirements governing stormwater management and water quality during construction and following buildout of master Plan Project components, impacts on water quality or related to waste discharge (i.e., construction dewatering) would be less than significant.*

(1) Construction

Construction activities would include the use of heavy equipment and construction-related chemicals, such as fuels, oils, grease, solvents, and paints that would be stored in limited quantities on-site. In the absence of proper controls, these construction activities could result in accidental spills or disposal of potentially harmful materials that could wash into and pollute surface waters or groundwater. During construction, portions of the Harbor-UCLA Campus would be subject to ground-disturbing activities (e.g., removal of the existing structures and pavement, excavation and grading, foundation and infrastructure construction, and the installation of utilities). These activities would expose soils for a limited time, allowing for possible erosion and sediments to enter into sheet flow runoff, which could enter the existing storm drain system untreated. Therefore, surface water quality could be temporarily affected by construction activities.

However, the Project would be subject to existing regulations governing water quality. Construction General Permits would be required from the SWRCB for individual Project components of the. The Construction General Permit and associated NPDES requirements include development and implementation of a SWPPP with appropriate NMPs, as well as associated monitoring and reporting. Stormwater BMPs are intended to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. BMPs could include, but are not limited to, the use of or implementation of water bars, silt fences, staked straw bales, and avoidance of water bodies during construction. Additional source-control BMPs might also be required to prevent runoff contamination by potentially hazardous materials and eliminate non-stormwater discharges.

Compliance with the Construction General Permit, SWPPP, and NPDES requirements that require construction phase BMPs are considered protective of water quality during construction and would, therefore, prevent a substantial violation of water quality standards and minimize the potential for contributing additional sources of polluted runoff during construction of the project. These existing regulations, programs, and policies would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site, and therefore ensure construction activities would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the Los Angeles RWQCB and/or other regulatory agencies or affect the beneficial uses of receiving waters. Compliance with regulatory requirements would ensure that construction of Master Plan Project components would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to the Dominguez Channel. In addition, the topographic gradients on the Harbor-UCLA Campus are relatively gentle.

The potential for any spill or release of construction related chemicals during Project construction would be generally small because of the localized, short-term nature of the releases. Furthermore, the NPDES Construction General Permit and SWPPP require measures regarding the handling of these types of materials and action protocols if a spill or release does occur. Therefore, potential soil erosion and sedimentation impacts during construction would be less than significant and no mitigation is required.

According to the *Preliminary Geotechnical Report* prepared for the Project (Appendix C), groundwater levels have ranged from approximately 48 to 60 feet below ground surface (bgs). Based on the depths to groundwater within the project site, construction dewatering is not anticipated to be required. However, should groundwater be encountered that would require dewatering, the County would require contractors for individual Project components to apply for coverage and adhere to the monitoring and reporting program under RWQCB Order No. R8-2009-0003. Compliance with these regulatory requirements would ensure that dewatering activities would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to Dominguez Channel. Based on the above, construction-related dewatering impacts would be less than significant.

(2) Operations

Stormwater discharge is generated by rainfall that runs off the land and impervious surfaces such as paved streets, parking lots, and rooftops. Stormwater discharge may include pollutants of concern, which are those that are expected to be generated by the project and that could impact stormwater. During operation of the Project, pollutants of concern within runoff may include, but are not limited to, pollutants such as sediment, hydrocarbons, oil, grease, heavy metals, nutrients, herbicides, pesticides, fecal coliform bacteria, and trash.

This runoff can flow directly into storm drains and continue through pipes until it is released, untreated, into the Dominguez Channel. Untreated stormwater runoff degrades water quality in surface waters and groundwater and can affect drinking water, human health, and plant and animal habitats.

Reducing natural resource demands is a key goal of the Master Plan Project. By utilizing landscape in strategic ways it can perform a variety of tasks beyond aesthetics including lowering potable water demands, reducing heat island effects, and mitigating building cooling demands. Landscape plans call for the use of native or culturally native (adaptive) low-maintenance species, which would be maintained by workers who are trained to work with native California landscapes. In addition, the Project would rely on its landscape to reduce dependency on natural resources by reducing water demands, capturing and cleaning stormwater runoff, and shading buildings to help reduce cooling demands. The Project would convert more than three acres of existing turf area to low water use plants, saving an estimate seven million gallons of water per year over current usage. The Project would introduce new trees in surface parking areas to create a dense canopy of shade which will reduce the asphalt's solar absorption rate, allowing surrounding buildings to cool down earlier in the evening, reducing the urban heat island effect. Furthermore, the Project proposes to incorporate green roofs, which will help reduce buildings' solar absorption and cooling demands during warmer daytime hours. The Project would avoid the use of pollutants, chemicals, or soil amendments that could harm the human or ecological health. Organic maintenance methods or Integrated Pest Management may be used.

Any proposed new storm drain connections to the RCB or open channel owned by the Flood Control District will require a connection permit. This permit will in turn require a proposed hydrology analysis and a comparison with the design peak flow rate of the facility. If the calculated peak flow rate exceeds the facility's design peak flow rate, the District will generally require detention to mitigate the increase in peak flow rates.

As discussed, the Harbor-UCLA Campus is currently fully developed and would be required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (0 percent impervious,) where feasible based on the LID Standards. The County also requires that the 0.75-inch rainfall event be treated to remove urban stormwater pollution. Based on information provided in the Harbor-UCLA Master Plan, the required treatment flow rate is approximately 0.17 cubic feet per second (cfs) per acre based on a flow rate design and the required treatment volume is approximately 2,200 cubic feet per acre based on a volume design. The excess volume to be infiltrated, reused, or stored is approximately 1,940 cubic feet per acre. Previously approved grading plans for the emergency/surgery replacement building indicate that several dry wells were constructed in the area of new construction to meet this requirement; this approach is likely to be implemented for future areas to be redeveloped on the Campus.[10]

Additionally, the incorporation of LID requirements is a significant element of the proposed site sustainability approach and LID features would meet the requirements found in the County's *Low-Impact Development Standards Manual*. The LID features would provide treatment control through physical, biological, and chemical processes to remove pollutants from stormwater runoff. Potential LID features

[10] *Campus Master Plan Addendum, County Of Los Angeles Harbor-UCLA Medical Center, Phase 04-F, Civil – Facilities and Utilities Assessment, page F-10.*

include: bioretention/rain gardens, strategic grading, resource conservation, flatter wider swales, flatter slopes, long flow paths, tree/shrub depression, turf depression, landscape island storage, rooftop detention/retention, roof leader disconnection, parking lot/street storage, smaller culverts/pipes/inlets, amended soils, alternative materials, tree box filters, alternative impervious surfaces, reduce impervious surface, rain barrels/cisterns/water use, catch basins/seepage pits, sidewalk storage, vegetative swales/buffers and strips, infiltration swales and trenches, eliminate curb and gutter, dry well, maximize sheet flow, maintain drainage patterns, green roofs, and permeable pavement. An illustration of the type and location of the Project's proposed BMPs is provided in **Figure 4.G-2,** *Potential LID Strategies*. The Project will also increase the amount of pervious area on the Harbor-UCLA Campus, which will reduce the calculated peak flow of stormwater runoff.

Provided that LID features (especially the design of any bioretention features) include modifications to address the potential leaching of nutrients, compliance with County LID criteria and other state and local regulations that require post-construction BMPs would ensure that operations on the Harbor-UCLA Campus would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the Los Angles RWQCB or other regulatory agencies or impair the beneficial uses of the receiving waters.

Following buildout of Project components, materials such as fuels or solvents may be stored on-site, similar to existing conditions. This is not anticipated to be a source of polluted stormwater runoff or dry-weather runoff. As under existing conditions, Harbor-UCLA would continue to adhere to all applicable regulations.

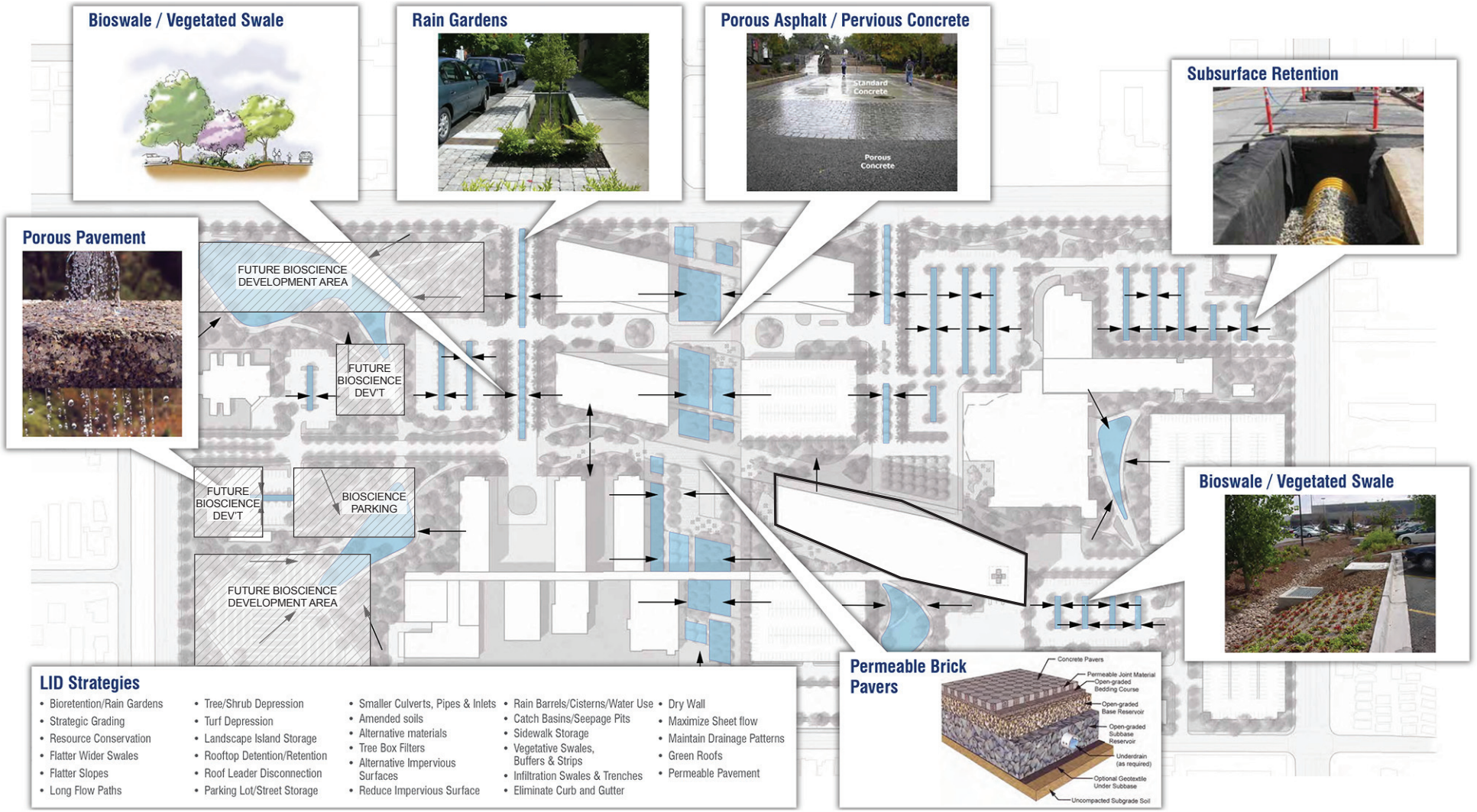
Accordingly, operations would not result in a violation of any water quality standards or waste discharge requirements, would not create substantial additional sources of polluted runoff, and would not substantially degrade water quality, and would therefore be less than significant.

Threshold HWQ-2: Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge?

Impact Statement HWQ-2: *Project-related excavation is not expected to extend to the depth of groundwater beneath the Harbor-UCLA Campus, with only temporary dewatering anticipated in the event seepage is encountered at shallower depths than anticipated. Project implementation would increase pervious area on the Campus over existing conditions through the introduction of more landscaped area and does not propose withdrawal of groundwater to meet water demand. The Project's indirect employment-related population growth would not substantially increase demand on groundwater supplies serving the Project Site, thus impacts regarding groundwater supplies would be less than significant.*

(1) Construction

Construction activities are not expected to require excavation below the normal or seasonally high groundwater levels. However, if seepage is encountered during construction, dewatering may be necessary. Any seepage encountered during construction would be mitigated, as needed, by constructing small drainage swales from the base of the excavations to temporary sump pits or existing LID features on-site.



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Stormwater Spreading Grounds

Harbor-UCLA Medical Center Master Plan

Source: County of Los Angeles, Harbor-UCLA Medical Center Campus Master Plan, June 2012.

FIGURE

4.G-2

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Any discharge of groundwater during construction would be implemented in compliance with applicable NPDES permit requirements. The Project would also comply with all applicable federal, state, and local requirements concerning the handling, storage, and disposal of hazardous materials to reduce the potential for a release of contaminants into the groundwater as a result of project construction. Thus, construction activities would not degrade groundwater quality or interfere with recharge and impacts would be less than significant.

(2) Operation

Under the Master Plan Project, water demand is projected to increase as the result of intensified use of facilities and a greater amount of landscaping on the Campus. Water usage is likely to increase following Project buildout because of the increased number of employees and, potentially, patients using Harbor-UCLA Medical Center facilities. However, increased regional water demand is primarily a function of population growth, and as the Project would not directly or indirectly result in substantial population growth in the area, it would not significantly increase demand for water supplies, including groundwater serving the Project area. Additionally, indoor fixtures would comply with applicable Municipal Codes requirements related to reducing indoor water consumption through maximum flow rates for indoor water fixtures. These requirements would limit potential increases in indoor water usage on the Campus. See Section 4.M.1, Water Supply, of this Draft EIR for further discussion of Project-related water demand and supply.

As previously stated, Harbor-UCLA receives its water supplies from CWS, which draws on a combination of local groundwater (i.e., the Central Basin) and water purchased from MWD. At Project buildout, the amount of pervious area on the Campus will be increased, which may incrementally increase recharge of the West Basin through infiltration based on the LID features implemented to reduce off-site discharge of stormwater and dry weather runoff. However, the increase in landscaped area on the Campus is expected to increase the need for irrigation over existing conditions. Current lawn areas will be reduced and planted with drought-tolerant plants reducing water usage. The proposed plant palette would include drought-tolerant and California native plants in compliance with the County's landscape ordinance, and therefore the use of plant species with high to moderate water needs would be limited.

Reclaimed water is currently not provided to the Project Site and the irrigation system is supplied by the CWS municipal domestic water system. Future opportunities for potential water sources for irrigation use include continuing with the municipal water supply, a future municipal recycled water supply, an on-site integrated stormwater management system, and/or an on-site recycled water system. Any of proposed recycled water systems or the on-site integrated stormwater management system would reduce the use of potable water.

The Master Plan Project would not involve any groundwater extraction or other activities that could result in direct withdrawal or depletion of groundwater supplies. As noted above, a portion of the Medical Center's water supply is provided by groundwater from local aquifers, and as such the implementation of the proposed Project would indirectly increase demands on the groundwater basins. However, the Project would not result in any adverse impacts to the local water supplies, including groundwater resources, as although the proposed development was not specifically accounted for in the most recently adopted Urban Water Management Plan (UWMP) for the Medical Center Campus service area, the Water Supply Assessment prepared for the Master Plan Project (included in Appendix I of this Draft EIR) demonstrates that adequate water supplies are available to meet projected demands. As the Project would not directly affect

groundwater resources, and indirect demands on local groundwater supplies would not exceed available supplies, impacts on groundwater resources would be less than significant.

Threshold HWQ-3: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?

Impact Statement HWQ-3: *The Project would redevelop the already fully developed Harbor-UCLA Campus, and, with compliance with NPDES regulations and County LID requirements governing construction and post-project stormwater management and water quality, would not substantially alter existing drainage patterns in a manner that would result in substantial erosion or siltation.*

(1) Construction

Grading and excavation would be required for building foundations, which could affect drainage on the sites of specific Master Plan Project components. However, as the site is currently fully developed, the proposed Project would not substantially alter the existing drainage pattern of the site or result in substantial erosion or siltation. Standard construction phase BMPs required for compliance with NPDES requirements would decrease the potential for any significant erosion or sedimentation from soil disturbance associated with construction. There are no streams or rivers nearby whose course would be altered by the proposed Project.

Any potential impacts on water quality arising from erosion and sedimentation are expected to be localized and temporary (i.e. during construction). NPDES compliance would require contractors to implement measures to minimize and contain erosion and sedimentation and be required to submit a grading plan to the County for approval prior to the commencement of any construction activities. In addition, where proposed construction for a specific Master Plan Project component would disturb more than one acre, the project proponent would be required to obtain and comply with the NPDES Construction General Permit. The permit would require a SWPPP and compliance with County requirements to meet state water quality objectives. Pending possible revisions as of this writing, the NPDES permitting process may also require development of a rain-event action plan prior to permit approval. Construction-related erosion and sedimentation impacts resulting from soil disturbance would be less than significant after implementation of the SWPPP (see MM-HWQ-1) and the BMPs required to control erosion and sedimentation.

(2) Operation

As previously stated, the amount of landscaped area would increase following Project buildout over existing conditions. Moreover, for each Project component, Harbor-UCLA would be required to identify and implement appropriate LID compliance features and practices include structural BMPS such as filtration, runoff-minimizing landscaping for common areas, and energy dissipaters, which would reduce peak runoff volumes as well as the overall amount of runoff discharged compared to existing conditions. Therefore, over time, Project implementation is expected to improve stormwater management conditions on the Harbor-UCLA Campus and reduce the potential for erosion and sedimentation.

Threshold HWQ-4: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

Impact Statement HWQ-4: *The Project would redevelop the already fully developed Harbor-UCLA Campus and would not substantially alter existing topography or affect the course of any streams or rivers. Neither construction nor operations would increase surface runoff in a manner that would result in flooding. Therefore, impacts on existing drainage patterns of the Project site would be less than significant.*

(1) Construction

The Harbor-UCLA Campus is already developed and proposed grading and excavation would not substantially alter its overall topography. Water used during construction (e.g. for dust compression) would be mechanically and precisely applied and would infiltrate or evaporate. Project-related excavation is not expected to intercept groundwater, and in the event of possible seepage within excavations, temporary dewatering would be conducted in accordance with NPDES requirements governing such discharges.

(2) Operation

As previously stated, Project buildout would not substantially alter the existing drainage patterns on the Harbor-UCLA Campus, Project area, or receiving waters, or result in substantial erosion or siltation on- or off-site. Future Project hydrologic boundaries and off-site storm drain infrastructure serving the Campus will closely match existing conditions. With the increase in pervious area, the calculated peak flow of the future development will generally be less than under existing conditions; in addition, any future site development will require compliance with County of Los Angeles and LID standards for stormwater management. As such, the project would not result in a substantial increase in the rate or amount of surface runoff or result in flooding on-or-off-site. Impacts would be less than significant.

Threshold HWQ-5: Would the Project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Impact Statement HWQ-5: *With adherence to County connection permit requirements and compliance with County LID requirements, the volumes of runoff discharged to the County's storm drain system following Project buildout would be similar or reduced compared to existing conditions and would not provide additional sources of polluted runoff; impacts would be less than significant.*

(1) Construction and Operation

As previously stated, future Campus hydrologic boundaries and off-site storm drain infrastructure serving the Campus will closely match existing conditions. The backbone of the drain system will continue to be the County-owned and operated 208th Street Storm Drain, an 8-foot by 4-foot RCB culvert which runs beneath the Medical Center in a north-south 15-foot wide easement, daylighting into an open culvert that parallels 220th Street and discharges to the underground network at Normandie Avenue to the west. Since the design of future Project facilities is presently conceptual, it is unknown whether new connections to the 228th

Street Storm Drain may be required as part of the Project, but it is considered likely due to the age and brittle condition of the system. However, future connections would require a connection permit from the County Flood Control District, which will in turn require a hydrology analysis and comparison with the design peak flow rate of the facility. As previously discussed, the County will require stormwater detention if the calculated peak flow rate exceeds the facility's design peak flow rate. Stormwater management infrastructure constructed for individual Project components would be constructed in compliance with permit and LID requirements and include upgraded infrastructure sized for future stormwater volumes.

The County of Los Angeles determines the allowable amount of runoff that can enter its system based on historical records. It is likely that the flow rate allowed at connections to the County Storm Drains will be required to match the original system design flow rate. As previously stated, new development in Los Angeles County is required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (i.e. 0 percent impervious) where technically feasible. In addition, a developed site is required to treat the entire 0.75-inch rainfall to remove urban stormwater pollution. In addition to the LID requirements set for the LID manual, the County also establishes hydromodification requirements that require the difference in peak flow rate, flow velocity, total volume, and depth/width of flow for the 2-, 5-, 10-, 25-, and 50-year storm with several exceptions. One exception is for proposed projects that do not add net new impervious area. Since the Harbor-UCLA Campus is fully developed and highly impervious, the hydromodification requirement will likely not apply to the Project.

With the increase in pervious area, an integrated stormwater management approach and the implementation of the County LID Standards, the requirements to detain flows to meet existing design flow rates will be minimized. Peak flow rates and runoff volumes from the Campus would be the same or lower compared to existing rates/volumes and would not affect the capacity or hydraulic integrity of the existing County storm drain system. Impacts related to the volume of runoff from the Harbor-UCLA Campus on the capacity of the County's storm drain infrastructure, and related to the potential for additional polluted runoff compared to existing conditions, would be less than significant.

Threshold HWQ-6: Would the Project otherwise substantially degrade water quality?

Impact Statement HWQ-6: *With compliance with County NPDES and LID requirements, the Project is not anticipated to substantially degrade water quality.*

(1) Construction

Impacts HWQ-1 though HWQ-5 discuss potential impacts associated with the degradation of water quality during construction. During construction, the Project would be required to adhere to the NPDES Construction General Permit to control erosion and protect water quality. Therefore, the Project would not create or contribute runoff that would exceed the capacity of drainage systems or provide substantial sources of polluted runoff. There are no other methods by which water quality could be degraded as a result of construction on the Project site, and impacts would be less than significant.

(2) Operation

Impacts HWQ-1 through HWQ-5 discuss potential impacts associated with degradation of water quality during Project operations. Prior to the start of individual Project component construction activities, Harbor-UCLA would be required to prepare and submit drainage plans for County approval, which would include post-Project structural and nonstructural BMPs. There are no other methods by which water quality could be degraded as a result of operations on the Project site. Impacts associated with potential degradation of water quality during Project operations would be less than significant.

e. Cumulative Impacts

The geographic scope for cumulative impacts related to water quality and hydrology encompasses the project site and the land uses within a 1-mile radius of the Project site. Other projects in the general vicinity of the proposed Project include a variety of housing, (apartments, condos, single-family), mixed-use, retail, and office and medical spaces. All of these projects have the potential to result in construction-period water quality impacts, which could result in cumulatively significant impacts. However, compliance with the Construction General Permit, SWPPP, and NPDES requirements, and local regulations that require construction phase BMPs would ensure that construction activities would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the Los Angeles RWQCB or other regulatory agencies or impair the beneficial uses of the receiving waters. Construction would not result in a violation of any water quality standards or waste discharge requirements, would not provide substantial additional sources of polluted runoff, and would not substantially degrade water quality. Compliance with construction phase permits and standard construction phase BMPs would decrease the potential for any significant erosion or sedimentation from soil disturbance associated with construction of the projects. During construction the amount of stormwater runoff is also anticipated to be less than or equal to the amount under existing conditions. Therefore, the cumulative effects would be less than significant.

Compliance with County LID criteria as well as state and local regulations that require post construction BMPs would ensure that the operation of related projects would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the Los Angeles RWQCB or other regulatory agencies or impair the beneficial uses of the receiving waters. The Project would also be required to comply with all applicable federal, state, and local requirements concerning handling, storage, and disposal of hazardous materials to reduce the potential for the release of contaminants into groundwater as a result of project construction or operation. Therefore, construction and operation activities would not degrade groundwater quality or interfere with recharge and the cumulative effects would be less than significant.

4. MITIGATION MEASURES

Potential impacts related to hydrology and water quality would be less than significant with compliance with applicable regulatory requirements. Therefore, no mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potential impacts related to hydrology and water quality would be less than significant with compliance with applicable regulatory requirements.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
H. LAND USE AND PLANNING

1. INTRODUCTION

Development on the Harbor-UCLA Campus is guided by the policies and regulations of several regional and Los Angeles County (County) plans. The provisions set forth in these plans and regulations have been adopted to promote orderly land use development and eliminate or reduce the potential land use conflicts from development. This section describes the existing land use conditions on and in the vicinity of the Harbor-UCLA Campus, identifies the existing land use plans and regulations applicable to the Project, and evaluates Project consistency with these plans and regulations and compatibility with adjacent land uses. The information in this section is based primarily on County 2035 General Plan Update and associated EIR, County Planning and Zoning Code (Title 22 of the Los Angeles County Code or LACC), and the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016RTP/SCS).

For evaluation of the consistency of the Project with applicable land use regulations pertaining to air quality, see Sections 4.B., Air Quality, and 4.E., Greenhouse Gas Emissions, of this Draft EIR. For evaluation of the consistency of the Project with applicable land use regulations pertaining to population/housing and transportation/parking, see Sections 4.J., Population and Housing, and 4.L., Transportation and Traffic, respectively, of this Draft EIR. For evaluation of the growth-inducing impacts of the Project, see Chapter 6.0, Other CEQA Considerations, of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Project Site

The 72-acre Harbor-UCLA Campus is located in the unincorporated Los Angeles County community of West Carson, which in turn is located in the County's South Bay Planning Area. The South Bay Planning Area occupies the southwestern portion of the County from the City of Inglewood in the north to the cities of Rancho Palos Verdes and San Pedro in the south, and from the 710 Freeway in the east to the Pacific Ocean to the West. The West Carson Community is centrally located within the South Bay Planning Area, encompassing the roughly 2.3-square-mile area between Del Amo Boulevard on the north and Lomita Boulevard on the south, and the Harbor Freeway (I-110) on the east and Normandie Avenue on the west. As indicated in **Figure 4.H-1**, *Project Site and Surrounding Land Uses*, the Project Site lies within a fully urbanized area bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. Unincorporated area lies immediately north, south and east of the Project Site. The City of Los Angeles lies immediately west of the Project Site, across Normandie Avenue, while the City of Carson lies one block east of the Project Site, across the Harbor Freeway. Local vehicular access to the Project Site is provided by each of the four streets bordering the site, while regional vehicular access is provided by the Harbor Freeway via Carson Street, and by the San Diego Freeway (I-405), which lies approximately two miles to the north and east, via Vermont Avenue, Normandie Avenue, and Carson

Street. The Metro Transit Station (Silver Line) is located on Carson Street, approximately 0.10 miles to the east along the Harbor Freeway.

The Project Site is generally flat and developed with 1,279,284 square feet of floor area, including the Harbor-UCLA Medical Center and multiple medical and research tenants. Harbor-UCLA is a County-owned and -operated tertiary-care medical center and one of only five Level 1 Trauma Centers in the County. It serves southwestern County of Los Angeles and plays a particularly critical role in meeting the healthcare needs of the more than 700,000 residents of the greater South Bay region within 15 miles of the Campus, the catchment or service region for the Medical Center. Harbor-UCLA Medical Center is licensed for 453 inpatient beds and houses more than 70 primary and secondary care clinics. A premiere teaching hospital with a strong research focus, the Hospital employs full- and part-time faculty physicians, volunteer faculty physicians, and both residents and fellows completing graduate studies at the Hospital. The three major tenants collocated on the Project Site together with the Hospital include the following:

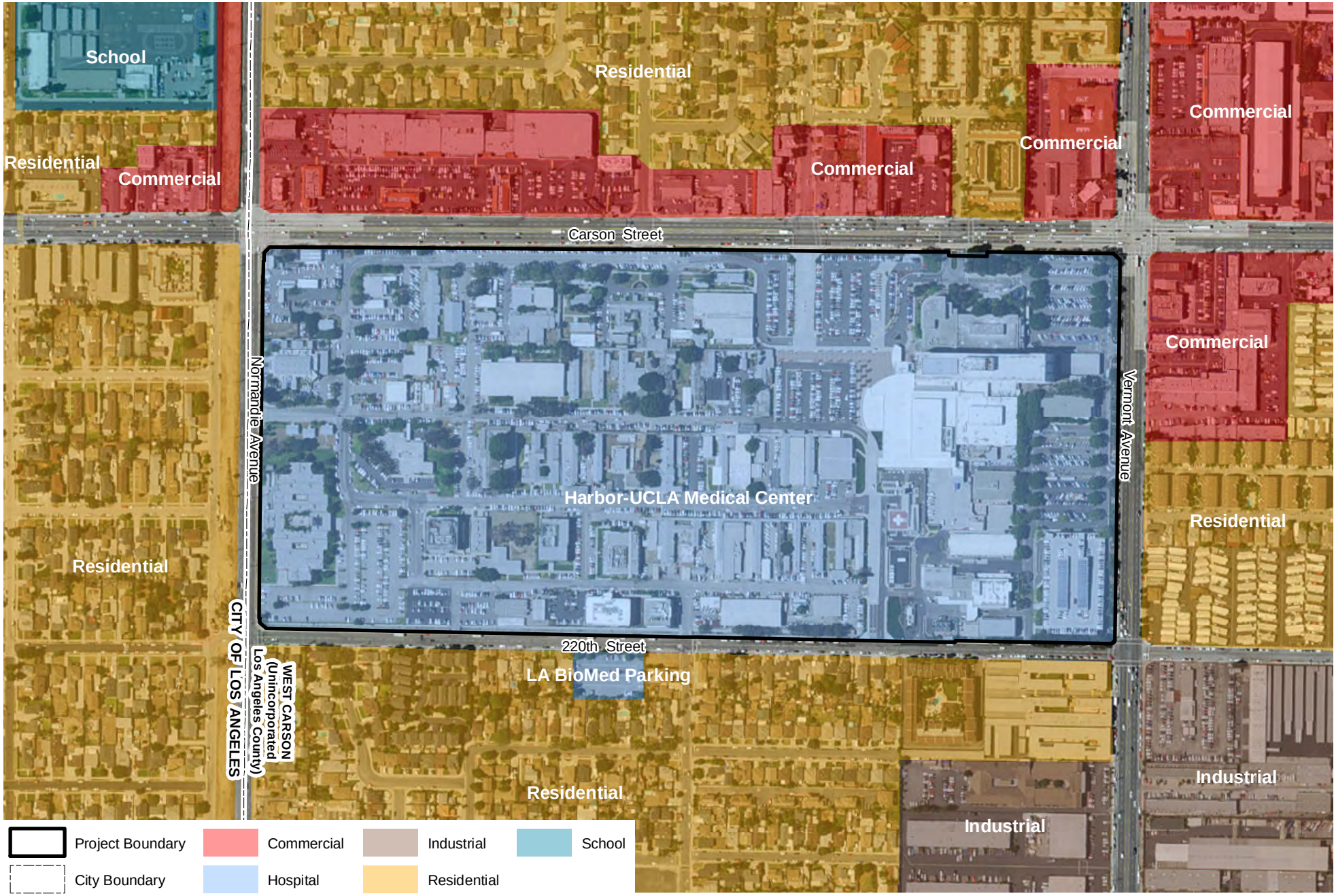
- LA BioMed: LA BioMed, the largest tenant, was founded as the Harbor-UCLA Research and Education Institute in 1952 and is currently one of the largest independent not-for-profit biomedical research institutes in the nation. It conducts and supports research, training, and education activities, provides community services including childhood immunization and nutrition assistance, and maintains an affiliation with the Harbor UCLA Medical Center, with many faculty members serving as both researchers and clinicians; this affiliation helps attract top residency candidates to Harbor UCLA Medical Center.
- Harbor-UCLA Medical Foundation, Inc. (MFI): MFI was founded in 1963 as a nonprofit organization dedicated to clinical patient care, the revenue from which is used to fund clinical, research, and educational activities at the Harbor-UCLA Medical Center.
- Children's Institute International (CII): CII, which specializes in the treatment and prevention of child abuse and neglect, operates its Burton E. Green Campus and provides services to families throughout the South Bay and adjacent communities. CII is headquartered near downtown Los Angeles and operates several facilities throughout the region.

A number of County departments, including offices of the Department of Mental Health, also occupy buildings on the Campus.

Existing buildings heights at the Project Site range from one to eight floors, with the existing Hospital Tower in the northeast portion of the Site representing the tallest building. The existing floor-area ratio (FAR) at the Site is 0.40:1, while total existing employment at the site (including the Hospital and both major and minor tenants) is approximately 5,500. See Figure 2-3, Existing Campus Buildings, in Chapter 2.0, *Project Description*, of this Draft EIR for an illustration of the layout of the existing buildings, parking areas, and internal streets at the Project Site.

(2) Surrounding Uses

As indicated in Figure 4.H-1, the Project Site is fully surrounded by urban uses. These include commercial uses with a small amount of high-density residential across Carson Street to the north; residential uses and a surface parking lot across 220th Street to the south; commercial and residential uses across Vermont Avenue



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Project Site and Surrounding Land Uses

Harbor-UCLA Medical Center Master Plan
Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2014.

FIGURE
4.H-1

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to the east, and residential uses across Normandie Avenue in the west. A more detailed description of the surrounding land uses is provided below:

- North: Carson Street to the north is largely developed with commercial uses, primarily neighborhood retail businesses and medical/dental services. The Harbor-UCLA Medical Center Employee Children's Center (daycare center) and a multifamily residential apartment complex, Harbor Cove Villa, are located on Carson Street just west of Vermont Avenue. The area north of the commercial uses on Carson Street is a predominantly single-family residential neighborhood.
- East: Vermont Avenue, bordering the Harbor-UCLA Campus to the east, is developed with a mix of neighborhood retail uses and medical services just north and south of Carson Street, while the southern half of the block facing the Harbor-UCLA Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and Starlite Trailer Park and Rainbow Mobile Home Park, which back up to the Harbor Freeway on the west. Wholesale and light industrial uses, primarily warehouses and truck distribution centers, are located to the southeast along 220th Street.
  - South and West: Single-family and multi-family residential neighborhoods border the Harbor-UCLA Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles; the abandoned Union Pacific Railroad right-of-way area along the west side of Normandie Avenue serves as a setback for residential uses to the west. An off-site surface parking lot serving LA BioMed is located across 220th Street from the Harbor-UCLA Campus.

(3) Existing General Plan Land Use Designations and Zoning

As indicated in **Figure 4.H-2**, *County of Los Angeles – General Plan Land Use Designations*, the Project Site is designated "P" (Public and Semi-Public) by the County of Los Angeles 2035 General Plan Update (General Plan Update). The "P" General Plan Land Use (GPLU) designation permits a broad range of public and semi-public facilities and community-serving uses, including public buildings and campuses, schools, hospitals, cemeteries, fairgrounds, airports and other major transportation facilities, landfills, solid and liquid waste disposal sites, multiple use storm water treatment facilities, and major utilities at a maximum FAR of 3:1.[1] Also, in the event that the public or semi-public use of mapped facilities is terminated, alternative uses that are compatible with the surrounding development, in keeping with community character, are permitted.[2]

In addition, the General Plan Update indicates that the western two-thirds of the Project Site fall within the boundaries of the 110 Freeway/Carson Station Transit Overlay District (TOD) due to its proximity to the Metro Transit Station (Silver Line) located on Carson Street, approximately 0.10 miles to the east.[3] TODs are areas within a ½-mile radius of a major transit stop that have development/design standards and incentives to facilitate transit-oriented development specifically tailored to the unique characteristics and needs of the local community.[4] However, the West Carson TOD Specific Plan, which is to specify the development/design

[1] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

[2] *Ibid.*

[3] *Ibid, Figure 6.5 and page 72.*

[4] *Ibid.*

standards and incentives for the 110 Freeway/Carson Station TOD, has not yet been prepared or adopted.[5] Therefore, the West Carson TOD Specific Plan is not addressed further in this section.

Finally, the Project Site is not located within an adopted community plan area.

As indicated in **Figure 4.H-3**, *County of Los Angeles – Zoning*, the Project Site is zoned C-3 (Unlimited Commercial) by the LACC. The C-3 zone permits a broad range of commercial uses, including but not limited to offices, universities/colleges, medical clinics, and medical research/laboratories (LACC §22.28.180), as well as hospitals and helistops. The maximum FAR in the C-3 zone is 13:1 (LACC §22.52.050), and the maximum height is 13 times the buildable area (LACC §22.52.050).

Hospital and ancillary uses on the Harbor-UCLA Campus are currently consistent with the current GPLU designation and zoning of the Project Site.

b. Regulatory Framework Summary

Development on the Project Site is guided by the policies and regulations of several regional and local plans, as well as by the County's 2035 General Plan Update and Zoning Ordinance (Title 22 of the LACC). The provisions set forth in these plans and regulations have been adopted to promote orderly land use development and to eliminate or reduce potential land use conflicts from development. What follows is a discussion of the land use provisions of these plans and ordinances applicable to the Project.

(1) Federal and State

No federal or State land use regulations are applicable to the proposed Project and the land use impact analysis.

(2) Regional

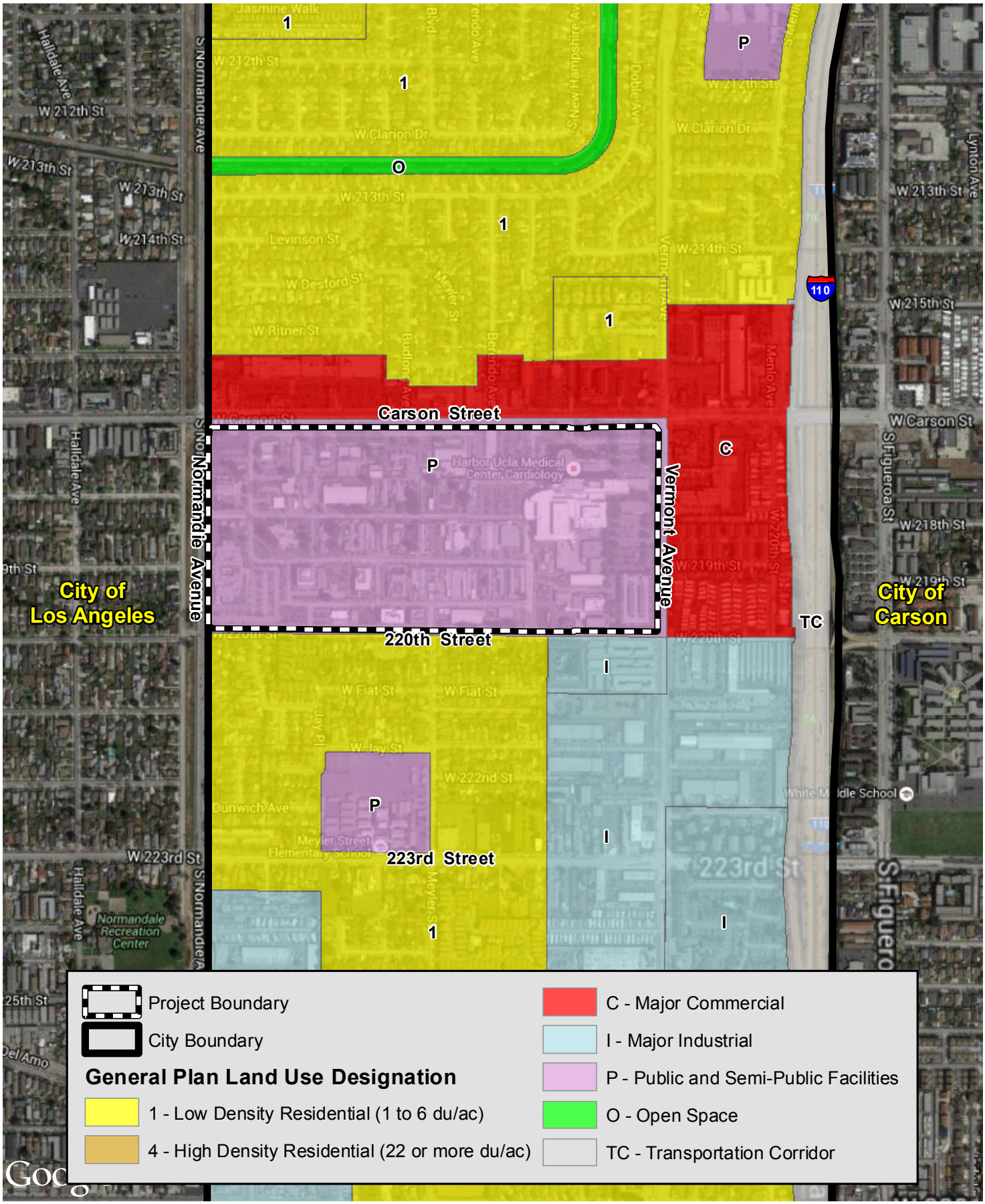
(a) SCAG - 2008 Regional Comprehensive Plan

SCAG is designated by the federal government as the Metropolitan Planning Organization and Regional Transportation Planning Agency for the Southern California region. SCAG's, a joint powers agency with responsibilities pertaining to regional planning issues and a jurisdiction covering Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. SCAG addresses regional planning issues through various plans and programs, including the Regional Comprehensive Plan (RCP), Compass Growth Visioning (including the Compass Blueprint 2% Strategy)[6], and the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

SCAG's 2008 RCP, the most recent RCP, was accepted by SCAG for use as an advisory document that may be voluntarily used by local jurisdictions when developing local plans and addressing local issues of regional

[5] *According to the County's website (http://planning.lacounty.gov/tod/plans), the County is planning to prepare a West Carson TOD Specific Plan and associated EIR commencing in Spring 2016, with public hearings on these documents anticipated in Spring 2017.*

[6] *The Compass Blueprint 2% Strategy is a guideline for how and where the Growth Vision for Southern California's future can be implemented. It calls for changes to current land use and transportation trends on only 2 percent of the land area of the region.*



PCR

0 750 1,500 Feet

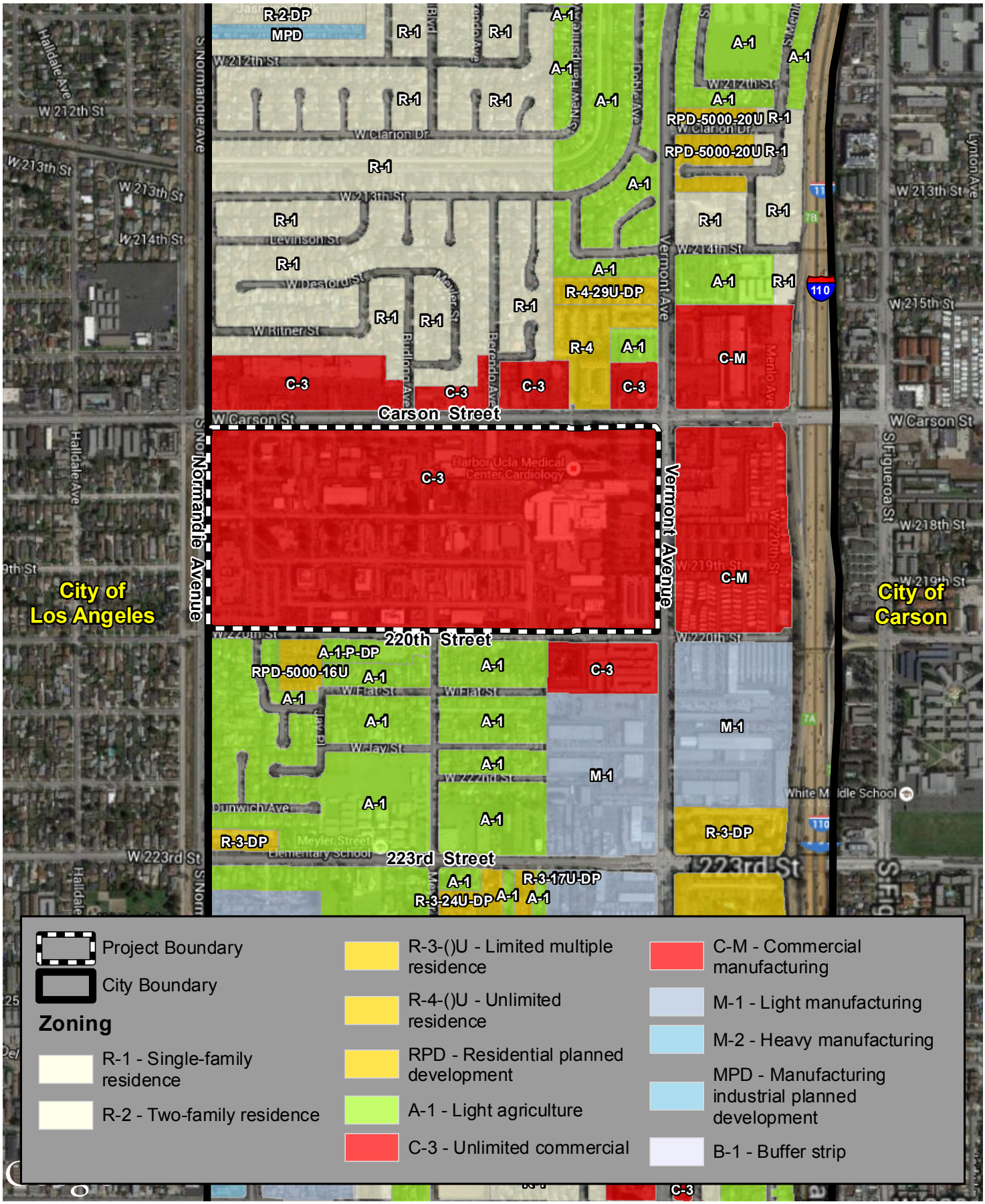
County of Los Angeles - General Plan Land Use Designations

Harbor-UCLA Medical Center Master Plan

Source: Google Maps, 2015 (Aerial); County of Los Angeles, 2015; PCR Services Corporation, 2015.

FIGURE

4.H-2



PCR

0 750 1,500 Feet

County of Los Angeles - Zoning

Harbor-UCLA Medical Center Master Plan

Source: Google Maps, 2015 (Aerial); County of Los Angeles, 2015; PCR Services Corporation, 2015.

FIGURE

4.H-3

significance. The RCP addresses issues related to housing, traffic/transportation, water, and air quality. Local governments are asked to consider the RCP's recommendations in the preparation of local plans and approval of development projects. The RCP is also closely linked to, and serves as a basis for, the preparation of SCAG's RTP/SCS and Compass Plan. The RCP contains the following land use and air quality goals relevant to the Project:

- Land Use: Successfully integrate land and transportation planning, and achieve land use and housing sustainability, by implementing the Compass Blueprint 2% Strategy, which includes following:
  - Focus growth in existing and emerging centers and along major transportation corridors;
  - Create significant areas of mixed-use development and walkable, "people-scaled" communities;
  - Target growth in housing, employment, and commercial development within walking distance of existing and planned transit stations;
  - Inject new life into under-used areas by creating vibrant new business districts, redeveloping old buildings, and building new businesses and housing on vacant lots;
  - Preserve existing stable single-family neighborhoods; and
  - Protect important open space, environmentally sensitive areas, and agricultural lands from development.
- Air Quality:
  - Minimize land uses that increase the risk of adverse air pollution-related health impacts from exposure to toxic air contaminants, particulates (PM<10, PM2.5, ultrafine), and carbon monoxide; and
  - Expand green building practices to reduce energy-related emissions from developments to increase economic benefits to business and residents.

(b) SCAG - 2008 Compass Growth Visioning (including Compass Blueprint 2% Strategy)

SCAG also engages in the Compass Growth Visioning effort that addresses the regional development pattern so as to accommodate future development and provide land use patterns that improve mobility, reduce vehicle miles traveled, and support the goals and polices established in the RTP. The Growth Vision is driven by four key principles: mobility – getting where we want to go; livability - creating positive communities; prosperity - long-term health for the region; and sustainability - preserving natural surroundings. To realize these principles on the ground, the Growth Vision encourages:

- Focusing growth in existing and emerging centers and along major transportation corridors
- Creating significant areas of mixed-use development and walkable communities
- Targeting growth around existing and planned transit stations
- Preserving existing open space and stable residential areas

As part of the visioning effort, the Compass Blueprint 2% Strategy provides guidance for how and where SCAG can implement the Growth Vision for Southern California's future. It calls for modest changes to current land use and transportation trends on only 2% of the land area of the region. Directing the changes to the selected 2% of the land identified produces the greatest policy achievement for the least land affected.

The Growth Visioning effort encourages clustering/densification of population activity in proximity to certain transportation facilities.

(c) SCAG - 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The 2016- RTP/SCS presents the transportation vision for the region through the year 2040 and provides a long-term investment framework for addressing the region's transportation and related challenges. Also, the 2016 RTP/SCS contains baseline socioeconomic projections that are used as the basis for SCAG's transportation planning and the provision of services by other regional agencies. The SCS portion presents an overall land use concept for the region with increasing focus on densification of urban areas and development around transit stations and increased focus on use of transit and active transportation. The goals of the 2016 RTP/SCS are as follows:

- Align plan investments and policies with improving regional economic development and competitiveness;
- Maximize mobility and accessibility for all people and goods in the region;
- Ensure travel safety and reliability for all people and goods in the region;
- Preserve and ensure a regional transportation system;
- Maximize the productivity of our transportation system;
- Protect the environment and health of residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking);
- Actively encourage and create incentives for energy efficiency, where possible;
- Encourage land use and growth patterns that facilitate transit and non-motorized transportation.; and
- Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

(d) SCAQMD - 2012 Air Quality Management Plan

The South Coast Air Quality Management District's (SCAQMD's) administers the Air Quality Management Plan (AQMP). The 2012 AQMP, the most recent AQMP, presents strategies for achieving the air quality planning goals set forth in the Federal and California Clean Air Acts (CCAA), including a comprehensive list of pollution control measures aimed at reducing emissions. The SCAQMD, which was established in 1977 pursuant to the Lewis-Presley Air Quality Management Act, is responsible for bringing air quality in the South Coast Air Basin (Basin) into conformity with federal and State air pollution standards. The SCAQMD is also responsible for monitoring ambient air pollution levels throughout the Basin and for developing and implementing attainment strategies to ensure that future emissions will be within federal and State standards. Project consistency with the AQMP is addressed in Section 4.B., *Air Quality*, of this Draft EIR.

(e) Metro - 2010 Congestion Management Program

The County of Los Angeles Metropolitan Transportation Authority (Metro) administers the Congestion Management Program (CMP), a State-mandated program designed to provide comprehensive long-range traffic planning on a regional basis. The 2010 CMP, the most recent CMP, summarizes the results of 18 years of CMP highway and transit monitoring and 15 years of monitoring local growth. CMP implementation guidelines for local jurisdictions are also contained in the 2010 CMP. The primary goal of the CMP is to reduce traffic congestion in order to enhance the economic vitality and quality of life for affected communities. CMP guidelines specify that those freeway segments to which a proposed project could add 150 or more trips in each direction during the peak hours be evaluated. The guidelines also require evaluation of designated CMP roadway intersections to which a proposed project could add 50 or more trips during either peak hour. Project consistency with the CMP is addressed in Section 4.L., *Transportation and Traffic*, of this Draft EIR.

(3) Local

(a) County of Los Angeles - 2035 General Plan Update

California law requires that every city and county prepare and adopt a long-range comprehensive General Plan to guide future development and to identify the community's environmental, social, and economic goals. The County of Los Angeles 2035 General Plan Update was approved and adopted by the Board October 6, 2015. The General Plan Update serves as a document to provide decision-makers with a policy framework to guide specific, incremental decisions to achieve the Plan's stated goals and objectives which focus on fostering healthy, livable, and sustainable communities. It contains nine elements, including Land Use, Mobility, Air Quality, Conservation and Natural Resources, Parks and Recreation, Noise, Safety, Public Services and Facilities, and Economic Development.

The Project Site is located in County's South Bay Planning Area, one of 11 Planning Areas which make up the County, but is not located within an adopted County Specific Plan area. The Project Site is designated P (Public and Semi-Public) by the General Plan Update which permits a broad range of public and semi-public uses, including but not limited to hospitals, universities/colleges, offices, medical clinics, and medical research/laboratories, at a maximum FAR of 3:1[7]. The western two-thirds of the Project Site is designated as a TOD by the General Plan Update due to its proximity to the Metro Transit Station (Silver Line), which has associated with it development and design standards and incentives to facilitate transit-oriented development.[8]

(b) County of Los Angeles - Planning and Zoning Code (LACC Title 22)

The County of Los Angeles Planning and Zoning Code (LACC Title 22) sets forth zoning designations and other regulations pertinent to land use. Title 22.12 establishes individual zoning designations, area requirements, density of land occupancy, and the necessary, proper and comprehensive groupings and arrangements of the various industries, businesses and population of the County in policy established by the Land Use Element of the General Plan. As discussed previously, the Project Site is zoned C-3, General Commercial. The C-3 zone permits a broad range of commercial uses, including but not limited to offices,

[7] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

[8] *Ibid, p.72.*

universities/colleges, medical clinics, and medical research/laboratories (LACC §22.28.180), as well as hospitals and helistops. Within the C-3 zone: the maximum FAR in the C-3 zone is 13:1 (LACC §22.52.050); the maximum height is 13 times the buildable area (LACC §22.52.050)[9]; there are no minimum building setbacks[10]; and the maximum permitted lot coverage is 90% of net lot area, with 10% of net lot area landscaped (LACC §22.28.220).

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of potential land use impacts in this section of the Draft EIR evaluates: (1) Project consistency with applicable land use plans, policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect; and (2) Project compatibility with existing adjacent land uses.

The evaluation of Project consistency with applicable land use plans, policies and regulations is based upon a review of the land use plans identified above. State *CEQA Guidelines* Section 15125(d) requires that an EIR discuss inconsistencies with applicable land use plans that the decision-makers should address. Evaluations are made as to whether a Project would further plan provisions or actively obstruct their implementation. The intention of the evaluation is to determine whether any noncompliance would result in a significant adverse physical impact on the environment. Accordingly, the criterion for determining significance with respect to a land use plan emphasizes substantive conflicts with plans adopted for the purpose of avoiding or mitigating an environmental effect, recognizing that a mere inconsistency with a plan, policy, or regulation does not necessarily equate to a significant impact on the environment.

The evaluation of Project compatibility with existing adjacent off-site land uses focuses on whether the nature (type, scale, height, location) of existing on-site land uses would substantially change under the Project, and if yes, whether this would adversely impact the character of the area as perceived by the existing adjacent off-site land uses.

b. Thresholds of Significance

The potential for land use and planning impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State CEQA Guidelines. These questions are as follows:

(XI) Land Use and Planning. Would the project:

a) Physically divide an established community?

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[9] *The height of buildings, except where otherwise provided, shall be determined as follows: The total floor area in all the buildings on any one parcel of land shall not exceed 13 times the buildable area of such parcel of land. Cellar floor space, parking floor space with necessary interior driveways and ramps thereto, or space within a roof structure or penthouse for the housing of building operating equipment or machinery shall not be considered in determining the total floor area within a building.*

[10] *County of Los Angeles website: http://planning.lacounty.gov/luz/summary/category/commercial_zones/. Accessed December 1, 2015.*

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

The Initial Study determined that the Project would have a less than significant impact with respect to Checklist question XI.a). Accordingly, this environmental topic is not evaluated in this EIR.

Based on the above factors, the Project would have a potentially significant impact on Land Use and Planning if it would result in any of the following:

LU-1: Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

LU-2: Would the Project be incompatible with existing adjacent land uses?

c. Project Characteristics or Design Features

(1) Project Characteristics

The Master Plan Project encompasses construction of a new Hospital tower (New Hospital Tower) on schedule to meet increasing state law seismic requirements for acute care facilities, renovation of the existing Hospital building (Existing Hospital Tower) to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Medical Center Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. The Campus-wide floor area would increase from 1,279,284 square feet to 2,457,355 square feet. The redesigned Harbor-UCLA Campus would consolidate outpatient facilities and locate them in proximity to the New Hospital Tower in the north-central Campus. It would also engage Carson Street by orienting Hospital-related services used by the community along this major thoroughfare. Courtyards, landscaped areas, and paths and sidewalks for pedestrian circulation would form the core of the Campus and connect the new Hospital Tower and outpatient facilities with the other major tenants on the Campus, including Los Angeles Biomedical Research Institute (LA BioMed) in the south-central Campus and the Children's Institute International (CII) Burton E. Green Campus in the northwest Campus. Patient and visitor vehicle access and parking would be realigned off Carson Street and staff vehicle access would be concentrated in the eastern and southeastern Campus off Vermont Avenue and 220th Street.

The western side of the Campus would be used for the development of a biotechnical research campus (Biosciences Campus). Implementation of the Master Plan Project is expected to meet short-term needs of the Hospital, associated facilities, and other tenants of the Campus, as well as long-term needs beyond 2030. It is anticipated that implementation of the Project would occur in approximately six phases, with construction commencing in 2017 and anticipated to be completed by 2030.

Under the proposed Project:

- Campus-wide floor area would increase from 1,279,284 sf to 2,457,355 sf (a net increase of 1,178,071 sf), due largely to the development of a new hospital tower, three new outpatient buildings, and the Bioscience Tech Park;
- Campus-wide FAR would increase from 0.40:1 to 0.78:1;
- The number of licensed in-patient hospital beds would decrease slightly from 453 to 446;
- Building heights across much of the Project Site would increase from an average of one to an average of four stories, with the tallest existing on-site building (the existing eight-floor Hospital Tower) retained and a second larger eight-floor building (New Hospital Tower) developed;
- Campus-wide parking would increase from 3,186 spaces (including 281 spaces in an off-site parking lot) to 4,240 spaces (including the spaces in the Bioscience Tech Park and in the off-site parking lot), due largely to the replacement of several on-site surface parking lots with three- to five-floor parking structures; and
- The number of Campus-wide employees would increase from approximately 5,464 to approximately 7,494.

See Chapter 2.0, *Project Description*, in this Draft EIR for more information, including but not limited to: Figure 2-4, Existing Campus Buildings; Figure 2-6, Harbor-UCLA Medical Campus Master Plan Site Plan; and Table 2-1, Harbor-UCLA Master Plan Project - Existing and Proposed Land Use Summary.

(a) Sign Program

Proposed signage will include identification and wayfinding to aid visitors and patients in finding their ultimate destinations into and within the Project Site. This would include signage at the two proposed public entryways into the Project Site on Carson Street, one proposed public entryway into the Project Site on Normandie Avenue, one staff and emergency ambulance entryway into the Project Site on Vermont Avenue, and two staff entryways into the Project Site on 220th Street, along with street, directional, and parking signage within the Project Site. All signage would be intended to serve the on-site uses and activity; no off-site signage (e.g., billboards, etc.) is proposed. The Project Sign Program would be reviewed by the Regional Planning Department (Director) to ensure Program consistency with applicable sign regulations (including LACC Section 6502.2. Permits would be obtained for signs and electrical permits for lighting in accordance with the Code.

(b) Sustainability Features

Long-term sustainability is an important principle guiding the Master Plan Project. The current County policy requires LEED Silver-level certification, or the equivalent, for any public facility over 10,000 square feet in floor area. Green building practices would be integrated into all building design, construction, and operation and would be integrated with Campus infrastructure and include integrated stormwater and wastewater treatment. Sustainability criteria include (1) green building metrics; (2) reduction of energy demand; (3) reduction of thermal energy needs; (4) water balance; and (5) use of healthy building materials. As the Master Plan Project is implemented, one or more of the following systems would be used for environmental performance certification.

- LEED for Healthcare Rating System / Green Guide for Healthcare: Campus Buildings are designed to meet the requirements of the USGBC's LEED for Healthcare, [Platinum] certification and incorporates LEED Pilot credits on healthy materials selection.
- LEED Application Guide for Multiple Buildings and On-Campus Building Projects: Utilize to exploit economies of scale and the unique challenges and opportunities inherent in Campus projects.
- Living Building Challenge: Achieve a majority of "petals" of the International Living Building Institute's Living Building Challenge 2.0.
- 2030 Challenge: Goals of each project to meet the 2030 Challenge relative to reduction requirements for the year constructed.
    - Targeting 100!: Utilize tools and approaches from research to meet the 2030 Challenge for the Hospital.

(c) Required Approvals

Implementation of the Master Plan Project would require the following approvals:

(i) State of California

- California Office of Statewide Health Planning and Development Approval
- Caltrans Division of Aeronautics Helistop Permit Approval

(ii) County of Los Angeles

- Certification of the Final EIR
- Project approval
- Approval of permits as may be required for component buildings and other structures
- Funding approval

(iii) Other Approvals

- Approval of permits for temporary construction activities associated with off-site infrastructure and/or traffic system improvements within other jurisdictions (if such improvements are ultimately necessary), including the cities of Los Angeles, Carson, and Torrance.

The Project has been designed to be consistent with the existing County General Plan land use designation (GPLU) and zoning of the Project Site, and would not include the subdivision of land. Therefore, no General Plan Amendments, Rezones, or Subdivisions are proposed or required.

(2) Project Design Features

The Master Plan Project does not include any specific Project Design Features (PDFs) that would apply to land use and planning.

d. Project Impacts

(1) Project Consistency with Applicable Land Use Plans, Policies, and Regulations

Threshold LU-1: Would the Project conflict with any applicable land use plan, policy, or regulation of an

agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Impact Statement LU-1: *The Project would be substantially consistent with applicable land use plans, policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, land use impacts associated with Project consistency with applicable land use plans, policies and regulations would be less than significant.*

Project consistency with applicable land use plans, policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect are addressed below. This include analysis of Project consistency with the SCAG RCP, SCAG Compass Growth Visioning (including the Compass 2% Blueprint Strategy), SCAG RTP/SCS, County 2035 General Plan Update (including the GPLU designation of the Project Site), and the County Planning and Zoning Code (including the zoning of the Project Site).

Project consistency with two other applicable land use plans adopted for the purpose of avoiding or mitigating an environmental effect are addressed in other sections of this Draft EIR. These include the SCAQMD AQMP which is addressed in Section 4.B., *Air Quality*, and the Metro CMP which is addressed in Section 4.L., *Transportation and Parking*.

As indicated in the following subsections, the Project would be substantially consistent with applicable regional and local land use plans, policies and regulations. Therefore, impacts with respect to Threshold LU-2 would be less than significant.

(a) SCAG - 2008 Regional Comprehensive Plan

Table 4.H-1, *Comparison of the Project to Applicable Policies of the SCAG 2008 Regional Comprehensive Plan*, evaluates the consistency of the Project with applicable policies of the RCP. As discussed, the Project would be consistent with applicable RCP policies, including focusing growth in existing urban centers, creating walkable mixed-use development, targeting commercial and employment growth within walking distance of existing transit stations, injecting new life into under-used areas, preserving established neighborhoods, and protecting open space, environmentally-sensitive areas, and farmland. The Project would also include sustainability features in accordance with the County's Green Building Program to reduce energy consumption, GHG emissions and pollution.

Table 4.H-1

Comparison of the Project to Applicable Policies of the SCAG 2008 Regional Comprehensive Plan

Goal/Policy	Analysis of Project Consistency
Land Use and Housing	
Policy: Focus growth in existing and emerging centers and along major transportation corridors	**Consistent:** The Project would focus growth within an existing urban center and along transportation corridors by nearly doubling urban density (from 0.40:1 to 0.78:1 FAR) on the Project Site which is located within a designated TOD and 0.10 miles of both a Metro Transit Station (Silver Line) and the Harbor Freeway.
Policy: Create significant areas of mixed-use development and walkable, "people-scaled"	**Consistent:** The Master Plan would create a significant area of walkable, "people-scaled" mixed use development by: including a mix of community-serving uses (e.g., hospital, outpatient facilities, ground floor retail, green areas,

Table 4.H-1 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2008 Regional Comprehensive Plan

Goal/Policy	Analysis of Project Consistency
communities.	etc.) oriented towards a major thoroughfare (Carson Street); providing a clear, well organized, and signed internal pedestrian circulation system; providing frontage improvements (sidewalk enhancements, street trees, benches) and internal landscaped pedestrian paths to increase foot traffic within the hospital Campus, and between the hospital Campus, the surrounding community, and the Metro Station located 0.10 mile to the east; and providing bicycle parking in accordance with LACC requirements.
Policy: Target growth in housing, employment, and commercial development within walking distance of existing and planned transit stations.	**Consistent:** The Project would target growth in employment within walking distance of the existing transit by nearly doubling commercial density (from 0.40:1 to 0.78:1 FAR) and increasing employment by approximately 37 percent (from approximately 5,464 to approximately 7,494) at the Project Site which is located approximately 0.10 mile from the Carson Street Metro Transit Station.
Policy: Inject new life into under-used areas by creating vibrant new business districts, redeveloping old buildings, and building new businesses and housing on vacant lots.	**Consistent:** The Project would inject new life into the 72-acre Project Site by: (1) redeveloping an existing under- and inefficiently-utilized site, portions of which contain many old World Word II barracks, with new state of the art hospital and medical buildings; (2) consolidating hospital and major tenant functions in fewer buildings to increase efficiency; (3) replacing a piecemeal and confusing internal vehicular and pedestrian circulation system with a clear, well organized and well signed internal circulation system; and (4) potentially providing ground-floor retail, as well as outpatient facilities, and other community-serving uses along Carson Street to increase foot traffic between the hospital site, the surrounding community, and the Metro Station.
Policy: Preserve existing stable, single-family neighborhoods.	**Consistent:** The Project would be consistent with this policy because it would not displace residential uses or create new barriers to circulation to or within residential neighborhoods.
Policy: Protect important open space, environmentally sensitive areas, and agricultural lands from development.	**Consistent:** The Project would be consistent with this policy because it would represent redevelopment of an already fully developed urban property, which is surrounded on all sides by urban development, rather than the development of open space, environmentally sensitive areas, or agricultural lands.
Air Quality	
Policy: Minimize land uses that increase the risk of adverse air pollution-related health impacts from exposure to toxic air contaminants, particulates (PM10, PM2.5, ultrafine), and carbon monoxide.	**Consistent:** The Project would not include industrial, utility, mining, or other land uses most often associated with the emission of large quantities of toxic air contaminants (TACs), particulates or carbon monoxide. Furthermore, the Project would represent redevelopment of an already fully developed site, which is already a source of air emissions, rather than the development of a vacant site which is not currently a source of air emissions. Finally, as indicated in the analysis in Section 4.B, *Air Quality*, of this EIR, the Project would not result in significant unavoidable pollution-related health impacts associated with the emissions of TACs, particulates, or carbon monoxide.
Policy: Expand green building practices to reduce energy-related emissions from developments to increase economic benefits to businesses and residents.	**Consistent:** Per the current County policy requiring LEED Silver-level certification or the equivalent for any public facility over 10,000 square feet in floor area, the Project would be designed and constructed to achieve LEED Silver-level certification or its equivalent. Green building practices would be incorporated into all building design, construction, and operation, and would be integrated with Campus infrastructure and stormwater/wastewater treatment.

Source: PCR Services Corporation, 2016.

(b) SCAG - 2008 Compass Growth Visioning (Including Compass 2% Blueprint Strategy)

Table 4.H-2, *Comparison of the Project to Applicable Policies of the SCAG 2008 Compass Growth Visioning (Including Compass 2% Blueprint Strategy)*, evaluates the consistency of the Project with applicable policies of the SCAG's Compass Growth Visioning (including the Compass 2% Blueprint Strategy). As discussed, the Project would be consistent with applicable policies of these plans as it would improve mobility for all residents by providing an infill development along established transportation corridors, as well as in proximity to transit options and existing housing. Moreover, the Project would provide pedestrian walkways and landscaped setbacks to provide a "people-scaled" project. Lastly, the Project would include sustainability features in accordance with the County's Green Building Program to reduce energy consumption, reduce GHG emissions, and reduce pollution.

Table 4.H-2

Comparison of the Project to Applicable Policies of the SCAG 2008 Compass Growth Visioning (including Compass 2% Blueprint Strategy)

Goal/Policy	Analysis of Project Consistency
Principle #1: Improve mobility for all residents.	**Consistent:** The Project would represent infill development that would increase urban density along established transportation corridors (with existing bus service) and within 0.10 miles of both a Metro Transit Station (Silver Line) and the Harbor Freeway. The Project would allow for the continued provision of hospital and outpatient services and additional employment opportunities within the West Carson community and larger South Bay Planning Area, thereby reducing the need for residents to travel outside the local area for health care and work. Finally, the Project would create a significant area of walkable, people-scaled mixed use development by including a mix of community-serving uses oriented towards a major thoroughfare (Carson Street), providing a clear, well organized, and signed internal pedestrian circulation system, and providing frontage improvements along the bordering streets to increase foot traffic between the hospital Campus, the surrounding community, and the Metro Station. Therefore, the Project would improve mobility for all residents
Policy: Locate new housing near existing jobs and new jobs near existing housing.	**Consistent:** The Project would increase employment by approximately 37 percent (from approximately 5,464 to approximately 7,494) at a site near multiple residential neighborhoods and the Carson Street Metro Transit Station. Furthermore, the Project would allow for continued operation of the Harbor-UCLA Medical Center, thereby maintaining existing jobs near existing housing and avoiding the need for residents to travel outside the local area for health care services.
Policy: Promote a variety of travel choices.	**Consistent:** As discussed above, the Project would be developed within close proximity to several established transportation routes, the Harbor Freeway, and the Carson Street Metro Transit Station. Furthermore, the Project would create a walkable development by: including a mix of community-serving uses (e.g., hospital, outpatient facilities, potentially ground floor retail, green areas, etc.) oriented towards a major thoroughfare (Carson Street); providing a clear, well organized, and signed internal pedestrian circulation system; and providing frontage improvements (sidewalk enhancements, street trees, benches) and internal landscaped pedestrian paths to increase foot traffic between the hospital Campus, the surrounding community, and the Metro Station. Finally, the Project would implement transportation demand management (TDM) measures as required by the County, and would provide bicycle parking in accordance with LACC requirements. Therefore, the Project would promote a variety of travel

Table 4.H-2 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2008 Compass Growth Visioning (including Compass 2% Blueprint Strategy)

Goal/Policy	Analysis of Project Consistency
	choices (e.g., car, carpooling, vanpooling, mass transit, pedestrian, bicycle).
Principle #2: Foster livability in all communities.	**Consistent:** The Project would increase employment from approximately 5,464 to approximately 7,494 at a site near multiple residential neighborhoods and the Carson Street Metro Transit Station. The Project would allow for continued operation of the Harbor-UCLA Medical Center, thereby maintaining existing jobs near existing housing and reducing the need for residents to travel outside local area for work and health care services. Finally, the Project would provide a mix of community-serving uses (e.g., hospital, outpatient facilities, ground floor retail or other limited commercial services, green areas, etc.) to the local community. Therefore, the Project would foster livability in the West Carson community and larger South Bay Planning Area.
Policy: Promote infill development and redevelopment to revitalize existing communities.	**Consistent.** The Project would represent infill development and the redevelopment of an existing underutilized site, and together with the community-serving uses discussed above, would help revitalize the local West Carson community.
Policy: Promote developments that provide a mix of uses.	**Consistent.** The Project would provide a mix of uses, including hospital/inpatient, outpatient, medical office, administrative office, R&D, medical laboratory, retail, library, daycare, and outdoor green space uses.
Policy: Promote "people-scaled" pedestrian-friendly communities.	**Consistent.** The Master Plan would promote a "people-scaled" pedestrian-friendly community by: including a mix of community-serving uses (e.g., hospital, outpatient facilities, ground floor retail or other limited commercial services, green areas, landscaped setbacks, etc.) oriented towards a major thoroughfare (Carson Street); providing a clear, well organized, and signed internal pedestrian circulation system; providing frontage improvements (sidewalk enhancements, street trees, benches) and internal landscaped pedestrian paths to increase foot traffic within the hospital Campus, and between the hospital Campus, the surrounding community, and the Metro Station located 0.10 mile to the east; and providing bicycle parking in accordance with LACC requirements.
Policy: Ensure environmental justice regardless of race, ethnicity, or income class.	**Consistent.** The Project would provide a range of employment opportunities that would adhere to all applicable federal, State, and local regulations prohibiting discrimination in employment. In addition, the Project would not displace low-income people, and would not introduce industrial, airport, rail, landfill, or other uses to the West Carson community most often associated with substantial amounts of pollution, toxic air contaminants, odors, noise, or visual blight.
Principle #4: Promote sustainability for future generations. **Policy:** Develop strategies to accommodate growth that use resources efficiently, eliminate pollution, and significantly reduce waste.	**Consistent.** The Project would constitute infill commercial development along established transit corridors that would allow for nearby residents to find jobs, health care services, and goods and services in their immediate vicinity, thereby reducing vehicle miles travelled (VMT) and avoiding urban sprawl. Furthermore, per the current County policy requiring LEED Silver-level certification or the equivalent for any public facility over 10,000 square feet in floor area, the Project would be designed and constructed to achieve LEED Silver-level certification or its equivalent. Green building practices would also be incorporated into all building design, construction, and operation, and would be integrated with Campus infrastructure and both stormwater and wastewater treatment. A Waste Management Center would also be developed as part of the new Hospital Tower

Table 4.H-2 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2008 Compass Growth Visioning (including Compass 2% Blueprint Strategy)

Goal/Policy	Analysis of Project Consistency
	where among other things, sorting of waste would occur for recycling.
Policy: Utilize "green" development techniques.	**Consistent.** As discussed above, the Project is required to meet the standards for LEED® Silver-level certification or the equivalent in accordance with the County's Green Building Program. Some key Project features intended to contribute to energy efficiency include high-efficiency fixtures and appliances; the use of drought-tolerant and water-efficient landscaping; water conservation measures including installation of low-flow fixtures and smart irrigation controls; and of stormwater retention and treatment onsite.

Source: PCR Services Corporation, 2016.

(c) SCAG - 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy

The 2016 RTP/SCS provides a guiding vision for development in the region and a basis for planning infrastructure improvements. **Table 4.H-3**, *Comparison of the Project to Applicable Policies of the SCAG 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy*, evaluates the consistency of the Project with policies of SCAG's 2016 RTP/SCS. As discussed therein, the Project would be consistent with applicable RTP/SCS goals and policies. The Project would encourage economic development by providing a mix of commercial uses on an infill site well served by an existing transportation network, including mass transit to provide an alternative to private automobiles. Further, the Project would enhance the pedestrian environment within the Project Site and along Carson Street, and improve pedestrian connectivity between the Project Site, the surrounding community, and the Carson Street Metro Transit Station (Silver Line). The Project would implement design features and mitigation measures to reduce air quality impacts, including the incorporation of energy-saving features (see Sections 4.B., Air Quality, and 4.E., Greenhouse Gas Emissions, of this Draft EIR). Active transportation, including pedestrian connections and close proximity to transit options, would encourage alternative transit modes and improve air quality. The Project would support energy efficiency through design and operation in accordance with LEED-Silver certification or its equivalent. Based on the analysis presented in Table 4.H-3, the Project would be consistent with applicable RTP/SCS policies. No significant impacts with respect to RTP/SCS policies, many of which were adopted for the purpose of avoiding or mitigating an environmental effect, would occur.

Table 4.H-3

Comparison of the Project to Applicable Policies of the SCAG 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy

Goal/Policy	Analysis of Project Consistency
Goal: Align the plan investments and polices with improving regional economic development and competitiveness.	**Consistent:** The Project would enable Harbor-UCLA Medical Center to continue to provide health care services to the region, and to enhance these services. In addition, the Project would allow for the retention of the existing jobs at the Harbor-UCLA campus, and would provide new jobs (i.e., short-term construction jobs and long-term operation) in close proximity to existing housing. Finally, the project would represent infill development of an existing underutilized site, and increased urban density, that would take advantage of the existing

Table 4.H-3 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2012-2035 Regional Transportation Plan and Sustainable Communities Strategy

Goal/Policy	Analysis of Project Consistency
	transportation options in the area, including the Carson Street Metro Transit Station and Harbor Freeway, both located 0.10 mile to the east. Hence, the Project would increase regional economic development and competitiveness.
Goal: Maximize mobility and accessibility for all people and goods in the region.	**Consistent:** The Project would represent infill development and increased density along established transportation corridors (with existing bus service) and within 0.10 miles of both a Carson Street Metro Transit Station and Harbor Freeway. The Project would allow for the continued provision of hospital and outpatient services, retention of existing campus jobs, and additional employment opportunities within the area, thereby reducing the need for residents to travel outside the area for health care and work. The Project would also represent walkable mixed use development by including a mix of community-serving uses oriented towards a major thoroughfare (Carson Street), providing a clear, well organized, and signed internal pedestrian circulation system, and providing frontage improvements along the bordering streets to increase foot traffic between the hospital Campus, the surrounding community, and the Metro Station. Therefore, the Project would improve mobility for all residents
Goal: Ensure travel safety and reliability for all people and goods in the region.	**Consistent:** The Project would represent infill development along established transportation routes and within 0.10 mile of the Harbor Freeway and the Carson Street Metro Transit Station, for safe and reliable access by hospital patients and employees. The internal circulation system and signage at Project driveways and within the Project Site would be improved, public and staff vehicular access to and within the Project Site would be separated, and a new public signalized public entrance to the Project Site would be provided from Carson Street, thereby increasing clarity and both vehicular and pedestrian access and safety. Further, the Project would incorporate County-required urban design standards along the transportation routes, and internal pedestrian walkways and landscaped setbacks, to maintain a safe and comfortable pedestrian environment and buffering between uses.
Goal: Preserve and ensure a sustainable regional transportation system. **Goal:** Maximize the productivity of our transportation system.	**Consistent:** The Project would represent infill development and increased urban density along established transportation routes (with existing bus service), and within close proximity to the Harbor Freeway and Carson Street Metro Transit Station, thereby taking advantage of existing vehicular and mass transit options. The Project would also allow for the continued provision of hospital and outpatient services, retention of existing campus jobs, and additional employment opportunities within the West Carson Community and greater South Bay Planning Area, thereby reducing the need for residents to travel outside the area for health care and work. The above would contribute to preserving the sustainability and maximizing the productivity of the regional transportation system.
Goal: Protect the environment and health for our residents by improving air quality and encouraging active transportation	**Consistent:** The Project would represent infill development and increased density along established transportation corridors (with existing bus service) and within 0.10 miles of both a Carson Street Metro Transit Station and Harbor Freeway. The Project would allow for the continued provision of hospital and

Table 4.H-3 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy

Goal/Policy	Analysis of Project Consistency
(non-motorized) transportation, such as bicycling and walking.	outpatient services, retention of existing campus jobs, and additional employment opportunities within the area, thereby reducing the need for residents to travel outside the area for health care and work. The Project would also represent walkable mixed use development by including a mix of community-serving uses oriented towards Carson Street, providing a clear, well organized, and signed internal pedestrian circulation system, and providing frontage improvements along the bordering streets to increase foot traffic between the hospital Campus, the surrounding community, and the Metro Station. Lastly, the Project would implement TDM measures as required by the County, and would provide bicycle parking in accordance with LACC requirements. The above would have the effect of encouraging alternative modes of transportation, and reducing per capita VMT and per capita air emissions, and thus would be protective of the environment and the health of local residents.
Goal: Actively encourage and create incentives for energy efficiency, where possible.	**Consistent:** In addition the energy efficiency to be realized associated with the above-discussed reduction in per capita VMT, the Project would: (1) be designed and constructed to achieve LEED Silver-level certification or its equivalent; and (2) incorporate Green building design and operation in all buildings, integrated with Campus infrastructure and both stormwater and wastewater treatment.
Goal: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consistent:** As indicated previously, the Project would represent infill development, the intensification of land uses within close proximity to mass transit, and the development of job-generating uses and provision of health care services within close proximity to housing,. As also discussed previously, the Project would include pedestrian improvements within the Project Site and along the streets bordering the Project Site, implementing TDM measures required by the County, and providing bicycle parking in accordance with LACC requirements. These would all have the effect of facilitating transit and non-motorized transportation.
Goal: Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Consistent:** This goal pertains to security provided by regional security agencies. Rather than adversely affecting the ability of the security agencies to perform their emergency response duties, the Project would allow these agencies to retain their response capacity by allowing the hospital to continue to operate, and would increase the response capacity of these agencies by increasing the inpatient and outpatient capacity of the hospital campus. In addition, the Project would help support improved system monitoring, rapid recovery planning, and the ability of security agencies to coordinate with one another by participating in area-wide emergency response planning and by generating increased property tax and other public revenues for use in emergency planning.

Source: PCR Services Corporation, 2016.

(d) County of Los Angeles - 2035 General Plan Update

Table 4.H-4, *Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update*, evaluates the consistency of the Project with applicable policies of the County's 2035 General Plan Update. As indicated, the Project would be consistent with applicable policies of General Plan Update as the Project would: be compatible with the existing adjacent off-site land uses; incorporate sustainable design; facilitate multiple modes of transportation (including alternative modes); provided interconnected and safe

pedestrian and bicycle circulation; provide required green space and landscaped setbacks; result in less than significant impacts to biological, aesthetic and cultural resources after mitigation; result in less than significant seismic/geotechnical and noise impacts after mitigation; be developed with adequate public service and water, wastewater, and solid waste disposal capacity to serve the Project; and foster regional economic development.

Table 4.H-4

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
Land Use Element	
Goal LU 6: Compatible land uses that complement neighborhood character and the natural environment.	
Policy LU 6.1: Reduce and mitigate the impacts of incompatible land uses, where feasible, using buffers and other design techniques.	**Consistent:** The Project would alter the existing visual appearance of the Project Site through the development of a denser set of buildings, in some cases with greater heights, than currently exist on the campus. However, the Project would continue the existing commercial (e.g., hospital/inpatient, outpatient, medical clinic/R&D, surface and structured parking) use of the campus which has been in such use for several decades rather than introduce a new use to the Project Site Furthermore, the Project Site is located within a fully urbanized setting with commercial uses to the north and east, is separated from off-site land uses by major thoroughfares, and in the west is also separated from off-site land uses by the abandoned railroad right-of-way along the west side of Normandie Avenue. Also, the Project would provide landscaping and street trees along the Project Site street frontages where in some areas such landscaping and trees are lacking, and Project buildings would be designed in compliance with unifying design guidelines which would improve the appearance of on-site development. In addition, the area as a whole, which is located within the 110 Freeway/Carson Station TOD, is undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. For all these reasons, while the densification of land uses at the Project Site would be noticeable from adjacent off-site land uses, including from the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Project Site and the residential neighborhood to the north), the Project would not result in significant land use incompatibilities with adjacent off-site land uses.
Policy LU 6.7: Protect rural communities from the encroachment of incompatible development.	**Consistent:** The Project would include infill development within a fully urbanized setting. Therefore, rural communities would be unaffected, and in fact the Project would contribute to a reduction in the potential for urban sprawl by providing health care services and new jobs in proximity to existing housing.
Policy LU 6.8: Encourage land uses and developments that are compatible with the natural environment and landscape.	**Consistent:** The Project would include infill development on an already fully developed site and within a fully urbanized setting, and would not include development adjacent to or within the proximity of natural areas or natural features. Furthermore, the Project would implement a Landscape Master Plan that would provide landscaped buffers along the campus perimeter, street trees, and landscaped promenades, trails, courtyards and plazas on the Project Site where little such landscape features currently exist.
Policy LU 6.9: Encourage development in rural areas that is	**Consistent:** The Project would include infill development within a fully urbanized setting, on a fully developed site already served by public services and

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
compatible with rural community character, preserves open space, conserves agricultural land, and promotes efficiencies in services and infrastructure.	infrastructure. Hence, the Project would not displace open space or agricultural land, and would not result in efficiencies in services and infrastructure. Concerning encouraging development in rural areas that is compatible with rural community character, see the analysis of Project consistency with Policy LU 6.8 above.
Goal LU 9: Well-designed and healthy places that support a diversity of built environments.	
Policy LU 9.2: Design development adjacent to natural features in a sensitive manner to complement the natural environment.	**Consistent:** See the analysis of Project consistency with Policy LU 6.8 above.
Policy LU 9.3: Consider the built environment of the surrounding area in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color, detailing or ornament.	**Consistent:** The built environment surrounding the Project Site is currently urbanized and located within the 110 Freeway/Carson Station TOD. Densification of the area is evident in recently constructed retail malls and multi-family housing in proximity to the Project Site. Because the Project Site is already developed and contains a high-rise element (existing 8-story hospital tower), and is located within an existing urbanized area, it would be consistent with the character of the existing on-site and surrounding off-site built environment. Also, the Project Site is an approximately one-half-mile-long block, abutting three major roadways (Carson Street, and Normandie and Vermont Avenues) and is self-contained with respect to building design and interface with on-site structures. Therefore, the built environment of the Project Site is already somewhat distinct from that of the surrounding area. Finally, the Project would include proposed Design Guidelines which require that individual buildings be compatible with each other in relation to massing, materials, design, building orientation, detailing, and other features, thereby providing a more cohesive architectural style that reflect appropriate features such as massing, materials, color, detailing and ornamentation..
Policy LU 9.12: Discourage gated entry subdivisions ("gated communities") to improve neighborhood access and circulation, improve emergency access, and encourage social cohesion.	**Consistent.** The Project would not contain residential use, either subdivision or a gated community. As indicated in Figure 2-8, Vehicular Circulation Plan, in Chapter 2.0, *Project Description*, of this Draft EIR, the Project's vehicular circulation plan would: separate public and staff site access, internal circulation and parking to better pare patients, visitors and staff with their on-site destinations; provide a comprehensive signage and wayfinding plan to aid patients, visitors and staff in navigating the Campus; include a new signalized public entrance on Carson Street and a new unsignalized staff entrance on Vermont Avenue; construct sidewalk connections to the public transit system and sidewalks along primary internal routes to aid in pedestrian circulation; and providing internal emergency access lanes per LACC standards. These measures would have the effect of improving vehicular, pedestrian and emergency access to and within the Project Site.
Goal LU 10: Development that utilize sustainable design techniques.	
Policy LU 10.1: Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies.	**Consistent.** The Project would constitute infill development along established transit corridors that would allow for nearby residents to find jobs, health care services, and goods and services in their immediate vicinity, thereby reducing vehicle miles travelled (VMT) and fuel consumption. The Project would also employ sustainable energy practices, including being designed and constructed to achieve LEED Silver-level certification or its equivalent, and incorporating green building practices in building design and infrastructure systems (including

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
	stormwater/wastewater treatment). Also, while the Project does not specifically propose the orientation of buildings to maximize passive and active solar design techniques, in order to achieve the proposed LEED Silver-level certification, the Project would be required to incorporate energy-saving heating and cooling which could include passive solar techniques and/.or active solar technologies.
Policy LU 10.2: Support the design of developments that provide substantial tree canopy cover, and utilize light colored paving materials and reflective roofing materials to reduce the urban heat island effect.	**Consistent.** The Project does not specifically propose the provision of light colored paving materials and reflective roofing materials to reduce the urban heat island effect. However, in order to achieve the proposed LEED Silver-level certification, the Project would be required to incorporate heat island reduction measures which could potentially include the use of light colored paving and/or reflective roofing materials. Furthermore, as indicated in Figure 2-10, Landscape Master Plan, in Chapter 2.0, *Project Description*, of this Draft EIR, unlike existing on-site conditions, the Project would include extensive canopy tree plantings along all four Project Site Street frontages, along internal streets, and within proposed on-site plazas and open space areas, which would reduce the urban heat island effect.
Policy LU 10.3: Encourage development to optimize the solar orientation of buildings to maximize passive and active solar design techniques.	**Consistent.** The Project does not specifically propose the orientation of buildings to maximize passive and active solar design techniques. However, in order to achieve the proposed LEED Silver-level certification, the Project would be required to incorporate energy-saving heating and cooling, which could include building orientation to maximize solar lighting and heating/cooling.
Mobility Element	
Goal M 1: Street designs that incorporate the needs of all users.	
Policy M 1.1: Provide for the accommodation of all users, including pedestrians, motorists, bicyclists, equestrians, users of public transit, seniors, children, and persons with disabilities when requiring or planning for new, or retrofitting existing, roads and streets.	**Consistent.** The Project would provide frontage improvements (sidewalk enhancements, street trees, benches) along the bordering streets, and an internal vehicular and pedestrian circulation system (Figures 2-8 and 2-9 in Chapter 2.0, *Project Description*, of this Draft EIR), in accordance with LACC requirements and County urban design standards to increase vehicular, pedestrian, and bicycle circulation within the Project Site and between the Project Site and the surrounding community. Furthermore, Project driveways to and within the Project Site would be improved, public and staff vehicular access to and within the Project Site would be separated, and a new public signalized public entrance to the Project Site would be provided from Carson Street, to increase clarity and both vehicular and pedestrian access and safety. Also, bicycle parking would be provided consistent with LACC requirements, and all new buildings, internal streets and sidewalks, and parking would be ADA-compliant. Therefore, the Project would improve mobility and safety for all users.
Goal M 2: Interconnected and safe bicycle- and pedestrian-friendly streets, sidewalks, paths and trails that promote active transportation and transit use.	
Policy M 2.1: Design streets that accommodate pedestrians and bicyclists, and reduce motor vehicle accidents through a context-sensitive process that addresses the unique characteristics of urban,	**Consistent.** Please see the analysis of Project consistency with Policy M 1.1 above. Furthermore, the Master Plan would create an interconnected and safe pedestrian- and bicycle-friendly environment that integrates with the surrounding community by: including a mix of community-serving uses (e.g., hospital, outpatient facilities, ground floor retail, green areas, etc.) oriented towards a major thoroughfare (Carson Street); providing a clear, well organized,

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
suburban, and rural communities.	and signed internal pedestrian circulation system (Figure 2-9 in Chapter 2*.0, Project Description*, of this Draft EIR); providing frontage improvements along the bordering streets and internal landscaped pedestrian paths, and providing bicycle parking consistent with LACC requirements. These improvements would increase pedestrian and bicycle traffic within the hospital Campus, and between the hospital Campus, the surrounding community, and the Metro Station located 0.10 mile to the east.
Policy M 2.5: Ensure a comfortable bicycling environment.	**Consistent.** According to the Los Angeles County 2012 Bicycle Master Plan, a sub-element of the County's General Plan Transportation Element, there are no existing designated bikeways along the four streets bordering the Project Site, although a Class II bike lane is planned along Vermont Avenue and a Class III bike route is planned along 220th Street.[11] The Project would not alter the Vermont Avenue or 220th Street rights-of-way, other than to provide frontage improvements (e.g., sidewalk enhancements, street trees, benches) along these streets, and thus would not interfere with the future development of these bikeways. Furthermore, the Project would provide on-site bicycle parking consistent with LACC requirements, and would include an on-site vehicular and pedestrian circulation system (Figures 2-9 and 2-10 in Chapter 2.0, *Project Description*, of this Draft EIR) that complies with LACC requirements and County Urban Design standards and could be used by bicycle traffic. Therefore, the Project would be expected to improve the local bicycling environment.
Policy M 2.9: Encourage the planting of trees along streets and other forms of landscaping to enliven streetscapes by blending natural features with built features.	**Consistent.** The Project would implement a Landscape Master Plan (Figure 2-10 in Chapter 2.0, *Project Description*, of this Draft EIR) that includes landscaped buffers along the campus perimeter, street trees, and on-site landscaped promenades, trails, courtyards, and plazas. This includes a central garden spine to extend through the Project Site from Carson Street to 220th Street.
Conservation and Natural Resources Element	
Goal C/NR 1: Open space areas that meet the diverse needs of County of Los Angeles**.**	
Policy C/NR 1.1: Implement programs and policies that enforce the responsible stewardship and preservation of dedicated open space areas.	**Consistent.** There is no existing dedicated open space or natural areas on the Project Site, nor does the County have open space dedication requirements applicable to the proposed Project. However, the Project would provide publically-owned on-site open space in the form of landscaped areas (see Figure 2-10, Landscape Master Plan, in Chapter 2.0, *Project Description*, of this Draft EIR). This includes landscaped buffers along the campus perimeter, and on-landscape promenades, trails, courtyards, and plazas, including a central garden spine to extend through the Project Site from Carson Street to 220th Street.
Policy C/NR 1.6: Prioritize open space acquisitions for available lands that contain unique ecological features, streams, watersheds, woodlands, grasslands, and/or	**Consistent.** The Project Site is fully developed and located within a fully urbanized setting. As indicated in Section IV of the Initial Study prepared for the Project (Appendix A-1 of this Draft EIR), no streams woodlands, grasslands, natural watershed areas, or sensitive biological resources habitat occur on or immediately adjacent to the Project Site, nor does the Project Site serve as a

[11] *County of Los Angeles 2012 Bicycle Master Plan, Figure 3-4 and Table 3-33, adopted March 13, 2012. dpw.lacounty.gov/pda/bike/masterplan.cfm. Accessed by PCR December 29, 2015.*

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
offer linkages that enhance wildlife movements and genetic diversity.	wildlife movement corridor. Furthermore, the Project Site is not located within a County-designated open space area or Significant Ecological Area (SEA).[12] Therefore, the Project would not impact such features/areas or the ability of the County to acquire or prioritize the acquisition of such features/areas.
Goal C/NR 3: Permanent, sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands and SEAs**.**	
Policy C/NR 3.2: Create and administer innovative County programs incentivizing the permanent dedication of SEAs and other important biological resources as open space areas.	**Consistent.** Please see analysis of Project consistency with Policy C/NR 1.6 above.
Goal C/NR 4: Preserved and restored oak woodlands that are conserved in perpetuity with no net loss of existing woodlands.	
Policy C/NR 4.1: Conserve and sustainably manage oak woodlands.	**Consistent.** The Project Site is fully developed and is located within a fully urbanized area. As indicated in Section IV of the Initial Study prepared for the Project (Appendix A-1 of this Draft EIR), no oak woodland and no oak trees protected under the County's Oak Tree Ordinance (LACC Chapter 22.56 – Part 16) occur on the Project Site. Therefore, the Project would not interfere with the ability of the County to conserve and sustainably manage oak woodlands.
Goal C/NR 13: Protected visual and scenic resources.	
Policy C/NR 13.2: Protect ridgelines from incompatible development that diminishes their scenic value.	**Consistent.** The Project Site occurs on a valley floor rather than a ridgeline. Therefore, the Project would not affect a ridgeline or the ability of the County to project ridgelines from incompatible development that diminishes their scenic value.
Policy C/NR 13.8: Manage development in HMAs to protect their natural and scenic character and minimize risks from natural hazards, such as fire, flood, erosion, and landslides.	**Consistent.** The Project Site is not located within a County-designated Hillside Management Area (HMA).[13] Therefore, the Project would not affect the natural or scenic character of an HMA, and would not expose persons or property to HMA-related hazards.
Goal C/NR 14: Protected historic, cultural, and paleontological resources.	
Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.	**Consistent.** As indicated in Section V of the Initial Study prepared for the Project (Appendix A-1 of this Draft EIR), which is based on an Historic Resources Report prepared of the Project Site, no existing on-site buildings are individually eligible for listing in the National Register or California, nor is the Site as a whole eligible for listing in these registers as an historic district. In addition, the analysis concluded that the Project Site as a whole is not historically significant despite its association with World War II military history in Los Angeles, a less than

[12] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Figure 9.1, Open Space Resources Policy Map, and Figure 9.3, Significant Ecological Areas. Adopted October 6, 2015.*

[13] *Ibid, Figure 9.8, Hillside Management Areas.*

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
	significant impact on historic resources would occur. Further discussion of historic resources is provided in Section 6.0, Other CEQA Considerations, of this Draft EIR. Also, as indicated in Section V of the Initial Study, while it is likely that any archaeological resources, paleontological resources, and/or human remains that may have been present on Site have been disturbed or removed, previously undiscovered such materials may still exist at the property and could potentially be disturbed by Project construction activities. However, the analysis determined that, with implementation of standard archaeological and paleontological mitigation requiring the handling, analysis and ultimate disposition of any finds in accordance with California Public Resources Code requirements, Project impacts on archaeological resources, paleontological resources, and human remains would be less than significant.
Policy C/NR 14.4: Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).	**Consistent.** Please see the analysis of Project consistency with Policy C/NR 14.1 above.
Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.	**Consistent.** Please see the analysis of Project consistency with Policy C/NR 14.1 above.
Parks and Recreation Element	
Goal P/R 4: Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages.	
Policy P/R 4.4: Maintain and design multi-purpose trails in ways that minimize circulation conflicts among trail users.	**Consistent.** The Project Site is not currently bisected by any multi-use trails, nor are any multi-use trails designated on the Project Site by the County's General Plan Update. Therefore, the Project is under no obligation to provide a multi-purpose trail across the Project Site. Still, the Project would include a central garden spine extending through the Project Site from Carson Street to 220th Street that would, as indicated Figure 2-9, Pedestrian Circulation, in Chapter 2.0, *Project Description*, of this Draft EIR, include pedestrian linkages.

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
Noise Element	
Goal N 1: The reduction of excessive noise impacts.	
Policy N 1.2: Reduce exposure to noise impacts by promoting land use compatibility.	Consistent. The Project Site is already the site of an operating Medical Campus, and already generates operational noise (traffic, stationary source, and activity noise) consistent with such a campus. The Project Site is also separated from existing off-site sensitive noise receptors (e.g., residential uses) by arterial streets which are already a source of traffic noise. Therefore, as indicated in Section 4.I., *Noise*, in this Draft EIR, while the Project would intensify the existing medical commercial use of the Project Site, and result in an incremental increase in operational noise, the operational noise impacts of the Project would be less than significant with implementation of the recommended mitigation. With respect to construction noise, Project construction activities would result in significant unavoidable construction noise as indicated in Section 4.I. However, as further indicated, such noise impacts would only occur associated with construction activities in portions of the Project Site closest to existing off-site sensitive noise receptors, and would be temporary, lasting only as long as the construction activities in the subject portion of the Project Site occur.
Safety Element	
Goal S 1: An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.	
Policy S 1.1: Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.	**Consistent.** As indicated in Section VII of the Initial Study prepared for the Project (provided in Appendix A-1 of this Draft EIR), the Project Site is not located in a Seismic Hazard Zone or Alquist-Priolo Earthquake Fault Zone, and no known faults bisect the Project Site. Therefore, the Project would not be subjected to fault rupture, and no mitigation is required.
Policy S 1.3: Require developments to mitigate geotechnical hazards, such as soil instability and landslides, in Hillside Management Areas through siting and development standards.	**Consistent.** The Project Site is not located within a County-designated Hillside Management Area (HMA).[14] Therefore, the Project would not be subjected to HMA-related geotechnical hazards, and no mitigation is required.
Goal S 3: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.	
Policy S 3.1: Discourage development in VHFHSZs, particularly in areas with significant biological resources.	**Consistent.** As indicated in Section IX of the Initial Study prepared for the Project (Appendix A-1 of this Draft EIR), the Project Site is not located within a Fire Hazard Severity Zone (FHSZ). Therefore, the Project would not be subjected to wildland fires or other potential very high fire risks, and no mitigation is required.
Policy S 3.4: Reduce the risk of wildland fire hazards through the use of regulations and performance	**Consistent.** Please see analysis of Project consistency with Policy S 3.1 above.

[14] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Figure 9.8, Hillside Management Areas. Adopted October 6, 2015.*

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
standards, such as fire resistant building materials and vegetation.	
Public Services and Facilities Element	
Goal PS/F 1: A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.	
Policy PS/F 1.1: Discourage development in areas without adequate public services and facilities.	**Consistent.** The Project would represent infill development within an existing urbanized area. Furthermore, the Project Site is already fully developed with similar hospital and medical uses, and already fully served by existing public services (police, fire, schools, parks, libraries) and existing public utilities (water, wastewater, electricity, natural gas, etc.). Finally, as indicated in Sections XV and XVIII of the Initial Study prepared for the Project (provided in Appendix A-1 of this Draft EIR) and Sections 4.K., Public Services, and 4.M., Utilities and Service Systems, of this Draft EIR, adequate public services and public utilities are available to serve the Project with implementation of the recommended mitigation.
Policy PS/F 1.2: Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.	**Consistent.** Please see analysis of Project consistency with Policy PS/F 1.1 above. Furthermore, during the development review and permitting stage for each phase of Project development, the applicant would coordinate with the County of Los Angeles County Department of Public Works (LACDPW) and other applicable County departments and service/utility providers, as required by the LACC, to ensure that adequate public service and utility infrastructure is in place to serve the subject development phase.
Goal PS/F 2: Increased water conservation efforts.	
Policy PS/F 2.1: Implement water conservation measures, such as drought tolerant landscaping and restrictions on water used for landscaping.	**Consistent.** As discussed in Section 4.M.1, *Water Supply*, of this Draft EIR: (1) the Project would comply with applicable provisions of the CALGreen code, Titles 20 and 24 of the California Administrative Code, and LEED to increase water efficiency and reduce water demand through the installation of drought-tolerant landscaping, low-water consumption irrigation systems, and water efficient plumbing fixtures; and (2) adequate water supplies are available to serve the Project.
Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution.	
Policy PS/F 5.5: Reduce the County's waste stream by minimizing waste generation and enhancing diversion.	**Consistent.** As discussed in Section 4.M.3, *Solid Waste*, of this Draft EIR: (1) the Project would comply with applicable provisions of the CALGreen Code, LEED, and LACC with respect to solid waste reduction, diversion and recycling; (2) adequate landfill capacity is available to serve the Project; and (3) the Project would not impede the ability of the County to meet its AB 939 waste diversion requirements.
Policy PS/F 5.6: Encourage the use and procurement of recyclable and biodegradable materials.	**Consistent.** As discussed in Section 4.M.3, Solid Waste, of this Draft EIR, the Project would use recyclable and biodegradable materials where appropriate and economically feasible. Materials may include, but are not limited to, gypsum board, insulation, steel, ceramic tile, countertops, trim, and carpet/carpet padding.
Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by	**Consistent.** As discussed in Section 4.M.3, Solid Waste, of this Draft EIR, the Project would comply with applicable provisions of the CALGreen code to reduce resource consumption, including recycling, reusing, and/or diverting 70 percent

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
public and private projects.	of non-hazardous construction waste.
Policy PS/F 5.9: Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.	**Consistent.** As discussed in Section 4.M.3, Solid Waste, of this Draft EIR, the Project would comply with applicable provisions of the CALGreen code to reduce resource consumption by ensuring that trash and recyclable containers are provided to future residents, in accordance with County requirements. Furthermore, the Project would include a Waste Management Center in the New Hospital Tower where hazardous and non-hazardous solid waste would be separated, and where the non-hazardous solid waste would be sorted for recycling.
Goal PS/F 7: A County with adequate educational facilities.	
Policy PS/F 7.2: Proactively work with school facilities and education providers to coordinate land use and facilities planning.	**Consistent.** As indicated in Section 4.K.4, *Schools*, of this Draft EIR, the Project would represent infill development within an existing urbanized area, is already fully developed with similar hospital and medical uses, and already generates a demand for Los Angeles Unified School District (LAUSD) school facilities and services, such that the densification of uses at the Project Site under the Project would result in a small incremental increase in demand for. As further indicated in Section 4.K.4, with the payment of the applicable prevailing LAUSD school impact fees, adequate school facilities would be available to serve the Project.
Goal PS/F 8: A comprehensive public library system.	
Policy PS/F 8.2: Support library mitigation fees that adequately address the impacts of new development.	**Consistent.** As indicated in Section 4.K.5, *Libraries*, of this Draft EIR, the Project would represent infill development within an existing urbanized area, is already fully developed with similar hospital and medical uses, and already generates a demand for library facilities and services from the County of Los Angeles Public Library (LACPL), such that the densification of uses at the Project Site under the Project would result in a small incremental increase in demand for libraries. As further indicated in Section 4.K.5, with the payment of the applicable prevailing LACPL library impact mitigation fee, adequate library facilities would be available to serve the Project.
Economic Development Element	
Goal ED 1: An economic base and fiscal structures that attract and retain valuable industries and businesses	**Consistent.** The Project would enable Harbor-UCLA to continue to operate a hospital at the Project Site, which would otherwise require closure in response to seismic safety regulations adopted in California after the Northridge Earthquake, and would also allow the hospital and other existing medical uses at the Project Site to expand operations. Thus, the Project would help attract and retain a valuable local-serving industry and associated local jobs, increase local job opportunities, and foster economic development and growth, in the West Carson community and greater South Bay Planning Area.
Goal ED 2: Land use practices and regulations that foster economic development and growth.	**Consistent.** Please see the analysis of Project consistency with Goal ED 1.

Source: PCR Services Corporation, 2016.

(e) County of Los Angeles - General Plan Land Use Designations

(i) Permitted Land Uses

As indicated in Figure 4.H-2, the Project Site is designated "P" (Public and Semi-Public) by the County's General Plan Update. The "P" GPLU designation permits a broad range of public and semi-public facilities and community-serving uses, including public buildings and campuses, schools, hospitals, cemeteries, fairgrounds, airports and other major transportation facilities, landfills, solid and liquid waste disposal sites, multiple use storm water treatment facilities, and major. Also, in the event that the public or semi-public use of mapped facilities is terminated, alternative uses that are compatible with the surrounding development, in keeping with community character, are permitted.[15]

As indicated in Table 2-1, Harbor-UCLA Master Plan Project Existing and Proposed Land Use Summary, and in Figure 2-6, Harbor-UCLA Medical Campus Master Plan Site Plan, in Chapter 2.0, Project Description, of this Draft EIR, the Project would include a mix of uses, including: hospital/in-patient, medical office/outpatient, administrative office, retail, library, day care, biomedical R&D, warehouse/storage, and utility/infrastructure uses (including surface parking lots and parking structures). These use types, which already occur on the Project Site, are permitted under the "P" GPLU designation. Therefore, the Project would be consistent with the GPLU designation of the Project Site.

(ii) Floor Area Ratio

The maximum FAR permitted under the "P" GPLU designation is 3:1.[16] Because the Campus-wide FAR under the Project would be 0.78:1, the Project FAR would be well within the maximum FAR permitted under the "P" GPLU designation of the Project Site.

(f) County of Los Angeles - Planning and Zoning Code (LACC Title 22)

(i) Permitted Land Uses

As indicated in Figure 4.H-3, the Project Site is zoned C-3 (Unlimited Commercial) by the LACC. The C-3 zone permits a broad range of commercial uses, including but not limited to offices, universities/colleges, medical clinics, medical research/laboratories, retail stores, and utility/infrastructure uses (LACC §22.28.180), as well as hospitals and helistops.

As discussed above, the Project would include a mix of uses, including: hospital/in-patient, medical office/outpatient, administrative office, retail, library, day care, biomedical R&D, warehouse/storage, and utility/infrastructure uses (including surface parking lots and parking structures). These use types are either permitted outright by the C-3 zoning or would are already permitted. Therefore, the Project would be consistent with the zoning of the Project Site.

[15] *Ibid, Table 6.2*

[16] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

(ii) Floor Area Ratio

The maximum FAR in the C-3 zone is 13:1 (LACC §22.52.050). Because the Campus-wide FAR under the Project would be 0.78:1, the Project FAR would be well within the maximum FAR permitted under the C-3 zoning of the Project Site.

(iii) Building Height

The maximum building height in the C-3 zone is up to 13 times the buildable area of the Medical Center Campus (per LACC §22.52.050). In other words, there is no height restriction as long as the development intensity on the site does not exceed the limits of the C-3 zone. Because the Campus-wide FAR under the Project would be only 0.78:1, Project building heights (which would reach a maximum of eight floors) would be well within the maximum permitted under the C-3 Zoning of the Project Site.

(2) Land Use Compatibility

Threshold LU-2: Would the Project be incompatible with existing adjacent off-site land uses?

Impact Statement LU-2: *The Project would be compatible with existing adjacent off-site land uses because the nature (type, scale, height, location) of the existing on-site land uses would not substantially change under the Project, nor would the character of the area as perceived by the existing adjacent off-site land uses. Therefore, land use compatibility impacts would be less than significant.*

The Project would alter the existing visual appearance of the Project Site through the development of a denser set of buildings, in some cases with greater heights, than currently exist on the campus. However, the Project would continue the existing commercial (e.g., hospital/inpatient, outpatient, medical clinic/R&D, surface and structured parking) use of the Campus which has been in such use for several decades rather than introduce new use types to the Project Site. Furthermore, as indicated in Figure 4.H-1, the Project Site is located within a fully urbanized setting with commercial uses to the north and east and primarily residential uses to the south and west, is separated from off-site land uses by major thoroughfares, and in the west is also separated from off-site land uses by the abandoned railroad right-of-way along the west side of Normandie Avenue. Also, the Project would provide landscaping and street trees along the Project Site street frontages where in some areas such landscaping and trees are lacking, and Project buildings would be designed in compliance with unifying design guidelines which would improve the appearance of on-site development therefore improving the visual appearance of the Project Site. In addition, the area as a whole, which is located within the 110 Freeway/Carson Station TOD, is undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. For all these reasons, while the densification of land uses at the Project Site would be noticeable from adjacent off-site land uses, including from the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Project Site and the residential neighborhood to the north), the Project would result in less than significant land use incompatibilities with adjacent off-site land uses.

e. Cumulative Impacts

Chapter 3.0, *General Description of Environmental Setting*, provides a list of projects that are planned or are under construction in the Project area. These projects are summarized in **Table 3.1**, *Related Projects List*, and mapped on **Figure 3-1**, *Related Projects Map*. As shown, 17 related projects occur within an

approximately two-mile radius of the Project Site, including four in the unincorporated West Carson Community, ten in the City of Carson, and three projects in the City of Los Angeles. These related projects combined include approximately 1,200 residential units and 158,000 square feet of non-residential land uses (e.g., retail, office, medical, and car wash).

As discussed in Subsection 4.H.2, *Environmental Setting*, the 72-acre Harbor-UCLA Campus is located in the unincorporated Community of West Carson on a flat urbanized site bordered by four arterial streets and surrounded on all sides by urban development. The City of Los Angeles lies immediately west of the Project Site, across Normandie Avenue, while the City of Carson lies one block east of the Project Site, across the Harbor Freeway located approximately 0.1 miles to the east. As discussed in Subsection 4.H.3.d, *Environmental Impacts*, the Project would represent infill development on an already urbanized site that would constitute a densification and slight increase in the height of the existing on-site medical uses, but that: (1) would be consistent with adopted regional and local land use plans, including the existing County GPLU designation and zoning of the Project Site; and (2) would result in less than significant land use incompatibilities with the existing adjacent off-site land uses.

Related projects are subject to CEQA review and review by County regulatory agencies. Most notably, related projects seeking increases in permitted densities and buildings seeking higher densities than those permitted by the underlying zoning per the LACC are subject to review by the Department of Regional Planning and other County departments for consistency with plan provisions. Projects can only be approved if found to be consistent with adopted land use plans and zoning. Given this, and given that the Project would be consistent with the adopted land use plans and zoning, cumulative impacts regarding consistency with the land use regulatory framework would be less than significant.

With respect to cumulative land use incompatibilities, such incompatibilities may occur when one or more related projects are close enough to a proposed project for the occupants of other nearby land uses to be able to experience substantive land use (height, scale, character), aesthetics (views, light, shading), air, and/or noise impacts from both one or more of the related projects AND the proposed project. In the current case, none of the related projects are close enough to the Project Site to add substantively to the Project's less than significant land use incompatibilities (the closest related project is Related Project #2, a 19-unit condominium project located at 1028 W 223rd Street, approximately ¼-mile (1,250 feet) south of the Project Site). Therefore, cumulative impacts regarding land use incompatibilities would be less than significant.

For evaluation of the cumulative land use impacts of the Project pertaining to air quality, see Sections 4.B., *Air Quality*, and 4.E., *Greenhouse Gas Emissions*, of this Draft EIR. For evaluation of the cumulative land use impacts of the Project pertaining to population/housing and transportation/parking, see Sections 4.J., *Population and Housing*, and 4.L., *Transportation and Traffic*, respectively, of this Draft EIR.

4. MITIGATION MEASURES

The land use impacts of the Project would be less than significant. Therefore, no mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The land use impacts of the Project would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
I. NOISE

1. INTRODUCTION

The section analyzes the potential noise and vibration impacts that would result from the Project. The analysis describes the existing noise environment within the Project area, estimates future noise and vibration levels at surrounding land uses resulting from construction and operation of the Project, identifies the potential for significant impacts, and provides mitigation measures to address significant impacts. In addition, an evaluation of the potential cumulative noise impacts of the Project and related projects is also provided. Supporting data and analysis for the analysis presented in this section, including a Helistop Relocation Noise Impact Study (AES, 2016), are provided in Appendix H of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Noise and Vibration Basics

(1) Noise

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of sound is subjective and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness." Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human, frequency-dependent response, the A-weighted filter system is used to adjust measured sound levels. The A-weighted sound level is expressed in "dBA." This scale de-emphasizes low frequencies to which human hearing is less sensitive and focuses on mid- to high-range frequencies. The range of human hearing is approximately 3 to 140 dBA, with 110 dBA considered intolerable or painful to the human ear. A comparison of types of commonly experienced environmental noise is provided in **Figure 4.I-1,** *Common Noise Levels*.

Although the A-weighted scale accounts for the range of people's response, and therefore, is commonly used to quantify individual event or general community sound levels, the degree of annoyance or other response effects also depends on several other perceptibility factors. These factors include:

- Ambient (background) sound level
- Magnitude of sound event with respect to the background noise level
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

People judge the relative magnitude of sound sensation by subjective terms such as "loudness" or "noisiness." That is, in a non-controlled environment a change in sound level of 3 dB is considered "just perceptible," a

change in sound level of 5 dB is considered "clearly noticeable, and a change in 10 dB is recognized as "twice as loud".[1]

In an outdoor environment, sound levels attenuate (i.e., diminish) with distance. Such attenuation is called "distance loss" or "geometric spreading" and is based on the source configuration, point source or line source. For a point source, the rate of sound attenuation is, usually, 6 dB per doubling of distance from the noise source. For example, a sound level of 50 dBA at a distance of 25 feet from the noise source would attenuate to 44 dBA at a distance of 50 feet. For a line source, such as a constant flow of traffic on a roadway, the rate of sound attenuation is 3 dB per doubling of distance.[2] In addition, structures (e.g., buildings and solid walls) and natural topography (e.g., hills) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., line-of-sight not fully blocked), some barrier insertion loss would still occur, however to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall reflects noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source and receiver) to an upper range of 20 dBA with a more substantial barrier.[3]

Community noise levels usually change continuously during the day. The equivalent sound level (L_{eq}) is normally used to describe community noise. The L_{eq} is the equivalent steady-state A-weighted sound level that would contain the same acoustical energy as the time-varying A-weighted sound level during the same time interval. For intermittent noise sources, the maximum noise level (L_{max}) is normally used to represent the maximum noise level measured during the measurement. Maximum and minimum noise levels, as compared to the L_{eq}, are a function of the characteristics of the noise source. As an example, sources such as generators have maximum and minimum noise levels that are similar to L_{eq} since noise levels for steady-state noise sources do not substantially fluctuate. However, as another example, vehicular noise levels along local roadways result in substantially different minimum and maximum noise levels when compared to the L_{eq} since noise levels fluctuate during pass-by events. The County of Los Angeles Noise Ordinance uses the L_{eq} for evaluation of noise violation.

To assess noise levels over a given 24-hour time period, the Community Noise Equivalent Level (CNEL) descriptor is used in land use planning. CNEL is the time average of all A-weighted sound levels for a 24-hour period with a 10 dBA adjustment (upward) added to the sound levels which occur in the night (10:00 P.M. to 7:00 A.M.) and a 5 dBA adjustment (upward) added to the sound levels which occur in the evening (7:00 P.M. to 10:00 P.M.). These penalties attempt to account for increased human sensitivity to noise during the quieter nighttime periods, particularly where sleep is the most probable activity. CNEL has been adopted by the State of California to define the community noise environment for development of a community noise element of a General Plan and is also used by County for land use planning in the County's Noise Element of the General Plan.[4]

1 *Engineering Noise Control, Bies & Hansen, 1988.*

2 *Caltrans, Technical Noise Supplement (TeNS), 2013.*

3 *Ibid.*

4 *State of California, General Plan Guidelines, 2002.*

Noise Level (dBA)	Common Indoor Noise Levels	Common Outdoor Noise Levels
110	Rock Band	
100	Inside Subway Train	Jet Flyover @ 1,000 feet Gas Lawn Mower @ 3 feet
90	Food Blender @ 3 feet	Diesel Truck @ 50 feet Noisy Urban Daytime
80	Garbage Disposal @ 3 feet Shouting @ 3 feet	
70	Vacuum Cleaner @ 10 feet	Gas Lawn Mower @ 100 feet Commercial Area
60	Normal Speech @ 3 feet Large	Heavy Traffic @ 300 feet
50	Dishwasher next room	Quiet Urban Daytime
40	Small Theater/Conference Room (background)	Quiet Urban Nightime Quiet Suburban Nightime
30	Library Bedroom at Night	
20	Concert Hall (background) Broadcast & Recording Studio	Quiet Rural Nightime
10		
0	Threshold of Hearing	

PCR

Common Noise Levels

Harbor-UCLA Medical Center Master Plan

Source: Caltrans Noise Manual, California Department of Transportation, 1980.

FIGURE **4.I-1**

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(2) Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The response of humans, buildings, and equipment to vibration is more accurately described using velocity or acceleration.[5] Vibration amplitudes are usually described as either peak, as in peak particle velocity (PPV). The peak level represents the maximum instantaneous peak of the vibration signal. In addition, vibrations can be measured in the vertical, horizontal longitudinal, or horizontal transverse directions. Ground vibrations are most often greatest in the vertical direction.[6] Therefore, the analysis of ground-borne vibration associated with the Project is addressed in the vertical direction. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 50 feet or less) from the source.

b. Existing Conditions

(1) Noise-Sensitive Receptor Locations

Some land uses are considered more sensitive to noise than others due to the amount of noise exposure and the types of activities typically involved at the receptor location. The *County of Los Angeles' 2006 CEQA Thresholds Guide* states that residences, schools, motels and hotels, libraries, religious institutions, hospitals, nursing homes, and parks are generally more sensitive to noise than commercial and industrial land uses. Existing noise sensitive uses within 500 feet of the Medical Center Campus include the following:

- The Harbor-UCLA Medical Center Employee Children's Center (Child Care Center) and a multi-family residential apartment complex, Harbor Cove Villa, are located on Carson Street just west of the intersection with Vermont Avenue.
- The area north of Carson Street is a predominantly single-family residential neighborhood.
- Vermont Avenue, the southern half of the block facing the Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and mobile home parks, Starlite Trailer Park and Rainbow Mobile Home Park.
- Single-Family and multi-family residential neighborhoods border the Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles.
- Halldale Avenue Elementary School is located at the southwest corner of Normandie Avenue and 216th Street. White Middle School is located at the southeast corner of Figueroa Street and West 220th Street.

(2) Ambient Noise Levels

The predominant noise source surrounding the Medical Center Campus is roadway noise from Carson Street to the north, Vermont Avenue to the east, and Normandie Avenue to the west. Secondary noise sources include general residential and commercial-related activities, such as loading dock/delivery truck activities, trash compaction, and refuse service activities.

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[5] *Federal Transit Authority, Transit Noise and Vibration Impact Assessment, Final Report, page 7-3, May 2006.*

[6] *California Department of Transportation, Transportation Related Earthborne Vibrations, page 4, February 2002.*

Measured Noise Levels – Existing Conditions

Ambient noise measurements were made at six locations, representing the nearby noise-sensitive land uses in the vicinity of the Medical Center Campus as indicated on **Figure 4.I-2,** *Noise Measurement Locations*. Long-term measurements were conducted at locations R1 and R5 for 2 days and short-term noise measurements were made at locations R2 through R4 and R6. Ambient sound measurements were conducted from Wednesday, October 29, through Friday, October 31, 2014 to characterize the existing noise environment during weekdays in the Project vicinity.

The ambient noise measurements were conducted using the Larson-Davis 820 Precision Integrated SLM. The Larson-Davis 820 SLM is a Type 1 standard instrument as defined in the American National Standard Institute (ANSI) S1.4. All instruments were calibrated and operated according to the applicable manufacturer specification. The microphone was placed at a height of 5 feet above the local grade, at the following locations as shown in Figure 4.I-2:

- Measurement Location R1: This measurement location represents the existing noise environment of the Medical Center Campus site along Central Drive. The noise measuring device (sound level meter) was placed approximately 200 feet north from the northwest corner of 220th Street and Central Drive.

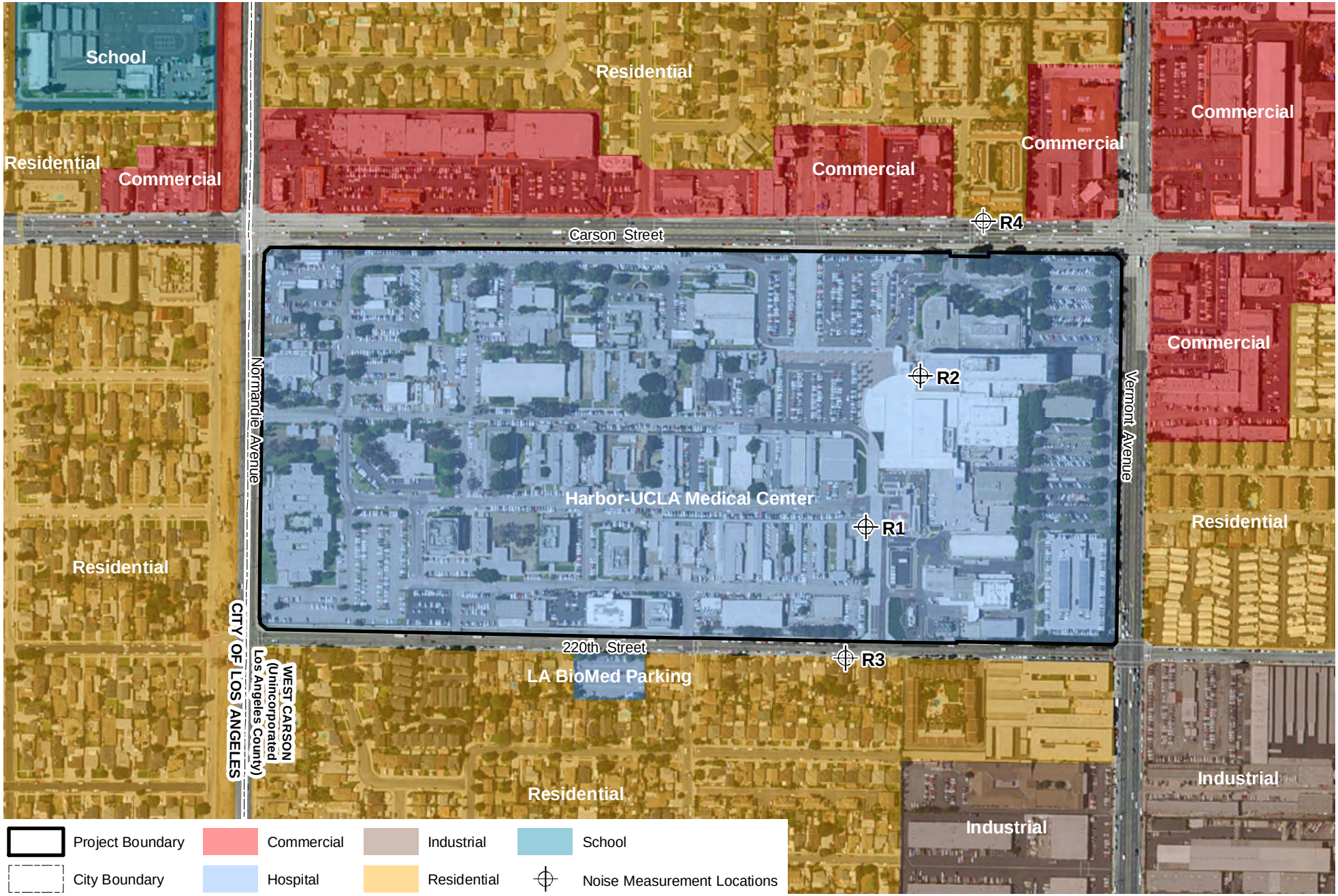
- Measurement Location R2: This measurement location represents the existing noise environment of the Medical Center Campus. The sound level meter was placed on the southwestern corner of the Existing Hospital tower.

- Measurement Location R3: This measurement location represents the existing noise environment of the Child Care Center and single and multi-family residential uses along West 220th Street, south of the Medical Center Campus. The sound level meter was placed along West 220th Street approximately 150 feet east from the northeastern corner of 220th Street and Central Drive.

- Measurement Location R4: This measurement location represents the existing noise environment of the multi-family residential uses along Carson Street. The sound level meter was placed along Carson Street approximately 300 feet west from the northwestern corner of Carson Street and Vermont Avenue.

- Measurement Location R5: This measurement location represents the existing noise environment of the single-family residential and mobile home uses along Vermont Avenue. The sound level meter was placed along Vermont Avenue approximately 250 feet north from the northwest corner of Vermont Avenue and 220th Street.

- Measurement Location R6: This measurement location represents the existing noise environment of the single-family residential uses along Normandie Avenue, north of 220th Street and Halldale Avenue Elementary School located at southwest corner of Normandie Avenue and 216th Street. The sound level meter was placed along Normandie Avenue approximately 350 feet north from the northwestern corner of Normandie Avenue and 220th Street.



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Noise Measurement Locations

Harbor-UCLA Medical Center Master Plan

Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2014.

FIGURE

4.I-2

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A summary of noise measurement data is provided in **Table 4.I-1,** *Summary of Ambient Noise Measurements*. As shown in Table 4.I-1, the existing ambient daytime and nighttime noise levels at all of the noise-sensitive residential receptors measured already exceed the County's Exterior Noise Standard for residential areas of 50 dBA during the daytime and 45 dBA during the nighttime. The ambient noise levels in the immediate Project vicinity are representative of a noisy urban area.

Table 4.I-1

Summary of Ambient Noise Measurements

Location, Duration, Existing Land Uses and, Date of Measurements	Measured Ambient Noise Levels,[a] (dBA) Daytime (7 A.M. to 10 P.M.) Hourly L_{eq}	Nighttime (10 P.M. to 7 A.M.) Hourly L_{eq}
R1		
10/29/14 (partial 8 hours)/ Wednesday	56 – 58	55 – 56
10/30/14 (full 24 hours)/ Thursday	56 – 67	51 – 57
10/31/14 (partial 8 hours)/ Friday	58 – 67	52 – 57
R2		
10/29/14 12 P.M. to 1 P.M./ Wednesday	56	N/A
R3		
10/29/14 11 A.M. to 12 P.M./ Wednesday	66	N/A
R4		
10/29/14 10 A.M. to 11 A.M./ Wednesday	69	N/A
R5		
10/29/14 (partial 8 hours)/ Wednesday	65 – 73	61 – 65
10/30/14 (full 24 hours)/ Thursday	64 – 73	58 – 69
10/31/14 (partial 8 hours)/ Friday	67	58 – 71
R6		
10/29/14 11 A.M. to 12 P.M./ Wednesday	67	N/A

[a] *Detailed measured noise data, including hourly L_{eq} levels, are included in Appendix H of this Draft EIR.*

Source: ESA PCR, 2016.

Measured Noise Levels – Existing Helicopter Noise

In addition, ambient noise measurements were conducted at seven off-site noise sensitive (residential and school uses) receptors in the vicinity of the Project site and the proposed helicopter flight paths, to quantify the existing noise environment, which are provided in the Helistop Relocation Noise Impact Study (AES 2016), attached as Appendix H of this EIR. **Figure 4.I-3**, *Ambient Noise Measurement Locations – Helicopter Operations,* (Figure 2 of the Study) shows the noise measurement locations in relation to the existing Helistop. At each of the measurement locations, two short-term (15-minute) noise readings were made, one during daytime period and one during nighttime period. The ambient noise measurements were conducted on March 10 and May 25, 2016, between the hours of 11 a.m. and 2 p.m. (daytime period) and 10 p.m. and 12 a.m. (nighttime period). Noise measurements were conducted using the Quest 2900 Integrated Sound Level Meter (SLM). The Quest 2900 SLM is a Type 2 standard instrument as defined in the American National Standard Institute (ANSI) S1.4; SLMs were calibrated and operated according to the manufacturer's written specifications. The SLM microphone was placed five feet above the local grade during measurements.

Table 4.I-2, *Measured Ambient Noise Levels,* presents the measured ambient noise levels in the vicinity and within the Project site.

Table 4.I-2

Measured Ambient Noise Levels

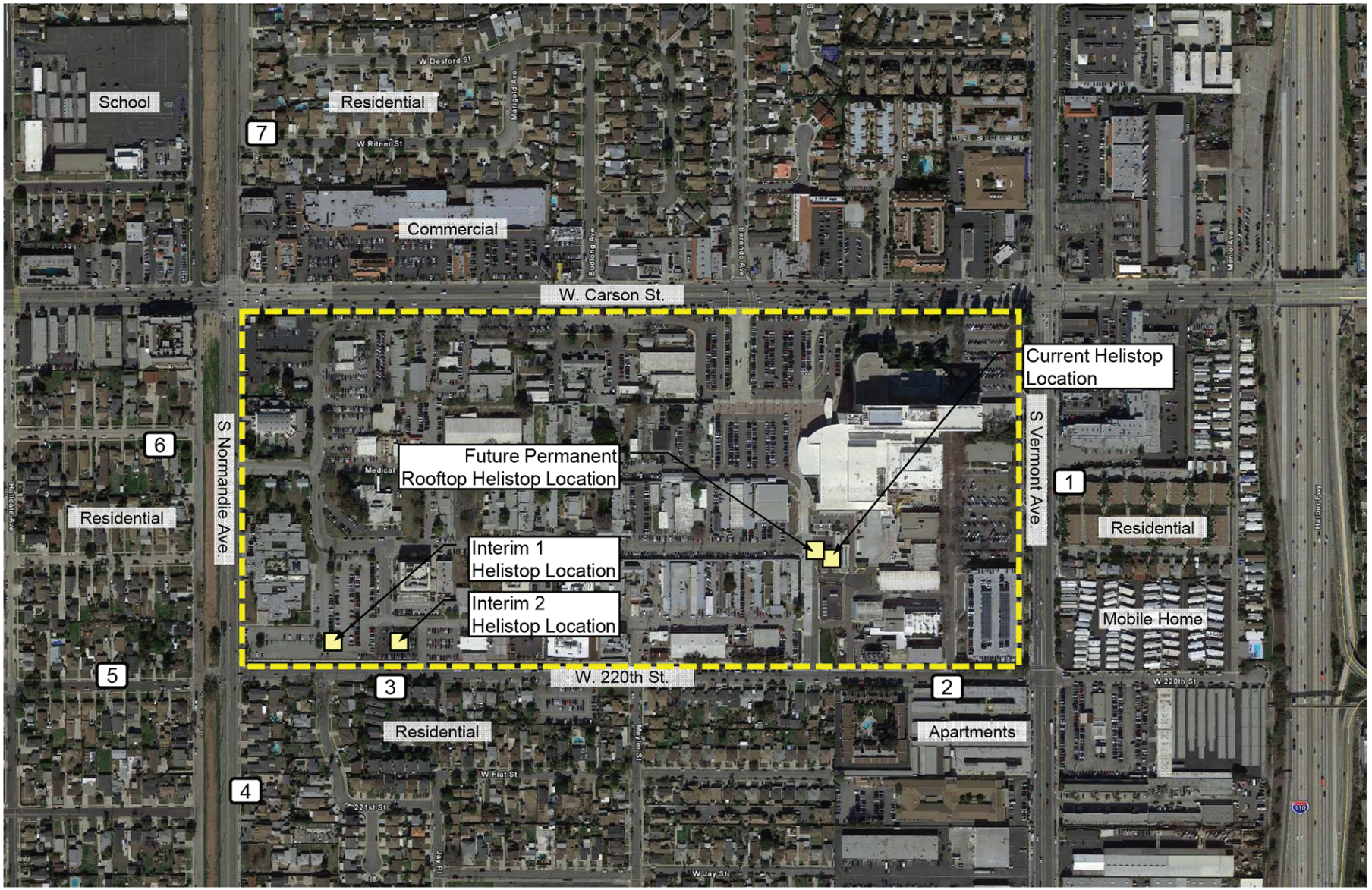
Location	Nearby Noise Sensitive Land Uses	Measured Noise Levels,[a] L_{eq} (dBA)		CNEL,[b] (dBA)
		Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	
R1: Multi-family residential use at the northeast corner of Vermont Avenue and 219th Street	Residential	68.3	64.9	70.5
R2: Multi-family residential use on 220th Street, approximately 200 feet west of Vermont Avenue	Residential	66.2	57.2	65.6
R3: Single-family residential use on 220th Street, approximately 230 feet east of Mariposa Avenue	Residential	63.3	58.0	64.3
R4: Single-family residential use on east side of Normandie Avenue, approximately 150 feet south of 220th Street	Residential	70.5	63.5	70.7
R5: Single-family residential use on north side of 220th Street, approximately 230 feet west of Normandie Avenue	Residential	51.4	47.3	53.1
R6: Single-family residential use on south side of 218th Street, approximately 90 feet west of Normandie Avenue	Residential	57.0	48.1	56.4
R7: Single-family residential use on east side of Normandie Avenue, just north of Ritner Street. This measurement location also represents the Halldale Elementary School located on the west side of Normandie Avenue	Residential/School	64.8	56.9	64.4

[a] *Detailed measured noise data, including hourly L_{eq} levels, are included in Appendix A of the Noise Study, provided in Appendix H of this Draft EIR.*
[b] *Estimated based on the short-term measurements following the FTA guidelines.*

Source: Acoustical Engineering Services, Inc., 2016.

Detailed noise measurement data, including time of measurements, field notes, and approximate locations are provided in an appendix to the Helistop Relocation Noise Impact Study, which is provided in Appendix H of this Draft EIR. Based on field observation and measured sound data, the current ambient noise environment in the vicinity of the Project Site is controlled primarily by vehicular traffic on nearby local roadways, and to a lesser extent by occasional aircraft flyovers, and other typical urban noise.

In addition to the ambient noise measurements, noise levels associated with the existing Helistop operations were calculated using information provided by the hospital's helicopter landing logs. Existing helicopter operation related noise contours were calculated using the FAA Integrated Noise Model (INM) Version 7.0d. The INM input information include: three dimensional flight tracks for departure and approach, helicopter flight



Ambient Noise Measurement Locations – Helicopter Operations

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-3

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procedures, number and type of helicopters, and daily operations (number of flights by hours). INM calculates helicopter operations-related CNEL, L_{max} and sound exposure level (SEL) at a particular receptor location. Detailed information for the helistop operations including: helicopter operations (i.e., numbers and types of helicopters), helicopter flight tracks, and helicopter flight procedures (i.e., speed, elevation, and distance) are defined in the Helistop Relocation Noise Impact Study, provided in Appendix H of this Draft EIR.

The existing Helistop is located on the roof level of a single-story structure, approximately 15 feet above the local grade elevation at 43 feet above mean sea level (MSL), within the HUCLAMC campus. There are four flight tracks/paths (under the current condition) that the helicopter would utilized for approach (to the hospital) and depart (from the hospital), as shown on **Figure 4.I-4**, *Helicopter Operations CNEL Noise Contour – Existing Helistop Location*. As indicated, two flight paths generally follow west (from the Helistop) and turn north and south follow Normandie Avenue and two flight paths to the northeast and southeast. The noise analysis assumed even distribution for helicopter operations for the four flight paths (i.e., one-fourth for each flight path), because the need for an air ambulance can arise from any direction.

Figure 4.I-4 shows the CNEL noise contours generated by the helicopter operations at the existing Helistop. As shown on Figure 4.I-4, the highest CNEL noise contour is CNEL 65 dBA, which lies within the hospital campus.

Table 4.I-3, *Summary of Helistop Noise Analysis – Existing Helistop Conditions,* presents the predicted helicopter CNEL levels at the Project receptor locations based on the existing helicopter operations.

Table 4.I-3

Summary of Helistop Noise Analysis – Existing Helistop Conditions

Location	Land Use Descriptions	Diagonal Distance from Helistop,[a] Feet	Predicted Existing Helicopter Noise Levels,[b] CNEL (dBA) "A"	Measured Ambient Noise Levels without Helicopter (from Table 3) Operations,[c] CNEL (dBA) "B"	Ambient Noise Levels + Helicopster Noise Levels,[d] CNEL (dBA) "C=A+B"
R1	Residential	800	47.6	70.5	70.5
R2	Residential	570	50.0	65.6	65.7
R3	Residential	1480	41.3	64.3	64.3
R4	Residential	2100	38.0	70.7	70.7
R5	Residential	2380	35.8	53.1	53.2
R6	Residential	2230	35.4	56.4	56.4
R7	Residential/ School[e]	2380	33.5	64.4	64.6

[a] *Estimated diagonal distances using Google Earth Map. Distances are estimated from the center of the existing Helistop to the sidewalk adjoining the receptor locations.*

[b] *Due to helicopter operations only.*

[c] *Measured ambient noise levels without helicopter operations.*

[d] *Calculation Methodologies are provided in Appendix C of the Noise Impact Study, which is provided in Appendix H of this Draft EIR.*

[e] *Halldale Elementary School located on the west side of Normandie Avenue and north of 216th Street.*

Source: Acoustical Engineering Services, Inc., 2016.

As indicated in Table 4.I-3, the predicted helicopter CNEL levels are significantly lower than that of the existing measured ambient noise levels (non-helicopter noise). Also, included in Table 4.I-3 (last column) are the existing ambient noise levels plus the estimated noise levels from the helicopter operations. The results show that the existing helicopter CNEL levels has no impact on the current ambient sound environment at the off-site noise sensitive uses.

In addition to the CNEL noise analysis, INM calculates the single-event (single helicopter) noise level in terms of SEL and L_{max}. The single-event noise analysis provides the maximum noise level that would be generated by a single helicopter arriving or departing on the identified flight paths, regardless of the number of flights per day. The twin engine Sikorsky S-70 helicopter represents the majority of the current helicopter landings, approximately 39 percent of the total operations, and also generates the highest sound level. Therefore, the Sikorsky S-70 helicopter noise signature was used for the single-event noise analysis.

Table 4.I-4, *Helicopter Single-Event Noise Levels – Existing Helistop Conditions,* presents the predicted SEL and L_{max} levels from the Sikorsky S-70 at the Project's offsite noise receptor locations.

Table 4.I-4

Helicopter Single-Event Noise Levels – Existing Helistop Conditions

Location	Land Use Descriptions	Diagonal Distance from Helistop,[a] Feet	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)
R1	Residential	800	100.8/85.4
R2	Residential	570	102.9/86.5
R3	Residential	1480	96.9/84.1
R4	Residential	2100	94,2/82.7
R5	Residential	2380	91.9/81.8
R6	Residential	2230	90.7/81.8
R7	Residential/School[b]	2380	88.1/79.5

[a] *Diagonal distances using Google Earth Map. Distances are from the center of the existing Helistop to the sidewalk adjoining the receptor locations.*

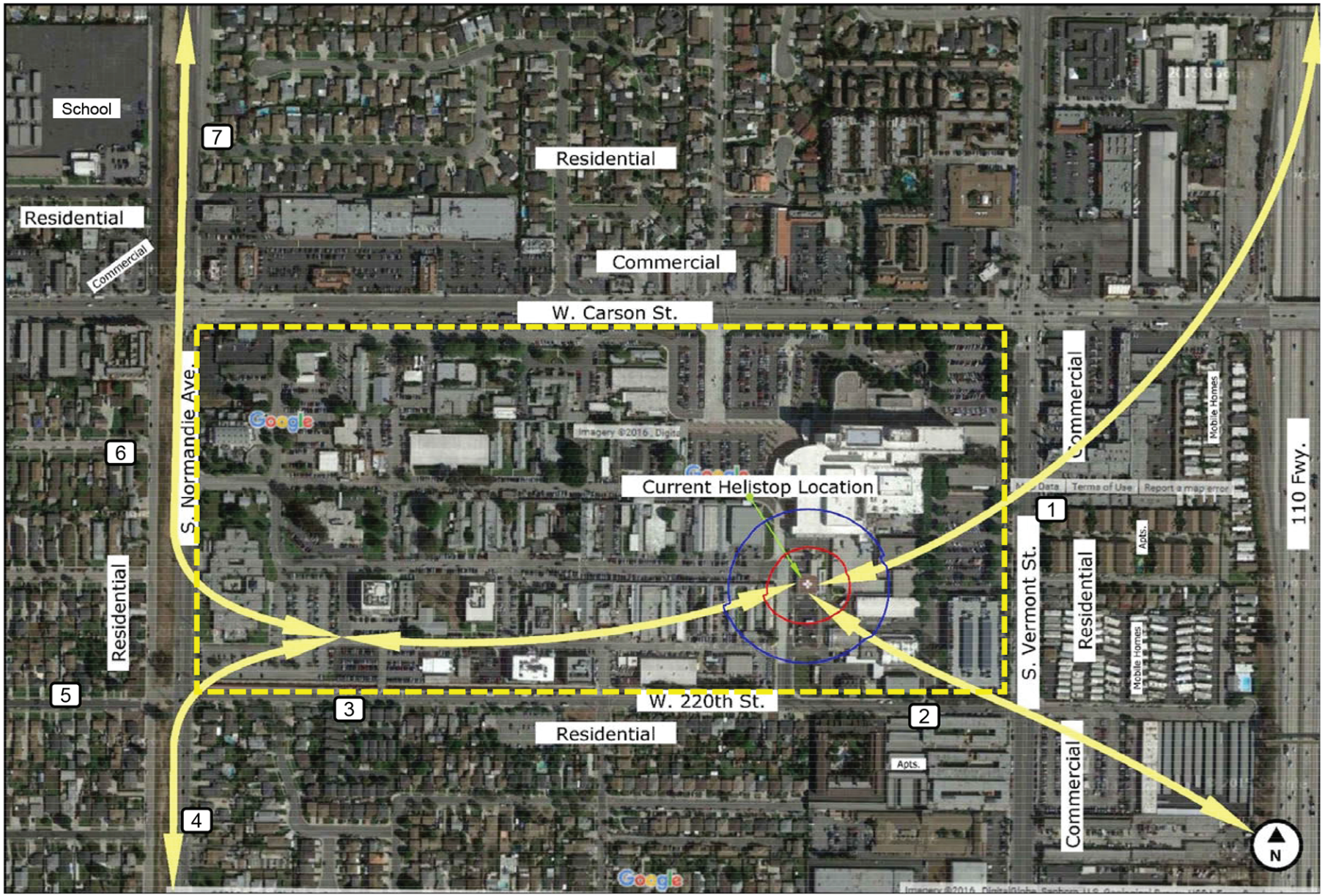
[b] *Halldale Elementary School located on the west side of Normandie Avenue and north of 216th Street.*

Source: Acoustical Engineering Services, Inc, 2016.

As indicated in Table 4.I-4, the predicted noise levels ranged from 79.5 dBA L_{max} (88.1 dBA SEL) at receptor R7 to 86.5 dBA L_{max} (102.9 dBA SEL) at receptor R2. Note: SEL represents the total sound energy during a single noise event normalized to a 1 second period; therefore, SEL is generally higher than L_{max}.

Modeled Noise Conditions – Traffic Noise

To further characterize the Project area's ambient noise environment, the CNEL noise levels attributed to existing traffic on local roadways was calculated using a noise prediction model which was developed based on calculation methodologies provided in the Caltrans Technical Noise Supplement (TeNS) document and



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Helicopter Operations CNEL Noise Contour – Existing Helistop Location

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-4

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traffic data provided by the Project traffic consultant.[7] [8] The roadway noise calculation procedures provided in the Caltrans TeNS are consistent with Federal Highway Administration RD-77-108 roadway noise prediction methodologies. This methodology, considered an industry standard, allows for the definition of roadway configurations, barrier information (if any), and receiver locations.

A traffic model calibration test was performed to establish the noise prediction model's accuracy. The road segments included in the calibration test were along Carson Street, between Normandie Avenue and Vermont Avenue and Normandie Avenue, between Carson Street and 220th Street. At the noted location, a 15-minute noise recording was made concurrent with logging of actual traffic volumes and auto fleet mix (i.e., standard automobile, medium duty truck, or heavy duty truck). The traffic counts were entered into the noise model along with the observed speed, lane configuration, and distance to the roadway to calculate the traffic noise levels. The results of the traffic noise model calibration are provided in **Table 4.I-5**, *Traffic Noise Model Calibration Results*. As indicated, the noise model results are within less than 1 dBA of the measured noise levels, which is within the industry standard tolerance of the noise prediction model. Therefore, the Project specific traffic noise prediction model is considered accurate and reflective of the Project's physical setting.

Table 4.I-5

Traffic Noise Model Calibration Results

Road Segment/ Noise Measurements Locations	Traffic Counts during noise readings, 15-minutes			Measured Traffic Noise Levels, L_{eq} (dBA)	Project Traffic Noise Model Predicted Noise Levels, L_{eq} (dBA)	Difference between Predicted and Measured Levels, dBA
	Autos	Medium Trucks [a]	Heavy Trucks [b]			
Carson Street	485	8	4	68.7	69.3	-0.6
Normandie Avenue	206	4	1	67.0	67.8	-0.8

[a] *Medium Truck – 2 axle trucks based on field observations.*

[b] *Heavy Truck – 3 or more axle trucks and buses based on field observations.*

Source: ESA PCR, 2016.

Because the monitoring data validates the use of a Project-specific traffic noise prediction model, the ambient noise environment of the Project vicinity can be characterized by 24-hour CNEL levels attributable to existing traffic on local roadways. As indicated in **Table 4.I-6**, *Predicted Existing Vehicular Traffic Noise Levels*, the calculated CNEL (at a distance of 25 feet from the roadway right-of-way) from actual existing traffic volumes on the analyzed roadway segments ranged from 56.1 dBA to 70.9 dBA for residential areas, hospital uses, schools, and commercial areas.

[7] *The roadway noise calculation procedures provided in TeNS are consistent with Federal Highway Administration RD-77-108 "industry standard" roadway noise prediction methodologies.*

[8] *Traffic Impact Analysis Report for the Harbor-UCLA Medical Center Master Plan Project, Fehr & Peers, March 2016.*

Table 4.I-6

Predicted Existing Vehicular Traffic Noise Levels

Roadway Segment	Adjacent Land Use	Existing Noise Exposure Compatibility [b] Category	Existing CNEL (dBA) at Referenced Distances from Roadway Right-of-Way [a] 25 Feet
Carson Street			
Between Western Avenue and Normandie Avenue	Residential/ Commercial	Normally Unacceptable	70.6
Between Normandie Avenue and Budlong Avenue	Commercial/ Hospital	Normally Unacceptable	70.6
Between Budlong Avenue and Berendo Avenue	Commercial/ Hospital	Normally Unacceptable	70.5
Between Berendo Avenue and Medical Center Drive	Residential/ Hospital	Normally Unacceptable	70.6
Between Medical Center Drive and Vermont Avenue	Residential/ Hospital	Normally Unacceptable	70.9
220th Street			
Between Western Avenue and Normandie Avenue	Residential	Conditionally Acceptable	60.6
Between Normandie and Myler Street	Residential/ Commercial	Conditionally Acceptable	62.7
Between Myler Street and Vermont Avenue	Residential/ Commercial	Conditionally Acceptable	63.7
East of Figueroa Street	Residential	Conditionally Acceptable	67.5
Figueroa Street			
South of 220th Street	Residential/ School	Conditionally Acceptable	69.3
223rd Street			
Between Western Avenue and Normandie Avenue	Residential	Conditionally Acceptable	69.6
Between Normandie Avenue and Myler Street	Residential/ School	Conditionally Acceptable	69.8
Between Myler Street and Vermont Avenue	Residential/ Commercial	Conditionally Acceptable	69.7
Between Vermont Avenue and I-110 SB Ramps	Residential	Normally Unacceptable	70.6
Between I-110 SB Ramps and Figueroa Street	Residential/ Commercial	Normally Unacceptable	70.5
Western Avenue			
Between Carson Street and 220th Street	Residential/ Commercial	Normally Unacceptable	70.5
Between 220th Street and 223rd Street	Residential/ Commercial	Normally Unacceptable	70.6
Between 223rd Street and Sepulveda Boulevard	Residential/ Commercial	Normally Unacceptable	70.7

Table 4.I-6 (Continued)

Predicted Existing Vehicular Traffic Noise Levels

Roadway Segment	Adjacent Land Use	Existing Noise Exposure Compatibility [b] Category	Existing CNEL (dBA) at Referenced Distances from Roadway Right-of-Way [a] 25 Feet
Myler Street			
Between 220th Street and 223rd Street	Residential/ School	Conditionally Acceptable	60.6
Normandie Avenue			
Between Torrance Boulevard and Carson Street	Residential/ Commercial	Conditionally Acceptable	69.0
Between Carson Street and 220th Street	Residential/ Hospital	Conditionally Acceptable	68.8
Between 220th Street and 223rd Street	Residential	Conditionally Acceptable	68.5
Budlong Avenue			
North of Carson Street	Residential	Normally Acceptable	56.2
Berendo Avenue			
North of Carson Street	Residential	Normally Acceptable	57.3
Vermont Avenue			
Between Torrance Boulevard and Carson Street	Residential/ Commercial	Normally Unacceptable	70.1
Between Carson Street and 220th Street	Residential/ Hospital	Normally Unacceptable	70.4
Between 220th Street and 223rd Street	Residential/ Commercial	Normally Unacceptable	70.0
Medical Center Drive			
North of Carson Street	Residential	Normally Acceptable	56.1

[a] *Calculated based on existing traffic volumes.*
[b] *Based on noise levels at 25 feet distance from the roadway and residential uses if residential uses are shown along roadways.*

Source: ESA PCR, 2016.

(3) Vibration-Sensitive Receptor Locations

Typically, ground-borne vibration generated by man-made activities (i.e., rail and roadway traffic, mechanical equipment and typical construction equipment) diminishes rapidly as the distance from the source of the vibration become greater. The Federal Transit Administration (FTA) uses a screening distance of 100 feet for high vibration sensitive buildings (e.g., hospital with vibration sensitive equipment) and 50 feet for residential uses. When vibration sensitive uses are located within those distances from a Medical Center Campus, vibration impact analysis is required. There are no residential uses that are located within the area of potential (within 50 feet) for perceptible vibration due to short-term construction and long-term project operations. Multi- and single-family residential uses are located approximately 55 feet south of the Medical Center Campus across 220th Street.

(4) Ground-Borne Vibration Environment

Based on field observations, the only source of ground-borne vibration in the Project vicinity is vehicular travel (refuse trucks, delivery trucks, and transit buses) on local roadways. According to the FTA technical study's "Federal Transit Administration; Transit Noise and Vibration Impacts Assessments," typical road traffic induced vibration levels are unlikely to be perceptible by people. In part, FTA indicates "it is unusual for vibration from traffic including buses and trucks to be perceptible, even in location close to major roadways."[9] Therefore, FTA published vibration data are utilized in describing the existing ground vibration environment in the vicinity of the Medical Center Campus. As the Medical Center Campus is located within 50 feet of two major roadways; Sunset Boulevard to the north and Crescent Heights Boulevard to the east. It is likely the site is exposed to ground vibration level of 0.004 inches per second PPV. As discussed below, this vibration level is considered below perception threshold of 0.04 inches per second (PPV).

c. Regulatory Framework

Many government agencies have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise and ground-borne vibration. Policies and/or standards such as those of the FTA, the California Department of Transportation (Caltrans) and regulations in the County of Los Angeles General Plan Noise Element, and the County of Los Angeles Municipal Code (Municipal Code) would be applicable to the Project. No regional regulations are applicable to the assessment of noise and vibration impacts.

(1) Federal

A technical discussion of construction activity-related vibration is provided in Section 12.2 of FTA publication titled "Transit Noise and Vibration Impacts Assessments," April 1995. As described therein, a ground-borne vibration level of 0.2 inch-per-second PPV should be considered as damage threshold criterion for structures deemed "fragile," and a ground-borne vibration level of 0.12 inch-per-second PPV should be considered as damage criterion for structures deemed "extremely fragile," such as historic buildings. Please also see discussion of State vibration standards below, which are based, in part, on FTA criteria.

The Federal Aviation Administration (FAA) established the aircraft noise analysis methodology and significance threshold that are applicable to federally funded projects that have an aviation noise component. Title 14 of the Code of Federal Regulations (CFR), and specifically Part 150, *Airport Noise Compatibility Planning*, provides guidelines for land use compatibility around airports. Part 150 states that in general, residential uses are not compatible within the 65 dBA L_{dn} contour or above, and that all types of land uses are compatible in areas below 65 dBA L_{dn} (65 dBA CNEL for projects in California). In addition, the FAA's Order 1050.1E, *Environmental Impacts: Policies and Procedures*, establishes a screening threshold of a 1.5 dBA L_{dn} (or 1.5 dBA CNEL for projects in California) increase in noise in any sensitive area located within the 65 dBA L_{dn} (or 65 dBA CNEL for projects in California) contour. In practice, it has been found that unless a proposed airport or heliport project will cause at least by a 1.5 dB increase within the 65 dBA CNEL or greater area, a 3 dB or greater (i.e., audible) increase in the 60-65 dBA CNEL area, impacts will not occur (Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992).

[9] *Federal Transit Administration "Transit Noise and Vibration Impact Assessment", Chapter 7, 2006.*

While the FAA has not established a standard compatibility criterion for the A-weighted single-event noise metrics, such as SEL or L_{max}, previous research performed by the FAA and others, examines the correlation between single-event noise levels and prediction of "annoyance" due to speech or sleep interference. The Federal Interagency Committee on Aircraft Noise (FICAN), *Effects of Aviation Noise on Awakenings from Sleep, June, 1997* analyzed several sleep studies regarding the relationship between the single event noise metric, SEL and sleep disturbance as measured by the number of awakenings. According to the FICAN reports, up to 10 percent of the people could experience sleep disturbance from aircraft noise when the indoor noise environment reaches a level of 81 dBA SEL (FICAN, "Effects of Aviation Noise on Awakening from Sleep", June 1997).

(2) State

(a) Noise Standards

The State Department of Health Services has established guidelines for community noise compatibility for land use in assessing the compatibility of various land use types with a range of noise levels. CNEL guidelines for specific land uses are classified into four categories: (1) "normally acceptable," (2) "conditionally acceptable," (3) "normally unacceptable," and (4) "clearly unacceptable." As shown in **Table 4.I-7,** *Land Use Compatibility for Community Noise*, a CNEL value of 70 dBA is the upper limit of what is considered a "conditionally acceptable" noise environment for hotel uses.

The airport noise regulations found in CCR Title 21, Section 5000 et seq. are administered by the Division of Aeronautics within Caltrans. Under these regulations, civilian airports are required to ensure compatible land uses within the 65 dBA CNEL contour produced by their aircraft operations. Caltrans also has adopted the 65 dBA CNEL threshold as the maximum acceptable exterior noise exposure for residential land uses affected by noise generated at helistops.

(b) Vibration Standards

Caltrans has produced a guidance manual for evaluating potential vibration impacts ("Transportation- and Construction-Induced Vibration Guidance Manual" dated June 2004). The manual provides thresholds for potential impacts on human comfort and damage to buildings, as well as guidance for reducing potential vibration impacts and addressing vibration issues. The manual gathers data from multiple sources, including the FTA. Tables 4, 5, and 6 of the manual provide criteria for identifying potential annoyance from vibration activity, as measured in inches per second PPV. The values range in value. For example, 0.035 inches per second PPV is identified as a level that is "distinctly" or "barely" perceptible, and 0.08/0.1 is identified as "readily" or "strongly" perceptible. Levels above this range are levels that begin to annoy human beings. Tables 9 through 15 of the manual provide criteria for identifying potential damage to buildings. Again, the values vary greatly depending on assumptions and the types and conditions of buildings considered. Per those guidelines, buildings that are extremely old and fragile can be subject to damage from vibration levels as low as 0.1 inches per second. Generally, the levels for well-constructed, more substantial buildings fall in the range of 1.0 to 2.0 inches per second PPV. Notably, Table 10 of the manual, based on FTA data, provides a conservative estimate for well-constructed buildings of 0.5 inches per second PPV, while Tables 9, 14, and 15 of the manual assign the 0.5 standard to residential structures and some older buildings, and levels of 1.0 to 2.0 inches per second PPV for newer, more substantial, better-engineered buildings.

Table 4.I-7

Land Use Compatibility for Community Noise
(California Department of Public Health Criteria)

Land Use	Community Noise Exposure CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-Family, Duplex, Mobile Homes	50 to 60	55 to 70	70 to 75	Above 70
Multi-Family Homes	50 to 65	60 to 70	70 to 75	Above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 to 70	60 to 70	70 to 80	Above 80
Transient Lodging—Motels, Hotels	50 to 65	60 to 70	70 to 80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50 to 70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50 to 75	—	Above 70
Playgrounds, Neighborhood Parks	50 to 70	—	67 to 75	Above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 to 75	—	70 to 80	Above 80
Office Buildings, Business and Professional Commercial	50 to 70	67 to 77	Above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50 to 75	70 to 80	Above 75	—

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Office of Noise Control, California Department of Public Health.

(3) Local

(a) Los Angeles County General Plan Noise Element

The overall purpose of the Noise Element of a General Plan is to protect people from the harmful and annoying effects of exposure to excessive noise. The Los Angeles County Noise Element focuses on noise issues associated with transportation, including airports, highways, and railroads.

The County has adapted the Table 4.I-7, Land Use Compatibility for Community Noise, to develop the County's exterior noise standards, discussed below.

(b) Los Angeles County Code (LACC)

The County of Los Angeles Noise Restrictions are provided in Chapter 12.08, Noise Control of the LACC. Chapter 12.08 provides procedures and criteria for the measurement of the sound level of "offending" noise sources.

The LACC outlines exterior noise standards for four noise zones based on land use type: noise-sensitive areas, residential properties, commercial properties, and industrial properties. The County's maximum exterior noise standards set forth in LACC Section 12.08.390 are provided in **Table 4.I-8,** *Los Angeles County Presumed Ambient Noise Levels*. For residential-zoned areas, the presumed ambient noise level is 50 dBA during the daytime and 45 dBA during the nighttime. The following standards are used to evaluate compliance:

Table 4.I-8

Los Angeles County Presumed Ambient Noise Levels

Noise Zone	Zone	Daytime Hours (7 A.M. to 10 P.M.) dBA (L_{eq})	Nighttime Hours (10 P.M. to 7 A.M.) dBA (L_{eq})
I	Noise-sensitive area	45	45
II	Residential	50	45
III	Commercial	60	55
IV	Industrial	70	70

Source: LACC, Section 12.08.390.

- Standard No. 1: Exterior noise cannot exceed levels set forth in Table 4.I-5 for a cumulative period of more than 30 minutes in any hour.
- Standard No. 2: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 5 dBA for a cumulative period of more than 15 minutes in any hour.
- Standard No. 3: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 10 dBA for a cumulative period of more than 5 minutes in any hour.
- Standard No. 4: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 15 dBA for a cumulative period of more than one minute in any hour.
- Standard No. 5: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 20 dBA at any time.

If ambient noise levels exceed the exterior noise levels in Table 4.I-5, then the aforementioned standards can be adjusted by substituting relevant noise levels in Table 4.I-5 with the following ambient measurements:

- Standard No. 6: Ambient L50, the noise level exceeded 50% of the time over an hour period.
- Standard No. 7: Ambient L25, the noise level exceeded 25% of the time over an hour period.
- Standard No. 8: Ambient L8.3, the noise level exceeded 8.3% of the time over an hour period.

- Standard No. 9: Ambient L1.7, the noise level exceeded 1.7% of the time over an hour period.
- Standard No. 10: Ambient L0, the maximum noise level over an hour period.

LACC Section 12.08.440 prohibits construction between the hours of 7:00 P.M. and 7:00 A.M. and at any time on Sundays or holidays, given that it creates a noise disturbance across a residential or commercial real-property line. **Table 4.I-9,** *Los Angeles County Permissible Construction Equipment Noise at Receptor*, outlines the maximum noise levels permissible by construction equipment at affected buildings depending on land use. These noise thresholds pertain to two timeframes: daytime hours from 7:00 A.M. to 8:00 P.M. daily (except Sundays and holidays) and nighttime hours from 8:00 P.M. to 7:00 A.M. daily (or all day Sundays and holidays).

Table 4.I-9

Los Angeles County Permissible Construction Equipment Noise at Receptor

Equipment Type	Receptor Type	Daytime Hours (7 A.M. to 8 P.M.) dBA (L_{eq})	Nighttime Hours (8 P.M. to 7 A.M.) dBA (L_{eq})
Mobile short-term operation (less than 10 days)	Single-family Residential	75	60
	Multi-family Residential	80	64
	Semiresidential/Commercial	85	70
	Business Structures	85	85
Stationary long-term operation (more than 10 days)	Single-family Residential	60	50
	Multi-family Residential	65	55
	Semiresidential/Commercial	70	60

Source: LACC , Section 12.08.440.

The County Noise Ordinance states that noise levels caused by any air-conditioning or refrigeration equipment shall not exceed the levels identified in **Table 4.I-10**, *County of Los Angeles Residential Air-Conditioning and Refrigeration Equipment Standards.*

The County Noise Ordinance Section 12.08.350 provides a presumed perception threshold of 0.01 inch-per second RMS; however, this applies to ground-borne vibrations from long-term operational activities, such as surface traffic, and not to short-term activities such as construction. Therefore, the 0.01 inch-per second RMS vibration criteria is used in connection with the Project's operation-related vibration impacts. The vibration level of 0.01 inch-per second RMS is equivalent to 0.04 inches per second PPV.

Table 4.I-10

County of Los Angeles Residential Air-Conditioning and Refrigeration Equipment Standards

Measurement Location	Units Installed Before 1-1-80 dBA	Units Installed On or After 1-1-80 dBA
Any point on neighboring property line, 5 feet above grade level, no closer than 3 feet from any wall.	60	55
Center of neighboring patio, 5 feet above grade level, no closer than 3 feet from any wall.	55	50
Outside the neighboring living area window nearest the equipment location, not more than 3 feet from the window opening, but at least 3 feet from any other surface.	55	50

Source: County of Los Angeles Ordinance, No. 11743, LACC, Section 12.08.530.

3. PROJECT IMPACTS

a. Methodology

(1) On-Site Construction Noise

On-site construction noise impacts were evaluated by determining the noise levels generated by the different types of construction activity, calculating the construction-related noise level at nearby sensitive receptor locations, and comparing these construction-related noise levels to existing ambient noise levels (i.e., noise levels without construction noise). More, specifically, the following steps were undertaken to assess construction-period noise impacts.

1. Ambient noise levels at surrounding sensitive receptor locations were estimated based on field measurement data (see Table 4.I-1);

2. Typical noise levels for each type of construction equipment were obtained from the Federal Highway Administration (FHWA) roadway construction noise model (RCNM);

3. Distances between construction site locations (noise source) and surrounding sensitive receptors were measured using Project architectural drawings, Google Earth, and site plans;

4. The construction noise level was then calculated, in terms of hourly L_{eq}, for sensitive receptor locations based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance; and

5. Construction noise levels were then compared to the construction noise significance thresholds identified below.

(2) Off-Site Roadway Noise (Construction and Operation)

Roadway noise impacts have been evaluated using the Caltrans TeNS methodology based on the roadway traffic volume data provided in the Traffic Impact Study prepared for the Project. This methodology allows for the definition of roadway configurations, barrier information (if any), and receiver locations. Roadway noise attributable to project development was calculated and compared to baseline noise levels that would occur under the "without project" condition.

(3) Stationary Point-Source Noise (Operation)

Stationary point-source noise impacts have been evaluated by identifying the noise levels generated by outdoor stationary noise sources such as rooftop mechanical equipment and loading dock activities, calculating the hourly L_{eq} noise level from each noise source at surrounding sensitive receiver property line locations, and comparing such noise levels to existing ambient noise levels. More specifically, the following steps were undertaken to calculate outdoor stationary point-source noise impacts:

1. Ambient noise levels at surrounding sensitive receptor locations were estimated based on field measurement data (see Table 4.I-1);

2. Distances between stationary noise sources and surrounding sensitive receptor locations were measured using project architectural drawings, Google Earth, and site plans;

3. Stationary-source noise levels were then calculated for each sensitive receptor location based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance;

4. Noise level increases were compared to the stationary source noise significance thresholds identified below; and

5. For outdoor mechanical equipment, the maximum allowable noise emissions from any and all outdoor mechanical equipment were specified such that noise levels would not exceed the significance threshold identified below.

(4) Ground-Borne Vibration (Construction and Operation)

Ground-borne vibration impacts were evaluated by identifying potential vibration sources, measuring the distance between vibration sources and surrounding structure locations, and making a significance determination based on the significance thresholds described below.

(5) Helicopter Noise

Helicopter noise impacts were evaluated by predicting the CNEL levels due to helicopter operations at the two proposed interim helistop locations (Interim 1 Helistop and Interim 2 Helistop), and at the Future permanent Helistop location; comparing these against current CNEL levels at the current Helistop location and determining the increase; and comparing the increases to the applicable CNEL and L_{max} significance thresholds. The significance threshold for the helicopter operations related noise impact is based on projected changes in noise levels (increases) from existing to the future conditions, with consideration of existing ambient noise environments and the regulatory framework described above. The applicable

significance threshold with respect to helicopter operation per FAA and Caltrans is provided in terms of CNEL. In addition to the CNEL threshold, a single-event noise level significance threshold is recommended in terms of L_{max}. As discussed above with respect to the community noise assessment, changes in noise levels of less than 3 dBA are generally not discernable to most people, while changes greater than 5 dBA L_{max} are readily noticeable and would be considered a significant increase (Bies & Hansen*, Engineering Noise Control,* 1988). Therefore, the significance threshold for the single-event noise level (in L_{max}) is utilized by evaluating the incremental change from the existing with that of the future helicopter operations.

b. Significance Thresholds

The potential for noise impacts is based on thresholds derived from Los Angeles County Department of Regional Planning Initial Study Checklist screening questions, which are based in part on Appendix G of the State CEQA Guidelines. These questions are as follows:

Noise. Would the project result in:

a) Exposure of persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance(Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Significance thresholds have been developed based on these factors and the applicable regulatory requirements, as presented below.

(1) Construction Noise

Since the Project construction period would have a duration of more than 10 days and would not occur between the hours of 7:00 P.M. and 7:00 A.M. Monday through Saturday, or at any time on Sundays and holidays (consistent with provisions of the LACC), noise during construction would have a significant impact if it would:

NOISE-1 Result in construction equipment noise exceeding 60 dBA, L_{eq} at single-family residences and mobile homes; 65 dBA, L_{eq} at multi-family residences; or 70 dBA, L_{eq} at transient lodging.

NOISE-2 Result in off-site Project construction traffic noise exceeding 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transient lodging.

(2) Operational Noise

Noise during operation would have a significant impact if it would:

NOISE-3 Increase ambient noise levels by 5 dBA CNEL or more at a land use currently experiencing "normally acceptable" or "conditionally acceptable" noise levels; or increase ambient noise levels by 3 dBA CNEL or more at a land use currently experiencing "normally unacceptable" or "clearly unacceptable" noise levels; or result in helicopter operations that generate noise levels in excess of 65 dBA CNEL at a sensitive land use and increase ambient noise levels by 1.5 dBA CNEL or more; or, for a single helicopter operation, generate an incremental noise increase of 5 dBA L_{max} or more, compared to existing helicopter operations, at a sensitive land use.

NOISE-4 Result in non-roadway-related noise, such as building mechanical/electrical equipment or the use of outdoor amenity spaces, which exceeds ambient noise levels at noise-sensitive uses, in violation of the County Noise Ordinance.

In addition, the LACC provides guidance for calculation of short-term annoying sounds of the type that could be generated within a project's parking structure. Accordingly, the Project would have a potentially significant impact on Noise if it would:

NOISE-5 Result in maximum noise (L_{max}) generated from the operation of the parking structure (e.g., car alarms) exceeding the average (L_{eq}) ambient noise level by 10 dBA.

(3) Ground-Borne Vibration

Vibration would have a significant impact if it would:

NOISE-6 Result in Project construction activities causing ground-borne vibration levels to exceed the applicable building damage threshold of 0.5 inch-per-second PPV at the nearest residential buildings.

NOISE-7 Result in Project construction and operation activities causing ground-borne vibration levels to exceed the human annoyance threshold, 0.04-inch-per-second PPV, at nearby sensitive land uses.

c. Project Characteristics or Design Features

(1) Project Characteristics

All outdoor mechanical building and electrical equipment would be designed to meet the requirements of LACC, Section 12.08.530.

(2) Project Design Features

In addition to compliance with LACC requirements in future construction, the following Project Design Features would be implemented to reduce Project-generated noise and were incorporated into analytical assumptions prior to the determination of potential impacts.

PDF-NOISE-1: The Project contractor(s) will equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards.

PDF-NOISE-2: On-site construction equipment staging area shall be located as far as feasible from sensitive uses/hospital patient buildings.

PDF-NOISE-3: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited near sensitive uses/patient buildings.

PDF-NOISE-4: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent feasible.

PDF NOISE-5: Effective noise barriers will be designed and erected as needed to shield on-site uses from excessive construction-related noise.

PDF NOISE-6: To reduce the potential for construction-related vibration effects to on-site operating rooms or other vibration sensitive medical uses (such as laboratories), the Project contractor(s) shall perform appropriate study of the potential for peak particle velocities to reach or exceed 0.008 inches per second PPV whenever construction involving the use of heavy duty equipment is planned within 125 feet of such an on-site medical use. If, based on site-specific conditions, this study indicates potential for detrimental effects, strategies to minimize the effects shall be incorporated into the construction plan.

PDF-NOISE-7: As required by LACC, an acoustical analysis of the mechanical plans of the proposed buildings will be prepared by a qualified acoustical engineer, prior to issuance of building permits, to ensure that all mechanical equipment would be designed to meet noise limits in Table 4.I-6.

d. Analysis of Project Impacts

(1) Construction

(a) On-site Construction Noise

Threshold NOISE-1: Would Project construction equipment noise exceed 60 dBA, L_{eq} at single-family residences; 65 dBA, L_{eq} at multi-family residences; or 70 dBA, L_{eq} at transient lodging?

Impact Statement NOISE -1 *On-site construction noise associated with the Project would increase noise levels at nearby residential uses in excess of established thresholds. Therefore, impacts would be significant without implementation of mitigation measures.*

Noise impacts from construction activities are generally a function of the noise generated by construction equipment, equipment locations, the sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Individual construction phases will typically be undertaken in four stages: (1) demolition; (2) grading; (3) building construction; and (4) paving. Each stage involves the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. Demolition typically involves the use of excavator, tractor/loader/backhoe, concrete saw, dozer, water truck, and loader. Grading typically involves the use of drill water truck, dozer, tractor/loader/backhoe, and grader. Building construction typically involves the use of crane, forklift, welder, tractor/loader/backhoe, air compressor, and water truck. Paving typically involves the use of tractor/loader/backhoe, concrete mixer truck, roller, paver, and trencher. The Project would be constructed using typical construction techniques.

Project construction would require the use of mobile heavy equipment with high noise level characteristics. Individual pieces of construction equipment that would be used for Project construction produce maximum noise levels of 74 dBA to 85 dBA at a reference distance of 50 feet from the noise source, as shown in **Table 4.I-11**, *Construction Equipment Noise Levels*. These maximum noise levels would occur when equipment is operating under full power conditions. However, equipment used on construction sites often operate under less than full power conditions, or part power as shown in the first column in Table 4.I-8. As shown in Table 4.I-8, the part power percentage (%) of construction equipment is based on the Construction Noise Control Specification developed for the Central Artery/Tunnel project in Boston.[10] To more accurately characterize construction-period noise levels, the average (Hourly L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage and are typically attributable to multiple pieces of equipment operating simultaneously.

Construction noise levels were estimated based on an industry standard sound attenuation rate of 6 dB per doubling of distance for point sources (e.g., construction equipment). Within the analysis, all construction equipment was assumed to operate simultaneously at the construction area nearest to potentially affected residential receptors. These assumptions represent a worst-case noise scenario as construction activities would routinely be spread throughout the construction site further away from noise sensitive receptors. In addition, noise from different construction stages, which have the potential to occur simultaneously were added together to provide a composite construction noise level. A summary of the construction noise impacts at the nearby sensitive receptors is provided in **Table 4.I-12,** *Estimate of Maximum Construction Noise Levels(L_{eq}) at Off-Site Sensitive Receptor Locations*. Detailed noise calculations for construction activities are provided in Appendix H of this EIR.

[10] *Federal Highway Administration, Roadway Construction Noise Model User's Guide, 2006.*

Table 4.I-11

Construction Equipment Noise Levels

Equipment	Estimated Usage Factor, %	Typical Noise Level at 50 feet from Equipment, dBA (L_{max})
Air Compressor	50	78
Concrete Mixer Truck	40	79
Chain Saw	20	85
Cranes	40	81
Dozer	40	82
Excavator	40	81
Forklift	10	75
Grader	40	85
Rubber Tired Loader	40	79
Other Equipment (Trencher)	50	85
Paver	50	77
Roller	20	80
Tractor/Loader/Backhoe	25	80
Water Truck	10	80
Welder	40	74

Source: FHWA Roadway Construction Noise Model User's Guide, 2006.

As shown in Table 4.I-12, construction noise levels would exceed the Project's significance threshold at the following receptor location

- R3 during the following construction phases: Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed;
- R4 during construction Phase 4; and
- R5 during construction phases: Phase 2, Phase 4, and Phase 5.

As such, construction-period noise impacts would be significant. Mitigation measures are therefore prescribed to reduce construction noise impacts to these sensitive noise receptors, as presented below in subsection 4. *Mitigation Measures*, below.

Table 4.I-12

Estimate of Maximum Construction Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations

Construction Phases	Noise Sensitive Receptor	Nearest Distance between Receptor and Construction Site, feet	Estimated Maximum Construction Noise Levels at the Noise Sensitive Receptor by Construction Phase,[a] Hourly L_{eq} (dBA)	Project's Significance Threshold (dBA)	Exceeds Significance threshold?
Phase C	R3: South of the Medical Center Campus	80	85	60	Yes
	R4 [b]: North of the Medical Center Campus	1,300	46	65	No
	R5 [b]: East of the Medical Center Campus	1,100	47	60	No
	R6 [b]: West of the Medical Center Campus	1,500	45	60	No
Phase 1	R3 [b]: South of the Medical Center Campus	750	44	60	No
	R4 [b]: North of the Medical Center Campus	350	66	65	No
	R5 [c]: East of the Medical Center Campus	1,200	45	60	No
	R6 [b]: West of the Medical Center Campus	1,000	47	60	No
Phase 2	R3 [c]: South of the Medical Center Campus	350	62	60	Yes
	R4 [b]: North of the Medical Center Campus	750	46	65	No
	R5 [c]: East of the Medical Center Campus	345	62	60	Yes
	R6 [b]: West of the Medical Center Campus	2,200	31	60	No
Phase 3	R3 [c]: South of the Medical Center Campus	215	70	60	Yes
	R4 [c]: North of the Medical Center Campus	750	59	65	No
	R5 [c]: East of the Medical Center Campus	850	53	60	No
	R6 [b]: West of the Medical Center Campus	1,450	43	60	No
Phase 4	R3 [c]: South of the Medical Center Campus	560	58	60	No
	R4: North of the Medical Center Campus	200	72	65	Yes
	R5: East of the Medical Center Campus	160	74	60	Yes
	R6 [b]: West of the Medical Center Campus	2,000	37	60	No

Table 4.I-12 (Continued)

Estimate of Maximum Construction Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations

Construction Phases	Noise Sensitive Receptor	Nearest Distance between Receptor and Construction Site, feet	Estimated Maximum Construction Noise Levels at the Noise Sensitive Receptor by Construction Phase,[a] Hourly L_{eq} (dBA)	Project's Significance Threshold (dBA)	Exceeds Significance threshold?
Phase 5	R3: South of the Medical Center Campus	55	83	60	Yes
	R4 [b]: North of the Medical Center Campus	600	53	65	No
	R5: East of the Medical Center Campus	110	77	60	Yes
	R6 [b]: West of the Medical Center Campus	2,500	35	60	No
Phase 6	R3: South of the Medical Center Campus	70	83	60	Yes
	R4 [c]: North of the Medical Center Campus	400	63	65	No
	R5 [b]: East of the Medical Center Campus	1,700	40	60	No
	R6: West of the Medical Center Campus	170	75	60	No
Phase LA Biomed	R3: South of the Medical Center Campus	65	82	60	Yes
	R4 [c]: North of the Medical Center Campus	1,200	42	65	No
	R5 [b]: East of the Medical Center Campus	1,400	40	60	No
	R6: West of the Medical Center Campus	1,100	52	60	No

[a] *Estimated construction noise levels represent the worst-case condition when all noise generators are located closest to the receptors and are not expected to last the entire construction duration.*

[b] *Receptors are fully shielded from the construction site by existing off-site buildings.*

[c] *Receptors are partially shielded from the construction site by existing off-site buildings.*

Source: ESA PCR, 2016

(b) Off-Site Construction Activities

Threshold NOISE-2 Would Project construction traffic noise exceed 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transient lodging?

Impact Statement NOISE-2: *Off-site construction traffic would not exceed the significance thresholds at off-site noise sensitive receptor locations. Impacts to off-site sensitive receptors would be less than significant.*

There would be material delivery truck trips throughout the construction period. The truck haul routes will comply with the approved truck routes designated within the County. Trucks traveling to and from the Medical Center Campus must travel along the designated truck route. Trucks are expected to travel on Carson Street, 220th Street, Vermont Street, and Figueroa Street to access the Harbor Freeway (I-110).

The Project's truck trips would result in a total noise level (exiting plus project trucks) of approximately 61.9 dBA, L_{eq} at 25 feet distance along Carson Street, 62.8 dBA along 220th Street, 61.5 dBA along Vermont Street, and 61.9 dBA along Figueroa Street. The noise levels by truck trips would be below the significance thresholds of 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transit lodging. Therefore, impacts would be less than significant.

(c) On-Site Sensitive Receptors

As discussed above, construction activities would temporarily increase the existing ambient noise in close proximity of the construction site within the Project areas. The on-site hospital uses are sensitive receptors, but effects of the Project itself on these included receptors are not considered a project impact to the environment under CEQA. Nonetheless, due to the sensitive on-site receptors, the potential for noise to affect on-site receptors is presented in this Draft EIR. The on-site hospital uses are noise-sensitive. At various times throughout the construction of the Master Plan Project, use of heavy duty construction equipment could be closer than 100 feet to occupied on-site patient rooms and it would increase the ambient noise levels at on-site noise sensitive uses. PDF-NOISE-2, PDF-NOISE-3, and PDF-NOISE-4 are designed to minimize the generation of on-site noise to the extent feasible. PDF NOISE-5 has been included to ensure appropriate noise barriers are designed and erected when construction is planned within close proximity to existing on-site noise-sensitive uses to minimize effects to on-site hospital uses. However, the upper floors (i.e. above 2nd floor) of the existing hospital buildings would not experience the same noise reductions as the result of the noise barriers since the proposed barrier would not block the line of sight between the construction site and upper floors of the existing hospital buildings. Therefore, detailed acoustical studies should be conducted prior to the construction phases.

(2) Operation

Threshold NOISE-3: Would the Project increase ambient noise levels by 5 dBA CNEL or more at a land use currently experiencing noise levels characterized as "normally acceptable" or "conditionally acceptable"; or increase ambient noise levels by 3 dBA CNEL or more at a land use currently experiencing "normally unacceptable" or "clearly unacceptable" noise levels? Would helicopter operations generate noise levels in excess of 65 dBA CNEL at a sensitive land use and increase ambient noise levels by 1.5 dBA CNEL or more? Would maximum noise levels from a single helicopter operation cause an incremental noise increase of 5 dBA L_{max} or more, compared to existing helicopter operations, at a sensitive land use?

Impact Statement NOISE-3: *Project implementation would increase noise levels at adjacent noise-sensitive receptors in the Project area as the result of increased Project traffic, but traffic would not exceed established noise thresholds at those receptors and impacts would be less than significant. Helicopter activity associated with use of the proposed Interim 1 and 2 Helistops would exceed established thresholds at sensitive land uses, which is a significant, although temporary and periodic, impact. Project-related noise from helicopter activity associated with use of the permanent helistop, following Master Plan Project buildout, would be less than significant.*

(i) Impacts Under Existing Traffic Baseline Conditions

Future roadway noise levels were calculated along various arterial segments adjacent to the Medical Center Campus. Roadway noise attributable to project development was calculated using the traffic noise model previously described and was compared to baseline noise levels that would occur under the "No Project" condition.

Project impacts are shown in **Table 4.I-13**, *Off-Site Traffic Noise Impacts- Project Build Out.* As indicated, the maximum increase in project-related traffic noise levels over existing traffic noise levels would be 0.7 dBA, CNEL, which would occur along 220th Street, between Myler Street and Vermont Avenue. This increase in sound level would be well below a "clearly noticeable" increase of 5.0 dBA, CNEL in an area characterized by conditionally acceptable noise levels (see Table 4.I-4),[11] and the increase in sound level would be substantially lower at the remaining roadway segments analyzed. The project-related noise increases would be less than the threshold and therefore less than significant, and no mitigation measures would be required.

(ii) Impacts Under Future Traffic Baseline Conditions

Future roadway noise levels were calculated along various arterial segments adjacent to the Project Site and compared to 2021 baseline traffic noise levels assuming implementation of the cumulative projects. Project impacts are shown in **Table 4.I-14**, *Off-Site Traffic Noise Impacts – Future 2030 Area-Wide Growth with Project.* As indicated therein, the maximum increase attributable to Project-related traffic would be 0.6 dBA CNEL along 220th Street between Myler Street and Vermont Avenue. This would be below the "clearly noticeable" increase threshold of 5.0 dBA CNEL applicable to land uses experiencing normally acceptable noise levels (see Table 4.H-4),[12] and the increase in noise would be substantially lower at the remaining roadway segments analyzed. Project-related noise increases, when measured against the 2030 with Area-Wide Growth conditions, would therefore be less than significant.

Noise would be substantially lower at the remaining roadway segments analyzed. Project-related noise increases, when measured against the 2030 with Area-Wide Growth conditions, would therefore be less than significant.

(iii) Impacts from Helicopter Operations

As part of the Master Plan Project, a permanent new Helistop would be located on the rooftop of the New Hospital Tower. However, as previously discussed, following demolition of the existing helistop and prior to construction of the New Hospital Tower and permanent new Helistop, two interim helistops would be constructed for temporary use. The Interim 1 Helistop is proposed in the existing Harbor-UCLA Professional Building parking lot near the southwestern corner of the Medical Center Campus, and the Interim 2 Helistop would be located in the LA BioMed surface parking lot, approximately 230 feet east of the Interim 1 Helistop location. Pads for both helistops would be raised approximately 10 feet above the adjacent grade. The helicopter flight paths for the Interim 1 Helistop and Interim 2 Helistop locations are illustrated on **Figure 4.I-5**, *Helistop Operation CNEL Noise Contour – Interim 1 Helistop Location*, and **Figure 4.I-6,** *Helistop Operation CNEL Noise Contour – Interim 2 Helistop Location*, respectively. This noise analysis assumes that future helicopter operations would be similar to helicopter operations under existing conditions, as

[11] *Engineering Noise Control, Bies & Hansen, 1988.*

[12] *Engineering Noise Control, Bies & Hansen, 1988.*

Table 4.I-13

Off-Site Traffic Noise Impacts – Project Build Out Conditions

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing [a] (A)	Existing with Project Build Out [b] (B)	Project Increment (B - A)	Exceed Threshold?
Carson Street				
Between Western Avenue and Normandie Avenue	70.6	70.7	0.1	No
Between Normandie Avenue and Budlong Avenue	70.6	70.7	0.1	No
Between Budlong Avenue and Berendo Avenue	70.5	70.7	0.2	No
Between Berendo Avenue and Medical Center Drive	70.6	71.0	0.4	No
Between Medical Center Drive and Vermont Avenue	70.9	71.3	0.4	No
220th Street				
Between Western Avenue and Normandie Avenue	60.6	60.9	0.3	No
Between Normandie and Myler Street	62.7	63.2	0.5	No
Between Myler Street and Vermont Avenue	63.7	64.4	0.7	No
East of Figueroa Street	67.5	68.0	0.5	No
Figueroa Street				
South of 220th Street	69.3	69.4	0.1	No
223rd Street				
Between Western Avenue and Normandie Avenue	69.6	69.7	0.1	No
Between Normandie Avenue and Myler Street	69.8	69.9	0.1	No
Between Myler Street and Vermont Avenue	69.7	69.8	0.1	No
Between Vermont Avenue and I-110 SB Ramps	70.6	70.9	0.3	No
Between I-110 SB Ramps and Figueroa Street	70.5	70.7	0.2	No
Western Avenue				
Between Carson Street and 220th Street	70.5	70.5	0.0	No
Between 220th Street and 223rd Street	70.6	70.6	0.0	No
Between 223rd Street and Sepulveda Boulevard	70.7	70.7	0.0	No
Myler Street				
Between 220th Street and 223rd Street	60.6	61.2	0.6	No
Normandie Avenue				
Between Torrance Boulevard and Carson Street	69.0	69.2	0.2	No
Between Carson Street and 220th Street	68.8	69.1	0.3	No
Between 220th Street and 223rd Street	68.5	68.7	0.2	No
Budlong Avenue				
North of Carson Street	56.2	56.2	0.0	No
Berendo Avenue				
North of Carson Street	57.3	57.3	0.0	No

Table 4.I-13 (Continued)

Off-Site Traffic Noise Impacts – Project Build Out Conditions

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing [a] (A)	Existing with Project Build Out [b] (B)	Project Increment (B - A)	Exceed Threshold?
Vermont Avenue				
Between Torrance Boulevard and Carson Street	70.1	70.2	0.1	No
Between Carson Street and 220th Street	70.4	70.6	0.2	No
Between 220th Street and 223rd Street	70.0	70.3	0.3	No
Medical Center Drive				
North of Carson Street	56.1	56.1	0.0	No

[a] *Existing data is taken from Table 4.I-1.*

Source: ESA PCR, 2016.

Table 4.I-14

Off-Site Traffic Noise Levels – Future 2030 Area-Wide Growth with Project

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Future No Project (2030 Area Wide Growth) (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Future Project Increment (B-A)	Exceed Threshold?
Carson Street				
Between Western Avenue and Normandie Avenue	71.7	71.8	0.1	No
Between Normandie Avenue and Budlong Avenue	71.8	71.9	0.1	No
Between Budlong Avenue and Berendo Avenue	71.8	72.0	0.2	No
Between Berendo Avenue and Medical Center Drive	71.8	72.1	0.3	No
Between Medical Center Drive and Vermont Avenue	71.8	72.1	0.3	No
220th Street				
Between Western Avenue and Normandie Avenue	61.1	61.4	0.3	No
Between Normandie and Myler Street	63.2	63.6	0.4	No

Table 4.I-14 (Continued)

Off-Site Traffic Noise Levels – Future 2030 Area-Wide Growth with Project

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)		Future Project Increment (B-A)	Exceed Threshold?
	Future No Project (2030 Area Wide Growth) (A)	Future with Project (2030 Area Wide Growth)[a] (B)		
Between Myler Street and Vermont Avenue	64.2	64.8	0.6	No
East of Figueroa Street	68.1	68.6	0.5	No
Figueroa Street				
South of 220th Street	69.9	70.1	0.2	No
223rd Street				No
Between Western Avenue and Normandie Avenue	70.2	70.2	0.0	No
Between Normandie Avenue and Myler Street	70.4	70.5	0.1	No
Between Myler Street and Vermont Avenue	70.3	70.4	0.1	No
Between Vermont Avenue and I-110 SB Ramps	71.2	71.5	0.3	No
Between I-110 SB Ramps and Figueroa Street	71.1	71.3	0.2	No
Western Avenue				
Between Carson Street and 220th Street	71.0	71.1	0.1	No
Between 220th Street and 223rd Street	71.2	71.2	0.0	No
Between 223rd Street and Sepulveda Boulevard	71.3	71.3	0.0	No
Myler Street				
Between 220th Street and 223rd Street	61.1	61.6	0.5	No
Normandie Avenue				
Between Torrance Boulevard and Carson Street	69.5	69.7	0.2	No
Between Carson Street and 220th Street	69.4	69.6	0.2	No
Between 220th Street and 223rd Street	69.1	69.2	0.1	No

Table 4.I-14 (Continued)

Off-Site Traffic Noise Levels – Future 2030 Area-Wide Growth with Project

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)		Future Project Increment (B-A)	Exceed Threshold?
	Future No Project (2030 Area Wide Growth) (A)	Future with Project (2030 Area Wide Growth)[a] (B)		
Budlong Avenue				
North of Carson Street	56.7	56.7	0.0	No
Berendo Avenue				
North of Carson Street	57.8	57.8	0.0	No
Vermont Avenue				
Between Torrance Boulevard and Carson Street	70.7	70.8	0.1	No
Between Carson Street and 220th Street	70.9	71.1	0.2	No
Between 220th Street and 223rd Street	70.6	70.8	0.2	No
Medical Center Drive				
North of Carson Street	56.6	56.6	0.0	No

[a] *Include future growth plus related (cumulative) projects and proposed project traffic.*

Source: ESA PCR, 2016.

discussed in the Helistop Relocation Noise Impact Study provided in Appendix H of this Draft EIR. Figure 4.I-5 shows the calculated CNEL noise contours generated by the helicopter operations at the Interim 1 Helistop location. As shown on Figure 4.I-5, the 65 CNEL noise contour would extend just beyond the southern property line of the Medical Center Campus.

Table 4.I-15, *Helicopter Noise Analysis – Interim 1 Helistop Locations,* summarizes the predicted noise levels in CNEL for helicopter operations at the Interim 1 Helistop location.

As shown in Table 4.I-15, the predicted CNEL levels due to the helicopter operations at the Interim 1 Helistop location ranged from 37.0 dBA CNEL at receptors R1 and R2 to 58.6 dBA CNEL at receptor R3. Compared with the current Helistop, these predicted CNEL levels for the Interim 1 Helistop would result in a higher CNEL level at receptors (R3 through R7). Also included in Table 4.I-15 are the ambient noise levels

Table 4.I-15

Helicopter Noise Analysis – Interim 1 Helistop Locations

Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E-C"
		Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	2470	70.5	47.6	70.5	37.0	70.5	0.0
R2	2040	65.6	50.0	65.7	37.0	65.6	-0.1
R3	260	64.3	41.3	64.3	58.6	65.3	1.0
R4	580	70.7	38.0	70.7	53.6	70.8	0.1
R5	700	53.1	35.8	53.2	47.1	54.1	0.9
R6	870	56.4	35.4	56.4	46.6	56.8	0.4
R7	1710	64.6	33.5	64.6	38.8	64.6	0.0

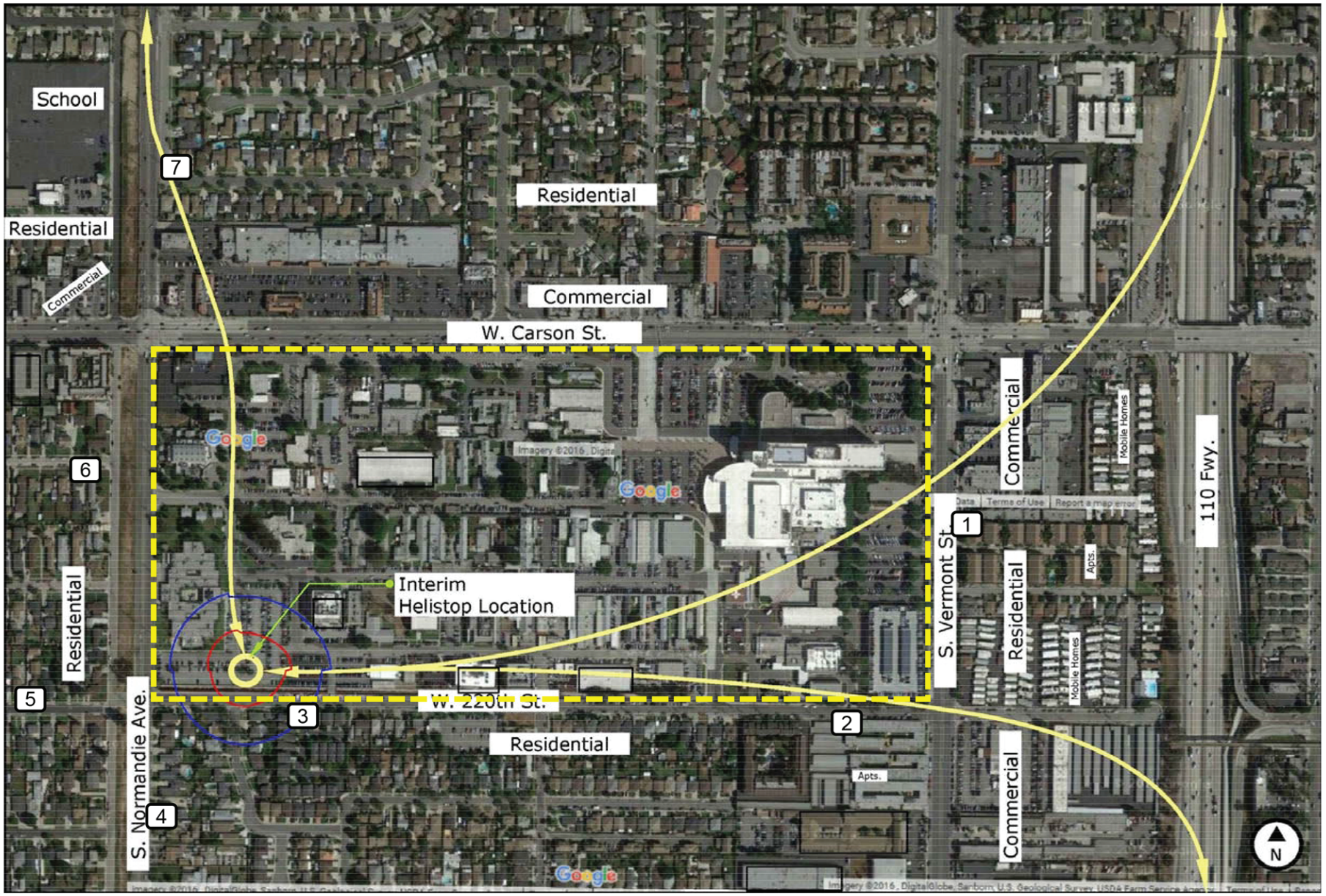
[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 1 Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

with helicopter operations under both existing and future conditions at the Interim 1 Helistop location. As indicated in Table 4.I-15, future helicopter operations would result in a maximum increase of 0.1 dBA CNEL at receptor R4 to 1.0 dBA CNEL at receptor R3 (with no increase in helicopter noise levels at receptors R1, R2 and R7). The estimated increase would be below the Project's significance threshold of 1.5 dBA CNEL.

Table 4.I-16, *Helicopter Single-Event Noise Impacts – Interim 1 Helistop,* presents the predicted helicopter single-event noise levels at R1 through R7 under the existing and the Interim 1 Helistop location in SEL and L_{max}. SEL levels are provided for informational purposes only, as the County does not have criteria as relates to SEL levels. A single helicopter operational event would generate noise levels at receptors in the vicinity of the Helistop, which could result in awakening based on the 1997 FICAN study. However, helicopter nighttime operations would be minimal, approximately 1.8 events per month.

As indicated in Table 4.I-16, the predicted L_{max} due to the helicopter (i.e., Sikorsky S-70) operation at the Interim 1 Helistop location would result in an increase of 2.7 dBA L_{max} (at receptor R4) to 5.6 dBA L_{max} (at receptor R3), as compared with the existing conditions. The estimated L_{max} increase would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, the relocation of the existing Helistop to the Interim 1 Helistop location would result in a significant impact, which would be temporary while the permanent Helistop is constructed on the rooftop of the New Hospital Tower.



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Helistop Operation CNEL Noise Contour – Interim 1 Helistop Location

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-5

PCR

Helistop Operation CNEL Noise Contour – Interim 2 Helistop Location

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-6

Table 4.I-16

Helicopter Single-Event Noise Impacts – Interim 1 Helistop

Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, SEL/L_{max} (dBA)
			Existing Helistop	Interim 1 Helistop	
R1	2470	Residential	100.8/85.4	92.1/81.4	-8.7/-4.0
R2	2040	Residential	102.9/86.5	90.6/81.2	-12.3/-5.3
R3	260	Residential	96.9/84.1	112.4/89.7	15.5/5.6
R4	580	Residential	94.2/82.7	107.0/85.4	12.8/2.7
R5	700	Residential	91.9/81.8	100.3/81.6	8.4/-0.2
R6	870	Residential	90.7/81.8	101.4/85.5	10.7/3.7
R7	1710	Residential/School	88.1/79.5	93.9/83.7	5.8/4.2

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 1 Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

The calculated CNEL noise contours generated by helicopter operations at the proposed Interim 2 Helistop location are provided on Figure 4.I-6. As shown on Figure 4.I-6, the 65 CNEL noise contour would extend just beyond the southern property line of the Medical Center Campus.

Table 4.I-17, *Helicopter Noise Analysis – Interim 2 Helistop Locations*, presents the predicted helicopter noise levels in CNEL with the helicopter operations at the Interim 2 Helistop location.

As shown in Table 4.I-17, the predicted CNEL levels due to the helicopter operations at the Interim 2 Helistop location ranged from 35.6 dBA CNEL at receptor R7 to 63.7 dBA CNEL at receptor R3. Similar to the Interim 1 Helistop location, the predicted helicopter CNEL levels (from the Interim 2 Helistop location) would result in higher CNEL levels at receptors (R3 through R7). When considering the ambient noise levels with the helicopter operations under both existing and future conditions at the Interim 2 Helistop location, future helicopter operations would result in a maximum increase of 0.2 dBA CNEL at receptor R6 to 2.7 dBA CNEL at receptor R3 (with no increase in helicopter noise levels at receptors R1, R2, R4 and R7). The estimated increase of 2.7 dBA CNEL would exceed the Project's significance threshold increase of 1.5 dBA CNEL at receptor R3. Therefore, the impact would be significant, albeit temporary and periodic, lasting only until implementation of the future permanent Helistop on the New Hospital Tower rooftop.

Table 4.I-18, *Helicopter Single-Event Noise Impacts – Interim 2 Helistop,* presents the predicted helicopter single-event noise levels under the existing and the Interim 2 Helistop location.

As indicated in Table 4.I-18, the predicted L_{max} due to the helicopter operation at the Interim 2 Helistop location would result in an increase of 0.3 dBA L_{max} (at receptors R4 and R5) to 15.4 dBA L_{max} (at receptor R3, directly south of the Interim 2 Helistop), as compared to the existing conditions. The estimated L_{max} increase would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, noise impacts

Table 4.I-17

Helicopter Noise Analysis – Interim 2 Helistop Locations

Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E-C"
		Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	2250	70.5	47.6	70.5	38.0	70.5	0.0
R2	1820	65.6	50.0	65.7	38.3	65.6	-0.1
R3	130	64.3	41.3	64.3	63.7	67.0	2.7
R4	720	70.7	38.0	70.7	50.2	70.7	0.0
R5	930	53.1	35.8	53.2	45.3	53.8	0.6
R6	1030	56.4	35.4	56.4	43.3	56.6	0.2
R7	1765	64.6	33.5	64.6	35.6	64.6	0.0

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 2 Helistop to the sidewalk adjoining the receptor locations.*

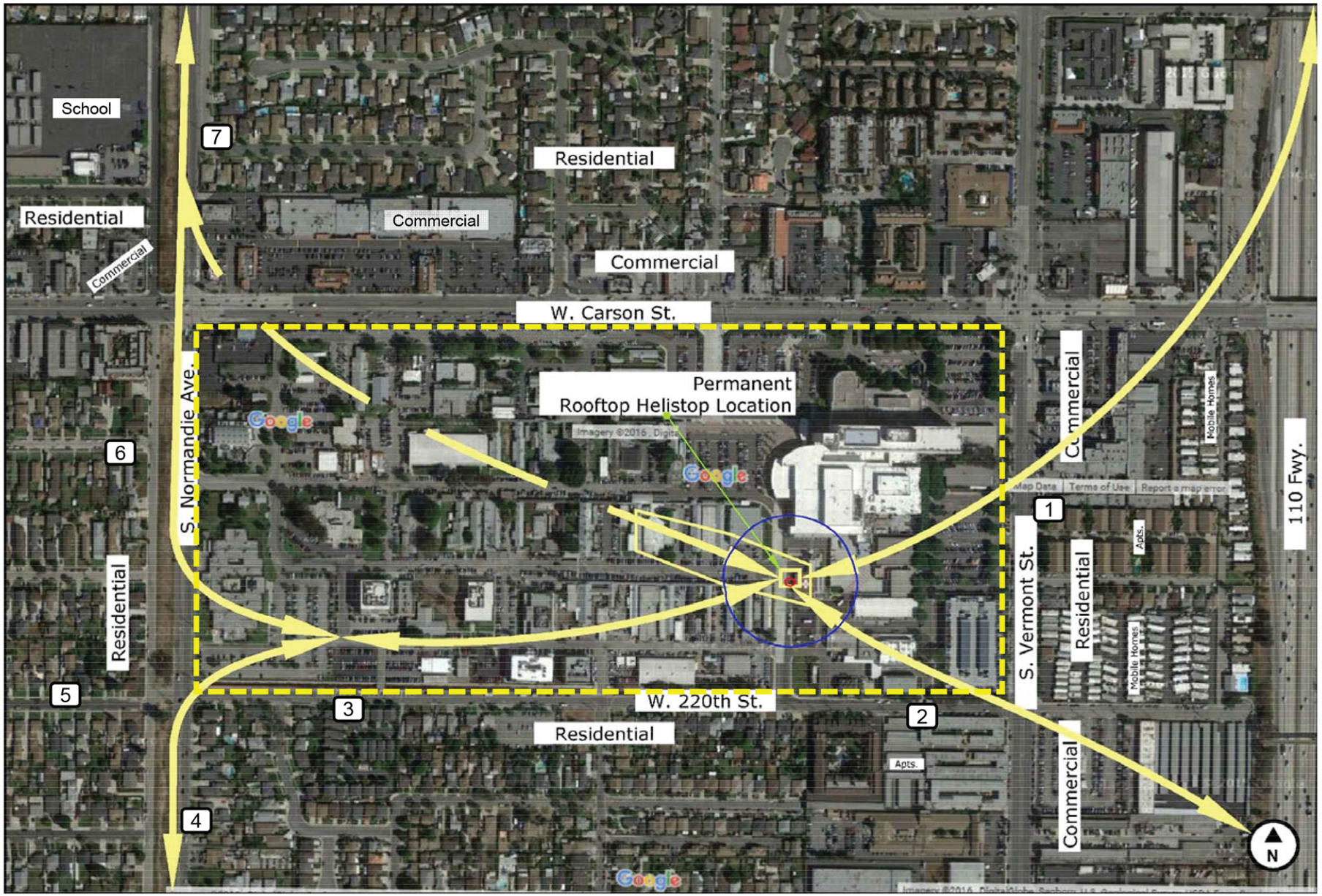
Source: Acoustical Engineering Services, Inc., 2016.

associated with the relocation to the existing Helistop to the Interim 2 Helistop location would result in a significant impact, which would be temporary while the permanent Helistop is constructed at the roof level of the future hospital building. However, there are no feasible mitigation measures to reduce the increase at receptor R3 below the level of significance. Therefore, the impact would be significant and unavoidable; however, impacts would be temporary, lasting only until the implementation of the future permanent Helistop location.

The permanent Helistop would be located at the roof level of the future hospital building, approximately 133 feet above local grade. **Figure 4.I-7**, *Helistop Operation Noise Contour – Permanent Rooftop Helistop,* shows the helicopter flight paths with the future permanent helistop. The future helicopter operations (i.e., number of flights per day) are assumed to be similar to the existing conditions. The calculated CNEL noise contours generated by the future helicopter operations are illustrated on Figure 4.I-7. As shown on Figure 4.I-7, the 60 and 65 dBA CNEL noise contour falls within the medical campus.

Table 4.I-19, *Helicopter Noise Analysis – Permanent Rooftop Helistop,* presents the predicted helicopter noise levels in CNEL with the helicopter operations at the future permanent helistop location.

As shown in Table 4.I-19, the predicted CNEL levels due to the helicopter operations ranged from 35.1 dBA CNEL at receptor R7 to 49.8 dBA CNEL at receptor R2. Similar to the existing conditions, the future predicted helicopter noise levels in term of CNEL would be lower than that of the existing measured ambient noise levels (non-helicopter noise). Included in Table 4.I.19 are the ambient noise levels plus helicopter operations under both existing and future conditions. As indicated therein, the future helicopter operations would not



PCR

Helistop Operation Noise Contour – Permanent Rooftop Helistop

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-7

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Table 4.I-18

Helicopter Single-Event Noise Impacts – Interim 2 Helistop

Location	Longitudinal Distance from Interim 2 Helistop,[a] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, SEL/L_{max} (dBA)
			Existing Helistop	Interim 1 Helistop	
R1	2250	Residential	100.8/85.4	93.0/83.4	-7.8/-2.0
R2	1820	Residential	102.9/86.5	91.7/83.9	-11.2/-2.6
R3	130	Residential	96.9/84.1	117.7/99.5	20.8/15.4
R4	720	Residential	94.2/82.7	105.0/83.0	10.8/0.3
R5	930	Residential	91.9/81.8	101.2/82.1	9.3/0.3
R6	1030	Residential	90.7/81.8	96.0/79.2	5.3/-2.6
R7	1765	Residential/School	88.1/79.5	88.2/79.3	0.1/-0.2

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 2 Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

result in an increase (in terms of CNEL), as compared to the existing conditions, and therefore, would be below the Project's significance threshold of 1.5 dBA CNEL.

Table 4.I-20, *Helicopter Single-Event Noise Impacts – Permanent Rooftop Helistop,* presents the predicted helicopter single-event noise levels under the existing and the future permanent location.

As indicated in Table 4.I-20, the predicted L_{max} due to the helicopter under the future conditions would result in a lower noise level, compared to existing conditions. As such, noise impacts associated with the proposed helicopter relocation to the future location (roof top of the future hospital building) would be less than significant.

Threshold NOISE-4: Would Project-related operational (i.e., non-roadway) noise sources such as building mechanical/electrical equipment or outdoor amenity spaces exceed ambient noise levels at noise sensitive uses, thus causing a violation of the County Noise Ordinance?

Impact Statement NOISE-4*: Project implementation would not increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. Therefore, impacts would be less than significant.*

(i) Fixed Mechanical Equipment

The operation of mechanical equipment such as air conditioners, fans, and related equipment may generate audible noise levels. These types of equipment would be used on the Medical Center Campus. Mechanical equipment would typically be located on rooftops or within buildings, shielded from nearby land uses to attenuate noise and avoid conflicts with adjacent uses. In addition, to ensure compliance with noise limitation requirements of the LACC shown in Table 4.I-7, PDF-NOISE-7 requires an acoustical analysis of the

Table 4.I-19

Helicopter Noise Analysis – Permanent Rooftop Helistop

		Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E-C"
Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	850	70.5	47.6	70.5	47.4	70.5	0.0
R2	620	65.6	50.0	65.7	49.8	65.7	0.0
R3	1440	64.3	41.3	64.3	41.9	64.3	0.0
R4	2060	70.7	38.0	70.7	38.3	70.7	0.0
R5	2340	53.1	35.8	53.2	36.1	53.2	0.0
R6	2185	56.4	35.4	56.4	36.8	56.4	0.0
R7	2330	64.6	33.5	64.6	35.1	64.6	0.0

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the nearest edge of the permanent Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

mechanical plans of the proposed building so that all mechanical equipment would be designed with appropriate noise control devices, such as sound attenuators, acoustics louvers, or sound screen/ parapet walls. Therefore, operation of mechanical equipment would not exceed the Project thresholds of significance and impacts would be less than significant.

(ii) Loading Dock and Refuse Collection Areas

The Project would incorporate new Materials and Waste Management facilities including a loading dock. The new loading dock and Waste Management Center would be located at the back of the New Hospital Tower, with the new storeroom located on the lower level of the tower.

Loading dock and refuse service-related activities such as truck movements/idling and loading/unloading operations would generate noise levels that have a potential to adversely impact adjacent land uses during long-term Project operations. Based on measured noise levels, delivery trucks (at loading dock) and trash compactors (from refuse collection) would generate noise levels of approximately 71 dBA (L_{eq}) and 66 dBA (L_{eq}) at 50 feet distance, respectively.

The nearest noise-sensitive use, the single and multi-family residential uses on along 220th Street (R3), is approximately 200 feet south of the proposed loading dock and Waste Management Center. The Central Plat building would partially block the line-of-sight between the noise source and sound receptor locations. Based on a noise level source strength of 71 dBA at a reference distance of 50 feet, and accounting for barrier-insertion loss (minimum 5 dBA insertion loss), loading dock noise would be 54 dBA and would not

Table 4.I-20

Helicopter Single-Event Noise Impacts – Permanent Rooftop Helistop

Location	Longitudinal Distance from Permanent Rooftop Helistop,[a] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, Permanent Conditions, L_{max} (dBA)
			Existing Helistop	Permanent Rooftop Helistop	
R1	850	Residential	100.8/85.4	101.0/83.8	0.2/-1.6
R2	620	Residential	102.9/86.5	103.0/84.2	0.1/-2.3
R3	1440	Residential	96.9/84.1	97.4/82.9	0.5/-1.2
R4	2060	Residential	94.2/82.7	94.3/81.5	0.1/-1.2
R5	2340	Residential	91.9/81.8	90.5/80.8	-1.4/-1.0
R6	2185	Residential	90.7/81.8	93.3/80.8	2.6/-1.0
R7	2330	Residential/School	88.1/79.5	89.0/79.0	0.9/-0.5

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the permanent Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

exceed the significance threshold of the ambient noise level of 66 dBA at the receptor locations, R3. As such, impacts to surrounding uses would be less than significant.

(iii) Composite Noise Level Impacts from Proposed Project Operations

Primary noise sources associated with the proposed Project would include traffic on nearby roadways, on-site mechanical equipment, on-site loading dock/waste management center, and parking areas. An evaluation of noise from all the Project's noise sources (i.e., composite noise level) was conducted to conservatively ascertain the potential maximum Project-related noise level increase that may occur at the noise-sensitive receptor locations included in this analysis. The overall sound environment at the areas surrounding the project is comprised of contributions from each individual noise source associated with the typical daily operation of the Project.

Based on a review of the noise-sensitive receptors and the project noise sources, the only noise-sensitive location wherein composite noise impacts could occur is single- and multi-family residences (R3). Due to a combination of distance and the presence of intervening structures that would serve as noise barriers, the predominant Project noise source that could potentially affect the other noise-sensitive locations is roadway noise.

Based on the traffic noise analysis above, Project -generated traffic is expected to increase the traffic-related noise by a maximum of 0.7 dBA (CNEL) along 220th Street, between Myler Street and Vermont Avenue, which is represented by the receptor R3. Noise associated with activities in parking structures and at the loading docks and refuse collection transference would increase the overall ambient noise levels by 0.3 dBA at the receptor location R3. Mechanical related noise is expected to be the maximum 50 dBA as shown in Table 4.I-7, which would not increase the ambient noise level of 66 dBA at R3 since, according to industry engineering

references, a 16 dB difference between two noise sources results in an increase of 0.1 dBA to the composite noise level of the two sources.[13] Overall, relative to the existing noise environment, the Project is estimated to increase the ambient noise level at the nearest noise-sensitive receptor R3, but by a less than the threshold of significance of 5 dBA. Composite noise level increases at all other receptor locations are expected to be less than significant as well, given their distance from the Medical Center Campus and the presence of intervening structures. As such, the composite noise level impact due to the proposed Project's future operations would be less than significant.

Threshold NOISE-5 Would the maximum noise (L_{max}) generated from the operation of the parking structure (e.g., car alarms) exceed the average (L_{eq}) ambient noise level by 10 dBA?

Impact Statement NOISE-5: *Project implementation, including noise from the parking structure, would increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. However, Project-related noise generation would not exceed established thresholds and therefore impacts would be less than significant.*

Currently, large parking lots are generally distributed along the Medical Center Campus perimeter, with smaller lots located throughout the Medical Center Campus interior. Parking is also allowed on one or both sides of most internal roadways. Nonetheless incidental on-street parking also occurs in areas not officially designated as parking areas, as shown in Figure 2-5.

With implementation of the Master Plan Project, parking structures would be built. The new parking structures would be located in the southeastern corner of the Harbor-UCLA Medical Center Campus, north of New Hospital Tower, the east end of the Medical Center Campus, and immediately north of the proposed new Central Plan. These proposed new/modified parking structures and lots would not bring parking areas into closer proximity to nearby residential uses. Because the distance between the parking areas and the nearest residential uses would generally be unchanged from current conditions, the parking lot related noise impacts at the offsite receptors would be consistent with the existing ambient noise levels and would not exceed the significance threshold of the average ambient noise level by 10 dBA. As such, impacts would be less than significant.

(3) Vibration

Threshold NOISE 6: Would Project construction activities cause ground-borne vibration levels to exceed the applicable building damage threshold of 0.5 inch-per-second PPV at the nearest residential buildings?

Impact Statement NOISE-6: *Construction activities would result in sporadic, temporary vibration effects adjacent to the Project area. However, ground-borne vibration levels would not exceed established thresholds. Thus, construction vibration impacts would be less than significant and no mitigation measures are required.*

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment used. The operation of construction equipment generates

[13] *Engineering Noise Control, Bies & Hansen, 1988.*

vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receptor buildings. Impacts from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Ground-borne vibration from construction activities rarely reach levels that damage structures. The FTA has published standard vibration velocities for construction equipment operations. The PPV for construction equipment pieces anticipated to be used during Project construction are listed in **Table 4.I-21**, *Typical Vibration Velocities for Potential Project Construction Equipment.*

Table 4.I-21

Typical Vibration Velocities for the Project Construction Equipment

Equipment	Reference Vibration Velocity Levels at 25 ft, inch/second PPV[a,b]	Vibration Velocity Levels at 55 ft, inch/second PPV[a,b]
Large bulldozer	0.089	0.027
Loaded trucks	0.076	0.023

[a] *PPV=Peak particle velocity.*
[b] *FTA's "Transit Noise and Vibration Impact Assessment", Table 12-2.*

Source: USDOT Federal Transit Administration, 2005.

The construction of the Project would generate ground-borne construction vibration during demolition, shoring and excavation, and large bulldozer operation. Based on the vibration data provided in Table 4.I-21, vibration velocities from operation of construction equipment would range from approximately 0.076 to 0.089 inches per second PPV at 25 feet from the source of activity. As shown previously in Table 4.I-12, the nearest off-site residential structures are the single- and multi-family residential buildings, R3, located approximately 55 feet south of the construction site during Phase 5.

As shown in Table 4.I-21, the maximum vibration velocities to which receptors could be exposed ranges from 0.01 to 0.027 inches per second PPV. As this value is considerably lower than the 0.5 inches per second PPV significance threshold regarding potential building damage for older residential buildings, vibration impacts associated with construction would be less than significant at the nearest residential building.

Due to the sensitivity of on-site receptors, the potential for noise to affect on-site receptors is presented in this Draft EIR. On-site hospital uses, such as surgical suites, are vibration-sensitive. At various times throughout the construction of the Master Plan, use of heavy duty construction equipment could be as close as 100 feet to occupied on-site operating rooms. The vibration velocity of a large bulldozer generates 0.89 inches per second PPV at 25 feet from the equipment. If a large bulldozer operates within 125 feet of an operating room, the operating room would be exposed to vibration levels of 0.008 inches per second PPV (the level established for the protection of operating rooms and other uses with sensitive equipment and systems). With implementation of PDF Noise-6, which would ensure appropriate site-specific studies are

conducted and additional noise reduction practices implemented as necessary, impacts would be less than significant even when construction is planned within 125 feet of on-site vibration-sensitive uses.

Threshold NOISE-7: Would Project construction and operational activities cause ground-borne vibration levels to exceed 0.04 inch per second PPV at nearby residential uses?

Impact Statement NOISE-7*: Project implementation would not generate excessive vibration levels to nearby sensitive receptors. Thus, construction and long-term vibration impacts would be less than significant and no mitigation measures are required.*

As discussed above, the nearest residential uses, R3 would be exposed to maximum vibration velocities during construction of approximately 0.027 inches per second PPV. As this value is lower than the 0.04 inches per second PPV significance threshold for human perception, vibration impacts associated with construction would be less than significant at the nearest residential building.

Operation of the Project would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration generated by each of the above-mentioned activities would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the closest off-site buildings would be up to 0.01 inches per second PPV[14] and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility. As such, vibration impacts associated with operation of the Project would be below the significance threshold and impacts would be less than significant.

e. Cumulative Impacts

The geographic context for the analysis of cumulative noise impacts depends on the impact being analyzed. Noise is by definition a localized phenomenon, and significantly reduces in magnitude as the distance from the source increases. As such, only projects and growth due to occur in the immediate project area would be likely to contribute to cumulative noise impacts.

As discussed in Section 3.0, General Description of Environmental Setting, of this EIR, there are 26 related projects in the surrounding areas. The closet related projects situated approximately 1,300 feet from the Medical Center Campus, including Related Project No. 2 – 1028 W 223rd Street, Condos. All other related projects are 2,600 feet or more from the proposed Project.

(1) Construction Noise

Noise from construction of the proposed Project and related projects would be localized, thereby potentially affecting areas within 500 feet from each of the construction sites. Due to distance attenuation of projects more than 1,000 feet from each other and intervening structures, construction noise from one site would not result in a noticeable increase in noise at sensitive receptors near the other site, which would preclude a

[14] *Transportation Related Earthborne Vibrations, California Department of Transportation, February 2002.*

cumulative noise impact. As such, cumulative impacts associated with construction noise would be less than significant.

(2) Operation

Cumulative operational noise impacts would occur primarily as a result of increased traffic on local roadways due to the Project and other projects within the Medical Center Campus. Therefore, cumulative traffic-generated noise impacts have been assessed based on the contribution of the Project to the future cumulative base traffic volumes in the project vicinity. The noise levels associated with cumulative base traffic volumes without the project, and cumulative base traffic volumes with the project are identified in **Table 4.I-22**, *Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth*. Noise level increases in the Project area would reach a maximum of 1.5 dBA CNEL along Carson Street, between Budlong Avenue and Medical Center Drive, which would not exceed the Project's 3 dBA significance threshold. As such, roadway noise impacts due to cumulative traffic volumes would be less than significant.

Table 4.I-22

Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Cumulative Increment (B-A)	Exceed Threshold?
Carson Street				
Between Western Avenue and Normandie Avenue	70.6	71.8	1.2	No
Between Normandie Avenue and Budlong Avenue	70.6	71.9	1.3	No
Between Budlong Avenue and Berendo Avenue	70.5	72.0	1.5	No
Between Berendo Avenue and Medical Center Drive	70.6	72.1	1.5	No
Between Medical Center Drive and Vermont Avenue	70.9	72.1	1.2	No
220th Street				
Between Western Avenue and Normandie Avenue	60.6	61.4	0.8	No
Between Normandie and Myler Street	62.7	63.6	0.9	No
Between Myler Street and Vermont Avenue	63.7	64.8	1.1	No
East of Figueroa Street	67.5	68.6	1.1	No
Figueroa Street				
South of 220th Street	69.3	70.1	0.8	No

Table 4.I-22 (Continued)

Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA) Existing (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Cumulative Increment (B-A)	Exceed Threshold?
223rd Street				No
Between Western Avenue and Normandie Avenue	69.6	70.2	0.6	No
Between Normandie Avenue and Myler Street	69.8	70.5	0.7	No
Between Myler Street and Vermont Avenue	69.7	70.4	0.7	No
Between Vermont Avenue and I-110 SB Ramps	70.6	71.5	0.9	No
Between I-110 SB Ramps and Figueroa Street	70.5	71.3	0.8	No
Western Avenue				
Between Carson Street and 220th Street	70.5	71.1	0.6	No
Between 220th Street and 223rd Street	70.6	71.2	0.6	No
Between 223rd Street and Sepulveda Boulevard	70.7	71.3	0.6	No
Myler Street				
Between 220th Street and 223rd Street	60.6	61.6	1.0	No
Normandie Avenue				
Between Torrance Boulevard and Carson Street	69.0	69.7	0.7	No
Between Carson Street and 220th Street	68.8	69.6	0.8	No
Between 220th Street and 223rd Street	68.5	69.2	0.7	No
Budlong Avenue				
North of Carson Street	56.2	56.7	0.5	No

Table 4.I-22 (Continued)

Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Cumulative Increment (B-A)	Exceed Threshold?
Berendo Avenue				
North of Carson Street	57.3	57.8	0.5	No
Vermont Avenue				
Between Torrance Boulevard and Carson Street	70.1	70.8	0.7	No
Between Carson Street and 220th Street	70.4	71.1	0.7	No
Between 220th Street and 223rd Street	70.0	70.8	0.8	No
Medical Center Drive				
North of Carson Street	56.1	56.6	0.5	No

[a] *Include future growth plus related (cumulative) projects and proposed project traffic.*

Source: ESA PCR, 2016.

LACC provisions that limit stationary-source noise from items such as roof-top mechanical equipment, noise levels would be less than significant at the property line for each related project. For this reason, on-site noise produced by any related project would not be additive to project-related noise levels. As the project's composite stationary-source impacts would be less than significant, composite stationary-source noise impacts attributable to cumulative development would also be less than significant.

(3) Ground-Borne Vibration

Due to the rapid attenuation characteristics of ground-borne vibration and distance of the related projects to the Project, there is no potential for a cumulative construction- or operational-period impact with respect to ground-borne vibration.

(4) Helicopter Noise

In addition to cumulative operational noise impacts from increased vehicle traffic (discussed under (b) above), potential cumulative operational noise impacts could occur as a result of increased air traffic in the local air space due to the Project and other air traffic in proximity to the Medical Center Campus. However,

there are no facilities similar to the project (i.e., with helicopter traffic) proposed in proximity to the Medical Center Campus. As such, noise impacts due to cumulative helicopter air traffic would be less than significant.

4. MITIGATION MEASURES

The following mitigation measures address the potential significant noise impacts from the proposed Project.

a. Construction Noise and Vibration

Construction-related activities on the Medical Center Campus have the potential to result in significant impacts at nearby sensitive receptors. Thus, the following mitigation measures are required to minimize construction-related noise and vibration impacts:

(1) Noise **Mitigation Measure NOISE-1:** Temporary noise barriers shall be used to block the line-of-site between the construction equipment and noise-sensitive receptors during project construction, as follows:

- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the southern boundary of the Project construction site to reduce construction noise at the single- and multi-family residential uses across 220th Street during Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed.
- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundaries of the Project construction site to reduce construction noise at the multi-family residential uses across Carson Street during Phase 4.
- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundary of the Project construction site to reduce construction noise at the single-family residential uses across Vermont Avenue during Phase 2, Phase 4, and Phase 5.

(2) Vibration

No mitigation measures are necessary.

b. Operational Noise and Vibration

(1) Noise

No mitigation measures are necessary.

(2) Vibration

No mitigation measures are necessary.

(3) Helicopter

The noise impacts associated with the proposed interim helistops would result in a significant temporary and periodic impact. No mitigation measures are feasible to reduce the temporary and periodic helicopter

noise associated with operation of the interim helistops. The proposed permanent helistop that would be located on the roof top of the proposed future hospital building would result in a less than significant permanent impact. Therefore, once the permanent helistop is operational, the significant temporary and periodic impact associated with the interim helistop would no longer occur.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Construction

The temporary sound barriers prescribed in Mitigation Measure NOISE-1 can achieve a noise reduction of 15 dBA or more in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. Therefore, the construction-period L_{eq} would be reduced to below the 60 dBA significance threshold at the south of the Medical Center Campus, Location R3 and the east of the Medical Center Campus, Location R5 and the 65 dBA significance threshold at north of the Medical Center Campus, Location R4. However, even with implementation of the mitigation measure, construction-related noise could reach up to approximately 85 dBA at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. As this will exceed the significance threshold of 60 dBA, construction noise impacts would be significant and unavoidable at the single- and multi-family residential uses across 220th Street, during Phase C, Phase 5, and Phase 6.b. Operation

Temporary helicopter operations associated with use of the Interim 1 Helistop and Interim 2 Helistop would result in significant and unavoidable, albeit temporary and periodic, impacts at receptor R3. There are no feasible mitigation measures to reduce the noise increases caused by the use of these interim helistops below the level of significance at receptor R3. Therefore, the impacts of temporary use of the Interim 1 Helistop and Interim 2 Helistop would be significant and unavoidable. However, impacts would last only until completion of the permanent Helistop location on the rooftop of the proposed New Hospital Tower. Noise impacts associated with use of the permanent Helistop would be less than significant.

Operation of the Project would result in less than significant traffic-related noise and vibration impacts on off-site noise sensitive receptors and no mitigation is required.

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4.0 ENVIRONMENTAL IMPACT ANALYSIS
J. POPULATION, HOUSING, AND EMPLOYMENT

1. INTRODUCTION

This section analyzes the potential effects of the Project's contribution to population, housing, and employment growth within the County of Los Angeles and the County's South Bay Planning Area**.** Project effects on demographic characteristics are compared to adopted and advisory growth forecasts and relevant policies and programs regarding planning for future development. The information in this section is based primarily on the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) and any associated documents. Related information regarding the effects of the new development on the relationship between land uses and resulting land use patterns is further addressed in Section 4.H., *Land Use and Planning*. Potential growth-inducing impacts of the Project are further addressed in Section 6.0, *Other CEQA Considerations*.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) On-Site Conditions

The 72-acre Harbor-UCLA Campus is located in the unincorporated Los Angeles County community of West Carson. The Medical Center Campus is generally flat and developed with 1,279,284 square feet of floor area, including the Harbor-UCLA Medical Center and multiple medical and research tenants. Harbor-UCLA Medical Center is licensed for 453 inpatient beds and houses more than 70 primary and secondary care clinics and plays a critical role in meeting the healthcare needs of more than 700,000 residents of the greater South Bay region. There are currently approximately 340,000 patient visits to the Campus annually, including admittances and discharges, diagnostics and treatment, and patient exam visits. Total existing employment at the Medical Center Campus, including the Hospital and both major and minor tenants is approximately 5,464 employees. Existing building heights range from one to eight floors, with the Existing Hospital Tower in the northeast portion of the Medical Center Campus representing the tallest building at eight floors. See Figure 2-3, Existing Campus Buildings, in Chapter 2.0, *Project Description*, of this Draft EIR for an illustration of the layout of the existing buildings, parking areas, and internal streets at the Medical Center Campus.

(2) County of Los Angeles 2014 Population and Housing Estimates

The Medical Center Campus is located within unincorporated Los Angeles County, and Project impacts within the Unincorporated County and County-wide levels are considered in this analysis. Population and housing data is shown in **Table 4.J-1**, *Population and Housing Summary (2014),* which is based on information and data from SCAG's 2016 RTP/SCS and associated documents. As indicated in Table 4.J-1, the 2014 population for the South Bay Cities Subregion was 867,885 people residing in 304,945 household units. The 2014 population for the Unincorporated County population was 1,046,557 people residing in 293,427 household units. The 2014 population for the Los Angeles County was 10,041,797 people residing in 3,268,347 household units. The average household size is 2.8 persons for the South Bay Cities Subregion, 3.5 persons in the Unincorporated County areas, and 3.0 persons in the Los Angeles County.

Table 4.J-1

Population and Housing Summary (2014)

	Population	Housing Units	Average Household Size
South Bay Cities Subregion[a]	867,885	304,945	2.8
Unincorporated County of Los Angeles	1,046,557	293,427	3.5
Los Angeles County	10,041,797	3,268,347	3.0

[a] *For the purposes of this analysis and comparison, we will include analysis based on the South Bay Cities Council of Governments (SBCCOG), which is one of 15 subregions that serve as a conduit between SCAG and the cities and counties of the region. Input from the subregions help shape the SCAG policies and RTP/SCS even though the subregions are not represented specifically in the 2016 RTP/SCS. The data used for the South Bay Cities Subregion is interpolated from the 2012 and 2020 estimations in the 2016 RTP/SCS Draft Growth Forecast for South Bay Cities Council of Governments, available at http://hermosabeach.granicus.com/MetaViewer.php?view_id=6&clip_id=3027&meta_id=148821.*

Source: Data for the Unincorporated County of Los Angeles and Los Angeles County are taken from the SCAG Profile of the Unincorporated Area of Los Angeles County (May 2015). Available at http://www.scag.ca.gov/documents/unincarealosangelescounty.pdf.

(3) Projected Population, Housing and Employment Estimates

The SCAG 2016 RTP/SCS is based on growth projections for population, households, and employment prepared for regional, county, and local jurisdictional areas and transportation analysis zones (TAZs). The 2016 RTP/SCS reports demographic data for 2012, 2020, 2035, and 2040.[1] The 2016 RTP/SCS forecasts represent the likely growth scenario for the Southern California region in the future, taking into account recent and past trends, reasonable key technical assumptions, and local or regional growth policies. An estimate of the 2016 baseline population, growth projections for Project buildout in 2030, and the SCAG 2040 Horizon Year, are shown in **Table 4.J-2**, *Projected Population, Housing and Employment Estimates*, and discussed below.[2]

(a) Population

As indicated in Table 4.J-2, the South Bay Cities Subregion population is expected to increase by 48,893 people or 5.6 percent by the time of Project buildout in 2030. Population within the Unincorporated Los Angeles County communities is expected to grow by 120,030 people or 11.2 percent during that same period. The total population of the County, including both incorporated and Unincorporated Los Angeles County communities, is expected to increase by 834,240 people, or 8.2 percent also during that same period.

By 2040, the Horizon year of the SCAG projections, the population is expected to increase in the South Bay Cities Subregion by 81,489 people, or 9.3 percent. Population within the Unincorporated Los Angeles County communities is expected to grow by 200,050 people or 18.6% percent during that same period. The total

[1] *SCAG provides City and County population, housing, and employment estimates for 2012, 2020, 2035 and 2040 in the 2016 RTP/SCS Demographics & Growth Forecast. Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed June 2016. Data specifically for the South Bay Cities Subregion is taken from http://hermosabeach.granicus.com/MetaViewer.php?view_id=6&clip_id=3027&meta_id=148821.*

[2] *The 2016 baseline estimate was determined by interpolating from data presented in the SCAG projections.*

Table 4.J-2

Projected Population, Housing and Employment Estimates

	2016 Baseline	Projected Buildout Year – 2030			SCAG 2040 Horizon Year		
		Projected	Total Growth	Percentage Increase	Projected	Total Growth	Percentage Increase
Population							
South Bay Cities Subregion	873,308	922,201	48,893	5.6%	954,797	81,489	9.3%
Unincorporated Los Angeles County	1,073,650	1,193,680	120,030	11.2%	1,273,700	200,050	18.6%
Total Los Angeles County	10,124,400	10,958,640	834,240	8.2%	11,514,800	1,390,400	13.7%
Housing							
South Bay Cities Subregion	308,206	327,311	19,105	6.2%	340,047	31,841	10.3%
Unincorporated Los Angeles County	312,700	360,520	47,820	15.3%	392,400	79,700	25.5%
Total Los Angeles County	3,375,650	3,718,220	342,570	10.1%	3,946,600	570,950	16.9%
Employment							
South Bay Cities Subregion	393,525	421,691	28,166	7.2%	440,469	46,944	11.9%
Unincorporated Los Angeles County	230,200	265,120	34,920	15.2%	288,400	58,200	25.3%
Total Los Angeles County	4,454,550	4,917,300	462,750	10.4%	5,225,800	771,250	17.3%

Source: Based on SCAG data prepared for the 2016 – 2040 RTP/SCS. Estimates for years presented in the table are based on interpolation of data presented in the RTP/SCS for 2012, 2020 and 2040. Compiled by PCR Services Corporation, 2016.

population of Los Angeles County is expected to increase by 1,390,400 people, or 13.7 percent also during that same period.

(b) Housing

As indicated in Table 4.J-2, the number of households/occupied housing units is expected to increase in the South Bay Cities Subregion by 19,105 units or 6.2 percent by the time of Project buildout in 2030. The number of households within the Unincorporated Los Angeles County communities is expected to grow by 47,820 units or 15.3 percent by the time of Project buildout in 2030. The total number of households in the County, including both incorporated and Unincorporated Los Angeles County communities, is expected to increase by 342,570 units, or 10.1 percent also during that same period.

By 2040, the number of households in the South Bay Cities Subregion is expected to increase by 31,841 units or 10.3 percent. The number of households within the Unincorporated Los Angeles County communities is expected to grow by 79,700 units or 25.5 percent during that same period. The total number of households in Los Angeles County is expected to increase by 570,950 units, or 16.9 percent also during that same period.

(c) Employment

As shown in Table 4.J-2, the number of workers in the South Bay Cities Subregion is expected to increase by 28,166 workers or 7.2 percent by the time of Project buildout in 2030. The number of workers within the Unincorporated Los Angeles County communities is expected to grow by 34,920 employees or 15.2 percent during that same period. The total number of workers in Los Angeles County is expected to increase by 462,750 people, or 10.4 percent also during that same period.

By 2040, the number of workers in the South Bay Cities Subregion is expected to increase by 46,944 workers or 11.9 percent. The number of workers within the Unincorporated Los Angeles County communities is expected to grow by 58,200 workers, an increase of 25.3 percent during that same period. The total number of workers in Los Angeles County is expected to increase by 771,250 people, or 17.3 percent also during that same period.

b. Regulatory Framework Summary

No federal or state regulations are applicable to population and housing impacts resulting from the Project. Below is a summary of the applicable regional and local regulatory requirements.

(1) Regional

The Project is located within the jurisdiction of SCAG, a Joint Powers Agency established under California Government Code Section 6502 et seq. Pursuant to federal and State law, SCAG serves as a Council of Governments, a Regional Transportation Planning Agency, and the Metropolitan Planning Organization (MPO) for Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial Counties. SCAG's mandated responsibilities include developing plans and policies with respect to the region's population growth, transportation programs, air quality, housing, and economic development. Specifically, SCAG is responsible for preparing the Regional Comprehensive Plan (RCP), the RTP/SCS, and Regional Housing Needs Assessment (RHNA), in coordination with other State and local agencies. These documents include population, employment, and housing projections for the region and its 13 subregions. The Medical Center Campus is located within the South Bay Cities Subregion.

(a) Regional Comprehensive Plan

As part of its planning obligations, SCAG prepares the RCP, most recently updated in 2008. The RCP does not itself include population projections, but serves as a policy guide upon which population projections are prepared in updates to the RTP. The 2008 RCP is an advisory document that may be voluntarily used by local jurisdictions when developing local plans and addressing local issues of regional significance. It addresses issues related to future growth and provides a means for assessing the potential impact of individual development projects within a regional context. Local governments are asked to consider the RCP's recommendations in the preparation of General Plan updates, municipal code amendments, design guidelines, incentive programs and other actions.

(b) Regional Transportation Plan/Sustainable Communities Strategy

In April 2016, SCAG adopted the 2016 RTP/SCS. The 2016 RTP/SCS presents the transportation vision for the region through the year 2040 and provides a long-term investment framework for addressing the region's transportation and related challenges. As previously discussed, the RTP/SCS also contains baseline socioeconomic projections that are the basis for SCAG's transportation planning, and the provision of

services by other regional agencies. It includes projections of population, households, and employment at the regional, county, and local jurisdictional levels, and TAZs that provide small area data for transportation modeling.[3] The Project area is also located within a SCAG-identified high-quality transit area (HQTA). A high-quality transit area is generally a walkable transit village or corridor, consistent with the adopted 2016 RTP/SCS, that has a minimum density of 20 dwelling units per acre and is within a ½-mile of a well-serviced transit stop with 15-minute or less service frequency.

The RTP/SCS identifies the amount of expected growth in the region and provides the expected distribution of that growth. The distribution reflects goals cited in the 2016 RTP/SCS. These goals seek to align the plan investments and policies with improving regional economic development and competitiveness; maximizing mobility and accessibility; ensuring travel safety and reliability for all people and goods in the region; preserving and ensuring a sustainable regional transportation system; maximizing productivity of the transportation system; protecting the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking); actively encouraging and creating incentives for energy efficiency, where possible; encouraging land use and growth patterns that facilitate transit and non-motorized transportation; and maximizing the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

(c) Regional Housing Needs Assessment

SCAG prepares the RHNA as mandated by State law as part of the periodic updating of the Housing Elements of General Plans by local jurisdictions. The RHNA identifies the housing needs for very low income, low income, moderate income, and above moderate income groups. The most recent RHNA allocation, the "5th Cycle RHNA Allocation Plan", was adopted by the Regional Council on October 4, 2012. This allocation identifies housing needs for the planning period between October 2013 and October 2021. Local jurisdictions are required by State law to update their General Plan Housing Elements based on the most recently adopted RHNA allocation.

(2) Local

(a) County of Los Angeles 2035 General Plan Update

California law requires that every city and county prepare and adopt a long-range comprehensive General Plan to guide future development and to identify the community's environmental, social, and economic goals. The County of Los Angeles 2035 General Plan Update was approved and adopted by the Board October 6, 2015. The General Plan Update serves as a document to provide decision-makers with a policy framework to guide specific, incremental decisions, and establishes the long range vision for how and where Unincorporated Los Angeles County areas will achieve the Plan's stated goals and objectives, which focus on fostering healthy, livable, and sustainable communities. The following five guiding principles work to emphasize the concept of sustainability throughout the General Plan:

[3] *SCAG provides City and County population, housing, and employment estimates for 2012, 2020, 2035 and 2040 in the 2016 RTP/SCS Demographics & Growth Forecast. Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed June 2016.*

1. Employ Smart Growth: Shape new communities to align housing with jobs and services; and protect and conserve the County's natural and cultural resources, including the character of rural communities.

2. Ensure community services and infrastructure are sufficient to accommodate growth: Coordinate an equitable sharing of public and private costs associated with providing appropriate community services and infrastructure to meet growth needs.

3. Provide the foundation for a strong and diverse economy: Protect areas that generate employment and promote programs that support a stable and well educated workforce. This will provide a foundation for a jobs-housing balance and a vital and competitive economy in the unincorporated areas.

4. Promote excellence in environmental resource management: Carefully manage the County's natural resources, such as air, water, wildlife habitats, mineral resources, agricultural land, forests, and open space in an integrated way that is both feasible and sustainable.

5. Provide healthy, livable and equitable communities: Design communities that incorporate their cultural and historic surroundings, are not overburdened by nuisance and negative environmental factors, and provide reasonable access to food systems. These factors have a measureable effect on public well-being.

(i) General Plan Update Elements

The General Plan Update contains nine elements, including Land Use, Mobility, Air Quality, Conservation and Natural Resources, Parks and Recreation, Noise, Safety, Public Services and Facilities, and Economic Development. The General Plan Update is the foundational document for all community-based plans that serve the County's unincorporated areas. The Medical Center Campus is located in the County's South Bay Planning Area, one of 11 Planning Areas which make up the County, but is not located within an adopted County Specific Plan area.

The Medical Center Campus is designated for "P" (Public and Semi-Public) land use by the General Plan Update which permits a broad range of public and semi-public uses, including but not limited to hospitals, universities/colleges, offices, medical clinics, and medical research/laboratories, at a maximum FAR of 3:1.[4] Also, the eastern two-thirds of the Medical Center Campus is designated as a Transit Overlay District (TOD) by the General Plan Update due to its proximity to the Metro Transit Station (Silver Line) (approximately 0.10 miles to the east), which has associated with it development and design standards and incentives to facilitate transit-oriented development.[5]

(ii) General Plan Update Economic Development Element

The Economic Development Element outlines the County's economic development goals, and provides strategies that contribute to the economic well-being of Los Angeles County. The overall performance of the

[4] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

[5] *Ibid, p.72.*

economy and economic development efforts strongly impact land use and development patterns. It also identifies target industries, or industry clusters, which have the most potential to contribute to a broad-based, stable, and expanding economy for Los Angeles County. Health sciences and biomedical research represent a growing industry that provides high-paying jobs. Los Angeles County cannot capitalize on this sector without addressing the lack of high-tech industrial or office space.

Policy ED 1.4 seeks to encourage the expansion and retention of targeted industries and other growth economic sectors, such as the entertainment industry, aerospace industry, agriculture, transportation and logistics, healthcare, biomedical/biotechnology, hospitality and tourism.

(b) General Plan Housing Element

The Housing Element of the General Plan was prepared pursuant to State law and adopted on April 30, 2014, prior to the General Plan Update. The Housing Element is one of the seven required elements of the Los Angeles County General Plan. The Housing Element serves as a policy guide to address the comprehensive housing needs of Unincorporated Los Angeles County areas. The primary focus of the Housing Element is to ensure decent, safe, sanitary, and affordable housing for current and future residents of the unincorporated areas, including those with special needs. The Housing Element does the following:

- Determines the existing and projected housing needs of the unincorporated areas.
- Establishes goals, policies, and implementation programs that guide decision-making on housing needs.
- Implements actions that encourage the private sector to build housing, and ensure that government policies do not serve as unnecessary constraints to housing production.[6]

Although the County General Plan Housing Element contains a number of goals, policies and objectives related to housing development within unincorporated County areas, they are not directly relevant to the proposed Master Plan Project, as no new housing is being proposed as a part of the Project. However, the Housing Element establishes quantifiable objectives regarding the number of new housing units it anticipates being constructed, in order to accommodate its fair share of the regional housing need and fulfill its allocation under the RHNA. The Housing Element's objective for new housing in unincorporated County areas during the 2014 to 2021 planning is 30,145, units, of which 12,581 units would be for above moderate income units, 5,060 units would be for moderate-income families, 4,650 new units would be for low-income, 7,854 would be for very and extremely low-income families.[7]

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of Population, Housing and Employment impacts compares the Master Plan Project's contribution to population, housing, and employment growth to the South Bay Planning Area, unincorporated County and Countywide projections and policies regarding future development. The

[6] *County of Los Angeles, Los Angeles County Housing Element, 2014-2021. Adopted April 30, 2014.*

[7] *Ibid, at page 8.*

analysis evaluates whether the Project's employment creation are consistent with those projections and related policies.

b. Thresholds of Significance

The potential for populations and housing impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State CEQA Guidelines. These questions are as follows:

XIV. Population and Housing. Would the project:

a) Induce substantial population growth in an area, either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The Initial Study determined that the Project would have less than significant impacts with respect to Checklist questions XIV.b) and c. Accordingly, these environmental topics are not evaluated in this EIR.

In consideration of the above factors, the Project would result in potentially significant impacts on population and housing if it would:

PH-1 Induce substantial population growth in an area, either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

c. Project Characteristics or Design Features

(1) Project Characteristics

The Harbor-UCLA Medical Center Master Plan Project would include construction of a new Hospital tower (New Hospital Tower) to meet increasing state law seismic requirements for acute care facilities as mandated by SB 1953, renovation of the existing Hospital building (Existing Hospital Tower) to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. Implementation of the Master Plan Project is expected to meet short-term needs of the Hospital, associated facilities, and other tenants of the Campus, as well as long-term needs beyond 2030. It is anticipated that implementation of the Project would occur in approximately eight phases, with construction commencing in 2017 and anticipated to be completed by 2030. Under the Master Plan Project, the number of Campus-wide employees would increase by 2,030 employees, from approximately 5,464 to approximately 7,494. With new employee positions at the Medical Center Campus, the Project would generate a new indirect residential population in the South Bay Cities Subregion.

(2) Project Design Features

No specific Project Design Features (PDFs) regarding population and housing impacts are proposed by the Project.

d. Project Impacts

Threshold PH-1 Would the project induce substantial population growth in an area, either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact Statement PH-1: *Given the temporary nature of the construction activity, the mobility of construction workers, and availability of a labor pool to draw upon in the area, construction workers would not have a notable impact on the demand for housing, nor affect general housing occupancy and population patterns. Thus, construction activities would not cause growth (i.e. new housing or employment generators) or accelerate development that exceeds projected/planned levels for the year of the Project occupancy/buildout, as compared to growth otherwise occurring, and would not result in a significant adverse physical change in the environment. Operation of the Master Plan Project would create new employment opportunities. The Project's contributions to employment would be consistent with SCAG's short-term and long-term growth projections for the South Bay Cities Subregion, unincorporated Los Angeles County communities and all of Los Angeles County, and would help the County meet or exceed its economic development objectives per the General Plan Economic Development Element, and housing allocation established in the SCAG RHNA. Overall, construction-related and long-term operational impacts regarding the relationship of the Project to growth projections would be less than significant.*

(1) Project-Related Growth

(a) Construction

Construction of the Project would require the participation of construction employees that would be hired from a mobile regional construction work force that moves from project to project. Typically, construction workers pass through various development projects on an intermittent basis as their particular trades are required. Given the mobility and short durations of work at a particular site, and large construction labor pool that can be drawn upon in the region, construction employees would not be expected to relocate residences within this region or move from other regions as a result of their work on the Project.

The number of construction workers would vary on a day to day basis over the course of Project construction. The number of construction workers is estimated to range from approximately 212 workers per day during less intensive construction activity in the initial Project phases up to a maximum of approximately 1,650 construction workers on a given day during the peak construction period (i.e., during Phase 4, which would be expected to overlap with Phase 6 improvements). As the Project would draw on an existing labor pool, the construction impacts of the Project on the number of employees in the region would not be substantial. Further, given the temporary nature of the construction activity, the mobility of construction workers, and availability of a labor pool to draw upon in the area, construction workers would not be expected to have notable impact on the demand for housing, nor affect general housing occupancy and population patterns.

The addition of construction employment opportunities, which is expected to be up to 1,650 workers on a given day during maximum construction activity, would contribute to the economic well-being of the County and region by creating direct employment opportunities for the individuals hired and indirect contributions to the local and regional economy through expenditures of those employees, particularly at retail operations in the Project vicinity.

Overall, based on the above, impacts from construction activity would be considered less than significant.

(b) Operation

As described in the Environmental Setting section above (Subsection 2.a.(1)), the total existing employment at the Medical Center Campus, including the Hospital and both major and minor tenants, is approximately 5,464 employees. The Master Plan Project would create new biomedical research uses (LA BioMed and Bioscience Tech Park), outpatient medical uses, and hospital uses that would add approximately 2,030 new employees to the Medical Center Campus, representing an increase of 37 percent. There would also be an increase in existing site visits, from approximately 340,000 annual patient visits to approximately 410,000, for an increase of approximately 70,000 visits, representing an increase of approximately 20 percent. The Master Plan Project would not contribute new housing stock or add a new residential population to the Medical Center Campus.

The Project's contribution to employment opportunities is compared to growth projections in the SCAG 2016 RTP/SCS for the South Bay Cities Subregion, Unincorporated Los Angeles County communities and Los Angeles County in its entirety in **Table 4.J-3,** *Project Employment Impacts.* The Project would not develop any housing that would cause a direct increase in population.

(i) Proposed Master Plan Employment Impacts

Impacts of the Project on Projections from 2016 Baseline to 2030 Project Buildout Year

As indicated in Table 4.J-3, the Master Plan Project would create 2,030 new employment opportunities. Estimated employment in the South Bay Cities Subregion in 2016, as shown in Table 4.J-2, is 393,525 jobs; with incorporation of the Project, employment would increase to 395,555. The Project's percentage of the estimated growth suggested by SCAG for the 2016 to 2030 time period are shown in Table 4.J-3. As indicated, the Project would provide 5.2 percent of the employment growth reflected in the SCAG data for the South Bay Cities Subregion at Project buildout in 2030. The Project's contribution to employment growth in Unincorporated Los Angeles communities is 5.8 percent of estimated growth for this same period, while for Los Angeles County, the Project's contribution to growth represents a less than one percent increase in projected growth through the 2030 buildout period. Increases in employment are consistent with SCAG's growth projections for the period between 2016 and 2030, the Project buildout year, for the South Bay Cities Subregion, Unincorporated Los Angeles County communities and the County as a whole. Therefore, impacts regarding consistency with the projections would be less than significant.

Table 4.J-3

Project Employment Impacts

Employment	Project Increase	SCAG Projected Growth	Project Percentage of Growth
2016 - 2030 Buildout			
South Bay Cities Subregion	2,030	28,166	7.2%
Unincorporated Los Angeles County	2,030	34,920	5.8%
Total Los Angeles County	2,030	462,750	0.4%
2016 - 2040 Projection Horizon			
South Bay Cities Subregion	2,030	46,944	4.3%
Unincorporated Los Angeles County	2,030	58,200	3.5%
Total Los Angeles County	2,030	771,250	0.3%

Source: PCR Services Corporation, 2016. Projected Growth and Percentage of Growth are based on Table 4.J-2, which in turn is based on SCAG 2016 RTP/SCS projections.

Impacts at the 2016 RTP/SCS 2040 Horizon Year

Similarly to the Project's 2030 buildout year, the Project's contribution to employment in the 2040 SCAG planning horizon year is also consistent with growth projections. Table 4.J-3 shows the Project's impacts with projected growth between 2016 and 2040, the time horizon of the 2016 RTP/SCS. The Project would comprise a smaller increment of growth over that longer period, representing 4.3 percent of the added employees within the South Bay Cities Subregion, 3.5 percent of added employees in Unincorporated Los Angeles County communities, and less than one percent of added growth projected for all of Los Angeles County through the 2040 SCAG planning horizon. As discussed previously, this growth is expected, desirable and within the projected levels, for the County. Impacts regarding these estimates would be less than significant.

(ii) Jobs-to-Housing Ratio

SCAG uses the jobs-to-housing ration as a general tool for evaluating where people live and work and how efficiently they can travel between the two. A jobs-to-housing balance is achieved by increasing employment opportunities for people to live within close proximity to work. The ratio is expressed by the number of jobs divided by the number of housing units. The closer to 1.0 or slightly above is the range which expresses the desired balance.

The Project would add 2,030 permanent jobs, as well as many temporary construction jobs, which may result in a demand for housing in the surrounding area. **Table 4.J-4,** *Jobs-to-Housing Ratio*, compares the current number of jobs and available housing, while also looking at the anticipated impact of the increased jobs generated by the Master Plan Project on existing and forecasted housing stock. The increased employment from the Project, which is 2,030 jobs, is added onto the 2016 baseline of jobs and divided by the projected number of housing units for that time period to assess impacts on housing from Project-generated employment opportunities.

Table 4.J-4

Jobs –to-Housing Ratio

Employment	2016 Baseline	Projected Growth - 2030 Buildout	Projected Growth - 2040 Planning Horizon
Based on SCAG Projections			
South Bay Cities Subregion	1.28	1.29	1.30
Unincorporated Los Angeles County	0.74	0.74	0.74
Total Los Angeles County	1.32	1.32	1.32
Including 2,030 Project-Generated Jobs			
South Bay Cities Subregion	1.28	1.18	1.30
Unincorporated Los Angeles County	0.74	0.74	0.74
Total Los Angeles County	1.32	1.32	1.32

Source: PCR Services Corporation, 2016. Based on SCAG 2012 RTP/SCS projections.

As shown in Table 4.J-4, the current jobs-to-housing ratio in the South Bay Cities Subregion is 1.28, which means that there are more jobs than homes in the area. When the new jobs generated by the Master Plan Project are added on to the existing jobs, the jobs-to-housing ratio remains roughly the same. The increase in jobs caused by the Master Plan Project would not vary significantly from the projected growth in the 2030 buildout year or the 2040 SCAG Planning Horizon. The difference in percentage is very small, and therefore, the Project's increase in jobs as compared to housing is consistent with the forecasted growth in South Bay Cities Subregion, Unincorporated Los Angeles County communities, and the County as a whole. Added employment would be considered beneficial to the economy as new local jobs would contribute to reducing unemployment in the Los Angeles County area. Therefore, impacts regarding consistency with these projections would be less than significant.

(c) Consistency with Growth Projections in Regulatory Documents

(i) General Plan Update

The 2015 General Plan Update was developed to provide direction in land use development for a County population that was estimated to reach 4,827,000 people beyond the 2035 planning horizon. The Master Plan Project proposes to add 0.3 percent to employment growth through the planning horizon Countywide, which is generally consistent with growth projections for the County and General Plan guidelines for accommodating growth. The General Plan Update states five goals, including Principle 3, to "Provide the foundation for a strong and diverse economy: Protect areas that generate employment and promote programs that support a stable and well educated workforce. This will provide a foundation for a jobs-housing balance and a vital and competitive economy in the Unincorporated areas." The Master Plan Project's added contribution to employment growth is consistent with this goal, as the increase in high-quality hospital and biotechnology jobs improves the jobs-to-housing ratio for the South Bay Cities Subregion, unincorporated County Communities and the County as a whole.

(ii) General Plan Update Economic Development Element

As previously discussed, the Economic Development Element outlines the County's economic development goals, and provides strategies that contribute to the economic well-being of Los Angeles County. It also identified health sciences and biomedical research as a target industry with the most potential to contribute to a broad-based, stable, and expanding economy for Los Angeles County.

Policy ED 1.4 seeks to encourage the expansion and retention of targeted industries and other growth economic sectors, such as the entertainment industry, aerospace industry, agriculture, transportation and logistics, healthcare, biomedical/biotechnology, hospitality and tourism. The Master Plan Project would support the General Plan Update Policy ED 1.4 encouraging the expansion of this target industry, particularly within the South Bay Planning Area and the West Carson Employment Protection District, by adding 2,030 permanent, high-quality health care and biomedical jobs. As such, the Project is consistent with General Plan Economic Development Policy 1.4.

(iii) General Plan Housing Element

As previously discussed, the purpose of the General Plan Housing Element is to provide guidance for meeting the County's need for housing per the allocation defined in the RHNA. As noted above, the 2014 – 2021 Housing Element identifies a need for 30,145, new housing units in Unincorporated County communities, of which 12,581 units, i.e. 41.7 percent of all units, would be marketed at above moderate income levels. The remaining 58.3 percent of the needed housing units consist of 5,060 moderate-income units (16.8 percent), 4,650 low-income units (15.4 percent), and 7,584 very and extremely low-income units (25.1 percent). Although the Master Plan Project does not propose to construct any housing, the number of employees who may choose live in the transit-oriented Project area could increase as a result of Project implementation. As discussed above regarding existing housing stock, there are currently enough housing units in the South Bay Planning Area and in unincorporated County communities to accommodate this increase in employees, as the projected housing stock in these regions is anticipated to increase during both the Housing Element and SCAG planning horizons in response to the projected increase in population County-wide. As such, the Project is consistent with the General Plan Housing Element's projections regarding regional housing.

(iv) SCAG Policies

SCAG is tasked with providing demographic projections for use by local agencies and public service and utility agencies. Regional policies and goals are achieved and future service demands are based on SCAG projections. Projections in the SCAG 2016 RTP/SCS serve as the bases for demographic estimates in this analysis of Project consistency with growth projections. The findings regarding growth in the region are consistent with the methodologies prescribed by SCAG and reflect SCAG goals and procedures.

SCAG data is periodically updated to reflect changes in development activity and provisions of local jurisdictions (e.g. zoning changes). Through this updating, service agencies have advance information regarding changes in growth that must be addressed in planning for their provision of services. The 2016 RTP/SCS projections take into account the increase in growth rates that have recently occurred. Changes in the growth rates would be reflected in the new projections for service and utilities planning through the long-term time horizon. Also, SCAG establishes policies pertaining to regional growth and efficient development patterns to reduce development impacts on traffic congestion and related increases in air

quality emissions. These policies are discussed in detail in Section 4.H., *Land Use and Planning,* Section 4.L. *Transportation and Traffic*, and Section 4.B., *Air Quality*.

SCAG, like the County, is encouraging increased density in High Quality Transit Areas as a means of reducing vehicle miles traveled in furtherance of the 2016 RTP/SCS goals, as the reduction in vehicle miles travelled is called for to reduce energy consumption and impacts on the environment. Project implementation would support the attainment of the SCAG policies by providing increased employment opportunities in an extremely well-served High Quality Transit Area. The Project has access to the Carson Street Metro Silver Line Transit Station (0.10 mile away), as well as multiple bus and shuttle lines, including Metro and Torrance Transit lines. The Medical Center Campus is also readily accessible to the regional roadway system, with access provided by the Harbor Freeway (I-110), which is located approximately 1/8th of a mile to the east. As discussed in Section 4.H., growth attributed to the Project would support the attainment of SCAG policies by providing increasing employment opportunities in a High Quality Transit Area.

Based on the 2016 employment and household estimates presented in Tables 4.J-2 and 4.J-4, above, the 2016 jobs-to-housing ratio in the South Bay Cities Subregion is approximately 1.28. The projected 2030 estimate is 1.29. Both of these estimates reflect a healthy balance in employment and housing in the South Bay Cities Subregion, and SCAG projections indicate a trend toward the desired increased employment in the area. This will allow more opportunities for people to reside and work in near proximity, avoiding transit; support greater use of public transit and enhance the jobs-to-housing balance. Based on the information in Table 4.J-4, above, the Project's contribution of net new jobs would further bolster the jobs to housing ratio, thereby contributing to a desired increase in the jobs-to-housing ratio. As such, Project implementation would support and enhance the anticipated trends.

(v) Conclusions Regarding Consistency with Growth Projections in Regulatory Documents

The Project's growth projections are within the growth anticipated in the South Bay Cities Subregion, unincorporated County Communities and the County as a whole, with regard to projections for the longer term in the SCAG data. SCAG projections have been used in the analyses of impacts consistent with the 2016 RTP/SCS. The growth pattern is encouraged in the County and in SCAG policies for increasing employment opportunities in a High Quality Transit Area, improving the trend for reaching a higher jobs-to-housing balance, and promoting development that reduces reliance on individual automobiles, with related lessening of impacts on the environment. Therefore, the Project is consistent with the growth projections contained in the applicable regulatory documents.

(2) Introduction of Unplanned Infrastructure

The Project would link with and tie-into an existing infrastructure system. New infrastructure that would be required, e.g., service connections to local water and sewer systems or electrical transformation facilities, would be sized to serve the Project's needs. No new roadways would be created as a Project component. As discussed in Section 4.M.1, *Water Supply*, and 4.M.2, *Wastewater*, of this Draft EIR, adequate water and wastewater infrastructure would be available to serve the Project, with limited improvements to provide new service connections as necessary. The Project would not open a new area currently not served by infrastructure nor add new facilities that would encourage growth, not otherwise planned in the Project vicinity. Impacts regarding growth associated with the provision of new infrastructure would be less than significant.

e. Cumulative Impacts

(1) Cumulative Growth and SCAG Projections

The cumulative impact analysis addresses the impacts of known and anticipated development in the Project vicinity in combination with the proposed Project, with respect to the anticipated amount and distribution of population, housing and employment. The 26 related projects are listed in Table 3-1 of Chapter 3.0, *General Description of Environmental Setting* of this Draft EIR. Out of 26 related projects, eleven (11) are located in the city of Carson, three (3) are located in the city of Los Angeles, eight (8) are located in the city of Torrance and the remaining four (4) are located in unincorporated Los Angeles County areas. The Project along with the related projects would contribute to the population, housing and employment impacts in the South Bay Cities Subregion. As such, all 26 related projects are considered in this analysis without regard to the jurisdictional boundaries.

The calculation of the cumulative number of housing units, population, and employees is provided in Appendix I of this Draft EIR. A summary of the growth associated with the related projects and the total cumulative growth in combination with the proposed Project is shown in **Table 4.I-5**, *R Development Summary*. As indicated therein, the Project plus related projects would create a total of 7,762 new residents and generate 2,772 new housing units and 7,794 new employees, of which 2,030 would be from the proposed Master Plan Project. There would be no housing developed as a part of the Project that would result in a direct increase in residential population; however, there would be an indirect increase in population to the area.

Table 4.J-5

Cumulative Development Summary

Development	Population [b]	Housing Units [b]	Employment [c]
South Bay Cities Subregion			
Related Projects[a]	7,762	2,772	5,764
Proposed Project - Total at Buildout	**0**	**0**	**2,030**
Total Cumulative Growth	**7,762**	**2,772**	**7,794**

[a] *A list of the Related Projects is Provided in Table 3-1 of Chapter 3.0 of this Draft EIR..*
[b] *The tabulation of cumulative project housing units and calculation of associated population is presented in Table 1 of Appendix I of this Draft EIR.*
[c] *The tabulation of employment generation for the related projects is presented in Table 2 of Appendix I of this Draft EIR.*

Source: PCR Services Corporation, 2016.

(a) Analysis of Cumulative Growth

Table 4.I-6, *Cumulative Population, Housing and Employment Impacts,* compares projected cumulative growth inclusive of the Project to 2040 horizon year projections in the 2016 RTP/SCS. The related projects include a broad array of housing, retail, entertainment, office and studio uses. As noted above and reflected in Table 4.J-6, cumulative development would create 2,772 residential units with housing for a population of 7,762. As indicated in Table 4.J-6, this would comprise approximately 9.5 percent of the population growth estimated in the SCAG projections for the South Bay Cities Subregion by the 2040 horizon year, 3.4 percent of

Table 4.I-6

Cumulative Population, Housing and Employment Impacts

	Cumulative Increase[a]	SCAG Projected Growth	Cumulative Percentage of Growth
Population			
2016 - 2040 Projection Horizon			
South Bay Cities Subregion	7,762	81,489	9.5%
Unincorporated County	7,762	200,050	3.4%
Los Angeles County Total	7,762	1,390,400	0.6%
Households			
2016 - 2040 Projection Horizon			
South Bay Cities Subregion	2,772	31,841	8.7%
Unincorporated County	2,772	79,700	3.5%
Los Angeles County Total	2,772	570,950	0.5%
Employment			
2016 - 2040 Projection Horizon			
South Bay Cities Subregion	7,794	46,944	16.6%
Unincorporated County	7,794	58,200	13.4%
Los Angeles County Total	7,794	771,250	1.0%

[a] *The cumulative increase is calculated by comparing the total growth from related projects, including the proposed Project's increase in employment, to growth projected by SCAG through the 2040 planning horizon.*

Source: PCR Services based on the SCAG 2016 RTP/SCS projections. PCR Services Corporation, 2016

population growth in unincorporated County communities, and 0.6 percent of growth for Los Angeles County in its entirety. The new units developed by related projects would represent approximately 8.7 percent of the new households expected in the South Bay Cities Subregion, 3.5 percent in the Unincorporated County Communities, and 0.5 percent of expected households Countywide. The number of new employees, including from the proposed Master Plan Project would represent approximately 16.6 percent of the projected new employees in the South Bay Cities Subregion, 13.4 percent of employees in Unincorporated Communities, and 1.0 percent of employees Countywide.

The population, housing and employment growth estimates for the related projects plus the proposed Project are within the estimated growth rates for the South Region Cities Subregion, the Unincorporated Los Angeles County communities, and the County as a whole. It should be noted that the estimate of cumulative development is conservative, as it does not fully account for existing development that would be replaced, as opposed to net new development, and it is likely that some of the related projects may never be developed. At the same time, other related projects would be proposed in later years in the Project vicinity and other development is occurring elsewhere. The two factors would off-set to a certain degree. However, as the cumulative household estimate is less than one half of the anticipated growth and given that SCAG updates are currently underway and repeated at four year intervals, SCAG will be able to sufficiently monitor growth for future planning purposes. SCAG performs a regular monitoring of factors affecting growth in the region, including monitoring of EIRs, provides self-correcting mechanisms for longer term projections suitable for use by service agencies for their long-term planning.

To the extent that employment might exceed current projections, it is expected that the new employees would come mostly from an existing employment pool and would not require movement of population or additional housing units. The County is still suffering from and seeking to recover job losses that occurred during the 2000s. The Los Angeles County seasonally adjusted unemployment rate was 5.8 percent in December 2015, which is approximately the same percent as the state rate of 5.8.[8]

The increased amount of employment would highlight the Project Site's designations as a Transit Overlay District and the West Carson Employment Protection District, a regional center, and Regional Center Commercial Area. New employment would support County policies that encourage employment growth in such areas. It would also support numerous County and SCAG policies that encourage denser employment in proximity of public transit systems such as those in the Project vicinity, most notably the Metro Silver Line. Such development reduces environmental impacts associated with transportation, air quality, noise and the consumption of natural resources. (For further discussion, refer to Section 4.H., *Land Use and Planning).* The added employment within the South Bay Cities Subregion would absorb new jobs that might otherwise locate in lower density areas that do not provide these advantages.

As noted above, the projected growth associated with the cumulative housing and population would be within the 2040 SCAG projections identified in the 2016 RTP/SCS and would not be cumulatively significant. With regard to employment, given the SCAG mechanisms for updating projections on a timely basis, the ability to accommodate an existing labor pool in the near term, and the potential of the added employment in proximity to public transportation to provide reductions in environmental impacts by contributing to sustainable development patterns, the additional employee growth would not be considered a significant impact. Even if the added employment were significant, which it is not, the Project's contribution would not be cumulatively considerable.

Furthermore, as discussed in Section 4.H., *Land Use and Planning*, the Project would be located within the area identified in as a Transit Overlay District and a High Quality Transit Area. As such, the Project has been anticipated and identified for new housing and employment growth. As discussed in the Initial Study for the Project, located in Appendix A-1 of this Draft EIR, the Medical Center Campus is located in an urbanized area that is served by current infrastructure (e.g., roads and utilities), and community service facilities. The Project's only off-site infrastructure improvements would consist of tie-ins to the existing utility main-lines already serving the Project area, as well as other limited improvements in surrounding areas as necessary to address system reliability and function. The Project would not require the construction of off-site infrastructure that would provide additional infrastructure capacity for other future development beyond the demand of the Master Plan Project itself.

(2) Cumulative Growth Projections and Consistency with Regulatory Documents

(a) Regional/SCAG Policies

As noted previously, the SCAG 2016 RTP/SCS projections have served as the basis for the demographic estimates in this analysis of Project and related projects regarding consistency with growth projections. The

[8] *State of California, Employment Development Department, Labor Market Division, December 2015 California Employment Highlights.*

findings regarding growth in the region are consistent with the methodologies proscribed by SCAG and reflect SCAG goals and procedures.

SCAG data is periodically updated to reflect changes in development activity and provisions of local jurisdictions, e.g. zoning changes. Through this updating, service agencies have advance information regarding changes in growth that must be addressed in planning for their provision of services.

As was the case with the proposed Project, the related projects generally support the development of the South Bay Cities Subregion with a mix of residential, commercial, and target industries, such as biomedical/biotechnology. Development through the vicinity is generally well-served by same transportation infrastructure as the proposed Project, Metro Silver Line, numerous regional Metro Bus lines, and local Torrance Transit lines. All of this development is occurring within an identified SCAG High Quality Transit Area, and such development channeling growth in a manner that reduces vehicle miles traveled supporting regional sustainability development. Therefore, the cumulative development is supportive of recommended growth patterns.

(3) Introduction of Unplanned Infrastructure

Of the related projects, none are new unplanned infrastructure projects that would open new areas for development or increase the capacity of the South Bay Cities Subregion. The South Bay Cities Subregion contains a mature system of service, utility and infrastructure facilities. The cumulative development represents mixed-use infill projects that would generally utilize available capacity and add project-related infrastructure where necessary for local infrastructure connections for the individual projects. This is the case with the proposed Project, which would not create new unplanned infrastructure, but rather would improve, as necessary, existing facilities already serving the Medical Center Campus. Therefore, cumulative development would not introduce unplanned infrastructure or accelerate development in an undeveloped area and cumulative impacts regarding such unplanned development would be less than significant.

4. MITIGATION MEASURES

Project impacts regarding population, housing and employment would be less than significant and no mitigation measures are required. The proposed Project includes Project Design Features and mitigation measures to reduce its impacts on transportation infrastructure and public services that are associated with growth impacts. These Project Design Features and mitigation measures are discussed in the analyses of cumulative impacts for the environmental topics evaluated in Chapter 4.0, Environmental Impact Analysis, of this Draft EIR.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project impacts regarding population, housing and employment are less than significant. As such, no mitigation measures are required.

4. ENVIRONMENTAL IMPACT ANALYSIS
K. PUBLIC SERVICES
1 FIRE PROTECTION AND EMERGENCY SERVICES

1. INTRODUCTION

This section analyzes the Project's potential impacts on fire protection and emergency medical services (EMS) provided by the Los Angeles County Fire Department (LACFD). The analysis addresses potential fire protection and EMS impacts related to service capacity, fire flow, emergency response times, emergency access, and fire safety, and determines whether the Project would generate the need for new or physically altered fire stations. This section is based, in part, on information provided by the LACFD (provided as Appendix G-1, *Fire Department Correspondence*, of this Draft EIR), including November 2014 and July 2015 LACFD comments on the Project's Notice of Preparation, and February 2016 LACFD correspondence. This section also incorporates information from the LACFD 2014 Statistical Summary, LACFD 2012 Strategic Plan, Los Angeles County 2035 General Plan Update Safety Element (Safety Element, 2015) and associated EIR (2015), and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Fire Protection Facilities, Services, and Response Times

The Harbor-UCLA Medical Center Campus is located within the unincorporated Harbor Community Plan Area of the County of Los Angeles, within relatively short distance of several incorporated cities including Los Angeles, Torrance and Carson. Fire protection and EMS is provided to the Project Site by LACFD, with assistance from the fire departments of the surrounding cities under mutual aid agreements with the County.

LACFD provides 24-hour, all-risk emergency services to a population of over four million residents in 58 cities and all of the County's unincorporated communities[1] within a 2,305-square-mile service area.[2] There are three major geographic regions and associated bureaus (North Regional Operations Bureau, Central Regional Operations Bureau, and East Regional Operations Bureau) within the LACFD service area, which are divided into nine divisions and 22 battalions.[3] LACFD provides emergency services in response to a wide range of incidents, including structure fires, wildfires, commercial fires, hazardous materials incidents, urban search and rescue, and swift water rescue.[4] In 2014, LACFD responded to approximately 8,080 fire incidents daily from 171 fire stations and provided over 277,000 emergency medical services.[5] In 2014, LACFD consisted of 4,663 total personnel of whom approximately 2,100 were firefighters, 259 engine companies, 32

1 *Los Angeles County Fire Department Strategic Plan, Engineering our Future, 2012.*

2 *Los Angeles County Fire Department 2014 Statistical Summary.*

3 *Ibid.*

4 *Los Angeles County Fire Department Strategic Plan, op. cit.*

5 *Los Angeles County Fire Department 2014 Statistical Summary.*

truck companies, 67 paramedic squads, 24 paramedic assessment engines, and nine helicopters.[6] LACFD specialty services include four emergency support teams, two urban search and rescue task forces, and four hazardous materials task forces.[7]

The Project Site is located in Division 1, Battalion 7 of LACFD's Central Regional Operations Bureau.[8] LACFD Fire Station 36, located at 127 W. 223rd Street in Cason, approximately 0.7 miles southeast of the Project Site, is the first-in fire station to the Project Site.[9] Fire Station 36 is equipped with two engines and one paramedic unit, is staffed by 30 full-time personnel, had average emergency and non-emergency response times within its service area in 2015 of 4:34 minutes and 6:23 minutes, respectively, and has an estimated emergency response time to the Project Site of 3:33 minutes (LACFD does not have estimated response times for non-emergency calls to the Project Site).[10] During 2015, Fire Station 36 responded to a total of 6,416 emergency and 248 non-emergency incidents, with the emergency incidents including 136 fires, 5,538 medical, and 742 other.[11] The LACFD uses the national guidelines for response times of five minutes for fire and EMS responses and eight minutes for advanced life support (paramedic unit) in urban areas.[12] Therefore, LACFD emergency response times to the Project Site are currently within LACFD's response time goals.

LACFD Fire Station 127, located at 2049 E. 223rd Street in Carson, approximately 3.5 miles east of the Project Site, is the second-in fire station to the Project Site.[13] Fire Station 127 is equipped with one engine and one engine/ladder truck, is staffed by 18 full-time personnel, had average emergency and non-emergency response times within its service area in 2015 of 5:09 minutes and 6:54 minutes, respectively, and has an estimated emergency response time to the Project Site of 7:30 minutes.[14] During 2015, Fire Station 127 responded to a total of 937 emergency and 53 non-emergency incidents, with the emergency incidents including 39 fires, 730 medical, and 168 other.[15]

While LACFD has identified Fire Stations 36 and 127 as the first-in and second-in fire stations serving the Project Site, LACFD operates under a regional concept whereby emergency response units are dispatched as needed to an incident anywhere in LACFD's service territory based on distance and availability, without regard to service areas.[16] Therefore, stations other than the two LACFD fire stations referenced above may respond to emergencies at the Project Site. The locations of the LACFD fire stations referenced above are shown in **Figure 4.K.1-1**, LACFD *Fire Stations Map*, and data about these stations is provided in **Table 4.K.1-1**, *LACFD Fire Stations in the Project Vicinity*, and **Table 4.K.1-2**, *LACFD First-In Fire Station (Station 36) Calls and Response Times*.

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6 *Ibid.*

7 *Ibid.*

8 *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035) SCH No. 201108104, Figure 5.14-1. Certified March 24, 2015.*

9 *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

10 *Ibid.*

11 *Ibid.*

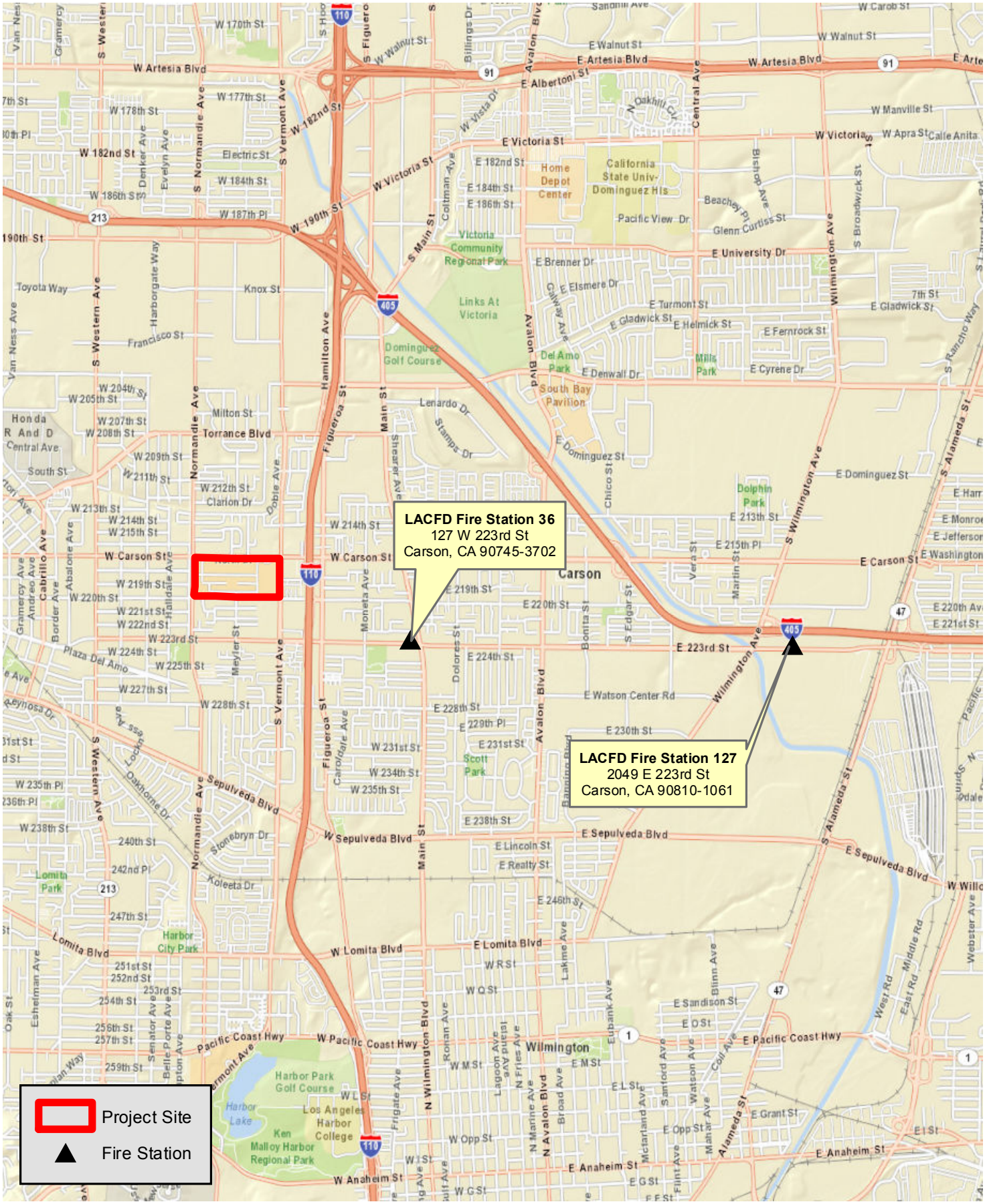
12 *Ibid.*

13 *Ibid.*

14 *Ibid.*

15 *Ibid.*

16 *Ibid.*



PCR

N

0 0.75 1.5 Miles

LACFD Fire Stations Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, February 2016.

FIGURE

4.K.1-1

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Table 4.K.1-1

LACFD Fire Stations in the Project Vicinity

Facility Name	Address	Jurisdiction	Distance (miles)	Equipment and Personnel
LACFD Fire Station 36	223rd Street, Carson	LACFD	0.7	2 engines, paramedic unit, 30 full-time personnel[a]
LACFD Fire Station 127	2049 E 223rd Street, Carson	LACFD	3.5	1 engine, 1 engine/ladder truck, 18 full-time personnel[a]

[a] *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

Source: PCR Services Corporation, February 2016.

Table 4.K.1-2

LACFD First-In Fire Station (Station 36) Calls and Response Times

Calls		Response Times (minutes)	
Type	Total Number in 2015	Average Within Service Area	Estimated to Project Site
Emergency	6,416	4:34	3:33
Non-Emergency	248	6:23	N/A[b]

[a] *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

[b] *LACFD does not have estimated non-emergency response time estimates to the Project Site.*

Source: PCR Services Corporation, February 2016.

According to the LACFD, there are no automatic aid agreements with any other fire protection agency (e.g., cities of Los Angeles, Carson, Torrance, etc.) that affect the Project Site - mutual aid is, by definition, available everywhere but is meant to be invoked only in rare and unusual circumstances.[17] Also according to the LACFD, there are currently no plans for new fire stations in the Project area.[18] Lastly, based on Figure 12.5 (Fire Hazard Severity Zones Policy Map) in the County's 2035 General Plan Update Safety Element, the Project Site is not located within a designated Wildland Fire Hazard Area.[19] Therefore, the Project Site is not subject to wildland fires, and this issue is not addressed further in this section.

(2) Emergency Access

The Project Site is bordered on the north, east and west by major arterials (W. Carson Street, S. Vermont Avenue, and Normandie Avenue, respectively), and is bordered on the south by a collector street (W. 220th Street). Emergency access to the Project Site is available from each of these streets, with direct routes from LACFD Fire Station 36 to the Project Site via either West 220th Street or West Carson Street (0.7 miles). According to Figure 12.6 (Disaster Routes Map) in the County's 2035 General Plan Update Safety Element,

[17] *Ibid.*

[18] *Ibid.*

[19] *County of Los Angeles, Los Angeles County General Plan Update (2035), Chapter 12: Safety Element. Adopted October 6, 2015.*

designated disaster routes within the Project Site vicinity include the Harbor Freeway (I-110) and West Carson Street.[20]

(3) Fire Flow

In general, fire flow requirements are closely related to land use, as the quantity of water necessary for fire protection varies with the type of development, life hazard, type of occupancy, and degree of fire hazard (based on such factors as building age or type of construction). Water service to the Project Site is currently provided by the California Water Service Company (CWS) and the City of Los Angeles Department of Water and Power (LADWP).[21] The CWS provides water service to the Project Site via four connections to CWS water mains in 220th and Carson Streets ranging in size from six to 33 inches, while LADWP provides non-continuous backup water service to the Project Site via one connection to a 78-inch LADWP water main in 220th Avenue.[22] Water pressure tests were conducted in 2009 and 2010 of the CWS water mains serving the Project Site (a pressure test was not conducted of the 78-inch LADWP water main since LADWP does not typically allow new individual connections to its distribution mains).[23] The results of the pressure tests are provided in **Table 4.K.1-3**, *Water Pressure Test Results – Existing Conditions*.

Table 4.K.1-3

Water Pressure Test Results – Existing Conditions

Location	Static Pressure	Residual Pressure	Total Flow Observed	Calculated Flow at 20 PSI
220th Street and Vermont Avenue, west of Vermont Avenue	78 psi	63 psi	4,545 gpm	9,434 gpm
Carson Street and Normandie Avenue	75 psi	68 psi	2,148 gpm	6,538 gpm
220th Street and Vermont Avenue, east of Vermont Avenue	80 psi	28 psi	1,358 gpm	1,467 gpm

Source: Perkins + Will, Harbor UCLA Medical Center Master Plan, Utility and Circulation Existing Conditions Assessment, p.F-5, July 11, 2011.

The pressure test conducted at 220th Street and Vermont Avenue, east of Vermont, was obtained from a hydrant connected to a 6-inch water main in 220th which may have caused the significant pressure drop for this test compared to the other tests which were taken off of 10-inch or larger mains.[24] Although there appears to be significant pressure in the area, the Project's civil engineer recommended that future development at the Project Site verify if the existing system can supply adequate pressures and flows based on final development type and building fire flow requirements.[25]

The existing Hospital tower, recently completed hospital expansion, Harbor-UCLA Professional Building, and several other of the more modern buildings on the Campus are currently sprinklered and standpiped, with

[20] *Ibid, Figure 12.6.*

[21] *Perkins + Will, Harbor UCLA Medical Center Master Plan, Utility and Circulation Existing Conditions Assessment, p.F-4, July 11, 2011.*

[22] *Ibid.*

[23] *Ibid.*

[24] *Ibid.*

[25] *Ibid.*

existing Hospital water pressure deemed adequate at around 80-85 psi.[26] It is assumed that most of the smaller on-site buildings, including most if not all of the World War II-era army barracks, are currently unsprinklered.

b. Regulatory Framework Summary

The following subsections discuss the various codes, regulations and polices applicable to fire protection and EMS services at the federal, state and local levels.

(1) Federal

There are no federal fire protection and EMS regulations pertinent to the Project.

(2) State

(a) California Code of Regulations (CCR)

The California Code of Regulations (CCR) Title 24, 2013 California Building Standards Code, Part 2, California Building Code (CBC) and Part 2.5, California Residential Building Code, is a compilation of building standards including fire safety standards for residential and commercial buildings. CBC standards are based on building standards that have been adopted by State agencies without change from a national model code, building standards based on a national model code that have been changed to address particular California conditions, and building standards authorized by the California legislature not covered by the national model code. Title 24, Part 9 contains the California Fire Code (CFC). Typical fire safety requirements of the CFC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. The CFC applies to all occupancies in California, except where more stringent standards have been adopted by local agencies. The County has adopted the 2013 Edition of the CFC, by reference, with certain changes and amendments.

(3) Local

(a) Los Angeles County General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the Public Services and Facilities Element and the Safety Element. Applicable goals and polices from these Elements are identified below:

> **Goal PS/F 1:** A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.
>
> - **Policy PS/F 1.1:** Discourage development in areas without adequate public services and facilities.
>
> - **Policy PS/F 1.2:** Ensure that adequate services and facilities are provided in conjunction

[26] *Perkins+Will, Harbor-UCLA Medical Center Campus Master Plan, p.63, June 30th, 2012*

with development through phasing or other mechanisms.

- **Policy PF/F 1.6:** Support multi-faced public facility expansion efforts, such as substations, mobile units, and satellite offices.

Goal S 4: Effective County emergency response management capabilities.

- **Policy S 4.1:** Ensure that residents are protected from natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.

- **Policy S 4.2:** Support County emergency providers in reaching their response time goals.

- **Policy S 4.3:** Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.

(b) LACFD Strategic Plan, Engineering Our Future (2012)

LACFD's Strategic Plan is designed to address short- and long-term challenges by providing a roadmap to maximize operational effectiveness, strengthen fiscal sustainability, and maximize integrated services delivery. The Strategic Plan is designed to carry out the County's public safety mission in meeting the current and future needs of over four million residents living and working in communities throughout the County.

(c) LACFD Response Time Standards

LACFD's current response time standard for urban areas is five minutes for fire EMS and eight minutes for advanced life support (paramedic) service.[27]

(d) Los Angeles County Code

(i) Title 32, Fire Code

The County of Los Angeles Fire Code (Fire Code) includes provisions that address fire apparatus access roads, adequate road widths, fire flow requirements, and fire hydrant spacing. For example, Section 105.7.10.1, Land Development Review, requires LACFD review and approval for applications, including parcel maps, final maps, conditional use permits, environmental impact reviews, zone changes, and water plan reviews. Section 503.1.2, et seq., contains requirements for fire apparatus access roads, marking of fire lanes and high-voltage transmission lines, and traffic-calming devices. Section 903.2.11.3, requires the installation of an automatic sprinkler system for buildings with more than three stories. Section 903.7 states that in multistory buildings four stories or higher, the automatic fire sprinkler system shall include an indicating control valve, water flow detector with an alarm bell, drain valve, and inspector's test valve with sight gauge.

[27] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035) SCH No. 201108104, p.5.14-1. Certified March 24, 2015. Also, Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

LACFD personnel have indicated that on-site fire flow requirements will be determined using Table B105.1 of the Fire Code.[28] The maximum required fire flow established in the table is 6,000 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for Type IA, IB, IIA, and IIA building construction types, and 8,000 gpm at 20 psi residual pressure for Type IIB, IIIB, IV, V-A, and V-B building construction types.[29] Appendix B, Section B105.2 states that a reduction in required fire flow of up to 50 percent is allowed when automatic sprinkler systems are provided.[30]

(ii) Title 20, Utilities

Los Angeles County Code (LACC) Title 20, Part 2, Design, Section 12.16.060, Minimum Fire Flow and Fire Hydrant Requirements, specifies that the minimum fire flow and fire hydrant requirements shall be determined by the Fire Chief or Fire Marshal based on local conditions, exposure, congestion, and construction of buildings. Should a minimum fire flow in excess of 5,000 gpm be required by the Fire Chief or Fire Marshal, the determination must first be approved by the water appeals board. Where buildings are constructed of fire-resistive materials and/or provided with automatic sprinkler systems, required fire flow may be reduced. For required fire flows greater than 2,000 gpm, the total required fire flow must be available from no more than the two closest public street fire hydrants to the proposed structure.

(iii) Title 21, Subdivisions

LACC Title 21, Chapter 21.24, Part 1, Design Standards, contains additional access road requirements to ensure adequacy of a route of access during evacuation and on the deployment of fire equipment or other services under emergency conditions. Part 2, Mapping Specifications, Section 21.44.250, requires that each easement shown for any storm drain or sewer or fire access to be designated on the final map or parcel map. Part 3, Local Streets and Ways, Section 21.24.220, requires the provision of fire protection access easements or fire breaks.

(e) Office of Emergency Management and Operational Area Emergency Response Plan

The Office of Emergency Management (OEM) is responsible for organizing and directing the preparedness efforts of the Emergency Management Organization of the County and is the day-to-day County Operational Area coordinator. As part of this effort, OEM prepares and maintains an Operational Area Emergency Response Plan (OAERP) which establishes the coordinated emergency management system including prevention, protection, response recovery, and mitigation.[31]

3. ENVIRONMENTAL IMPACTS

a. Methodology

Fire protection and EMS needs relate to the size of the population and geographic area served, the number and types of calls for service, and the characteristics of the community and the project. Changes in these factors resulting from the proposed Project may increase the demand for services. LACFD evaluates the

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[28] *Perkins + Will, Harbor UCLA Medical Center Master Plan, Utility and Circulation Existing Conditions Assessment, p.F-6, July 11, 2011.*

[29] *Ibid. Also, Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated July 16, 2015. Included in Appendix G-1, Fire Department Correspondence, of this EIR.*

[30] *Ibid.*

[31] *Los Angeles County, Office of Emergency Management, About OEM, http://lacoa.org/aboutoem.html. Accessed July 15, 2015.*

demand for fire prevention and protection services on a project-by-project basis, including review of the proposed land uses, fire protection needs, design features, and estimated emergency response times, to determine if the Project would require new or altered fire-fighting facilities, personnel, and service. Additionally, consideration is given to the size and components of the Project, fire flow necessary to accommodate the Project, fire hydrant sizing and placement standards, access, and the potential to use or store flammable and/or hazardous materials. Based on these factors, a determination is made as to whether LACFD would require new or physically altered facilities to maintain acceptable service levels, the construction of which could result in a potentially significant environmental impact. As part of this analysis, LACFD staff was consulted and their responses incorporated regarding the Project, and applicable information sources, plans and requirements were reviewed and the Project's consistency with them assessed.

b. Thresholds of Significance

The potential for impacts on fire protection and EMS is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines*. This question is as follows:

(XIV) Public Services. Would the project:

a) Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

- Fire protection?

Based on this factor, the Project would have a potentially significant impact on fire protection and EMS if it would result in the following:

FIRE-1: Would the Project require the addition of a new fire station, or the expansion, consolidation or relocation of an existing fire station, to maintain services, which would result in a substantial adverse physical impact on the environment?

c. Project Characteristics or Design Features

(1) Project Characteristics

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus. The existing Campus contains 1,279,284 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a New Hospital Tower that meets current seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities (including approximately a dozen WWII barracks), reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, an increase in building heights across the Campus by an average of two floors above

grade (with the Existing and New Hospital Towers eight floors each above grade), and increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively. The Project would also include a temporary ground-level helistop just west of the LA BioMed Campus along the Project Site's southern boundary, as well as a new permanent rooftop helistop on the New Hospital Tower. Project construction would be anticipated to occur in phases through the year 2030. See Chapter 2.0, Project Description, of this Draft EIR for further project description, including Figure 2-6, *Harbor-UCLA Medical Campus Master Plan Site Plan*, and Table 2-1, *Existing and Proposed Land Use Summary*.

The Project would connect to the CWS water system at various locations along Carson Street, Vermont Avenue, and 220th Street, with domestic water and water for fire flow provided on-site via a combined looped network of primarily 12-inch mains generally located within the primary vehicular circulation areas.[32] It is anticipated that backup water service would continue to be provided by LADWP.[33]

(2) Project Design Features

The Master Plan Project includes the following Project Design Features (PDFs) that are specific to fire protection and emergency medical services:

PDF-FIRE-1: The applicants, designers, construction contractors, and tenants for/of development under the Project will implement the conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, which are included in Appendix G-1, *Fire Department Correspondence*, of this Draft EIR.

The LACFD conditions of approval referenced above are summarized below and include, but are not limited to, the following:

- Provide multiple ingress/egress access for circulation of traffic and emergency response vehicles.
- Every building constructed shall be accessible to Fire Department apparatus by way of Fire Apparatus Access Roads of not less than the minimum widths prescribed in Fire Code Section 503.2.1, with roadways extending to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.
- Fire Apparatus Access Roads shall be a minimum unobstructed width of 28 feet exclusive of shoulders and have unobstructed vertical clearance "clear to sky"
- Dead-end Fire Apparatus Access Roads in excess of 150 feet in length shall be provided with an approved Fire Department turnaround.
- Provide approved signs or other approved notices or markings that include the words "NO PARKING – FIRE LANE".

[32] *Perkins + Will, Harbor UCLA Medical Center Master Plan, Utility and Circulation Existing Conditions Assessment, p.D-2, July 11, 2011.*

[33] *Ibid.*

- Fire Apparatus Access Roads must be installed and maintained in a serviceable manner prior to and during the time of construction.
- Approved building address numbers, building numbers, or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property.
- The method of gate control shall be subject to review by the Fire Department prior to approval, and shall meet specified width, positioning, emergency power, and emergency access requirements.
- The development may require fire flows up to 8,000 gpm at 20 psi residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, the installation of an automatic fire sprinkler system, and type(s) of construction used.
- Fire hydrant spacing shall be every 300 feet for both the public and the on-site hydrants, with no portion of a lot frontage more than 200 feet via vehicular access from a public hydrant, and no portion of a building exceeding 400 feet via vehicular access from public fire hydrant.
- All required public fire hydrants shall be installed, tested, and accepted prior to beginning construction.
- Provide a Fire Department-approved fire sprinkler system in all proposed buildings.

d. Project Impacts

Threshold FIRE-1: Would the Project require the addition of a new fire station, or the expansion, consolidation or relocation of an existing fire station, to maintain services, which would result in a substantial adverse physical impact on the environment?

Impact Statement FIRE-1: *The Project would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing fire station to maintain service due to compliance with County Code and LACFD requirements and PDF-FIRE-1 that address fire safety, emergency access, emergency response times, and fire flow. Therefore, construction and operational impacts would be less than significant.*

(1) Construction

Construction activities associated with the Project would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through the year 2030. These periodic construction activities could temporarily increase demand for fire protection and EMS, and may cause the occasional exposure of combustible materials such as wood, plastics, sawdust, coverings and coatings, heat sources including machinery and equipment sparking, exposed electrical lines, welding activities, and chemical reactions in combustible materials and coatings. However, in compliance with California Division of Occupational Safety and Health Administration (Cal/OSHA) and Fire Code requirements, construction managers and personnel would be trained in fire prevention and emergency response. Fire suppression equipment specific to construction would be maintained on-site. As required by the LACFD and Project Design Feature PDF-FIRE-1, all required fire

hydrants would be nstalled, tested, and accepted prior to construction. Additionally, Project construction would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Therefore, given State, County and LACFD regulations that require construction personnel to be trained in fire prevention and emergency response, required maintenance of fire suppression equipment, and implementation of proper procedures for storage and handling of flammable materials on the Project Site during construction, the demand for fire protection and EMS during construction would be less than significant.

Regarding emergency access and response times during construction, construction staging and construction worker parking associated with the Project would be accommodated on the Project Site, limiting potential conflicts with traffic on local streets. In addition, as required by the LACFD and PDF-FIRE-1, emergency access would be provided and maintained throughout construction to existing uses, new uses, and fire hydrants. Furthermore, while the Project would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site: (1) as discussed in Section 4.L., *Transportation and Traffic*, with the implementation of PDF-TRAF-1, which requires the implementation of a County-required construction traffic management plan, Project traffic impacts during construction would be less than significant; and (2) the Project would implement Mitigation Measure FIRE-1, which requires that Project construction contractors coordinate with LACFD concerning any planned temporary lane closures and other construction activities that could affect emergency access and emergency response times. Therefore, impacts on emergency access and response times during Project construction would also be less than significant.

(2) Operation

(a) Fire Safety

The Project would be subject to the requirements of the County Code (e.g., Building Code, Fire Code, Utilities Code, and Subdivision Code) for new construction that address structural design, building materials, site access, fire lanes, fire flow requirements, automatic sprinkler systems, alarms, and smoke detectors. Per PDF-FIRE-1, the Project would also implement the LACFD fire protection and EMS conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, including but not limited to: provision multiple ingress/egress for emergency response vehicles; provision of Fire Apparatus Access Roads extending to within 150 feet of all structures; provision of the LACFD-specified fire flow; provision of fire hydrants every 300 feet and no portion of a building exceeding 400 feet from a fire hydrant; and provision of fire sprinklers in all buildings. In addition, the LACFD would review and approve all Project plans at the building permit and plan check phases of the Project to ensure compliance with applicable Fire Code requirements, thereby minimizing the risk of increased operation fire safety hazards. Furthermore, the Applicant would be required to submit an Emergency Response Plan for review and approval by LACFD to include, but not be limited to, mapping of site access and emergency exits, evacuation routes for vehicles and pedestrians, and locations of the nearest hospitals and fire stations. Finally, because the Project would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, fire safety at the Project Site would be improved. Therefore, with compliance applicable County Code requirements and implementation of Project Design Feature PDF-FIRE-1, Project operation would not have fire safety issues that would require the construction of new or physically altered fire stations, and the impact would be less than significant.

The Project would increase the net floor area, employee population, and annual patient visits at the Project Site by 48 percent (1,178,071 sf), 37 percent (2,030 employees), and 34 percent (185,745 patient visits), respectively. These increases could potentially result in an increase in calls for LACFD fire protection and EMS service from the Project Site. However, several factors would minimize any such increase. First, because the Project would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, calls for fire protection service resulting from dangerous or flammable conditions would be expected to decrease. Second, because a portion of the new on-site employees would be expected to be derived from the existing local labor pool, and because patients visiting the Project would already reside in the area, many of the additional employees and most if not all of the additional patients already generate a demand for service from LACFD Fire Stations 36 and 127. Third, the Project Site is already fully developed and already generates service calls from LACFD such that the Project would not generate service demand in an area where service demand does not already exist. Fourth, the Project would include an increase in hospital and other medical uses, such that it is reasonable to assume that a portion of the on-site EMS needs under the Project would be provided by the proposed uses themselves rather than be provided by LACFD. Fifth, per Mitigation Measure FIRE-2, the Project would pay the LACFD Developer Fee which would help pay for any new LACFD equipment/personnel required at LACFD Station 36 to serve the Project. Lastly, the LACFD did not identify the need for new or physically altered fire stations associated with the Project in its comments on the Project's Notice of Preparation or other LACFD correspondence included in Appendix G-1 of this Draft EIR. Therefore, with compliance applicable County Code requirements and implementation of PDF-FIRE 1 and Mitigation Measure FIRE-2, Project operation would not be expected to increase calls for LACFD fire protection and EMS service that would require new or physically altered fire stations, and the impact would be less than significant.

(b) Emergency Response Times

As discussed previously, LACFD Fire Station 36 is located 0.7 miles southeast of the Project Site and has an estimated existing emergency response time to the Project Site of 4:34 minutes which falls within the LACFD's response time goals of five minutes for the first-arriving unit for fire and emergency medical services and eight minutes for the advance life support unit (paramedic) unit in urban areas.

Development of the Project would increase the existing employee population and annual patient visits at the Project Site, and would increase operational traffic in the Project vicinity. As determined by the traffic analysis in Section 4.L., *Transportation and Traffic*, of this Draft EIR, Project operational traffic would significantly impact 10 intersections, even with implementation of all feasible mitigation measures. Accordingly, traffic associated with the Project could potentially affect LACFD emergency vehicle response times in the area.

Impacts on traffic that could cause delays in emergency response times are addressed through PDF-TRAF-1 and PDF-TRAF-2. These measures would provide for the installation roadway and traffic control improvements, including a Construction Traffic Management Plan, flag persons, prohibition of construction worker parking on residential streets, and more, which would improve traffic conditions and facilitate emergency access to the Project Site. In addition, emergency response is routinely facilitated, particularly for high priority calls, through use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. In light of the above, and the fact that emergency response times to the Project Site from Station 36 are currently within the LACFD's response time goals, Project operational impacts on emergency response times would not require new or physically altered fire stations, and the impact would be less than significant.

(c) Emergency Access

As discussed previously, emergency access to the Project Site is provided by each of the four streets bordering the Project Site (e.g., West Carson Street, W 220th Street, Normandie Avenue, and S. Vermont Avenue), with three of these streets representing major arterials (e.g. major streets). Also as discussed previously, West Carson Street and I-110 represent the designated disaster routes serving the Project Area. The Project would not permanently close any of these streets or any of the lanes of any of these streets. Furthermore, any roadway and traffic improvements on any of these streets would comply with all applicable County Code requirements and would be reviewed and approved by the Los Angeles County Department of Public Works (see Section 4.L., *Transportation and Traffic*, for further discussion). Therefore, emergency access to the Project Site and the other properties in the Project vicinity would be maintained during Project operation, Project operational impacts on emergency access would not require new or physically altered fire stations, and the impact would be less than significant.

As indicated in Figure 2-8, *Vehicular Circulation Plan*, in Chapter 2.0, *Project Description*, of this Draft EIR, vehicular access into the Project Site would be provided by: a signalized driveway on Carson Street, near the Existing Hospital, which would serve as the main public entry into the Project Site; a second new signalized driveway on Carson Street west of the main entry, one driveway each on Vermont Avenue and Normandie Avenue, and two driveways on 220th Street. A comprehensive on-site signage and wayfinding program would also be implemented to aid in navigation, including naming of the internal streets, naming and numbering of on-site buildings, the provision of street signs at intersections (unlike under existing conditions), and the provisions of directory boards throughout to aid in navigation. Furthermore, all Project driveways and internal streets would be designed and constructed in accordance with applicable County cross-section requirements, as opposed to many of the driveways and on-site streets which were added on a piecemeal basis in the 1940s in the absence of Code requirements. Finally, in accordance with PDF-FIRE-1: every building constructed would be accessible to Fire Department apparatus by way of Fire Apparatus Access Roads designed to County Fire Code specifications and extending to within 150 feet of all exterior walls; Fire Apparatus Access Roads would be marked "NO PARKING – FIRE LANE"; all gate controls would be reviewed and approved by the Fire Department; and the Fire Department would be provided with all gate and building access codes. And again, much of the existing on-site circulation system is not currently designed to County Fire Code specifications. Therefore, emergency access into and within the Project Site would be substantially improved, Project operational impacts on emergency access would not require new or physically altered fire stations, and a beneficial impact would occur.

(d) Fire Flow

The Project would intensify the hospital, medical and office use of the Project Site. According to the LACFD's Land Development Unit: (1) the Project may require fire flows of up to 8,000 gallons per minute (gpd) at 20 pounds per square inch (psi) residual pressure for up to a five-hour duration, although final fire flow requirements will be determined during the building permit and fire plan check phases; (2) fire hydrant spacing shall be every 300 feet for both the public and on-site fire hydrants, which each proposed building either located a maximum of 25 feet from a fire hydrant or constructed with two hour fire walls; and (3) an approved automatic fire sprinkler system is required for all proposed on-site buildings.[34] In accordance with PDF-FIRE-1, the above would be provided under the Project.

[34] *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

As discussed previously, water service to the Project Site is currently provided by CWS and LADWP, with the CWS providing water service via four connections to CWS water mains in 220th and Carson Streets ranging in size from six to 33 inches, while LADWP provides non-continuous backup water service via one connection to a 78-inch LADWP water main in 220th Avenue.[35] Based on the 2009 and 2010 water pressure test results discussed previously for the CWS water mains and summarized in Table 4.K.1-3, adequate water pressure (i.e., 9,434 gpm at 20 psi residual[36]) appears to be available in the 220th Street and Vermont Avenue water main to meet the LACFD-identified preliminary fire flow requirements for the Project, although final fire flow requirements would be determined during the building permit and fire plan check phases of the Project, and such fire flow requirements shall be complied with by the Project, in accordance with PDF-FIRE-1.

Based on the above, adequate fire flow is available to serve the Project, Project operational impacts on fire flow would not require new or physically altered fire stations, and the impact would be less than significant.

e. Cumulative Impacts

Chapter 3.0, General Description of Environmental Setting, of this Draft EIR provides a list of 26 related projects that are planned or are under construction within an approximately 2.4 mile radius of the Project. These projects are summarized in Table 3-1, *Related Projects List*, and shown on Figure 3-1, *Related Projects Map.* As shown in Figure 3-1, these related Projects occur in several jurisdictions, including unincorporated Los Angeles County and the Cities of Los Angeles Carson and Torrance. The Project and related projects would increase the daytime and 24-hour populations and introduce structures that would create increased demand for LACFD fire protection and EMS. This increase in demand could potentially require additional personnel and resources at the LACFD to provide adequate service levels and to maintain existing response times. LACFD operates under a regional concept in its approach to providing fire protection and emergency medical services anywhere in the LACFD service territory without regard to jurisdictional or municipal boundaries.[37] Therefore, all 26 related projects are considered in this analysis without regard to the jurisdictional boundaries of a specific fire station.

Although a cumulative demand for LACFD fire protection and EMS could occur, this demand would be reduced through regulatory compliance, similar to the Project. All the related projects would be subject to review by the LACFD (or the Cities of Los Angeles, Carson and Torrance) for compliance with applicable fire and building code requirements related to fire safety, emergency response times, emergency access, and fire flow which have been formulated to avoid significant fire protection and EMS impacts.

In addition, the LACFD's operating budget, and the operating budgets of the other jurisdictions, include funds generated by property tax revenues which are supplemented by tax-base expansion. Tax-base revenue from Project development—together with revenues from past, present, and reasonably foreseeable future projects—would generate funding for fire protection services. This funding would support any needed increases in staffing, fire stations, and equipment to keep response times within acceptable limits (i.e., five minutes for first arrival and eight minutes for paramedic response within urban areas and eight minutes for first arrival and 12 minutes for paramedic response within suburban areas). Also, some or all of the

[35] *Perkins + Will, Harbor-UCLA Medical Center Master Plan, Utility and Circulation Exiting Conditions Assessment, p.F-4, July 11, 2011.*

[36] *Ibid, p.F-5.*

[37] *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

jurisdictions within which the related projects are located require payment of developer fees to help funding additional fire protection and EMS facilities and services necessitated by new development.

Lastly, while the cumulative demand for fire protection facilities could potentially contribute to the future need for a new fire station in the West Carson community, and while the construction of any such station could potentially result in substantial adverse physical impacts, it would be speculative to predict where and when a new station would be needed as LACFD does not currently have plans for new fire protection facilities in the area. Therefore, it would be speculative to predict the environmental effects resulting from any such improvements, and per State *CEQA Guidelines* Section 15145 regarding speculation, no further analysis is required.

Based on the above, the Project would not substantially contribute to cumulatively considerable impacts regarding fire protection and EMS. Therefore, cumulative impacts would be less than significant.

4. MITIGATION MEASURES

In order to reduce impacts related to fire protection and EMS to less than significant, the following mitigation measures are required:

Mitigation Measure FIRE-1: The Project construction contractors shall regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times.

Mitigation Measure FIRE-2: Prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee, as applicable.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant impacts on fire protection and EMS with adherence to applicable fire protection and emergency services requirements and implementation of the Project Design Features and mitigation measures provided above.

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4. ENVIRONMENTAL IMPACT ANALYSIS
K. PUBLIC SERVICES
2 SHERIFF PROTECTION

1. INTRODUCTION

This section describes existing police protection services and analyzes potential impacts related to these services that would occur as a result of Project implementation. The focus of the analysis is on Los Angeles County Sheriff's Department (LACSD) facilities and staffing resources that currently serve the Project Site and vicinity, including whether the Project would generate the need for new or physically altered sheriff's stations or other facilities. This section is based, in part, on information provided by the LACSD (included in **Appendix G-2**, *Sheriff Department Correspondence*, of this Draft EIR). This section also incorporates information from the: Los County General Plan Update (2035) Safety Element (Safety Element, 2015) and associated EIR (2015); and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) County of Los Angeles Sheriff's Department

The Harbor-UCLA Medical Center Campus is located within the unincorporated Harbor Community Plan Area of the County of Los Angeles, within relatively short distance of several incorporated cities, including Los Angeles, Torrance and Carson. Police protection service in the Harbor Community Plan Area and the Project Site is provided by LACSD, with assistance from the police departments of the surrounding cities (e.g., the cities of Los Angeles, Long Beach, Torrance, and Gardena) under mutual aid agreements with the County.[1]

LACSD provides police protection services to more than one million residents living within 90 unincorporated communities, as well as to more than four million residents living within 42 contract cities.[2] LACSD, which is divided into 10 divisions, also provides police protection services to nine community colleges, Metro, 48 superior courts, and County-owned facilities located in incorporated cities (e.g., parks, marinas, government buildings, hospitals, community colleges, etc.).[3] LACSD, along with the Los Angeles County Fire Department (LACFD), also provides provide first response during declared emergencies such as natural disasters and terrorist events.[4]

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[1] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.*

[2] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035), SCH. No. 2011081042, page 5.14-12. Certified March 24, 2015.*

[3] *Ibid.*

[4] *Ibid.*

(2) LACSD Carson Sheriff's Station

The Project Site is located within LACSD's South Patrol Division and within the service area of the LACSD's Carson Sheriff's Station[5]. The Carson Sheriff's Station, which provides general police protection services within the South Patrol Division, is located at 21356 S. Avalon Boulevard in Carson, approximately two miles east of the Project site.[6] The Carson Sheriff's Station has an approximately 24.21 square mile service area that includes the City of Carson and the unincorporated communities of Rancho Dominguez, Torrance, and Harbor City.[7] The estimated resident population of this service area is 117,000. Other LACSD stations in the vicinity include the Lomita, Compton, and Lakewood Stations, located five, eight and 14 miles from the Project Site, respectively.[8]

As of January 1, 2016, the Carson Sheriff's Station: was staffed by approximately 177 sworn officers and 40 civilian employees; has assigned assets of an undisclosed number of patrol vehicles, motorcycles, unmarked vehicles, and other specialty vehicles; is equipped with a helistop for emergency flight operations; operated on a 24-hour basis utilizing multiple shifts (day, night, and early morning); and had an undisclosed number of personnel per shift.[9] **Table 4.K.2-1**, *Carson Sheriff's Station*, provides summary information concerning this station, while **Figure 4.K.2-1**, *Carson Sheriff's Station*, identifies the location of this station relative to that of the Project Site. According to the LACSD, the Carson Sheriff's Station has operated above capacity for many years, although there are presently no plans in development to expand the station in order to meet the growing needs of the community it serves.[10]

Table 4.K.2-1

Carson Sheriff's Station

Facility Name	Address	Jurisdiction	Distance (miles)	Personnel
Carson Sheriff's Station	21356 S. Avalon Blvd.	LACSD	2.0	177 sworn officers 40 civilian employees

Source: Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.

[5] *Tracey Jue, Director, Facilities Planning Division, LACSD, correspondence dated March 31, 2016. Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016. Also Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

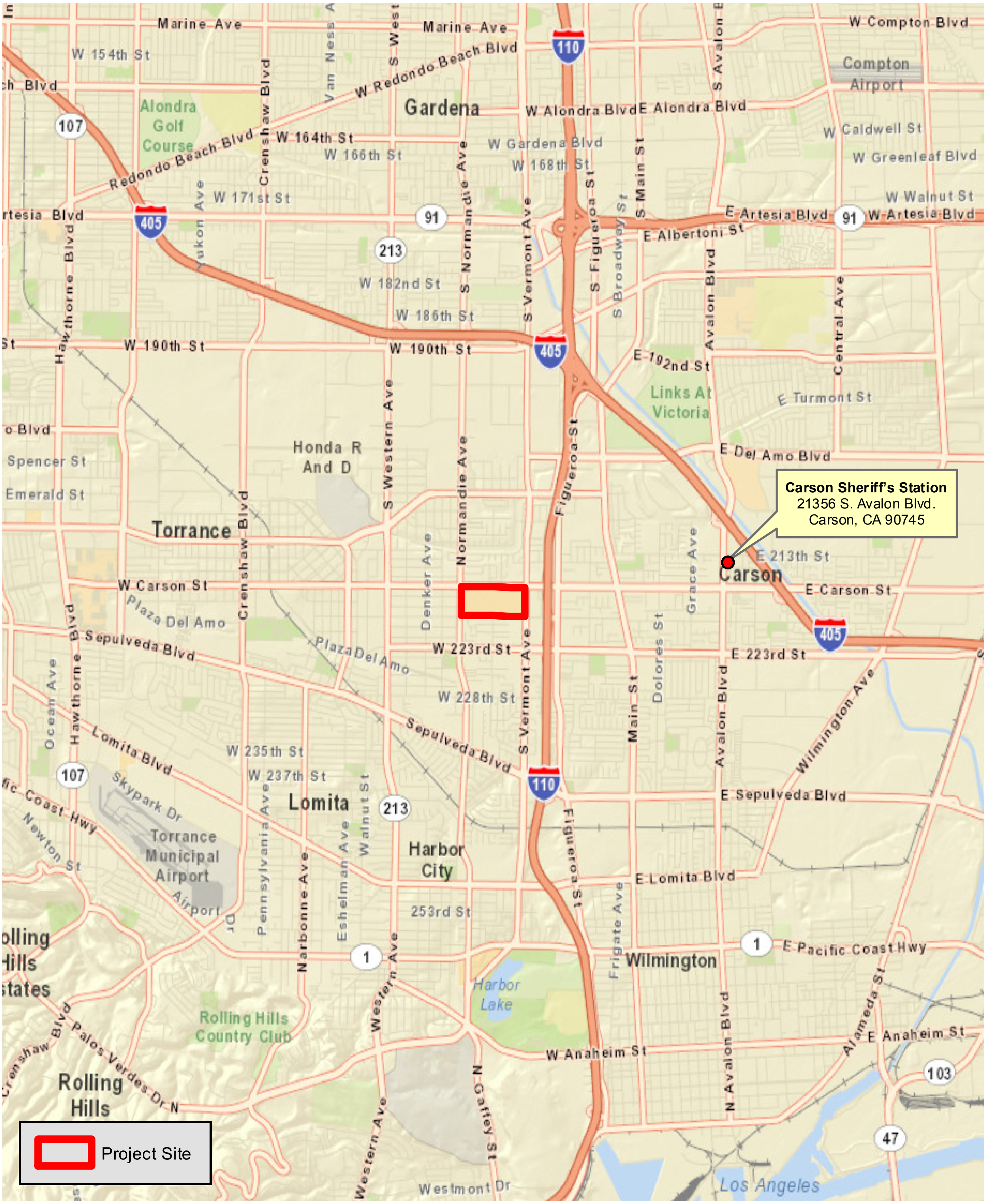
[6] *Ibid.*

[7] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

[8] *Ibid.*

[9] *Tracey Jue, Director, Facilities Planning Division, LACSD, letter dated March 31, 2016.*

[10] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*



N
0
1
2 Miles

Carson Sheriff's Station

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, February 2016.

FIGURE

4.K.2-1

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Table 4.K.2-2, *LACSD Call, Response Time, and Crime Data for the Unincorporated Communities Surrounding the Project Site*, provides 2011-2015 LACSD call, response time, and crime data for the unincorporated communities surrounding the Project Site. As indicated therein, the LACSD received a total of 6,444 calls for Service, had average response times of 4.2 minutes for emergent (crimes in progress that are life threatening), 7.7 minutes for priority (crimes in progress that are not life threatening), and 32.2 minutes for routine calls (crimes that have already occurred and are not life threatening), and had a total of 648 Part I crimes (criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny theft, grand theft auto, arson) reported, in the given geography in 2015. As further indicated, of the 648 crimes reported in the given geography in 2015, the majority were of four types: petty theft (127), vehicle burglary (119), grand theft auto (108), and burglary from a residence (103). Last, as indicated, while average response times within the given geography between 2011 and 2015 decreased, both calls for service and Part I crimes increased during the same period. According to the LACSD, these increases are partly attributable to an increase in homelessness in the area which is believed to be at least partly due to the transport of indigents to the Medical Center from outside the area for treatment, and the lack of transportation and placement services for these patients once released.11 According to LACSD, police response times to the Project Site from the Carson Sheriff's Station are currently four minutes for emergency calls, seven minutes for priority calls, and 28 minutes for routine calls.12 This is compared to the widely-accepted police protection industry standards of 10 minutes or less for emergency calls, 20 minutes or less for priority calls, and 60 minutes or less for routine calls.[13] Therefore, LACSD response times to the Project site are currently well within accepted standards.

(3) LACSD County Services Bureau

Because the Harbor-UCLA Medical Center Campus is a County facility, police protection service for the Project Site is provided primarily by LACSD's County Services Bureau (CSB) rather than by LACSD's Carson Station.[14] As indicated in **Table 4.K.2-3**, *LACSD Harbor-UCLA Medical Center Satellite Station*, CSB operates a satellite station (927 sf) in the Existing Hospital Tower of the Medical Campus which, as of January 1, 2016, was staffed by 24 sworn officers, 25 civilian employees, and 82 non-LACSD contract security guards, with assets assigned to the office including four patrol cars, one Sheriff's security officer vehicle, two unmarked vehicles, two T3 Chariots, and four bicycles.[15] CSB also occupies a locker room facility (1,672 sf) at 21840 Normandie Avenue at the west end of the Campus.[16] CSB operates at the Project Site on a 24-hour basis utilizing multiple shifts (day, night, and early morning).

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[11] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

[12] *Ibid.*

[13] *Ibid.*

[14] *Tracey Jue, Director, Facilities Planning Division, LACSD, letter dated March 31, 2016 and included in Appendix G-2 of this Draft EIR. Also, Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, memorandum dated March 18, 2016 and included in Appendix G-2. Also Chris E. Marks, Carson Station Commander, LACSD, memorandum dated March 22, 2016 and included in Appendix G-2*

[15] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, memorandum dated March 18, 2016 and included in Appendix G-2 of this Draft EIR.*

[16] *Ibid.*

Table 4.K.2-2

LACSD Call, Response Time, and Crime Data for the Unincorporated Communities Surrounding the Project Site

Calls for Service

Call Type	2011	2012	2013	2014	2015
Emergent	298	384	308	336	420
Priority	887	1,084	1,123	1,170	1,241
Routine	3,582	3,826	3,822	4,231	4,783
Total	**4,767**	**5,294**	**5,253**	**5,737**	**6,444**

Average Response Times (Minutes)

Call Type	2011	2012	2013	2014	2015
Emergent	5.1	5.5	4.6	5.2	4.2
Priority	8.2	9	8.4	7.9	7.7
Routine	42.1	49.3	38.5	36.1	32.2

Part I Crimes

Crime Type	2011	2012	2013	2014	2015
Homicide	0	4	2	4	1
Rape	1	1	1	3	1
Robbery, Weapon	8	17	14	11	13
Robbery, Strong-arm	12	15	9	7	10
Aggravated Assault	58	57	48	45	47
Burglary, Residence	82	82	98	81	103
Burglary, Other Structure	39	43	47	56	57
Grand Theft	61	47	52	58	59
Grand Theft Auto	89	106	97	121	108
Arson	3	2	6	2	3
Vehicle Burglary	103	118	113	95	119
Petty Theft	118	144	107	121	127
Total	**574**	**636**	**594**	**604**	**648**

Source: Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.

CSB also maintains several special purpose details in its central office which are available to respond to calls at the Project Site, including an Arson Explosives Detail, Canine Services Detail, Emergency Services Detail

Table 4.K.2-3

LACSD Harbor-UCLA Medical Center Satellite Station

Facility Name	Address	Jurisdiction	Distance	Personnel	Assets
LACSD Harbor-UCLA Medical Center Satellite Station	1000 W. Carson St.	LACSD (CSB)	On-site	24 sworn officers 25 civilian employees 82 non-LACSD security guards	4 patrol cars 1 security vehicle 2 unmarked vehicles 2 T3 chariots 4 bicycles

Source: Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.

(including emergency preparedness and management), Haz-Mat Detail, and Special Enforcement Detail (e.g., involved in high-risk tactical operations).[17]

During 2015, there were a total of 67 Part 1 crimes committed in RD 8545 (which includes the Harbor-UCLA Medical Center site) as set forth in **Table 4.K.2-4**, *2015 Crime Data for RD 8545*. Based on the total existing daytime population at the Project Site of 7,560[18] and the total number of existing officers operating out of the LACSD on-site satellite station of 106[19], the existing on-site officer to daytime population ratio at the Project Site is 1:71.3. Based on the existing daytime population of 7,560 and the total number of Part I crimes on the Project Site in 2015 of 67, the existing annual crimes per capita at the Project Site is 0.009.

Since CSB occupies offices within the Medical Center, CSB police protection response times to the Project Site are extremely rapid.[20] Response times for emergent, priority, and routine calls are often within five minutes.[21] This is compared to the widely-accepted police protection industry standards of 10 minutes or less for emergency calls, 20 minutes or less for priority calls, and 60 minutes or less for routine calls.[22] Therefore, LACSD response times to the Project site are currently well within accepted standards.

(4) LACSD Transit Bureau South

[17] *Ibid.*

[18] *The total existing daytime population at the Project Site was estimated by adding the existing number of on-site employees (5,464) to the existing number of daily patient visits (2,096). The existing number of daily patient visits (2,096) was estimated by dividing the total number of existing annual patient visits (545,079) by the total number of weekday days per year (260). This provides a conservative estimate since it assumes that daily patient visits occur only during weekdays since most of the on-site clinics and other on-site patient-serving uses are only open during weekdays.*

[19] *The total number of existing officers operating out of the LACSD on-site satellite station (106) includes both sworn LACSD officers (24) and non-LACSD contract security guards (82)*

[20] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.*

[21] *Ibid.*

[22] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

Table 4.K.2-4

2015 Crime Data for RD 8545

Part 1 Crime Type	Number of Crimes
Murder/non-negligent homicide	0
Forcible rape	0
Robbery	1
Aggravated assault	1
Burglary	1
Motor vehicle theft	19
Larceny/theft	45
Arson	0
Total	**67**

Source: Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.

LACSD's Transit Bureau South (TBS) provides transit related police protection service (transit-related crimes only) for County Metropolitan Transportation Authority (Metro) facilities, including the Metro Transit Station located on Carson Street approximately 0.10 miles to the east.[23] Because of the proximity of the transit station to the Project Site, and because the Project Site is located within a County-designated Transit Overlay District (TOD) associated with the transit station, TBS assists in providing police protection

service to the Project Site (transit-related crimes only).[24] There were no reported transit-related crimes at the Project Site in 2015; there were a minimal number of transit-related crimes in the area immediately surrounding the Project Site in 2015, but none were related to the Harbor-UCLA Medical Center.[25]

(5) Emergency Management and Response

The CSB's Emergency Operations Bureau, specifically the Tactical Planning Unit and Sheriff's Response Team, is responsible for responding to natural or manmade disasters or emergencies at the Project Site that require the provision of law, order, emergency care, and shelter for disaster victims.[26] The Bureau adheres to the policies and procedures of the Los Angeles County Operational Area Emergency Response Plan (OAERP), maintained by the County Office of Emergency Management (OEM), which outlines the

[23] *Tracey Jue, Director, Facilities Planning Division, LACSD, correspondence dated March 31, 2016. Also, Karl R. Schow, Captain, Transit Bureau South, LACSD, correspondence dated March 17, 2016.*

[24] *Ibid.*

[25] *Ibid.*

[26] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.*

organizational structure for the County's coordinated response to catastrophic events.[27]

(6) Project Site

The 72-acre Project Site, which is bordered by Carson Street, 220th Street, Vermont Avenue, and Normandie Avenue, is currently fully developed with the Harbor-UCLA Medical Center. The Medical Center currently includes a total of 1,279,284 square feet of hospital/inpatient, medical office/outpatient, biomedical research and development (R&D), administrative office, day-care, warehouse/storage, library, central plant, and retail uses, and 453 hospital beds. These land uses support 5,464 existing employees and an estimated 545,079 annual patient visits (including admittances/discharges, diagnostics/treatment, and patient exam visits).

For the most part, the perimeter of the Medical Center Campus is demarcated with chain- link fences and concrete block walls, with limited landscape screening. The parking structures and some of the private streets used for maintenance are also gate-controlled, while most of the public streets and public surface parking lots are not gate-controlled.

The Los Angeles County Department of Health Services (DHS) maintains an existing Security Management Plan for the Harbor-UCLA Campus.[28] The purpose of the Security Management Plan is to minimize the risk of personal injury or property loss/damage due to criminal activity or workplace violence.[29] It is designed to minimize crimes against persons and property, provide security awareness, prepare for the successful management of sentinel security events, and to ensure compliance with applicable codes and regulations.[30] It incorporates patients, visitors, and staff as well as the facilities and grounds of the Medical Center and clinics.[31] The primary provisions of the Security Management Plan are summarized below[32]:

- Provide a visible security presence and patrol to reduce crime and increase the feeling of security by patients, visitors, and staff;
- Provide a timely response to emergencies and requests for assistance, including assistance in subduing violent or aggressive patients or visitors;
- Control vehicle movement on facility grounds, including control of parking and access to the Emergency Department and helistop;
- Provide an employee security orientation and education program;
- Implement routine and emergency incident reporting procedures;
- Implement a program of inspection, preventative maintenance and testing of security equipment;

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27 *Ibid.*

28 *Los Angeles County Department of Health Services, Security Management Plan for the Harbor-UCLA Medical Center, Policy No. 405, effective date March 1996, last revised March 2011.*

29 *Ibid.*

30 *Ibid.*

31 *Ibid.*

32 *Ibid.*

- Implement a plan for access control provisions and employee identification procedures; and
- Conduct annual evaluations of the scope, objectives, performance, and effectiveness of the program.

As part of the Security Management Program, LACSD uses a round-the-clock integrated combination of police protection officers and private security guards for: inspections, preventive maintenance, and testing of security equipment; security hazard identification and correction; monitoring of closed circuit surveillance cameras; weapons screening; access screening/control (including magnetometer screening at the main hospital, key card controls, etc.); and employee security education.[33] The Security Management Plan also outlines requirements for perimeter fencing, area lighting, provision of panic alarms in high risk areas, access controls to buildings and parking structures, and other on-site security features.[34] Finally, the Security Management Plan outlines emergency security procedures for handling security incidents, civil disturbances, bomb threats, infant abductions, hostage situations, and traffic control during security/emergency incidents.[35]

b. Regulatory Framework Summary

(1) Federal

There are no federal police protection regulations pertinent to the Project.

(2) State

There are no State police protection regulations pertinent to the Project.

(3) Local

(a) Los Angeles County General Plan

As a County-run facility on County-owned land in the unincorporated area, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the Public Services and Facilities Element and the Safety Element. Applicable goals and polices from these Elements are identified below:

> **Goal PS/F 1:** A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.
>
> - **Policy PS/F 1.1:** Discourage development in areas without adequate public services and facilities.
> - **Policy PS/F 1.2:** Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.
> - **Policy PF/F 1.6:** Support multi-faced public facility expansion efforts, such as substations,

[33] *Ibid.*

[34] *Ibid.*

[35] *Ibid.*

mobile units, and satellite offices.

Goal S 4: Effective County emergency response management capabilities.

- **Policy S 4.1:** Ensure that residents are protected from the public health consequences of natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.
- **Policy S 4.2:** Support County emergency providers in reaching their response time goals.
- **Policy S 4.3:** Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.

(b) LACSD Level-of-Service Standards

LACSD has indicated that an officer-to-population ratio of one officer to every 1,000 residents provides the desired level of service for its service area.[36] This ideal standard typically is applied in EIRs for proposed projects that are served by LACSD as a means to develop a rough assessment of a project's impacts on police protection services.[37]

(c) LACSD Response Time Standards

As indicated previously, LACSD responses are within widely-accepted police protection industry standards of 10 minutes or less for emergency calls, 20 minutes or less for priority calls, and 60 minutes or less for routine calls.[38]

(d) Los Angeles County Office of Emergency Management

The Los Angeles County Office of Emergency Management's (OEM) is responsible for emergency operations in unincorporated Los Angeles County. OEM's Operational Area Emergency Response Plan (OAERP) establishes the coordinated emergency response system, which includes prevention, protection, response, recovery, and mitigation. The OAERP also provides an overview of emergency management in the area.

(e) Crime Prevention Through Environmental Design

LACSD generally subscribes to the principles of Crime Prevention Through Environmental Design (CPTED).[39] The goal of CPTED is to reduce opportunities for criminal activities by employing physical design features that discourage anti-social behavior, while encouraging the legitimate use of the site.[40] The overall tenets of

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[36] *County of Los Angeles, Los Angeles County General Plan Update (2035), page 5.14-12. Adopted October 6, 2015.*

[37] *Ibid.*

[38] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

[39] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, memorandum dated March 18, 2016 and included in Appendix G-2 of this Draft EIR.*

[40] *Ibid.*

CPTED include defensible space, territoriality, surveillance, lighting, landscaping, and physical security.[41] LACSD ensures that new development adheres to CPTED principals through the provision of comments on development plans during the CEQA and development review processes.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of impacts on police protection services in this section addresses the Project's effects on the ability of LACSD to adequately serve existing and future population at the Project Site, taking into consideration the Project's security and/or design features intended to reduce the demand for police protection services; and potential need for new or expanded LACSD facilities. Because police protection services are provided to the Project Site primarily by the LACSD CBS satellite station on the Project rather than by the Carson Sheriff's Station, this analysis presents statistical for the satellite station and the RD within which the Project Site is located, including the ratio of satellite station sworn officers and contract security personnel to the on-site population, and the ratio of crimes within the RD to the on-site population, as a basis for measuring the increase in policing required for the Project. The analysis uses the above, rather than the LACSD level of service standard of one officer to every 1,000 residents, because the Project does not include a residential component and would not directly increase the number of residents in the West Carson community.

The analysis of impacts on police access and response times in this section focuses on existing response times to the Project Site, the consistency of these response times with LACSD response time standards, and whether the Project would potentially increase these response times due to increased traffic or other factors such that they would no longer be within the response time standards.

The analysis in this section is based on the information sources identified at the beginning of this section.

b. Thresholds of Significance

The analysis of potential impacts on police protection is based on thresholds derived from the Los Angeles County Department of Regional Planning Initial Study Checklist screening question, which is based in part on Appendix G of the State CEQA Guidelines. This question is as follows:

15. Public Services

    a) Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

        - Police protection?

[41] *Ibid.*

Based on this factor, the Project would have a potentially significant impact on police protection if it would result in the following:

SHER-1: Would the Project require the addition of a new police station, or the expansion, consolidation or relocation of an existing police station, to maintain service, which would result in a substantial adverse physical impact on the environment?

c. Project Characteristics or Design Features

(1) Project Characteristics

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Campus). The existing Campus contains approximately 1,279,300 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project), 5,464 existing employees, and an estimated 545,079 annual patient visits. The Master Plan Project encompasses construction of a New Hospital Tower that meets current seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities (including approximately a dozen WWII barracks), reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, and net increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 annual visits or 714[42] daily visits), respectively. Project construction would be anticipated to occur in phases through the year 2030. See Chapter 2.0, Project Description, of this Draft EIR for further project description, including Figure 2-6, *Harbor-UCLA Medical Campus Master Plan Site Plan*, and Table 2-1, *Existing and Proposed Land Use Summary*.

(2) Project Design Features

The Master Plan Project includes the following Project Design Features (PDFs) that are specific to sheriff protection services:

PDF-SHER-1: The County Department of Public Works shall provide the LACSD CSB with the on-site satellite station space, locker space, and associated parking spaces, required to serve the Project. This shall include, at a minimum, the existing amount of satellite station space (927 sf), locker room space (1,672 sf), and associated parking spaces, plus an additional 36 percent (approximately 1,000 sf) of this operational space and associated parking to serve the net increase in on-site employees and patients under the Project.

PDF-SHER-2: Project design shall adhere to the Crime Prevention Through Environmental Design (CPTED) principles. This shall include, but not be limited to, the provision of physical design features that discourage crime such as defensible space, territoriality, surveillance, lighting,

[42] *Daily visits were estimated based on the following formula which assumes that patients visits occur during workdays: 52 weeks per year times 5 days a week = 260 weekdays. So, 185,745 patients ÷ 260 days = ~715 patients a day. This provides a conservative estimate because it assumes that patient visits are restricted to weekdays, largely because most of the on-site clinics and other non-hospital on-site medical uses would only be open during weekdays.*

landscaping, and physical security. The CPTED features shall be identified on the design plans for the Project which shall be provided to the LACSD for review and approval.

d. Project Impacts

Threshold SHER-1: Would the Project require the addition of a new police station, or the expansion, consolidation or relocation of an existing police station, to maintain service, which would result in a substantial adverse physical impact on the environment?

Impact Statement SHER-1: *The Project would not require the addition of a new police station but would require the relocation and expansion of the existing on-site sheriff substation in order to maintain service levels, the construction of which could have potentially significant environmental effects. However, given implementation of Project Design Features and mitigation measures that address police protection service, response times, and Crime Prevention Through Environmental Design (CPTED), construction and operational impacts would be less than significant.*

(1) Construction

(a) Police Protection Services

Construction activities associated with the Project would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through the year 2030. These periodic construction activities could temporarily increase demand for police protection associated with patrolling the construction site. However, as required by Mitigation Measure SHER-1, the construction sites would be fully fenced, lighted with security lighting, and patrolled either by on-site LACSD personnel from the on-site LACSD satellite station or by private security hired by DHS. Furthermore, an LACSD satellite station is located on-site, and the Campus has a 24-hour a day LACSD presence, which would both discourage construction site crimes and provide for almost immediate response to any observed or reported construction site crimes that are in process. Therefore, the demand for police protection services during Project construction would not require new or altered police protection facilities to maintain service, and the impact would be less than significant.

(b) Police Access and Response Times

Regarding police access and response times during construction, construction staging and construction worker parking associated with the Project would be accommodated on the Project Site, limiting potential conflicts with traffic on local streets. In addition, as required by the Mitigation Measure SHER-2, emergency access would be provided and maintained to existing and new on-site uses, and to off-site uses, throughout construction. Furthermore, while the Project would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site: (1) as discussed in Section 4.L., *Transportation and Traffic*, with the implementation of PDF-TRAF-1, which requires the implementation of a County-required construction traffic management plan, Project traffic impacts during construction would be less than significant; (2) the Project would implement Mitigation Measure SHER-3, which requires that Project construction contractors coordinate with the LACSD concerning any planned temporary lane closures and other construction activities that could affect emergency access and emergency response times; and (3) an LACSD satellite station is located on-site such that LACSD response times to calls for service at the Project

Site would continue to be well below LACSD response time standards, even with the addition of Project construction traffic on local streets. Therefore, impacts on police access and response times during Project construction would not require new or altered police protection facilities to maintain service, and the impact would be less than significant.

(2) Operation

(a) Police Protection Services

As indicated previously, the Project would result in a net increase of up to 1,178,071 square feet of building floor area on-site, and net increases in total Campus-wide employees and annual patient visits of up to 2,030 employees and 185,745 annual patients' visits. This would translate to a net increase in the daily on-site population of up to 2,744 persons (an approximately 36 percent increase over the existing on-site daily population of 7,560).[43]. Based on the existing officer to daytime population ratio at the Project Site of 1:71.3, and the existing annual crimes per capita at the Project Site of 0.009, the Project would result in an increase in demand for up to 38 additional officers (both LACSD sworn officers and non-LACSD security guards, a 36 percent increase over the 106 existing officers), and an increase in on-site crimes of an estimated 25 crimes per year. This, in turn, would create the need for additional space at LACSD's on-site satellite station to accommodate the additional officers. However, per Project Design Feature PDF-SHER-1, the Project would continue to provide space for LACSD's satellite station, locker room, and associated parking on-site, and would increase these by a minimum of 36 percent (approximately 1,000 sf) to accommodate the additional officers required to serve the Project's demand for sheriff protection services. The construction of the expanded sheriff substation facilities at the Medical Center Campus would be carried out in the context of the larger Master Plan Project implementation phases, and thus the environmental impacts of such construction activities has been accounted for in the evaluation of impacts presented throughout Chapter 4 of this Draft EIR. Thus, given that the Project would not result in the need for additional construction, consolidation, relocation, or expansion of any other off-site police or sheriff facilities, impacts would be considered less than significant.

In addition, Project design would adhere to the Crime Prevention Through Environmental Design (CPTED) principles as required by PDF-SHER-2, and DHS would revise the Security Management Plan for the Harbor-UCLA Campus, as required, to address the proposed physical and operational changes to the Campus under the Project as required by Mitigation Measure SHER-4. These would include structural and operational security features that would reduce the incremental increase in crime and the need for additional officers under the Project.

Because the environmental impacts associated with constructing the additional on-site LACSD facility space and parking is already evaluated as part of the Project in this Draft EIR (as part of the 1,178,071 sf net increase in Campus-wide square footage), the development of the additional LACSD facility square footage and parking required to serve the Project would not result in additional significant environmental effects.

[43] *The total net increase in daytime population at the Project Site was estimated by adding the net increase in on-site employees (2,030) to the net increase in daily patient visits (714). The net increase in daily patient visits (714) was estimated by dividing the total net increase in annual patient visits (185,745) by the total number of weekdays per year (260). This provides a conservative estimate since it assumes that daily patient visits occur only during weekdays since most of the on-site clinics and other on-site patient-serving uses are only open during weekdays.*

Furthermore, the Project would increase County tax revenues which the County could use to hire the additional officers required to serve the Project. Therefore, Project operational impacts on police protection services would be less than significant.

(b) Police Access and Response Times

The LACSD's Carson Sheriff's Station is located 2.0 miles east of the Project Site and has responses times to the Project Site of four minutes for emergency calls, seven minutes for priority calls, and 28 minutes for routine calls[44], while LACSD's Harbor-UCLA Medical Center satellite station is located on-site and has response times to all three types of calls on-site that are often within five minutes.[45] These are compared LACSD's response time standards of 10 minutes or less for emergency calls, 20 minutes or less for priority calls, and 60 minutes or less for routine calls.[46] Based on the above, LACSD's responses times to the Project Site from both the Carson Sheriff's Station and the on-site satellite station are well within LACSD response time standards.

Development of the Project would increase the existing employee population and annual patient visits at the Project Site, and would increase operational traffic in the Project vicinity. As determined by the traffic analysis in Section 4.L, *Transportation and Parking*, of this Draft EIR, Project operational traffic would significantly impact a total of six intersections under Cumulative (2030) Plus Project Impacts, even with implementation of all feasible mitigation measures. Accordingly, traffic associated with the Project could potentially affect LACSD emergency vehicle response times in the area from the Carson Sheriff's Station, but would not be expected to affect LACSD response times from the on-site satellite station given the on-site location of that facility.

Construction traffic impacts are addressed through PDF-TRAF-1, which requires a Construction Traffic Management Plan. Furthermore, emergency response is routinely facilitated, particularly for high priority calls, through such means as the use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. Also, emergency response times to the Project Site from both the Carson Sheriff's Station and the on-site satellite station are well within the LACSD's response time times standards, and that the majority of on-site calls would be responses to from the on-site satellite station that would be unaffected by off-site traffic. For all these reasons, LACSD response times to the Project Site would continue to be within LACSD response time standards, Project operational impacts on LACSD response times would not require new or physically altered police stations given the provision of an expanded on-site sheriff substation on the Medical Center Campus as required by PDF-SHER-1, and the impact would be less than significant.

e. Cumulative Impacts

(a) Police Protection Services

Chapter 3.0, General Description of Environmental Setting, of this Draft EIR provides a list of 26 related

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[44] *Ibid.*

[45] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.*

[46] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

projects that are planned or are under construction within an approximately 2.4 mile radius of the Project. These projects are summarized in Table 3-1, *Related Projects List*, and shown on Figure 3-1, *Related Projects Map*, in Chapter 3.0. As shown in Figure 3-1, these related Projects occur in several jurisdictions, including unincorporated Los Angeles County and the Cities of Los Angeles Carson and Torrance. Of these related projects, four occur within unincorporated Los Angeles County and, along with the Project, would create a demand for service from LACSD. These four related projects are listed in **Table 4.K.2-4**, *Related Projects for Sheriff Protection*. As indicated therein, these related projects would include a total of 211 dwelling units and 3,900 sf of retail.

Table 4.K.2-4

Related Projects for Sheriff Protection

Map ID	Address	Land Use	Size
1	24500 Normandie Ave.	Apartments	112 du
		Retail	3,900 sf
2	1028 W 223rd St.	Condos	19 du
3	22700 Meyer St.	Condos	60 du
4	19208 Vermont Ave.	Condos	20 du
	Total		**211 du**
			3,900 sf

Source: PCR Services Corporation, May 2016. Based on related projects list from Fehr & Peers Traffic Study, 2016.

Based on the 177[47] sworn officers operating out of the Carson Sheriff's Station and the existing resident population within the Carson Station service area of this station of 117,000[48], the existing officer to resident population in the Carson Station service area is 1:661. Applying this ratio to the 597 residents projected for the related project's 211 dwelling units (based on 2.83 persons per household within the County's South Bay Planning Area), the related projects would create a demand for one additional LACSD officer. And, as discussed previously under the Project analysis, the Project would create a demand for up to 38 additional LACSD officers (both LACSD sworn officers and non-LACSD security guards).

While the Project and the related projects together would generate a demand for up to 39 additional LACSD officers, the related projects would create the demand from the Carson Sheriff's Station while the Project would create the demand primarily from the LACSD CSB on-site satellite station. In this respect, the Project would not contribute to the cumulative demand for service from LACSD's Carson Sheriff's Station. However, even if the demand from the related projects and the Project were considered together, this demand would not be expected to require new or expanded LACSD that would result in additional significant environmental

[47] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

[48] *Ibid.*

effects because: (1) the Project would provide the additional on-site operational space and parking required to accommodate its demand for 38 additional officers, and the impacts of constructing this space and parking is already evaluated as part of the Project in this Draft EIR; (2) it is anticipated that the one additional officer required by the related projects would be able to be accommodated at the Carson Sheriff's Station without expansion because this would represent a less than one percent increase in the number of officers at the station; (3) the Project and the related projects would be required to implement security features, such as those outlined in CPTED, to reduce their demand for service from LACSD; (4) the Project and related projects would be subject to review by LACSD to ensure that required security features are incorporated; and (5) the Project and the related projects would generate tax revenues for the County that the County could use to hire the additional LACSD officers; etc.). Therefore, the cumulative impact on police protection services would be less than significant.

(b) Police Access and Response Times

The Project and the related projects could potentially block access to on-site and adjacent off-site uses, could include construction activities (such as temporary lane closures) that disrupt area traffic, and could generate construction traffic that that results in localized traffic congestion and slows LACSD emergency response. As indicated in the Project analysis above, Project construction activities would not result in significant impacts in terms of these issues because: (1) the Project would restrict most construction staging and parking to the Project Site, implement a construction management plan, and coordinate with LACSD in advance of any lane closures or other activities that could impact emergency access and response times; (2) LACSD response times to the Project Site from both the Carson Sheriff's Station and the LACSD on-site satellite station are both well below LACSD response time standards; and (3) the traffic analysis in Section 4.L., *Transportation and Traffic*, of this Draft EIR concludes that Project construction traffic would result in less than significant traffic congestion. Similarly, as indicated in the Project analysis above, Project operation would not result in significant impacts associated with these issues because: (1) LACSD response times to the Project Site from both the Carson Sheriff's Station and the LACSD on-site satellite station are both well below LACSD response time standards; and (2) while the traffic analysis in Section 4.L., *Transportation and Traffic*, of this Draft EIR concludes that Project operational traffic would significantly impact 10 intersections, even with implementation of all feasible mitigation measures, this traffic would not be expected to adversely affect LACSD response times to the Project Site given the on-site location of the LACSD satellite station.

Several of the above considerations that lead to the conclusions of less than significant Project impacts on police access and response times during Project construction and operation would also apply to the related Projects. For example, like the Project, the related Projects would be required to implement a construction management plan to minimize traffic disruptions during construction, and like the Project, LACSD response times from the Carson Sheriff's Station to the related projects are likely well below LACSD response time standards. Furthermore, emergency response is routinely facilitated through the use of sirens to clear a path of travel, given the grid pattern of the local street system there are likely multiple routes for the Carson Station to each of the related projects such that traffic congested streets could likely be avoided, and LACSD maintains mutual aid agreements with the surrounding cities such that police response could potentially originate from multiple stations in the area. However, it is unknown whether all 26 of the related projects would restrict construction staging and parking on-site, or that the traffic analysis for each of these related projects would conclude less than significant construction and operational traffic impacts. Hence, this analysis conservatively concludes that cumulative impacts to police access and response times would be significant, although the Project's contribution to any such impacts would not be cumulatively considerable

(because the Project would result in less than significant impacts to police access and response times).

While the cumulative impact on police access and response times could potentially contribute to the future need for new or expanded LACSD facilities in the West Carson community, and while the construction of any such facilities could potentially result in substantial adverse physical impacts, it would be too speculative to predict where and when such new or expanded facilities would be needed as LACSD does not currently have plans for new or expanded LACSD facilities in the area.[49] Therefore, per State *CEQA Guidelines* Section 15145 regarding speculation, no further analysis is required.

4. MITIGATION MEASURES

In order to reduce impacts related to sheriff protection to less than significant, the following mitigation measures are required:

Mitigation Measure SHER-1: During Project construction, construction sites shall be fully fenced, lighted with security lighting, and patrolled by either the LACSD on-site satellite station personnel (either sworn officers or contract security guards) or private security hired by DHS.

Mitigation Measure SHER-2: Emergency access to the LACSD shall be provided and maintained to existing and new on-site uses, and to off-site uses, throughout construction.

Mitigation Measure SHER-3: The Project construction contractors shall regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times.

Mitigation Measure SHER-4: The Security Management Plan for the Harbor-UCLA Campus shall be updated by DHS, in consultation with the LACSD, to address the proposed physical and operational changes to the Campus under the Project. At a minimum, the primary security features and measures currently in place at the Campus under the Security Management Plan shall be carried forward under the Project.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant impacts on sheriff protection with implementation of the Project Design Features and mitigation measures provided in this section.

[49] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

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4. ENVIRONMENTAL IMPACT ANALYSIS

K. PUBLIC SERVICES

3 PARKS AND RECREATION

1. INTRODUCTION

This section identifies and describes the public parks and recreational facilities serving the Project Site, including those operated by the Los Angeles County Department of Parks and Recreation (LACDPR) and the surrounding cities (Los Angeles, Carson and Torrance), and analyzes the potential impacts of the Project on these facilities, including whether the Project would generate the need for new or physically altered parks and recreation facilities. This section is based, in part, on information provided by LACDPR and the cities of Los Angeles, Carson and Torrance (included in Appendix G-3, *Parks and Recreation Department Correspondence*, of this Draft EIR). This section also incorporates information from the LACDPR website, Los County General Plan Update (2035) and associated EIR (2015); and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

The Harbor-UCLA Medical Center Campus is located within the unincorporated Harbor Community Plan Area of the County of Los Angeles, within a relatively short distance of several incorporated cities including Los Angeles, Torrance and Carson. Within the unincorporated areas of the County, LACDPR is responsible for providing public parks and recreational facilities. LACDPR owns and administers 70,000 acres of parks and recreational facilities, in both unincorporated areas and cities within the County, broken into a local and regional park system.[1] The local park system is intended to meet the needs of local residents, and consists of neighborhood parks, community parks, pocket parks, and park nodes. The regional park system is intended to meet the needs of residents and visitors throughout the County, and consists of community regional parks, regional parks, and special use facilities (County beaches, golf courses, etc.). In addition, County residents may be served by LACDPR multi-use trails, parks and recreational facilities owned and maintained by the Cities of Los Angeles, Torrance and Carson, parks shared with local schools, and private recreational facilities.

Los Angeles County has an existing average of 3.3 acres of local parkland per 1,000 residents.[2] Within the unincorporated West Carson Community, the ratio is 0.02 acres of parkland per 1,000 residents (e.g., 0.53

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[1] *County of Los Angeles, Los Angeles County General Plan Update (2035), Chapter 10: Parks and Recreation Element. Adopted October 6, 2015.*

[2] *Clement Lau, Department Facilities Planner II, LACDPR, e-mail dated February 22, 2016 and included in Appendix G-3 of this Draft EIR.*

acres / 21,715 residents x 1,000).[3] Hence, the West Carson community is substantially under-served by County parks.

Nine public parks and recreational facilities are located within a two mile radius of the Project site (the service radius for County community parks). The closest County parks are: Learning Grove County Park, a 0.53-acre pocket part located approximately 0.2 miles to the south and the only County park in the West Carson community; the Links at Victoria Golf Course, a special use park located approximately 1.7 miles to the northeast; and Victoria Community Regional Park, a community/regional park located approximately 2.0 miles to the northeast. The closest City parks are: Normandale Recreation Center, a City of Los Angeles neighborhood park located approximately 0.3 miles to the south; Veteran's Park, a City of Carson park located approximately 0.7 miles to the southeast; and Carson Park, a City of Carson park located approximately 0.8 miles to the northeast. Lastly, a new County Neighborhood Park is under construction approximately 1.3 miles north of the Project Site. The locations of these 10 public park and recreational facilities are shown in **Figure 4.K.3-1**, *Public Parks and Recreation Facilities Map*, and while data about these parks and recreation facilities is provided in **Table 4.K.3-2**, *Public Parks and Recreation Facilities in the Project Vicinity*.

There are no public parks and recreational facilities currently located on the HUCLA Campus. As indicated in Figure 2-2, *Aerial Photograph with Surrounding Land Uses*, in Chapter 2.0, *Project Description*, of this Draft EIR, existing on-site landscaped open space areas are limited and discontinuous, with several landscaped courtyards at the western end of the Campus surrounding the MFI and CII buildings, on the LA BioMed Campus, and in scattered locations in the north-central portion of the Campus. The peripheries of the on-site surface parking lots along Vermont Avenue are also planted with trees. However, the remainder of the Campus has little in the way of landscaped open space areas, and there are very few places for patients or visitors to congregate outdoors. Furthermore, there are no landscaped parkways or street trees along the four streets bordering the Project Site.

b. Regulatory Setting

The following subsections discuss the various parks and recreation codes, regulations and polices applicable to the Project at the federal, state and local levels.

(1) Federal

There are no federal parks and recreation regulations applicable to the Project.

(2) State

There are no State parks and recreation regulations applicable to the Project.[4]

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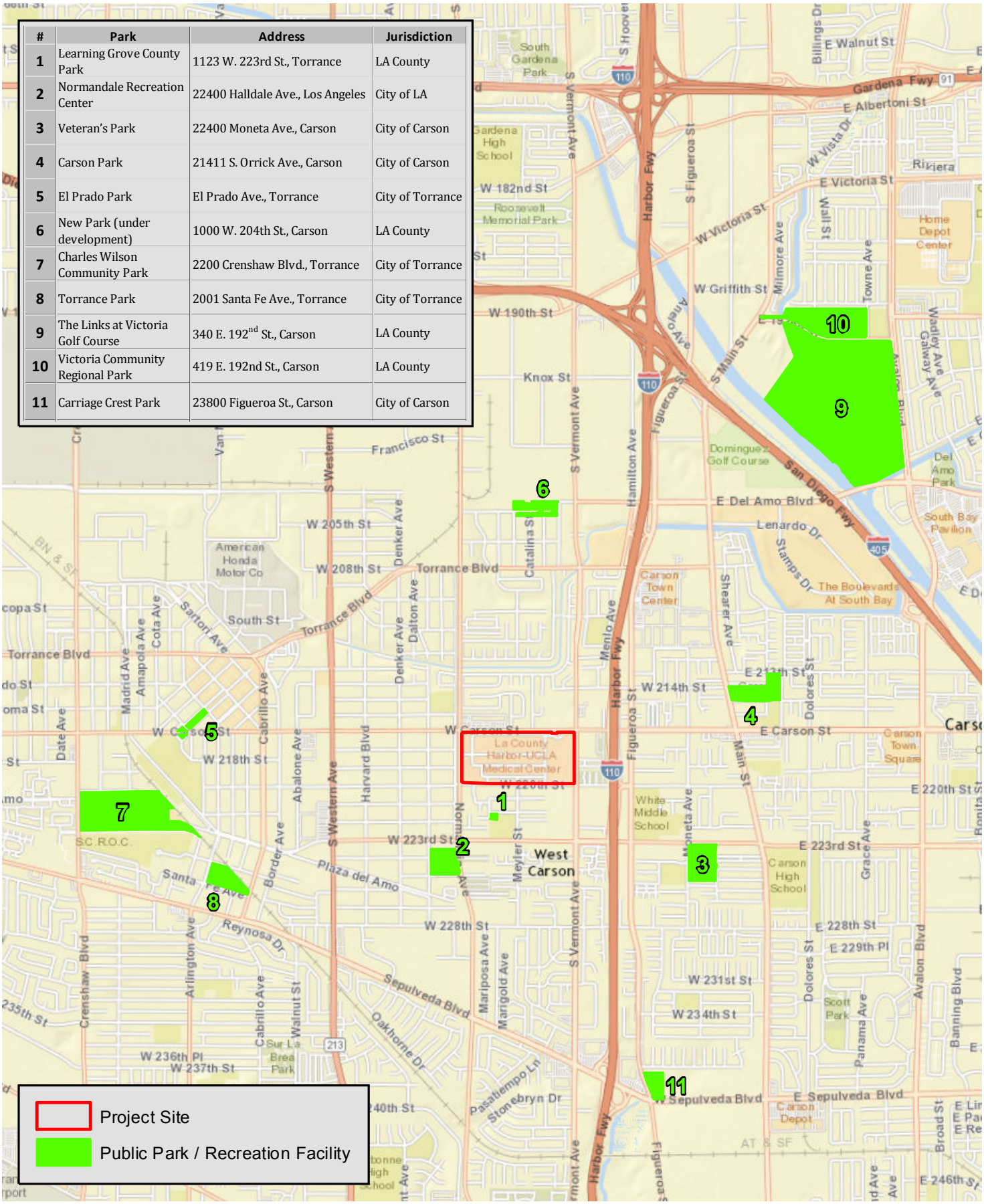
[3] *Ibid.*

[4] *Section 66477 of the California Government Code, also known as the Quimby Act, was enacted by the California legislature in 1975 to promote the availability of park and open space areas in response to California's rapid urbanization. The Act authorizes cities and counties to enact ordinances requiring the dedication of land, the payment of fees for park and/or recreational facilities in lieu thereof, or both, by developers of residential subdivisions as a condition of subdivision approval. Because the proposed Project does not propose a residential subdivision, the Quimby Act does not apply to the proposed Project.*



#	Park	Address	Jurisdiction
1	Learning Grove County Park	1123 W. 223rd St., Torrance	LA County
2	Normandale Recreation Center	22400 Halldale Ave., Los Angeles	City of LA
3	Veteran's Park	22400 Moneta Ave., Carson	City of Carson
4	Carson Park	21411 S. Orrick Ave., Carson	City of Carson
5	El Prado Park	El Prado Ave., Torrance	City of Torrance
6	New Park (under development)	1000 W. 204th St., Carson	LA County
7	Charles Wilson Community Park	2200 Crenshaw Blvd., Torrance	City of Torrance
8	Torrance Park	2001 Santa Fe Ave., Torrance	City of Torrance
9	The Links at Victoria Golf Course	340 E. 192nd St., Carson	LA County
10	Victoria Community Regional Park	419 E. 192nd St., Carson	LA County
11	Carriage Crest Park	23800 Figueroa St., Carson	City of Carson

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Public Parks and Recreation Facilities Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, February 2016.

FIGURE

4.K.3-1

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Table 4.K.3-1

Public Parks and Recreation Facilities in the Project Vicinity

Facility Name	Address	Jurisdiction	Classification[a]	Amenities[a]	Size (ac)[a]	Distance (miles)
Learning Grove County Park	1123 W. 223rd St., Carson	County	Pocket Park	Turf	0.5	0.2
Normandale Rec. Center	22400 Halldale Ave., Torrance	LA	Neighborhood Park	Auditorium, baseball diamond, basketball/volleyball courts, children's play area, football field, gym, soccer field	10.1	0.3
Veteran's Park	22400 Moneta Ave., Carson	Carson	City Park (Community Use)	Baseball diamonds, multi-purpose rooms, play area, picnic area, skate park, tennis courts, amphitheater	12.3	0.7
Carson Park	21411 S. Orrick Ave., Carson	Carson	City Park Community Use)	Baseball diamonds, swimming pool, play area, multi-purpose game courts, multi-purpose building, picnic area, restrooms	10.8	0.8
El Prado Park	El Prado Ave., Torrance	Torrance	City Park	Passive recreation, greenbelt, park benches	2.9	1.2
New Park (under development)	1000 W. 204th St., Carson	County[b]	Neighborhood Park	Baseball/softball field, basketball court, volleyball court, walking/jogging trails, children's play area, benches/picnic tables, restrooms	8.5	1.3
Charles Wilson Community Park	2200 Crenshaw Blvd., Torrance	Torrance	City Park	Picnic areas, barbecues, softball diamonds, basketball courts, outdoor amphitheater, tennis/paddle tennis courts, roller hockey rink, batting cages, fitness course, restrooms	44.1	1.3
Torrance Park	2001 Santa Fe Ave., Torrance	Torrance	City Park	Outdoor band shell, baseball diamond, basketball court, picnic area, children's play area, barbecues, restrooms.	10.2	1.3
The Links at Victoria Golf Course	340 E. 192nd St., Carson	County	Special Use Park	Golf course	167.0	1.7

Table 4.K.3-1

Public Parks and Recreational Facilities in the Project Vicinity

Facility Name	Address	Jurisdiction	Classification[a]	Amenities[a]	Size (ac)[a]	Distance (miles)
Carriage Crest Park	23800 Figueroa St., Carson	Carson	City Park (Community Use)	--	4.9	1.8
Victoria Community Regional Park	419 E. 192nd St., Carson	County	Community/ Regional Park	Gym, multi-purpose room, multipurpose field, baseball diamonds, basketball courts, cricket field, tennis courts, children's play area, heated pool, picnic areas, barbeques	34.0	2.0

[a] *Data for Los Angeles County parks from: http://parks.lacounty.gov/wps/portal/dpr/Parks, accessed February 25, 2015; Clement Lau, Department Facilities Planner II, LACDPR, e-mail dated February 22, 2016 and included in Appendix G-3 of this Draft EIR; and Mark Glassrock, Director of Special Projects, Los Angeles Neighborhood Land Trust, e-mail dated February 29, 2016. Data for City of Los Angeles Parks from: ttp://www.laparks.org /dos/reccenter/facility/normandaleRC.htm, accessed February 25, 2015. Data for City of Carson parks from: http://ci.carson.ca.us/department/communityservices/parks_rec_parks.asp, accessed February 25, 2015. Data for City of Torrance parks from: www.torrance.gov/Parks/Documents/Park AmenitiesGrid(2).pdf), accessed February 25, 2014.*

[b] *Pending lease agreements with Del Amo Neighborhood Park LLC.*

Source: PCR Services Corporation, October 2015

(3) Local

(a) Los Angeles County General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035). The Parks and Recreation Element (Element) of the General Plan Update identifies parkland classifications for County parks and recreational facilities, and provides policy direction for the provision, expansion and maintenance of the County's parks and recreational facilities.[5] The Element breaks the County park system into a local park system consisting of neighborhood parks, local parks, pocket parks and park nodes, and a regional park system consisting of community regional parks, regional parks and special use facilities. **Table 4.K.3-2**, *Los Angeles County Park Classifications*, identifies the Element-specified criteria for each of these park types.

The Element also identifies the following parks and recreation polices applicable to the Project:

- **Policy P/R 1.2:** Provide additional active and passive recreational opportunities based on a community's setting as well as its recreational needs and preferences.
- **Policy P/R 1.3:** Consider emerging trends in parks and recreation when planning new parks and recreational programs.
- **Policy P/R 1.5:** Ensure that County parks and recreational facilities are clean, safe, inviting, usable, and accessible.
- **Policy P/R 3.1:** The County standard for the provision of parkland is 4 acres of local parkland per 1,000 residents of the population in the unincorporated areas, and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.[6]
- **Policy P/R 3.4:** Provide additional parks in communities with insufficient local parkland, as identified through the gap analysis.
- **Policy P/R 3.9:** Site new parks near schools, libraries, senior centers, and other community facilities, where possible.
- **Policy P/R 5.7:** Integrate a range of cultural programs into existing activities, and partner with multicultural vendors and organizations.

[5] *County of Los Angeles, Los Angeles County General Plan Update (2035), Chapter 10: Parks and Recreation Element. Adopted October 6, 2015.*

[6] *This policy is identified here for informational purposes. Because the Project does not include a residential component, this policy is not applicable to the Project.*

Table 4.K.3-2

Los Angeles County Park Classifications

Facility	Typical Park Features and Amenities
Local Park System	
Community Park Acres Per Thousand Population: 4/1,000 Suggested Acreage: 10-20 Service Area: 1-2 miles	Passive park amenities including but not limited to: informal open play areas, children's play apparatus, family and group picnic areas with overhead shelters, barbecues. Active sports activities including but not limited to: lighted sports fields, basketball courts and tennis courts, arena soccer, roller hockey, community gardens, dog parks. Park facilities including but not limited to: public restrooms, concession, community, and maintenance buildings, onsite parking/information kiosks.
Neighborhood Park Acres Per Thousand Population: 4/1,000 Suggested Acreage: 3-10 Service Area: ½ mile	Passive park amenities including but not limited to: informal open play areas, children's play apparatus, group picnic areas with overhead shelters, barbecues. Active park amenities including but not limited to: practice sports fields, basketball, tennis, volleyball courts. Park facilities including but not limited to: public restroom, onsite parking/ information kiosks.
Pocket Park Acres Per Thousand Population: 4/1,000 Suggested Acreage: < 3 Service Area: ¼ mile	Passive park amenities including but not limited to: picnic areas, seating areas. Active park amenities including but not limited to: children's play apparatus.
Park Node Acres Per Thousand Population: 4/1,000 Suggested Acreage: ≤ 1/4 Service Area: No service radius area	Varies: can include plazas, rest areas, playgrounds, landmarks, public art installations.
Regional Park System	
Community Regional Park Acres Per Thousand Population: 6/1,000 Suggested Acreage: 20-100 Service Area: ≤ 20 miles	Passive park amenities including but not limited to: informal open play areas, children's play apparatus, group picnic areas with overhead shelters, barbecues. Additional amenities may include one or more of the following features: multiple sports facilities, aquatics center, fishing lake, community building and gymnasium, scenic views/vistas. Park facilities including but not limited to: public restrooms, concession, community, and maintenance buildings, onsite parking/information kiosks.
Regional Park Acres Per Thousand Population: 6/1,000 Suggested Acreage: > 100 Service Area: ≥ 25 miles	Passive park amenities including but not limited to: group picnic areas with overhead shelters, barbecues. Additional amenities may include one more of the following features: lakes, wetlands, auditoriums, water bodies for swimming, fishing and boating, sports fields.
Special Use Facility Acres Per Thousand Population: 6/1,000 Suggested Acreage: No size criteria Service Area: No service radius area	Generally, single purpose facilities. Can include passive features such as: wilderness parks, nature preserves, botanical gardens, nature centers. Active uses can include: performing arts, water parks, golf courses/driving ranges.

Source: County of Los Angeles, Los Angeles County General Plan Update (2035), Chapter 10: Parks and Recreation Element. Tables 10.2 and 10.3, Adopted October 6, 2015.

(b) Los Angeles County Code

The Los Angeles County Code contains several sections (Sections 21.24.340, 21.24.350, etc.) requiring the dedication of parkland or payment of in-lieu fees by new residential subdivision development to offset the increase in park demand associated with this development as authorized by Section 66477 of the California Government Code (Quimby Act). As a condition of zone change, General Plan amendment, specific plan, or development agreement approval, these codes require applicants to dedicate park land, or pay in-lieu fees for such parkland, based on the following formula set in Section 21.24.340: P = 0.003(UP), where P = acres of parkland, U = number of dwelling units, and P = persons per proposed unit type within the given unincorporated community as identified in the table in the Code section. For example, if a Project in the West Carson community included 1,000 single family residential units, it would be required to provide 8.85 acres of parkland or pay equivalent in-lieu fees (e.g., acres of parkland = 0.003(1,000 x 2.95)).

These code sections are identified here for informational purposes and apply to eligible residential development in the areas around the project. Because the proposed Project does not include a residential component, these requirements do not apply to the Project.

(c) Los Angeles County Parks Proposition A

Parks Proposition A, approved in 1992, with a second Parks Proposition A approved in 1996, authorized an annual County assessment on nearly all of the 2.25 million parcels of real property in Los Angeles County. Parks Proposition A Funds may be used to fund: the development, acquisition, improvement, restoration and maintenance of parks; recreational, cultural and communities facilities; and open space lands. These funds are administered by the Los Angeles County Regional Park and Open Space District. A parcel tax measure will be on the November 2016 ballot in the County which, if approved, would provide continued funding for parks.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis in this section evaluates the potential for impacts to public parks and recreational facilities that would serve the Project. The methodology for this analysis included corresponding with the LACDPR and the Cities of Los Angeles, Carson and Torrance to request current information existing parks are recreational facilities that would serve the Project, service ratios, and performance objectives. In addition, available information concerning parks and recreational facilities was obtained from the LACDPR website, Los County General Plan Update (2035) and associated Environmental Impact Report (EIR, 2015), and other County plans and environmental documents. Based on the addition of the Project, the analysis makes a determination of whether the Project would meet County parks requirements and thus not require new or physically altered parks or recreational facilities, or fall short of such requirements in which case: (1) additional parks and recreational facilities could potentially be required; and/or (2) substantial physical deterioration of existing parks and recreational facilities could occur.

b. Thresholds of Significance

The potential for parks and recreation impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State CEQA Guidelines. These questions are as

follows:

(XV) Public Services.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Parks?

(XVI) Recreation.

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Based on the above factors, the Project would have a potentially significant impact on parks and recreation if it would result in any of the following:

PARKS-1: Would the Project require new or physically altered parks or recreational facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

PARKS-2: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

PARKS-3: Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

c. Project Characteristics and Design Features

(1) Project Characteristics

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Campus). The existing Campus contains approximately 1,279,300 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a New Hospital Tower on schedule to meet increasing state law seismic requirements for acute care facilities, renovation of the Existing Hospital Tower to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, to include new hospital, medical office, medical research, and service commercial uses, a net increase in Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34

percent (185,745 visits), respectively, and an unknown increase in Campus visitors. Project construction would occur in phases through the year 2030. See Chapter 2.0, Project Description, of this Draft EIR for further project description, including Figure 2-6, *Harbor-UCLA Medical Campus Master Plan Site Plan*, and Table 2-1, *Existing and Proposed Land Use Summary*.

There is no existing dedicated open space or natural areas on the Project Site, nor does the County have open space dedication requirements applicable to the limited commercial services (e.g., coffee stand, sundry shop, etc.) that are part of the proposed Project. However, the Project would provide on-site open space in the form of landscaped areas (see Figure 2-6 in Chapter 2.0) for use by Project patients, visitors and employees. These landscaped open space areas would include: a central garden spine extending through the Project Site in a north-south orientation from Carson Street; landscape promenades into the Project Site along the proposed vehicular access routes; several courtyards and plazas, including one immediately east of the existing Surgery/Emergency Medical Building, one immediately south of the proposed New Hospital Tower, one along 220th Street in the area of several of the research centers, and several between the buildings in the Biosciences Campus; and, potentially, roof gardens on some of the Project buildings. Landscaped pedestrian paths would also be provided throughout, and landscaped buffers and street trees would be provided along the campus perimeter.

(2) Project Design Features

The Project does not include any Project Design Features (PDFs) related to parks and recreation.

d. Project Impacts

Threshold PARKS-1: Would the Project require new or physically altered parks or recreational facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

Threshold PARKS-2: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Threshold PARKS-3: Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact Statement PARKS-1: *Project construction and operation would not create a demand for parks and recreational facilities that would require new or physically altered parks and recreational facilities or result in substantial physical deterioration of such facilities. In addition, the Project would not include new recreational facilities or require the construction or expansion of existing facilities. Therefore, the impact would be less than significant.*

(1) Construction

Project construction activities would not physically affect existing public parks and recreational facilities as no such facilities are located on or directly adjacent to the Project Site. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing parks and

recreational facilities would be maintained during Project construction (see Section 4.L., *Transportation and Traffic*, of this Draft EIR for further discussion). Also, while construction activities at the Project Site would potentially be perceptible by users of some of the local parks and recreational facilities (for example, at Learning Grove County Park located approximately 0.2 miles to the south), this would not result in substantial physical deterioration of these facilities.

Project construction would require construction workers at the Project Site intermittently through the year 2030 as discrete phases of the Project are constructed. The exact number of construction workers during each construction phase is not known at this time. However, given the general accessibility of the Project Site and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local parks and recreational facilities such that new such facilities would be required and substantial physical deterioration of such facilities would occur. Furthermore, construction workers would have limited opportunities during the work day to use local parks and recreational facilities, and any demand for parks and recreational facilities that would occur would be limited and temporary, lasting only as long as the given construction phase.

Finally, construction of the proposed on-site landscaped open space amenities could result in environmental effects (e.g., visual impacts, dust and other air emissions, noise, and traffic during the construction period). However, these environmental effects have been evaluated as part of the construction impacts of the Project in Sections 4.A., *Aesthetics*, 4.B., *Air Quality*, 4.I., *Noise*, and 4.L., *Transportation and Parking*, of this Draft EIR, and no additional substantial environmental effects would occur.

Based on the above discussion, Project construction would not require new or physically altered parks and recreational facilities or result in substantial physical deterioration of such facilities. Therefore, impacts would be less than significant.

(2) Operation

As indicated previously in Subsection 3.C., *Project Characteristics and Design Features*, the proposed Project is a commercial project to include new hospital, medical office, medical research, and service commercial uses. No residential uses are proposed. Therefore, the Project would not create a direct demand for parks and recreational facilities, and would not be subject to the park dedication and in-lieu fee requirements of the County Code or the park to resident population standards of the County General Plan.

As indicated above in Subsection 3.C, the Project would result in a net increase of 1,178,071 square feet of building floor area, increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively, and an unknown increase in Campus visitors. This increase in Campus patients, employees and visitors would not be expected to result in a substantial increase in demand for public parks and recreational facilities for two reasons. First, substantial on-site landscaped open space would be provided to serve these populations as shown in Figure 2-6 in Chapter 2.0 of this Draft EIR, including a central garden spine, landscape promenades, several courtyards and plazas, roof gardens, landscaped pedestrian paths, and landscaped buffers and street trees would be provided along the campus perimeter. Second, any usage by these populations of existing public parks and recreation facilities would likely be split among the eleven public parks and recreational facilities located within a two-mile radius of the Project Site identified in Figure 4.K.3-1.

Many of the approximately 2,030 new Project employees and families could create a demand for public parks and recreational facilities. However, because a portion of the new on-site employees would be expected to be derived from the existing local labor pool, it is likely that these employees and their families likely already generate a demand for public parks and recreational facilities in the local area. Furthermore, any use of existing public parks and recreational facilities by Project employees and their families would likely be dispersed over a wide geographic area rather than concentrated at any one of the eleven local public parks and recreational facilities identified in Figure 4.K.3-1.

Based on the above, Project operation would not require new or physically altered parks and recreational facilities or result in substantial physical deterioration of such facilities. Therefore, impacts would be less than significant.

e. Cumulative Impacts

Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR provides a list of 26 related projects that are planned or are under construction within an approximately 2.4 mile radius of the Project. **Table 4.K.3-3**, *Related Projects for Parks and Recreation*, identifies the 17 related projects located within a two-mile radius of the Project Site (the cumulative study area for parks). As indicated, these 17 related projects would include 2,742 dwelling units (du), 300 hotel rooms, and approximately 653,000 square feet of non-residential floor area.

The development of the 17 related projects within a two-mile radius of the Project Site that are identified in Table 4.K.3-3, along with the proposed Project, would increase the demand for public parks and recreational facilities from the County and the Cities of Los Angeles, Carson and Torrance. However, residential subdivisions in the County and City of Los Angeles are required to dedicate parkland or pay in-lieu fees to serve their respective populations, so that any of the 17 related projects that represent residential subdivisions would not be expected to contribute to the cumulative demand for public parks and recreation facilities. Furthermore, non-residential Projects, such as the proposed Project and roughly half of the related projects, generate an indirect rather than a direct demand for parks and recreational facilities and typically provide on-site parks and recreational facilities to help meet this indirect demand. In addition, the Project and the 17 related Projects would pay property and other taxes and fees which could be used by the County and the Cities of Los Angeles, Carson and Torrance to develop new parks, and voters have approved propositions and bonds (for example, Los Angeles County Proposition A) to help fund new park development. Furthermore, pending lease agreements with Del Amo Neighborhood Park LLC, the County will shortly be opening a new Neighborhood Park at 1000 W. 204th Street in Carson to serve the West Carson community which would help serve the Project and related projects. Lastly, as indicated in the analysis in Subsection d, *Project Impacts*, above, the Project would not be expected to generate a substantial demand for public parks and recreational facilities for several reasons, such that it would not be expected to contribute substantially to cumulative demand for public parks and recreational facilities. For all these reasons, cumulative parks and recreation impacts would be less than significant.

4. MITIGATION MEASURES

No mitigation measures are required. For measures to mitigate the construction impacts of the Project (including the impacts associated with the construction of the proposed on-site landscaped open space

amenities), please see in Sections 4.A., *Aesthetics*, 4.B., *Air Quality*, 4.I., *Noise*, and 4.L., *Transportation and Traffic*, of this Draft EIR.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant parks and recreation impacts.

Table 4.K.3-3

Related Projects for Parks and Recreation

ID	Jurisdiction	Project location	Land use	Size
1	County	24500 Normandie Ave	Apartments	112 du
			Retail	3.9 ksf
2	County	1028 W 223rd St	Condos	19 du
3	County	22700 Meyer St	Condos	60 du
4	County	19208 S Vermont Ave	Condos	20 du
7	Carson	616 E Carson	Apartments	152 du
			Retail	13 ksf
8	Carson	19220 S Main St	Commercial	65 ksf
10	Carson	21521 S Avalon Blvd	Apartments	357 du
			Retail	32 ksf
12	Carson	21791 Moneta Ave	Apartments	13 du
14	Carson	22303 Avalon	Automated Car Wash	4.673 ksf
			Office Space	0.48 ksf
15	Carson	Carson Marketplace	Regional Retail	13.07 ksf
			Neighborhood Retail	130 ksf
			Residential	1,550 du
			Hotel	300 rooms
			Restaurants	81.125 ksf
			Commercial Recreational	214 ksf
16	Los Angeles	1311 W Sepulveda Blvd	Apartments	352 du
			Retail	17.904 ksf
17	Los Angeles	21176 S Western Ave	Retail	0.836 ksf
18	Los Angeles	20805-22341 S. Normandie Ave	Single Family	63 du
19	Torrance	1640 Cabrillo Ave	Apartments	44 du
			Retail	3.7 ksf
20	Torrance	1752 Border Ave	Warehouse	10 ksf
			Automobile Care Center	3 ksf
25	Torrance	20405 Gramercy Place	Light Industrial	17 ksf
26	Torrance	1750 214th St/1600 Abalone St	Warehouse	30 ksf
			Manufacturing	13 ksf
		Total	**Residential**	**2,742 du**
			Hotel Rooms	**300 rms**
			Non-Residential	**652.688 ksf**

Source: PCR Services Corporation, 2016. Based on the Related Projects Table from the Fehr and Peers Traffic Study, 2016.

4. ENVIRONMENTAL IMPACT ANALYSIS
K. PUBLIC SERVICES
4 SCHOOLS

1. INTRODUCTION

This section analyzes the Project's potential impacts on public schools operated by the Los Angeles Unified School District (LAUSD) and other public schools in the Project vicinity. The analysis identifies the potential impacts of the proposed Project on school enrollment and capacity, and whether new or physically altered school facilities may be required. This section is based, in part, on information provided by the LAUSD (included in **Appendix G-4**, *School District Correspondence*, of this Draft EIR). This section also incorporates information from Los County General Plan Update (2035) and associated EIR (2015), and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

The Harbor-UCLA Medical Center Campus is located in the unincorporated community of West Carson in Los Angeles County, within relatively short distance of several incorporated cities including Los Angeles, Torrance and Carson. The site falls within the educational jurisdiction of, and is served by, the Los Angeles County Office of Education (COE) and LAUSD.[1]

(1) Los Angeles County Office of Education (COE)

The role of Los Angeles County in developing and managing educational facilities and programs is limited. However, COE serves as an intermediary between the local school districts in the County (such as LAUSD) and the California Department of Education. The COE provides a vision statement and strategic opportunities for educational facility development to coordinate the assessment of facility needs and the construction of schools that fall to individual school districts. In 2013, there were 88 local school districts within in the COE with a total enrollment of 1,564,205 students.[2]

(2) Los Angeles Unified School District (LAUSD)

LAUSD provides K-12 educational facilities and services to a 720-square-mile service area that includes the unincorporated areas of Los Angeles County and many of the incorporated cities within the county (including Los Angeles and Carson).[3] More than 640,000 students in kindergarten through 12th grade are enrolled in LAUSD, which is comprised of more than 900 schools and 197 public charter schools.[4] LAUSD

[1] *Rena Perez, Director, Master Planning & Demographics, LAUSD, correspondence dated January 29, 2016 and included in Appendix G-4 of this Draft EIR.*

[2] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035), SCH. No. 2011081042, p.5.14-18. Certified March 24, 2015.*

[3] *County of Los Angeles, Environmental Impact Report for the LAC+USC Medical Center Campus Master Plan Project,, SCH #2014051061, p.3.12-18. Certified November 18, 2014.*

[4] *Ibid.*

provides K-12 educational facilities and services to Project Site and to the majority of community north, east and south of the Project Site (e.g., unincorporated Los Angeles County, the city of Los Angeles, and the city of Carson, but not the city of Torrance which has its own school district).

Funding sources used by LAUSD for new school construction and the expansion, modernization, improvement and repair of existing school facilities include, but are not limited to, a $19.5 billion voter-approved District program initiated in 1997, the collection of State-mandated school impact fees permitted under California Government Code Section 65995 and State Senate Bill (SB) 50, State Proposition 47 and 55 school bonds, and Assembly Bill 16 (Critically Overcrowded School Facilities Program) funds.[5] Funding sources for LAUSD school operation comes primarily from the State general fund and local property taxes.[6]

As indicated in **Figure 4.K.4-1**, *School Facilities Map*, and **Table 4.K.4-1**, *Public Schools in the Project Vicinity*, nine LAUSD schools and three Torrance Unified School District (TUSD) schools occur within a three-mile radius of the Project Site. According to the LAUSD, the Project Site is located within the attendance area of, and is served by, three of the LAUSD schools, including Meyler Street Elementary, M. White Middle School, and Narbonne Senior High (SH) School.[7] Meyler Street Elementary, located at 1123 W. 223rd Street in Torrance approximately 0.5 miles south of the Project Site, is a grade K-5 school which in the 2013-2014 school year had an enrollment of 818 and a capacity of 846.[8] M. White Middle School, located at 22102 Figueroa Street in Carson approximately 0.8 miles southeast of the Project Site, is a grade 6-8 school which in the 2013-2014 school year had an enrollment of 1,428 and a capacity of 1,743.[9] Narbonne SH, located at 24300 S. Western Avenue in Harbor City approximately 3.0 miles southwest of the Project Site, is a grade 9-12 school which in the 2013-2014 school year had an enrollment of 3,207 and a capacity of 3,443, and which hosts as a separate personalized campus LAUSD's Humanities and Arts Academy of Los Angeles (e.g., HArts Academy).[10] According to the LAUSD, while the number of seats at each of these three schools during the 2013-2014 school year exceeded enrollment, because of how LAUSD measures school overcrowding, Meyler Street Elementary was over capacity during the 2013-2014 school year.[11] As indicated in Figure 4.K.4-1 and Table 4.K.4-1, the other LAUSD schools located within a three-mile radius of the Project Site include Halldale Avenue Elementary, Van Deene Avenue Elementary, Caroldale Avenue Elementary, Carson Street Elementary, Dolores Street Elementary, and Carson High School.

According to the LAUSD, no new LAUSD schools are currently planned within the Project vicinity, although the White, Carnegie and Willmington Middle Schools, and the Carodale Learning Community School, provide attendance options for grade 6-8 students located within the M. White Middle School attendance area (subject to space availability at these optional schools).[12]

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5 *LAUSD, Fingertip Facts 2013-2014.*

6 *Ibid.*

7 *Rena Perez, Director, Master Planning & Demographics, LAUSD, correspondence dated January 29, 2016 and included in Appendix G-4 of this Draft EIR.*

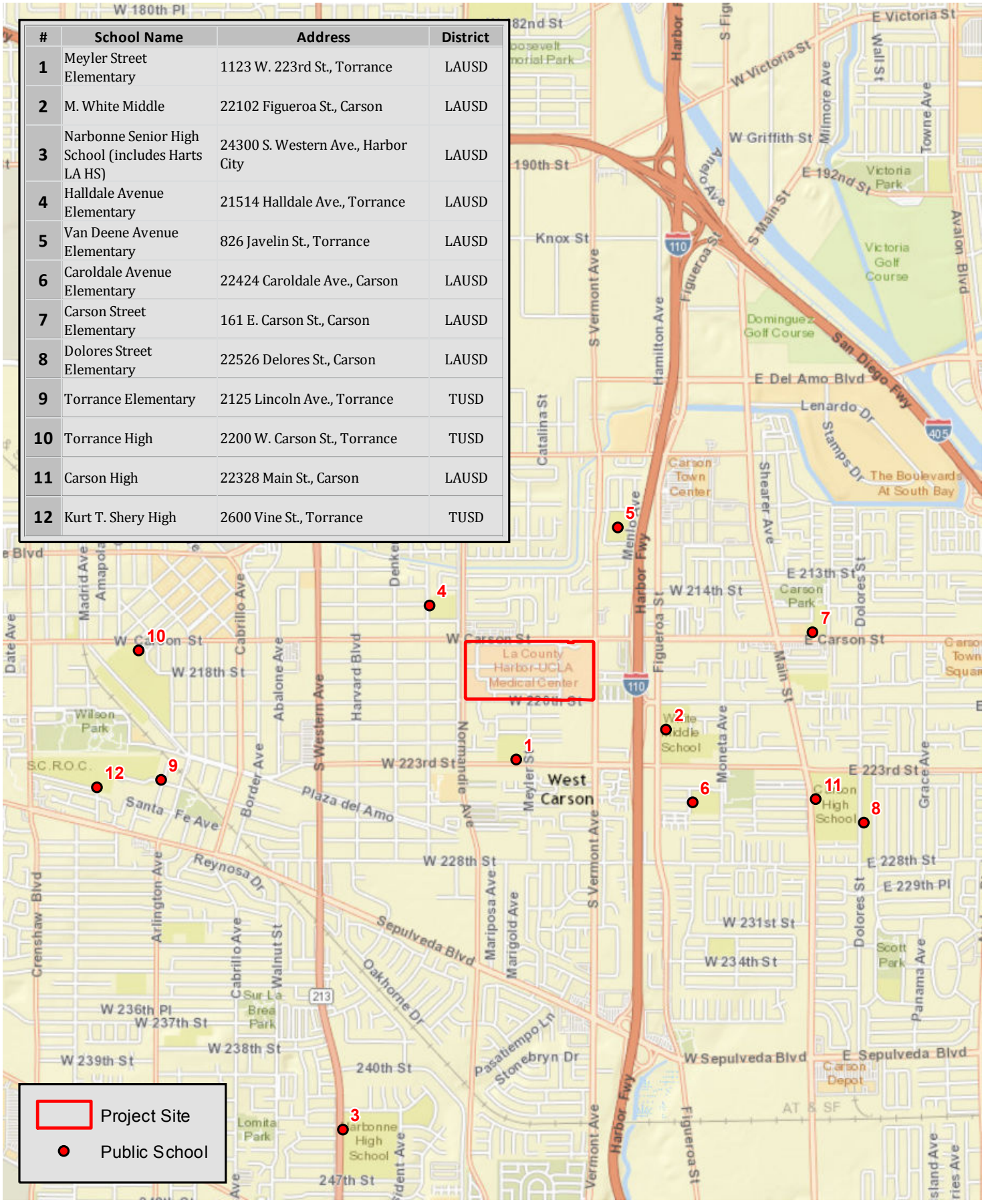
8 *Ibid.*

9 *Ibid.*

10 *Ibid. The enrollments and capacities of Narbonne SH and HArts Academy are considered together in this analysis.*

11 *Ibid. LAUSD considers a school to be overcrowded or over capacity if enrollment is either within 30 seats or less of capacity or over the capacity.*

12 *Ibid.*



#	School Name	Address	District
1	Meyler Street Elementary	1123 W. 223rd St., Torrance	LAUSD
2	M. White Middle	22102 Figueroa St., Carson	LAUSD
3	Narbonne Senior High School (includes Harts LA HS)	24300 S. Western Ave., Harbor City	LAUSD
4	Halldale Avenue Elementary	21514 Halldale Ave., Torrance	LAUSD
5	Van Deene Avenue Elementary	826 Javelin St., Torrance	LAUSD
6	Caroldale Avenue Elementary	22424 Caroldale Ave., Carson	LAUSD
7	Carson Street Elementary	161 E. Carson St., Carson	LAUSD
8	Dolores Street Elementary	22526 Delores St., Carson	LAUSD
9	Torrance Elementary	2125 Lincoln Ave., Torrance	TUSD
10	Torrance High	2200 W. Carson St., Torrance	TUSD
11	Carson High	22328 Main St., Carson	LAUSD
12	Kurt T. Shery High	2600 Vine St., Torrance	TUSD

PCR

Public Schools Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, March 2016.

FIGURE

4.K.4-1

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Table 4.K.4-1

Public Schools in the Project Vicinity

School Name	Address	District	Grades	Distance (miles)	2013-2014[a] Enrollment	2013-2014[a] Capacity	2013-2014[a] Over Capacity[c]	~ 2019[b] Enrollment	~ 2019[b] Capacity	~ 2019[b] Over Capacity[c]
LAUSD Schools Serving the Project Site[a]										
Meyler Street Elementary	1123 W. 223rd St., Torrance	LAUSD	K-5	0.5	818	846	Yes	909	733	Yes
M. White Middle	22102 Figueroa St., Carson	LAUSD	6-8	0.8	1,428	1,743	No	1.270	1,543	No
Narbonne Senior High School (includes HArts Academy)	24300 S. Western Ave., Harbor City	LAUSD	9-12	3.0	3,207	3,443	No	3,177	2,910	Yes
Other Public Schools in the Project Vicinity										
Halldale Avenue Elementary	21514 Halldale Ave., Torrance	LAUSD	K-5	0.3						
Van Deene Avenue Elementary	826 Javelin St., Torrance	LAUSD	K-5	0.9						
Caroldale Avenue Elementary	22424 Caroldale Ave., Carson	LAUSD	K-5	1.3						
Carson Street Elementary	161 E. Carson St., Carson	LAUSD	K-5	1.3			N/A[d]			
Dolores Street Elementary	22526 Delores St., Carson	LAUSD	K-5	1.8						
Torrance Elementary	2125 Lincoln Ave., Torrance	TUSD	K-5	2.0						
Torrance High	2200 W. Carson St., Torrance	TUSD	9-12	1.5						
Carson High	22328 Main St., Carson	LAUSD	9-12	1.7						
Kurt T. Shery High	2600 Vine St., Torrance	TUSD	9-12	2.9						

[a] *Rena Perez, Director, Master Planning & Demographics, LAUSD, correspondence dated January 29, 2016 and included in Appendix G-4 of this Draft EIR.*

[b] *Ibid. LAUSD only makes five year projections of future enrollment and capacity. Hence, LAUSD projections do not exist of enrollments and capacities at the anticipated Project buildout year of 2030.*

[c] *LAUSD considers a school to be "Overcapacity" if enrollment is either within 30 seats or less of the capacity or over the capacity.*

[d] *Enrollment and capacity information for these schools was not provided by LAUSD because the Project Site is not located within the service areas of these schools.*

Source: PCR Services Corporation, March 2016.

(3) Torrance Unified School District

The Torrance Unified School District (TUSD) provides K-12 educational facilities and services to the portions of the community west the Project site (e.g., the City of Torrance), and while TUSD is not responsible for providing school services to the Project Site, HUCLA employees, patients and visitors that may live in the City of Torrance are provided school services by TUSD. Total enrollment in the TUSD during the 2013-2014 school year was 24,324 students.[13] As indicated in Figure 4.K.4-1 and Table 4.K.4-1, three TUSD schools are located within a three-mile radius of the Project Site, including Torrance Elementary, Torrance High School, and Kurt T. Shery High School.

b Regulatory Setting

(1) Federal

There are no federal schools regulations pertinent to the Project.

(2) State

(a) Senate Bill 50

Senate Bill 50 (SB 50, codified in California Government Code Section 65995 et seq., was enacted in 1988 to address how schools are financed and how development projects may be assessed for associated school impacts.[14] SB 50 sets forth the "exclusive methods of considering and mitigating impacts on school facilities" resulting from any state or local planning and/or development projects, regardless of whether its character is legislative, adjudicative, or both (Govt. Code §65996[a]).[15] Section 65995 provides that "[t]he payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 … are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving but not limited to, the planning, use, or development of real property, or any change in governmental organization … on the provision of adequate school facilities" Govt. Code §65995[h]).[16] The reference in Section 65995(h) to fees "imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995" is a reference to per-square-foot school fees than can be imposed by school districts on new residential, commercial and industrial construction.[17] Education Code Section 17620 provides the basic authority for school districts to levy fees against construction for purposes of funding construction or reconstruction of school facilities, subject to limits set forth in Government Code Section 65995.[18]

As stated in Section 65995 (d), facilities that are owned and occupied by one or more agencies of federal, state, or local governments are exempt from these fees. Therefore, the fee does not apply to the proposed

[13] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035) SCH No. 201108104, Table 5.14-1. Certified March 24, 2015.*

[14] *Ibid, p.5.4-23. Certified March 24, 2015.*

[15] *Ibid.*

[16] *Ibid.*

[17] *Ibid.*

[18] *Ibid.*

Project. However, it could apply to any new residential, commercial, or industrial development in the Project vicinity, as noted in subsection e, Cumulative Impacts.

(b) Assembly Bill 16

In 2002, AB 16 created the Critically Overcrowded School Facilities Program (Education Code, Article 11, Critically Overcrowded School Facilities, Sections 17078.10-17078.30), which supplements the new construction provisions within the School Facilities Program (SFP). The SFP provides State funding assistance for two major types of facility construction projects: new construction and modernization. The Critically Overcrowded School Facilities program allows school districts with critically overcrowded school facilities, as determined by the California Department of Education (CDE), to apply for new construction projects in advance of meeting all SFP new construction program requirements. Districts with SFP new construction eligibility and school sites included on a CDE list of source schools may apply.

(3) Local

(a) County of Los Angeles General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the following applicable polices from the Public Services and Facilities Element. This goal and these policies are more applicable to the local school districts, and to County and local school district coordination, than they are to development projects such as the proposed HUCLA Campus Master Plan Project, but are nevertheless identified for purposes of public disclosure.

Goal PS/F 7: A County with adequate educational facilities.

- **Policy PS/F 7.1:** Encourage the joint-use of school sites for community activities and other appropriate uses.
- **Policy PS/F 7.2:** Proactively work with school facilities and education providers to coordinate land use and facilities planning.
- **Policy PS/F 7.3:** Encourage adequate facilities for early care and education.

(b) LAUSD School Facilities Fees Under SB 50

The latest (January 2015) LAUSD School Facilities Fees authorized under SB 50 are $3.36 per square foot for new residential construction, $0.54 per square foot for new commercial/industrial construction, and $0.07 per square foot for new parking structures.[19] Facilities that are owned and occupied by one or more agencies of federal, state, or local governments are exempt from these fees. Therefore, the fee does not apply to the Proposed Project.

3. ENVIRONMENTAL IMPACTS

a. Methodology

[19] *Sonja White, Analyst, Los Angeles Unified School District, Developer Fee Program Office, April 13, 2015.*

As the Project Site is located within the service areas of three LAUSD schools, this analysis evaluates the impacts of the proposed Project on these three LAUSD schools.

The methodology for this analysis included: (1) corresponding with LAUSD to request current information regarding the LAUSD schools that would serve the Project, the existing and projected year 2030 (the buildout year of the proposed Project) enrollments and capacities at those schools, including whether those schools are and/or are projected to be over capacity; (2) estimating the increase in students (if any) to be generated by the Project's employee, patient and visitor populations; (3) evaluating the impacts of these students on the capacities of the three LAUSD schools to serve the Project; and (4) based on this information, determining whether new or expanded schools would be required to serve the Project, and if so, whether the construction of these schools would result in substantial adverse physical effects.

Because the Project Site is located within three miles or less of six other LAUSD schools and three TUSD schools, the analysis also evaluates potential Project impacts on those schools (although at a lesser level of detail given that the Project Site is not located within the service areas of those schools).

As discussed previously, in addition to the correspondence from the LAUSD (which is included in Appendix G-4 of this Draft EIR), this section is based on information from the Los County General Plan Update (2035) and associated EIR (2015), and other County plans and environmental documents.

b. Thresholds of Significance

The potential for school impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State CEQA Guidelines. This question is as follows:

(XV) Public Services. Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Schools?

Based on this factor, the Project would have a potentially significant impact on schools if it would result in the following:

SCHOOLS-1: Would the Project require the addition of new or physically altered school facilities to maintain acceptable service ratios or other performance objectives, the construction of which would result in a substantial adverse physical impact?

c. Project Characteristics or Design Features

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Campus). The existing Campus contains approximately 1,279,300 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a New Hospital Tower that meets current

seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, to include new hospital, medical office, medical research, service commercial, and parking uses, a net increase in Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 annual visits or 714 daily visits[20]), respectively. Project construction would occur in phases through the year 2030. See Chapter 2.0, Project Description, of this Draft EIR for further information.

The Project would implement the following Project Design Feature (PDF) designed to mitigate Project impacts on public schools:

d. Project Impacts

Threshold SCHOOLS-1: Would the Project require the addition of new or physically altered school facilities to maintain acceptable service ratios or other performance standards, the construction of which would result in a substantial adverse physical impact?

Impact Statement SCHOOLS-1: *Project construction and operation would not be expected to create a demand for schools that would require new or physically altered public schools, the construction of which would result in a substantial adverse physical impact. Therefore, the impact would be less than significant.*

(1) Construction

Project construction activities would not physically affect existing public schools as no public schools are located on or directly adjacent to the Project Site, and the nearest public school (Halldale Avenue Elementary) is 0.5 miles away. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public schools would be maintained during Project construction (see Section 4.L., *Transportation and Traffic*, of this Draft EIR for further discussion).

Project construction would require construction workers at the HUCLA Campus intermittently through the year 2030 as discrete phases of the Project are constructed. The exact number of construction workers during each construction phase is not known at this time. However, given the general accessibility of the Project Site and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and have children that would use local public schools. Hence, new or physically altered local public schools would not be required to provide service to the children of Project construction workers and maintain acceptable service ratios and other performance standards.

[20] *Daily visits were estimated based on the following formula which assumes that patients visits occur during workdays: 52 weeks per year times 5 days a week = 260 weekdays. So, 185,745 patients ÷ 260 days = ~715 patients a day. This provides a conservative estimate because it assumes that patient visits are restricted to weekdays, largely because most of the on-site clinics and other non-hospital on-site medical uses would only be open during weekdays.*

Finally, the New Hospital and of some of the new medical clinic and R&D uses under the Project would include teaching components, the construction of which could result in environmental effects (e.g., visual impacts, dust and other air emissions, noise, and traffic during the construction period). However, these environmental effects have been evaluated as part of the construction impacts of the Project in Sections 4.A., *Aesthetics*, 4.B., *Air Quality*, 4.I., *Noise*, and 4.L., *Transportation and Traffic*, of this Draft EIR, and no additional substantial environmental effects would occur.

Based on the above, Project construction would not require new or physically altered public schools, and the impact would be less than significant.

(2) Operation

As indicated previously in Subsection 2.a, Environmental Setting, the Project Site is located within the boundaries of LAUSD and is served by (e.g., is located within the service areas of) Meyler Street Elementary, M. White Middle School, and Narbonne Senior High School (including HArts Academy). As indicated previously in Subsection 3.c, *Project Characteristics and Design Features*, the Project would result in an increase of 1,178,071 square feet of non-residential floor area (e.g., hospital, medical office, medical research, service commercial, and parking structure uses), an increase in Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively, and an unknown increase in Campus visitors.

Table 4.K.4-2, *Project Student Generation*, provides an estimate of the number of students that would be generated by the proposed Project. As indicated, the Project would generate an estimated 29 grade K-5 students, 14 grade 6-8 students, and 18 grade 9-12 students.

Assuming that all Project students would attend Meyler Street Elementary, M. White Middle School, and Narbonne Senior High School (including HArts Academy), adequate capacity would be available at M. White Middle School to serve these students as indicated in Table 4.K.4-1, but these students would exacerbate the overcapacity conditions projected by LAUSD at Meyler Street Elementary and Narbonne Senior High School. However, multiple factors would help mitigate any such potential overages. First, while the Project Site is located within the service areas of Meyler Street Elementary and Narbonne Senior High School, the families of Project employees would not reside on-site, but rather would reside within the local community and/or greater Los Angeles area. Therefore, rather than being restricted to these three schools, it is highly likely that Project student attendance would be split among the 11 elementary and high schools in the local area listed in Table 4.K.4-1 and possibly beyond. Second, even if some of the Project grade K-5 and 9-12 students were to attend Meyler Street Elementary and Narbonne Senior High School, it is unlikely that these students alone would necessitate the need to construct new or physically altered school facilities given the small numbers of students involved.

Due to the lack of residential uses proposed in the Project, it is likely that the Project's indirectly generated students will be less than the amount calculated above. Because the calculated students represent a conservative generation based on the land uses, it is highly unlikely that the Project would generate enough students to necessitate the need to construct new or physically altered school facilities. Therefore, Project operational impacts on schools would be less than significant.

Table 4.K.4-2

Project Student Generation

Grade Level	Land Use	Net Increase in Development (sf)	Generate Rate Students per 1,000 sf)[a]	Students
K-5	Administrative Office	107,200	0.0278	2.98
	Day Care Center	0	--	--
	Central Utilities	16,486	0.0214	0.35
	Hospital	553,845	0.0221	12.24
	Library	0	--	--
	Medical Office	153,196	0.0278	4.26
	Biomedical R&D	380,246	0.0242	9.20
	Warehouse/Storage	(45,402)	0.0214	(0.97)
	Retail	35,000	0.0178	0.62
			Total K-5	**29**
6-8	Administrative Office	107,200	0.0139	1.49
	Day Care Center	0	--	--
	Central Utilities	16,486	0.0108	0.18
	Hospital	553,845	0.0111	6.15
	Library	0	--	--
	Medical Office	153,196	0.0139	2.13
	Biomedical R&D	380,246	0.0121	4.60
	Warehouse/Storage	(45,402)	0.0108	(0.49)
	Retail	35,000	0.0089	0.31
			Total 6-8	**14**
9-12	Administrative Office	107,200	0.0173	1.85
	Day Care Center	0	--	--
	Central Utilities	16,486	0.0133	0.22
	Hospital	553,845	0.0138	7.64
	Library	0	--	--
	Medical Office	153,196	0.0173	2.65
	Biomedical R&D	380,246	0.0151	5.74
	Warehouse/Storage	(45,402)	0.0133	(0.60)
	Retail	35,000	0.0111	0.39
			Total 9-12	**18**
			Total K-12	**61**

[a] *LAUSD Commercial/Industrial Development School Fee Justification Study, p.19, September 27, 2010.*

Source: PCR Services Corporation, March 2016.

e. Cumulative Impacts

Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR provides a list of 26 related projects that are planned or are under construction within the vicinity of the proposed Project. **Table 4.K.4-3**, *Related Projects for Schools*, identifies these Projects. As indicated, these related projects

would include 2,835 dwelling units (du), 300 hotel rooms, and approximately 1.95 million square feet of non-residential floor area.

Table 4.K.4-4, *Cumulative Student Generation*, provides an estimate of the number of students to be generated by the related projects along with the proposed Project. As indicated, related projects along with the proposed Project would generate an estimated 541 grade K-5 students, 164 grade 6-8 students, and 302 grade 9-12 students.

The development of the related projects, along with the proposed Project, would increase the demand for public schools in the local area from LAUSD and TUSD, and could potentially contribute to the future need for new or expanded school facilities in the Project vicinity. However, pursuant to SB 50 (Section 65995[h] of the California Government Code), the related projects and the proposed Project would be required to pay the LAUSD School Facilities Fees authorized under SB 50 within the LAUSD, and the school facilities fees authorized by SB 50 within the TUSD for those related projects served by the TUSD, which, per Section 65995[h], would represent "full and complete mitigation" for impacts to schools.[21] Also, LAUSD is currently engaged in a multi-year capital improvement program to construct 131 new schools to accommodate projected growth.[22] Furthermore, the Project and the related Projects would pay property and other taxes and fees, a portion of which would go to the LAUSD and TUSD for school facilities and services.

As indicated above, the related projects and the proposed Project could potentially contribute to the future need for new or expanded school facilities in the Project vicinity. While the construction of any such schools could potentially result in substantial adverse physical impacts, it would be speculative to predict where and when a new school would be needed as LAUSD does not currently have plans for a new school in the area.[23] Therefore, it would be speculative to predict the environmental effects resulting from any such improvements, and per State *CEQA Guidelines* Section 15145 regarding speculation, no further analysis is required. Based on the above, cumulative schools impacts would be less than significant.

4. MITIGATION MEASURES

No mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant Project-level schools impacts. The Project's contribution to cumulative impacts would not be cumulatively considerable.

[21] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035), SCH. No. 2011081042, p.5.4-23. Certified March 24, 2015.*

[22] *County of Los Angeles, Environmental Impact Report for the LAC+USC Medical Center Campus Master Plan Project,, SCH #2014051061, p.3.12-18. Certified November 18, 2014.*

[23] *Rena Perez, Director, Master Planning & Demographics, LAUSD, correspondence dated January 29, 2016 and included in Appendix G-4 of this Draft EIR.*

Table 4.K.4-3

Related Projects for Schools

Id	Jurisdiction	Project location	Land use	Size
1	County	24500 Normandie Ave	Apartments	112 du
			Retail	3.9 ksf
2	County	1028 W 223rd St	Condos	19 du
3	County	22700 Meyer St	Condos	60 du
4	County	19208 S Vermont Ave	Condos	20 du
5	Carson	440 Sepulveda Blvd	Apartments	11 du
6	Carson	628 Lincoln St	Single Family	3 du
7	Carson	616 E Carson	Apartments	152 du
			Retail	13 ksf
8	Carson	19220 S Main St	Commercial	65 ksf
9	Carson	402 E Sepulveda Blvd	Apartments	65 du
			Retail	3 ksf
10	Carson	21521 S Avalon Blvd	Apartments	357 du
			Retail	32 ksf
11	Carson	23401 S Avalon Blvd	Retail	6.3 ksf
12	Carson	21791 Moneta Ave	Apartments	13 du
13	Carson	20920 Chico St	Medical	11.34 ksf
14	Carson	22303 Avalon	Automated Car Wash	4.673 ksf
			Office Space	0.48 ksf
15	Carson	Carson Marketplace	Regional Retail	1,370 ksf
			Neighborhood Retail	130 ksf
			Residential	1,550 du
			Hotel	300 rooms
			Restaurants	81.125 ksf
			Commercial Recreational	214 ksf
16	Los Angeles	1311 W Sepulveda Blvd	Apartments	352 du
			Retail	17.904 ksf
17	Los Angeles	21176 S Western Ave	Retail	0.836 ksf
18	Los Angeles	20805-22341 S. Normandie Ave	Single Family	63 du
19	Torrance	1640 Cabrillo Ave	Apartments	44 du
			Retail	3.7 ksf
20	Torrance	1752 Border Ave	Warehouse	10 ksf
			Automobile Care Center	3 ksf
21	Torrance	570 Alaska Ave	Warehouse	31.015 ksf
22	Torrance	2540 Sepulveda Blvd	Automobile Care Center	2.525 ksf
23	Torrance	465 Crenshaw Blvd	Transit Center	17.8 ksf
24	Torrance	23625 Arlington Ave	Apartments	14 du
25	Torrance	20405 Gramercy Place	Light Industrial	17 ksf
26	Torrance	1750 214th St/1600 Abalone St	Warehouse	30 ksf
			Manufacturing	13 ksf
		Total	**Residential**	**2,835 du**
			Hotel Rooms	**300 rooms**
			Non-Residential	**1,951.6 ksf**

Source: PCR Services Corporation, 2016. Based on the Related Projects Table from the Fehr and Peers Traffic Study, 2016.

Table 4.K.4-4

Cumulative Student Generation

Grade Level	Land Use	Related Projects: Development (sf)	Related Projects: Generate Rate Students per 1,000 sf)[a]	Related Projects: Students	With Proposed Project: Students
K-5	Residential	2,835 du	0.1649	467.49	467.49
	Non-Residential	1,951.6 ksf	0.0228	44.50	73.50
			Total K-5	**512**	**541**
6-8	Residential	2,835 du	0.0450	127.58	127.58
	Non-Residential	1,951.6 ksf	0.0114	22.25	36.25
			Total 6-8	**150**	**164**
9-12	Residential	2,835 du	0.0903	256.00	256.00
	Non-Residential	1,951.6 ksf	0.0142	27.71	45.71
			Total 9-12	**284**	**302**
			Total K-12	**946**	**1,007**

[a] *Student generation rate for residential units based on multi-family residential unit rate from LAUSD School Facilities Needs Analysis, p.5, September 2012. Student generation rate for non-residential based on the average of office and retail/service student generation rates from LAUSD Commercial/Industrial Development School Fee Justification Study, p.19, September 27, 2010.*

Source: PCR Services Corporation, March 2016.

4. ENVIRONMENTAL IMPACT ANALYSIS
K. PUBLIC SERVICES
5 LIBRARIES

1. INTRODUCTION

This section analyzes the Project's potential impacts on public libraries in the Project vicinity, including those operated by the Los Angeles County Public Library (LACPL) and the Cities of Los Angeles and Torrance. The near-by city of Carson does not operate any libraries within a three-mile radius of the Project Site, and thus impacts on city of Carson libraries are not evaluated. The analysis identifies the potential impacts of the proposed Project on library service ratios, and determines whether the Project would generate the need for new or physically altered library facilities. This section is based, in part, on information provided by the LACPL (included in **Appendix J-5**, *Library Correspondence*, of this Draft EIR). This section also incorporates information from Los County General Plan Update (2035) and associated Environmental Impact Report (EIR, 2015), the County Code, and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

The Harbor-UCLA Medical Center Campus is located at 1000 W. Carson Street in the unincorporated West Carson community of Los Angeles County, within a relatively short distance of several incorporated cities including Los Angeles, Torrance, and Carson. LACPL has the responsibility for providing public library facilities and services to the Project Site and greater West Carson community. In fiscal year 2011-2012, LACPL had 86 libraries; 7.5 million book volumes; circulated 16.5 million items to 3.1 million cardholders; answered over eight million reference questions; provided 18,000 programs to 500,000 children, teenagers, and adults; and assisted the public with three million internet sessions on the library's public access computers.[1]

The closest LACPL library to the Project Site is the Carson Branch Library located at 151 E. Carson Street in the City of Carson, approximately 0.8 miles east of the Project Site. The Carson Branch Library is a 33,112-square-foot facility with 118,133 volumes, 23 staff, and a 19.4-square-mile service area bordered by: 190th Street, 192nd Street, University Drive, Wilmington Avenue, and E. Del Amo Boulevard in the north; W. Lomita Boulevard in the south; the 710 Freeway, S. Santa Fe Avenue, the 405 Freeway, Intermodal Way, Middle Road, and W. Lomita Boulevard in the east; and S. Normandie Avenue in the west.[2] This library has been programmed to serve a resident population of up to 79,838, and during 2014-2015 served an estimated resident population of 73,648.[3] According to the LACPL, interior refurbishments are under discussion for

[1] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035) SCH No. 201108104, p. 5.14-29. Certified March 24, 2015.*

[2] *Yolanda De Ramus, Chief Deputy Director, LACPL, correspondence dated February 12, 2016 and included in Appendix J-5 of this Draft EIR.*

[3] *Ibid.*

this facility, but these improvements would not significantly impacts the service capacity of the library and LACPL does not currently have plans for new library facilities in the West Carson community.

Other public libraries within a three-mile radius of the Project Site include: the Southwest Branch Library operated by the City of Torrance and located approximately 2.4 miles to the southwest; the Harbor Gateway Branch Library operated by the City of Los Angeles and located approximately 2.6 miles to the southwest; and the AF Parlow Library of Health Sciences operated by the Los Angeles County Department of Health Services (LACDHS) and located on the Harbor-UCLA Medical Center Campus (though access to the AF Parlow Library's collection is limited to Harbor-UCLA staff, faculty, and students).

The four libraries discussed above are listed in **Table 4.K.5-1**, *Public Libraries in the Project Vicinity*, and their locations are identified in **Figure 4.K.5-1***, Public Libraries Map*.

Table 4.K.5-1

Public Libraries in the Project Vicinity

Library	Address	Jurisdiction	Distance (miles)
Carson Branch Library	151 E. Carson St., Carson	LA County (LACPLA)	0.8
Southwest Branch Library	23115 Arlington Ave., Torrance	City of Torrance	2.4
Harbor Gateway Branch Library	24000 Western Ave., Harbor City	City of LA	2.6
AF Parlow Library of Health Sciences	1000 W. Carson St., Torrance	LA County (LACDHS)	On-site

Source: PCR Services Corporation, March 2016.

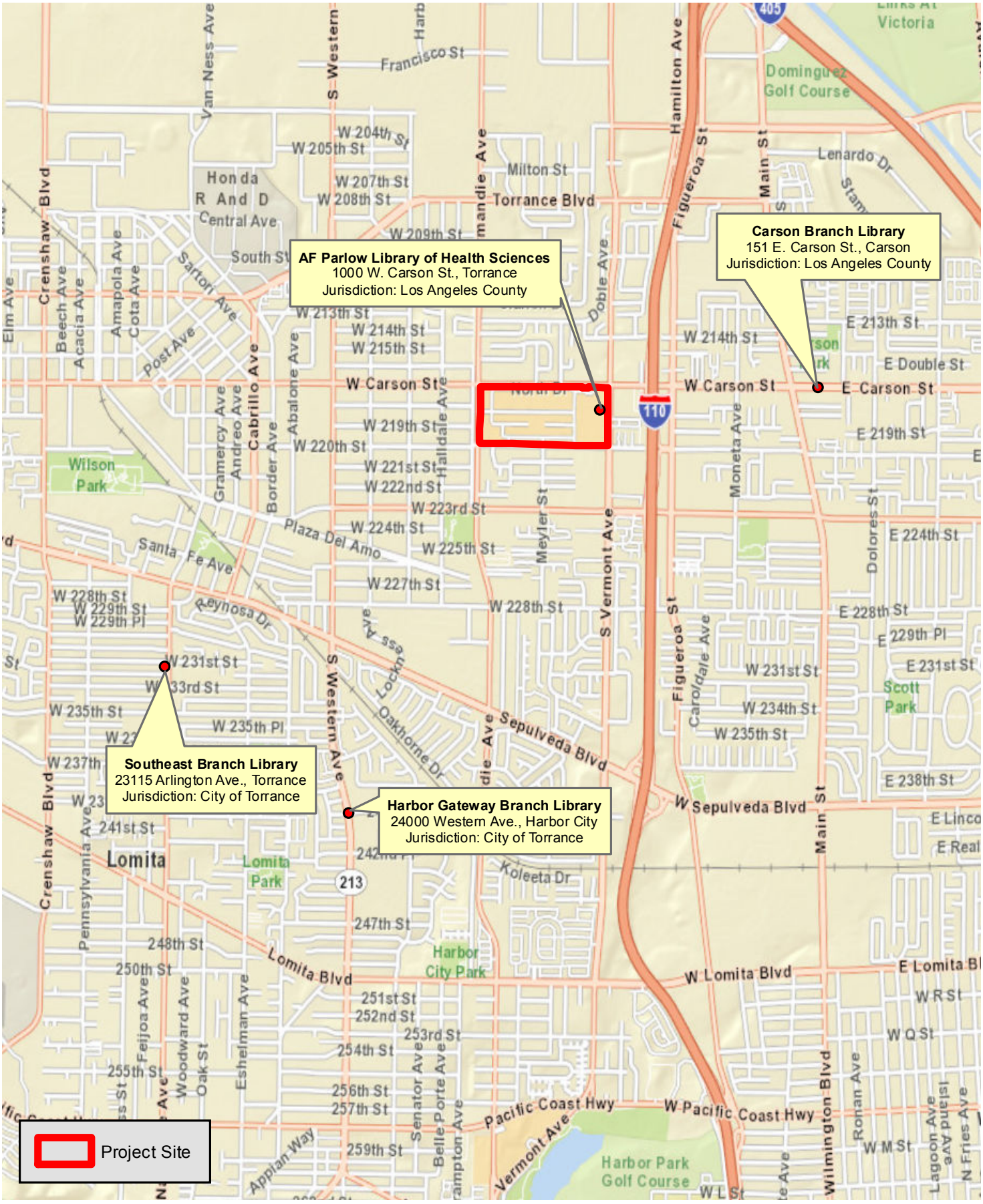
The LACPL determines the library service needs of an area by applying its current service level guidelines to the total resident population of an area.[4] These guidelines are a minimum of 0.50 gross square feet of library facility space per capita and 2.75 volumes (books and other library materials) per capita.[5] The Carson Branch Library currently has 2.4 sf of library facility space per capita and 1.48 volumes per capita, thus providing more facility space but fewer volumes than set forth in the guidelines.[6]

The Project Site is currently developed with 1,279,300 sf of existing hospital, medical office, clinic, and medical research and development uses, and currently has an estimated 5,464 employees, 545,079 annual patient visits, and an unknown number of visitors. It is likely that these employees, patients and visitors generate some demand for local public library facilities and services from the Carson Branch, Southwest Branch, and Harbor Gateway Branch Libraries. Also, as previously discussed, the Project Site contains the AF

[4] *Yolanda De Ramus, Chief Deputy Director, LACPL, correspondence dated February 12, 2016 and included in Appendix J-5 of this Draft EIR.*

[5] *Ibid.*

[6] *Ibid.*



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Public Libraries Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, February 2016.

FIGURE

4.K.5-1

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Parlow Library of Health Sciences, which serves doctors, medical students, fellows, faculty, nurses, and allied health professionals affiliated with the Medical Center Campus.[7]

b. Regulatory Setting

(1) Federal

There are no federal library regulations applicable to the Project.

(2) State

There are no state library regulations applicable to the Project.

(3) Local

(a) County of Los Angeles General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the following library-related goal and polices from the Public Services and Facilities Element. This goal and these policies are more applicable to the County than to development projects, but are identified here for purposes of public disclosure.

Goal PS/F 8: A comprehensive public library system.

- **Policy PS/F 8.1:** Ensure a desired level of library service through coordinate land use and facilities planning.
- **Policy PS/F 8.2:** Support library mitigation fees that adequately address the impacts of new development.

(b) County of Los Angeles Library Facilities Mitigation Fee Ordinance

The County applies a library facilities mitigation fee to new residential developments in unincorporated areas of the County.[8] This fee, which is codified in Section 22.72.030 of the County's Zoning Code (Library Facilities Mitigation Fee Ordinance), is based on the estimated cost of providing the projected library facility needs within each of the LAPL's seven library planning areas, and is intended to mitigate the significant adverse impacts of increased residential development on the library system.[9] According to the Ordinance, the fee shall be determined by the County Librarian on an annual basis, shall be no more and no less than that required to cover the cost of providing library facilities and services for the development served, and shall be uniform within each library planning area.[10] All fees collected are deposited into a special library capital facilities fund (one for each library planning area) and expended solely for the purposes for which the

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7 *Harbor-UCLA Medical Center website: http://harborucla.org/library/page2.php?mytext=users/faq.htm# checkout. Accessed March 2, 2016.*

8 *County of Los Angeles, Los Angeles County General Plan Update (2035), p.234. Adopted October 6, 2015.*

9 *Ibid.*

10 *Ibid.*

fees were collected.[11] The Ordinance is applicable to residential projects only.[12] Therefore, the fee does not apply to the proposed Project.[13] However, it would apply to any new residential development induced by the Project within unincorporated areas of the County.

(c) LAPL Library Service Level Guidelines

The LACPL determines the library service needs of an area by applying its current service level guidelines to the total resident population of an area.[14] These guidelines are a minimum of 0.50 gross square feet of library facility space per capita and 2.75 volumes (books and other library materials) per capita.[15]

3. ENVIRONMENTAL IMPACTS

a. Methodology

As the Project Site is located within the unincorporated West Carson community, and as the LACPL is responsible for providing public libraries facilities and services to the Project Site, this analysis evaluates the impacts of the proposed Project on LACPL library facilities and services within the West Carson community.

The methodology for this analysis included: (1) corresponding with LACPL to request current information regarding the LACPL libraries that would serve the Project, the existing service ratios at those facilities, and the LACPL performance standards and guidelines applicable to the Project; (2) estimating the increase in the employee, patient and visitor populations to be generated by the Project; (3) evaluating the impacts of these populations on the service ratios at the LACPL facilities to serve the Project; and (4) based on this information, determining whether new or expanded LACPL library facilities would be required to serve the Project, and if yes, whether the construction of these facilities would result in substantial adverse physical effects. Because the Project Site is located within three miles or less of several libraries operated by the Cities of Los Angeles and Torrance, the analysis also evaluates potential Project impacts on those facilities (although at a lesser level of detail given that the Project Site is not located within the service areas of those facilities, and those facilities are located further away from the Project Site than the County libraries and thus can be expected to experience less visits from the Project).

As discussed previously, in addition to the correspondence from the LACPL (which is included in Appendix J-5 of this Draft EIR), this section is based on information from the Los County General Plan Update (2035) and associated EIR (2015), the County Code, and other County plans and environmental documents.

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[11] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035), SCH No. 201108104, p.5.14-30. Certified March 24, 2015.*

[12] *Ibid.*

[13] *Yolanda De Ramus, Chief Deputy Director, LACPL, correspondence dated February 12, 2016 and included in Appendix J-5 of this Draft EIR.*

[14] *Yolanda De Ramus, Chief Deputy Director, LACPL, correspondence dated February 12, 2016 and included in Appendix J-5 of this Draft EIR.*

[15] *Ibid.*

b. Thresholds of Significance

The potential for library impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State CEQA Guidelines. This question is as follows:

(XV) Public Services. Would the project:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Other public facilities?

Based on this factor, the Project would have a potentially significant impact on libraries if it would result in the following:

LIBRARIES-1: Would the Project require the provision of new or physically altered library facilities to maintain acceptable service ratios, the construction of which would result in a substantial adverse physical impact?

c. Project Characteristics or Design Features

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus. The existing Campus contains approximately 1,279,284 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a New Hospital Tower that meets current seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, to include new hospital, medical office, medical research, service commercial, and parking uses, a net increase in Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively, and an unknown increase in Campus visitors. Project construction would occur in phases through the year 2030. See Chapter 2.0, *Project Description*, of this Draft EIR for further information.

The following Project Design Feature (PDF) is proposed to reduce Project impacts on public libraries:

PDF-LIBRARIES-1: The AF Parlow Library of Health Sciences, an existing LACDHS-operated library on the Project Site available for use by doctors, medical students, fellows, faculty, nurses, and allied health professionals affiliated with the medical center, will be retained and relocated to other building space on the HUCLA Campus.

d. Project Impacts

Threshold LIBRARIES-1: Would the Project require the addition of new or physically altered library facilities to maintain acceptable service ratios, the construction of which would result in a substantial adverse physical impact?

Impact Statement LIBRARIES-1: *Project construction and operation would not be expected to create a demand for libraries that would require new or physically altered public libraries, the construction of which would result in a substantial adverse physical impact. Therefore, the impact would be less than significant.*

(1) Construction

Project construction activities would not physically affect existing public libraries as no such facilities are located on or directly adjacent to the Project Site. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public libraries would be maintained during Project construction (see Section 4.L., *Transportation and Traffic*, of this Draft EIR for further discussion).

Project construction would require construction workers at the Harbor-UCLA Medical Center Campus intermittently through the year 2030 as discrete phases of the Project are constructed. The exact number of construction workers during each construction phase is not known at this time. However, given the general accessibility of the Project Site and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local public libraries such that new such facilities would be required and substantial physical deterioration of such facilities would occur. Furthermore, construction workers would have limited opportunities during the work day to use local libraries, and any demand for libraries that would occur would be limited and temporary, lasting only as long as the given construction phase.

Finally, retention and relocation of the existing on-site AF Parlow Library of Health Sciences, as required by PDF LIBRARIES-1, would require construction activities which could result in environmental effects (e.g., visual impacts, dust and other air emissions, noise, and traffic during the construction period). However, these environmental effects have been evaluated as part of the construction impacts of the Project in Sections 4.A., *Aesthetics*, 4.B., *Air Quality*, 4.I., *Noise*, and 4.L., *Transportation and Traffic*, of this Draft EIR, and no additional substantial environmental effects would occur.

Based on the above, Project construction would not require new or physically altered public library facilities, and the impact would be less than significant.

(2) Operation

As indicated previously in Subsection 3.c, *Project Characteristics and Design Features*, the proposed Project includes new hospital, medical office, medical research, and some minor commercial uses. No residential uses are proposed. The Project would result in a net increase of 1,178,071 square feet of non-residential building floor area, increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively, and an unknown increase in Campus visitors.

Because the Project would not include a residential component,it would not directly impact the existing service ratios (e.g., per capita facility space and per capita volumes) at LACPL's Carson Branch Library or other libraries in the area which are based on the resident population.

The increase in Campus patients, employees and visitors would generate some indirect demand for libraries facilities and services from the LACPL-operated Carson Branch Library, and to a lesser extent from the City of Torrance-operated Southwest Branch Library and City of Los Angeles-operated Harbor Gateway Branch Library. However, this increase in demand would not be expected to be substantial or result in the need for new or physically altered library facilities for several reasons. First, while the Project's estimated 2,030 new Project employees would create some demand for library facilities, a portion of these new employees would be expected to be derived from the existing local labor pool and thus already generate a demand for public libraries. Second, as required by Project Design Features PDF-LIBRARIES-1, the exiting on-site AF Parlow Library of Health Sciences would be retained under the Project, which would continue to meet the Hospital-related demand for library facilities. Third, any usage by Project employees, patients and visitors of existing public library facilities would likely be split among the four public libraries referenced above, thus avoiding the concentration of usage at any one library. Lastly, non-residential development, such as the proposed Project, generates less demand for public libraries than residential development because it does not generate school-aged children or non-working adults that generate a substantial amount of daily library demand.

The additional on-site employees under the proposed Project could potentially induce additional residential development in the local area to help house these employees which could indirectly increase the demand for public library facilities. However, the Project Site is located in the Metropolitan Los Angeles area which has substantial existing housing opportunities, so the potential for the Project to induce substantial new residential development is low. Furthermore, any new residential development induced by the Project would be required to pay applicable library impact fees (e.g., the County's Library Facilities Mitigation Fee, etc.) which would mitigate any associated increase in demand for public libraries. Therefore, any new residential development induced by the Project would not be expected to result in a substantial change in the existing service ratios of the public libraries in the area.

Based on the above, Project operation would not require new or physically altered public library facilities, and the impact would be less than significant.

e. Cumulative Impacts

Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR provides a list of 26 related projects that are planned or are under construction within the vicinity of the proposed Project. **Table 4.K.3-2**, *Related Projects for Libraries*, identifies these Projects. As indicated, these related projects would include 2,835 dwelling units (du), 300 hotel rooms, and approximately 1.95 million sf of non-residential floor area.

The development of the related projects, along with the proposed Project, would increase the demand for public library facilities from LACPL and to a lesser extent from the Cities of Los Angeles and Torrance. However, the developers of new residential units are required to pay fees to cover the cost of the provision of public library facilities (e.g., the County Library Facilities Mitigation Fee, etc.), so that the residential portion of the related projects would mitigate their demand for public libraries.

In addition, non-residential development, such as the proposed Project and the non-residential floor area of the related projects, would generate less demand for public libraries than residential development because they do not generate school-aged children or non-working adults that generate a substantial amount of daily library demand. Also, because LACPL measures library demand (e.g., library space per capita and volumes per capita) based on the resident population served, attributing library demand to non-residential uses would be in a sense be double counting because the demand associated with non-residential development is already incorporated into LACPL's residential population-based per capita service ratios.

Furthermore, as indicated in the analysis in Subsection d, *Project Impacts*, above, the Project would not be expected to generate a demand for library facilities that would require new or expanded library facilities, such that it would not be expected to contribute substantially to cumulative demand for public libraries.

Lastly, while the cumulative demand for public libraries could potentially contribute to the future need for a new library in the West Carson community, and while the construction of any such library could potentially result in substantial adverse physical impacts, it would be speculative to predict where and when a library would be needed as LACPL does not currently have plans for a new library in the area. Therefore, it would be speculative to predict the environmental effects resulting from any such improvements, and per State *CEQA Guidelines* Section 15145 regarding speculation, no further analysis is required.

Based on the above, cumulative library impacts would be less than significant.

4. MITIGATION MEASURES

No mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant libraries impacts with adherence to applicable library requirements and implementation of the Project Design Feature referenced in this section.

Table 4.K.5-2

Related Projects for Libraries

Id	Jurisdiction	Project location	Land use	Size
1	County	24500 Normandie Ave	Apartments	112 du
			Retail	3.9 ksf
2	County	1028 W 223rd St	Condos	19 du
3	County	22700 Meyer St	Condos	60 du
4	County	19208 S Vermont Ave	Condos	20 du
5	Carson	440 Sepulveda Blvd	Apartments	11 du
6	Carson	628 Lincoln St	Single Family	3 du
7	Carson	616 E Carson	Apartments	152 du
			Retail	13 ksf
8	Carson	19220 S Main St	Commercial	65 ksf
9	Carson	402 E Sepulveda Blvd	Apartments	65 du
			Retail	3 ksf
10	Carson	21521 S Avalon Blvd	Apartments	357 du
			Retail	32 ksf
11	Carson	23401 S Avalon Blvd	Retail	6.3 ksf
12	Carson	21791 Moneta Ave	Apartments	13 du
13	Carson	20920 Chico St	Medical	11.34 ksf
14	Carson	22303 Avalon	Automated Car Wash	4.673 ksf
			Office Space	0.48 ksf
15	Carson	Carson Marketplace	Regional Retail	1,370 ksf
			Neighborhood Retail	130 ksf
			Residential	1,550 du
			Hotel	300 rooms
			Restaurants	81.125 ksf
			Commercial Recreational	214 ksf
16	Los Angeles	1311 W Sepulveda Blvd	Apartments	352 du
			Retail	17.904 ksf
17	Los Angeles	21176 S Western Ave	Retail	0.836 ksf
18	Los Angeles	20805-22341 S. Normandie Ave	Single Family	63 du
19	Torrance	1640 Cabrillo Ave	Apartments	44 du
			Retail	3.7 ksf
20	Torrance	1752 Border Ave	Warehouse	10 ksf
			Automobile Care Center	3 ksf
21	Torrance	570 Alaska Ave	Warehouse	31.015 ksf
22	Torrance	2540 Sepulveda Blvd	Automobile Care Center	2.525 ksf
23	Torrance	465 Crenshaw Blvd	Transit Center	17.8 ksf
24	Torrance	23625 Arlington Ave	Apartments	14 du
25	Torrance	20405 Gramercy Place	Light Industrial	17 ksf
26	Torrance	1750 214th St/1600 Abalone St	Warehouse	30 ksf
			Manufacturing	13 ksf
		Total	**Residential**	**2,835 du**
			Hotel Rooms	**300 rooms**
			Non-Residential	**1,951.6 ksf**

Source: PCR Services Corporation, 2016. Based on the Related Projects Table from the Fehr and Peers Traffic Study, 2016.

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4. ENVIRONMENTAL IMPACT ANALYSIS
L. TRANSPORTATION AND TRAFFIC

1. INTRODUCTION

This section describes potential impacts associated with construction and operational transportation and traffic. The section provides an analysis of construction traffic; intersection capacity; the regional transportation system; public transit and alternative transportation; vehicular access and circulation; and parking supply. The evaluation of intersection capacity examines the impact of the Project relative to existing and future conditions. This section is based on the *Traffic Impact Analysis* (Traffic Study*)* prepared by Fehr & Peers, Inc. dated February 2016. The Traffic Study, which provides more detailed information, data, and analyses, is included as Appendix I of this Draft EIR. The Traffic Study was prepared following extensive coordination with staff from Los Angeles County, Caltrans, City of Los Angeles, City of Carson and City of Torrance. Further, the Traffic Study for this County project was prepared pursuant to a Memorandum of Understanding (MOU) with the County of Los Angeles Department of Public Works (DPW) Traffic and Lighting Division (TLD), which is appended to the Traffic Study provided in Appendix I of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Study Area Street System

The Project Site is located at 1000 West Carson Street in the unincorporated community of West Carson, California. The study area includes intersections located in or bordering Los Angeles County, City of Los Angeles, City of Carson and City of Torrance. Carson Street, Vermont Avenue, Normandie Avenue and 220th Street currently provide access to the site via 11 driveways. In addition, a parking lot for staff is located on the southeast corner of Vermont Avenue & 220th Street, with access provided by four driveways on 220th Street. The study area for this analysis is bounded by Torrance Boulevard on the north, 223rd Street on the south, Figueroa Street on the east, and Western Avenue on the west. **Figure 4.L-1**, *Study Area Intersections*, depicts the Project's Traffic Study area and the intersections analyzed for potential Project impacts. As described in further detail below, the study area is well served by a network of freeways and streets.[1] Freeways are under the jurisdiction of the California Department of Transportation (Caltrans).

(a) Freeways

Primary regional access to the site is provided by Carson Street, I-110, I-405 and State Route 91. Following is a brief description of the freeways that serve the site.

San Diego Freeway (I-405) – The San Diego Freeway runs east/west approximately two miles north of the Project Site and southeast/northwest approximately two miles east of the Project Site. Access from the

[1] *More detailed information regarding the major arterials in the study area and lane configurations is presented in the Traffic Impact Analysis, which is included as Appendix I of this Draft EIR.*

Project Site to the San Diego Freeway is provided by interchanges at Western Avenue, Normandie Avenue, Vermont Avenue (westbound vehicles only), Carson Street, and Wilmington Avenue.

Harbor Freeway (I-110) – The Harbor Freeway runs north/south approximately ¼ mile east of the Project Site. Access from the Project Site to the Harbor Freeway is provided by via interchanges at Carson Street and 223rd Street for southbound vehicles and at 220th Street for northbound vehicles.

Gardena Freeway/Artesia Freeway (State Route 91) – State Route 91 (SR 91) runs east/west approximately three miles north of the Project Site. East of the Harbor Freeway, SR 91 is known as the Gardena Freeway. West of the Harbor Freeway, SR 91 is known as the Artesia Freeway. Access from the Project Site to SR 91 is provided by the 110 Freeway and Vermont Avenue.

The following three types of analyses were conducted on Caltrans facilities: 1) freeway mainline segments, 2) Caltrans intersections, and 3) off-ramp queuing. More specifically, the following facilities were analyzed: two freeway mainline segments on I-110, three segments on I-405 and one segment on SR-91 to determine density and LOS; one intersection (Western Ave. (State Route 213) & Carson Street); and six freeway off-ramps to estimate queues.

With regard to the freeway mainline segments, level of service (LOS) is a measure used to describe traffic flow conditions or the freedom to maneuver within traffic stream. The LOS ranges from nearly free-flow traffic at LOS A to breakdown and oversaturation at LOS F. The definitions of the LOS levels are shown in **Table 4.L-1**, *Highway Capacity Manual Level of Service Definitions for Freeway Segments*. The six freeway segments and respective LOS are summarized in **Table 4.L-2**, *Existing Conditions Freeway Segment Levels of Service*. As shown in Table 4.L-2, the I-110 at 228th Street and the I-110 at El Segundo operates at a LOS ranging from C to E during the AM and PM peak hours. The I-405 Freeway at I-710, I-405 south of I-110, and I-405 north of Western Ave/Van Ness Ave operates at a LOS ranging from LOS C to LOS F, with LOS F occurring during the AM peak hour at the I-405 at I-710 segment. The SR-91 at Avalon Boulevard interchange operates at a LOS ranging from LOS C to D.

With regard to intersections with the freeways, LOS provides a qualitative measure to describe the flow of traffic through the intersection. The LOS ranges from LOS A, which is excellent to LOS F, which is failure of the intersection. **Table 4.L-3**, *Highway Capacity Manual Level of Service Definitions for Intersections*, shows the LOS for signalized intersections. The one study intersection at Western Ave. (State Route 213) & Carson Street (Intersection ID 3) and its respective LOS is summarized in **Table 4.L-4**, *Existing Conditions Caltrans' Intersection Level of Service Impact Analysis*. As shown in Table 4.L-4, Signalized Intersection 3 - Western Ave. (State Route 213) & Carson Street operates at LOS E during the morning and afternoon peak hours.

With regard to freeway ramps, Caltrans' primary concern at off-ramps is that queued vehicles may extend past the back of the ramp onto the mainline. The six off-ramps analyzed include: I-110 SB ramps at Carson Street; 220th Street/I-210 NB ramps at Figueroa Street; 1-110 SB ramps at 223rd Street; I-405 SB ramps at Carson Street; I-405 NB ramps at Carson Street; and I-405 NB ramps at Wilmington Avenue. Table 17 in Traffic Study includes the peak hour off-ramp intersection 95th percentile queues for the analyzed ramps. As shown therein, the AM and PM peak hour queues at all ramp locations do not exceed the ramp length under existing conditions.

1 Study Intersection

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Study Area Intersections

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE

4.L-1

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Table 4.L-1

Highway Capacity Manual Level of Service Definitions for Freeway Segments

Level of Service	Description	Density[a]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11 and ≤ 18
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18 and ≤ 26
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 26 and ≤ 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35 and ≤ 45
F	Represents a breakdown in flow and oversaturated conditions.	> 45

[a] *Density is defined in vehicles per mile per lane and describes the proximity to other vehicles and is related to the freedom to maneuver within the traffic stream (2010 Highway Capacity Manual, Transportation Research Board, 2010).*

Source: 2010 Highway Capacity Manual (Transportation Research Board, 2010) and Caltrans.

(b) Roadways

The Project Site is served by a grid of streets that are oriented toward the north-south and east-west directions. The major arterials providing regional and sub-regional access to the Project vicinity include Vermont Avenue, Normandie Avenue, and Carson Street. Within the City of Los Angeles, the Mobility Plan 2035, which was adopted in August 2015 and is a comprehensive update of the Transportation Element, provides a classification system for roadways within the City boundaries.

Roadway descriptions are also described per the County's General Plan and the City of Carson General Plan, as applicable. The following is a brief description of the major roadways in the study area including the classifications under per the applicable planning documents referenced above:

Table 4.L-2

Existing Conditions Freeway Segment Levels of Service

ID	Freeway Segment	Peak Hour	Direction	Existing Conditions	
				Density [a]	LOS
FS-1	I-110 at 228th Street	A.M.	NB	37.0	E
			SB	22.9	C
		P.M.	NB	23.1	C
			SB	33.7	D
FS-2	I-110 at El Segundo Boulevard	A.M.	NB	27.0	D
			SB	36.9	E
		P.M.	NB	26.1	D
			SB	37.4	E
FS-3	I-405 at I-710	A.M.	NB	47.5	F
			SB	27.4	D
		P.M.	NB	28.5	D
			SB	43.8	E
FS-4	I-405 south of I-110/ Carson Scales	A.M.	NB	33.9	D
			SB	28.2	D
		P.M.	NB	26.0	C
			SB	37.9	E
FS-5	I-405 north of Western Ave/Van Ness Ave.	A.M.	NB	30.8	D
			SB	29.0	D
		P.M.	NB	27.5	D
			SB	31.8	D
FS-6	SR 91 at Avalon Blvd.	A.M.	EB	21.9	C
			WB	28.7	D
		P.M.	EB	26.1	D
			WB	19.9	C

[a] *Measured in passenger cars per mile per lane (pc/mi/ln) for freeways assuming a free-flow speed of 55 mph per Caltrans request.*

Source: Fehr & Peers, 2016.

(i) North/South Roadways

Vermont Avenue – Vermont Avenue is designated as a Major Highway in the Los Angeles County General Plan that runs north/south on the east side of the Project Site and provides two travel lanes and a bicycle lane in each direction. The street also has a center turn lane. Parallel parking is available on both sides of the street. The posted speed limit is 40 miles per hour (mph).

Table 4.L-3

Highway Capacity Manual Level of Service Definitions for Intersections

Level of Service	Description	Seconds of Delay Signalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 10
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35 and ≤ 55
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80

Source: 2010 Highway Capacity Manual (Transportation Research Board, 2010) and Caltrans.

Table 4.L-4

Existing Conditions Caltrans' Intersection Level of Service Impact Analysis

ID	Intersection	Peak Hour	Existing Delay	Existing LOS
Signalized Intersections				
3.	Western Ave. (State Route 213) & Carson Street	A.M.	61.4	E
		P.M.	61.4	E

Delay is measured in average seconds per vehicle; LOS = Level of service

Source: Fehr & Peers, 2016.

Normandie Avenue – Normandie Avenue is designated as a Secondary Highway in the Los Angeles County General Plan that runs north/south on the west side of the Project Site and provides two travel lanes in each direction. This roadway is part of the City of Los Angeles Bicycle Lane Network in the City of Los Angeles Mobility Plan. Restricted and unrestricted parking is available on both sides of the street. The posted speed limit is 35 mph. Within the study area, Normandie Avenue forms the boundary between the City of Los Angeles and the unincorporated community of West Carson.

Western Avenue (State Route 213) – Western Avenue is designated as a Major Highway in the Los Angeles County General Plan that runs north/south to the west of the Project Site. The roadway provides two travel lanes in each direction and contains a raised median with intersection turn lanes on portions of the roadway. Western Avenue is part of the City of Los Angeles Mobility Plan's Bicycle Enhanced Network. Restricted and unrestricted parking is available on both sides of the street near the Project Site. The posted speed limit is 40 mph. Within the study area, Normandie Avenue forms the boundary between the City of Los Angeles and the City of Torrance.

Figueroa Street – Figueroa Street is designated as a Major Highway in the City of Carson General Plan that runs north/south to the east of the Project Site. The roadway provides two travel lanes in each direction and contains a raised median with intersection turn lanes on portions of the roadway. Restricted and unrestricted parking is available on both sides of the street near the Project Site. The posted speed limit is 40 mph.

Meyler Street – Meyler Street is a local street that runs north/south south of the Project Site. Unrestricted parking is available on both sides of the street near the Project Site.

Berendo Avenue – Berendo Street is a local street that runs north/south north of the Project Site. Restricted and unrestricted parking is available on both sides of the street near the Project Site.

Budlong Avenue – Budlong Avenue is a local street that runs north/south north of the Project Site. Restricted and unrestricted parking is available on both sides of the street near the Project Site.

(ii) East/West Roadways

Carson Street – Carson Street is designated as a Major Highway in the Los Angeles County General Plan that runs east/west on the north side of the Project Site and provides two travel lanes in each direction. The portions of the roadway within the City of Los Angeles are part of the City of Los Angeles Bicycle Lane Network. Restricted and unrestricted parking is available on either side of the street on portions of the roadway. The posted speed limit is 35 mph.

220th Street – 220th Street is a local street that runs east/west on the south side of the Project Site and provides four vehicle travel lanes, two in each direction. This roadway is part of the County of Los Angeles proposed Bicycle Network. Restricted and unrestricted parking is available on either side of the street on portions of the roadway near the Project Site. The posted speed limit is 30 mph.

223rd Street – 223rd Street is designated as a Secondary Highway in the Los Angeles County General Plan that runs east/west to the south of the Project Site and provides two travel lanes in each direction. This

roadway is part of the County of Los Angeles proposed Bicycle Network. The majority of parking is unrestricted on either side of the street. The posted speed limit is between 35 and 40 mph.

Torrance Boulevard – Torrance Boulevard is designated as a Secondary Highway in the Los Angeles County General Plan that runs east/west north of the Project Site and provides two travel lanes in each direction. Parking is available on most blocks within the study area for passenger vehicles. Commercial vehicles are not allowed to park on the roadway. The posted speed limit is 35 mph.

Sepulveda Boulevard – Sepulveda Boulevard is designated as a Major Highway in the Los Angeles County General Plan that runs east/west south of the Project Site and provides three travel lanes in each direction, with a raised median on portions of the roadway. Parking is not available on either side of the street. The posted speed limit is 40 mph.

(2) Existing Intersection Service Levels

Twenty-two study intersections, 21 signalized and one (1) unsignalized, were selected for the Project traffic analysis (See Figure 4.L-1 for intersection locations). Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow on the street system, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum desirable level of service in urban areas. Levels of service definitions are provided in **Table 4.L-5**, *Level of Service Definitions for Signalized Intersections*.

Per the requirements of Los Angeles County, City of Torrance and City of Carson, Intersection Capacity Utilization (ICU) methodology was used to determine the intersection volume-to-capacity (V/C) ratio and corresponding LOS for the 21 signalized study intersections wholly or partly in these jurisdictions. The ICU method of intersection capacity analysis determines the intersection V/C ratio and corresponding LOS for the turning movements and intersection characteristics at signalized intersections. "Capacity" represents the maximum volume of vehicles in the critical lanes that have a reasonable expectation of passing through an intersection in one hour under prevailing roadway and traffic conditions. The ICU were calculated by dividing critical traffic movement volumes at an intersection by the capacity per number of lanes for the movement.

The one unsignalized study intersection, Meyler Street & 220th Street, is located in unincorporated Los Angeles County. The County's Impact Analysis Report Guidelines do not specify a specific methodology or thresholds of significance when analyzing unsignalized intersections. Consistent with County practices, this intersections is evaluated as if it were signalized, using the ICU methodology. The County of Los Angeles thresholds of significance for a signalized intersection are also applied to this intersection (described below).

The City of Los Angeles requires the use of Critical Movement Analysis (CMA) methodology to evaluate the operations of intersections and this methodology was used to analyze the study locations in the City of Los Angeles. The CMA method of intersection capacity analysis determines the intersection V/C ratio and corresponding LOS for the turning movements and intersection characteristics at signalized intersections. The CALCADB software package developed by Los Angeles Department of Transportation (LADOT) was used to implement the CMA methodology at the eight study intersections wholly or partly under City of Los Angeles jurisdiction.

Table 4.L-5

Level of Service Definitions for Signalized Intersections

Level of Service	Intersection Capacity Utilization[a]	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

[a] *Transportation Research Circular No. 212, Interim Materials on Highway Capacity, Transportation Research Board, 1980.*

Source: Fehr & Peers, 2016.

The City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) system is a computer-based traffic signal control system that monitors traffic conditions and system performance to allow ATSAC-operations to manage signal timing to improve traffic flow conditions. All eight signalized study intersections under City of Los Angeles jurisdiction are currently operating under the City's ATSAC system. In accordance with established City of Los Angeles procedures, a 0.07 V/C reduction was applied at each intersection where ATSAC is implemented. Per direction from LADOT, the benefits of the Adaptive Traffic Control System (ATCS) in place at these intersections (normally estimated at 0.03 V/C) are not reflected in this analysis due to the limited area of the City's system.

Table 4.L-6, *Existing Intersection Levels of Service Analysis,* summarizes the existing LOS analysis results. As shown in the table, the following nine intersections are currently operating at poor levels of service, i.e., LOS E or F, during one or both of the analyzed peak hours:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

Detailed LOS calculation worksheets are presented in Appendix C of the Traffic Study.

Table 4.L-6

Existing Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	Existing LOS
1	Normandie Ave.	Torrance Blvd.	City of Los Angeles	CMA	AM	0.902	E
					PM	0.904	E
			Los Angeles County	ICU	AM	0.935	E
					PM	0.936	E
2	Vermont Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.927	E
					PM	0.880	D
3	Western Ave.	Carson St.	City of Los Angeles	CMA	AM	0.877	D
					PM	0.948	E
			City of Torrance	ICU	AM	0.943	E
					PM	1.006	F
4	Normandie Ave.	Carson St.	City of Los Angeles	CMA	AM	0.763	C
					PM	0.837	D
			Los Angeles County	ICU	AM	0.904	E
					PM	0.930	E
5	Budlong Ave.	Carson St.	Los Angeles County	ICU	AM	0.570	A
					PM	0.539	A
6	Berendo Ave.	Carson St.	Los Angeles County	ICU	AM	0.575	A
					PM	0.569	A
7	Medical Ctr Dr.	Carson St.	Los Angeles County	ICU	AM	0.628	B
					PM	0.611	B
8	Vermont Ave.	Carson St.	Los Angeles County	ICU	AM	0.905	E
					PM	0.917	E
9	I-110 SB Ramps	Carson St.	Los Angeles County	ICU	AM	0.814	D

Table 4.L-6

Existing (2014) Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	Existing LOS
					PM	0.849	D
10	Figueroa St.	Carson St.	City of Carson	ICU	AM	0.661	B
					PM	0.762	C
11	Western Ave.	220th St.	City of Los Angeles	CMA	AM	0.554	A
					PM	0.698	B
			City of Torrance	ICU	AM	0.685	B
					PM	0.819	D
12	Normandie Ave.	220th St.	City of Los Angeles	CMA	AM	0.409	A
					PM	0.293	A
			Los Angeles County	ICU	AM	0.549	A
					PM	0.441	A
13	Meyler St.	220th St.	Los Angeles County	ICU	AM	0.460	A
					PM	0.446	A
14	Vermont Ave.	220th St.	Los Angeles County	ICU	AM	0.645	B
					PM	0.696	B
15	Figueroa St.	220th St./I-110 NB Ramps	City of Carson	ICU	AM	0.913	E
					PM	0.886	D
16	Western Ave.	223rd St.	City of Los Angeles	CMA	AM	0.822	D
					PM	0.851	D
			City of Torrance	ICU	AM	0.893	D
					PM	0.919	E
17	Normandie Ave.	223rd St.	City of Los Angeles	CMA	AM	0.623	B
					PM	0.701	C
			Los Angeles County	ICU	AM	0.807	D
					PM	0.822	D
18	Meyler St.	223rd St.	Los Angeles County	ICU	AM	0.649	B
					PM	0.578	A
19	Vermont Ave.	223rd St.	Los Angeles County	ICU	AM	0.917	E
					PM	0.880	D
20	I-110 SB Ramps	223rd St.	Los Angeles County	ICU	AM	0.755	C
					PM	0.843	D
21	Figueroa St.	223rd St.	City of Carson	ICU	AM	0.827	D
					PM	0.718	C
22	Western Ave.	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.927	E
					PM	0.990	E
			City of Torrance	ICU	AM	0.957	E
					PM	1.011	F

A All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.

Source: Fehr & Peers, 2016

(3) CMP Monitoring Stations

The following six (6) Congestion Management Program (CMP) arterial monitoring intersections are located nearest to the Project study area:

- Western Avenue & Carson Street (City of Torrance)
- Western Avenue & 190th Street (City of Torrance)
- Western Avenue & Sepulveda Boulevard (City of Torrance)
- Pacific Coast Highway & Western Avenue (City of Los Angeles)
- Pacific Coast Highway & Figueroa Street (City of Los Angeles)
- Artesia Boulevard & Vermont Avenue (City of Gardena)

The CMP Program is discussed further below.

(4) Public Transit and Alternative Transportation Facilities

(a) Public Transit Service

The Project area is served by bus lines operated by Los Angeles County Metropolitan Transportation Authority (Metro), Torrance Transit, Carson Circuit and Gardena Municipal Bus. **Figure 4.L-2**, *Existing Transit Lines*, illustrates the existing transit service in the study area. The following is a summary of the transit services in the Project vicinity:

Metro Line 205 – Line 205 is a north/south line that runs from the Willowbrook/Rosa Parks Station to San Pedro. The line has 30- to 35-minute headways during AM/PM peak hours and runs on Vermont Avenue within the study area, with stops every few blocks. Project site access is provided via stops at the intersections of Vermont Avenue & Carson Street and Vermont Avenue & 220th Street.

Metro Line 950X – Line 950X is a north/south line that runs from downtown Los Angeles to San Pedro via the Harbor Freeway and provides limited service. The line has 12- to 30-minute headways during AM/PM peak periods and runs on the Harbor Freeway within the study area. Project site access is provided via a stop at Carson Street.

Metro Line 550 – Line 550 is a north/south line that runs from the University of Southern California to San Pedro. The line has 30- to 35-minute headways during AM/PM peak hours and runs on Vermont Avenue within the study area, with stops at Torrance Boulevard and Carson Street. Project site access is provided via a stop at the intersection of Vermont Avenue & Carson Street.

Carson Circuit Line F – Line F travels on a loop route that runs primarily along 223rd Street, Figueroa Street, 213th Street and Martin Street. The line has 40-minute headways during AM and PM peak periods and runs on 223rd Street and Figueroa Street within the study area, with stops at Figueroa Street & 223rd Street, Figueroa Street & 220th Street, Figueroa Street & Carson Street, Carson Town Center, and Figueroa Street & Torrance Boulevard.

Carson North/South Shuttle Line S – Line S is a north/south line that runs from Wilmington to the Harbor Gateway Transit Center and provides morning and afternoon peak period service only. The line has 50-minute headways and runs on Figueroa Street within the study area, with stops at Figueroa Street & 223rd Street, Figueroa Street & 220th Street, Figueroa Street & Carson Street, Carson Town Center, and Figueroa Street & Torrance Boulevard.

Torrance Transit Line 1 – Line 1 runs from Del Amo Fashion Center to the Harbor Gateway Center. The line runs east/west along Torrance Boulevard, north/south along Normandie Avenue and Vermont Avenue and east/west along Carson Street within the study area, with stops at every few blocks. The Project Site is served by two stops along Carson Street with 40- to 45-minute headways during the AM and PM peak periods.

Torrance Transit Line 3 – Line 3 is an east/west line that runs from the Redondo Beach Pier to downtown Long Beach. The line runs along Carson Street within the study area with 20- to 25-minute headways during the AM and PM peak periods and stops at every few of blocks.

Torrance Transit Line Rapid 3 – Line Rapid 3 is an east/west line that runs from the South Bay Galleria to downtown Long Beach and travels much of the same route as Line 3 adding frequent service to the study area between 6:30 and 8:30 AM and between 2:30 and 6:00 PM. The line runs along Carson Street within the study area and provides service with headways between 10 and 20 minutes during the AM and PM peak periods. Stops are provided at Carson Street & Western Avenue, Carson Street & Normandie Avenue, and Carson Street & Vermont Avenue within the study area.

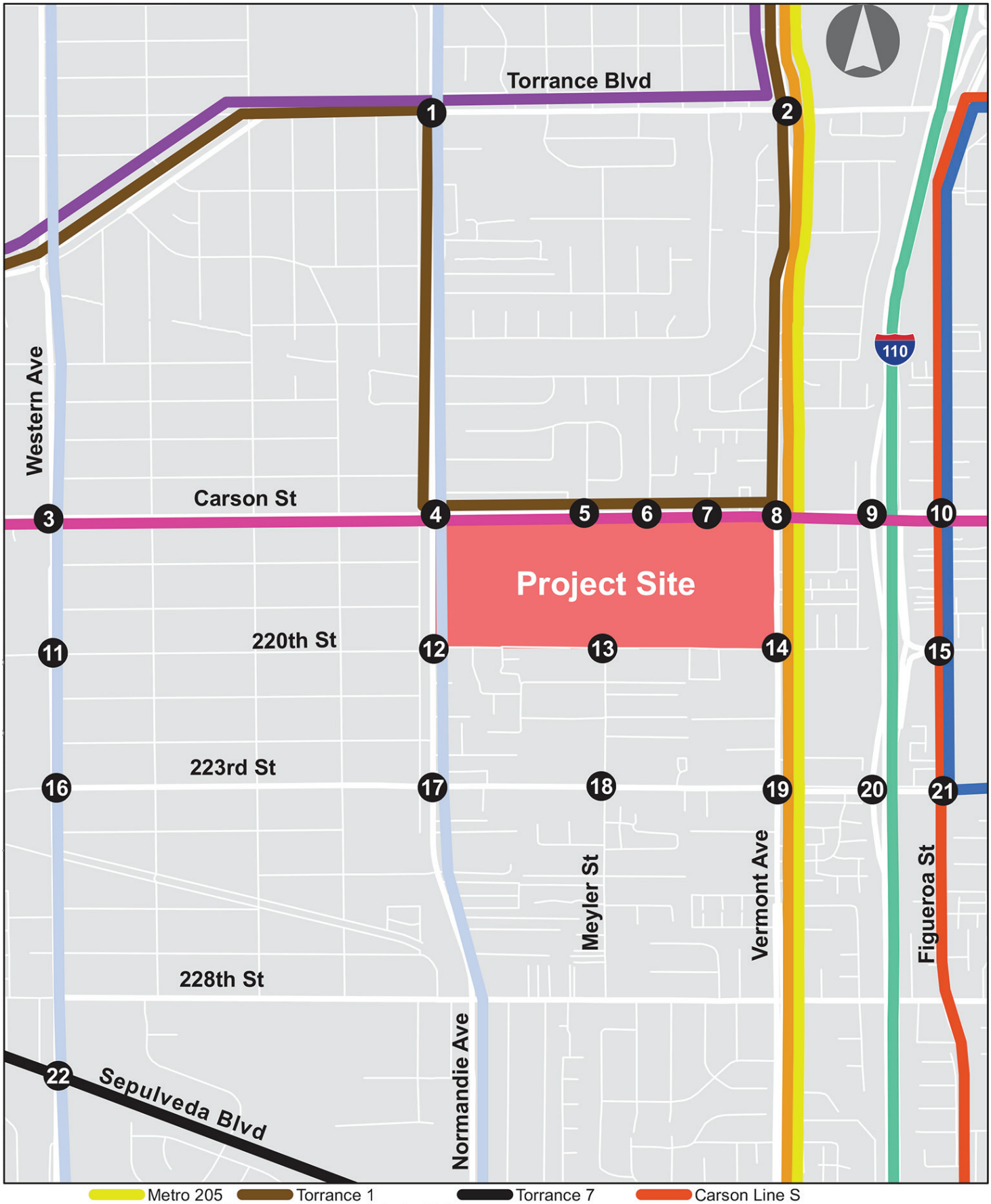
Torrance Transit Line 4 – Line 4 is a north/south express line that runs from the intersection of Hawthorne Boulevard and the Pacific Coast Highway to downtown Los Angeles. The line travels east/west on Torrance Boulevard and north/south on Vermont Boulevard within the study area with stops located at Torrance Boulevard & Western Avenue, Torrance Boulevard & Normandie Avenue, and Torrance Boulevard & Vermont Avenue. The line operates between 5:30 and 8:50 AM and between 3:30 and 7:00 PM with 40-minute headways.

Torrance Transit Line 7 – Line 7 is an east/west line that runs from the intersection of Catalina Street & Torrance Boulevard to the intersection of Sepulveda Boulevard & Avalon Boulevard. The line runs along Sepulveda Boulevard within the study area with 60-minute AM and PM peak period headways and provides a stop at Western Avenue & Sepulveda Boulevard.

Gardena Municipal Bus Lines 2 – Line 2 is a north/south line that runs from the Metro Green Line Vermont Station to the intersection of the Pacific Coast Highway & Normandie Avenue. The line runs along Western Avenue and Normandie Avenue within the study area and provides stops every few blocks. The line provides service with headways of 15 minutes during AM and PM peak periods.

(b) Bicycle and Pedestrian Facilities

Currently, there is limited dedicated bicycle infrastructure in the study area. East of the Project Site, bicycle lanes (Class II facilities) extend north/south on Vermont Avenue from 223rd Street through the northern edge of the study area. An east/west Class II facility exists on Carson Street between Normandie Avenue and



PCR

N

0 0.4 Miles

Existing Transit Lines

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE

4.L-2

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Western Avenue. The City of Los Angeles Mobility Plan includes a proposed protected bicycle lane on Western Avenue within the study area. The Los Angeles County Bicycle Master Plan includes a proposed Class II bicycle lane on 223rd Street between Normandie Avenue and the Harbor Freeway and a Class III bicycle route on 220th Street between Normandie Avenue and Vermont Avenue. The City of Carson Master Plan of Bikeways includes proposed buffered bicycle lanes on Figueroa Street south of 223rd Street and bicycle lanes north of 223rd Street within the study area. The plan also calls for buffered bike lanes on 223rd Street, sharrows[2] on Carson Street and bicycle lanes on 220th Street in the City of Carson portion of the study area. Existing and planned bicycle facilities are illustrated in **Figure 4.L-3**, *Existing and Planned Bicycle Facilities*. Pedestrian traffic typically enters the Medical Center Campus from one of the parking structures, parking lots or from the nearby transit stops. The Medical Center Campus is located in an established neighborhood with a moderate population density. All of the streets immediately bordering the Medical Center Campus and nearly all of the other streets in the vicinity include sidewalks, facilitating pedestrian movement. Marked crosswalks are present at most intersections in the study area. Pedestrian walk phases are either automatically provided at the intersections or are actuated by pedestrian push-buttons.

(5) Existing Project Site Vehicular Circulation

Vehicular access to the Harbor-UCLA Medical Center Campus, as illustrated below in **Figure 4.L-4**, *Existing Site Circulation*, is provided by a primary driveway on Carson Street, near the Existing Hospital and a second driveway west of the primary driveway; two driveways on Vermont Avenue; five driveways along 220th Street; and one driveway on Normandie Avenue. Only the Carson Street driveways are signalized. Internal circulation on-site follows the original grid layout established on the property, with four east-west roadways and numerous short north-south connector roadways. Most interior intersections of two roadways or drive aisles are stop-sign controlled. To aid wayfinding, most of the internal roadways are named and display street name signs at intersections. In addition, most buildings or modular structures have a building number (consisting of a letter and a number) or a building name, or both, visible to drivers. However, few directory boards are located within the Medical Center Campus, and wayfinding for motorists as well as pedestrians can be confusing. Contributing to this confusion is the lack of distinctions between Medical Center Campus entrances and parking areas for Harbor-UCLA staff and those for the general public.

(6) Parking Facilities

Existing parking facilities consist primarily of on-site surface parking lots and one multi-level parking structure located at the southeast corner of the Medical Center Campus, as well as three off-site surface parking lots. On-site parking facilities at the Medical Campus are illustrated in Figure 2-5 in Chapter 2.0, *Project Description*, of this Draft. The larger parking lots are generally distributed along the Medical Center Campus perimeter, with smaller lots throughout the Medical Center Campus interior; parking is allowed on one or both sides of internal roadways, though incidental on-street parking also occurs in areas not officially designated as parking areas, as discussed below.

The on-site parking supply totals 2,905 spaces, which exceeds the County's parking code requirement of 2,709 spaces. Specifically, as discussed in further detail below under Regulatory Framework Summary, Los Angeles County Code, Section 22.52.1120, Hospitals, Convalescent Hospitals, Adult Residential Facilities, and

[2] *Sharrows are chevrons combined with bicycle stencils placed in the center of a travel lane. They indicate that bicycles and motor vehicles share the lane. These are often times accompanied by signage such as "bicyclists can use full lane".*

Group Homes for Children, requires 2 spaces per bed, 1 space per 250 square feet for outpatient facilities, and 1 space per 400 square feet for research use. This supply includes 2,168 standard spaces and 124 American with Disabilities Act (ADA) spaces in designated surface parking lots and the new parking structure in the southeastern corner of the Harbor-UCLA Medical Center Campus, and 596 standard spaces and 17 ADA spaces along the internal streets. An additional 281 spaces (278 standard spaces and three ADA spaces) are provided in off-site parking facilities, and street parking is permitted along all or portions of the four public streets surrounding the Medical Center Campus. However, parking is not uniformly utilized, with parking for the Existing Hospital Tower and other facilities near the eastern end of the Medical Center Campus and along the northern perimeter experiencing severe localized shortfalls, while in other locations, designated parking for specific facilities is underutilized. A considerable number of makeshift parking spaces have been created along internal roadways to accommodate localized demand, though many of these areas are not designated for on-street parking. Moreover, most of the interior roadways do not provide sidewalks or curbs and pedestrians must share the roadways with vehicle traffic, adversely affecting access, including disabled access, to facilities throughout the Harbor-UCLA Medical Center Campus.

b. Regulatory Framework Summary

(1) Federal

No federal traffic/transportation regulations apply to the Project.

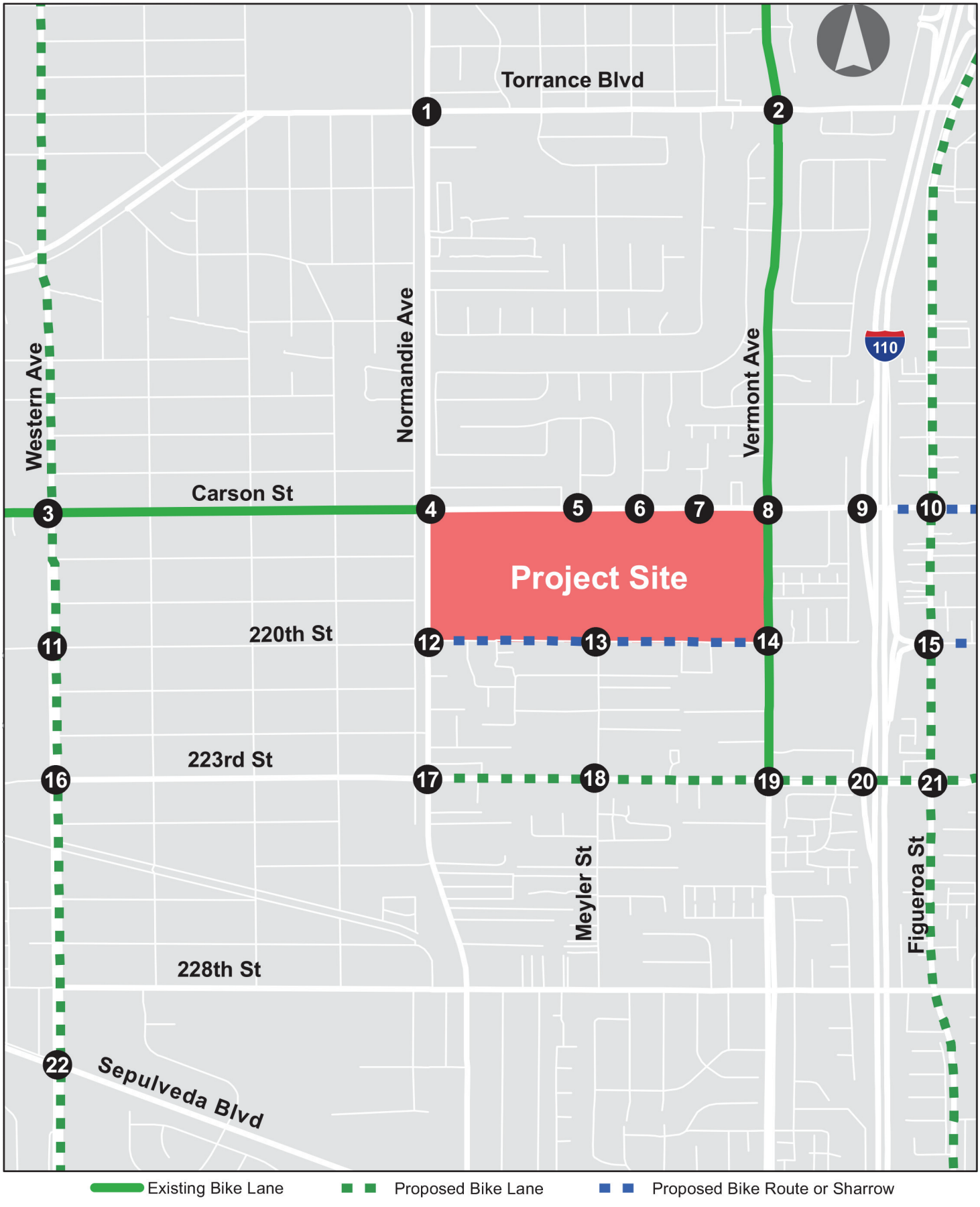
(2) State

(a) Statewide Transportation Improvement Program

Caltrans administers transportation programming, which is the public decision-making process that sets priorities and funds projects envisioned in long-range transportation plans. Caltrans commits expected revenues over a multi-year period to transportation projects. The Statewide Transportation Improvement Program (STIP) is a multiyear capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other sources.

(b) Congestion Management Program

The Congestion Management Program (CMP) is a state-mandated program enacted by the State legislature to address the increasing concern that urban congestion is affecting the economic vitality of the state and diminishing the quality of life in some communities. The 2010 CMP is the eighth CMP adopted for Los Angeles County since the requirement became effective with the passage of Proposition 111 in 1990. The hallmark of the CMP program is that it is intended to address the impact of local growth on the regional transportation system. Statutory requirements of the CMP include monitoring LOS on the CMP Highway and Roadway network, measuring frequency and routing of public transit, implementing the Transportation Demand Management and Land Use Analysis Program and helping local jurisdictions meet their responsibilities under the CMP. Metro, the local CMP agency, has established a countywide approach to implement the statutory requirements of the CMP in their governing 2010 CMP for Los Angeles County. Please see discussion below.



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0 0.4 Miles

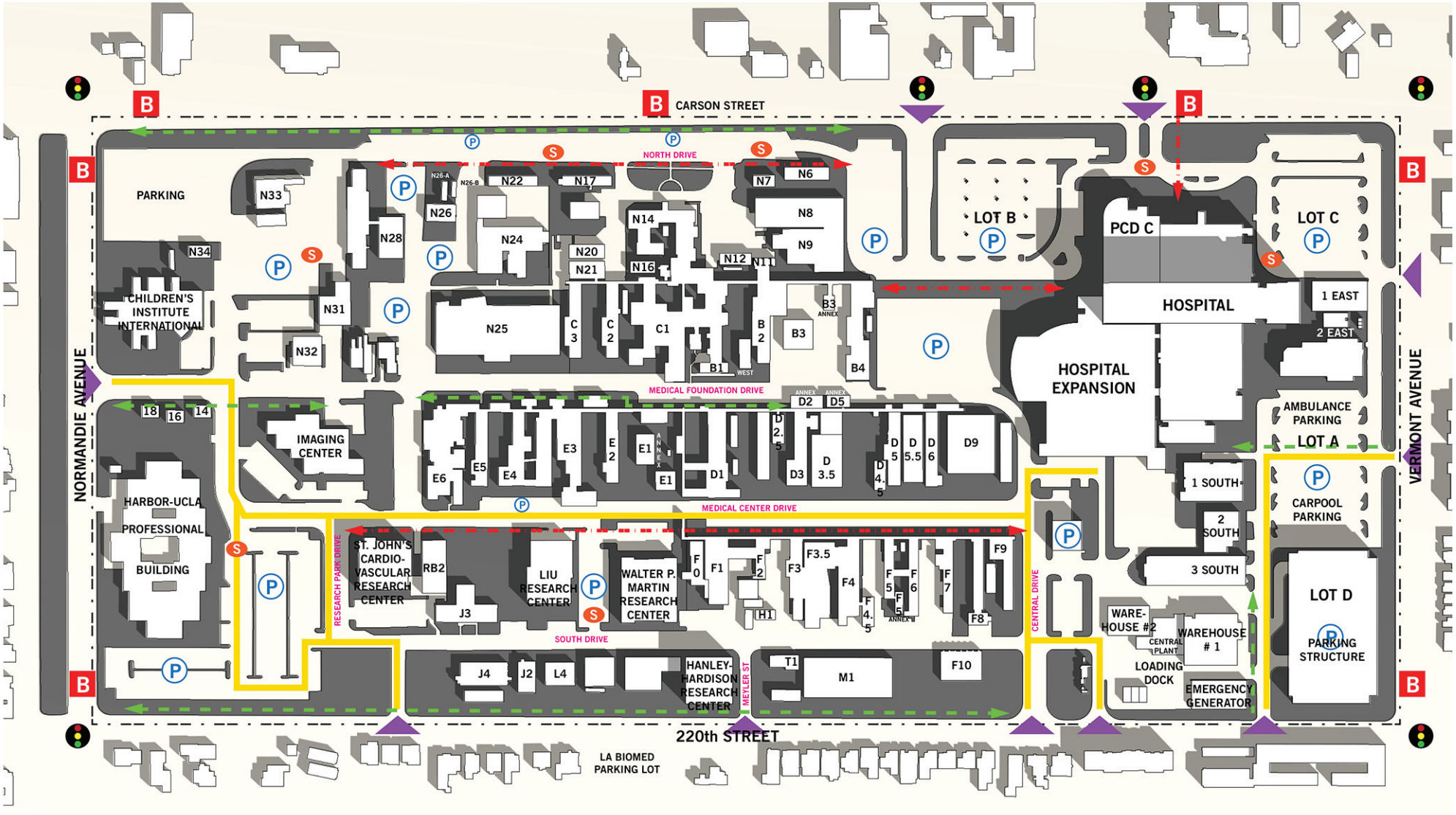
Existing and Planned Bicycle Facilities

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE

4.L-3



LEGEND

- PARKING
- SHUTTLE BUS STOPS
- STOP LIGHTS
- FIRE DEPT. FIRE LANE ACCESS 26'0" ACCESS ROAD
- BUS STOP
- PRIMARY PEDESTRIAN ROUTE
- SECONDARY PEDESTRIAN ROUTE
- CAMPUS ENTRY
- PROPERTY LINE

PCR

0 400 Feet

Existing Site Circulation

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE

4.L-4

(c) Senate Bill No. 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under CEQA for several categories of development projects including the development of infill projects in transit priority areas. The bill adds to the CEQA Statute, California Public Resources Code Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, Section 21099. Pursuant to Section 21099(d)(1) "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."[3] The provisions of SB 743 apply to projects located on a "lot within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by, an improved public right-of-way from, parcels that are developed with qualified urban uses….and it is located within one-half mile of a major transit stop."[4] The Project would meet the criteria set forth in SB 743 because it (1) is located within a transit priority area less than one-half mile from the Harbor Freeway/Carson Station TOD (connection to Metro Silver Line) and (2) comprises an employment center within an established urban area. Under SB 743, the Project would be exempt from findings of significance related to parking effects. However, for the purpose of this EIR, parking effects are evaluated for informational and disclosure purposes.

(3) Regional

(a) Southern California Association of Governments' Regional Transportation Plan

The Southern California Association of Governments' (SCAG) Regional Transportation Plan (RTP) is a federal- and State-mandated transportation plan that envisions the future multimodal transportation system for the region and provides the basic framework for coordinated, long-term investment in the regional transportation system over the RTP planning horizon of 2035. In compliance with State and federal requirements, SCAG prepares the RTIP to implement projects and programs listed in the RTP. Updated every other year, the RTP lists all transportation projects proposed for the region over a six-year period. Transportation projects proposed in the region are required to be consistent with the RTP and included within the RTIP to be eligible for State or federal funding.

The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) was adopted by SCAG on April 7, 2016. The 2016 RTP/SCS identifies mobility as an important component of a much larger picture with added emphasis on sustainability and integrated planning. In addition, the RTP/SCS includes goals and policies that pertain to mobility, accessibility, safety, productivity of the transportation system, protection of the environment and energy efficiency, and land use and growth patterns that complement the State and region's transportation investments. An integral component of the RTP/SCS is a strong commitment to reduce emissions from transportation sources in order to comply with Senate Bill 375, improve public health, and meet the National Ambient Air Quality Standards as set forth by the Clean Air Act. For further discussion of air quality and greenhouse gas emissions, see Section 4.B, *Air Quality*, and Section 4.E, *Greenhouse Gas Emissions*, respectively, of this Draft EIR.

[3] *Section 21009(2)(B) clarifies that "For the purposes of this subdivision, aesthetic impacts do not include impacts on historical or cultural resources."*

[4] *Per definitions included in Section 21099(a).*

(b) Los Angeles County Congestion Management Program

The CMP is a State-mandated program enacted by the State legislature to address the increasing concern that urban congestion is affecting the economic vitality of the State and diminishing the quality of life in some communities. The 2010 CMP is the eighth CMP adopted for Los Angeles County since the requirement became effective with the passage of Proposition 111 in 1990. The hallmark of the CMP program is that it is intended to address the impact of local growth on the regional transportation system. Statutory requirements of the CMP include monitoring LOS on the CMP highway and roadway network, measuring frequency and routing of public transit, implementing the Transportation Demand Management and Land Use Analysis Program, and helping local jurisdictions meet their responsibilities under the CMP.

Los Angeles County Metropolitan Transportation Authority (Metro), the local CMP agency, has established a countywide approach to implement the statutory requirements of the CMP in its governing 2010 CMP for Los Angeles County. The CMP identifies a system of highways and roadways with minimum levels of service performance measurements designated at LOS E (unless exceeded in base year conditions) for highway segments and key roadway intersections on this system. If LOS standards deteriorate, then local jurisdictions must prepare a deficiency plan to be in conformance with the countywide plan.

The CMP requires that, when an EIR is prepared for a project, traffic and public transit impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use those facilities. Mixed-use developments that meet minimum density requirements and that are located within a one-quarter mile radius of a fixed rail station are exempt from CMP analysis. The CMP guidelines state that areas selected for analysis should be those that include the following locations:

- All CMP arterial monitoring intersections, including monitored on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the morning or afternoon weekday peak hours of adjacent street traffic; and
- Mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either the morning or afternoon weekday peak hours.

If a project adds more traffic than the minimum threshold amount to an intersection, then that intersection has to be analyzed for deficiencies. The analysis must investigate measures which will mitigate the significant CMP system impacts; develop cost estimates, including the fair share costs to mitigate impacts of the proposed project; and indicate the responsible agency. In Los Angeles County, an impact is considered significant if the project related increase in the V/C ratio equals or exceeds the thresholds noted below under Thresholds of Significance.

(4) Local

(a) County of Los Angeles

(i) Los Angeles County General Plan 2035

The Mobility Element, included as Chapter 7 of the Los Angeles County General Plan 2035, provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network. The Element assesses the challenges and constraints of the County transportation system and offers policy guidance to reach the County's long-term mobility goals. The Element includes two sub-elements, the Highway Plan and the Bicycle Master Plan. These plans establish policies for the roadway

and bikeway systems in the unincorporated areas, which are coordinated with the networks in the 88 cities in the County. The General Plan also established a program to prepare community pedestrian plans, with guidelines and standards to promote walkability and connectivity throughout the unincorporated areas.

(ii) West Carson Transit Oriented District (TOD) Specific Plan

The Los Angeles County Department of Regional Planning is currently preparing the West Carson Transit Oriented District (TOD) Specific Plan. The Plan aims to improve access to transit, housing, and jobs, while creating a healthier, safer environment for walking and biking. The final document will be based on collaborative efforts with residents, other County agencies, adjacent cities, and other stakeholders, and will contain standards for zoning and land use as well as a mobility strategy, an economic development strategy, a capital improvement plan, and urban design guidelines for the West Carson TOD area, which includes the Harbor-UCLA Medical Center Campus.

(iii) Parking Requirements

Section 22.52.1120 of the County Code applies to parking for hospitals, convalescent hospitals, adult residential facilities and group homes for children. According to Section 22.52.1120:

a. *Every hospital shall have two automobile parking spaces, plus adequate access thereto, for each patient bed. The parking may be within 500 feet of the exterior boundary of the lot or parcel containing the main use. At least 25 percent of the required parking shall be reserved and marked for the use of employees only.*

b. *Outpatient clinics, laboratories, pharmacies and other similar uses shall have one parking space for each 250 square feet of floor area when established in conjunction with a hospital.*

c. *Every convalescent hospital shall have an amount of automobile parking spaces not less than the number of residents permitted by any license or permit which allows the maintenance of such facility. If employee dwelling units are provided on the premises there shall be, in addition to the automobile parking spaces required for the principal use, the number of automobile parking spaces required by this Part 11 for residential uses.*

d. *Every adult residential facility and group home for children shall have one automobile parking space for each staff member on the largest shift and one parking space for each vehicle used directly in conducting such use.*

With regard to bicycle parking, Section 22.52.1225 of the County Code applies to the provision of bicycle parking and related facilities. According to Section 22.52.1225, the minimum number of short-term and long-term bicycle parking spaces for a particular use shall be provided in accordance with the requirements for each particular type of land use. For a combination of uses on a single lot, the number of required bicycle parking spaces shall be equal to the combined total of the required bicycle parking spaces for each of the individual uses. For purposes of this calculation, when floor area is used, all calculations for the specific use shall be based on gross floor area, including the gross floor area of any proposed addition to the involved structure or site. The following requirements provided in Section 22.52.1225 apply to existing and proposed uses on the Medical Center Campus.

- Institutional uses, including hospitals, convalescent hospitals, adult residential facilities, and group homes for children: Short-term - One space per each 20,000 square feet of gross floor area (two space minimum); Long-term - One space per each 10,000 square feet of gross floor area (two space minimum)

(b) City of Los Angeles

(i) Mobility Plan 2035

The City of Los Angeles Mobility Plan 2035, which was approved by Los Angeles City Council on August 11, 2015, is a comprehensive update of the City's Transportation Element and incorporates "complete streets" principles. Government Code Sections 65302(b)(2)(A) and (B) require a circulation element (i.e., Mobility Plan) to provide for a balanced, multimodal transportation network that meets the needs of all users of street, roads, and highways. "All users" by definition in the statute is "bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors." This requirement was established as part of Assembly Bill 1358, which is referred to as the California Complete Streets Act, as well as Caltrans Deputy Directive DD-64-R1, Complete Streets: Integrating the Transportation System.

The Mobility Plan 2035 addresses the expanded definition of streets that has fundamentally changed the relationship of people with streets. The Plan also responds to changing demographics in the City, including people wanting safe and accessible active transportation options and alternatives to the automobile as well as an aging population needing to rely on alternatives to the automobile. The Mobility Plan also addresses the role of transportation in the City's economic vitality. The Plan serves to meet the goal in the Regional Transportation Plan to decrease the vehicle miles traveled (VMT) per capita by five percent every five years, to 20 percent by 2035 and to meet a nine percent per capita greenhouse gas reduction by 2020 and a 16 percent per capita reduction by 2035.

The Mobility Plan 2035 identifies Transit Enhanced Network (TEN), a Neighborhood Enhanced Network (NEN) to support pedestrian activity, and an expanded Bicycle Enhanced Network (BEN). Among other provisions the Mobility Plan 2035 includes roadway designations pursuant to updated policies and current transportation needs in the City.

Mobility Plan 2035 includes goals that define the City's five main priorities: 1) Safety First; 2) World Class Infrastructure; 3) Access for All Angelenos; 4) Collaboration, Communication and Informed Choices; and 5) Clean Environmental & Healthy Communities.

The 2010 Bicycle Plan, which is part of the Mobility Plan 2035, guides the development of a citywide bicycle transportation system. The Bicycle Plan recognizes the growing needs of the cycling public and seeks to further reduce the barriers to greater utilization of bicycles for both personal transportation and for recreation. Particular emphasis is placed on bicycling as a commute option. The overall intent is to expand bicycle usage through further development of bicycle riding facilities and improvement of existing facilities along with appropriate support programs. The Bicycle Plan establishes standards for development of these facilities, as well as criteria for prioritization of development of designated routes.

With a stated policy to reduce automobile trips and greenhouse gas emissions by making 5 percent of all daily trips and 3 percent of commute trips bicycle trips by 2020, the 2010 Bicycle Plan establishes a Backbone Network and Neighborhood Network linking Regional Centers to promote bicycle usage.

(c) City of Carson

(i) Carson General Plan Transportation and Infrastructure Element

The purpose of the City of Carson General Plan Transportation and Infrastructure Element is to document the methods and results of the analysis of the existing and projected future circulation conditions in the City of Carson. As part of the General Plan, this document outlines Transportation and Infrastructure System policies and describes the future circulation system needed to support the Land Use Element. In addition, this Element addresses public utilities and infrastructure.

(d) City of Torrance

(i) Torrance General Plan Circulation and Infrastructure Element

The Torrance General Plan Circulation and Infrastructure Element plans for the efficient and effective movement of people and goods between destinations within Torrance and throughout the region. A well-planned circulation system is a high priority, given that Torrance plays a unique role in the geography of the South Bay Region. Creative solutions, technology, right-of-way acquisition, and cooperation with adjacent cities are keys to addressing circulation issues and managing growth. While the Circulation and Infrastructure Element recognizes that automobiles will remain the leading mode of transportation for most Torrance residents and visitors, the objectives and policies included in this Element also stress the importance of accommodating and encouraging alternatives to automobile travel. The provision of facilities for pedestrians and bicycles and a comprehensive transit system will ensure that non-automobile transportation is a convenient alternative. In addition to planning for the City's long-term mobility needs, this Element also addresses the circulation of energy, water, sewage, storm drainage, and communications.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of potential transportation and parking impacts considers potential project effects related to construction, intersection service levels, roadway segments, the regional transportation system (i.e., CMP analysis), Caltrans facilities (freeway mainline segments, Caltrans intersections, and off-ramp queuing), public transit and other alternative transportation modes, vehicular access and circulation, and parking supply.

(1) Construction Traffic Impacts

The analysis of construction traffic includes a determination of the number of construction-related trips (i.e., construction worker trips and construction truck trips) that would occur as a result of the Project, the contributions of those trips to the local traffic system, and an analysis of the potential conflicts between construction activity and on-going activity in the Project vicinity. The potential impact of construction traffic, including haul trucks, would be a lessening of the capacities of access streets and haul routes due to slower movements and larger turning radii of trucks.

(2) Operational Traffic Impacts

(a) Intersection Service Levels

The methodology for evaluating operational intersection traffic impacts involves several steps, including the identification of existing traffic conditions at all Project study intersections and the determination of existing conditions with the Project traffic, Interim Year baseline conditions without and with Project traffic, and future cumulative Full Buildout operating year baseline conditions without and with Project traffic at the 22 study intersections.

Weekday morning and evening peak hour traffic counts were conducted at the 22 analyzed intersections in October 2014, May 2015, November 2015 and December 2015. Existing peak hour weekday traffic volumes are illustrated in Figure 5 of the Traffic Study.

(i) Trip Generation

Vehicle trip generation for the Project was estimated using a combination of: standard rates developed by the ITE and published in *Trip Generation, 9th Edition* and trip generation reduction rates for similar sites. For the Hospital's inpatient facilities (ITE Code 610), the analysis used the number of beds to estimate trip generation. The proposed new hospital tower would provide more spacious facilities consistent with current best practices, meaning that the new facility will require more floor area per bed.

As this site is located adjacent to transit, mixed uses, and falls within the Los Angeles County West Carson Transit Oriented District Specific Plan, its trip generation pattern is likely to deviate from the data collection sites where rates from ITE were drawn. Internal trip credits, defined as a reduction that can be applied to the trip generation estimates due to trips made within the site between land uses, are also applied at a rate of 20% of the daily and peak hour trips to all land uses on the site. Many of the buildings and activities on the Harbor-UCLA Medical Center Campus are related to one another, and this will continue as the site continues to add complementary uses. The internal trip credits were estimated based on the recommended factors provided in *Trip Generation, 9th Edition*; review of traffic studies for projects located in the region; and consultation with county staff as part of the MOU process.

A 7% transit credit and a 2% walk credit were applied to the all land uses on the site. These credits account for trips to and from the Project Site using modes other than automobiles. These include trips on transit, bicycle, walk, etc. The site is located within walking distance to the several Metro and municipal bus lines including two express lines, and is in close proximity to a wide diversity of land uses within reasonable walking distance.

(ii) Trip Distribution

The geographic distribution of the traffic generated by the proposed Project depends on several factors. These factors include the type and density of the proposed land uses, the geographic distribution from which patients and staff are drawn, and the location of the Project in relation to the surrounding street system. The general distribution pattern used in this traffic study was developed in consultation with county staff and is illustrated in Figure 6 of the Traffic Study. Aggregated data on existing staff home zip codes and patient home zip codes was used to determine existing origins for trips coming to and leaving from the Project.

(iii) Traffic Assignment

The traffic expected to be generated by the proposed Project was assigned to the street network using the distribution pattern described in Figure 6 of the Traffic Study. Project traffic was assigned based on the vehicle access and circulation diagram from the Harbor-UCLA Master Plan, as seen in **Figure 4.L-5**, *Proposed Vehicular Access and Circulation*. Figure 8 in the Traffic Study illustrates the assignment of Project traffic for the Interim Development scenario at each of the 22 intersections analyzed in this study, and Figure 9 of the Traffic Study illustrates the assignment of Full Buildout Project traffic.

(iv) Future Cumulative Analysis (Interim Year and Full Buildout Year Conditions)

Future Street Network Changes

The existing traffic signal at the intersection of Western Avenue and Carson Street will be modified to include a protected/permitted left turn phase at the east and west approaches. The existing signal is being installed by the City of Los Angeles in consultation with Caltrans and the City of Torrance using funding from the Highway Safety Improvement Program (HSIP). As part of the proposed project, the southern leg of the intersection of Carson Street & Medical Center Drive, which serves as an entrance point to Harbor-UCLA Medical Center, would be closed and a new entrance will be opened on Carson Street between Budlong Avenue and Normandie Avenue.

Interim Year and Full Buildout Year Base Traffic Generation

In order to evaluate the potential impact of the Project in the future on the surrounding street system, it was necessary to develop estimates of future traffic conditions both with and without the Project. Future traffic volumes without the Project were first estimated, representing the Interim base conditions and the Cumulative base conditions. The trips generated by the Project are then estimated and separately assigned to the surrounding street system.

The Interim and Cumulative base traffic projections reflect growth in traffic from two primary sources: background or ambient growth in the existing traffic volumes to reflect the effects of overall regional growth both in and outside of the study area, and traffic generated by the related projects in, or in the vicinity of, the study area. These factors are described below.

Ultimately, the Project's added increment is compared to the significance thresholds to determine whether the Project-generated traffic would result in a significant impact in the Future (Year 2023 and 2030) scenarios.

Areawide Traffic Growth

As part of the MOU process with County staff, an areawide traffic growth of 0.73% per year was agreed upon for the study area. Future increases in the background traffic volumes due to regional growth and development are expected to continue at this rate, at least through 2030. For the Interim analysis period, existing baseline traffic volumes were adjusted upward by a factor of 6.8% to reflect areawide regional growth up to 2023. With the projected completion date of 2030 for the Medical Center, the existing baseline traffic volumes were adjusted upward by a factor of 12.3% to reflect areawide regional growth up to the Cumulative period. The methodology prescribed by Los Angeles County does not include adding areawide traffic growth to existing volumes.

Cumulative Projects Traffic Generation

As indicated above, the second major source of traffic growth in the study area is from specific cumulative development projects, also called related projects, expected to be built in the vicinity of the Project Site prior to the proposed buildout. Data describing cumulative projects in the area was developed using information obtained from Los Angeles County Department of Regional Planning, LADOT, City of Carson Department of Planning and City of Torrance Department of Planning. A total of 26 related projects were identified in the surrounding area and are listed in Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR. The locations of the related projects are illustrated in Figure 3-1, *Related Projects Map*.

Trip generation estimates for related projects within the City of Los Angeles were obtained from the LADOT. All other trip generation estimates were determined using standard rates developed by the ITE and published in *Trip Generation, 9th Edition*, or from data in the traffic studies prepared for the projects. Table 6 in the Traffic Study presents the resulting trip generation estimates for these related projects. These projections are conservative in that they do not in every case account for either the existing uses to be removed or the possible use of non-motorized travel modes (transit, walking, etc.). The cumulative projects are expected to generate approximately 85,391 daily trips, including 3,684 trips during the morning peak hour and 7,316 trips during the evening peak hour.

Cumulative Projects Trip Distribution and Traffic Assignment

The geographic distribution of the traffic generated by the cumulative projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees and potential patrons of the proposed developments are drawn, and the location of the employment and commercial centers to which residents of residential projects would be drawn, and the location of the projects in relation to the surrounding street system. If available, trip distribution from a related project's traffic study was used in this analysis. When trip distribution was not available for a related project, it was estimated based on the factors described above. The trip generation estimates were assigned to the local street system using the trip distribution pattern described above. Figure 13 of the Traffic Study shows the traffic generated from the cumulative projects at the study intersections.

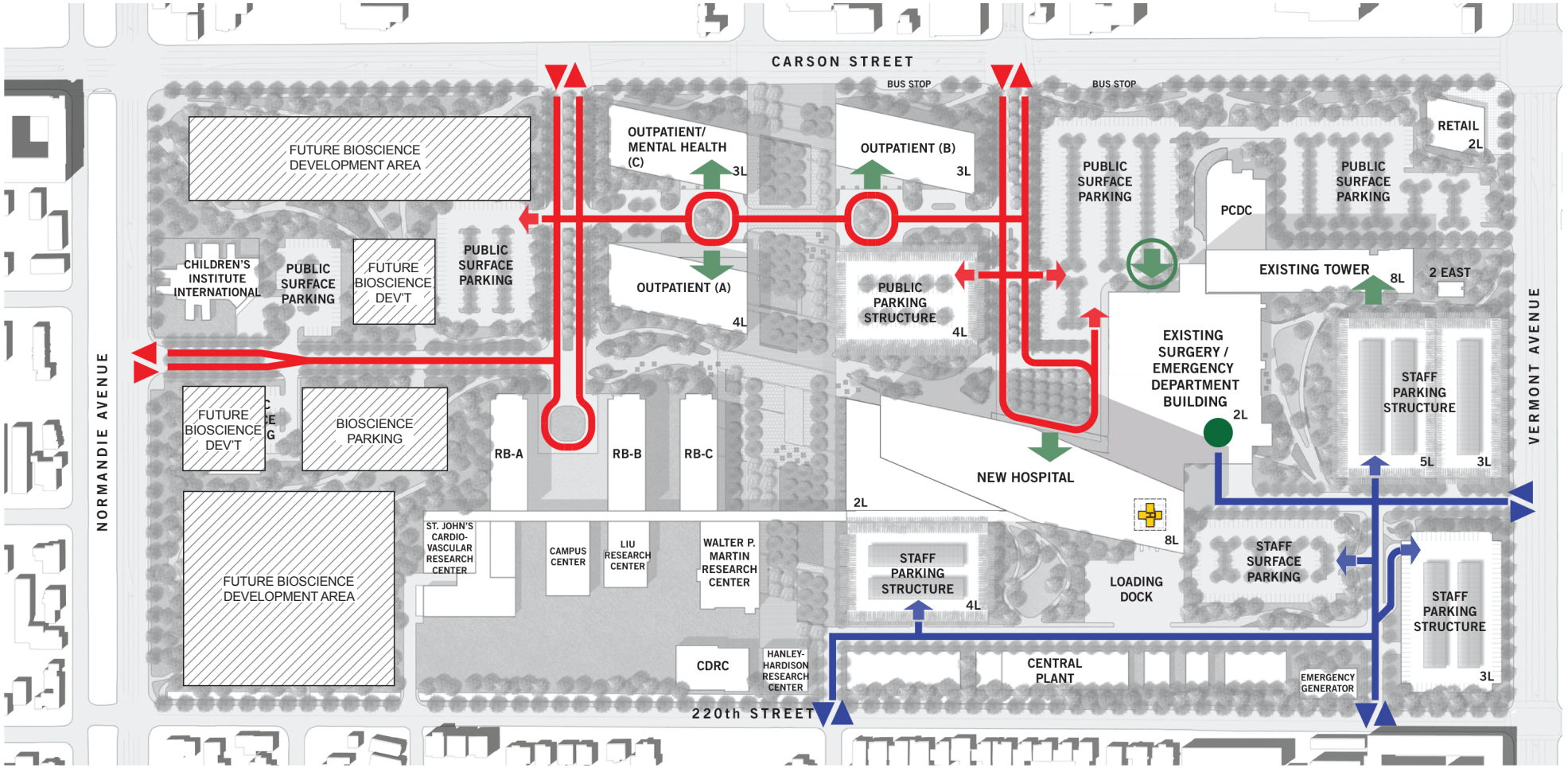
(3) Regional Transportation System

(a) Congestion Management Program Analysis

In accordance with the 2010 CMP, the impacts at all CMP arterial monitoring stations to which the Project would add 50 or more trips during either the morning or afternoon weekday peak hours, or 150 or more trips to a mainline freeway monitoring station, required to be examined. The CMP analysis evaluates six (6) arterial monitoring stations and six (6) freeway mainline monitoring stations in the study area.

(b) Caltrans Facilities Analysis

Impacts to Caltrans' State Highway facilities were evaluated according to the guidelines found in the *Guide for the Preparation of Traffic Impact Studies* (Caltrans, 2002) (Caltrans TIS Guide). The analysis of the Caltrans facilities was based on the Caltrans comment letters on the Project dated November 20, 2014 and July 20, 2015, submitted in response to the Notice of Preparation for the Draft EIR (see Appendix A of this Draft EIR for a copy of the comment letter), as well as subsequent conversations with Caltrans staff.



VEHICULAR CIRCULATION PLAN

LEGEND

- PUBLIC ENTRY/EXIT TO CAMPUS
- STAFF ENTRY/EXIT TO CAMPUS
- PUBLIC ENTRY/EXIT TO PARKING
- STAFF ENTRY/EXIT TO PARKING
- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- PRIMARY PUBLIC VEHICULAR CIRC.
- PRIMARY STAFF VEHICULAR CIRC.
- AMBULANCE EMERGENCY ENTRY

PCR

N

Proposed Vehicular Access and Circulation

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE 4.L-5

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The following three types of analyses were conducted on Caltrans facilities: 1) freeway mainline segments, 2) Caltrans intersections, and 3) off-ramp queuing. Two freeway mainline segments on I-110, three segments on I-405 and one segment on SR-91 to determine density and LOS. Because PeMS data was not available for some nearby segments, existing traffic volume data was obtained from the 2013 Caltrans Traffic Census Program, the most recent year when data was available for all relevant segments (http://traffic-counts.dot.ca.gov/), and increased by 0.73%/year to represent future conditions. Project-generated trips were assigned to the regional freeway system as described above. The freeway level of service methodology described in the Highway Capacity Manual was used to determine the vehicle density on each analyzed segment (passenger cars per mile per lane) by direction and the corresponding level of service. The level of service definitions used for freeway mainline segments are shown in Table 4.L-1.

One intersection (Western Avenue [State Route 213] at Carson Street) was analyzed using HCM 2010 methodology to identify average vehicle delay and LOS. For this signalized intersection, the traffic signal timing plan provided by LADOT was also used in this analysis. Caltrans, LADOT and the City of Torrance have jointly agreed to modify the signal in the near term at this location by implementing protected left-turn phasing on the eastbound and westbound approaches. The Caltrans analysis uses the same intersection volumes that are used for the intersection analysis described above.

With regard to ramps, six freeway off-ramps were analyzed for ramp queue lengths. The Synchro traffic analysis software was used to implement the HCM methodology to calculate the 85th percentile queues at and compare them with the available vehicle storage on these ramps. Traffic signal-related information such as phasing and timing plans (minimum green, maximum green, gap, etc.) were obtained for each location and the morning and evening peak hour traffic volumes from this study were used. Additional detail such as turn pocket lengths and ramp lengths was coded based on scaled distances from on-line aerial photographs. Caltrans' primary concern of off-ramps is that queued vehicles do not extend past the back of the ramp onto the mainline. The queuing analysis looks at two separate components of ramp capacity: 1) the length of each approach lane to the intersection and 2) the remaining length of the ramp, behind any approach lane delineation lines, to the core point where the ramp diverges from the freeway mainline. The queue may exceed the striped length of a given approach lane, but as long as there is sufficient additional queuing capacity on the ramp, it will not spill over onto the mainline.

(4) Public Transit and Alternative Transportation

Section D.8.4 of the Los Angeles County CMP provides a methodology for estimating the number of transit trips expected to result from a proposed project based on the number of vehicle trips. This methodology assumes an average vehicle ridership (AVR) factor of 1.4 in order to estimate the number of person trips to and from the Project Site and then provides guidelines regarding the percentage of person trips assigned to public transit depending on the type of use (commercial versus residential) and the proximity to transit services. Since the Project Site is located within ¼ mile of a designated CMP transit corridor, the CMP guidelines provide that approximately 7% of total person trips generated might use public transit to travel to and from the site. With regard to non-motorized transportation, the Project is also evaluated in terms of whether its implementation would conflict with various plans, policies, or regulations supportive of alternative transportation including the provision of pedestrian- and bicycle-friendly facilities and improvements.

(5) Access and Circulation

Vehicular access to/from and within the Project Site is evaluated to ensure that conflicts would not arise and that on-site circulation would be adequate. Regarding vehicular access for the proposed new driveway on Carson Street, Synchro traffic analysis software was used to implement the HCM methodology to calculate the 95th percentile queues and compare them with the available vehicle storage for westbound left turns into the Medical Center Campus. Traffic signal-related information such as phasing and timing plans (minimum green, maximum green, etc.) were developed for each scenario in Synchro and informed by volumes for each scenario and existing signal timing information for other intersections on Carson Street in this area. In addition, access for pedestrians and bicyclists are evaluated. The Project's access and circulation scheme was evaluated to determine whether the Project would substantially increase the potential for conflicts between vehicles and pedestrians and cyclists.

(6) Parking Supply

Parking supply impacts are evaluated by comparing the projected parking demands of the various land uses to be developed under the Master Plan Project at buildout with the proposed parking supply on the Medical Center Campus. At a minimum, parking supply would meet parking requirements of the County Code; however, adverse parking-related impacts could still occur if demands exceed available supply. The provision of parking supply on the Medical Campus is evaluated in light of the anticipated maximum parking demands of the Project rather than the number of spaces required by the Code.

b. Thresholds of Significance

The potential for transportation and traffic impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines*. These questions are as follows:

(XVI) Transportation and Traffic. Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

With respect to Threshold (c), result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks, please refer to Section 4.F, *Hazards and Hazardous Materials*, of this Draft EIR for further discussion of aircraft-related hazards associated with operation of the proposed helistop on the Project Site.

In consideration of the above CEQA Guidelines, the thresholds to determine if the Project would have a potentially significant impact on traffic, transportation, and parking are described below. A number of thresholds presented below address question a) above, regarding conflicting with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, but are tailored to reflect the specific numerical thresholds for level of service for a specific facility (e.g., intersection) in a given jurisdiction. Thus, the thresholds presented below may not reflect the specific language of the questions above, but are intended to establish specific limits by which to gauge the impact of the Project-related traffic at affected facilities, taking into account the location and agency responsible for each facility.

(1) Construction Traffic and Parking

Construction-related traffic is typically expected to cause adverse but not significant impacts because, while sometimes inconvenient, construction-related traffic effects are temporary. Nevertheless, the determination of significance is made on a case by case basis, considering the temporary traffic impacts, temporary loss of access, temporary loss of bus stops or rerouting of bus lines, and temporary loss of on-street parking. Based on these considerations, Project construction would have a significant impact on traffic and circulation if the following were to occur:

TRAF-1 Would construction of the Project (1) cause substantial delays and disruption of existing traffic flow; (2) require temporary relocation of existing bus stops to more than one-quarter mile from their existing stops; (3) result in impacts based on the operational thresholds at intersections during peak periods; or (4) result in the substantial loss of on-street parking such that the parking needs of the Project area would not be met?

(2) Intersection Service Levels

As discussed above, the study area intersections are located under the jurisdictions of the County of Los Angeles, City of Los Angeles, City of Torrance or City of Carson.

For intersections in the Los Angeles County and City of Los Angeles, in accordance with Los Angeles County criteria defined in their Traffic Impact Analysis Report Guidelines and per LADOT guidelines, an intersection would be significantly impacted if it experienced an increase in V/C ratio equal to or greater than 0.04 for intersections operating at LOS C, equal to or greater than 0.02 for intersections operating at LOS D, and equal to or greater than 0.01 for intersections operating at LOS E or F after the addition of Project traffic. Intersections operating at LOS A or B after the addition of the Project traffic are not considered significantly impacted regardless of the increase in V/C ratio. The following summarizes the impact criteria:

Intersection Conditions with Project Traffic		Relative Baseline Increase
LOS	Final V/C Ratio	in V/C Ratio
C	0.701 to 0.800	Equal to or greater than 0.04
D	0.801 to 0.900	Equal to or greater than 0.02
E, F	0.901 or more	Equal to or greater than 0.01

Source: Fehr & Peers, 2016.

The City of Carson has created threshold criteria to determine whether the addition of Project-generated trips results in a significant impact at a study intersection, and thus requires mitigation. The thresholds of significance have to satisfy the following two criteria:

- The addition of project-generated trips causes an intersection V/C ratio increase of 0.020 or more; and
- Under future plus project conditions, the intersection is projected to operate at LOS E or F (represented by a V/C ratio of 0.901 or greater).

The City of Torrance uses the following thresholds of significance to assess project impacts based on the ICU analysis methodology:

- The project causes a change from LOS D or better to LOS E or F; or
- The project causes a change from LOS E to LOS F; or
- The project increases traffic at the intersection by 2% of capacity (ICU increase ≥ 0.020), causing or worsening LOS E or F (ICU > 0.901).

Based on the above, the following is the threshold for signalized intersections:

TRAF-2 Would the Project increase V/C ratios or delay above LOS standards set forth under County, LADOT, City of Carson, or City of Torrance guidelines, as applicable?

(3) Regional Transportation System

Based on the CMP, a project would normally have a significant impact on CMP arterial monitoring stations or freeway mainline monitoring stations if:

TRAF-3 Would the Project result in a change at a CMP facility in V/C of 0.02 or greater and cause LOS F conditions, or if it would result in a change in V/C of 0.02 or greater at a CMP facility that is already at LOS F?

With regard to the Caltrans facilities, a project would result in a significant impact on Caltrans facilities if:

TRAF-4 Would the Project result in traffic where the analyzed freeway mainline segment or intersection were found to operate at LOS F with the addition of Project-related traffic and the increase is equal to or greater than 50 trips?

or

TRAF-5 Would the Project result in traffic where the off-ramp queue extends beyond the length of the ramp itself onto the mainline of the freeway during the peak arrival period?

(4) Public Transit and Alternative Transportation

The County and the CMP do not specify a threshold of significance for a project's impact on transit system capacity. The determination of significance for public transit is made on a case by case basis, considering the projected number of additional transit passengers expected with implementation of the Project and available transit capacity. For purposes of this analysis, the Project would have a significant impact if:

TRAF-6 Would the Project add substantial new ridership to the transit lines operating in excess of their capacity or if the Project would conflict with adopted policies, plans, or programs supporting alternative transportation?

(5) Access and Circulation

Impacts of a project regarding accessibility on evaluated on a case by case basis, based on the amount of pedestrian activity at project access points; design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists; the type of facility the project driveway(s) crosses and the level of utilization; the physical conditions of the surrounding area, such as curves, slopes, walls, landscaping or other barriers, that could result in vehicle/pedestrian, vehicle/bicycle, or vehicle/vehicle impacts. Based on the above, a project would have a significant impact if:

TRAF-7 Would the Project increase roadway hazards resulting from a conflict of movement between vehicles and pedestrians or bicycles because of driveway design, the location of parking facilities, or other Project characteristics affecting visibility and turning movements?

(6) Parking Supply

The County does not specify a threshold of significance for a project's impact parking supply. The determination of significance for parking supply is made on a case by case basis, considering the projected number of additional parking spaces required by the County Code and the proposed parking supply on the Medical Campus. It should be noted that, as noted above under Regulatory Framework Summary, pursuant to Senate Bill 743, parking-related effects of infill projects like the Master Plan Project are not considered significant environmental impacts on the environment. However, for purposes of this analysis, which is provided for informational and disclosure purposes, the Project would have a significant impact on parking if it would result in the following:

TRAF-8 Would the Project provide less parking than the projected demand?

c. Project Characteristics and Design Features

(1) Project Characteristics

(a) Construction Traffic Generation

The construction of the Master Plan Project would occur in several phases through the year 2030, though in order to present a conservative analysis, some phases of construction are assumed to overlap. Based on the current estimated construction schedule, the Project would require a total of 122,602 laborers during the approximately 14-year implementation of the Master Plan Project. It is anticipated, based on current estimates, that the various phases would have the following average daily construction labor requirements: Phase M (190 workers); Phase C (220 workers); Phase 1 (92 workers); Phase 2 (295 workers); Phase 3 (59 workers); Phase 4 (1,360 workers); Phase 5 (253 workers); and Phase 6 (141 workers). Furthermore, based on the various phases of work, the Project would average the following laborers per day during each month of Project implementation:

- 212 laborers per day for the first 54 months
- 664 laborers per day for the following 27 months
- 1,646 laborers per day for the following 54 months
- 253 laborers per day for the final 32 months

As discussed in Chapter 2.0, Project Description, of this Draft EIR, it is anticipated that all worker vehicle parking, materials and equipment storage, and other construction staging would occur entirely within the 72-acre Medical Center Campus. As such, at its peak phase of construction (Phase 4) anticipated between 2023 and 2027, which is conservatively assumed to overlap with Phase 6 improvements related to construction of Bioscience Tech Park uses, the Project could generate up to an additional 7,006 daily construction worker vehicle trips to and from the Project Site under worst-case conditions. In addition, the import and export of soil materials and material and equipment deliveries would add an additional 427 truck trips per day during the same peak construction period on-site (i.e., during the Phase 4 and Phase 6 construction overlap), for a total of up to 7,433 daily construction-related vehicle trips under worst-case conditions.

(b) Operational Trip Generation

Table 4.L-7a, *Project Trip Generation – Interim Development (2023)*, estimates the trip generation for the Interim Development (2023) scenario and **Table 4.L-7b**, *Project Trip Generation – Full Buildout (2030)*, estimates the trip generation for Full Buildout (2030). In the Interim Development (2023) scenario, the Project is estimated to generate a net increase of 1,640 daily trips, including 200 trips (166 inbound/34 outbound) during the AM peak hour and 197 trips (33 inbound/164 outbound) during the PM peak hour. At Full Buildout (2030), the Project is estimated to generate a net increase of 6,598 daily trips, including 637 trips (523 inbound/114 outbound) during the AM peak hour and 732 trips (169 inbound/563 outbound) during the PM peak hour.

Table 4.L-7a

Project Trip Generation – Interim Development (2023)

	Land Use	ITE Land Use Code	Size [a]		Trip Generation Rates [b] Daily Rate	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Estimated Trip Generation Daily Trips	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Existing	**EXISTING USE**																	
	Administrative Office	710	23.435	ksf	[c]	[c]	88%	12%	[c]	17%	83%	436	53	7	60	18	87	105
	Central Utilities/Industrial [d]	120	112.719	ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	169	50	7	57	9	68	77
	Hospital/Inpatient	610	373	Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,827	354	138	492	175	355	530
	Library	590	22.500	ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	327.304	ksf	36.13	2.39	79%	21%	3.57	28%	72%	11,825	618	164	782	327	841	1,168
	Warehouse/Storage	150	45.402	ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	LA BioMed	760	94.754	ksf	[e]	[e]	83%	17%	[e]	15%	85%	961	103	21	124	19	107	126
	Project Site Subtotal											**19,644**	**1,206**	**347**	**1,553**	**630**	**1,554**	**2,184**
	Internal Capture [f]											*-3,737*	*-221*	*-65*	*-286*	*-122*	*-290*	*-412*
	Transit Credit [g]											*-1,375*	*-84*	*-25*	*-109*	*-44*	*-109*	*-153*
	Walk/Bike Credit [h]											*-393*	*-24*	*-7*	*-31*	*-13*	*-31*	*-44*
	Total Existing Trips											**14,139**	**877**	**250**	**1,127**	**451**	**1,124**	**1,575**
Proposed	**PROPOSED PROJECT**																	
	Administrative Office	710	52.635	ksf	[c]	[c]	88%	12%	[c]	17%	83%	806	101	14	115	23	114	137
	Central Utilities/Industrial [d]	120	129.205	ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	194	58	8	66	10	78	88
	Hospital/Inpatient	610	379	Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,904	360	140	500	177	361	538
	Library	590	22.500	ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	338.700	ksf	36.13	2.39	79%	21%	3.57	28%	72%	12,237	639	170	809	338	871	1,209
	Warehouse/Storage	150	45.402	ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	BioSciences	760	125.000	ksf	[e]	[e]	83%	17%	[e]	15%	85%	1,209	131	27	158	24	135	159
	LA BioMed	760	112.500	ksf	[e]	[e]	83%	17%	[e]	15%	85%	1,108	120	24	144	21	124	145
	Project Site Subtotal											21,885	1,436	393	1,829	677	1,779	2,456
	Internal Capture [f]											-4,155	-263	*-74*	-337	-131	*-331*	-462
	Transit Credit [g]											*-1,532*	*-101*	*-27*	*-128*	*-47*	*-125*	*-172*
	Walk/Bike Credit [h]											*-438*	*-29*	*-8*	-37	*-14*	*-35*	-49
	Total Proposed Trips											**15,760**	**1,043**	**284**	**1,327**	**485**	**1,288**	**1,773**

Table 4.L-7a (Continued)

Project Trip Generation – Interim Development (2023)

	Land Use	ITE Land Use Code	Size [a]	Trip Generation Rates [b]							Estimated Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour Trips			PM Peak Hour Trips		
				Rate	Rate	% In	% Out	Rate	% In	% Out	Trips	In	Out	Total	In	Out	Total
Net Change	**Total Net Trips**										**1,620**	**166**	**34**	**200**	**33**	**164**	**197**

a Size in thousand square feet (ksf) unless otherwise noted.
b Source: Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition, 2012.
c ITE administrative office trip generation equations used rather than linear trip generation rate:
*Daily: Ln(T) = 0.76 * Ln(A) + 3.68, where T = trips, A = area in ksf*
*AM Peak Hour: Ln(T) = 0.8 * Ln(A) + 1.57, where T = trips, A = area in ksf*
*PM Peak Hour: T = 1.12 * Ln(A) + 78.45, where T = trips, A = area in ksf*
d Peak hour direction distribution not provided by ITE for code 120. Directional distribution taken from ITE code 110, General Light Industrial.
e ITE research and development trip generation equations used rather than linear trip generation rate:
*Daily: Ln(T) = 0.83 * Ln(A) + 3.09, where T = trips, A = area in ksf*
*AM Peak Hour: Ln(T) = 0.87 * Ln(A) + 0.86, where T = trips, A = area in ksf*
*PM Peak Hour: Ln(T) = 0.83 * Ln(A) + 1.06, where T = trips, A = area in ksf*
f Internal capture represents the percentage of trips between land uses that occur within the site. Internal capture was used for all land uses within the site with the exception of LA BioMed. This percentage (20%) is informed by MXD 2.0 Mixed Use Trip Generation Methodology, which incorporated the findings of NCHRP Project 8-51 as described in "Improved Estimation for Internal Trip Capture for Mixed-use Developments," ITE Journal, August 2010. Internal capture is taken for all land uses except LA Biomed.
g Transit credit of 7% informed by MXD 2.0 Mixed Use Trip Generation Methodology
h Walk/Bike credit of 2% informed by MXD 2.0 Mixed Use Trip Generation Methodology.

Source: Fehr & Peers, 2016

Table 4.L-7b

Project Trip Generation – Full Buildout (2030)

	Land Use	ITE Land Use Code	Size [a]		Trip Generation Rates [b] Daily Rate	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Estimated Trip Generation Daily Trips	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Existing	**EXISTING USE**																	
	Administrative Office	710	23.435	ksf	[c]	[c]	88%	12%	[c]	17%	83%	436	53	7	60	18	87	105
	Central Utilities/Industrial [d]	120	112.719	ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	169	50	7	57	9	68	77
	Hospital/Inpatient	610	373	Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,827	354	138	492	175	355	530
	Library	590	22.500	ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	327.304	ksf	36.13	2.39	79%	21%	3.57	28%	72%	11,825	618	164	782	327	841	1,168
	Warehouse/Storage	150	45.402	ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	LA BioMed	760	94.754	ksf	[e]	[e]	83%	17%	[e]	15%	85%	961	103	21	124	19	107	126
	Project Site Subtotal											**19,644**	**1,206**	**347**	**1,553**	**630**	**1,554**	**2,184**
	Internal Capture [f]											*-3,737*	*-221*	*-65*	*-286*	*-122*	*-290*	*-412*
	Transit Credit [g]											*-1,375*	*-84*	*-25*	*-109*	*-44*	*-109*	*-153*
	Walk/Bike Credit [h]											*-393*	*-24*	*-7*	*-31*	*-13*	*-31*	*-44*
	Total Existing Trips											**14,139**	**877**	**250**	**1,127**	**451**	**1,124**	**1,575**
Proposed	**PROPOSED PROJECT**																	
	Administrative Office	710	52.635	ksf	[c]	[c]	88%	12%	[c]	17%	83%	1,608	209	28	237	38	187	225
	Central Utilities/Industrial [d]	120	129.205	ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	194	58	8	66	10	78	88
	Hospital/Inpatient	610	379	Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,904	360	140	500	177	361	538
	Library	590	22.500	ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	338.700	ksf	36.13	2.39	79%	21%	3.57	28%	72%	14,907	779	207	986	412	1,061	1,473
	Warehouse/Storage	150	45.402	ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	Retail	820	35.000	ksf	42.7	0.96	62%	38%	3.71	48%	52%	1,495	21	13	34	62	68	130
	BioSciences	760	125.000	ksf	[e]	[e]	83%	17%	[e]	15%	85%	2,149	239	49	288	42	240	282
	LA BioMed	760	112.500	ksf	[e]	[e]	83%	17%	[e]	15%	85%	1,969	218	45	263	39	220	259
	Project Site Subtotal											**28,654**	**1,911**	**500**	**2,411**	**862**	**2,311**	**3,173**
	Internal Capture [f]											-5,337	-339	*-91*	-430	-165	*-418*	-583
	Transit Credit [g]											*-2,006*	*-134*	*-35*	*-169*	*-60*	*-161*	*-221*
	Walk/Bike Credit [h]											*-573*	*-38*	*-10*	-48	*-17*	*-45*	-62
	Total Proposed Trips											**20,738**	**1,400**	**364**	**1,764**	**620**	**1,687**	**2,307**

Table 4.L-7b (Continued)

Project Trip Generation – Full Buildout (2030)

	Land Use	ITE Land Use Code	Size [a]	Trip Generation Rates [b] Daily Rate	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Estimated Trip Generation Daily Trips	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Net Change	**Total Net Trips**										**6,598**	**523**	**114**	**637**	**169**	**563**	**732**

[a] *Size in thousand square feet (ksf) unless otherwise noted.*
[b] *Source: Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition, 2012.*
[c] *ITE administrative office trip generation equations used rather than linear trip generation rate:*
*Daily: Ln(T) = 0.76 * Ln(A) + 3.68, where T = trips, A = area in ksf*
*AM Peak Hour: Ln(T) = 0.8 * Ln(A) + 1.57, where T = trips, A = area in ksf*
*PM Peak Hour: T = 1.12 * Ln(A) + 78.45, where T = trips, A = area in ksf*
[d] *Peak hour direction distribution not provided by ITE for code 120. Directional distribution taken from ITE code 110, General Light Industrial.*
[e] *ITE research and development trip generation equations used rather than linear trip generation rate:*
*Daily: Ln(T) = 0.83 * Ln(A) + 3.09, where T = trips, A = area in ksf*
*AM Peak Hour: Ln(T) = 0.87 * Ln(A) + 0.86, where T = trips, A = area in ksf*
*PM Peak Hour: Ln(T) = 0.83 * Ln(A) + 1.06, where T = trips, A = area in ksf*
[f] *Internal capture represents the percentage of trips between land uses that occur within the site. Internal capture was used for all land uses within the site with the exception of LA BioMed. This percentage (20%) is informed by MXD 2.0 Mixed Use Trip Generation Methodology, which incorporated the findings of NCHRP Project 8-51 as described in "Improved Estimation for Internal Trip Capture for Mixed-use Developments," ITE Journal, August 2010. Internal capture is taken for all land uses except LA Biomed.*
[g] *Transit credit of 7% informed by MXD 2.0 Mixed Use Trip Generation Methodology*
[h] *Walk/Bike credit of 2% informed by MXD 2.0 Mixed Use Trip Generation Methodology.*

Source: Fehr & Peers, 2016

(2) Project Design Features

(a) Construction Traffic Management

The following Project Design Features are proposed to reduce temporary construction-related traffic and parking impacts:

PDF-TRAF-1: Construction Traffic Management Plan: A detailed Construction Traffic Management Plan including street closure information, detour plans, haul routes, and staging plans would be prepared by the construction contractor for each development phase or individual improvement, as appropriate, and submitted to the County for review and approval. This requirement would be included in the construction bid documents for each future development phase or individual improvement as part of the Master Plan Project. The Construction Traffic Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements as appropriate:

- Prohibition of construction worker parking on nearby residential streets.
- Prohibition of construction-related vehicles parking or staging on surrounding public streets.
- Temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.
- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.
- Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible.

PDF-TRAF-2: Pedestrian Safety: The construction contractor(s), as required by construction bid documents for each development phase or individual improvement, would plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. The contractor(s) would maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. Temporary pedestrian facilities would be adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. Covered walkways would be provided where pedestrians are exposed to potential injury from falling objects. The contractor would keep sidewalks open during construction except when it is absolutely required to close or block the sidewalks for construction staging. Sidewalks shall be reopened as soon as reasonably feasible taking construction and construction staging into account.

(b) Travel Demand Management

Also, the existing Harbor-UCLA Medical Center, like other large employment sites, maintains a program of employee travel behavior monitoring and incentives to reduce single-occupant vehicle commute trips. Collectively known as Travel Demand Management (TDM), these programs aim to reduce traffic congestion and the impacts associated with heavy traffic by providing incentives and other measures to encourage alternative travel arrangements between work and home. Among the measures now in place at the Medical Center Campus are:

- Transit information center
- Rideshare matching services
- Guaranteed ride home/Guaranteed return trip
- Commuter choice program
- Bi-monthly newsletters, flyers or announcements to employees
- New hire orientation and periodic events
- Compressed work week and flex time schedules
- Off-peak rideshare program
- Bicycle racks, lockers and showers
- Telecommuting
- Vanpool program
- Preferential parking for those who rideshare

Expanding the current menu of incentives and disincentives could reduce vehicle trips during the peak hours and thus reduce the severity of the impacts identified. The County-owned medical facility is somewhat different from many other land uses in that it operates on a 24-hour schedule and employees have shifts that begin and end throughout the day, including many that are outside of the typical peak periods when transit service is most extensive. Because the effectiveness of these measures cannot be guaranteed, however, TDM cannot ensure impacts would be below applicable thresholds. Among the additional TDM measures that could be considered for implementation as development of the Master Plan Project proceeds are:

- Parking pricing
- Transit pass subsidy
- On-site sales of transit passes and tokens
- Direct financial awards for ridesharing

d. Project Impacts

(1) Construction Impacts

Threshold TRAF-1: Would construction of the Project (1) cause substantial delays and disruption of existing traffic flow; (2) require temporary relocation of existing bus stops to more than one-quarter mile

from their existing stops; (3) result in impacts based on the operational thresholds at intersections during peak periods; or (4) result in the substantial loss of on-street parking such that the parking needs of the Project area would not be met?

Impact Statement TRAF-1: *With the implementation of PDF TRAF-1, Construction Traffic Management Plan, and PDF TRAF-2, Pedestrian Safety, potential construction impacts associated with hauling, deliveries and worker vehicles would be reduced. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance with the two Project Design Features would minimize the potential for the Project to result in substantial disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the Project area's commercial zones and residential neighborhoods. However, given the potential addition of construction-related vehicle trips during peak construction periods, transportation and parking impacts related to construction would be considered significant and unavoidable, though such impacts would only occur on a temporary basis while construction activities are occurring on-site.*

Construction of the Project is anticipated to occur intermittently in phases over an approximately 14-year time period. Construction activities would be governed by Chapter 12.12 of the County Code including Section 12.12.30 which generally limits construction to the hours of 6:30 A.M. to 8:00 P.M. on weekdays and Saturdays. Phases of construction would include grading, excavation, concrete pouring, building construction, architectural coating, and paving. Project construction would add haul trucks, equipment and delivery trucks and trips generated by the construction workers to the local roadway network.

As noted above under Project Characteristics, the construction of the Master Plan Project would occur in several phases through the year 2030, though in order to present a conservative analysis, some phases of construction are assumed to overlap. Based on the current estimated construction schedule, the Project would require a total of 122,602 laborers during the approximately 14-year implementation of the Master Plan Project. The Project, at its peak phase of construction (Phase 4) anticipated between 2023 and 2027, which is conservatively assumed to overlap with Phase 6 improvements related to construction of Bioscience Tech Park uses, could generate up to an additional 7,006 daily construction worker vehicle trips to and from the Project Site on a worst-case basis. In addition, the import and export of soil materials and material and equipment deliveries would add an additional 427 truck trips per day during the same peak construction period on-site (i.e., during the Phase 4 and Phase 6 construction overlap), for a total of up to 7,433 daily construction-related vehicle trips under worst-case conditions. It is likely, however, that many of the construction workers would arrive and depart the Project Site outside of the peak traffic periods given typical construction work hours. More specifically, the hours of construction typically require workers to be on-site before the weekday A.M. commuter peak period and allow them to leave before or after the P.M. commuter peak period (i.e., arrive at the site prior to 6:30 AM and depart before 4:00 PM or after 6:00 PM). Therefore, many, if not most, construction worker trips would occur outside of the typical weekday commuter peak periods. With the implementation of the Construction Management Plan, required by PDF TRAF-1, it is anticipated that a substantial portion of haul truck activity to and from the Project Site would occur outside of the peak traffic hours. However, haul truck activity was assumed to occur during the morning and afternoon peak periods for the purposes of providing a conservative analysis of potential construction traffic impacts. Haul trucks would travel on approved truck routes designated within the Project area, and would access the I-110 Harbor Freeway for regional access. Although it is possible that many of the Project-related worker vehicle and haul truck trips would occur outside of peak traffic periods

throughout construction phases, given the number of potential vehicle trips generated during peak construction periods, it is possible that construction-related traffic could result in significant impacts to both local intersections and Caltrans facilities in the Project area. While the construction-related traffic impacts of the Project have not been quantified in terms of LOS, it is conservatively concluded that construction activities would result in unavoidable significant traffic impacts, though such impacts would be temporary.

With regard to construction-related impacts to localized and on-site circulation, construction activities would be generally contained within the Project Site boundaries and therefore access points from surrounding roadways would not vary substantially from existing conditions. However, construction fences or temporary off-site utility work may encroach into the public right-of-way (e.g., sidewalk and roadways) adjacent to or near the Project Site. In such cases, temporary traffic controls would be provided to direct traffic around any closures as required in the Project's Construction Traffic Management Plan. Travel lanes would be maintained in each direction on both streets throughout the construction period, and emergency access would not be impeded. Similarly, as required by the Construction Traffic Management Plan, prohibition of construction-related vehicles on surrounding residential streets, as well as the provision of temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way, would improve traffic flow on public roadways and maximize pedestrian and bicycle safety. Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers would also be implemented as appropriate. In addition, as required by PDF-TRAF-2, pedestrian access near construction activities would be maintained in such a manner as to preclude safety hazards or access limitations to non-vehicular circulation on the Medical Center Campus. Therefore, impacts related to vehicular, pedestrian, and bicycle access and circulation in the Project vicinity during construction activities would be less than significant.

With regard to construction-related impacts on transit facilities and the existing parking supply, the curbside lanes on Carson Street, Vermont Avenue, 220th Street, and Normandie Avenue, all of which provide on-street parking in some areas, would not be used for activities such as equipment staging and concrete pumping. Given that the Project would not require the sustained closure of travel lanes or sidewalks along any of the surrounding roadways, and the Project also does not propose or otherwise require relocation of any existing public transit stops or other facilities, it is expected that construction of the various Project phases would not substantially affect public transit service. Likewise, as all construction worker vehicle parking and truck deliveries would occur within the Medical Center Campus, and since PDF TRAF-1 would prohibit parking by construction workers on surrounding residential streets, impacts related to construction parking would be considered less than significant.

In summary, the Project would implement a Construction Traffic Management Plan and Pedestrian Safety plan as described in PDF TRAF-1 and PDF TRAF-2, which would ensure the scheduling of construction-related traffic to avoid peak hours, require the use of temporary traffic controls, prohibit construction vehicle activities and parking in surrounding off-site areas, as well as require various safety precautions such as alternate routing and protection barriers. With the implementation of the Project Design Features, impacts to traffic flow, vehicular access, pedestrian and bicycle access and safety, public transit, and construction parking would be less than significant. However, construction impacts on study area intersections are conservatively concluded to be potentially significant and unavoidable.

(2) Intersection Service Levels

Threshold TRAF-2: Would the Project increase V/C ratios or delay above LOS standards set forth under County, LADOT, City of Carson, or City of Torrance guidelines, as applicable?

Impact Statement TRAF-2: *Implementation of the Master Plan Project would result in a net increase in traffic generation on the Project Site of 1,640 daily trips under Interim Year (2023) conditions and 6,598 daily trips at Full Buildout (2030). Project-related operational traffic impacts on study area intersections would be considered potentially significant under Existing With Project Conditions, Future Interim Year (2023) conditions, and Full Buildout (2030) conditions.*

(a) Existing With Project Conditions

Existing plus Project traffic volumes (using Interim Development Project volumes), presented in Figure 10 of the Traffic Study, were analyzed to determine the projected V/C ratios and LOS for each intersection. **Table 4.L-8**, *Existing (2014) Plus Interim Development Project Intersection Level of Service,* summarizes the Existing plus Project LOS using Interim Development Project trips. The following ten (10) intersections are projected to operate at LOS E or F during one or both peak hours:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

Additionally, Existing plus Project traffic volumes (using Full Buildout Project trips), presented in Figure 11 of the Traffic Study, were analyzed to determine the projected V/C ratios and LOS for each intersection. **Table 4.L-9**, *Existing (2014) Plus Full Buildout Project Intersection Level of Service,* summarizes the Existing plus Project LOS using the Full Buildout Project trips. The following 10 intersections are projected to operate at LOS E or F during one or both peak hours:

Table 4.L-8

Existing (2014) Plus Interim Development Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Avenue	Torrance Boulevard	City of Los Angeles	CMA	AM	0.902	E	0.904	E	0.002	NO
					PM	0.904	E	0.906	E	0.002	NO
			Los Angeles County	ICU	AM	0.935	E	0.936	E	0.001	NO
					PM	0.936	E	0.938	E	0.002	NO
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.927	E	0.928	E	0.001	NO
					PM	0.880	D	0.881	D	0.001	NO
3	Western Avenue	Carson Street	City of Los Angeles	CMA	AM	0.877	D	0.878	D	0.001	NO
					PM	0.948	E	0.949	E	0.001	NO
			City of Torrance	ICU	AM	0.943	E	0.944	E	0.001	NO
					PM	1.006	F	1.008	F	0.002	NO
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.763	C	0.769	C	0.006	NO
					PM	0.837	D	0.846	D	0.009	NO
			Los Angeles County	ICU	AM	0.904	E	0.910	E	0.006	NO
					PM	0.930	E	0.938	F	0.008	NO
5	Budlong Avenue	Carson Street	Los Angeles County	ICU	AM	0.570	A	0.624	B	0.054	NO
					PM	0.539	A	0.572	B	0.033	NO
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.629	B	0.054	NO
					PM	0.569	A	0.629	B	0.060	NO
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.628	B	0.682	B	0.054	NO
					PM	0.611	B	0.576	B	-0.035	NO
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.917	E	0.012	YES
					PM	0.917	E	0.945	F	0.028	YES
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D	0.844	D	0.030	YES
					PM	0.849	D	0.867	E	0.018	NO

Table 4.L-8 (Continued)

Existing (2014) Plus Interim Development Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
10	Figueroa Street	Carson Street	City of Carson	ICU	AM	0.661	B	0.670	B	0.009	NO
					PM	0.762	C	0.767	D	0.005	NO
11	Western Avenue	220th Street	City of Los Angeles	CMA	AM	0.554	A	0.559	A	0.005	NO
					PM	0.698	B	0.698	B	0.000	NO
			City of Torrance	ICU	AM	0.685	B	0.689	B	0.004	NO
					PM	0.819	D	0.819	D	0.000	NO
12	Normandie Avenue	220th Street	City of Los Angeles	CMA	AM	0.409	A	0.425	A	0.016	NO
					PM	0.293	A	0.297	A	0.004	NO
			Los Angeles County	ICU	AM	0.549	A	0.564	A	0.015	NO
					PM	0.441	A	0.444	A	0.003	NO
13	Meyler Street	220th Street	Los Angeles County	ICU	AM	0.460	A	0.483	A	0.023	NO
					PM	0.446	A	0.455	A	0.009	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.645	B	0.660	B	0.015	NO
					PM	0.696	B	0.726	C	0.030	NO
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.913	E	0.922	E	0.009	NO
					PM	0.886	D	0.919	E	0.033	YES
16	Western Avenue	223rd Street	City of Los Angeles	CMA	AM	0.822	D	0.822	D	0.000	NO
					PM	0.851	D	0.853	D	0.002	NO
			City of Torrance	ICU	AM	0.893	D	0.893	D	0.000	NO
					PM	0.919	E	0.921	E	0.002	NO
17	Normandie Avenue	223rd Street	City of Los Angeles	CMA	AM	0.623	B	0.627	B	0.004	NO
					PM	0.701	C	0.705	C	0.004	NO
			Los Angeles County	ICU	AM	0.807	D	0.813	D	0.006	NO

Table 4.L-8 (Continued)

Existing (2014) Plus Interim Development Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
					PM	0.822	D	0.826	D	0.004	NO
18	Meyler Street	223rd Street	Los Angeles County	ICU	AM	0.649	B	0.658	B	0.009	NO
					PM	0.578	A	0.585	A	0.007	NO
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E	0.936	E	0.019	YES
					PM	0.880	D	0.886	E	0.006	NO
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C	0.768	C	0.013	NO
					PM	0.843	D	0.852	D	0.009	NO
21	Figueroa Street	223rd Street	City of Carson	ICU	AM	0.827	D	0.833	D	0.006	NO
					PM	0.718	C	0.722	C	0.004	NO
22	Western Avenue	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.927	E	0.927	E	0.000	NO
					PM	0.990	E	0.991	E	0.001	NO
			City of Torrance	ICU	AM	0.957	E	0.957	E	0.000	NO
					PM	1.011	F	1.012	F	0.001	NO

[a] *All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all way-stop controlled.*

Source: Fehr & Peers, 2016

Table 4.L-9

Existing (2014) Plus Full Buildout Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Avenue	Torrance Boulevard	City of Los Angeles	CMA	AM	0.902	E	0.907	E	0.005	NO
					PM	0.904	E	0.913	E	0.009	NO
			Los Angeles County	ICU	AM	0.935	E	0.939	E	0.004	NO
					PM	0.936	E	0.944	E	0.008	NO
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.927	E	0.930	E	0.003	NO
					PM	0.880	D	0.886	D	0.006	NO
3	Western Avenue	Carson Street	City of Los Angeles	CMA	AM	0.877	D	0.882	D	0.005	NO
					PM	0.948	E	0.955	E	0.007	NO
			City of Torrance	ICU	AM	0.943	E	0.948	E	0.005	NO
					PM	1.006	F	1.012	F	0.006	NO
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.763	C	0.785	C	0.022	NO
					PM	0.837	D	0.872	D	0.035	YES
			Los Angeles County	ICU	AM	0.904	E	0.925	E	0.021	YES
					PM	0.930	E	0.962	E	0.032	YES
5	Budlong Avenue	Carson Street	Los Angeles County	ICU	AM	0.570	A	0.636	B	0.066	NO
					PM	0.539	A	0.591	A	0.052	NO
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.642	B	0.067	NO
					PM	0.569	A	0.708	C	0.139	YES
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.628	B	0.717	C	0.089	YES
					PM	0.611	B	0.620	B	0.009	NO
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.946	E	0.041	YES
					PM	0.917	E	1.010	F	0.093	YES
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D	0.907	E	0.093	YES
					PM	0.849	D	0.916	E	0.067	YES

Table 4.L-9 (Continued)

Existing (2014) Plus Full Buildout Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	Existing LOS	Existing+Project V/C or Delay	Existing+Project LOS	Project Increase In V/C	Significant Impacts
10	Figueroa Street	Carson Street	City of Carson	ICU	AM	0.661	B	0.685	B	0.024	NO
					PM	0.762	C	0.779	C	0.017	NO
11	Western Avenue	220th Street	City of Los Angeles	CMA	AM	0.554	A	0.570	A	0.016	NO
					PM	0.698	B	0.699	B	0.001	NO
			City of Torrance	ICU	AM	0.685	B	0.699	B	0.014	NO
					PM	0.819	D	0.820	D	0.001	NO
12	Normandie Avenue	220th Street	City of Los Angeles	CMA	AM	0.409	A	0.458	A	0.049	NO
					PM	0.293	A	0.308	A	0.015	NO
			Los Angeles County	ICU	AM	0.549	A	0.596	A	0.047	NO
					PM	0.441	A	0.454	A	0.013	NO
13	Meyler Street	220th Street	Los Angeles County	ICU	AM	0.460	A	0.533	A	0.073	NO
					PM	0.446	A	0.486	A	0.040	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.645	B	0.708	C	0.063	YES
					PM	0.696	B	0.806	D	0.110	YES
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.913	E	0.942	E	0.029	YES
					PM	0.886	D	1.000	E	0.114	YES
16	Western Avenue	223rd Street	City of Los Angeles	CMA	AM	0.822	D	0.823	D	0.001	NO
					PM	0.851	D	0.856	D	0.005	NO
			City of Torrance	ICU	AM	0.893	D	0.894	D	0.001	NO
					PM	0.919	E	0.923	E	0.004	NO
17	Normandie Avenue	223rd Street	City of Los Angeles	CMA	AM	0.623	B	0.634	B	0.011	NO
					PM	0.701	C	0.715	C	0.014	NO
			Los Angeles County	ICU	AM	0.807	D	0.828	D	0.021	YES
					PM	0.822	D	0.834	D	0.012	NO

Table 4.L-9 (Continued)

Existing (2014) Plus Full Buildout Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	Existing LOS	Existing+Project V/C or Delay	Existing+Project LOS	Project Increase In V/C	Significant Impacts
18	Meyler Street	223rd Street	Los Angeles County	ICU	AM	0.649	B	0.675	B	0.026	NO
					PM	0.578	A	0.604	B	0.026	NO
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E	0.975	E	0.058	YES
					PM	0.880	D	0.933	E	0.053	YES
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C	0.796	C	0.041	YES
					PM	0.843	D	0.873	D	0.030	YES
21	Figueroa Street	223rd Street	City of Carson	ICU	AM	0.827	D	0.844	D	0.017	NO
					PM	0.718	C	0.729	C	0.011	NO
22	Western Avenue	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.927	E	0.928	E	0.001	NO
					PM	0.990	E	0.993	E	0.003	NO
			City of Torrance	ICU	AM	0.957	E	0.957	E	0.000	NO
					PM	1.011	F	1.013	F	0.002	NO

[a] *All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all way-stop controlled.*

Source: Fehr & Peers, 2016

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

As shown in Table 4.L-8, after applying the aforementioned significant impact criteria, it was determined that the proposed Project would result in potentially significant impacts to the following four (4) study intersections under Existing (2014) plus Interim Development Project conditions:

8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
19. Vermont Avenue & 223rd Street

As shown in Table 4.L-9, when examining Existing (2014) plus Full Buildout Project conditions using the significant impact criteria, potentially significant impacts would result at the following nine (9) intersections:

4. Normandie Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
14. Vermont Avenue & 220th Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
17. Normandie Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
20. I-110 Southbound Ramps & 223rd Street

(b) Interim Year (2023) Without and With Project Conditions

Cumulative Project volumes were added to the existing traffic volumes to create the Interim Year (2023) volumes for Los Angeles County, illustrated in Figure 14 of the Traffic Study. For the incorporated cities of

Los Angeles, Torrance and Carson, existing traffic volumes were increased, based on the previously discussed rates, to 2023 and then added to cumulative projects volumes to create the Interim Year (2023) volumes, shown in Figure 15 of the Traffic Study.

(i) Unincorporated Los Angeles County Interim Year (2023) Traffic Conditions

Table 4.L-10, *Interim Year (2023) Plus Interim Development Project for Unincorporated Los Angeles County Intersection Level of Service Analysis*, summarizes the levels of service during the Interim Year (2023) conditions. Poor operating conditions (LOS E or F) are projected at six (6) of the 15 study intersections within Los Angeles County's jurisdiction under the With and Without Project scenarios during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
19. Vermont Avenue & 223rd Street

The results of the Interim Year (2023) (without an area-wide growth factor) plus Interim Development Project peak hour traffic volumes are also presented in Table 4.L-10 for intersections within unincorporated Los Angeles County. Table 4.L-10 indicates that poor operating conditions (LOS E or F) are projected at eight (8) of the 15 study intersections within Los Angeles County's jurisdiction. The intersections projected to operate at poor levels of service (LOS E or F) in one or both peak hours include:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
19. Vermont Avenue & 223rd Street20. I-110 Southbound Ramps & 223rd Street

Table 4.L-10

Interim Year (2023) Plus Interim Development Project for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Interim (2023) Base		Interim (2023) Base+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.962	E	0.963	E	0.028	YES
					PM	0.993	E	0.994	E	0.058	YES
2	Vermont Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.968	E	0.969	E	0.042	YES
					PM	0.895	D	0.896	D	0.016	NO
4	Normandie Ave.	Carson St.	Los Angeles County	ICU	AM	0.946	E	0.952	E	0.048	YES
					PM	1.007	F	1.016	F	0.086	YES
5	Budlong Ave.	Carson St.	Los Angeles County	ICU	AM	0.603	B	0.657	B	0.087	NO
					PM	0.608	B	0.639	B	0.100	NO
6	Berendo Ave.	Carson St.	Los Angeles County	ICU	AM	0.609	B	0.663	B	0.088	NO
					PM	0.636	B	0.696	B	0.127	NO
7	Medical Center Dr.	Carson St.	Los Angeles County	ICU	AM	0.661	B	0.715	C	0.087	YES
					PM	0.678	B	0.643	B	0.032	NO
8	Vermont Ave.	Carson St.	Los Angeles County	ICU	AM	0.939	E	0.953	E	0.048	YES
					PM	0.982	E	1.010	F	0.093	YES
9	I-110 SB Ramps	Carson St.	Los Angeles County	ICU	AM	0.848	D	0.878	D	0.064	YES
					PM	0.906	E	0.925	E	0.076	YES
12	Normandie Ave.	220th St.	Los Angeles County	ICU	AM	0.550	A	0.565	A	0.016	NO
					PM	0.448	A	0.451	A	0.010	NO
13	Meyler St.	220th St.	Los Angeles County	ICU	AM	0.460	A	0.483	A	0.023	NO
					PM	0.446	A	0.455	A	0.009	NO
14	Vermont Ave.	220th St.	Los Angeles County	ICU	AM	0.647	B	0.668	B	0.023	NO
					PM	0.703	C	0.733	C	0.037	NO
17	Normandie Ave.	223rd St.	Los Angeles County	ICU	AM	0.811	D	0.820	D	0.013	NO
					PM	0.830	D	0.834	D	0.012	NO
18	Meyler St.	223rd St.	Los Angeles County	ICU	AM	0.653	B	0.662	B	0.013	NO
					PM	0.582	A	0.589	A	0.011	NO

Table 4.L-10 (Continued)

Interim Year (2023) Plus Interim Development Project for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Interim (2023) Base V/C or Delay	Interim (2023) Base LOS	Interim (2023) Base+Project V/C or Delay	Interim (2023) Base+Project LOS	Project Increase In V/C	Significant Impacts
19	Vermont Ave.	223rd St.	Los Angeles County	ICU	AM	0.927	E	0.945	E	0.028	YES
					PM	0.899	D	0.905	E	0.025	YES
20	I-110 SB Ramps	223rd St.	Los Angeles County	ICU	AM	0.765	C	0.779	C	0.024	NO
					PM	0.864	D	0.873	D	0.030	YES

[a] *All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.*

Source: Fehr & Peers, 2016

(ii) Incorporated Cities Interim Year (2023) Traffic Conditions

Table 4.L-11, *Interim Year (2023) Plus Interim Development Project for Incorporated Cities Intersection Level of Service Analysis*, summarizes the levels of service during the Interim Year (2023) conditions within the cities of Los Angeles, Carson and Torrance. Poor operating conditions (LOS E or F) are projected in one or both of the peak hours at eight (8) of the 11 study intersections including:

1. Normandie Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
10. Figueroa Street & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
21. Figueroa Street & 223rd Street
22. Western Avenue & Sepulveda Boulevard

The Interim peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections during the projected operating conditions with the addition of Project traffic. Table 4.L-11 summarizes the Interim and Interim plus 2023 Project LOS using the appropriate methodology as prescribed by the local city. As shown in Table 4.L-11, using the criteria for determination of significant impacts, the Project would create a significant traffic impacts at the following analyzed intersection under Interim plus 2023 Project conditions:

15. Figueroa Street and 220th Street/I-110 Northbound Ramps

(c) Full Buildout (2030) Without and With Project Conditions

Cumulative project volumes were added to the existing traffic volumes to create the cumulative (2030) volumes for Los Angeles County, illustrated in Figure 17 of the Traffic Study. Note that Interim Development Base volumes and Cumulative (2030) base volumes are the same under Los Angeles County's methodology because no areawide growth rate is used. For the incorporated Cities of Los Angeles, Torrance and Carson, which require an areawide growth rate, existing traffic volumes were grown based on the previously discussed rates for the Cumulative (2030) base scenario and then added to cumulative project volumes, shown in Figure 18 of the Traffic Study.

Table 4.L-11

Interim Year (2023) Plus Interim Development Project for Incorporated Cities Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Interim (2023) Base		Interim (2023) Base+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Ave.	Torrance Blvd.	City of Los Angeles	CMA	AM	0.999	E	1.001	F	0.002	NO
					PM	1.036	F	1.038	F	0.002	NO
3	Western Ave.	Carson St.	City of Los Angeles	CMA	AM	1.022	F	1.022	F	0.000	NO
					PM	1.137	F	1.139	F	0.002	NO
			City of Torrance	ICU	AM	1.038	F	1.039	F	0.001	NO
					PM	1.138	F	1.139	F	0.001	NO
4	Normandie Ave.	Carson St.	City of Los Angeles	CMA	AM	0.863	D	0.870	D	0.007	NO
					PM	0.987	E	0.996	E	0.009	NO
10	Figueroa St.	Carson St.	City of Carson	ICU	AM	0.730	C	0.737	C	0.007	NO
					PM	0.919	E	0.924	E	0.005	NO
11	Western Ave.	220th St.	City of Los Angeles	CMA	AM	0.598	A	0.603	B	0.005	NO
					PM	0.751	C	0.751	C	0.000	NO
			City of Torrance	ICU	AM	0.727	C	0.732	C	0.005	NO
					PM	0.870	D	0.870	D	0.000	NO
12	Normandie Ave.	220th St.	City of Los Angeles	CMA	AM	0.443	A	0.459	A	0.016	NO
					PM	0.325	A	0.328	A	0.003	NO
15	Figueroa St.	220th St./I-110 NB Ramps	City of Carson	ICU	AM	0.979	E	0.987	E	0.008	NO
					PM	0.960	E	0.994	E	0.034	YES
16	Western Ave.	223rd St.	City of Los Angeles	CMA	AM	0.886	D	0.886	D	0.000	NO
					PM	0.922	E	0.924	E	0.002	NO
			City of Torrance	ICU	AM	0.950	E	0.950	E	0.000	NO
					PM	0.984	E	0.985	E	0.001	NO
17	Normandie Ave.	223rd St.	City of Los Angeles	CMA	AM	0.675	B	0.679	B	0.004	NO
					PM	0.761	C	0.765	C	0.004	NO
21	Figueroa St.	223rd St.	City of Carson	ICU	AM	0.900	D	0.904	E	0.004	NO
					PM	0.786	C	0.788	C	0.002	NO

Table 4.L-11 (Continued)

Interim Year (2023) Plus Interim Development Project for Incorporated Cities Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Interim (2023) Base		Interim (2023) Base+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
22	Western Ave.	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.998	E	0.998	E	0.000	NO
					PM	1.063	F	1.064	F	0.001	NO
			City of Torrance	ICU	AM	1.017	F	1.017	F	0.000	NO
					PM	1.074	F	1.074	F	0.000	NO

[a] *All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.*

Source: Fehr & Peers, 2016

(i) Unincorporated Los Angeles County Cumulative Buildout (2030) Traffic Conditions

Table 4.L-12, *Cumulative (2030) Plus Project for Unincorporated Los Angeles County Intersection Level of Service Analysis*, summarize the levels of service during the Cumulative Buildout (2030) conditions. Poor operating conditions (LOS E or F) are projected at six (6) of the 15 study intersections wholly or partly within Los Angeles County's jurisdiction under the With and Without Project scenarios during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
19. Vermont Avenue & 223rd Street

As shown in Table 4.L-12, when examining Cumulative Buildout (2030) Plus Project conditions (without an area-wide growth factor) using the significant impact criteria, potentially significant impacts would result at the following eleven (11) intersections in unincorporated Los Angeles County:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
6. Berendo Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
14. Vermont Avenue & 220th Street
17. Normandie Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
20. I-110 Southbound Ramps & 223rd Street

Mitigation Measures are prescribed below for potentially significant impacted intersections, where feasible, in unincorporated Los Angeles County, which address both Interim (2023) and Buildout (2030) traffic conditions.

Table 4.L-12

Cumulative (2030) Plus Project for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative 2030		Cumulative 2030+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.962	E	0.966	E	0.031	YES
					PM	0.993	E	1.000	E	0.064	YES
2	Vermont Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.968	E	0.972	E	0.045	YES
					PM	0.895	D	0.900	D	0.020	YES
4	Normandie Ave.	Carson St.	Los Angeles County	ICU	AM	0.946	E	0.967	E	0.063	YES
					PM	1.007	F	1.038	F	0.108	YES
5	Budlong Ave.	Carson St.	Los Angeles County	ICU	AM	0.603	B	0.669	B	0.099	NO
					PM	0.608	B	0.634	B	0.095	NO
6	Berendo Ave.	Carson St.	Los Angeles County	ICU	AM	0.609	B	0.675	B	0.100	NO
					PM	0.636	B	0.747	C	0.178	YES
7	Medical Center Dr.	Carson St.	Los Angeles County	ICU	AM	0.661	B	0.751	C	0.123	YES
					PM	0.678	B	0.722	C	0.111	YES
8	Vermont Ave.	Carson St.	Los Angeles County	ICU	AM	0.939	E	0.982	E	0.077	YES
					PM	0.982	E	1.075	F	0.158	YES
9	I-110 SB Ramps	Carson St.	Los Angeles County	ICU	AM	0.848	D	0.941	E	0.127	YES
					PM	0.906	E	0.974	E	0.125	YES
12	Normandie Ave.	220th St.	Los Angeles County	ICU	AM	0.550	A	0.596	A	0.047	NO
					PM	0.448	A	0.461	A	0.020	NO
13	Meyler St.	220th St.	Los Angeles County	ICU	AM	0.460	A	0.533	A	0.073	NO
					PM	0.446	A	0.486	A	0.040	NO
14	Vermont Ave.	220th St.	Los Angeles County	ICU	AM	0.647	B	0.717	C	0.072	YES
					PM	0.703	C	0.813	D	0.117	YES
17	Normandie Ave.	223rd St.	Los Angeles County	ICU	AM	0.811	D	0.833	D	0.026	YES
					PM	0.830	D	0.844	D	0.022	YES
18	Meyler St.	223rd St.	Los Angeles County	ICU	AM	0.653	B	0.679	B	0.030	NO
					PM	0.582	A	0.608	B	0.030	NO

Table 4.L-12 (Continued)

Cumulative (2030) Plus Project for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative 2030		Cumulative 2030+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
19	Vermont Ave.	223rd St.	Los Angeles County	ICU	AM	0.927	E	0.983	E	0.066	YES
					PM	0.899	D	0.956	E	0.076	YES
20	I-110 SB Ramps	223rd St.	Los Angeles County	ICU	AM	0.765	C	0.806	D	0.051	YES
					PM	0.864	D	0.895	D	0.052	YES

[a] *All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.*

Source: Fehr & Peers, 2016

(ii) Incorporated Cities Cumulative Buildout Year (2030) Traffic Conditions

Table 4.L-13, *Cumulative (2030) Plus Project for Incorporated Cities Intersection Level of Service Analysis*, summarize the levels of service during the Cumulative Buildout (2030) conditions. Poor operating conditions (LOS E or F) are projected at ten (10) of the 11 study intersections under the With and Without Project scenarios during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
10. Figueroa Street & Carson Street
11. Western Avenue & Carson Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
17. Normandie Avenue & 223rd Street
21. Figueroa Street & 223rd Street
22. Western Avenue & Sepulveda Boulevard

As shown in Table 4.L-13, when examining Cumulative Buildout (2030) Plus Project conditions (with an area-wide growth factor) using the significant impact criteria, potentially significant impacts would result at the following intersections:

4. Normandie Avenue & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps

Mitigation measures are prescribed below for potentially significant impacted intersections in the incorporated cities, which address both Interim (2023) and Buildout (2030) traffic conditions.

Table 4.L-13

Cumulative (2030) Plus Project for Incorporated Cities Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative 2030 V/C or Delay	Cumulative 2030 LOS	Cumulative 2030+Project V/C or Delay	Cumulative 2030+Project LOS	Project Increase In V/C	Significant Impacts
1	Normandie Ave.	Torrance Blvd.	City of Los Angeles	CMA	AM	1.054	F	1.059	F	0.005	NO
					PM	1.090	F	1.098	F	0.008	NO
3	Western Ave.	Carson St.	City of Los Angeles	CMA	AM	1.076	F	1.081	F	0.005	NO
					PM	1.196	F	1.204	F	0.008	NO
			City of Torrance	ICU	AM	1.085	F	1.089	F	0.004	NO
					PM	1.188	F	1.194	F	0.006	NO
4	Normandie Ave.	Carson St.	City of Los Angeles	CMA	AM	0.910	E	0.933	E	0.023	YES
					PM	1.037	F	1.073	F	0.036	YES
10	Figueroa St.	Carson St.	City of Carson	ICU	AM	0.762	C	0.786	C	0.024	NO
					PM	0.957	E	0.974	E	0.017	NO
11	Western Ave.	220th St.	City of Los Angeles	CMA	AM	0.633	B	0.649	B	0.016	NO
					PM	0.793	C	0.794	C	0.001	NO
			City of Torrance	ICU	AM	0.760	C	0.775	C	0.015	NO
					PM	0.909	E	0.910	E	0.001	NO
12	Normandie Ave.	220th St.	City of Los Angeles	CMA	AM	0.470	A	0.519	A	0.049	NO
					PM	0.345	A	0.359	A	0.014	NO
15	Figueroa St.	220th St./I-110 NB Ramps	City of Carson	ICU	AM	1.024	F	1.054	F	0.030	YES
					PM	1.006	F	1.121	F	0.115	YES
16	Western Ave.	223rd St.	City of Los Angeles	CMA	AM	0.935	E	0.936	E	0.001	NO
					PM	0.974	E	0.978	E	0.004	NO
			City of Torrance	ICU	AM	0.994	E	0.996	E	0.002	NO
					PM	1.029	F	1.034	F	0.005	NO
17	Normandie Ave.	223rd St.	City of Los Angeles	CMA	AM	0.713	C	0.724	C	0.011	NO
					PM	0.805	D	0.817	D	0.012	NO
21	Figueroa St.	223rd St.	City of Carson	ICU	AM	0.939	E	0.956	E	0.017	NO
					PM	0.820	D	0.831	D	0.011	NO

Table 4.L-13 (Continued)

Cumulative (2030) Plus Project for Incorporated Cities Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative 2030 V/C or Delay	Cumulative 2030 LOS	Cumulative 2030+Project V/C or Delay	Cumulative 2030+Project LOS	Project Increase In V/C	Significant Impacts
22	Western Ave.	Sepulveda Blvd	City of Los Angeles	CMA	AM	1.054	F	1.054	F	0.000	NO
					PM	1.122	F	1.124	F	0.002	NO
			City of Torrance	ICU	AM	1.067	F	1.067	F	0.000	NO
					PM	1.124	F	1.126	F	0.002	NO

[a] *All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.*

Source: Fehr & Peers, 2016

(d) Summary of Interim Year (2023) and Buildout (2030) Intersection Impacts

Table 4.L-14, *Potentially Significant Impacts at Unincorporated Los Angeles County Intersections*, depicts the impacts at all intersections within unincorporated Los Angeles County using the impact criteria from Los Angeles County. As shown therein, the Project would result in potentially significant impacts at eight (8) intersections under Interim (2023) Plus Project Conditions and ten (10) intersections under Cumulative (2030) Plus Project conditions. The Project would also result in potentially significant impacts at eight (8) of the same intersections plus one additional intersection under Existing Plus Project (Full Buildout) conditions, and three (3) of those same intersections under Existing Plus Project (Interim) conditions. In all, the Project would result in potentially significant impacts at eleven (11) unincorporated County intersections.

Table 4.L-15, *Potentially Significant Impacts at Incorporated City Intersections*, depicts the impacts at all intersections within the jurisdictions of incorporated cities (city of Los Angeles, city of Torrance, and city of Carson) using the impact criteria from the relevant city. As shown therein, the Project would result in impacts at only one (1) intersection in the City of Carson under Interim (2023) Plus Project conditions and impacts at two (2) intersections under Cumulative (2030) Plus Project conditions (including the intersection affected under Interim (2023) Plus Project conditions in the city of Carson and an additional intersection in the city of Los Angeles). The Project would also result in potentially significant impacts at the same two (2) intersections under Existing Plus Project (Full Buildout) conditions, and one (1) of those same intersections under Existing Plus Project (Interim) conditions. In all, the Project would result in potentially significant impacts at two (2) incorporated city intersections (one of which, Intersection No. 4 at Normandie Avenue and Carson Street, is also significantly impacted under Los Angeles County criteria as discussed above).

As such, the Project would result in potentially significant impacts to a total of twelve (12) intersections within both unincorporated Los Angeles County and incorporated cities.

Table 4.L-14

Potentially Significant Impacts at Unincorporated Los Angeles County Intersections

ID	Intersection	Period	Existing + Project (Interim)	Interim (2023) + Project	Existing + Project (Full Buildout)	Cumulative (2030) + Project
1	Normandie Avenue & Torrance Boulevard	AM	NO	**YES**	NO	**YES**
		PM	NO	**YES**	NO	**YES**
2	Vermont Avenue & Torrance Boulevard	AM	NO	**YES**	NO	**YES**
		PM	NO	NO	NO	**YES**
4	Normandie Avenue & Carson Street	AM	NO	**YES**	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**
5	Budlong Avenue & Carson Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
6	Berendo Avenue & Carson Street	AM	NO	NO	NO	NO
		PM	NO	NO	**YES**	**YES**
7	Medical Center Drive & Carson Street	AM	NO	**YES**	**YES**	**YES**
		PM	NO	NO	NO	**YES**
8	Vermont Avenue & Carson Street	AM	**YES**	**YES**	**YES**	**YES**
		PM	**YES**	**YES**	**YES**	**YES**
9	I-110 SB Ramps & Carson Street	AM	**YES**	**YES**	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**
12	Normandie Avenue & 220th Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
13	Meyler Street & 220th Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
14	Vermont Avenue & 220th Street	AM	NO	NO	**YES**	**YES**
		PM	NO	NO	**YES**	**YES**
17	Normandie Avenue & 223rd Street	AM	NO	NO	**YES**	**NO**
		PM	NO	NO	NO	**NO**
18	Meyler Street & 223rd Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
19	Vermont Avenue & 223rd Street	AM	**YES**	**YES**	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**
20	I-110 SB Ramps & 223rd Street	AM	NO	NO	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**

Source: Fehr &Peers, 2016

Table 4.L-15

Potentially Significant Impacts at Incorporated City Intersections

ID	Intersection	Jurisdiction	Period	Existing + Project (Interim)	Interim (2023) + Project	Existing + Project (Full Buildout)	Cumulative (2030) + Project
1	Normandie Avenue & Torrance Boulevard	City of Los Angeles	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
3	Western Avenue & Carson Street	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
4	Normandie Avenue & Carson Street	City of Los Angeles	AM	NO	NO	NO	**YES**
			PM	NO	NO	**YES**	**YES**
10	Figueroa Street & Carson Street	City of Carson	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
11	Western Avenue & 220th Street	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
12	Normandie Avenue & 220th Street	City of Los Angeles	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
15	Figueroa Street & 220th Street/I-110 NB Ramps	City of Carson	AM	NO	NO	**YES**	**YES**
			PM	**YES**	**YES**	**YES**	**YES**
16	Western Avenue & 223rd Street	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
17	Normandie Avenue & 223rd Street	City of Los Angeles	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
21	Figueroa Street & 223rd Street	City of Carson	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
22	Western Avenue & Sepulveda Blvd	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO

Source: Fehr &Peers, 2016

(3) CMP Transportation System

Threshold TRAF-3: Would the Project result in a change at a CMP facility in V/C of 0.02 or greater and cause LOS F conditions, or result in a change in V/C of 0.02 or greater at a CMP facility that is already at LOS F?

Impact Statement TRAF-3: *The Project would not meet the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant.*

(a) CMP Arterial Monitoring Stations

The CMP arterial monitoring stations nearest to the Project study area are:

- Western Avenue & Carson Street (City of Torrance)
- Western Avenue & 190th Street (City of Torrance)
- Western Avenue & Sepulveda Boulevard (City of Torrance)
- Pacific Coast Highway & Western Avenue (City of Los Angeles)
- Pacific Coast Highway & Figueroa Street (City of Los Angeles)
- Artesia Boulevard & Vermont Avenue (City of Gardena)

Based on the Project trip generation estimates and a review of the net Project-generated AM and PM peak hour traffic volumes (shown in Figures 8 and 9 of the Traffic Study), the Project would add 50 or more vehicle trips through one of the CMP arterial monitoring stations, Western Avenue & Carson Street. Fewer than 50 trips would be added to all other arterial monitoring stations during the AM or PM analysis periods. Therefore, no further analysis of is required for the CMP arterial intersections with the exception of Western Avenue & Carson Street. Per CMP Impact Analysis guidelines, intersection LOS calculations can be completed using either ICU or CMA methodology. Table 4.L-13 depicts the results of both CMA and ICU methodologies for Western Avenue & Carson Street in the Full Buildout plus Project scenario. Because the incremental change in V/C at this location would not increase by 2%, CMP arterial intersection impacts are considered to be less than significant for the Project. Because no impact would occur under the longest-term Cumulative (2030) plus Project scenario, it is concluded that no impact would occur under the Interim Development (2023) plus Project scenario or Existing plus Project scenarios.

(b) CMP Freeway Monitoring Stations

The nearest CMP mainline freeway monitoring locations nearest to the Project Site are:

- I-110 at Wilmington, south of "C" Street (Station 1045)
- I-110 at Manchester Boulevard (Station 1046)
- I-405 at Santa Fe Avenue (Station 1066)
- I-405 south of I-110 (Station 1067)
- I-405 north of Inglewood Avenue (Station 1068)
- SR 91 east of Alameda Street/Santa Fe Avenue (Station 1033)

Results are depicted in **Table 4.L-16**, *CMP AM Peak Hour Existing (2014) and Cumulative (2030) Freeway Analysis*, and **Table 4.L-17**, *CMP AM Peak Hour Existing (2014) and Cumulative (2030) Freeway Analysis* for the AM and PM peak hours, respectively, under Existing, Cumulative (2030) and Cumulative (2030) plus Project conditions. The Project would not add more than 150 trips at any station location, and the V/C would not increase by 2% or more. Therefore, CMP freeway impacts are considered to be less than significant.

Table 4.L-16

CMP AM Peak Hour Existing (2014) and Cumulative (2030) Freeway Analysis

Freeway Segments	Direction	# of Lanes	Capacity [a]	Existing			Cumulative (2030) with Areawide Growth			Full Buildout Project Trips	Cumulative (2030) with Areawide Growth plus Project				
				Peak Hour Volume [b]	D/C Ratio	LOS [c]	Peak Hour Volume	D/C Ratio	LOS [c]		Peak Hour Volume	D/C Ratio	LOS [c]	Project-related D/C change	Significant Impact [d]
Harbor Freeway (I-110)															
Harbor Freeway (I-110)	NB	4	8,000	3,025	0.38	B	3,088	0.386	B	52	3,141	0.393	B	0.007	NO
at Wilmington, south of "C" Street - CMP Station 1045	SB	4	8,000	4,235	0.53	B	4,323	0.54	B	11	4,334	0.542	C	0.002	NO
Harbor Freeway (I-110)	NB	6	12,000	11,794	0.98	E	12,652	1.054	F(0)	12	12,664	1.055	F(0)	0.001	NO
at Manchester Bl - CMP Station 1046	SB	6	12,000	11,115	0.93	D	11,924	0.994	E	78	12,002	1	E	0.006	NO
San Diego Freeway (I-405)															
San Diego Freeway (I-405)	NB	5	10,000	12,549	1.26	F(1)	15,171	1.517	F(3)	52	15,223	1.522	F(3)	0.005	NO
Santa Fe Ave -CMP Station 1066	SB	5	10,000	9,384	0.94	E	11,345	1.135	F(0)	8	11,353	1.135	F(0)	0.000	NO
San Diego Freeway (I-405)	NB	5	10,000	11,227	1.12	F(0)	12,045	1.205	F(0)	0	12,045	1.205	F(0)	0.000	NO
s/o RTE 110; Carson Scales -CMP Station 1067	SB	5	10,000	9,682	0.97	E	10,387	1.039	F(0)	0	10,387	1.039	F(0)	0.000	NO
San Diego Freeway (I-405)	NB	5	10,000	11,476	1.15	F(0)	11,917	1.192	F(0)	15	11,932	1.193	F(0)	0.001	NO
n/o Inglewood Ave -CMP Station 1068	SB	5	10,000	8,551	0.86	D	8,880	0.888	D	78	8,958	0.896	D	0.008	NO
Artesia Freeway (SR 91)															
Artesia Freeway (SR 91)	EB	6	12,000	8,048	0.67	C	9,669	0.806	D	13	9,682	0.807	D	0.001	NO
e/o Alameda St/Santa Fe Ave -CMP Station 1033	WB	6	12,000	10,767	0.9	D	12,935	1.078	F(0)	80	13,014	1.085	F(0)	0.007	NO

[a] *Capacity assumes 2,000 vehicles/hour/lane based on analysis contained in 2010 Congestion Management Program, Metro, 2010.*
[b] *2015 Volume obtained from CMP 2009 Data, factored to 2015 conditions using CMP growth rate for the RSA that contains freeway census station.*
[c] *Freeway Segment LOS methodology taken from 2010 CMP, Metro, 2010.*
[d] *CMP defines significant freeway impact as change in D/C ratio of 0.02 or more when a freeway segment is at LOS F (D/C ratio > 1.00).*

Source: Fehr & Peers, 2016

Table 4.L-17

CMP PM Peak Hour Existing (2014) and Cumulative (2030) Freeway Analysis

Freeway Segments	Direction	# of Lanes	Capacity [a]	Existing			Cumulative (2030) with Areawide Growth			Full Buildout Project Trips	Cumulative (2030) with Areawide Growth plus Project				
				Peak Hour Volume [b]	D/C Ratio	LOS [c]	Peak Hour Volume	D/C Ratio	LOS [c]		Peak Hour Volume	D/C Ratio	LOS [c]	Project-related D/C change	Significant Impact [d]
Harbor Freeway (I-110)															
Harbor Freeway (I-110)	NB	4	8,000	3,090	0.39	B	3,587	0.448	B	17	3,604	0.451	B	0.003	NO
at Wilmington, south of "C" Street - CMP Station 1045	SB	4	8,000	4,223	0.53	B	4,799	0.600	C	56	4,855	0.607	C	0.007	NO
Harbor Freeway (I-110)	NB	6	12,000	11,781	0.98	E	12,827	1.069	F(0)	62	12,889	1.074	F(0)	0.005	NO
at Manchester Bl - CMP Station 1046	SB	6	12,000	11,954	1	E	13,036	1.086	F(0)	26	13,062	1.089	F(0)	0.003	NO
San Diego Freeway (I-405)															
San Diego Freeway (I-405)	NB	5	10,000	9,167	0.92	D	10,393	1.039	F(0)	16	10,409	1.041	F(0)	0.002	NO
Santa Fe Ave -CMP Station 1066	SB	5	10,000	11,021	1.1	F(0)	12,367	1.237	F(0)	41	12,408	1.241	F(0)	0.004	NO
San Diego Freeway (I-405)	NB	5	10,000	9,682	0.97	E	10,921	1.092	F(0)	0	10,921	1.092	F(0)	0.000	NO
s/o RTE 110; Carson Scales -CMP Station 1067	SB	5	10,000	11,639	1.16	F(0)	13,006	1.301	F(1)	0	13,006	1.301	F(1)	0.000	NO
San Diego Freeway (I-405)	NB	5	10,000	8,734	0.87	D	9,518	0.952	E	78	9,596	0.96	E	0.008	NO
n/o Inglewood Ave -CMP Station 1068	SB	5	10,000	10,562	1.06	F(0)	11,476	1.148	F(0)	24	11,500	1.15	F(0)	0.002	NO
Artesia Freeway (SR 91)															
Artesia Freeway (SR 91)	EB	6	12,000	16,532	1.38	F(2)	19,893	1.658	F(3)	65	19,958	1.663	F(3)	0.005	NO
e/o Alameda St/Santa Fe Ave -CMP Station 1033	WB	6	12,000	6,526	0.54	C	7,887	0.657	C	25	7,912	0.659	C	0.002	NO

[a] *Capacity assumes 2,000 vehicles/hour/lane based on analysis contained in 2010 Congestion Management Program, Metro, 2010.*
[b] *2015 Volume obtained from CMP 2009 Data, factored to 2015 conditions using CMP growth rate for the RSA that contains freeway census station.*
[c] *Freeway Segment LOS methodology taken from 2010 CMP, Metro, 2010.*
[d] *CMP defines significant freeway impact as change in D/C ratio of 0.02 or more when a freeway segment is at LOS F (D/C ratio > 1.00).*

Source: Fehr & Peers, 2016

(4) Caltrans Facilities

(a) Freeway Mainlines and Intersections

Threshold TRAF-4: Would the Project result in traffic that would extend onto the freeway mainline or intersection were found to operate at LOS F with the addition of Project-related traffic and the increase is equal to or greater than 50 trips?

Impact Statement TRAF-4: *The Project would increase traffic on the Caltrans facilities. With regard to freeway segments and intersections, while the County would make a fair-share contribution to offset increases in trips that would occur as a result of Project traffic, the Project could have a significant impact on Caltrans facilities. While the County would contribute a fair-share contribution for future improvements, this impact is considered potentially significant.*

(i) Freeway Mainlines

Morning and afternoon peak hour analysis of six selected freeway mainline segments in the Project vicinity was conducted in response to a request from Caltrans:

- I-110 at 228th Street
- I-110 at El Segundo Boulevard
- I-405 at I-710
- I-405 south of I-110
- I-405 north of Western Avenue
- SR-91 at Avalon Boulevard

As discussed above, the level of service definitions used for freeway mainline segments are shown above in Table 4.L-1. Caltrans' *Guide for the Preparation of Traffic Impact Studies* (December 2002) states that:

> "The level of service (LOS) for operating State highway facilities is based upon measures of effectiveness (MOEs). Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on State highway facilities. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained."

The surrounding freeways (I-405, I-710, SR-91, and I-110) are operating at or near capacity during the peak period. When additional traffic trips are assigned to those freeways, existing LOS should be maintained.

Following consultation between County staff and Caltrans staff, it was agreed that for the purposes of this study for this Project, an impact would be considered adverse if the analyzed freeway segment were found to operate at LOS F with the addition of Project-related traffic and if the increase were equal to or greater than 50 trips.

Existing (2014) and Existing plus Project freeway segment analysis is presented in **Table 4.L-18**, *Existing (2014) Peak Hour Freeway Segment Analysis*, and Cumulative (2030) and Cumulative (2030) plus Project freeway segment analysis is presented in **Table 4.L-19**, *Cumulative (2030) Peak Hour Freeway Segment Analysis*. As shown, using this methodology, adverse impacts are identified on the following three freeway segments:

Existing (2014) plus Project at Full Buildout

- I-405 at I-710 – northbound in the AM peak hour (52 Project-added trips)

Cumulative (2030) plus Project at Full Buildout

- I-110 at 228th Street – northbound in the AM peak hour (52 Project-added trips)
- I-110 at El Segundo Boulevard – southbound in the AM peak hour (78 Project-added trips)
- I-405 at I-710 – northbound in the AM peak hour (52 Project-added trips)

To address these adverse impacts three potential measures were investigated:

- Reduce Project-generated traffic by reducing the building program or by implementing a more effective TDM program sufficient to reduce estimated trips by 1% to avoid two of the adverse impacts identified or 6% to avoid all three of the adverse impacts identified. The effectiveness of the ongoing programs varies from year to year, however, and it is not possible to guarantee that specific measures would be effective in perpetuity.

- Add mainline freeway capacity to address existing and cumulative conditions. This would be beyond the ability of any individual project to implement, due to the potential need to acquire right-of-way and the magnitude of the cost.

- Contribute to implementation of Caltrans' projects to address congestion in the study area, which would contribute to minimizing the impact associated with the proposed development. However, there are no specific improvements identified for implementation. Thus, no fair-share contribution can be calculated or made.

Because the potential measures described above were each found to be infeasible, the Project's incremental impacts on poor cumulative conditions on identified segments would be considered significant and unavoidable.

Table 4.L-18

Existing (2014) Peak Hour Freeway Segment Analysis

Name [a]	Peak Hour	Existing Northbound Density (pc/mi/ln)*	Existing Northbound LOS	Existing Southbound Density (pc/mi/ln)*	Existing Southbound LOS	Full Buildout Project Trips Northbound	Full Buildout Project Trips Southbound	Existing plus Project Northbound Density (pc/mi/ln)*	Existing plus Project Northbound LOS	Existing plus Project Southbound Density (pc/mi/ln)*	Existing plus Project Southbound LOS	Change in Density Northbound	Change in Density Southbound	Project Impact? [b] Northbound	Project Impact? [b] Southbound
I-110 at 228th Street	AM	37.0	E	22.9	C	52	11	37.5	E	22.9	C	0.5	0.0	NO	NO
	PM	23.1	C	33.7	D	17	56	23.2	C	34.1	D	0.1	0.4	NO	NO
I-110 at El Segundo Blvd	AM	27.0	D	36.9	E	12	78	27.0	D	37.5	E	0.0	0.6	NO	NO
	PM	26.1	D	37.4	E	62	26	26.4	D	37.6	E	0.3	0.2	NO	NO
I-405 JCT. RTE 710	AM	47.5	F	27.4	D	52	8	48.0	F	27.4	D	0.5	0.0	YES	NO
	PM	28.5	D	43.8	E	16	41	28.5	D	44.2	E	0.0	0.4	NO	NO
I-405 S/O JCT RTE 110, Carson Scales	AM	33.9	D	28.2	D	0	0	33.9	D	28.2	D	0.0	0.0	NO	NO
	PM	26.0	C	37.9	E	0	0	26.0	C	37.9	E	0.0	0.0	NO	NO
I-405 N/O Western Avenue; Van Ness Avenue	AM	30.8	D	29.0	D	15	78	30.8	D	29.3	D	0.0	0.3	NO	NO
	PM	27.5	D	31.8	D	78	24	27.9	D	31.9	D	0.4	0.1	NO	NO

Name [a]	Peak Hour	Existing Eastbound Density (pc/mi/ln)*	Existing Eastbound LOS	Existing Westbound Density (pc/mi/ln)*	Existing Westbound LOS	Full Buildout Project Trips Eastbound	Full Buildout Project Trips Westbound	Existing plus Project Eastbound Density (pc/mi/ln)*	Existing plus Project Eastbound LOS	Existing plus Project Westbound Density (pc/mi/ln)*	Existing plus Project Westbound LOS	Change in Density Eastbound	Change in Density Westbound	Project Impact? [b] Northbound	Project Impact? [b] Westbound
SR 91 at Avalon Boulevard Interchange	AM	21.9	C	28.7	D	13	80	21.9	C	29.1	D	0.0	0.4	NO	NO
	PM	26.1	D	19.9	C	65	25	26.4	D	20.0	C	0.3	0.1	NO	NO

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** pc/mi/ln denotes passenger cars per mile per lane*

[a] *Analyzed using Freeway methodology from Highway Capacity Manual, Transportation Research Board, 2010.*

[b] *After discussion with Caltrans staff, Impact Criteria was defined as mainline LOS F and more than 50 project trips.*

Source: Fehr & Peers, 2016

Table 4.L-19

Cumulative (2030) Peak Hour Freeway Segment Analysis,

Name [a]	Peak Hour	Cumulative with Areawide Growth: Northbound Density (pc/mi/ln)*	LOS	Cumulative with Areawide Growth: Southbound Density (pc/mi/ln)*	LOS	Full Buildout Project Trips: Northbound	Full Buildout Project Trips: Southbound	Cumulative with Areawide Growthplus Project: Northbound Density (pc/mi/ln)*	LOS	Cumulative with Areawide Growthplus Project: Southbound Density (pc/mi/ln)*	LOS	Change in Density: Northbound	Change in Density: Southbound	Project Impact? [b]: Northbound	Project Impact? [b]: Southbound
I-110 at 228th Street	AM	45.4	F	25.6	C	52	11	46.0	F	25.7	C	0.6	0.1	YES	NO
	PM	24.6	C	37.0	E	17	56	24.7	C	37.5	E	0.1	0.5	NO	NO
I-110 at El Segundo Blvd	AM	31.3	D	45.5	F	12	78	31.4	D	46.3	F	0.1	0.8	NO	YES
	PM	28.2	D	41.8	E	62	26	28.5	D	42.0	E	0.3	0.2	NO	NO
I-405 JCT. RTE 710	AM	63.0	F	31.8	D	52	8	63.9	F	31.9	D	0.9	0.1	YES	NO
	PM	30.9	D	50.0	F	16	41	31.0	D	50.4	F	0.1	0.4	NO	NO
I-405 S/O JCT RTE 110, Carson Scales	AM	40.9	E	32.6	D	0	0	40.9	E	32.6	D	0.0	0.0	NO	NO
	PM	26.0	C	42.2	E	0	0	26.0	C	42.2	E	0.0	0.0	NO	NO
I-405 N/O Western Avenue; Van Ness Avenue	AM	36.1	E	33.6	D	15	78	36.2	E	34.1	D	0.1	0.5	NO	NO
	PM	29.7	D	34.7	D	78	24	30.0	D	34.9	D	0.3	0.2	NO	NO

Name [a]	Peak Hour	Existing: Eastbound Density (pc/mi/ln)*	LOS	Existing: Westbound Density (pc/mi/ln)*	LOS	Full Buildout Project Trips: Eastbound	Full Buildout Project Trips: Westbound	Existing plus Project: Eastbound Density (pc/mi/ln)*	LOS	Existing plus Project: Westbound Density (pc/mi/ln)*	LOS	Change in Density: Eastbound	Change in Density: Westbound	Project Impact? [b]: Northbound	Project Impact? [b]: Westbound
SR 91 at Avalon Boulevard Interchange	AM	24.4	C	33.2	D	13	80	24.4	C	33.7	D	0.0	0.5	NO	NO
	PM	28.0	D	21.1	C	65	25	28.3	D	21.2	C	0.3	0.1	NO	NO

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** pc/mi/ln denotes passenger cars per mile per lane*

[a] *Analyzed using Freeway methodology from Highway Capacity Manual, Transportation Research Board, 2010.*

[b] *After discussion with Caltrans staff, Impact Criteria was defined as mainline LOS F and more than 50 project trips.*

Source: Fehr & Peers, 2016

(ii) Intersections

Analysis of the arterial intersection of Western Avenue (State Route 213) & Carson Street was conducted using the Highway Capacity Manual (HCM) methodology in response to a request from Caltrans. Caltrans, LADOT and the City of Torrance have jointly agreed to modify the signal in the near term at this location by implementing protected left-turn phasing on the eastbound and westbound approaches.

The discussion above regarding Caltrans' MOEs for freeway mainline segments also applies to arterial intersections. However, following consultation between county staff and Caltrans staff, it was agreed that for the purposes of this study of this Project, an impact would be considered adverse if the analyzed intersection were found to operate at LOS F with the addition of Project-related traffic and if the increase were equal to or greater than 50 trips. The results of this analysis under Existing conditions without and with the Project, Interim Year (2023) without and with the Project, and Cumulative Year (2030) without and with the Project are presented in **Table 4.L-20**, *Peak Hour Highway Capacity Manual Intersection Analysis – Western Avenue (State Route 213) & Carson Street*. Detailed level of service worksheets are provided in Appendix C of the Traffic Study. The intersection is operating at LOS E under Existing and Existing plus Project conditions. Under Interim Development (2023) and Cumulative (2030) conditions in both the AM and PM peak hours, the intersection is projected to decline to LOS F without or with the addition of Project traffic. Because the Project would add more than 50 trips in both the AM and PM peak hours during the Cumulative (2030) condition, the impact would be a potentially significant impact.

Table 4.L-20

Peak Hour Highway Capacity Manual Intersection Analysis – Western Avenue (State Route 213) & Carson Street

Scenario	Time Period	Without Project		Plus Project [b]		Project Trips	Project Delay	Adverse Impact [c]
		Delay	LOS	Delay	LOS			
Existing	AM	66.4	E	67.8	E	55	1.4	NO
	PM	65.8	E	69.9	E	73	4.1	NO
Interim (2023) with Areawide Growth [d]	AM	93.6	F	93.7	F	17	0.1	NO
	PM	116.4	F	117.5	F	20	1.1	NO
Cumulative (2030) with Areawide Growth [d]	AM	105.7	F	106.9	F	55	1.2	YES
	PM	133.6	F	138.2	F	73	4.6	YES

[a] *Analyzed using Freeway methodology from Highway Capacity Manual, Transportation Research Board, 2010.*
[b] *Project trips for Existing and Cumulative (2030) with areawide growth are for Full Buildout. Project Trips for Interim (2023) with areawide growth are for Interim Development.*
[c] *After discussion with Caltrans staff, Impact Criteria was defined as intersection operating at LOS F and more than 50 project trips.*
[d] *Includes protected left-turn phases for eastbound and westbound approaches.*

Source: Fehr & Peers, 2016

(b) Freeway Off-Ramps

Threshold TRAF-5: Would the Project result in traffic where the off-ramp queue extends beyond the length of the ramp itself onto the mainline of the freeway during the peak arrival period?

Impact Statement TRAF-5: *The Project would increase traffic on the Caltrans facilities. However, with regard to off-ramps, the Project would not contribute traffic such that off-ramp queues would extend beyond the length of the ramp itself onto the mainline of a freeway during peak arrival periods. Thus, impacts would be less than significant.*

A freeway ramp queuing analysis was conducted at six freeway ramp terminal intersections in the Project vicinity in response to a request from Caltrans:

- I-110 Northbound Off-Ramp at 220th Street/Figueroa Street (Exit 7)
- I-110 Southbound Off-Ramp at Carson Street (Exist 7B)
- I-110 Southbound Off-Ramp at 223rd Street (Exit 7B)
- I-405 Northbound Off-Ramp at Carson Street (Exit 34)
- I-405 Northbound Off-Ramp at Wilmington Avenue (Exit 33B)
- I-405 Southbound Off-Ramp at East Carson Street (Exit 34)

Following consultation between County staff and Caltrans staff, it was agreed that for the purposes of this study for this Project, an impact would be considered adverse if the off-ramp queue extends beyond the length of the ramp itself onto the mainline of the freeway during the peak arrival period. **Table 4.L-21**, *Peak Hour Off-Ramp Intersection 95th Percentile Queues***,** presents a summary of the ramp queuing analysis for Existing, Cumulative (2030) and Cumulative (2030) plus Project conditions. The queue does not exceed the ramp length in any of the scenarios; therefore, less than significant impacts would occur.

Table 4.L-21

Peak Hour Off-Ramp Intersection 95th Percentile Queues

Ramp	Cross Street	Ramp Length	Ramp Turn Lanes at Intersection			Existing (2014)				Cumulative (2030) with Areawide Growth				Cumulative (2030) with Areawide Growth plus Project				Queue Exceeds Storage?
						AM Queue		PM Queue		AM Queue		PM Queue		AM Queue		PM Queue		
			# of Lanes	Move	Length	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	
I-110 SB Ramps	Carson Street	980	2	Left	980	130	640 [a]	250	350	150	770 [a]	280	520 [a]	150	970 [a]	280	580 [a]	NO
				Right	380	640		350		770		520		970		580		
220th Street/ I-110 NB Ramps	Figueroa Street	1,150	2	Through/Left	1,150	570	570 [a]	710	710 [a]	640	640 [a]	790	790 [a]	680	680 [a]	810	810 [a]	NO
				Right	525	0		30		0		50		20		60		
I-110 SB Ramps	223rd Street	930	2	Through/Left	930	360	360	340	340	440	440 [a]	440	440	530	530 [a]	480	480 [a]	NO
				Through/Right	390	[b]		[b]		[b]		[b]		[b]		[b]		
I-405 SB Ramps	Carson Street	1,120	2	Left	1,120	40	50	40	40	50	60	40	50	50	60	40	50	NO
				Right	660	50		40		60		50		60		50		
I-405 NB Ramps	Carson Street	1,200	2	Through/Left	630	30	30	40	40	30	30	40	40	30	30	40	40	NO
				Right	1,200	0		0		0		0		0		0		
I-405 NB Ramps	Wilmington Avenue	1,350	3	Left	900	440	440	400	400	530	530	480	480	550	550	490	490	NO
				Left	1,350	[b]		[b]		[b]		[b]		[b]		[b]		
				Right	450	360		60		490		120		490		120		

[a]: *95th percentile volume exceeds capacity, queue may be longer.*
[b] *Queue same as in adjacent lane.*

Source: Fehr & Peers, 2016

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(5) Public Transit and Alternative Transportation

Threshold TRAF-6: Would the Project add substantial new ridership to the transit lines operating in excess of their capacity or conflict with adopted policies, plans, or programs supporting alternative transportation?

Impact Statement TRAF-6: *Transit ridership generated by the Project would not exceed the residual capacity of the public transit system under Future Interim (2023) and Buildout (2030) conditions. Therefore, impacts with respect to transit would be less than significant. With regard to other alternative transportation modes, the Project would be supportive of and would not conflict with applicable alternative transportation policies, plans, and programs. Thus, impacts would be less than significant.*

(a) Public Transit

Based on the trip generation for the Interim Development (2023) scenario shown in Table 4.L-7a, the Project is estimated to generate 1,822 daily net trips, 225 net AM peak hour tips, and 221 net PM peak hour trips before transit credits and bike/walk credits are applied. Applying the CMP guidelines by converting the vehicle trips to person trips by multiplying by a 1.4 AVR (225 net AM peak hour trips x 1.4 = 315 and 221 net PM peak hour trips x 1.4 = 310) and applying a 7% transit use (315 net AM peak hour person trips x 7% = 22 and 310 net PM peak hour person trips x 7% = 22), would result in approximately 22 new transit person trips during the weekday AM peak hour and 22 new transit person trips during the weekday PM peak hour in the Interim Development (2023) scenario.

Based on the trip generation for the Full Buildout (2030) scenario shown in Table 4.L-7b, the Project is expected to generate 7,409 daily net trips, 714 net AM peak hour tips, and 818 net PM peak hour trips before internal capture, transit credits and bike/walk credits are applied. Applying the CMP guidelines by converting the vehicle trips to person trips by multiplying by a 1.4 AVR (714 net AM peak hour trips x 1.4 = 1,000 and 818 net PM peak hour trips x 1.4 = 1,145) and applying a 7% transit use (1,000 net AM peak hour person trips x 7% = 70 and 1,145 net PM peak hour person trips x 7% = 80), would result in approximately 70 new transit person trips during the weekday AM peak hour and 80 new transit person trips during the weekday PM peak hour in the Full Buildout scenario.

Within ¼-mile of the Project Site, Metro operates one local line and two express lines; Carson Circuit operates two local lines; Torrance Transit operates two local lines and one rapid line; and Gardena Municipal Bus operates one local line. The Project location is also served by numerous established local and regional transit routes with peak period headways of between 10 and 40 minutes. The bus services have an approximate capacity of approximately 1,840 persons during the peak hours based on a seating capacity of 40 persons for a standard bus and 30 persons for a shuttle bus and a policy load factor of 1.0. The Project would utilize less than 5% of available transit capacity during the peak hours. As such, impacts to public transit service would be less than significant.

(b) Alternative Transportation

With regard to alternative transportation, more specifically non-motorized transportation, the Project would implement a wide range of pedestrian- and bicycle-oriented improvements throughout the Medical Center Campus intended to foster non-vehicular access and circulation within the Project Site, as well as provide access to off-site facilities. On-site pedestrian and bicycle-related facilities would include a central

garden/open space system connecting the Medical Center Campus in a north-south and east-west orientation, which also ties into the proposed "fitness trail" which weaves through the property in a circuitous pattern and links the various Project components. The Project would also provide bicycle parking on the Medical Center Campus in accordance with County Code requirements, and may also provide lockers and showers for employees in accordance with existing TDM measures in place at the facility, and may also implement further bicycle-friendly improvements to meet LEED certification requirements as part of future development. Nonetheless, the Project would continue to implement TDM measures on the Project Site as under current conditions, and may ultimately expand the range of strategies to reduce vehicle trips. As such, the Project would not conflict with plans, policies, or programs supportive of alternative transportation such as the SCAG RTP/SCS, Los Angeles County CMP, or Los Angeles County General Plan 2035, and impacts would be less than significant.

(6) Access and Circulation

Threshold TRAF-7: Would the Project substantially increase conflict of movement between vehicles and pedestrians or bicycles because of driveway design, the location of parking facilities, or other Project characteristics affecting visibility and turning movements?

Impact Statement TRAF-7: *Site access would be provided via seven driveways designed to County standards that would accommodate left and right ingress/egress turning movements. The existing network of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. Impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant.*

The Master Plan Project design is intended to separate the access and the on-site circulation and parking for staff and the public, with Medical Center Campus entries and staff parking near the southeast area of the campus, and access and parking for the public from Carson Street, on the north (please see Figure 2-8 in Chapter 2.0, *Project Description*, of this Draft EIR). Access to the Medical Center Campus would be augmented with the addition of a signalized public entrance on Carson Street, near the northern portion of the proposed Bioscience Tech Park area, and one additional unsignalized staff entrance on Vermont Avenue. The new signalized public entrance on Carson Street may ultimately be located to the west of the location depicted in Figure 2-8, in order to allow adequate queue lengths and vehicles turning left into the Medical Center Campus from westbound Carson Street. A queueing analysis was conducted in the Traffic Study in order to assess the adequacy of the available storage space for westbound left-turns approaching the proposed new driveway on Carson Street west of Budlong Avenue. Figures 2 and 7 in the Traffic Study illustrate the location of the relocated driveway, which is currently proposed to be located approximately 300 feet west of the intersection of Carson Street and Budlong Avenue, directly opposite an existing retail driveway. Existing eastbound left-turn volumes from Carson Street onto Budlong Avenue are approximately 25 vehicles in the AM peak hour and 15 vehicles in the PM peak hour. The proposed westbound left-turn lane would occupy space now occupied by a center two-way left-turn lane and by the transitional taper to the existing eastbound left-turn lane onto Budlong Street, which would be shortened to accommodate projected westbound left vehicles at the Project driveway. For the analysis, a protected/permitted phase was assumed for westbound left vehicles at the driveway.

Table 17 in the Traffic Study presents a summary of the queuing analysis for Existing plus Project and Cumulative (2030) plus Project conditions at build-out for the AM and PM peak hours. The longest westbound queue is estimated to be six vehicles, requiring approximately 150 feet of storage. Providing a westbound left-turn lane of sufficient length would require shortening the eastbound left-turn lane onto Budlong Avenue, which appears feasible due to the modest left-turn volumes that it serves. As such, access to and from this driveway would be considered adequate and thus access impacts at this location would be less than significant. Detailed queue calculations are provided in Appendix D of the Project Traffic Study.

Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes between the main parking areas and the New Hospital Tower and Outpatient buildings. Circular pick-up and drop-off loading zones would also be provided at the main entrances to each of the New Hospital Tower and Outpatient buildings. Loading and trash collection activities would continue to occur within the existing location on the south side of the Surgery and Emergency building, accessed via either Vermont Avenue or 220th Street.

The proposed circulation improvements at the Medical Center Campus, both vehicular and non-vehicular, would be designed, as noted above, to provide separation between pedestrians/bicyclist and motor vehicles in order to minimize potential conflicts and associated hazards. Given implementation of Master Plan design principles and proposed circulation plan components, it is anticipated that vehicular circulation, bicycle and pedestrian safety, and both vehicular and non-vehicular access and circulation on-site would not only maintained but substantially improved relative to existing conditions as no unified, comprehensive circulation system currently exists on the Medical Center Campus. Furthermore, all access points and on-site circulation improvements would be designed in accordance with County standards under the review of County staff. Therefore, impacts regarding access and circulation would be less than significant.

(7) Parking Supply

Threshold TRAF-8: Would the Project provide less parking than the projected demand?

Impact Statement TRAF-8: *The Project would provide vehicle parking sufficient to meet projected demand. Therefore, impacts related to parking would be less than significant.*

As noted above, the Medical Center Campus currently provides 2,905 total parking spaces, which exceeds the County's parking code requirement of 2,709 spaces. Parking for proposed future uses would be provided as needed throughout Master Plan Project implementation phases, which is planned to provide sufficient parking in excess of both County Code requirements and projected demands. Based on parking ratios for the various land uses proposed under the Medical Center Campus, including the proposed Bioscience Tech Park, the County Code requirement for on-site parking at Project buildout in year 2030 would be 2,772 spaces, while the projected demand for parking is estimated to be 3,424 parking spaces based on application of adjusted ITE parking generation rates shown on page 59 of the Harbor-UCLA Master Plan. According to information provided by County staff, the Project would provide a total of 3,240 parking spaces on the Medical Center Campus, not inclusive of parking to be provided for the Bioscience Tech Park uses, which would add another 1,000 spaces to on-site parking capacity. As such, total on-site parking to serve future land uses at the Medical Center Campus at buildout would be 4,240 spaces, which would be 816 spaces more than the total projected demand and 1,468 spaces more than required by the County Code.

With regard to bicycle parking, the County Code requires short-term bicycle parking at a rate of 1 space for every 10,000 gross square feet of building space and long-term bicycle parking at a rate of one space for every 20,000 gross square feet, which results in a requirement of 246 short-term spaces and 123 long-term spaces. It is anticipated that the Project, in accordance with existing and proposed TDM measures or potential LEED requirements for future buildings, would provide additional bicycle parking facilities on the Medical Center Campus beyond what is required by the County Code.

As discussed previously, the Project would meet the criteria set forth in SB 743 because it (1) is located within a transit priority area less than one-half mile from the Harbor Freeway/Carson Station TOD (connection to Metro Silver Line) and (2) comprises an employment center within an established urban area. Under SB 743, the Project would be exempt from findings of significance related to parking effects. However, for the purpose of this EIR, parking effects have been evaluated herein for informational and disclosure purposes. Overall, as the Project would provide parking for proposed uses in an amount greater than both County Code requirements and the projected parking demand, impacts related to parking supply would be less than significant.

e. Cumulative Impacts

(1) Construction

Impacts on traffic associated with construction (e.g., an intermittent reduction in street and intersection operating capacity) are typically considered short-term adverse impacts. As discussed above, the Project is conservatively concluded to result in a significant traffic impact during construction associated with construction worker vehicle and truck trips during peak construction periods, although implementation of both a Construction Traffic Management Plan and Pedestrian Safety Plan (PDF TRAF-1 and PDF TRAF-2) that would incorporate notification and safety procedures and controls would reduce impacts in this regard to a certain extent. Although details regarding the timing and location of future development projects in the Project area are currently unknown, it is possible that other construction activities in the Project vicinity could occur concurrently with Project-related construction activities given the approximately 14-year implementation schedule for the Master Plan Project, and thus the Project could contribute to cumulative traffic impacts. Nonetheless, each related Project would be required to comply with County or respective City requirements regarding haul routes and would implement mitigation measures and/or include Project Design Features, such as traffic controls and safety procedures, to reduce potential traffic impacts during construction. However, even though the Project Site is located within close proximity to the freeway and would implement Project Design Features, due to the Project's assumed significant construction traffic impact, the number of related projects in the vicinity and the uncertainty in terms of timing for each related Project and the potential overlap of development, it is determined that the Project could contribute to a cumulatively significant construction impact.

(2) Operation

The Traffic Study was developed to address Project impacts in the context of existing baseline conditions and future Interim Year (2023) and Full Buildout (2030) conditions. The latter two scenarios take into account traffic caused by the 26 related projects identified in Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR as well as a growth factor to account for other ambient growth occurring in the region. Therefore, the analysis of future traffic conditions in 2023 and 2030 provides the cumulative

analysis in that it considers traffic generated by future planned land uses. The above analyses of Project impacts have taken into account the cumulative impacts associated with future growth.

The Traffic Study analyzed seven scenarios: Existing (2014), Existing (2014) plus Interim Development Project, Existing (2014) plus Full Buildout Project, Interim (2023) without Project, Cumulative (2030) without Project, Interim (2023) plus Project, Cumulative (2030) plus Project. The LOS analysis for the Cumulative (2030) plus Project scenario determined that the proposed Project would significantly impact traffic at eight intersections. After the proposed mitigation, the proposed Project would create significant traffic impacts at one of the analyzed intersections. Thus, the Project would contribute to a significant cumulative impact at this location.

The regional transportation analysis, including public transit, is based on CMP procedures that have been developed to address countywide cumulative growth impacts on regional transportation facilities. The CMP Guidelines contain procedures for monitoring land use development levels and transit system performance by local jurisdictions and Metro and are used to inform planning of infrastructure improvements to meet future needs, including development of the CMP CIP, Metro's LRTP, and SCAG's RTP. As indicated in the discussion of Project impacts above, the Project would not have a significant impact on public transit and the incremental impacts on the regional public transit system would not be cumulatively considerable. Analyses of potential impacts on the regional transportation system conducted in accordance with CMP requirements determined that the Project would not have a significant impact on CMP monitoring intersections. Analyses of potential impacts on the regional transportation in accordance with Caltrans found a Project impact on Interstate 405 northbound in the AM peak hour, and cumulative impacts on Interstate 110 northbound and southbound in the AM peak hour. Options for addressing the impacts were identified that can fully mitigate Project-related impacts; however, given uncertainties regarding the timing of implementation of such improvements, impacts are conservatively concluded to be significant and unavoidable. Therefore, the Project would contribute to a significant cumulative impact in this regard.

No impacts were found at freeway off-ramps. Thus, given that the analysis of Project-related traffic impacts under future development scenarios accounts for ambient growth and growth associated with the 26 related projects, and Project-related impacts would be less than significant, the Project's contribution to cumulative effects would not be considerable.

With regard to pedestrian and bicycle access and facilities, vehicular access and circulation, and parking, the Project would not result in a significant impact. Each related project would be reviewed by the County or respective City to ensure compliance with that jurisdiction's requirements relative to the provision of safe access for vehicles, pedestrian and cyclists. Access to each site would be assessed during the County's or respective City's review process to ensure compliance with applicable requirements, which are established to minimize potential impacts. With regard to parking, the related projects would be subject to the applicable County or City parking requirements for vehicle and bicycle parking. Therefore, cumulative impacts on parking would be less than significant. Therefore, the Project would not contribute to a significant cumulative impact with regard to these issues.

4. MITIGATION MEASURES

a. Construction

(1) Temporary Construction Traffic and Parking (Threshold TRAF-1)

With the incorporation of Project Design Features PDF-TRAF-1, Construction Traffic Management Plan, and PDF TRAF-2, Pedestrian Safety, construction traffic impacts would be less than significant. However, given the amount of development in the Project area, the uncertainty in terms of timing for each related Project and the potential for overlap of development, the Project could contribute to a cumulatively significant construction impact. Beyond compliance with County requirements regarding haul routes and implementation of traffic controls and safety procedures, no other feasible mitigation measures have been identified.

b. Operation

(1) Intersection Service Levels (Threshold TRAF-2)

The traffic impact analysis determined that the proposed development would generate significant traffic impacts at twelve (12) of the 22 analyzed intersections under future plus Project conditions. The following mitigation measures are prescribed to address a number of these impacts, where improvements to address such impacts are considered feasible.

I-110 Southbound Ramps & Carson Street (Intersection #9) – The Project would result in a potentially significant impact at the intersection of Interstate 110 Southbound Ramps & Carson Street (Intersection #9) in the AM and PM peak hours in the Full Buildout scenario using its current lane configuration.

> **Mitigation Measure TRAF-1: I-110 Southbound Ramps & Carson Street (Intersection #9)** - The existing southbound approach on the Interstate I-110 off-ramp shall be restriped to convert the existing left-turn lane to a left-/right-turn lane.

This improvement would require coordination with and approval by Caltrans.

220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) - The Project would result in a potentially significant impact at the intersection of 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) in the AM and PM peak hours in the Full Buildout scenario using its current lane configuration.

> **Mitigation Measure TRAF-2: 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15)** - An additional northbound through lane shall be striped and the existing through lane shall be restriped as a through/right-turn lane. The eastbound approach shall be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane.

As stated in the Transportation and Infrastructure Element of the Carson General Plan, Figueroa Street between 223rd Street and Carson Street is planned to be widened to three lanes in each direction. The proposed mitigation/improvement would require coordination with and approval by Caltrans and the City of Carson.

A mitigation involving modifying the existing raised median and restriping the northbound approach to accommodate a second left-turn lane was also considered. However, this mitigation was deemed to be inconsistent with the existing on-ramp configuration, which provides one general lane and one HOV lane.

I-110 Southbound Ramps & 223rd Street (Intersection #20) - The Project would result in a potentially significant impact at the intersection of Interstate 110 Southbound Ramps & 223rd Street (Intersection #20) in the AM and PM peak hours in the Full Buildout scenario using its current lane configuration.

Mitigation Measure TRAF-3: I-110 Southbound Ramps & 223rd Street (Intersection #20) - The southbound approach would be restriped from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach shall be restriped to change the existing right-turn lane to a through/right-turn lane. Under this mitigation, parking shall be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane.

This improvement would require coordination with and approval by Caltrans.

(2) CMP Transportation System (Threshold TRAF-3)

Impacts to regional CMP transportation systems would be less than significant. Thus, no mitigation measures are necessary.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections (Threshold TRAF-4)

Significant impacts have been identified with regard to freeway segments and intersections under Caltrans jurisdiction. As such, mitigation measures are recommended. Although the Project would increase traffic on the freeway mainline segments, in light of the nature of regional nature of the freeway system, improvements to Caltrans freeway facilities tend to be beyond the feasibility of any individual Project to implement. Thus, Caltrans allows development projects to pay a fair share or an equitable percentage contribution toward the estimated cost of an improvement.

The following mitigation measure is recommended to address the potentially significant impacts that were identified on the freeway mainline segments and the intersections that are under Caltrans' jurisdiction:

Mitigation Measure TRAF-4: The developer shall contribute a fair share contribution to Caltrans toward an analysis or improvements on I-110 (Harbor Freeway) in the Project vicinity to offset the additional Project-generated trips that would result on the freeway mainline segments and that would pass through the affected Caltrans intersections.

The fair share is calculated as the Project's percentage of the total projected traffic growth on a freeway mainline segment over a 25-year period. The fair share is a contribution toward the improvement and maintenance of a shared facility that benefits the Project and the region.

(b) Freeway Off-Ramps (Threshold TRAF-5)

Impacts to freeway off-ramps would be less than significant. Thus, no mitigation measures are necessary.

(4) Public Transit and Alternative Transportation (Threshold TRAF-6)

Impacts to public transit and alternative transportation would be less than significant. Thus, no mitigation measures are necessary.

(5) Access and Circulation (Threshold TRAF-7)

Impacts regarding vehicular access and circulation would be less than significant. Thus, no mitigation measures are necessary.

(6) Parking Supply (Threshold TRAF-8)

Impacts regarding parking supply would be less than significant. Thus, no mitigation measures are necessary.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Construction

(1) Construction Traffic, Access, Transit and Parking (Threshold TRAF-1)

Despite the incorporation of Project Design Features PDF-TRAF-1, Construction Traffic Management Plan, construction traffic impacts from construction worker vehicles and truck trips, for both Project-level and cumulative conditions, are conservatively concluded to be significant and unavoidable.

With implementation of PDF-TRAF-1 and PDF-TRAF-2, impacts related to construction-related vehicle access, pedestrian and bicycle access and safety, public transit service, and construction parking would be less than significant.

b. Operation

(1) Intersections Levels of Service (Threshold TRAF-2)

Table 4.L-22, *Existing Plus Project with Mitigation for Unincorporated Los Angeles County Intersection Level of Service Analysis*, and **Table 4.L-23**, *Cumulative (2030) Plus Project with Mitigation for Unincorporated Los Angeles County Intersection Level of Service Analysis*, summarize mitigation measures at intersections with potentially significant impacts using Los Angeles County's impact criteria at intersections located within unincorporated Los Angeles County. **Table 4.L-24**, *Existing Plus Project with Mitigation for Incorporated Cities Intersection Level of Service Analysis*, and **Table 4.L-25**, *Existing Plus Project with Mitigation for Incorporated Cities Intersection Level of Service Analysis*, summarize mitigation measures at intersections with potentially significant impacts located in incorporated cities using the impact criteria from the respective city. Below is a summary of the intersection impacts after implementation of the mitigation measures.

Normandie Avenue & Torrance Boulevard (Intersection #1) - The Project would result in a significant impact at this intersection in the Interim Existing plus 2023 Project plus Cumulative (2023) and Existing plus 2030 Project plus Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as the addition of separate right- turn lanes at the eastbound or westbound approaches, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & Torrance Boulevard (Intersection #2) - The Project would result in a significant impact at this intersection in the Existing plus 2023 Project plus Cumulative and Existing plus 2030 Project plus Cumulative Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as additional northbound or southbound through lanes, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

Normandie Avenue & Carson Street (Intersection #4) - The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Berendo Avenue & Carson Street (Intersection #6) – The Project would result in a significant impact at this intersection under the Existing and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Medical Center Drive & Carson Street (Intersection #7) - The Project would result in a significant impact at this intersection in the Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & Carson Street (Intersection #8) – The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

I-110 Southbound Ramps & Carson Street (Intersection #9) – The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios. The implementation of this mitigation measure would reduce the Project-related impact to a less than significant level and would reduce the cumulative impact to a less than significant level in the AM peak hour. The impact during the PM peak hour would also be reduced, but not below a significant level. This improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, and because the improvement would not fully mitigate the identified impacts in all scenarios, this impact would be considered significant and unavoidable.

Vermont Avenue & 220th Street (Intersection #14) – The Project would result in a significant impact at this intersection under the Existing and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound approaches to provide a dedicated left turn-lane but were determined to conflict with the Los Angeles County Transit Oriented Districts Access Study. The Study calls for curb extensions at all four crossings to shorten the pedestrian crossing distance. The intersection approaches do not have sufficient space to accommodate both curb extensions and additional lanes. Thus, this impact would remain significant and unavoidable.

220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) - As shown in Tables 4.L-24 and 4.L-25, the implementation of Mitigation Measure TRAF-2 would reduce the Project-related impact at this intersection to a less than significant level. However, this improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, this impact is considered significant and unavoidable.

Normandie Avenue & 223rd Street (Intersection #17) - The Project would result in a significant impact at this intersection in the Cumulative (2030) Existing plus 2030 Project and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & 223rd Street (Intersection #19) - The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Thus, this impact would remain significant and unavoidable.

I-110 Southbound Ramps & 223rd Street (Intersection #20) - As shown in Tables 4.L-22 and 4.L-23, the implementation of Mitigation Measure TRAF-3 would reduce the Project-related impact at this intersection to a less than significant level. However, this improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, this impact is considered significant and unavoidable.

Overall, the Project would result in twelve (12) significant and unavoidable impacts to study area intersections, even though Tables 4.L-22 through 4.L-25 show that proposed improvements, if implemented, would reduce impacts at these intersections, because implementation of the proposed improvements is not entirely within the control of the lead agency.

(2) CMP Transportation System (Threshold TRAF-3)

Not applicable. Impacts to regional CMP transportation systems would be less than significant.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections (Threshold TRAF-4)

Mitigation Measure TRAF-4 requires that the developer make a fair-share contribution to address potentially significant impacts on freeway mainline segments, intersections under Caltrans jurisdiction, and off-ramps. Caltrans generally considers fair share contributions to constitute full mitigation of a significant impact. In addition, under CEQA Guidelines Section 15130(a)(3) fair share contribution could be considered adequate mitigation for cumulative traffic impacts. Options for addressing the impacts were identified, but because there are no existing projects that identified by Caltrans that would lower the impact below the significance threshold, the significant impacts identified above to Caltrans facilities are conservatively determined to be significant and unavoidable.

(b) Freeway Off-Ramps (Threshold TRAF-5)

Not applicable. Impacts to freeway off-ramps would be less than significant.

(4) Public Transit and Alternative Transportation (Threshold TRAF-6)

Not applicable. Impacts to public transit would be less than significant.

(5) Access and Circulation (Threshold TRAF-7)

Not applicable. Impacts regarding vehicular access and circulation would be less than significant.

(6) Parking Supply (Threshold TRAF-8)

Not applicable. Impacts regarding parking supply would be less than significant.

Table 4.L-22

Existing Plus Project with Mitigation for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	LOS	Existing+Project V/C or Delay	LOS	Total Increase In V/C	Significant Impacts	C+P plus Mitigation V/C or Delay	LOS	Project Increase In V/C	Significant Impacts
4	Normandie Avenue	Carson Street	Los Angeles County	ICU	AM	0.904	E	0.925	E	0.021	YES				
					PM	0.93	E	0.962	E	0.032	YES	**No Feasible Mitigation**			
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.642	B	0.067	NO				
					PM	0.569	A	0.708	C	0.139	YES	**No Feasible Mitigation**			
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.628	B	0.717	C	0.089	YES				
					PM	0.611	B	0.620	B	0.009	NO	**No Feasible Mitigation**			
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.946	E	0.041	YES	0.745	C	-0.069	NO
					PM	0.917	E	1.010	F	0.093	YES	0.862	F	0.013	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.814	D	0.907	E	0.093	YES				
					PM	0.849	D	0.916	E	0.067	YES	**No Feasible Mitigation**			
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.645	B	0.708	C	0.063	YES				
					PM	0.696	B	0.806	D	0.11	YES	**No Feasible Mitigation**			
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.807	D	0.828	D	0.021	YES	0.713	C	-0.042	NO
					PM	0.822	D	0.834	D	0.012	NO	0.779	E	-0.064	NO

Source: Fehr & Peers, 2016

Table 4.L-23

Cumulative (2030) Plus Project with Mitigation for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative (2030) V/C or Delay	LOS	Cumulative (2030)+Project V/C or Delay	LOS	Project Increase In V/C	Significant Impacts	C+P plus Mitigation V/C or Delay	LOS	Project Increase In V/C	Significant Impacts
1	Normandie Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.962	E	0.966	E	0.031	YES				
					PM	0.993	E	1.000	E	0.064	YES	**No Feasible Mitigation**			
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.968	E	0.972	E	0.045	YES				
					PM	0.895	D	0.900	D	0.020	YES	**No Feasible Mitigation**			
4	Normandie Avenue	Carson Street	Los Angeles County	ICU	AM	0.946	E	0.967	E	0.063	YES				
					PM	1.007	F	1.038	F	0.108	YES	**No Feasible Mitigation**			
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.609	B	0.675	B	0.100	NO				
					PM	0.636	B	0.747	C	0.178	YES	**No Feasible Mitigation**			
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.661	B	0.751	C	0.123	YES				
					PM	0.678	B	0.722	C	0.111	YES	**No Feasible Mitigation**			
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.939	E	0.982	E	0.077	YES	0.780	C	-0.034	NO
					PM	0.982	E	1.075	F	0.158	YES	0.915	E	0.066	YES
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.848	D	0.941	E	0.127	YES				
					PM	0.906	E	0.974	E	0.125	YES	**No Feasible Mitigation**			
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.647	B	0.717	C	0.072	YES				
					PM	0.703	C	0.813	D	0.117	YES	**No Feasible Mitigation**			
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.811	D	0.833	D	0.026	YES	0.719	C	-0.036	NO
					PM	0.830	D	0.844	D	0.022	YES	0.797	C	-0.046	NO

Source: Fehr & Peers, 2016

Table 4.L-24

Existing Plus Project with Mitigation for Incorporated Cities Intersection Level of Service Analysis

ID	N/S Street Name	E/W Street Name	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	LOS	Existing+Project V/C or Delay	LOS	Project Increase In V/C	Significant Impacts	C+P plus Mitigation V/C or Delay	LOS	Project Increase In V/C	Significant Impacts
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.763	C	0.785	C	0.022	NO				
					PM	0.837	D	0.872	D	0.035	YES	**No Feasible Mitigation**			
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.913	E	0.942	E	0.029	YES	0.907	E	-0.006	NO
					PM	0.886	D	1.000	E	0.114	YES	0.881	D	-0.005	NO

Source: Fehr & Peers, 2016

Table 4.L-25

Cumulative (2030) Plus Project with Mitigation for Incorporated Cities Intersection Level of Service Analysis

ID	N/S Street Name	E/W Street Name	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative (2030)		Cumulative (2030)+Project		Project Increase	Significant Impacts	C+P plus Mitigation		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C		V/C or Delay	LOS	In V/C	
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.910	E	0.933	E	0.023	YES	**No Feasible Mitigation**			
					PM	1.037	F	1.073	F	0.036	YES				
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	1.024	F	1.054	F	0.030	YES	1.017	F	-0.007	NO
					PM	1.006	F	1.121	F	0.115	YES	0.998	E	-0.008	NO

Source: Fehr & Peers, 2016

4. ENVIRONMENTAL IMPACT ANALYSIS
M. UTILITIES
1. WATER SUPPLY

1. INTRODUCTION

This section identifies the water purveyor responsible for providing water to the Project, and analyzes whether this water purveyor has adequate water supplies to serve the proposed Project. This section also describes the existing and proposed water distribution infrastructure in the Project area, and evaluates whether this infrastructure has sufficient capacity to serve the proposed Project. This section is based on several information sources, including a Project-specific Water Supply Assessment (WSA) provided by the California Water Service Company (Cal Water), the water purveyor serving the Medical Center Campus, which is included in Appendix J of this Draft EIR, and Cal Water's Rancho Dominguez District 2010 Urban Water Management Plan (UWMP).

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Water Supply

(a) Existing Water Sources and Supply[1]

The Medical Center Campus is located within Cal Water's Rancho Dominguez District service area, also referred to as the "Dominguez system". The Dominguez system is supplied by the following water sources:

1. Imported water purchased from Metropolitan Water District (MWD) of Southern California through the West Basin Municipal Water District (WBMWD).

2. Groundwater pumped from two adjudicated groundwater basins: the West Coast Basin and the Central Basin. Groundwater is extracted from both basins using 10 wells (8 active and 2 inactive).

3. Cal Water purchases treated desalted brackish groundwater produced in the C. Marvin Brewer Desalter owned by WBMWD in their West Basin Water Recycling Plant located in El Segundo.

In 2015, the Dominguez system used 26,886 acre-feet (AF)[2] of purchased water and 4,405 AF of groundwater pumped from Cal Water wells for a total of 31,291 AF. Hence, groundwater supplied 14 percent of total annual demand.

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[1] *Water supply information provided in this section is contained in the Water Supply Assessment prepared for the Master Plan Project by Yarne & Associates, Inc. on behalf of Cal Water. Yarne & Associates, Inc., "Harbor-UCLA Medical Center Campus SB610 Water Supply Assessment" prepared for California Water Service Company 2632 West 237th Street Torrance, California 90505. April 21, 2016. Included in Appendix J of this Draft EIR.*

[2] *One acre-foot of water is equal to approximately 328,000 gallons.*

Since 1926 (a period of 90 years), Cal Water has continuously supplied water to meet Dominguez system demands during normal, dry and multiple dry year periods using sources and water conservation measures as described in greater detail below. Actual and projected Dominguez system water supply sources and quantities are summarized below in **Table 4.M.1-1**, *Dominguez System Actual and Projected Water Supplies (AFY)*. Cal Water operates its potable water distribution system so that demand not met by groundwater sources is supplied through its interconnections with the WBMWD transmission system. Cal Water has a capital improvement program to maximize use of its adjudicated groundwater rights by constructing new wells and installing treatment on wells with non-compliant water quality. The plan is to provide sufficient well capacity to fully utilize its annual allocation. Currently, Cal Water leases a portion of its groundwater rights using short-term transfer agreements. The amount of recycled water listed in Table 4.M.1-1 is the projected demand from this source and does not include estimated unaccounted for losses in the recycled water distribution system. Purchased water would be used to provide the remaining supply.

Table 4.M.1-1

Dominguez System Actual and Projected Water Supplies (AFY)

Water Supply Sources	2010 Actual	2015	2020	2025	2030	2035	2040
West Basin Municipal Water District – Purchased Water	27,247	26,886	13,987	14,378	14,917	15,264	15,564
Cal Water Groundwater Wells	8,575	4,405	16,897	16,897	16,897	16,897	16,897
Recycled Water	4,515	5,089	6,776	7,481	8,260	9,120	10,069
Total	40,337	36,380	37,660	38,756	40,074	41,281	42,530

Source: California Water Service Company, 2016

(i) Purchased Imported Water

Purchased potable water is imported and supplied by MWD to WBMWD. Purchased water will continue to be the main supply source through 2019 per the UWMP. In 2020, groundwater is planned to provide 54.7 percent of potable water and in year 2040, 52 percent of potable supply.

Imported water from MWD is delivered through four interconnection feeders (Palos Verdes Feeder, Victoria Feeder, Long Beach Lateral and Extension and the Sepulveda Feeder) to WBMWD and through seven WBMWD service connections to the Dominguez system. The total rated capacity of the seven service connections is 72,000 gallons per minute (gpm). If operated at full capacity, these connections are capable of delivering up to 103.68 million gallons per day (mgd) or approximately 116,140 acre-feet per year (AFY), which is a flow rate higher than the distribution system could likely accommodate.

Cal Water has a supply purchase agreement with WBMWD. Water purchased by Cal Water and supplied to the Dominguez system comes from either the Colorado River Aqueduct (CRA), which is owned by MWD, or through the California Aqueduct, a facility of the State Water Project (SWP), which is owned and operated by the California Department of Water Resources (DWR).

MWD classifications of service and rate structure have changed in recent years and further changes are anticipated. Key to these changes is a purchase agreement for imported water between WBMWD and MWD. This agreement became effective January 1, 2003, had an initial term of five years, and establishes requirements for water sales within MWD's service area. The agreement sets a Base Allocation for each Purchaser, which is essentially their share of the supply MWD has made available to WBMWD. The Base Allocation is determined on that Purchaser's five-year average non-surplus purchases during fiscal years ending 1997 through 2001. Over the term of the agreement, the Purchaser commits to purchase at least 60 percent of the Base Allocation times five, which is known as the Purchase Commitment. If a Purchaser does not purchase the full Purchase Commitment over the term of the agreement, then they must pay for the balance at the current Tier 1 Supply Rate.

A two-tier rate and annual allocation is another aspect of this agreement. The agreement sets a Tier 1 Annual Maximum at 90 percent of the Base Allocation. All water purchased in any year in an amount that is equal to or less than the Tier 1 Maximum must be purchased at the current Tier 1 Rate. Any amount of water purchased in excess of the Tier 1 Annual Maximum must be at the Tier 2 Rate. In 2013, the Tier 1 rate for water purchased from WBMWD was $1,089/AF and the Tier 2 rate was $1,239/AF.

In the Imported Water Purchase Agreement between Cal Water and WBMWD, the Base Allocation, Tier Allocations, and Purchase Commitment are established as a combined amount for all four Cal Water systems served (Palos Verdes, Hermosa-Redondo, Dominguez and Hawthorne). The Dominguez system shares in the combined amount with the other three service areas. The agreement became initially effective on January 1, 2003. There have been several subsequent amendments, with No. 4 dated January 1, 2008, being the most recent. It eliminated Cal Water's Base Allocation, set the Tier 1 Annual Maximum to 70,000 acre-feet and the Purchase Commitment is 210,000 acre-feet. Cal Water has developed an allocation that distributes the Tier 1 Annual Maximum to each of its four districts, so that if the total Tier 1 Maximum is exceeded the applicable Tier 2 charges can be assessed to the appropriate district. Allocations among the four districts are as follows: Dominguez 22,400 AF, Hawthorne 4,900 AF, Hermosa-Redondo 16,800 AF, and Palos Verdes 25,900.

In-Lieu Seasonal Storage is an economic incentive program designed to encourage purveyors to shift groundwater production from winter to summer to reduce peak summer demands. Seasonal Storage Service is a classification for water that is available for delivery by MWD during the October through April period during years of adequate supply. Monthly certification is required to receive this reduced-price Seasonal Storage Service. To qualify for In-Lieu Seasonal Storage service water rates, a purveyor must reduce demand for supplemental water from MWD in the summer months (May to September) and shift production of groundwater from winter to summer. The baseline production ratio between local groundwater supply and total demand verifies that this shift has been accomplished. In-Lieu Seasonal Storage groundwater not pumped is left in the ground to augment groundwater replenishment. This unused groundwater results in a rebate or compensation from the Water Replenishment District (WRD) for the amount not pumped.

This program benefits MWD by reducing the summer peak flows that push MWD's treatment facilities and distribution system to capacity limits, and enables MWD to maximize water importation during winter when surplus flows are abundant in the areas of origin. Changes are anticipated in this conjunctive use program in the future. Cal Water's participation in this conjunctive use program in the future will depend on the makeup of the economic incentives provided by these changes.

(ii) Groundwater

In 1965 the Central Basin was adjudicated, and in 1961 the West Coast Basin was adjudicated, with the Department of Water Resources as Watermaster. The adjudication orders are attached to the Dominguez District 2010 UWMP as Appendices J and K for each basin, respectively. The DWR Annual Summary of Watermaster Service reports on groundwater status in each of the basins. This summary includes historical fluctuation of water level elevation in wells throughout the basin. These references indicate that, since the reduction in pumping began in 1954 and the adjudication was implemented in 1961, groundwater levels in the West Coast Basin have risen some 20 to 60 feet, depending on location. However, many groundwater elevations in the basin remain below sea level, requiring maintenance of seawater intrusion barriers.

The West Coast Basin is a pressurized aquifer groundwater basin with three primary aquifers: the 200-foot Sands, the Silverado Aquifer, and the Lower San Pedro Aquifer. These aquifers have continuity with the Pacific Ocean in Santa Monica Bay. Overdraft of the basin was caused by excessive pumping due to population growth and rapid industrialization of the Los Angeles Coastal Plain beginning in the 1930s. This overdraft caused lowering of the water pressure of the aquifers, which increased pumping cost and resulted in seawater intrusion. The adjudication of the West Coast Basin began in 1945 when Cal Water, along with the City if Torrance and the Palos Verdes Water Company, filed a lawsuit in Superior Court, Los Angeles County, to quiet title to the groundwater rights and control pumping in the basin. As part of the effort to resolve the overdraft condition, the WBMWD was formed in 1947 to distribute supplemental water to the major water purveyors imported into the region by the MWD. In 1955 when pumpers realized the severity of the overdraft, groundwater pumping was limited under an interim agreement. In 1961, the Court rescinded the interim agreement and signed the West Coast Basin Judgment.

The Dominguez Water Company was identified as a party to the judgment and granted water rights. Now Cal Water, as a result of the merger with Dominguez, owns 10,417.45 acre-feet of adjudicated rights in the West Coast Basin, or 16.15 percent of the total basin annual adjudicated rights of 64,486.25 acre-feet. This amount is in addition to the 4,070 acre-feet held by Cal Water's Hermosa- Redondo District. As a result of the reduction in pumping ordered by the adjudication and increased recharge via the injection wells of the seawater intrusion barrier, in-lieu replenishment and improved underflow from Central Basin, the water levels in the West Coast Basin have slowly recovered to near 1940 levels.

The adjudication of the Central Basin began not out of litigation as in the West Coast Basin, but out of the collective concern expressed by the major pumpers regarding the impacts that reduced groundwater quantity and quality would have on the future of their communities. The Central Basin Municipal Water District was formed in 1952 to distribute supplemental water to the major water purveyors. In 1954 it was annexed to the MWD, so that access to the imported water supplies was available to the region.

The WRD was created in 1959, largely out of cooperation between the West Coast Basin Water Association and the Central Basin Water Association, with the directive to facilitate artificial replenishment of the two basins as a means of eliminating the overdraft and halting seawater intrusion. To quiet the title to and limit production of the groundwater in Central Basin, the WRD filed a lawsuit in Superior Court, Los Angeles, in 1962 against more than 700 parties. Later that year after a vast majority of the pumpers approved of the approach, the Court adopted an interim agreement to limit the production from the basin. In 1965, following extensive meetings by

the parties to work out a settlement that was supported by pumpers representing over 75 percent of the basins anticipated water rights, the court approved the stipulated judgment for the Central Basin.

This judgment established an adjudicated water right for each party, but limited the allowable pumping allocation (APA) to 80 percent of the water right, which equals 217,367 acre-feet annually. The Dominguez Water Company was identified as a party to the judgment and granted water rights. As a result of the merger with Dominguez, Cal Water now owns these 8,100 acre-feet of adjudicated right with the associated 6,480 AFY of APA in the Central Basin. This amount is in addition to the 11,774 acre-feet held by Cal Water's East Los Angeles District. **Table 4.M.1-2**, *Cal Water Groundwater Pumping Rights*, below, summarizes Cal Water's Dominguez system allowable pumping allocation for the two basins.

Table 4.M.1-2

Cal Water Groundwater Pumping Rights

Basin	Pumping Rights AFY
Central Basin	6,480.00
West Coast Basin	10,417.45
Total	16,897.45

Source: California Water Service Company, 2016

The principle mechanisms for recharge in the West Coast Basin are injection of water into the seawater intrusion barriers, in-lieu replenishment, and inflow to the West Coast Basin from the Central Basin. The Central Basin is recharged through percolation of water applied to surface spreading ponds in the Montebello Forebay, in-lieu replenishment, and inflow to the Central Basin from the San Gabriel Valley.

The Los Angeles County Department of Public Works owns and operates all groundwater recharge facilities as a county-funded activity through a longstanding inter-agency agreement. As a result, costs associated with the capture and recharge of storm water runoff are not directly accounted for in the cost of water replenishment. All other water used for replenishing the groundwater of the Central and West Coast Basins is funded by the WRD through the Replenishment Assessment. Additionally, the WRD manages various groundwater quality cleanup programs. To finance its designated responsibilities, the WRD levies a Replenishment Assessment on every acre-foot of groundwater produced in the Central and West Coast Basins.

Cal Water's management plan for Dominguez District water supplies includes participating in existing regional conjunctive-use programs and making use of economic incentives and the lease market to the fullest extent possible.

Basin Boundaries and Hydrology

The West Coast Subbasin is bounded on the north by the Ballona Escarpment, an abandoned erosional channel from the Los Angeles River. On the east it is bounded by the Newport-Inglewood fault zone and on the south and west by the Pacific Ocean and consolidated rocks of the Palos Verdes Hills. The surface of the sub-basin is crossed in the south by the Los Angeles River through the Dominguez Gap, and the San Gabriel River through the Alamitos Gap, both of which then flow into San Pedro Bay.

The Central Subbasin occupies a large portion of the southeastern part of the Coastal Plain of Los Angeles Groundwater Basin. This subbasin is bounded on the north by a surface divide called the La Brea High, and on the northeast and east by emergent less permeable Tertiary rocks of the Elysian, Repetto, Merced and Puente Hills. The southeast boundary between Central Basin and Orange County Groundwater Basin roughly follows Coyote Creek, which is a regional drainage province boundary. The southwest boundary is formed by the Newport Inglewood fault system and the associated folded rocks of the Newport Inglewood uplift. The Los Angeles and San Gabriel Rivers drain inland basins and pass across the surface of the Central Basin on their way to the Pacific Ocean Bay.

A detailed description of the basin is given in the California's Ground Water Bulletin 118, which is included as Appendix D in the Dominguez District 2010 UWMP. The Urban Water Management Plans for West Coast Basin and Central Basin are included in Appendix H and I, respectively, of the UWMP.

Groundwater Management Plan

As the regional groundwater management agency for two of the most utilized groundwater basins in the state of California, the WRD plays an integral role in overall water resource management in southern Los Angeles County. The WRD manages groundwater for nearly four million residents in 43 cities of southern Los Angeles County. The 420 square mile service area uses about 250,000 AF of groundwater per year, which equates to nearly 40 percent of the total demand for water. The WRD ensures that a reliable supply of high-quality groundwater is available through its clean water projects, water supply programs, and effective management principles. A copy of WRD's Strategic Plan is included as Appendix J in the Dominguez District 2010 UWMP.

Dominguez System Wells (Groundwater) Summary

For 2012, total production capacity of the 7 active wells in the Dominguez system was approximately 6,650 gpm, which if operated continuously would produce 10,735 AFY. Actual well production in 2012 was 7,991 AF or approximately 74.4 percent of production capacity. In 2015, well production decreased to 4,405 AF. However, for 2020 Cal Water projects annual well production of 16,897 AF (its allowable pumping allocation from the West and Central Basins) and the same amount through at least 2040. Three wells (219-02, 275-01, and 294-01) will have treatment facilities installed and become operational between 2016 and 2018, which will add 2,600 gpm for a total production of 14,932 AFY. Cal Water temporarily has lost some well production capacity due to localized groundwater quality issues and reduced well efficiencies. In 2009, well production capacity was approximately 10,700 AFY. If the wells were operated at 90 percent utilization, this would equal a production of 9,630 AFY out of its allowable pumping right of 16,987 AF. In 2000, Cal Water pumped 14,737 AF or 87 percent of its adjudicated rights.

Cal Water has additional well projects in its current capital budget program that it intends to bring on line before the year 2020 in order to bring production capacity to it allowable pumping allocation. In addition to capital improvement projects for adding production capacity, Cal Water has projects for constructing new wells to replace older wells that are declining in output or are non-functional. **Table 4.M.1-3**, *Dominguez System Existing Production Wells Summary*, below, provides a summary of existing well pumping rates for 2015 and projected well pumping rates for existing wells for 2020 for the Dominguez system.

Table 4.M.1-3

Dominguez System Existing Production Wells Summary

Well Number	2015 Discharge Rate (GPM)	Estimated 2020 Discharge Rate (GPM)
215-01	420	400
219-02	Treatment to be added – online 2017	600
203-01	Destroyed	0
277-01	670	500
279-01	750	700
294-01	Treatment to be added – online 2016	1,000
298-01	Well rehabilitation – online 2016	1,300
275-01	Treatment to be added – online 2016	700
272-02	Treatment to be added – online 2017	500
290-01	700	700
297-01	650	600
Total	**3,190**	**7,000**

Source: California Water Service Company, 2016

Cal Water is implementing the recommendations of its 2009 WSFMP which include in addition to continued maintenance and improvements of existing wells construction of five to seven new wells to achieve full use of Cal Water's its groundwater rights and to replace wells at the end of their useful life. In 2016, Cal Water plans to replace station 215-02, which has been demolished. By 2020, it recommends replacement of station 290-01 (700 gpm). If the average production rate of a new well is 1,200 gpm, five new wells would have a combined production rate of 6,000 gpm. Total well production capacity in 2020, assuming no other changes in the other wells listed in Table 4.M.1-3, would be 7,000 gpm plus 6,000 gpm, for a total of 13,000 gpm. If these wells operate at a rate of 90 percent of production capacity (allows for downtime for maintenance), they could provide

a groundwater supply of 18,888 AFY. Cal Water's allowable pumping groundwater right is 16,987AFY. In summary, Cal Water's groundwater pumping right as a percentage of available production would be 90 percent (16,987 AFY/18,888 AFY). Cal Water provides ongoing maintenance, well rehabilitation and engineering support to maintain production in all of its active wells including adding treatment facilities for wells with water quality issues.

(iii) Recycled Water

Although Los Angeles County Sanitation District's (LACSD) Joint Water Pollution Control Plant (JWPCP) provides wastewater collection and treatment services for the Dominguez service area, recycled water comes from WBMWD's West Basin Water Recycling Facility (WBWRF). The source of water to that facility is secondary effluent from the City of Los Angeles' Hyperion Wastewater Treatment Plant, which provides secondary treatment using the activated sludge process. Most of the Hyperion treated effluent is disposed of through an ocean outfall. Approximately six percent of treated effluent goes to the WBWRF in El Segundo where it undergoes chemical clarification, recarbonation, microfiltration, and chlorination. The WBWRF produces 42,000 AFY (37.5 mgd) of recycled water and has a maximum capacity of 67,210 AFY (60 mgd).

WBMWD has one of the largest recycled water programs in the United States. WBMWD has identified over 105 economically feasible recycled water users. Fully implemented, the recycling program has the potential to use over 67,210 AFY of recycled water. In the Dominguez system, Cal Water began purchasing recycled water from WBMWD in 2000 for industrial process waters and landscape irrigation. WBMWD and Cal Water's plan is to increase use of recycled water with as new customers as WBMWD's distribution system is expanded. This will result in less potable water use where that water is being used for those purposes.

Recycled water from the WBWRF is used for groundwater replenishment through more than 100 injection wells. In addition to serving Cal Water the WBWRF provides recycled water to more than 140 sites in Manhattan Beach, Torrance, Hermosa Beach, Carson, and Inglewood. Its biggest customers are the Chevron, Mobil and BP oil refineries. It should be noted that Cal Water operates and maintains the recycled water distribution system under contract to WBMWD. WBMWD is responsible for:

1. Determining the technical and economic feasibility of supplying recycled water to the Dominguez service area

2. Encouraging the use of and optimizing the use of recycled water in the Dominguez service area

3. Extension of recycled water lines within the Dominguez service area

Cal Water actively supports use of recycled water by its customers and offers recycled water at a reduced cost. WBMWD has identified over 105 feasible recycled water users with a combined estimated average annual demand of 19,100 AFY. In 2015, Cal Water supplied 5,089 AF of WBMWD recycled water to 11 customers in the Dominguez system. Examples of recycled customers include the BP/ARCO refinery, the Home Depot sports complex with numerous soccer fields, and the Cal State University Dominguez Hills campus.

The Harbor-UCLA Medical Center Campus is not close to an existing WBMWD recycled water transmission main. WBWMD would have to construct a recycled transmission pipeline running west from an existing line in Carson for several miles. Hence, the WSA takes the position that in the next 5 years at least, all water demands for the project will be met by potable supplies.

The WBMWD Water Recycling Master Plan identified potential customers in the Dominguez service area. Currently there are eleven customers in the Dominguez system that use recycled water. The WBMWD plan ambitiously projected an increase in commercial, industrial and irrigation customers to 158 services by 2007 and use of 10,800 AFY. WBMWD's recycling plan includes several projects to install pipelines capable of delivering recycled water throughout the Harbor/South Bay area.

WBMWD believes there is a significant growth potential for recycled water; hence, the projected increase in recycled water use from 5,080 AFY in 2015 to 10,069 AFY in 2014 or an increase of approximately 5,000 AFY in 25 years (200 AFY per year increase) can be considered to be conservative when compared to the projections in WBMWD's Water Recycling Master Plan. Given four continuous years of severe drought in California (2011 - 2014) and the emphasis on developing local supply sources by MWD, WBMWD's strong development plan for recycled water use, projected recycled water use growth are conservative since in the future, WBMWD plans to further extend its pipe delivery system for recycled water in the Harbor/South Bay area.

Estimates of increased use of recycled water in WBMWD's Water Recycling Master Plan (WRMP) are quite high when compared to what has actually occurred in the Dominguez system. The WRMP assumes several large water users will switch to recycled water rather pump groundwater for which they hold water rights at a cost nearly double the cost of groundwater. The WRMP anticipates large uses of recycled water by several industrial customers for processes for which use of recycled water has not been demonstrated. Hence, for the Dominguez system, Cal Water uses a lower growth projection than WBMWD. **Table 4.M.1-4**, *Normal Hydrologic Year Supply and Demand Comparison (AFY)*, below, summarizes Cal Water's projected recycled water supply in the Dominguez system through 2040. Cal Water assumes that 80 percent of recycled water supply will be for industrial use and 20 percent for landscape irrigation.

Table 4.M.1-4

Normal Hydrologic Year Supply and Demand Comparison (AFY)

	2015	2020	2025	2030	2035	2040
Purchased water	26,886	13,987	14,378	14,917	15,264	15,564
Groundwater	4,405	16,897	16,897	16,897	16,897	16,897
Recycled water	5,089	6,776	7,481	8,260	9,120	10,069
Supply totals	36,380	37,660	38,756	40,074	41,281	42,530
Demand totals	36,380	37,660	38,756	40,074	41,281	42,530
Difference	0	0	0	0	0	0

Source: California Water Service Company, 2016

(iv) Desalinated Water

Desalted Brackish Groundwater

Seawater intrusion into the groundwater of the West Coast Basin has been a problem since the 1930s. Two seawater intrusion barriers, the West Coast Basin Barrier and the Dominguez Gap Barrier, have been constructed and put into operation to stop salt water intrusion. The Los Angeles County Department of Public Works is responsible for maintenance of these barriers and the WRD provides freshwater that is injected into these barriers. A large amount of brackish water still lies inland of the saltwater barriers. It is being removed by extraction wells and treated at the C. Marvin Brewer Desalter, which is a reverse osmosis treatment plant that started operating in 1993. Dominguez Water Corporation, with the support of the WBMWD, WRD, MWD, and the US Bureau of Reclamation established the desalter project. Its costs of operation are reduced through a MWD incentive program so that the unit cost of desalinated brackish water is slightly less than non-interruptible imported freshwater from MWD. Since the merger of Cal Water and Dominguez Water Corporation in 2000, Cal Water has operated the desalter project.

Desalinated Ocean Water

In 2014, WBMWD completed an ocean water desalination demonstration project at the L.A. Conservation Corps' SEA Lab facility in Redondo Beach for the purpose of developing and collecting data for planning, permitting, design, construction, and operation of a full-scale desalination facility. The demonstration plant used full-scale equipment to assess operating factors, evaluate alternative processes and assess water quality and energy efficiency. Based on the results of the study, WBMWD determined that building a full-scale desalination plant is feasible.

1. WBMWD intends to build a 20 mgd desalination plant in El Segundo (expandable to 60 mgd) because that location offers many advantages and has none of the significant issues associated with the demonstration plant site in Redondo Beach. Because of the extensive permitting and approval requirements, conducting the necessary environmental and scientific field studies, preparing the necessary draft and final documents, obtaining funding, designing, constructing, testing and commissioning of all new facilities could take at least 10 years to complete.

2. WBMWD is interested in discussing with Cal Water its interest in participating in its El Segundo desalination plant and what that might entail in terms of supply, costs and other factors. Cal Water is considering this option.

3. The research completed by WBMWD at the Redondo Beach demonstration plant could provide useful information to Cal Water in locating possible treatment plant sites and in developing a preliminary feasibility assessment should Cal Water elect to pursue its own desalination project. An in-depth technical, environmental, permitting and cost analysis would be required to provide the information needed to decide whether or not it was feasible for Cal Water to move forward with its own desalination project.

Transfer or Exchange Agreements

Both the West Coast Basin and Central Basin judgments allow for transfer of groundwater rights through sale or lease agreements between parties and for the carryover of unused rights in an amount up to 20 percent of the

groundwater rights held by a party. DWR is the designated Watermaster for both the West Coast Basin and Central Basin Adjudications. In that capacity, DWR accounts for all groundwater production in the basin, and annually reports on groundwater production and related groundwater-use transactions. The parties must file monthly production reports and notify the Watermaster regarding all leases or sales of rights.

The lease or purchase of additional adjudicated water rights could be used to increase supply reliability and availability. Obtaining additional adjudicated rights would further increase the savings available to the system under MWD's seasonal service program. Hence, the Dominguez system's program for increasing reliable groundwater production capacity of its wells to fully utilize all of its existing adjudicated rights and those of other agencies when opportunities become available. In the past nine years, Cal Water leased a portion of its adjudicated rights in both basins on a short-term basis to other pumpers that had production capacity and had the need for more water. As Cal Water increases its well production capacity, it will not renew these leases. Cal Water has had several short- term leases with local municipalities and private companies to use their available excess groundwater allocations for supply and will evaluate negotiating new leases as Dominguez system well capacity increases and full use of Cal Water's allowable pumping allocation is achieved.

(b) Future Water Supply

Cal Water's plan for the Dominguez system and its three neighboring districts is to continuously provide adequate reliable supplies through facilities that meet peak demand requirements and have sufficient reserve capacity for fire protection. Cal Water recognizes that water supply planning is an ongoing process that requires regular reviews of assumptions and conditions.

The reliability of MWD imported water supplies has been affected by a number of factors in recent years, so MWD has implemented several programs to improve supply reliability:

1. Financial incentives for development of local supplies
2. Use of imported supplies on a seasonal basis and in a manner that maximizes the importation of supplies into Southern California
3. Storage for surplus imported supplies for future use
4. Restore use of local groundwater that have been contaminated

Cal Water will evaluate prospective additional supply projects and regional supply conditions to include:

1. Status of West Coast and Central Basin groundwater basin storage, availability of groundwater and utilization of adjudicated water rights.
2. Transfer Agreements with other utilities that hold adjudicated groundwater rights in the two basins and have surplus water rights available.
3. Status and maintenance of seawater intrusion barriers managed by the Los Angeles County Department of Public Works.

4. Increased participation in WBMWD's water recycling program in the Dominguez and adjacent systems.

5. Possible participation in WBMWD's desalination treatment project.

Cal Water coordinates its supply planning activities with other purveyors who are served by WBMWD. Cal Water participated in the development of the WBMWD Water Shortage Contingency Plan. Proposed Programs in this plan include:

1. West Coast Basin Judgment Work Group - Representatives of the West Coast Basin Water Association are developing possible amendments to provide more flexible operations during drought, expansion of storage and conjunctive operation of the basin, and innovative water management practices.

2. Water Supply and Drought Management Planning.

3. Implementation of the Best Management Practices through a Memorandum of Understanding.

4. West Coast Basin Reclamation Program.

5. West Coast Basin Saline Plume Mitigation Planning.

While Cal Water recognizes that MWD and WBMWD are committed to providing reliable and affordable imported water supplies, it also recognizes that as water demand increases the potential for water shortages does also. MWD's and WBMWD's objective is to provide 100 percent supply reliability over the next twenty years to meet all non-discounted, non-interruptible demand in the region. MWD initiatives to ensure this reliability include the Integrated Resource Plan (IRP), the Water Surplus and Drought Management Plan (WS&DMP) and the Local Resource Investments program.

As indicated previously, Cal Water is committed to implementing new programs and projects in increasing water conservation, expanding use recycled water and maximizing use of its groundwater rights to decrease reliability on MWD supplied water.

(c) Supply Adequacy and Reliability

This section combines and compares previously presented information on projected demand and supplies for the Dominguez system to address the question of whether Dominguez system supplies are adequate and reliable for the next 20 years for normal hydrologic conditions, one dry year and a multiple dry year period.

(i) Normal Water Year

Groundwater supply is limited to Cal Water's adjusted pumping allocation (APA) and by the capacity of wells to pump water. As explained previously, Cal Water is installing new wells to increase pumping capacity and adding wellhead treatment to existing wells with water quality issues. Cal Water plans to maximize use of its APA by 2020. Recycled water supply is matched to expected demand from this source. If some industrial customers in

the Dominguez system were to convert their process water use to recycled water sooner, this would decrease potable water demand and make existing potable supplies available for future growth.

Cal Water's combined projected purchased water for all four of its districts receiving WBMWD water will be below its Tier I maximum of 70,000 AFY in normal hydrologic years. According to MWD's 2010 Regional Urban Water Management Plan, sufficient supplies of imported water will be available in normal hydrologic years to meet all projected demands. For the WSA analysis as previously noted, normal demand is considered equal to Cal Water's calculated demand minus one standard deviation rather than the SBx7-7 target water demand projection (see discussion of SBx7-7 below under Regulatory Framework Summary). This results in a higher potable demand from 2020 to 2040. Table 4.M.1-4 above compares demand with supply for a normal hydrologic year and demonstrates adequacy of supply to meet demands.

(ii) Single Dry Year

Cal Water projects no decrease in total supply available and that it will meet projected demands. As noted previously, groundwater and recycled water are expected to be available in the quantities projected and are not affected by a dry year. MWD's 2010 Regional Urban Water Management Plan indicates sufficient supplies of imported water will be available in single dry years to meet all projected demands. MWD indicates that the policies in its 2010 Integrated Resources Plan (IRP) update will insure this reliability. Therefore, the supply is projected to be fully meet demand during a single dry year as shown below in **Table 4.M.1-5**, *Single Dry Year Supply and Demand Comparison (AFY)*.

Table 4.M.1-5

Single Dry Year Supply and Demand Comparison (AFY)

	2015	2020	2025	2030	2035	2040
Purchased water	26,886	13,987	14,378	14,917	15,264	15,564
Groundwater	4,405	16,897	16,897	16,897	16,897	16,897
Recycled water	**5,089**	**6,776**	**7,481**	**8,260**	**9,120**	**10,069**
Supply totals	36,380	37,660	38,756	40,074	41,281	42,530
Demand totals	36,380	37,660	38,756	40,074	41,281	42,530
Difference	0	0	0	0	0	0

Source: California Water Service Company, 2016

(iii) Multiple Dry Year Period

Because of adequate existing groundwater basin storage volume and ongoing regional groundwater recharge programs, groundwater supply is considered reliable. Therefore, Cal Water will be able pump up to its annual APA based on need and well production capacity. The quantity of recycled water to be delivered in the Dominguez system during a multiple dry year period is expected to be the same as that delivered during a normal hydrologic year. MWD's 2010 Regional Urban Water Management Plan indicates that sufficient supplies

of imported water will be available during multiple dry years to meet all projected demands. MWD believes that the policies in the 2010 IRP update will insure reliability.

As a conservative approach, a scenario with 10 percent reduction of MWD supply in year 2 and 20 percent in year 3 of a multiple dry year period was developed. **Table 4.M.1-6**, *Multiple Dry Year Period Supply and Demand Comparison: 1st & 2nd Years (AFY)*, below, presents this water supply scenario for an assumed multiple dry year period from 2015 - 2017. Normal year demand is assumed for year 2010. The quantity of MWD imported water delivered to the Dominguez system is assumed to be reduced by 10 percent in 2016 and by 20 percent in 2017. The quantity of groundwater pumped and recycled water increases as shown in Table 4.M.1-6. Groundwater and recycled water supplies are not expected to be affected by a multiple dry year period. Table 4.M.1-6 shows that even if there were cut backs in MWD supply of 10 percent and 20 percent, Dominguez system supplies would be adequate to meet projected normal demand during a multiple dry year period.

Table 4.M.1-6

Multiple Dry Year Period Supply and Demand Comparison: 1st & 2nd Years (AFY)

Water Supply Source	2010 Normal Water Year Water Supply	Multiple Dry Water Year Water Supply		
		2015	2016	2017
Purchased	27,247	26,886	24,522	21,798
Recycled	4,515	5,089	5,426	5,764
Groundwater	8,575	4,405	6,608	9,270
Total Supply	40,337	36,380	36,556	43,354
Demand	40,377	36,380	36,556	36,832

Source: California Water Service Company, 2016

Table 4.M.1-7, *Multiple Dry Year Period: 3rd Year (AFY)*, below, is a comparison of supply to normal demand for the 3rd year in a multiple dry year period where a 20-percent reduction (relative to 2010) in purchased water is assumed. Cal Water will be implementing increased water conservation program measures during the period from 2015 to 2020, which should result in further decreases in per capita water use as previously discussed; however, no additional potable water demand reduction over what is shown in Table 4.M.1-7 is assumed. Recycled water use will be increasing and by 2020, Cal Water expects to be able to pump it full groundwater allocation. Table 4.M.1-7 shows that even with a 20-percent reduction in purchased water, total supplies are more than adequate to meet normal projected demands for the Dominguez system.

During dry years when deliveries from the Colorado River Aqueduct and the SWP are reduced, MWD can draw water from other storage areas established through groundwater banking and transfer agreements made with other agencies. These agreements are further described in MWD's Water Surplus and Drought Management Plan (WSDM Plan).

Table 4.M.1-7

Multiple Dry Year Period: 3rd Year (AFY)

	Supply Source	2010	2015	2020	2025	2030
Third Dry Year	Purchased	27,247	21,798	21,798	21,798	21,798
	Groundwater	8,575	4,405	16,897	16,897	16,897
	Recycled water	4,515	5,089	6,776	7,481	8,260
	Supply Total	40,337	36,380	45,471	46,176	46,955
	Demand Total	40,337	36,380	37,660	38,756	40,074

Source: California Water Service Company, 2016

(2) Water Demand

(a) Dominguez District Background Information

The Dominguez system within the Rancho Dominguez District of Cal Water currently provides water service to the existing Medical Center Campus. Cal Water's Rancho Dominguez District is located in the southern corner of Los Angeles County approximately ten miles north of Los Angeles Harbor. The Rancho Dominguez District includes three separate regulated water systems, a leased system, and various operations and billing contracts.

The Dominguez system serves most of the City of Carson, as well as a portion of the City of Torrance and small sections of the cities of Compton, Long Beach and Los Angeles and unincorporated Los Angeles County. The service area covers approximately 25 square miles and is bounded on the north by the cities of Redondo Beach, Torrance, Los Angeles, Carson and Compton, on the east by Long Beach, on the south by the cities of Los Angeles, Lomita and Torrance, and on the west by Redondo Beach.

Senate Bill 610 (Chapter 643, Statutes of 2001) (SB 610) amended state law as of January 1, 2002, to include consideration of water supply availability when cities and counties are making land use development decisions (see further discussion of SB 610 below under Regulatory Framework Summary). SB 610 requires information on water supply availability be provided to local public agency decision-makers prior to approval of development projects that meet or exceed any of the following criteria:

1. A residential development of more than 500 dwelling units.
2. A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet.
3. A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
4. A hotel or motel with more than 500 rooms.

5. An industrial, manufacturing or processing plant or industrial park planned to house more than 1,000 persons occupying more than 40 acres of land or having more than 650,000 square feet of floor area.

6. A mixed-used project that includes one or more of the projects specified above.

7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

Depending on the definitions used, the proposed Harbor-UCLA Master Plan Project exceeds criteria 2, 3, 5, 6 and 7 above, and as such, a WSA is required. As such, a WSA was prepared for the Project that assesses the adequacy of the water supply to meet the estimated demands of the proposed Harbor-UCLA Project over the next 20 years and those of Cal Water's Dominguez system customers and projected new users under normal, single dry year and multiple dry year conditions (Water Code §10911(a)). SB 610 requires that the information presented in a WSA be included in the administrative record that is the basis for an approval action by the local public agency. Cal Water uses U.S. Census data in estimating populations in all of its districts in California. Its methodology for estimating existing and future populations has been reviewed and accepted by the California Public Utilities Commission (CPUC), which provides regulatory oversight of privately owned water and wastewater utilities. In its 2010 UWMP, Cal Water used year 2000 census data because 2010 data were not available to local governments until the beginning of 2012. Cal Water is using 2010 U.S. Census data in the Dominguez 2015 UWMP. That data and more recent projections of population growth in the service area are the basis for water demand forecasts.

Estimates of the population serviced by Cal Water in the Dominguez system are based on overlaying the 2010 U.S. Census Tract Block data with the Dominguez system service area. A summary of the census data for 2010 for the Dominguez system is shown below in **Table 4.M.1-8**, *Summary of Census 2010 Data for Dominguez System*.

Table 4.M.1-8

Summary of Census 2010 Data for Dominguez System

	Census Tract Block	Population	Dwelling Units
Dominguez Service Area	889	141,105	45,021

Source: California Water Service Company, 2016

The data presented in Table 4.M.1-8 were used as a baseline for estimating future population in the Dominguez system. To forecast population to 2040, the 2010 Census population was divided by the total number of dwelling units served by Cal Water in 2000 to obtain an average of 3.134 persons per dwelling unit. This average number of persons per dwelling unit value was multiplied by the projected number of dwelling units in the Dominguez system for future years to obtain the population forecast.

To estimate future residential service counts, Cal Water used the 10-year average annual growth rate of 0.873-percent calculated from service counts using U.S. Census data from 2000 and 2010. To estimate total population, the projected residential service counts are multiplied by the estimated number of persons per residential unit based on U.S. Census data. **Table 4.M.1-9**, *Dominguez System Population Projections*, below, summarizes Cal Water's projected population for the Dominguez system in five-year increments based on the 10-year long-term average service connection growth rates and 2010 US Census data used to determine persons per dwelling unit.

Table 4.M.1-9

Dominguez System Population Projections

	2005	2010	2015	2020	2025	2030	2035	2040
Persons/Dwelling Unit	3.127	3.134	3.134	3.134	3.134	3.134	3.134	3.134
Total Dwelling Units	44,946	45,024	45,382	46,012	46,650	47,297	47,954	48,619
Number of Persons	140,546	141,105	142,227	144,201	146,202	148,230	150,287	152,372

Source: California Water Service Company, 2016

Cal Water's user classes for customer services are as follows:

1. Single-family Residential
2. Multi-family Residential
3. Commercial
4. Industrial
5. Government
6. Other

The total number of customer services for the Dominguez system for 2010 was 32,629. In 2012, total customer services were 32,737 or an increase of 108 services in two years or 54 services per year. Virtually all of these were residential with single-family being 66 percent of the increase. Hence, the data from 2010 continues to be an accurate indicator of water use by user class.

Single-family residential services totaled 28,574 (88 percent of total). Multi-family residential services totaled 704 (two percent of total) and commercial totaled 2,866 (nine percent of total). All other user classes comprised the remaining one percent of total. Classes using the most water are single-family residential, commercial, and industrial. Single-family residential and commercial uses increased constantly from 1992 until about 2003/2004, after which they have declined to almost 1992 levels. Water use in the residential sector is for permanent single- and multi-family residences. There are no seasonal customers. The industrial

sector has had some fluctuations, but overall is fairly constant. Multi-residential and governmental sectors have been constant since 1992. Recycled water was not available in the Dominguez system until early 2000.

(b) Historical and Current Water Demand

(i) Dominguez System Water Demand

Projected increases in the number of customers in each user class are based on historic growth rates for that class unless a particular growth rate was determined to be non-representative then the overall customer growth rate was used.

Historically, Cal Water projected demand by multiplying the projected number of services for each user class by one of three (high, average and low) historic service rates for that class. The three service rates were derived from customer water records. The sum of the projected demands for each user class equals the total projected demand for the Dominguez system. Three separate demand projections for the Dominguez system were calculated in this manner: high, average and low. After the passage of Senate Bill 7 (SBx7-7, see further discussion below under Regulatory Framework Summary), the above method is no longer used by Cal Water as the primary method for making projected demands. However, these calculations are still used as the basis for projected services, population, and distribution of demand among user classes.

Demand projections in the 2010 UWMP were made in accordance with SBx7-7 requirements. Two demand projections were made: 1) an unadjusted baseline demand and 2) a target demand. The unadjusted baseline water demand projection is the total demand expected without any conservation. It is equal to forecasted population multiplied by the base per capita water use, which is the average for the period from 2005 to 2009 or 225 gallons per person per day. Updated demand projections were made by Cal Water in 2015 which reflect different methods and sources.

The target water demand projection includes conservation savings due to both passive and active demand management. Target demand is calculated by multiplying SBx7-7 target per capita water use values by the projected population. The water demand projection calculation used for SBx7-7 compliance is based on future population projections and per capita per day water use target values. Projected water demand based on user class (customer type) cannot be determined by this method. To obtain a breakdown of future demand by user class, Cal Water calculated the ratio of demand for each user class to total demand. This ratio was applied to the total baseline demand forecast to develop projected potable water demands by user class for 2020 to 2040. The SBx7-7 demand forecast includes conservation savings associated with the demand management measures described later in this section. As shown below in **Table 4.M.1-10**, *Actual 2010 and 2015 Potable Water Use Dominguez System (AF)*, total potable water use in the Dominguez system for 2015 was 31,291 AF, which was 1,701 AF less than total water use in 2010. Thus, even with an estimated population increase of 1,122 people in five years, increased water conservation due in part to measures implemented by Cal Water resulted in less water use.

Table 4.M.1-10

Actual 2010 and 2015 Potable Water Use Dominguez System (AF)

Water Use Sectors	2010		2015		Difference
	# of accounts	*Use*	*# of accounts*	*Use*	*Use*
Single family	28,574	9,937	28,732	8,012	-1,925
Multi-family	704	2,661	742	2,428	-233
Commercial	2,866	7,308	2,869	8,077	+769
Industrial	162	10,953	158	10,772	-181
Institutional/government	286	1,438	278	1,312	-126
Other	26	67	34	59	-8
Unaccounted for Water	-	628	-	631	+3
Total	**32,629**	**32,992**	**32,813**	**31,291**	**-1,701**

Source: California Water Service Company, 2016

California Senate Bill x7- 7 Baseline and Targets

Cal Water is expanding water conservation programs for its 24 California service districts. Over the next five years, conservation program expenditures will increase significantly due to the state requiring future reductions in per capita urban water use. Senate Bill No. 7 (SBx7-7) adopted in November 2009 (see further discussion below under Regulatory Framework Summary) mandates a statewide 20 percent reduction in per capita urban water use by December 31, 2020. The CPUC is directing Class A and B water utilities, including Cal Water, to adopt conservation programs and rate structures designed to achieve reductions in per capita water use. In preparing to achieve increased water conservation, Cal Water in 2010 developed five-year conservation program plans for each of its service districts. The complete Dominguez District Conservation Master Plan is included in Appendix G of the 2010 UWMP. An updated Conservation Master Plan will be included in the 2015 UWMP.

SBx7-7 required progress toward the 2020 goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. SBx7-7 requires each urban retail water supplier to develop 2015 and 2020 urban water use targets in accordance with specific requirements and provides several ways to calculate water use reduction targets. Retail water suppliers can also form regional alliances within the same hydrologic region to achieve compliance. Cal Water plans to include the Dominguez system in a regional alliance with four other Cal Water districts in the South Coast hydrologic region. For the five districts, Cal Water has calculated both district-specific targets and a regional alliance target. The specific targets for Dominguez system are:

1. 193 gallons per capita per day (gpcd) by 2015
2. 171 gpcd by 2020

Dominguez system 2015 demand including distribution system losses averaged 27,911,572 gpd for an estimated population of 142,227 persons which equals 196.2 gpcd, or 3.2 gpcd more than the 2015 target value, which is an exceedance of 1.6 percent.

For 2020, per capita demand is to decrease by 25.2 gpcd, or 12.8 percent, in order to meet the Dominguez system target. **Table 4.M.1-11**, *Dominguez System Potable Water Demand Actual and Projected (AF)*, below, provides two projected potable water demand forecasts for the Dominguez water system: 1) based on historic water use by user class and projected growth in each user class minus one standard deviation, 2) the SBx7-7 method described above. The reason for presenting two is that achieving SBx7-7 compliance based on using the 171 gpcd by 2020 will be challenging since it depends on achieving in higher levels of water conservation than what was realized in 2015. The Cal Water method selected would result in a per capita water use of 191 gpcd in 2020 and 188.8 gpcd in 2040, which are below the 2015 SBx7-7 target value but above the 2020 value. To be conservative, the WSA prepared for the Master Plan Project uses the higher demand forecast (Cal Water Average – Standard Deviation) shown in Table 4.M.1-11.

Table 4.M.1-11

Dominguez System Potable Water Demand Actual and Projected (AF)

	2005*	2010*	2015*	2020	2025	2030	2035	2040
Cal Water Average – Standard Deviation	36,499	32,992	31,291	30,884	31,221	31,567	31,910	32,260
SBx7-7	36,499	32,992	31,291	27,643	28,028	28,416	28,810	29,210
Difference	0	0	0	3,241	3,193	3,147	3,100	3,050

**Actual demand from year indicated*

Source: California Water Service Company, 2016

(ii) Recycled Water Demand

Cal Water purchases recycled water from West Basin Municipal Water District (WBMWD) and provides it to a number of customers for non-potable uses, thereby reducing use of potable water. **Table 4.M.1-12**, *Actual and Projected Recycled Water Use in Dominguez System (AF)*, below, provides updated projections on recycled water use. The quantity of recycled water delivered to the distribution system is greater than recorded or projected customer use due to pipe leakage, authorized but unmeasured water use and unauthorized and unmeasured use. More information on the recycled water source and system for delivery and existing and projected customers is provided later.

Table 4.M.1-12

Actual and Projected Recycled Water Use in Dominguez System (AF)

	2010	2015	2020	2025	2030	2035	2040
Recycled Water Use	4,515	5,089	6,776	7,481	8,260	9,120	10,069

Source:

Actual and projected total demand (potable and recycled water use) for the Dominguez system is shown below in **Table 4.M.1-13**, *Dominguez System Total Water Demand: Potable and Recycled Water Use Actual and Projected (AF)*.

Table 4.M.1-13

Dominguez System Total Water Demand: Potable and Recycled Water Use Actual and Projected (AF)

	2005 (Actual)	2010 (Actual)	2015	2020	2025	2030	2035	2040
Water Use	40,356	37,507	36,280	37,660	38,702	39,823	41,030	42,279

Source: California Water Service Company, 2016

(iii) Dominguez System Demand Management

Cal Water has and is significantly expanding its water conservation programs. State law, CPUC directives and a state water conservation organization are focused on reducing urban water use and have provided much of the impetus for this emphasis. This includes the following factors:

1. Recent decisions by the CPUC directing regulated water utilities to reduce per capita urban water demand.

2. State legislation mandating urban water suppliers reduce per capita demand 20 percent by 2020.

3. Memorandum of Understanding Regarding Urban Water Conservation in California (MOU).

A brief summary of each of these factors is provided below.

The CPUC's Decision 07-05-062 directed Class A and B water utilities to submit a plan to achieve a five-percent reduction in average customer water use over each three-year rate cycle. This policy was refined under Decision 08-02-036, which established a water use reduction goal of three to six percent in per customer or service connection consumption every three years once a full conservation program, with price and non-price components, is in place. These decisions anticipated enactment of policies by the State legislature to reduce urban water use in California 20 percent by 2020.

SBx7-7 requires the state to achieve a 20 percent reduction in urban per capita water use by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. SBx7-7 requires each urban retail water supplier to develop interim and 2020 urban water use targets. Urban retail water suppliers will not be eligible for state water grants or loans unless they comply with SBx7-7's requirements.

There are three ways in which a water supplier can comply with the MOU. The first way is to implement a set of water conservation best management practices (BMPs) according to the requirements and schedules set forth in

Exhibit 1 of the MOU. The second way, called Flex Track compliance, is to implement conservation programs expected to save an equivalent or greater volume of water than the BMPs. The third way, similar to SBx7-7, is to reduce per capita water use. Each of these compliance options is briefly described below.

Originally, the MOU established a set of BMPs that signatories agreed to implement in good faith. For each BMP, the MOU established the actions required by the water supplier (e.g. site surveys, fixture and appliance rebates, water use budgets, volumetric pricing and conservation rate designs), the implementation schedule, and the required level of effort (in the MOU this is referred to as the coverage requirement). Additionally, the MOU established the terms by which a water supplier could opt out of implementing a BMP.

BMPs are grouped into five categories. Two categories, Utility Operations and Education, are "Foundational BMPs" because they are considered essential water conservation activities by any utility and are adopted for implementation by all signatories to the MOU as ongoing practices with no time limits. The remaining BMPs are "Programmatic BMPs" and are organized into Residential, Commercial, Industrial, and Institutional (CII), and Landscape categories. **Table 4.M.1-14**, *MOU Best Management Practices*, below, lists the BMPs by category. The requirements and coverage levels of each BMP are set forth in Exhibit 1 of the MOU. Cal Water's CUWCC annual reports, which detail BMP implementation, are included as Appendix G in the 2010 UWMP.

Table 4.M.1-14

MOU Best Management Practices

BMP Group	BMP Name
1. Utility Operations Programs (F)	Conservation Coordinator
	Water Waste Prevention
	Wholesale Agency Assistance Programs
	Water Loss Control
	Metering & Volumetric Rates
	Retail Conservation Pricing
2. Education Programs (F)	Public Information Programs
	School Education Programs
3. Residential (P)	Residential Assistance Program
	Landscape Water Surveys
	High Efficiency Clothes Washer Program
	Watersense Toilet Program
	Watersense Specifications for Residential Development
4. Commercial, Industrial, Institutional (P)	Reduce baseline CII water use by 10% in 10 years
5. Landscape (P)	Large Landscape Water Budget Programs
	Large Landscape Water Surveys

F = Foundational BMP, P = Programmatic BMP

Source: California Water Service Company, 2016

Under Flex Track, a water supplier can estimate the expected water savings over the 10-year period 2009-2018 if it were to implement the programmatic BMPs in accordance with the MOU's schedule, coverage, and exemption requirements, and then achieve these water savings through any combination of programs it desires. Thus, through the Flex Track compliance option, a water supplier agrees to save a certain volume of water using whatever it determines to be the best combination of programs. Because the savings target depends on the programmatic BMP coverage requirements, which in turn are functions of service area size and composition of demand, the volume of water to be saved under this compliance option must be calculated separately for each supplier. The methodologies and tools for water suppliers to implement these calculations had not been developed by the CUWCC at the time of preparation of the 2010 UWMP. They will be used in the 2015 Dominguez system UWMP.

Under the gpcd option, a water supplier can comply with the MOU by reducing its baseline gpcd by 18 percent by 2018. The baseline is the ten-year period 1997-2006. The MOU also establishes interim gpcd targets and the highest acceptable levels of water use deemed to be in compliance with this option. The MOU's gpcd option is similar to using Method 1 to set the SBx7-7 target, except that it uses a fixed baseline period and only runs through 2018. This compliance option may be difficult to achieve for Cal Water districts that are part of a regional alliance for purposes of SBx7-7 compliance because savings as a percent of demand will vary considerably among the districts in the alliance. It may also conflict with district-specific SBx7-7 targets set using method 3 (hydrologic region-based target). Because of these potential conflicts, this is not considered a viable MOU compliance option for Cal Water districts.

Cal Water uses Flex Track to comply with the MOU. This compliance option offers the most flexibility in selecting conservation programs suited to each Cal Water district and allows for more streamlined reporting. Because CUWCC tools for calculating a district's Flex Track savings target were not available in the 2010 UWMP, Cal Water developed its own target estimates. Cal Water will update these estimates in the 2015 UWMP using the CUWCC Flex Track target calculator.

(iv) Water Conservation Master Plans

To comply with requirements for urban water use reduction, Cal Water developed Water Conservation Master Plans (WCMP) for each of its service districts. WCMPs set forth a framework for compliance and describe Cal Water's specific conservation actions to be implemented in the next five years. Major tasks in the WCMPs include:

1. A complete review of State policies and development of a compliance strategy
2. Calculating all appropriate per capita targets
3. Determining water savings required from new programs
4. Performing an analysis of conservation programs
5. Developing a portfolio of conservation program actions
6. Creating a plan for monitoring and updating the WCMP

The Water Conservation Master Plan for the Dominguez system is included in its entirety as Appendix G of the Dominguez District 2010 UWMP and will be included in the 2015 UWMP. A discussion of baseline and target water use is in Section 3 of the UWMP. Details on water savings requirements and the programs to be implemented are also provided that document. **Table 4.M.1-15**, *Cal Water Conservation Programs*, below, provides a summary of water conservation programs selected for evaluation.

Table 4.M.1-15

Cal Water Conservation Programs

Program Name	Description	Target Market
CORE PROGRAMS		
Rebate/Vouchers for toilets, urinals, and clothes washers	Provide customer rebates for high-efficiency toilets, urinals, and clothes washers	All customer segments
Residential Surveys	Provide residential surveys to low-income customers, high-bill customers, and upon customer request or as pre-screen for participation in direct install programs	All residential market segments
Residential Showerhead/Water Conservation Kit Distribution	Provide residential showerhead/water conservation kits to customers upon request, as part of residential surveys, and as part of school education curriculum	All residential market segments
Pop-Up Nozzle Irrigation System Distribution	Offer high-efficiency pop-up irrigation nozzles through customer vouchers or direct install.	All customer segments
Public Information/Education	Provide conservation messaging via radio, bill inserts, direct mail, and other appropriate methods. Provide schools with age appropriate educational materials and activities. Continue sponsorship of Disney Planet Challenge program.	All customer segments
NON-CORE PROGRAMS		
Toilet/Urinal Direct Install Program	Offer direct installation programs for replacement of non-HE toilets and urinals	All customer segments
Smart Irrigation Controller Contractor Incentives	Offer contractor incentives for installation of smart irrigation controllers	All customer segments
Large Landscape Water Use Reports	Expand existing Cal Water Large Landscape Water Use Report Program providing large landscape customers with monthly water use reports and budgets	Non residential customers with significant landscape water use and potential savings

Table 4.M.1-15 (Continued)

Cal Water Conservation Programs

Program Name	Description	Target Market
Large Landscape Surveys & Irrigation System Incentives	Provide surveys and irrigation system upgrade financial incentives to large landscape customers participating in the Large Landscape Water Use Reports programs and other targeted customers	Non residential customers with significant landscape water use and potential savings
Food Industry Rebates/Vouchers	Offer customer/dealer/distributor rebates/vouchers for high-efficiency dishwashers, food steamers, ice machines, and pre-rinse spray valves	Food and drink establishments, institutional food service providers
Cooling Tower Retrofits	Offer customer/dealer/distributor rebates/vouchers of cooling tower retrofits	Non-residential market segments with significant HVAC water use
Industrial Process Audits and Retrofit Incentives	Offer engineering audits/surveys and financial incentives for process water efficiency improvement	Non-residential market segments with significant industrial process water uses

Source: California Water Service Company, 2016

(v) Dominguez System Conservation Programs

Conservation programs selected for the Dominguez system are summarized below in **Table 4.M.1-16**, *Dominguez System Projected Water Savings by Conservation Program*. A water savings requirement analysis showed that after accounting for water savings from existing water efficiency codes and ordinances, scheduled adjustments to water rates, and past investment in conservation programs, projected 2015 baseline demand (excluding recycled water use) in the Dominguez system is 1,307 AFY above the level required for SBx7-7 compliance. The analysis also showed that 713 AFY of water savings from new programs would be required to satisfy MOU compliance requirements in 2015.

(vi) Water Shortage Allocation Plans

Cal Water has also developed Water Shortage Allocation Plans (WSAP), which are plans of action to reduce water demand should significant water supply shortages occur. These actions may be implemented for several months or several years depending on circumstances. The WSAP differs from the WCMP, which is focused on achieving permanent reductions in per capita water use by Cal Water's customers and is not driven by significant short or long reductions in supply. In the short- term, the WSAP assists Cal Water in further reducing demand so that it matches significant reductions in supply.

Implementation of Cal Water's WSAP for the Dominguez system will generally be triggered by actions taken by the West Basin Municipal Water District (WBMWD) and the Metropolitan Water District (MWD). Except in

Table 4.M.1-16

Dominguez System Projected Water Savings by Conservation Program

Program	Water Savings AFY				
	2011	2012	2013	2014	2015
CORE PROGRAMS					
Rebates/Vouchers					
Toilets	24.5	48.0	70.6	105.5	139.0
Clothes Washers	10.9	21.3	31.3	41.2	50.6
Urinals	0.0	0.0	0.0	0.0	0.0
Customer Surveys/Audits	34.3	65.3	93.1	135.3	173.3
Conservation Kit Distribution	9.0	16.9	23.9	30.0	35.4
Pop-Up Nozzle Distribution	34.6	69.3	103.9	138.6	173.2
Subtotal Core Programs	113.3	220.8	322.8	450.5	571.5
NON-CORE PROGRAMS					
Direct Install Toilets/Urinals	19.1	38.7	57.5	141.5	222.2
Smart Irrigation Controller Vendor Incentives	1.6	3.2	4.9	15.7	26.5
Large Landscape Water Use Reports	5.6	5.6	5.6	11.2	11.2
Large Landscape Surveys/Incentives	9.0	18.0	27.0	36.0	44.9
Commercial Kitchen Rebates/Vouchers	0.0	0.0	0.0	14.9	29.9
Cooling Tower/Process Water Retrofit Incentives	58.6	117.3	175.9	194.2	212.4
Subtotal Non-Core Programs	93.9	182.8	270.8	413.4	547.1
Total Core and Non-Core Program Savings	207.3	403.5	593.6	864.0	1,118.6

Source: California Water Service Company, 2016

unusual circumstances, Cal Water will follow the lead of these agencies when deciding whether to implement its WSAP. Cal Water has a four-stage approach that corresponds to specific levels of projected water supply shortage. Depending on the supply reduction target, this approach becomes increasingly more aggressive in requiring customer water use reductions. The stage selected depends on such factors as wholesale supply reductions, availability of alternative supplies, time of year and coordinated regional actions among all affected water utilities and agencies.

The percentage of supply shortage determined by MWD will be a significant factor in Cal Water's decision on which stage of supply reduction it will implement for the Dominguez system. Supply reductions percentages are shown for each of the four stages below in **Table 4.M.1-17**, *Cal Water Supply Shortage Reduction Stages*. A description of each stage is provided below.

Table 4.M.1-17

Cal Water Supply Shortage Reduction Stages

Stage	Projected Supply Reduction %
Stage 1	5 to 10%
Stage 2	10 to 20%
Stage 3	20 to 35%
Stage 4	35 to >50%

Source: California Water Service Company, 2016

Stage 1 is for water supply shortages of up to 10 percent and can be used to address annual variations in precipitation and mild dry year periods of one or two years duration. All reductions in Stage 1 are voluntary and impacts to customers are considered minimal. Actions to be taken by Cal Water in Stage 1 are listed below in **Table 4.M.1-18**, *WSCP Stage 1 Demand Reduction*.

Table 4.M.1-18

WSCP Stage 1 Demand Reduction

Stage 1	Cal Water Actions
• 5 to 10 percent • Shortage Up to 10 Percent Reduction Goal • Voluntary Reductions	• Request voluntary customer conservation as described in CPUC Rule 14.1. • Maintain an ongoing public information campaign. • Maintain conservation kit distribution programs. • Maintain school education programs. • Maintain incentive programs for high efficiency devices. • Coordinate drought response with wholesale suppliers and cities. • Lobby cities for passage of drought ordinances. • Discontinue system flushing except for water quality purposes. • Request that restaurants serve water only on request.

Source: California Water Service Company, 2016

Stage 2 is based on projected water supply shortages between 10 and 20 percent. Stage 2 is for water shortages of moderate severity such as those caused by a multi-year dry period. Reductions by customers can be voluntary or mandatory depending on percentage of water shortage. Mandatory requirements would likely be implemented if supply shortage exceeds 15 percent. Customers will experience moderate impacts on normal water use and some businesses may experience financial impacts. In Stage 2, Cal Water intensifies demand reduction by implementing the actions listed below in **Table 4.M.1-19**, *WSCP Stage 2 Demand Reduction*.

Table 4.M.1-19

WSCP Stage 2 Demand Reduction

Stage 2	Cal Water Actions
• 10 to 20 Percent Shortage • Up to 20 Percent Reduction Goal • Voluntary or Mandatory Reductions	• Increase or continue all actions from Stage 1. • Implement communication plan with customers, cities, and wholesale suppliers. • Request voluntary or mandatory customer reductions. • File Schedule 14.1 with CPUC approval if necessary. • Request memorandum account to track penalty rate proceeds and other drought related expenses. • Lobby for implementation of drought ordinances. • Monitor water use for compliance with reduction targets.

Source: California Water Service Company, 2016

Stage 3 will be activated if there is a water supply reduction between 20 and 35 percent. This stage can be triggered by a very severe multi-year dry period or major failures in facilities for storage, transmission, treatment water and distribution facilities due to a natural disaster such as an earthquake. Supply reduction of these percentages could impact public health and safety and cause significant financial impacts on local businesses.

All reductions are mandatory and customer allocations will be made. In Stage 3, Cal Water will take the actions listed below in **Table 4.M.1-20**, *WSCP Stage 3 Demand Reduction*.

Table 4.M.1-20

WSCP Stage 3 Demand Reduction

Stage 3	Cal Water Actions
• 20 to 35 Percent Shortage • Up to 35 Percent Reduction Goal • Mandatory Reductions	• Increase or continue all actions from previous stages. • Implement mandatory conservation with CPUC approval. • Install flow restrictors on repeat offenders. • Require customers to have high efficiency devices before granting increased allocations. • Require participation in survey before granting an increased allocation.

Source: California Water Service Company, 2016

Stage 4 would be triggered by a reduction of supply greater than 35 percent, and possibly above 50 percent. This would be a crisis caused by a most severe multi-year dry period, a severe natural disaster resulting in catastrophic failure of major water supply infrastructure. In Stage 4, Cal Water will take the additional actions listed below in **Table 4.M.1-21**, *WSCP Stage 4 Demand Reduction*.

Table 4.M.1-21

WSCP Stage 4 Demand Reduction

Stage 4	Cal Water Actions
• 35 to 50+ Percent Shortage • Up to and above a 50 percent Reduction Goal Mandatory Reductions	• Increase all actions from previous stages. • Discontinue service for repeat offenders. • Monitor water use daily for compliance with reduction targets. • Prohibit potable water use for landscape irrigation and other non- essential activities

Source: California Water Service Company, 2016

Cal Water's groundwater supply from the Central and West Basins is limited to its APA of 16,897 AFY, which is based on the safe yield of each basin and is fixed in both wet and multiple dry year periods. After Dominguez system well pumping capacity is increased to sustainably produce the APA, groundwater supply can be used to offset reductions in imported water from WBMWD. Recycled water is a drought-proof supply not subject to reductions by WBMWD. During critical water shortage periods, Cal Water will maximize recycled water use with existing customers and work on increasing use by additional customers in order to reduce potable water demand.

In April of each year, MWD assesses its available water supply for the coming water year and determines if reductions in water use by its member agencies are not required, are advisable or are in fact needed. MWD evaluates the performance of WBMWD retailers as a whole and will only assess penalties to WBMWD if retailers' collective use exceeds its allocation. These reduction targets are passed along through WBMWD to Cal Water and from Cal Water to its customers. If requested by MWD, the allocation period begin on July 1st and continues for at least one year or until the availability of supplies warrants the lifting of requesting water use reductions.

During all stages of water shortages, water production data for all sources are monitored by Dominguez system management. Customer water use data is concurrently monitored to determine if demand reduction percentages are being achieved and, if not, which customers require greater attention by Cal Water.

(3) Existing Harbor-UCLA Medical Center Water Use

Cal Water provides water service to the Medical Center Campus through four metered service connections. **Table 4.M.1-22**, *Harbor-UCLA Medical Center Campus Annual Water Use Data (gpd)*, below, provides a summary of Cal Water metered water use sales data by year from 2012 through 2015 for the existing Medical Center Campus.

As shown in Table 4.M.1-22, annual average daily potable metered water use for these four years is 185,105 gpd or 207.5 AFY. The peak annual daily use in 2014 was 199,130 gpd and the lowest annual daily use in 2015 was 157,508 gpd, which represents a difference of 41,622 gpd, or a 20.9-percent reduction. Presumably, the reduction between 2014 and 2015 reflects increased water conservation actions as a result

Table 4.M.1-22

Harbor-UCLA Medical Center Campus Annual Water Use Data (gpd)

Year	Service Connection 1	Service Connection 2	Service Connection 3	Service Connection 4	Total All Connections
2012	114,782	32,279	44,107	594	191,763
2013	78,860	39,570	73,515	74	192,019
2014	91,850	42,925	64,283	72	199,130
2015	94,240	25,668	37,601	0	157,508
Average:					
gpd	94,933	35,110	54,877	185	185,105
AFY	106.4	39.4	61.5	0.2	207.5

Source: California Water Service Company, 2016

of four years of drought and California's mandate for all urban areas to achieve a 25-percent reduction in annual water use.

The total developed square footage of the existing Medical Center Campus is 1,279,284 square feet. Therefore, the average water use factor for all existing facilities (including an estimated 2.5 acres of landscaping) is 185,105 gpd/1,279,284 square feet, or 0.1447 gpd/square foot of development.

(4) Existing Water Distribution Infrastructure[3]

(a) Domestic Water Facilities

The Project Site is located within the service area of Cal Water, which is responsible for constructing, operating, and maintaining the water conveyance and treatment infrastructure serving the Medical Center Campus and the surrounding area. As such, Cal Water owns and maintains distribution mains within the roadways around the medical center that range in size from six inches to 33 inches in diameter. Based on preliminary utility research and conversations with facility staff, the Medical Center Campus is currently served off of the Cal Water mains at four connection points with a backup system connection off of a water main owned and operated by the Los Angeles Department of Water and Power (LADWP) that is not continuously operational.

The four connections to the Cal Water water system are made at various locations. One connection is made from the 220th Street main line, approximately 450 feet west of Vermont Avenue and is near the Central Plant. Another single connection is made from the Vermont Avenue main line approximately 300 feet north of 220th street. The final two connections are made from the Carson Street main. One of the Carson Street connections is located adjacent to the main hospital entrance off of Carson Street, approximately 600 feet

[3] *Information presented in this section regarding existing water distribution infrastructure serving the Medical Center Campus is provided on pages 65 and 66 of the Harbor-UCLA Master Plan prepared by Perkins+Will(June 2012).*

west of Vermont Avenue. The other Carson Street connection is located close to mid-block, approximately 1400 feet west of Vermont Avenue. The LADWP connection is made from Normandie Avenue, approximately 300 feet south of Carson Street.

Existing pressure tests were obtained from Cal Water for different locations near the medical center during late 2009 and 2010 at three locations including Carson Street and Normandie Avenue, 220th Street and Vermont Avenue, just west of Vermont Avenue, and 220th Street and Vermont Avenue, just east of Vermont Avenue. The pressure test results are summarized below in **Table 4.M.1-23**, *Harbor-UCLA Medical Center Campus Water Pressure Test Results*.

Table 4.M.1-23

Harbor-UCLA Medical Center Campus Water Pressure Test Results

Location	Static Pressure	Residual Pressure	Total Flow Observed	Calculated Flow at 20 PSI
220th and Vermont, West of Vermont	78 psi	63 psi	4545 gpm	9434 gpm
Carson and Normandie	75 psi	68 psi	2148 gpm	6538 gpm
220th and Vermont East of Vermont	80 psi	28 psi	1358 gpm	1467 gpm

Source: Perkins+Will, 2012

The 220th Street and Vermont Avenue, east of Vermont Avenue pressure test was obtained from a hydrant connected to a six-inch water main in 220th Street which may have caused the significant pressure drop for this test compared to the other two fire flow tests which were taken off of 10-inch or larger mains.

MWD owns a 78-inch transmission main in 220th Avenue. Given the size of the pipeline, it is highly unlikely that any service connections will be allowed off of this pipeline as MWD typically does not allow individual connection to its distribution mains. This is currently the only known MWD transmission main in the area.

Based on the 1993 District 5 Interceptor Relief Trunk Sewer As-Built plans, an LADWP-owned 30-inch water main is shown on Normandie Avenue. No flow tests were performed on this system, though facility staff indicated that when the on-site system was originally connected to the LADWP main, the high pressure in the system caused damage to several on-site water mains. Subsequently, a pressure regulator was placed on this connection.

The on-site water system for the Medical Center Campus is looped and consists of 10-inch and 12-inch main lines. Generally, water mains are located in the main north-south and east-west roads on the Medical Center Campus. The system was overhauled recently after the connection to the LAWPD water main caused multiple system failures. The water pipe network is relatively new and maintenance should not be a major issue. Most of the on-site building fire services are connected to the on-site looped system, though the site

water plan indicates that the hospital fire service is taken directly from the Vermont Avenue water main.

(b) Reclaimed Water Facilities

Reclaimed Water is currently not provided to the existing Medical Center Campus, as noted above. Previous studies investigated opportunities for serving Harbor-UCLA with recycled water for landscape irrigation. According to staff from the Los Angeles County Sanitation Districts (LACSD), their recycling efforts are concentrated in the eastern areas of the County and there are no plans to extend the system to the Torrance area in LACSD's District Number 5.

West Basin Municipal Water District (WBMWD) does have recycled water distribution systems in the west County area according to WBMWD staff input. The closest facilities WBMWD has to the project site are about three miles away, with no future plans for extending their system to the vicinity of the Medical Center Campus.

b. Regulatory Framework Summary

Following is a discussion of the regulatory plans, regulations, and requirements related to water supply applicable at the Medical Center Campus.

(1) Federal

(a) Safe Drinking Water Act

The primary federal legislation concerning domestic water supply is the Safe Drinking Water Act (SDWA) of 1974. The SDWA provides the U.S. Environmental Protection Agency (USEPA) with the authority to regulate the quality of water supplies. The SDWA required USEPA to set interim primary drinking water regulations that establish recommended maximum contamination levels (RMCLs) for each contaminant that may have an adverse effect on human health. Since promulgation of the National Primary Drinking Water Regulations, USEPA has developed additional drinking water quality standards for volatile organic chemicals, fluoride, surface water treatment, total coliform bacteria, lead, copper, synthetic organic contaminants, and inorganic contaminants. All domestic water supplies are required to meet these standards.

(2) State

(a) California Urban Water Management Planning Act(Assembly Bill 797)

The California Urban Water Management Planning Act (California Water Code [CWC] Division 6, Part 2.6, Sections 10610-10656) addresses several State policies regarding water conservation and the development of water management plans to ensure the efficient use of available supplies. The Act also requires water suppliers to develop water management plans every five years to identify short-term and long-term demand management measures to meet growing water demands during normal, dry, and multiple-dry years. Specifically, municipal water suppliers that serve more than 3,000 customers or provide more than 3,000 AFY of water must adopt an UWMP.

(b) Senate Bill 610

State legislation addressing water supply, Senate Bill (SB) 610, became effective January 1, 2002. SB 610, codified in CWC Section 10910 et seq., describes requirements for both water supply assessments (WSAs) and UWMPs applicable to the California Environmental Quality Act (CEQA) process. SB 610 requires that for projects subject to CEQA which meet specific size criteria, the water supplier must prepare a WSA that determines whether the projected water demand associated with the proposed project is included as part of the most recently adopted UWMP. Specifically, a WSA must identify existing water supply entitlements, water rights, or water service contracts held by the public water system, and prior years' water deliveries received by the public water system. In addition, it must address water supplies over a 20-year period and consider normal, single-dry, and multiple-dry year conditions. In accordance with SB 610 and Section 10912 of the CWC, projects subject to CEQA and requiring completion of a WSA include the following:

- Residential developments of more than 500 dwelling units;
- Shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- Commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- Hotels, motels, or both, having more than 500 rooms;
- Industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sf of floor area;
- Mixed-use projects that include one or more of the projects specified in this subdivision; or
- Projects that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project.

The WSA must be approved by the public water system at a regular or special meeting and must be incorporated into the CEQA document. The lead agency must then make certain findings related to water supply based on the WSA.

(c) California Code of Regulations

(i) Title 20

Title 20, Sections 1605.1(h) and 1605.1(i) of the California Code of Regulations (CCR) establishes efficiency standards (maximum flow rates) for all new federally regulated plumbing fittings and fixtures, including such fixtures as showerheads, lavatory faucets, and toilets. Among the standards, the maximum flow rate for showerheads and lavatory faucets are 2.5 gpm at 80 pounds per square inch (psi) and 2.2 gpm at 60 psi, respectively. The standard for toilets is 1.8 gallons per flush. In addition, Section 1605.3(h) establishes State efficiency standards for non-federally regulated plumbing fittings, including commercial pre-rinse spray valves.

(ii) Title 24, Part 11

Part 11 of Title 24, the title that regulates the design and construction of buildings, establishes the California Green Building Standards Code (CALGreen). The purpose of CALGreen is to improve public health, safety and general welfare by: 1) enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and 2) encouraging sustainable construction practices in the categories of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CalGreen includes both mandatory measures and voluntary measures. The mandatory measures establish minimum baselines that must be met in order for a building to be approved. The voluntary measures can be adopted by local jurisdictions for greater efficiency.

(d) State Executive Order B-29-15[4]

In response to the current drought conditions, Governor Brown signed Executive Order B-29-15 on April 1, 2015. The Order requires an immediate 25 percent mandatory reduction in overall potable urban water use Statewide, from 2013 levels, through at least February 28, 2016. This is applicable to all cities, towns, and urban water supplies in California (such as the RWD). The Order also requires RWD to provide funding to allow for lawn replacement programs; requires the California Energy Commission to provide rebates for water-efficient appliances; prohibits irrigation of ornamental turf on public street medians with potable water; use of only drip or microspray irrigation systems in new residential construction; and requires urban water suppliers to develop rate structures and other pricing mechanisms, including but not limited to surcharges, fees and penalties, to maximize water conservation consistent with Statewide water restrictions.

(e) State Water Resources Control Board 2015 Emergency Water Conservation Regulations[5]

On March 17, 2015, the State Water Resources Control Board (SWRCB) adopted Emergency Water Conservation Regulations in response to California's current drought and State Executive Order B-29-15 (discussed above). The Regulations identify mandatory water conservation requirements for all Californians including, but not limited to, the following:

- Prohibits:
    - Using potable water to wash sidewalks and driveways;
    - Allowing runoff when irrigating with potable water;
    - Using hoses with no shutoff nozzles to wash cars;
    - Using potable water in decorative water features that do not recalculate the water;
    - Irrigating outdoor areas within 48 hours following measurable rainfall;
    - Serving water to customers in restaurants unless the customer requests it; and

[4] *State of California, Executive Department, Executive Order B-29-15, signed April 1, 2015.*

[5] *State Water Resources Control Board, 2015 Emergency Water Conservation Regulations Fact Sheet, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/fs_conservreg_032715.pdf. Accessed June 17, 2015.*

- Irrigating outdoor areas more than two days per week.

- Requires:
  - Hotels and motels to offer their guests the option to not have their linens and towels laundered daily; and
  - Large urban water suppliers (serving >3000 connections) to:
    - Impose restrictions on outdoor irrigation;
    - Notify customers about leaks that are within the customer's control;
    - Report on water use monthly; and
    - Report on compliance and enforcement.

Violations of prohibited activities are considered infractions punishable by fines of up to $500 per day. Furthermore, the State Water Board can issue cease and desist orders and fines against and water agencies that do not impose mandatory outdoor irrigation restrictions on their customers. The regulations are in effect through at least the end of 2015.

(f) Water Conservation Act of 2009[6]

The California Water Conservation Act of 2009, otherwise known as Senate Bill X7-7 (SBx7-7), was enacted in November 2009, requiring all water suppliers to increase water use efficiency. The bill also requires, among other things, that the Department of Water Resources, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies. The legislation sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020. The state must make incremental progress towards this goal by reducing per capita water use by at least 10% by December 31, 2015. Each urban retail water supplier shall develop water use targets and an interim water use target by July 1, 2011.

An urban retail water supplier shall include in its water management plan due July 2011 the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use. The Department of Water resources, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part. The Department of Water Resources shall adopt regulations for implementation of the provisions relating to process water.

A Commercial, Institutional, Industrial (CII) task force is to be established that will develop and implement urban best management practices for statewide water savings. Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans.

[6] *http://www.water.ca.gov/wateruseefficiency/sb7/*

(3) Regional

(a) Cal Water Dominguez District Urban Water Management Plan

California Water Code (CWC) Section 10644(a) requires urban water suppliers to file with the Department of Water Resources, the California State Library, and any city or county within which the supplier provides water supplies, a copy of its Urban Water Management Plan (UWMP), no later than 30 days after adoption. Cal Water complies with the California Water Code and files an UWMP at least once every five years on or before December 31, in years ending in five and zero.

All urban water suppliers as defined in CWC Section 10617 (including wholesalers), either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet annually are required to prepare an UWMP. Cal Water's 2010 UWMP, the most recently adopted UWMP for the Rancho Dominguez service area, is a foundation document and source of information for a Water Supply Assessment and a Written Verification of Water Supply. An UWMP also serves as:

- A long-range planning document for water supply,
- Source data for development of a regional water plan, and
- A source document for cities and counties as they prepare their General Plans.
- A key component to Integrated Regional Water Management Plans

(4) Local

(a) Los Angeles County General Plan 2035

As discussed in the Public Services and Facilities Element of the Los Angeles County General Plan 2035, the conservation of the water supply is a primary goal of the County. To reduce the County's dependence on imported water, County agencies are establishing various water conservation programs. One example from DPW is the creation of water reclamation projects and groundwater recharge facilities to capture stormwater runoff. Another effort by DPW is participation in a Water Augmentation Study, which is striving to make parcel-level groundwater recharge feasible. Additional actions include the Board of Supervisor's 2008 Countywide Water Supply and Conservation Alert. This resolution urges residents, businesses, and water purveyors to intensify water conservation efforts and directs all County departments to implement measures to achieve a 15 to 20 percent reduction in overall water demand.

The General Plan supports water conservation efforts that focus on curbing demand by reducing consumption through technological advances, such as aerators and motion sensors on low flush toilets and stalls, onsite gray water reclamation and dual plumbing; promoting xeriscaping; and organizing educational campaigns to discourage wasteful water consumption.

Goals and policies contained in the Public Services and Facilities Element that are relevant to water supply include the following:

Goal PS/F 2: Increased water conservation efforts.

- Policy PS/F 2.1: Support water conservation measures.
- Policy PS/F 2.2: Support educational outreach efforts that discourage wasteful water consumption.

Goal PS/F 3: Increased local water supplies through the use of new technologies.

- Policy PS/F 3.1: Increase the supply of water though the development of new sources, such as recycled water, gray water, and rainwater harvesting.
- Policy PS/F 3.2: Support the increased production, distribution and use of recycled water, gray water, and rainwater harvesting to provide for groundwater recharge, seawater intrusion barrier injection, irrigation, industrial processes and other beneficial uses.

(b) County of Los Angeles Green Building Standards Code(Title 31)

In 2008, Los Angeles County adopted the Green Building Program, which included the Green Building Ordinance, Low Impact Development (LID) Ordinance, and Drought-Tolerant Landscaping Ordinance. The County also created an Implementation Task Force and Technical Manual. In November 2013, in response to the mandates set forth in the 2010 CALGreen, the Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31). Among other things, the Green Building Standards Code promotes water conservation by requiring the installation of smart irrigation controllers and high-efficiency toilets, design features that maximize the infiltration of stormwater for groundwater recharge, landscaping using drought-tolerant species, and limiting turf areas.

3. ENVIRONMENTAL IMPACTS

a. Methodology

(1) Water Infrastructure

The analysis of water infrastructure capacity in this section is based on the location and flow capacity of water distribution facilities and other water infrastructure serving the Medical Center Campus. Based on the projected demands of the Master Plan Project, the analysis evaluates whether the existing off-site facilities are adequate to serve future development under the Master Plan Project.

(2) Water Supply

The Harbor-UCLA Project was not specifically included in Cal Water's Dominguez system 2010 Urban Water Management Plan (UWMP); therefore, its water requirements relative to existing and future demand and supply are addressed in the project-specific WSA included in Appendix J of this Draft EIR. The 2010 UWMP is based on data recorded through 2010 and is still the most recent UWMP document for the Dominguez system service area within which the Medical Center Campus is located. Cal Water is currently preparing a 2015 Draft UWMP and has collected and compiled data on population growth, water demand and water supplies from 2010 to 2015. These data, where available were used in the Master Plan Project WSA. In June

2009, Cal Water completed a Water Supply and Facilities Master Plan (WSFMP) for the Dominguez system that also included an assessment of future water demand and supply, which has information that has been used in preparing by Cal Water in preparing its UWMP. Based on the long-term supply and demand projections within the Dominguez system, which is the service area for the Master Plan Project, the demands of the Master Plan Project were compared in the WSA against these projections to determine if the Project demands are within the available supplies anticipated to be available at Master Plan Project buildout and beyond.

b. Thresholds of Significance

The potential for populations and housing impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines.* These questions are as follows:

XVIII. Utilities and Service Systems. Would the project:

b) Create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other land uses?

In consideration of the above factors, the following thresholds are utilized to determine if the Project would result in potentially significant impacts on water infrastructure or water supply. The Project would result in potentially significant impacts if it would result in either of the following:

WS-1: Would the Project create water system capacity problems, or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

WS-2: Would the Project have insufficient reliable water supplies available to serve Project demand from existing entitlements and resources, considering existing and projected water demands from other land uses?

c. Project Characteristics or Design Features

Of existing campus facilities, 759,649 square feet are to be demolished. Total new construction would total 1,908,520 square feet at Master Plan buildout in 2030. Total planned facilities area in year 2023 total 1,400,425 square feet while at build out in year 2030 the total would be 2,457,355 square feet, for a total net increase in building space of 1,178,071 square feet.

All existing uses (administrative office, day-care center, central utilities/industrial/infrastructure, hospital/inpatient, library, medical offices/outpatient, biomedical research and development, warehouse/storage) would be included to some degree in the Master Plan Project, though the intensity of

most of these would increase. Specifically, hospital space would increase from 648,810 square feet to 1,202,655 square feet; LA BioMed space would increase from 94,754 square feet to 225,000 square feet. New biomedical research space within the Bioscience Tech Park would be 250,000 square feet, while new retail area would be 35,000 square feet.

The proposed Master Plan Project would replace existing facilities with those that will fully comply with more stringent and current LA County water conservation requirements including the California Plumbing Code and the California Green Building Code, which mandate installation of water conserving plumbing fixtures and fittings. However, it is not known how much additional water demand may be created by new laboratories and other water using medical and biomedical research and development activities. Therefore, as an offset to the installation of more water conserving fixtures, machines and cleaning practices, the existing average water use factor of 0.1447 gpd/square feet is used.

Therefore, the estimated water use in 2023, excluding irrigation of landscape area improvements, is:

1,400,425 square feet x 0.1447 gpd/square feet = 202,642 gpd or 227.2 AFY

The proposed Master Plan Project includes a substantial increase in landscaped areas when compared to the existing Medical Center Campus, which is minimally landscaped. The landscaped area estimate using the Master Plan Campus map is 26.5 acres. The estimated existing landscaped area is about 2.5 acres; therefore, the net increase in landscaped area is 24 acres.

For the year 2023 it is assumed that 56 percent of the total landscaped area or 13.4 acres would be in place (same percentage as the 2023 building space area is to the 2030 building space area.)

The landscape plan identifies a number of plants, shrubs and trees which are drought tolerant. A typical historic Southern California irrigation rate for public landscaped areas is between three and four AFY/acre. For a more water conserving irrigation system (i.e., drip system) with plantings that are more drought tolerant, an irrigation rate of 2.5 AFY/acre is assumed. This would result in an irrigation water use of 33.5 AFY in the year 2023 and 60 AFY in the year 2030.

The Harbor-UCLA Medical Center Campus is not proximate to West Basin Municipal Water District's (WBMWD) recycled water transmission pipeline which could supply recycled water for landscape irrigation. While it is suggested this option be explored with WBMWD, the assumption in the WSA is that landscape irrigation will be done with potable water. Therefore, estimated Medical Center Campus Project water demand in 2023 is: 227.2 + 33.5 = 260.7 AFY.

For the year 2030 (Master Plan Project build out), estimated water use, excluding irrigation of landscaped area improvements is 2,457,355 gpd x 0.1447 gpd/square feet = 355,579 gpd (or 398.6 AFY).

Total estimated Medical Center Campus Project water demand in 2030 is: 398.5 + 60 = 458.6 AFY. Net new water demand for the Medical Center Project is as follows:

- Year 2023: 53.2 AFY (260.7 – 207.5)
- Year 2030: 251.1 FY (458.6 – 207.5)

California Water Code 10631, Paragraph (e) (2), requires a water use projection (average annual demand forecast) in five-year increments for the 20-year forecasted period. The average annual day demand in five-year forecast increments for the Master Plan Project for the next 20 years is shown below in **Table 4.M.1-24**, *Harbor-UCLA Medical Center Project Demand Forecast (Net Increase)*.

Table 4.M.1-24

Harbor-UCLA Medical Center Project Demand Forecast (Net Increase)

Year	2015	2020	2025	2030	2035	2040
Net Demand Increase (AF)	0	0	54	251	251	251

Source: California Water Service Company, 2016

d. Project Impacts

(1) Water Distribution Facilities

Threshold WS-1: Would the Project create water system capacity problems, or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Impact Statement WS-1: *Construction of the water infrastructure required to serve the Master Plan Project would not result in significant environmental effects. Impacts would be less than significant.*

The proposed Project would require construction of some new on-site domestic water and fire water conveyance facilities (pipelines, sub-meters, and other connections) and the connection of this system to the existing off-site facilities discussed above. This would require on-site trenching for new or relocated water lines and welding activities to connect the new hardware. No active water lines serving adjacent properties bisect the Project Site, so there would be no potential to interrupt water service to adjacent properties (such as due to inadvertent damage of existing lines) during construction.

Although there appears to be significant pressures in the area, future development for any of the proposed Master Plan Project components would be required to verify if the existing system can supply adequate pressures and flows to and within the Medical Center Campus based on final development type and building fire flow requirements once specific details of such development are known. If future services are anticipated to be taken off of six-inch or eight-inch mains in the street, additional fire flow tests would need to be conducted from hydrants connected to the mains that are anticipated for connection to verify the pressure and flow in the system at that location. Such tests and verification would be carried out by the affected agency, including Cal Water, the Los Angeles County Department of Public Works, and/or LADWP, as applicable, in order to demonstrate that capacity exists. Should system improvements be necessary to achieve adequate capacity for proposed uses, such improvements would be carried out as part of the overall construction effort for those Master Plan Project improvements.

County of Los Angeles Fire Department (LACFD) personnel indicated that the on-site fire flow requirement would be determined using Table B105.1 from the California Fire Code. The maximum required fire flow established in Table B105.1 is 6,000 gallons per minute (gpm) at 20 pounds per square inch residual pressure for type IA, IB, IIA, and IIIA building construction types. The maximum required fire flow for type IIB, IIIB, IV, V-A, and V-B building construction is 8,000 gpm as 20 psi residual pressure. Required fire flows are also based on building square footages. The County of Los Angeles Fire Code allows for a 50-percent reduction of the required fire flows for buildings as approved by the fire department on a project-by-project basis. Hydraulic modeling of the on-site and off-site water distribution systems will be required by LACFD for new building construction on the Medical Center Campus as part of the Master Plan Project. Similar to non-fire flow-related improvements, any necessary construction to provide adequate fire flow infrastructure would be carried out as part of overall Master Plan Project construction activities, which would be largely limited to the Medical Center Campus itself.

Overall, the environmental effects associated with trenching and other activities required to install and connect the on-site water system are addressed as part of the larger construction-related impacts of the proposed Project in the appropriate impact sections of this Draft EIR (e.g., Sections 4.B., Air Quality, 4.E., Geology and Soils, 4.G., Hydrology and Water Quality, etc.). No additional environmental effects would occur beyond short-term construction-related effects as once constructed these facilities would operate passively with little, if any, operational activity needed. As such, impacts related to water distribution infrastructure would be less than significant.

(2) Water Supply

Threshold WS-2: Would the Project have insufficient reliable water supplies available to serve Project demand from existing entitlements and resources, considering existing and projected water demands from other land uses?

Impact Statement WS-2: *Implementation of the proposed Master Plan Project would not result in a demand for water that would exceed projected available supplies. As such, impacts would be less than significant.*

(a) Harbor-UCLA Medical Center Project and Dominguez System Demand Comparison

Table 4.M.1-25, *Dominguez System and Harbor-UCLA Medical Center Net New Project Potable Water Demands (AF)*, below, summarizes the Dominguez system and Master Plan Project projected potable water demands in five-year increments. Since the Harbor-UCLA Medical Center Master Plan Project was not explicitly part of the projected increase in Dominguez system demand, the water demands of previously anticipated development and the Master Plan Project are combined for the purposes of assessing the additive demands of the Project and other demand sources in the service area. As shown in Table 4.M.1-25, in 2025, projected Harbor-UCLA Medical Center project water demand would cause an increase in Dominguez system demand of 54 AF, compared to 31,221 AF from previously anticipated development, or only 0.17 percent of total demand in the service area. In 2030, projected Master Plan Project water demand would cause an increase in Dominguez system demand of 251 AF, compared to 31,567 AF for all other development, or an increase of 0.8 percent.

Table 4.M.1-25

Dominguez System and Harbor-UCLA Medical Center Net New Project Potable Water Demands (AF)

	2015	2020	2025	2030	2035	2040
Dominguez System	31,291	30,884	31,221	31,567	31,910	32,260
Harbor-UCLA Master Plan Project	0	0	54	251	251	251
Combined Demand	31,291	30,884	31,275	31,818	32,161	32,511

Source: California Water Service Company, 2016

As stated above, the Harbor-UCLA Master Plan Project's increase in demand is not considered part of the demand forecast for the Dominguez system; therefore, it was treated in the WSA as additive since the total projected increase in demand from 2025 to 2030 for the Dominguez system is 346 AFY while the Harbor-UCLA Medical Campus project increase is 197 AFY, or approximately 57 percent of the Dominguez system increase. Nonetheless, based on the information and analysis presented in the Project WSA, the Harbor-UCLA Master Plan Project demand in 2030 represents only 0.8 percent of total Dominguez system demand, and therefore implementation of the Master Plan Project would not affect the ability of Cal Water to provide an adequate supply to meet water demands in the Project's service area. As such, impacts to water supply would be less than significant.

e. Cumulative Impacts

(1) Water Infrastructure

The related projects identified in Chapter 3.0, General Description of Environmental Setting, of this Draft EIR, located in various jurisdictions in the vicinity of the Medical Center Campus and thus many are not located within Cal Water's Dominguez system service area. Nonetheless, each related project would be reviewed by Cal Water, LADWP, or other water service provider that operates and maintains water conveyance infrastructure within each respective service area, to ensure its infrastructure could adequately serve those projects. Because of this circumstance and because the same infrastructure is not anticipated to serve the Project and many of the related projects, the Master Plan Project, considered together with the related projects, is not anticipated to have a cumulatively considerable contribution to cumulatively significant impacts on water infrastructure.

(2) Water Supply

With respect to cumulative water supply impacts, the Project-specific analysis presented above also represents the cumulative analysis because it considers water demand and supply within the whole of Cal Water's Dominquez system service area at Project buildout in 2030. While many of the related projects are located outside the Cal Water Dominquez system service area, and thus would not contribute to cumulative water demands on this system, those that are within the Master Plan Project service area are anticipated to have been included in the overall growth projections utilized in the 2010 UWMP. Per the Project WSA,

because cumulative plus Project water demand in 2030 would not exceed Cal Water's 2030 water supply projections in light of anticipated demands, the contribution to cumulative water supply impacts of the proposed Master Plan Project would not be cumulatively considerable. More specifically, as discussed in the Project WSA, based on (1) the adequacy of existing and planned supplies from WBMWD and MWD, (2) plans to construct new wells and maintain existing wells including constructing treatment facilities to address water quality issues where needed in order to fully utilize its adjudicated groundwater rights, (3) plans to continue to participate in MWD's in-lieu storage program for increasing basin groundwater storage for use during drought periods, (4) plans to increase use of recycled water from WBMWD, (5) in-place, ongoing and planned expanded water conservation programs and best management practices for reducing demand during normal and single and multiple dry years, (6) continuing participation in regional supply programs sponsored by WBMWD and MWD, (7) success in obtaining increased reductions in water use during multiple dry years by implementing its four-stage water demand reduction program, and (8) ninety years of experience in continuously providing an adequate supply to meet demands during normal, single and multiple dry years in the Dominguez service area, Cal Water concludes that for the next 24 years (2016 – 2040), the Dominguez system will have adequate water supplies to meet projected demands associated with the proposed Master Plan Project and those of all existing customers and other anticipated future customers for normal, single dry year and multiple dry year conditions.

4. MITIGATION MEASURES

With the implementation of Project water system improvements, potential impacts on the water distribution system and water supply would be less than significant. Therefore, no mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potential impacts with regard to water infrastructure and water supply as a result of implementation of the Master Plan Project would be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS
M. UTILITIES AND SERVICE SYSTEMS
2. WASTEWATER

1. INTRODUCTION

This section addresses potential impacts on existing wastewater infrastructure and treatment facilities and analyzes whether sufficient capacity is available to serve Project demand. This section incorporates information from the Los Angeles County 2035 General Plan Update Public Services and Facilities Element (Public Services Element, 2015) and associated EIR (2015), and other County plans and available information available through the Sanitation Districts of Los Angeles County's website.[1]

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Wastewater Treatment and Collection Services

The Sanitation Districts of Los Angeles County (LACSDs) are a partnership of 24 independent special districts that serve the wastewater and solid waste management needs of approximately 5.5 million people in Los Angeles County. The LACSDs' service area covers approximately 824 square miles and encompasses 78 cities and unincorporated territory within the County.[2] Within the LACSDs' service area, there are approximately 9,500 miles of sewers that are owned and operated by the cities and County that are tributary to the Sanitation Districts' wastewater collection system. The LACSDs own, operate, and maintain approximately 1,400 miles of sewers, ranging from 8 to 144 inches in diameter, that convey approximately 500 million gallons per day of wastewater to 11 wastewater treatment plants.[3] Included in the LACSDs' wastewater collection system are 48 active pumping plants located throughout the County. The LACSDs' service area includes wastewater collection systems located within the Joint Outfall System, the Santa Clarita Valley, and the Antelope Valley. The Project Site is located within the service area of the Sanitation Districts' Joint Outfall System for wastewater collection and the Joint Water Pollution Control Plan (JWPCP), located in the City of Carson, approximately 1.5 miles south of the Project Site, for wastewater treatment.

Sanitary wastewater is treated in the following three phases:[4]

- Primary Treatment: removal of solids using settling tanks
- Secondary Treatment: reduction of organic matter using bacteria and oxygen; followed by further removal of solids

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1 *Sanitation Districts of Los Angeles County. http://www.lacsd.org/*

2 *Sanitation Districts of Los Angeles County. Wastewater Collection Systems. Available at: http://www.lacsd.org/wastewater/wwfacilities/wcs.asp. Accessed February 2016.*

3 *Ibid.*

4 *Sanitation Districts of Los Angeles County. Wastewater Treatment and Water Reclamation. Available at: http://www.lacsd.org/wastewater/wwfacilities/moresanj.asp. Accessed February 2016.*

- Tertiary Treatment: filtration of wastewater to remove any solids remaining after the first two phases of treatment

Most wastewater that undergoes tertiary treatment is disinfected after tertiary treatment. Disinfection methods include chlorine bleach and ultraviolet light. Tertiary-treated wastewater is often reused (i.e. recycled) for landscape and agricultural irrigation, groundwater recharge, and industrial uses.[5]

(2) Wastewater Treatment Facilities

As noted above, the Project Site is served by the Joint Water Pollution Control Plant (JWPCP), which is located at 24501 S. Figueroa Street in the City of Carson, approximately 1.5 miles south of the Project Site. The plant occupies approximately 420 acres to the east of the Harbor (110) Freeway. The JWPCP is one of the largest wastewater treatment plants in the world and is the largest of the LACSDs' wastewater treatment plants. The facility provides both primary and secondary treatment for approximately 280 million gallons of wastewater per day (mgd), and has a total permitted capacity of 400 mgd.[6]

Solids collected in Primary Treatment and Secondary Treatment are processed in anaerobic digestion tanks where bacteria break down organic material and produce methane gas. After digestion, the solids are dewatered at Solids Processing and hauled off-site to composting, land application, and landfill disposal. Methane gas generated in the anaerobic digestion process is used to produce power and digester heating steam in a Total Energy Facility that utilizes gas turbines and waste-heat recovery steam generators. The on-site generation of electricity permits the JWPCP to produce most of its electricity.[7]

The plant serves a population of approximately 3.5 million people throughout Los Angeles County. Prior to discharge, the treated wastewater is disinfected with sodium hypochlorite and sent to the Pacific Ocean through a network of outfalls. These outfalls extend 1.5 miles off the Palos Verdes Peninsula to a depth of 200 feet.[8]

(3) Wastewater Conveyance Facilities

The public sewer system in the Project Site vicinity is owned and maintained by LACSD. Several large trunk sewers exist around the perimeter of the Project Site including a 90-inch and a 63-inch sewer in Normandie Avenue, a 63-inch sewer within the easement at the southern end of the Project Site, a 55-inch sewer that runs through roughly the center of the Campus site within the abandoned Meyler Street Alignment (Joint Outfall D, Unit 8), a 66-inch, 78-inch, and eight-inch sewer in Vermont Avenue, and a 66-inch sewer in Carson which eventually turns to the north just west of Berendo Street.[9]

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5 *County of Los Angeles. Los Angeles County General Plan Update Draft EIR. Page 5.17-2.*

6 *Sanitation Districts of Los Angeles County. Joint Water Pollution Control Plant (JWPCP). Available at: http://www.lacsd.org/wastewater/wwfacilities/jwpcp/default.asp. Accessed February 2016.*

7 *Ibid.*

8 *Ibid.*

9 *Perkins+Will. Harbor-UCLA Campus Master Plan. Engineering Background: Sewer. Page 66.*

Review of the existing on-site sewer plans and conversations with Harbor-UCLA facilities staff indicate that the portion of the site east of Central Drive, approximately 25 percent of the Campus area, including the existing Hospital, Central Plant, and cooling tower is served by sewer mains in Vermont Avenue, 220th Street, and Carson Street.[10] The remaining 75 percent of the Campus area, located west of Central Drive, is served by an on-site sewer network that discharges to the LACSDs' Joint Outfall D, Unit 8 trunk sewer through a single point of connection. Harbor-UCLA facilities staff has indicated that there are currently no capacity issues with the on-site sewer system and that the pipes are in good condition.[11] The sizes of the on-site main lines are currently unknown.

However, the LADSDs have a will-serve process which includes published estimated loadings for sanitary sewers based on land uses. In a letter dated August 24, 2011, the District indicated that the Joint Outfall D Unit 8 trunk sewer has a capacity of 28.4 mgd and a measured peak flow rate of 17.0 mgd as of 2008.[12]

(4) Existing Wastewater Generation

Existing uses on the Medical Center Campus currently generate wastewater, which is conveyed by existing sewers in the Project Site vicinity and treated at the JWPCP in the City of Carson. Existing wastewater generation on-site is summarized below in **Table 4.M.2-1**, *Existing Wastewater Generation*, which is based on sewage generation factors provided by both LACSDs and the City of Los Angeles (where LACSDs generation factors are not provided for specific land uses). As shown in Table 4.M.2-1, existing uses on the Medical Center Campus currently generate approximately 171,646 gallons per day (gpd) or 0.176 mgd of wastewater.

b. Regulatory Framework

(1) Federal

Wastewater treatment before effluent is discharged to Waters of the United States is required by the federal Clean Water Act (CWA), United States Code, Title 33, Sections 1251 et seq. The federal Clean Water Act is described in further detail in Section 4.G., *Hydrology and Water Quality*, of this Draft EIR.

(2) State

In California, State Water Resources Control Board (SWRCB) is responsible for ensuring the highest reasonable quality of waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The 1969 Porter-Cologne Water Quality Control Act, codified in the California Water Code, authorizes the SWRCB to implement programs to control polluted discharges into State waters. This law essentially implements the requirements of the CWA. Pursuant to this law, the local Regional Water Quality Control Board (RWQCB) is required to establish the wastewater concentrations of a number of specific hazardous substances in treated wastewater discharge. The Los Angeles RWQCB regulates wastewater discharges and water quality in the southern/coastal portions of Los Angeles County, including the Project Site.

[10] *Ibid.*

[11] *Ibid.*

[12] *Ibid.*

Table 4.M.2-1

Existing Wastewater Generation

Land Use	Generation Factor [a]	Units (beds, s.f.)	Wastewater Generation (gpd)	Wastewater Generation (mgd)
Existing Uses				
Administrative Office	200 gpd/ksf	23,435 s.f.	4,687	0.005
Day-Care Center	200 gpd/ksf	4,360 s.f.	872	0.001
Central Utilities/Industrial /Infrastructure	170 gpd/ksf	112,719 s.f.	19,162	0.019
Hospital/Inpatient	70 gpd/bed	453 beds [b]	26,110	0.026
Library	80 gpd/ksf	22,500 s.f.	1,800	0.002
Medical Office/Outpatient	300 gpd/ksf	327,304 s.f.	98,191	0.098
Biomedical Research & Development	250 gpd/ksf	94,754 s.f.	23,689	0.024
Warehouse/Storage	25 gpd/ksf	45,402 s.f.	1,135	0.001
Retail	150 gpd/ksf	0 s.f.	-	-
Total Existing Wastewater Generation			***171,646***	***0.176***

Notes: ksf = thousand square feet s.f. = square feet gpd = gallons per day mgd = million gallons per day

[a] *Factors provided in Table 1, Loadings for Each Class of Land Use, of the LACSDs' Will Serve Program Instructions, Table 3.15-6 of the LAC+USC Draft Environmental Impact Report, as well as in Table M.2-12, Sewage Generation Factors, of the Los Angeles CEQA Thresholds Guide (2006)..*

[b] *Although the existing Hospital is licensed for 453 beds, only 373 beds are currently staffed, and thus only these beds would count toward existing solid waste generation for hospital/inpatient uses.*

Source: PCR Services Corporation, 2016

(3) County

(a) Los Angeles County General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the Public Services and Facilities Element. Applicable goals and polices from this Element are identified below:

- **Policy PS/F 4.1:** Encourage the planning and continued development of efficient countywide sewer conveyance treatment systems.
- **Policy PS/F 4.2:** Support capital improvement plans to improve aging and deficient wastewater systems, particularly in areas where the General Plan encourages development, such as TODs.

(b) Los Angeles County Wastewater Ordinance

The Los Angeles County Wastewater Ordinance was enacted pursuant to authority contained in the County Sanitation District Act, California Health and Safety Code Sections 4700 through 4859, and exercises authority conferred by law including but not limited to Health and Safety Code Sections 5400 through 5474, and California Government Code Sections 54725 through 54740. The purpose of this Ordinance is 1) to

protect the environment and public health; 2) to provide for the maximum possible beneficial public use of the LACSDs' sewerage facilities through adequate regulation of sewer construction, sewer use and industrial wastewater discharges; 3) to provide for equitable distribution of the LACSDs' costs; and 4) to provide procedures for complying with requirements placed upon the LACSDs by other regulatory agencies. The provisions of the Ordinance apply to all direct or indirect discharges, including the discharge of all wastewater, to any part of the sewerage systems of the LACSDs, or to other sewerage systems tributary to the LACSDs' sewerage system. The provisions of the Ordinance also apply to wastewater originating outside the territorial boundaries of the LACSDs or outside the boundaries of Los Angeles County if such wastewater eventually enters the LACSDs' sewerage system. The Ordinance, among other things, regulates sewer construction and provides for the approval of plans for sewer construction and implements federal and state pollution control regulations. The Ordinance also provides for the issuance of permits, including Permits for Industrial Wastewater Discharge, prohibits the discharge of certain wastes, and regulates the quantity and quality of other waste discharges. Further, the Ordinance imposes wastewater pretreatment requirements upon waste dischargers and provides for the regulation of the degree of such pretreatment. Lastly, the Ordinance provides for the filing of Wastewater Treatment Surcharge Statements, imposes fees and charges, and provides for the distribution of revenue. Violations of this Ordinance are subject to criminal fines and penalties, civil liabilities and other penalties in accordance with law.

(c) Los Angeles County Connection Fee Ordinance and Program

Capital improvements to LACSDs' water reclamation plants are funded from connection fees charged to new developments, redevelopments, and expansions of existing land uses. The connection fee is a capital facilities fee used to provide additional conveyance, treatment, and disposal facilities (capital facilities) required by new users connecting to the LACSDs' sewerage system or by existing users that significantly increase the quantity or strength of their wastewater discharge. The Connection Fee Program ensures that all users pay their fair share for any necessary expansion of the system. Estimated wastewater generation factors used in determining connection fees in the LACSDs' 22 member Districts are set forth in the Connection Fee Ordinance for each respective District available on LACSDs' website. The purpose of the Ordinance is to impose fees for the privilege of connecting facilities to the sewerage system or for the privilege of increasing the strength or quantity of wastewater discharged into connected facilities, and to provide for the collection of those fees. Revenue derived under the Ordinance is used for expansion of the LACSDs' capital facilities and to fund loans as provided for in the Ordinance.

The LACSDs are empowered to fix fees or charges for the privilege of connecting directly or indirectly to the sewerage system and to prescribe, revise, and collect fees, tolls, rates, rentals, or other charges for services and facilities furnished by the LACSDs pursuant to California Health & Safety Code Section 5471. The revenue derived under the Ordinance is in addition to all revenue otherwise collected by or on behalf of the LACSDs including, but not limited, to ad valorem taxes, federal and state grants and loans, bond revenue, contract revenue, investment income, annexation fees, service charges, and wastewater treatment surcharges imposed under the Wastewater Ordinance (see discussion above).

3. ENVIRONMENTAL IMPACTS

a. Methodology

The wastewater generation of the proposed Project was estimated using wastewater generation factors contained in Table 1, *Loadings for Each Class of Land Use*, provided by the LACSDs, as well as factors provided

by the City of Los Angeles Bureau of Sanitation (for those land uses for which the LACSDs' table provides no generation factors). The amount of wastewater generated from the existing uses was determined based on these factors. The amount of wastewater generated by the proposed uses was then calculated. The amount of wastewater generated by existing uses was subtracted from the Project's wastewater generation to determine the net increase in wastewater that would occur at the Project Site. The Project's estimated increase in wastewater flow is compared to the existing conditions to assess the capacity of the existing sewer system and the ability of the system to accommodate the additional flows. In order to evaluate treatment capacity, the Project's estimated wastewater generation and projected average dry water flow is compared with the available treatment capacity at the JWPCP in the City of Carson. Cumulative wastewater generation is also compared with the available capacity of the LACSDs' treatment system using the average dry weather flow.

b. Thresholds of Significance

The potential for wastewater impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the CEQA Guidelines. These questions are as follows:

(XVIII) Utilities and Service Systems. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

In consideration of the above factors, the following thresholds are utilized to determine if the Project would result in potentially significant impacts on wastewater services and facilities if it would result in any of the following:

WW-1: Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

WW-2: Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

WW-3: Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project that is has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

c. Project Characteristics

As under existing conditions, the LACSDs will continue to be the primary provider of sanitary sewer service to the Medical Center Campus. In addition, it is anticipated the trunk sewers that currently exist around the

perimeter of the Project Site and through the Medical Center Campus will remain throughout and following implementation of the Master Plan Project. The proposed sanitary sewer conveyance system will closely match the existing conveyance system and consist of a network of sewer pipes generally located within the primary vehicular circulation areas. Please see **Figure 4.M.2-1**, *Proposed Sewer Infrastructure*, below, for an illustration of proposed sewer improvements on the Medical Center Campus.

As with the existing system, it is anticipated that approximately 75 percent of the existing Medical Center Campus, including the New Hospital Tower, LA BioMed Campus, Bioscience Tech Park, and proposed outpatient clinics will continue to be served by an on-site sewer network that discharges to Sanitation District Joint Outfall D, Unit 8 trunk sewer in the old Meyer Street right-of-way through a single point of connection. The existing connection may be used until such time a new connection might be warranted with development of the proposed Central Plant and back-of-house operations at the Medical Center Campus. The remaining 25 percent of the campus area, including the PCDC, existing tower and Surgery and Emergency Room Replacement Project will likely still continue to be served by sewer mains in Vermont Avenue, 220th Street, and Carson Street.

d. Project Impacts

Threshold WW-1: Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Threshold WW-2: Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects**?**

Threshold WW-3: Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

Impact Statement WW-1: *Although construction and operation of the Project would result in an increase in wastewater generation that would increase the overall demands on wastewater conveyance and treatment facilities in the area, this increase would not exceed the available capacity of affected wastewater facilities and thus would not, directly or indirectly, result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Therefore, impacts related to wastewater conveyance and treatment would be less than significant.*

(1) Construction

Construction of the proposed Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the LACSDs' existing sewer system. Construction relative to the wastewater system for the Project would occur at the Project site and immediate vicinity. The design of these connections would be developed by a professional engineer and approved by the County Department of Public Works (DPW). In the event that, during development, wastewater lines were found to be substandard or in deteriorated condition, the County would be required to make necessary improvements to

achieve adequate service pursuant to applicable County requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer capacity and connection permit from the LACSDs.

During construction of the proposed Project, which would occur in several phases intermittently through year 2030, a negligible amount of wastewater would be generated by construction workers. It is anticipated that portable toilets would be provided by the construction contractor(s) and the waste disposed of off-site. Wastewater generation from construction activities is not anticipated to cause a measurable increase in wastewater flows at a point where, and at a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained. In addition, construction is not anticipated to generate wastewater flows that would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the County's General Plan or other wastewater facilities planning documents. Therefore, construction impacts to the wastewater conveyance and treatment system serving the Project Site would be less than significant.

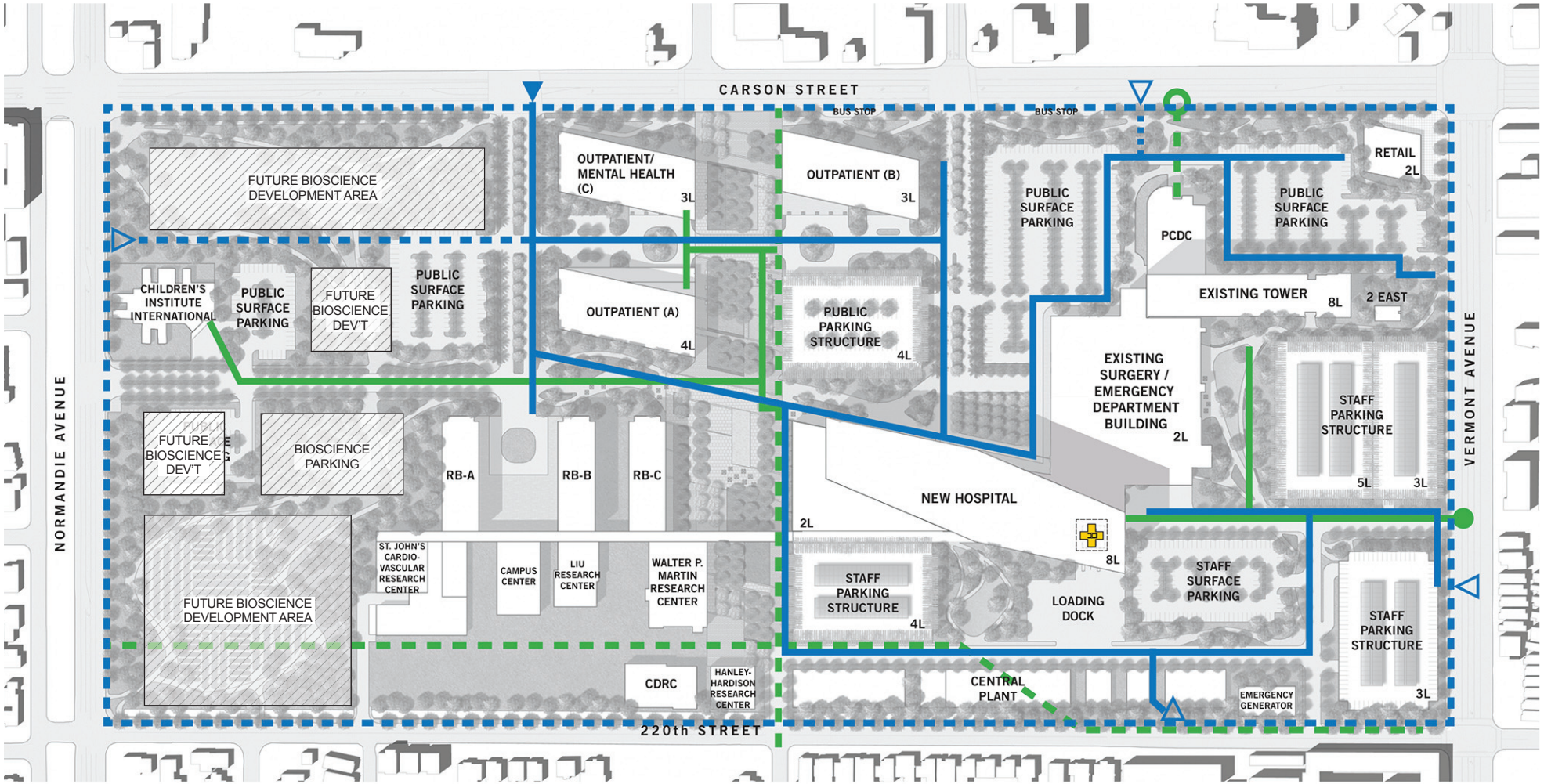
(2) Operation

The Project site would continue to be served by existing County water and utility lines, including sewer lines. As indicated in **Table 4.M.2-2,** *Wastewater Generated During Operation*, the proposed Project would result in an estimated average daily wastewater generation of approximately 343,644 gpd (0.344 mgd). However, subtracting the existing generation of 171,646 gpd (0.172 mgd), the Project would result in a net increase of 171,998 gpd (0.172 mgd) of wastewater generation over existing conditions.

The proposed increase of 171,998 gpd that would result from Project implementation would represent 0.143-percent of JWPCP's total remaining capacity of 120 mgd. Thus, given the amount of wastewater generated by the proposed Project and existing wastewater treatment capacity, notwithstanding any future wastewater treatment capacity that may be implemented before Project buildout in year 2030, adequate wastewater capacity would be available to serve the proposed Project. Based on the above, the Project would not result in an increase in wastewater flows that would result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Therefore, impacts related to wastewater treatment and infrastructure would be less than significant.

e. Cumulative Impacts

Chapter 3.0, General Description of Environmental Setting, of this Draft EIR identifies 26 related projects located in the vicinity of the Project Site. Although not all the wastewater generated by the various related projects is conveyed to the JWPCP for treatment, all the related projects were included in this cumulative analysis in order to present a conservative estimate of potential cumulative wastewater generation and associated impacts. As shown in **Table 4.M.2-3,** *Estimated Cumulative Wastewater Generation*, the estimated wastewater generation associated with related projects on average is approximately 1,041,437 gpd (1.041 mgd). The proposed Project would contribute an additional 171,998 gpd (0.172 mgd). The estimated generation for the proposed Project and the related projects would be a combined total of approximately 1,213,435 gpd (1.214 mgd). As discussed above, the JWPCP has a current treatment capacity of 400 mgd and a current average dry water flow of approximately 280 mgd. The cumulative wastewater generation from



LEGEND

- EXISTING SEWER SYSTEM
- PROPOSED SEWER SYSTEM
- EXIST. POINT OF CONNECTION
- PROPOSED POINT OF CONNECTION
- EXISTING WATERLINE
- PROPOSED WATERLINE
- EXISTING WATER POINT OF CONN.
- PROP. WATER POINT OF CONN

PCR

N

0 400 Feet

Proposed Sewer Infrastructure

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE **4.M.2-1**

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Table 4.M.2-2

Wastewater Generated During Operation

Land Use	Generation Factor [a]	Units (beds, s.f.)	Wastewater Generation (gpd)	Wastewater Generation (mgd)
Proposed Uses				
Administrative Office	200 gpd/ksf	130,635 s.f.	26,127	0.026
Day-Care Center	200 gpd/ksf	4,360 s.f.	872	0.001
Central Utilities/Industrial /Infrastructure	170 gpd/ksf	129,205 s.f.	21,965	0.022
Hospital/Inpatient	70 gpd/bed	446 beds [b]	26,530	0.027
Library	80 gpd/ksf	0 s.f.	-	-
Medical Office/Outpatient	300 gpd/ksf	480,500 s.f.	144,150	0.144
Biomedical Research & Development	250 gpd/ksf	475,000 s.f.	118,750	0.119
Warehouse/Storage	25 gpd/ksf	0 s.f.	-	-
Retail	150 gpd/ksf	35,000 s.f.	5,250	0.005
Total Proposed Wastewater Generation			***343,644***	***0.344***
Total Existing Wastewater Generation			***171,646***	***0.172***
Net Increase			**171,998**	**0.172**

Notes: ksf = thousand square feet s.f. = square feet gpd = gallons per day mgd = million gallons per day

[a] *Factors provided in Table 1, Loadings for Each Class of Land Use, of the LACSDs' Will Serve Program Instructions, Table 3.15-6 of the LAC+USC Draft Environmental Impact Report, as well as in Table M.2-12, Sewage Generation Factors, of Los Angeles CEQA Thresholds Guide (2006).*

[b] *Although the New Hospital would be licensed for 446 beds (as currently proposed), only 379 beds are expected to be staffed, and thus only these beds would count toward future solid waste generation for hospital/inpatient uses.*

Source: PCR Services Corporation, 2016

the 26 related projects and the proposed Project, therefore, would represent just over one percent of the current 120 mgd of available treatment capacity at the JWPCP. The average flow projections in conjunction with the cumulative wastewater estimate from related projects represents a conservative analysis as the average dry water flow projections already take into account future population growth, including growth such as that represented by related projects. Furthermore, as with the proposed Project, these estimates do not account for reductions in wastewater generation that would occur with implementation of conservation measures. As the proposed Project, in conjunction with related project development, would not cause an increase in wastewater flows that would result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments, cumulative wastewater impacts would be less than significant.

Table 4.M.2-3

Estimated Cumulative Wastewater Generation

Land Uses	Quantity (units/ rooms/ square feet)	Wastewater Generation Factor [a]	Wastewater Generated (gpd)	Wastewater Generated (mgd)
Related Projects				
Multifamily Residential [b]	2,769	195 gpd/unit	539,955	0.540
Single Family Residential	66	260 gpd/unit	17,160	0.017
Retail	1,580,640	150 gpd/ksf	237,096	0.237
Auto Dealer and Service Station [c]	10,198	100 gpd/ksf	1,020	0.001
Office	480	200 gpd/ksf	96	0.001
Medical Office [d]	11,340	300 gpd/ksf	3,402	0.003
Hotel	300	125 gpd/room	37,500	0.038
Restaurant	81,125	1,000 gpd/ksf	81,125	0.081
Other Services [e]	296,800	350 gpd/ksf	103,880	0.104
Manufacturing/Warehouse	84,015	200 gpd/ksf	16,803	0.017
Industrial	17,000	200 gpd/ksf	3,400	0.003
Total Related Projects			**1,041,437**	**1.042**
Proposed Project (Net Increase)			**171,998**	**0.172**
Cumulative Wastewater Generation			**1,213,435**	**1.214**

Notes: ksf = thousand square feet s.f. = square feet gpd = gallons per day mgd = million gallons per day

[a] *Factors provided in Table 1, Loadings for Each Class of Land Use, of the LACSDs' Will Serve Program Instructions, Table 3.15-6 of the LAC+USC Draft Environmental Impact Report, as well as in Table M.2-12, Sewage Generation Factors, of Los Angeles CEQA Thresholds Guide (2006).*

[b] *Multifamily Residential includes apartments and condos, but higher condominium use factor is applied to be conservative.*

[c] *Auto Dealer and Service Station includes Automated Car Wash and Automobile Care Center.*

[d] *Medical Office uses wastewater generation factors for professional offices.*

[e] *Other services includes Public Venues, Recreation, and a Transit Center – used LACSDs Auditorium/Amusement factor to be conservative.*

Source: PCR Services Corporation, 2016.

4. MITIGATION MEASURES

With the implementation of Project wastewater system improvements and compliance with applicable County regulatory requirements regarding wastewater, potential impacts on the wastewater system would be less than significant. Therefore, no mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potential impacts with regard to wastewater as a result of implementation of the Project would be less than significant and no mitigation measures would be required.

4. ENVIRONMENTAL IMPACT ANALYSIS
M. UTILITIES AND SERVICE SYSTEMS
3. SOLID WASTE

1. INTRODUCTION

This section addresses potential impacts on existing and planned capacity of designated landfill sites and inert materials landfill sites; and whether sufficient capacity is available to serve Project demand. Consistency with applicable goals and programs to divert waste and increase recycling of the waste stream is also evaluated. This section incorporates information from the Los Angeles County 2035 General Plan Update Public Services and Facilities Element (Public Services Element, 2015) and associated EIR (2015), and other County plans and environmental documents, including the Los Angeles County Integrated Waste Management Plan 2014 Annual Report.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Existing Site Conditions

The approximately 72-acre Project Site is currently occupied by the Harbor-UCLA Medical Center Campus and associated surface parking. Waste generation volumes from operations on a day-to-day basis vary as there are multiple waste sources throughout the Campus, ranging from medical and biohazardous waste, to everyday Municipal Solid Waste (MSW), such as food waste. As summarized below in **Table 4.M.3-1**, *Existing Solid Waste Generation*, it is estimated that the Harbor-UCLA Medical Center Campus currently generates approximately 1,817 tons of solid waste per year.[1] Harbor-UCLA Medical Center's Environmental Services Department is responsible for the collection, transportation, and processing of the existing Hospital's waste stream, which includes general waste, regulated medical waste, sharps containers, pharmaceutical waste, chemo waste, and pathogen waste.

(2) Solid Waste Disposal Services

(a) Countywide Collection Services

For many years, two-thirds of the unincorporated areas (primarily in the San Gabriel Valley and Antelope Valley Planning Areas), residential and commercial solid waste collection services were provided through an open-market system, whereby each resident/business directly arranged for trash collection services with no County involvement. Due to changes in federal and state laws regarding waste reduction, and changing public attitudes toward protecting the environment and increasing consumer demands for better service, the

[1] *The total estimated existing solid waste generation includes Regulated Medical Waste (RMW) or sharps containers, which are estimated to generate approximately 2,200 pounds per day (1.1 tons per day) per page H-23 of the Harbor-UCLA Master Plan Addendum. This translates to approximately 401.5 tons per year, which is included in the overall 1,817 tons per year of total solid waste generated on-site.*

Table 4.M.3-1

Existing Solid Waste Generation

Land Use	Generation Factor	Units (beds, s.f.)	Solid Waste Generation (lbs./day)	Solid Waste Generation (tons/year)
Existing Uses				
Administrative Office	6 lbs./ksf/day	23,435 s.f.	140.61	25.66
Day-Care Center	6 lbs./ksf/day	4,360 s.f.	26.16	4.77
Central Utilities/Industrial /Infrastructure	6 lbs./ksf/day	112,719 s.f.	676.31	123.43
Hospital/Inpatient	16 lbs./day/bed	453 beds [a]	5,968.00	1,089.16
Library	7 lbs./ksf/day	22,500 s.f.	157.50	28.74
Medical Office/Outpatient	6 lbs./ksf/day	327,304 s.f.	1,963.82	358.40
Biomedical Research & Development	6 lbs./ksf/day	94,754 s.f.	568.52	103.76
Warehouse/Storage	10 lbs./ksf/day	45,402 s.f.	454.02	82.86
Retail	6 lbs./ksf/day	0 s.f.	-	-
Total Existing Solid Waste Generation			***9,954.94***	***1,816.78***

Notes: ksf = thousand square feet s.f. = square feet lbs = pounds

[a] *Although the existing Hospital is licensed for 453 beds, only 373 beds are currently staffed, and thus only these beds would count toward existing solid waste generation for hospital/inpatient uses.*

Source: PCR Services Corporation, 2016

open-market system was unable to fully adapt to these conditions. In response, beginning in 2007, the Department of Public Works (DPW) gradually implemented a system establishing commercial and residential Garbage Disposal Districts (GDDs) to replace the open-market system. Garbage Disposal Districts (GDDs) are designated areas within the unincorporated areas where trash collection and disposal services are provided to both residents and businesses by a private waste hauler that contracts with DPW. Operational expenses are paid from revenues generated through special property tax assessments. To date, the County has established seven GDDs in the unincorporated areas in South Los Angeles and Malibu communities. Because the Harbor-UCLA Medical Center is owned and operated by DPW as a public facility, it is not part of a GDD.

(b) Harbor-UCLA Medical Center Campus Collection Services

The Los Angeles County DPW Environmental Services is responsible for the collection, transport and processing of the Medical Centers Campus' waste stream. The waste generated on-site includes 1) General Waste, 2) Regulated Medical Waste (RMW), 3) Sharps Containers, 4) Pharmaceutical Waste, 5) Chemo Waste, and 6) Pathological Waste.[2] All waste processing equipment and staging space is currently located at the loading dock area south of the recently completed Surgery and Emergency Room. The equipment consists of a sterilizer, a 40-cubic-yard compactor/container, and a cardboard baler. Regulated Medical Waste is currently sterilized in the sterilizer, and then added to the General Waste compactor/container. The 40-

[2] *Perkins+Will. Harbor-UCLA Campus Master Plan Addendum. June 2012. Page H-23.*

cubic-yard compactor/container is emptied four to five times per week. Twenty six (26) additional three-cubic-yard dumpsters are also located throughout the Medical Center Campus, which are emptied four days per week.[3]

(3) Regional Landfill Capacity

Regional planning for the provision of landfill services is provided by the County of Los Angeles which, in response to the California Integrated Waste Management Act of 1989, prepared and administers a Countywide Integrated Waste Management Plan (ColWMP). As part of its obligations, Los Angeles County continually evaluates landfill disposal needs and capacity through preparation of ColWMP Annual Reports. Within each annual report, future landfill disposal needs over the ensuing 15-year planning horizon are addressed, in part by determining the available landfill capacity.[4] As discussed in the Los Angeles County Countywide Integrated Waste Management Plan 2014 Annual Report (published in December 2015), due to lack of consumer demand for materials, slowdown in the construction industry, and the production and manufacturing of goods, the amount of waste that residents and business generated and disposed of in Los Angeles County has continued to decrease substantially since 2006 and has generally stayed even from 2009 through 2014. In 2014, Los Angeles County disposed of approximately 9 million tons of materials, compared to approximately 12 million tons in 2005.[5] Of that amount, the majority was accommodated by in-County Class III landfills (4.6 million tons), followed by exports to out-of-County landfills (3.7 million tons) and transformation facilities (562,685 tons).[6] The remaining disposal capacity for the County's Class III landfills is estimated at approximately 112 million tons as of December 31, 2014.[7] It is estimated that by year 2029, the cumulative demand for disposal capacity will have reached a total of approximately 99.8 million tons, or approximately 89 percent of the existing remaining capacity.[8] As such, projected cumulative County disposal demands would continue to be met even without the provision of additional disposal capacity at the various permitted facilities. However, as further discussed below, additional disposal capacity is being sought through a number of options, including in-County landfill expansions, exports to out-of-County facilities, and source reduction and recycling to ensure adequate capacity is maintained in the long-term.

Of the various landfills serving the County of Los Angeles, Sunshine Canyon Landfill is the largest recipient of non-hazardous MSW, i.e. Class III waste materials. This landfill received 2.4 million tons of solid waste in 2014, which accounts for approximately 27% of the total solid waste disposed in 2014.[9] This landfill had a remaining capacity 64.7 million tons in 2014, with an expected life expectancy of 23 years.[10]

The annual amount of disposed inert waste materials, such as earth, landscaping, concrete and asphalt, in 2014 was 315,884 tons. It is estimated that that this disposal amount represents the generation of

[3] *Ibid, Page H-23.*

[4] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015.*

[5] *Ibid, Page 5, Figure 1.*

[6] *Ibid, Page 24.*

[7] *Ibid, Page 31, Figure 20.*

[8] *Ibid, Appendix E-2, Table 5.*

[9] *Ibid, Page 27, Figure 5.*

[10] *Ibid, Page 31, Figure 20 and Page 32, Figure 21.*

approximately 21.9 million tons with a 60 percent diversion rate. As of 2014, the Azusa Land Reclamation is the only permitted Inert Waste Landfill in Los Angeles County with a full solid waste facility permit. The remaining capacity of this landfill is estimated at 59.8 million tons. Given the remaining permitted capacity and at the average disposal rate of 1,215 tons per day in 2014, this capacity would be exhausted in approximately 189 years. In addition to the County-permitted facility, there are a number of Inert Debris Engineered Fill Operation facilities operating under State permit provisions that provide additional capacity in the County, processing approximately 4.3 million tons in 2014.[11]

Aggressive waste reduction and diversion programs on a countywide level have helped reduce disposal levels at the County's landfills. As described in the Regulatory Framework section below, the County has prepared and is updating its Countywide Integrated Waste Management Plan, including annual reports and a master plan for meeting waste disposal needs over the next 20 years. The most recent Annual Report indicates that, as noted above, the County can adequately meet future Class III disposal needs through 2029 through scenarios that include a combination of all or some of the following: (1) expansion of existing in-County Class III landfills; (2) studying, promoting, and developing conversion technologies; (3) expansion of transfer and processing infrastructure; (4) development of a waste-by-rail system; and (5) maximization of waste reduction and recycling.[12]

(4) County Recycling Efforts

As discussed further below in the regulatory discussion, the County of Los Angeles has numerous plans, policies and regulations that address the future provision of solid waste services and reductions of the solid waste stream. These waste reduction measures increased recycling goals for the County and State (e.g., AB341's goal of reduce, recycle, or compost at least 75 percent of solid waste that would go to landfills by 2020) and require monitoring activities to attain the recycling goals. Multiple cities within the County have already achieved an earlier goal of achieving a 50% waste reduction to landfills. The County Department of Public Works' Clean LA Program provides multiple initiatives to recycle waste, including the SmartBusiness Recycling Program, Construction and Demolition Debris Recycling and Reuse Program, and the Los Angeles County Materials Exchange.[13] The 2014 Los Angeles County Integrated Waste Management Plan indicates that in 2014, the County generated approximately 21.9 million tons of potential solid waste. Of this total, the County diverted 13.1 million tons (or approximately 60%) from disposal into landfills.[14]

b. Regulatory Framework

(1) State of California

(a) Assembly Bill 939 - California Integrated Waste Management Act of 1989

The State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939) to improve solid waste disposal management with respect to (1) source reduction, (2) recycling and composting, and

[11] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015.*

[12] *Ibid, Page 50.*

[13] *http://dpw.lacounty.gov/epd/cleanla/3Rs.aspx*

[14] *Ibid, Page 25.*

(3) environmentally safe transformation and land disposal. AB 939 mandates jurisdictions to meet a diversion goal of 25 percent by 1995 and 50 percent by 2000.[15]

AB 939 requires that all counties have to prepare a Countywide Integrated Waste Management Plan (CIWMP). The CIWMP had to include had to include a Source Reduction and Recycling Element (SRRE) to address waste characterization, source reduction, recycling, composting, solid waste facility capacity, education and public information, funding, special waste (asbestos, sewage sludge, etc.), and household hazardous waste. The CIWMP also had to include a Nondisposal Facility Element (NDFE) to identify nondisposal facilities to be used in order to assist counties in reaching AB 939's diversion mandates. Nondisposal facilities include material recovery facilities, transfer stations, large-scale composting facilities, and other facilities that require a solid waste facility permit. Lastly, the CIWMP has to include a Household Hazardous Waste Element (HHWE) to reduce the amount of hazardous household waste generated and to provide the County with convenient collection services and promote waste minimization/reduction techniques. It also requires counties to develop a Siting Element that addresses how each county, and cities within that county, will manage their solid waste disposal over 15-year planning periods. The Siting Elements also include goals and policies to ease the use of out-of-County/remote landfills and foster the development of alternatives to landfill disposal (e.g. conversion technologies). See further discussion of the Los Angeles County Siting Element below under Los Angeles County regulations. Oversight of these activities was set up under the charge of the California Integrated Waste Management Board (CIWMB). The duties and responsibilities of CIWMB were transferred to the California Department of Resources, Recycling, and Recovery (CalRecycle) as of January 1, 2010.

(b) Assembly Bill 1327 - California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327), passed on October 11, 1991, required CalRecycle to develop a model ordinance for adoption of recyclable materials in development projects by March 1, 1993. Local agencies were then required to adopt the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects by September 1, 1993. If, by that date, a local agency had not adopted its own ordinance, the model ordinance adopted by the CalRecycle took effect and shall be enforced by the local agency.

(c) Senate Bill 1374 – Construction and Demolition Waste Materials Diversion Requirements

Senate Bill 1374 was signed into law in 2002 to assist jurisdictions with diverting their construction and demolition (C&D) waste material. The legislation requires that the CIWMB complete five items in regards to the diversion of construction and demolition waste: (1) adopt a model ordinance for diverting 50 percent to 75 percent of all construction and demolition debris from landfills; (2) consult with multiple regulators and waste entities (e.g. California State Association of Counties, private and public waste services, building construction materials industry, etc.) during the development of the model ordinance; (3) compile a report on programs that can be implemented to increase diversion of C&D debris; (4) post a report on the agency's website for general contractors on methods that contractors can use to increase diversion of C&D waste materials; (5) post on the agency's website a report for local governments with suggestions on programs to

[15] *https://www.edcgov.us/Government/EMD/SolidWaste/The_Intergrated_Waste_Management_Act_AB_939.aspx*

increase diversion of C&D waste materials. The model ordinance was adopted by CalRecycle on March 16, 2004.

(2) Los Angeles County

(a) Countywide Integrated Waste Management Plan (ColWMP)

Pursuant to AB 939, each County is required to prepare and administer a Countywide Integrated Waste Management Plan (the aforementioned ColWMP), including preparation of an Annual Report. The ColWMP, per AB 939, is to comprise of the various counties' and cities' solid waste reduction planning documents, plus an Integrated Waste Management Summary Plan (Summary Plan) and a Countywide Siting Element (CSE). The Summary Plan describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated state diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated within the County. The County's Department of Public Works is responsible for preparing and administering the Summary Plan and the CSE. The Summary Plan for the Count was approved by CalRecycle on June 23, 1999. The CSE was approved by CalRecycle on June 24, 1998. A revised CSE was completed in 2012. An EIR for this document was scheduled to be released for public review in early 2016, but as of March 2016 the document has not been published.

In addition, as part of its regulatory efforts, the County has prepared a long-term master plan which describes how the County will manage solid waste through the year 2050. The 2050 Plan identifies measures to meet the landfill needs over the time horizon and includes such measures as conserving in-County disposal capacity, implementing waste diversion programs, fostering alternatives to landfills, and identifying funding resources to carry out the plan.

(b) Construction and Demolition (C&D) Debris Recycling and Reuse Program

On January 4, 2005, the County of Los Angeles Board of Supervisors adopted the C&D Debris Recycling and Reuse Ordinance which added Chapter 20.87 to the Los Angeles County Code. The ordinance requires projects to recycle or reuse 50 percent of the debris generated. The ordinance is meant to increase the diversion of construction and demolition debris from disposal facilities to assist California's statewide waste reduction mandates.

Los Angeles County adopted the Green Buildings Standard Code, which became effective on January 1, 2011. The Code enforces more stringent provisions for all construction and demolition projects after January 1, 2011; non-residential projects must recycle a minimum of 50 percent of the debris generated by weight.

(c) Roadmap to a Sustainable Waste Management Future

On October 21, 2014, the Board of Supervisors adopted the Roadmap to a Sustainable Waste Management Future, establishing a goal to divert 80 percent of solid waste generated in the unincorporated County areas from landfills by 2025, 90 percent by 2035, and 95 percent or more by 2045.[16] The County's efforts to achieve waste diversion are guided by the new waste management paradigm, which places a greater

[16] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015. Page 7.*

emphasis on source reduction, reuse, recycling, and otherwise maximizing the benefits and use of materials over disposal.

(d) Los Angeles County General Plan Update (2035)

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the Public Services and Facilities Element. Applicable goals and polices from the Public Services and Facilities Element are identified below:

Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution.

- **Policy PS/F 5.5:** Reduce the County's waste stream by minimizing waste generation and enhancing diversion.
- **Policy PS/F 5.7:** Encourage the recycling of construction and demolition debris generated by public and private projects.
- **Policy PS/F 5.8:** Ensure adequate and regular waste and recycling collection services.
- **Policy PS/F 5.9:** Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of impacts on solid waste disposal addresses the amount of waste debris that would be generated by the Project and whether sufficient landfill capacity is available to receive that waste debris. The amount of waste debris generated is determined by multiplying the amount of each of the Project uses by per unit waste generation factors associated with each use. The availability of landfill capacity is taken directly from the County of Los Angeles Countywide Integrated Waste Management Plan, 2014 Annual Report. The Project's waste generation is compared to existing and planned capacities to determine potential Project impact.

The analysis also addresses the Project's consistency with policies and programs to increase diversion of waste materials from landfills and increase the recycling of materials in support of sustainability/green growth. Applicable policies and programs are summarized, and their goals and standards are noted. The Project's design features are reviewed for consistency with those goals and standards.

b. Thresholds of Significance

The potential for solid waste impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State *CEQA Guidelines*. These questions are as follows:

XVIII. Utilities and Service Systems. Would the project:

a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

b) Comply with federal, state, and local statutes and regulations related to solid waste?

Based on the above factors, the Project would have a potentially significant impact on Solid Waste if it would:

SW-1 Would the Project generate solid waste in excess of the permitted capacity of the disposal facilities serving the Project?

SW-2 Would the Project conflict with federal, state, and local statutes, ordinances, policies, and regulations related to solid waste?

c. Project Characteristics

The Project would generate construction debris as the result of demolition of existing buildings, excavation, grading, and construction of new buildings. A summary of land uses to be removed is provided in Table 2-2, *Disposition of Existing Buildings*, in Chapter 2.0, *Project Description*, of this Draft EIR. The long-term operations of the Project assumes continued operation of the Harbor-UCLA Medical Center in a manner similar to existing conditions, and would also introduce the new Bioscience Tech Park to the Project Site which would generate additional solid waste that requires disposal, some of which would end up at County landfills sites.

Nonetheless, the Project would include design provisions that respond to compliance measures and public goals that address reductions in waste generation and the resulting waste stream. Among these, the Project would be designed to meet the standards for Leadership in Energy and Environmental Design (LEED®) "Silver" level certification, which identifies and give credit for green building techniques and other sustainability features. Green building practices will be integrated into all building design, construction, and operation.

d. Project Impacts

Threshold SW-1: Would the Project generate solid waste in excess of the permitted capacity of the disposal facilities serving the Project?

(1) Construction Impacts

Impact Statement SW-1: *The Project would generate construction debris due to demolition and removal of multiple buildings throughout the Campus, grading and excavation, and construction of new buildings. Disposal of waste materials would achieve a minimum diversion or recycling rate of 50 percent, as required by County regulations, and adequate capacity exists at the County's C&D disposal sites. As such, impacts related to solid waste disposal capacity due to construction activities would be less than significant.*

The Project proposes the construction of medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of existing facilities. Construction would generate inert solid waste (e.g. construction demolition and debris) which would be disposed at an unclassified landfill. The Master Plan Project would be implemented in phases through the year 2030. The construction work for the Project Site includes the demolition of 759,649 square feet of existing buildings for Harbor-UCLA Medical Center and LA BioMed and the construction of 1,908,520 square feet of total building construction for Harbor-UCLA Medical Center, LA BioMed, and the Bioscience Tech Park.

Construction of the Project's new buildings would require earthwork and construction of the new buildings. Demolition of existing buildings would also occur. Each of these activities would generate demolition waste including but not limited to soil, asphalt, wood, paper, glass, plastic, metals, and cardboard that would be disposed of in the County's inert landfill site (Azusa Land Reclamation) or one of a number on inert debris engineered fill operations that are located throughout Los Angeles County. The amount of demolition waste anticipated to be generated by the Project is shown in **Table 4.M.3-2,** *Estimated C&D Waste Generation*. As indicated therein, the Project would result in approximately 294,738 cubic yards of demolition waste. The total earthwork-soil volume will be 428,396 cubic yards, of which 154,154 cubic yards is export. There will be an additional 40 cubic yards of soil removed for soil remediation due to the four Leaking Underground Storage Tanks found near the Central Plant. More information regarding the soil remediation and tanks is in Section 4.F., *Hazards and Hazardous Materials*, of this Draft EIR.

Based on these quantities, construction of the proposed Project is estimated to generate 166,530 tons of soil 179,053 tons of demolition debris, and 4,142 tons of construction debris for a combined total of 349,725 tons of C&D waste as shown in Table 4.M.3-2. These numbers do not take into account the amount of C&D waste that could potentially be diverted via source reduction and recycling programs within the County. Pursuant to the C&D Debris Recycling and Reuse Program and the Los Angeles County Green Buildings Standard Code, the Project must recycle or reuse 50 percent of the debris generated.

As noted above, the County-certified waste processing facilities recycle amounts varying from 50 percent to 75 percent of the waste stream. Therefore, the most waste that would require disposal at a landfill site (i.e., assuming the lower 50 percent diversion rate) would be approximately 174,863 tons over the 15-year construction period. The C&D waste would be disposed of at the County's Azusa Land Reclamation landfill or one of the State-permitted Inert Debris Engineered Fill Operation facilities. As indicated above, the remaining disposal capacity for the Azusa Land Reclamation facility is 59.8 million tons. The Project's total solid waste disposal need during construction would represent approximately 0.29-percent of the estimated remaining capacity at the County's inert landfill. The Department of Public Works estimates that the remaining life of the Azusa Land Reclamation is 189 years based on the 2014 average disposal rate of 1,215 tons per day.[17] The County's inert fill landfills would have adequate capacity to accommodate Project-generated inert waste, and construction impacts relative to solid waste would be less than significant.

(2) Operation

[17] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Page 32.*

Table 4.M.3-2

Estimated C&D Waste Generation

Debris Type	Quantity	Generation Factor	Waste Generation (in tons)
Site Preparation			
Earthwork-Soil	154,194 c.y.	1 cubic yd = 1.08 tons [b]	166,530 tons
Demolition	294,738 c.y. [a]	1 cubic yd = 0.6075 tons [b]	179,053 tons
Site Preparation Subtotal			***345,583 tons***
Building Construction			
Total Building Area (including parking and exterior walls)	1,908,520 square feet	1 square foot = 0.00217 tons [c]	4,142 tons
Building Subtotal			***4,142 tons***
Grand Total			**349,725 tons**

Notes: c.y. = cubic yards s.f. = square feet

[a] *Includes demotion of interiors, structures, and asphalt/parking areas.*

[b] *CalRecyle Diversion Study Guide, http://www.calrecycle.ca.gov/LGCentral/Library/DSG/ICandD.htm, Accessed September 18, 2014. Factors converted from 80 lbs/cf to 1.08 tons/cy; and 45 lbs/cf to 0.6075 tons/cy.*

[c] *Generation factor obtained from U.S. EPA, Estimating 2003 Building-Related Construction and Demolition Materials Amounts, 2003, Page 8. Factor converted from 4.34 lbs/sf for non-residential uses to 0.00217 tons/sf.*

Source: PCR Service Corporation, 2014.

Impact Statement SW-2: *Impacts on waste disposal facilities from operations would be less than significant because the County has sufficient landfill capacity to accommodate residual waste generation. The Project would generate solid waste as the result of operation of Project Site, but there will not be a substantial increase in operations and solid waste generation. Waste disposal would include design features and compliance with County waste disposal procedures for recycling and diversion of waste from County landfills.*

The estimated solid waste generation for the Project is shown in **Table 4.M.3-3,** *Solid Waste Generated During Operation*. Based on waste generation factors from the California Department of Resources Recycling and Recovery website, and net increases in square footage for the Project, it is estimated that the total waste generation from the existing uses to be demolished would be approximately 1,817 tons per year. The total waste generation from the Proposed Uses would be approximately 2,481 tons per year. As such, the Project would result in a net increase of approximately 664 tons of solid waste generated per year. These estimates do not take into account the amount of solid waste that could potentially be diverted via source reduction and recycling programs within the City.

Table 4.M.3-3

Solid Waste Generated During Operation

Land Use	Generation Factor	Units (beds, s.f.)	Solid Waste Generation (lbs./day)	Solid Waste Generation (tons/year)
Proposed Uses				
Administrative Office	6 lbs./ksf/day	130,635 s.f.	783.81	143.05
Day-Care Center	6 lbs./ksf/day	4,360 s.f.	26.16	4.77
Central Utilities/Industrial /Infrastructure	6 lbs./ksf/day	129,205 s.f.	775.23	141.48
Hospital/Inpatient	16 lbs./day/bed	446 beds [a]	6,064.00	1,106.68
Library	7 lbs./ksf/day	0 s.f.	0	0
Medical Office/Outpatient	6 lbs./ksf/day	480,500 s.f.	2,883.00	526.15
Biomedical Research & Development	6 lbs./ksf/day	475,000 s.f.	2,850.00	520.13
Warehouse/Storage	10 lbs./ksf/day	0 s.f.	-	-
Retail	6 lbs./ksf/day	35,000 s.f.	210.00	38.33
Total Proposed Solid Waste Generation			***13,592.20***	***2,480.59***
Total Existing Solid Waste Generation			***9,954.94***	***1,816.78***
Net Increase			**3,637.26**	**663.81**

Notes: ksf = thousand square feet s.f. = square feet lbs = pounds

[a] *Although the New Hospital would be licensed for 446 beds (as currently proposed), only 379 beds are expected to be staffed, and thus only these beds would count toward future solid waste generation for hospital/inpatient uses.*

Source: PCR Services Corporation, 2016

Countywide, the ColWMP assumes a diversion rate of 60 percent for 2014, and anticipates an increase up to 75 percent by year 2020.[18] The Project's net increase in annual solid waste generation, not accounting for diversion, would represent a negligible increment to the County's 2014 annual waste generation of 9.2 million tons per year, as the additional 663 tons would be approximately 0.007-percent of the annual total, and less than 0.0006-percent of the remaining 112-million-ton capacity in the County's Class III landfills.

In year 2029, the year prior to the proposed buildout of the Master Plan Project, the County expects that cumulative demand for use of the currently available 112 million tons of capacity would be approximately 99.8 million tons. This would leave an available capacity of approximately 12.2 million tons of capacity to serve the Project, even without the provision of additional capacity compared to existing conditions. Further, the 2014 daily disposal rate in the County landfills was 14,567 tons per day versus a maximum daily capacity of 28,549 tons per day, resulting in an additional permitted daily capacity of 13,982 tons per day.[19] The Project's net additional daily generation volume of 1.82 tons, would be approximately 0.01 percent of the additional daily capacity, assuming no diversion. With 60 percent diversion it would be approximately 0.004 percent.

[18] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Appendix E-2, Table 5.*

[19] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015. Appendix E-2 Table 1.*

As noted above, the Sunshine Canyon Landfill is the primary recipient of County waste disposal. The maximum daily capacity for this landfill is 12,100 tons per day and the 2014 disposal rate was 7,582 tons per day, indicating a residual daily capacity of 4,518 tons per day of capacity. If all of the Project's waste were taken to Sunshine Canyon Landfill, the Project's respective additions to the daily disposal, 1.4 tons, would be approximately 0.013-percent of the residual daily capacity, assuming no diversion. With 60 percent diversion it would be approximately 0.005-percent.

As described in the CoIWMP 2014 Annual Report, future disposal needs over the next 15-year planning horizon (2029) would be adequately met through the use of in-County and out-of-County facilities through a number of strategies that would be carried out over the years. It should also be noted that with annual reviews of demand and capacity in each subsequent Annual Report, the 15-year planning horizon provides sufficient lead time for the County to address any future shortfalls in landfill capacity.

Based on the above discussion, the Project would not generate solid waste in sufficient quantities to substantially reduce the County's existing estimated landfill capacity or otherwise limit the County's ability to address ongoing landfill capacity needs via existing capacity and other options for increasing capacity. Therefore, impacts on solid waste disposal from Project operations would be less than significant.

Threshold SW-2: Would the Project conflict with federal, state, and local statutes, ordinances, policies, and regulations related to solid waste?

Impact Statement SW-3: *The Project would be implemented in compliance with all applicable Federal, State and local regulatory requirements regarding diversion of landfill materials and efficient use of County landfill facilities. Thus, impacts would be less than significant.*

(3) Consistency with Regulatory Framework

The Project would comply with applicable regulations related to solid waste, including those pertaining to waste reduction and recycling, as summarized above in the Regulatory Framework subsection. In accordance with California's Green Building Standards Code for Non-residential development, development projects must recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste (Section No. 5.408). The Los Angeles County Construction and Demolition Debris Recycling and Reuse Ordinance (Chapter 20.87) also requires the recycling or reuse of at least 50 percent of all construction and demolition debris. Furthermore, the Project would implement source reduction and recycling strategies to comply with the County's Roadmap to a Sustainable Waste Management Future, which established a goal to divert 80 percent of solid waste generated in the unincorporated County areas from landfills by 2025, 90 percent by 2035, and 95 percent or more by 2045. Because the Harbor-UCLA Medical Center is a public facility under the control of the Department of Public Works, which also is responsible for waste collection and recycling efforts at the Medical Center Campus, it is anticipated that the Project would implement all applicable regulations related to solid waste and recycling at the facility, and thus impacts in this regard would be less than significant.

e. Cumulative Impacts

Cumulative impacts associated with disposal of waste materials on landfill facilities are a regional phenomenon addressed by regional agencies, in this case the County of Los Angeles. County planning for future landfill capacity addresses expected cumulative demand over 15-year planning increments. The Los Angeles County Integrated Waste Management Plan, 2014 Annual Report anticipates a 10.1 percent increase in population growth within the County of Los Angeles by 2029 and an increase of 15.0 percent in employment.[20]

With regard to construction, the above analysis indicates that the Project's contribution to cumulative impacts would include 166,530 tons of soil and 179,053 tons of demolition and construction debris for a combined total of 349,725 tons of C&D waste, or 174,863 tons after accounting for 50 percent mandatory diversion. The 26 related projects identified in Table 3-1 in Chapter 3.0 of this Draft EIR would also contribute to the generation of C&D waste materials. All of the related projects are located within Los Angeles County and would therefore be subject to the same C&D recycling regulations as the proposed Project. Further, all of the related projects would have the same options for disposal as the proposed Project; i.e. the County's Azusa Land Reclamation landfill or one of the State-permitted Inert Debris Engineered Fill Operation facilities. As indicated above, the remaining disposal capacity for the Azusa Land Reclamation facility is 59.8 million tons; and the Department of Public Works estimates that the remaining life span of the Azusa Land Reclamation is 189 years based on the 2014 average disposal rate of 1,215 tons per day.[21] Given this future capacity, independent of the additional capacity at the State-permitted Inert Debris Engineered Fill Operation facilities, it is expected that all C&D waste can be accommodated for the foreseeable future, and cumulative impacts regarding the disposal of C&D waste would not occur.

With regard to future solid waste generation from the operations of new development, the contribution of the 26 related projects along with the proposed Project would contribute an increment to the overall cumulative demand for landfill disposal. As shown in **Table 4.M.3-4,** *Cumulative Solid Waste Generated - Operations*, the estimated solid waste requiring landfill disposal for the 26 related projects, not accounting for diversion and recycling, would be 32,926 pounds per day or 6,009 tons per year. The cumulative annual disposal inclusive of the Project would be 36,564 pounds per day or 6,673 tons per year. The cumulative daily generation, therefore, would be approximately 18.3 tons per day. Again, these estimates do not take into account the amount of solid waste that would potentially be diverted via source reduction and recycling programs within the County, which is assumed to be approximately 60 percent. The cumulative annual solid waste generation of 6,673 tons, not accounting for diversion, would represent 0.073-percent of the County's annual waste generation of 9.2 million tons per year, and 0.006-percent of the remaining 112-million-ton capacity in the County's Class III landfills.

[20] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Appendix E-2, Table 4.*

[21] *Ibid, Page 32.*

Table 4.M.3-4

Cumulative Solid Waste Generated - Operations

Land Uses	Quantity (units/ rooms/ square feet)	Solid Waste Generation Factor [a]		Solid Waste Generated (pounds/day)	Solid Waste Generated (tons/year)
Related Projects					
Multifamily Residential [b]	2,769	4	lbs/unit/day	11,076	2,021.37
Single Family Residential	66	10	lbs/unit/day	660	120.45
Retail	1,580,640	6	lbs/ksf/day	9,483.84	1,730.80
Auto Dealer and Service Station [c]	10,198	9	lbs/ksf/day	91.78	16.75
Office	480	6	lbs/ksf/day	2.88	0.53
Medical Office [d]	11,340	6	lbs/ksf/day	68.04	12.42
Hotel	300	2	lbs/room/day	600.00	109.50
Restaurant	81,125	5	lbs/ksf/day	405.63	74.03
Other Services [e]	296,800	31.2	lbs/ksf/day	9,260.16	1,689.98
Manufacturing/Warehouse	84,015	14.2	lbs/ksf/day	1,193.01	217.73
Industrial	17,000	5	lbs/ksf/day	85.00	15.51
Total				**32,926.34**	**6,009.07**
Proposed Project (Net Increase)				**3,637.26**	**663.81**
Cumulative Solid Waste Generation				**36,563.60**	**6,672.88**

Notes: ksf = thousand square feet s.f. = square feet lbs = pounds

[a] *Generation factors are taken from CalRecycle Waste Characterization: Estimated Solid Waste Generation and Disposal Rates (http://www.calrecycle.ca.gov/WASTECHAR/WasteGenRates/).*

[b] *Multifamily Residential includes apartments and condos.*

[c] *Auto Dealer and Service Station includes Automated Car Wash and Automobile Care Center.*

[d] *Medical Office uses waste generation factors for large offices.*

[e] *Other services includes Public Venues, Recreation, and a Transit Center.*

Source: PCR Services Corporation, 2016.

In 2029, the year prior the anticipated buildout of the Master Plan Project, the County expects that cumulative demand for use of the currently available 112 million tons of capacity would be approximately 99.8 million tons. This would leave an available capacity of approximately 12.2 million tons of capacity to serve the cumulative development in the Project vicinity, even without the provision of additional capacity compared to existing conditions. Further, the 2014 daily disposal rate in the County landfills was 14,567 tons per day versus a maximum daily capacity of 28,549 tons per day, resulting in an additional permitted daily capacity of 13,982 tons per day.[22] The additional cumulative daily generation volume of 18.3 tons per day would be approximately 0.13-percent of the additional daily capacity, assuming no diversion. With 60 percent diversion it would be approximately 0.005 percent.

[22] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015. Appendix E-2 Table 1.*

As noted above, the CoIWMP 2014 Annual Report indicates that future disposal needs over the next 15-year planning horizon (2029) would be adequately met through the use of in-County and out-of-County facilities through a number of strategies that would carried out over the years.

As discussed above, the Project, in conjunction with other related projects in the area, would not generate solid waste in sufficient quantities to substantially reduce the County's existing estimated landfill capacity or otherwise limit the County's ability to address ongoing landfill capacity needs via existing capacity and other options for increasing capacity. Therefore, the waste generation from the cumulative development would be less than significant.

4. MITIGATION MEASURES

No mitigation measures are required, as impacts would be less than significant given compliance with regulatory requirements related to solid waste disposal and recycling.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project-specific and cumulative impacts related to solid waste disposal would be less than significant.

5. Alternatives

5.0 ALTERNATIVES

A. INTRODUCTION

Under CEQA, and as indicated in California Public Resources Code Section 21002.1(a), the identification and analysis of alternatives to a project is a fundamental aspect of the environmental review process intended to consider ways to mitigate or avoid the significant environmental effects of a project.

Guidance regarding the definition of project alternatives is provided in State *CEQA Guidelines* Section 15126.6(a) as follows:

> An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.

The State *CEQA Guidelines* emphasize that the selection of project alternatives be based primarily on the ability to reduce significant impacts relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."[1] The State *CEQA Guidelines* further direct that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are analyzed.[2]

In selecting project alternatives for analysis, potential alternatives should be feasible. The State *CEQA Guidelines* Section 15126.(f)(1) explains that:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.

The State *CEQA Guidelines* require the analysis of a "no project" alternative and, depending on the circumstances, evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated. In general, the environmentally superior alternative is the alternative with the least adverse impacts on the environment. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify another environmentally superior alternative among the other alternatives.[3]

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1 *CEQA Guidelines Section 15126.6(b) .*

2 *Ibid., Section 15126.6(f) .*

3 *Ibid., Section 15126.6(e) (2) .*

Section 15126.6(d) of the State *CEQA Guidelines* states that alternatives analysis need not be presented in the same level of detail as the assessment of the proposed project. Rather, the EIR is required to provide sufficient information to allow meaningful evaluation, analysis and comparison with the proposed project.

B. OBJECTIVES OF THE PROPOSED PROJECT

The underlying purpose and primary objective of the Master Plan Project is to redevelop the County-owned Harbor-UCLA Medical Center Campus to support a modern, integrated healthcare delivery system which provides a New Hospital Tower to replace the acute care functions of the Existing Hospital before the state law deadline to meet seismic standards for critical trauma/ tertiary acute care services so that the South Bay service region and the County seamlessly retain this key link in the County-wide trauma hospital safety net which features biomedical research and development facilities and integrates inpatient and outpatient services in a renovated and expanded setting. As discussed in Chapter 2.0, Project Description, of this Draft EIR, this goal is supported by the following objectives:

1. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.

2. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.

3. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways;

4. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.

5. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities.

6. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.

7. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.

8. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."

C. SUMMARY OF THE ALTERNATIVES

This chapter considered a total of seven (7) alternatives to the Project, three of which were considered but were not selected for further analysis, and the remaining four of which, including the "no project" alternative noted previously and three other "build" alternatives, are comprehensively evaluated below. The three alternatives that were considered but rejected after initial analysis included Alternative Off-Site Locations, Alternative On-Site Uses, and a No Bioscience Tech Park Alternative. The No Project Alternative for this analysis is referred to as the No Project/No Build Alternative. Under the No Project/No Build Alternative, the Project would not be developed and the use of the entire Harbor-UCLA Medical Center Campus would continue as under current conditions.

Three additional alternatives were selected, as noted above, with the goal of identifying ways to reduce or avoid significant unavoidable impacts that would result from implementation of the Project, including temporary construction-related traffic impacts; long-term operational traffic impacts; cumulative construction noise impacts; and temporary operational helicopter noise impacts. Based on these significant unavoidable environmental impacts and the objectives established for the Project (set forth above), the following alternatives are evaluated:

1. No Project/No Build Alternative
2. Reduced Intensity Alternative A: Acute Bed and Other Plan Reductions
3. Reduced Intensity Alternative B: Further Acute Bed and Other Plan Reductions
4. Reduced Intensity Alternative C: New Acute Bed Hospital Tower Only

D. ALTERNATIVES CONSIDERED AND REJECTED

The State *CEQA Guidelines* Section 15126.6(c) provides that an EIR should identify alternatives that were considered for analysis but rejected and briefly explain the reasons for their rejection. According to the State *CEQA Guidelines*, the following factors may be used to eliminate alternatives from detailed consideration: the alternative's failure to meet most of the basic Project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts. Alternatives that have been considered and rejected as infeasible are discussed below.

1. Alternative Off-Site Locations

CEQA does not require that analysis of alternative sites always be included in an EIR. However, if all the surrounding circumstances make it reasonable to consider an alternative site, then this Alternative should be

considered and analyzed in the EIR. In making the decision to include or exclude analysis of an alternative site, the "key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR". If no feasible alternative locations exist, the EIR must disclose the reasons for this conclusion.[4]

Among the factors that may be considered when addressing the feasibility of alternatives is site suitability, economic viability, availability of infrastructure, general plan consistency, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site.[5]

The Medical Center Campus is unique in the Project area (West Carson and vicinity) because of its size, current uses, availability for development, and central location with respect to the sizeable daytime employee population and 24-hour residential populations within the surrounding communities. The Medical Center Campus is also highly visible and easily accessible from major roadways (Vermont Avenue, Normandie Avenue, Carson Street and 220th Street) and the Harbor Freeway.

Within unincorporated Los Angeles County, and in the Project area (West Carson) there is a scarcity of vacant properties, or developed properties suitable for redevelopment, that are similarly sized to the Medical Center Campus, are proximate to existing public services with easy access from an existing public road and freeway visibility, and are near compatible uses. Furthermore, to replace the entire existing Medical Center Campus, which has been located here since 1943 and serves many thousands of people, to a completely new and undeveloped location would likely result in impacts greater than the Project, while redevelopment of an already urbanized site elsewhere in the region would not serve the population that currently relies on the services provided at the Medical Center Campus. Furthermore, acquisition of a similarly sized property, whether public or private, would involve substantial capital costs that would not otherwise be necessary at the existing Medical Center Campus, as the Project Site is currently under the sole ownership of the County of Los Angeles.

Implementation of the Project at an off-site location, therefore, would not meet the Project objectives of modernizing and renovating the current Medical Center Campus or optimizing use of County property and resources. In addition, the County did not consider implementation of other alternatives discussed in this chapter at any off-site locations, based on the discussion above regarding the Project. For these reasons, this development scenario, was not considered for further analysis in this Draft EIR.

2. Alternative On-Site Uses

As discussed in Chapter 2.0, Project Description, of this Draft EIR, the existing Medical Center Campus has been utilized for hospital, outpatient, research, and other related activities for many decades, with substantial investment by the County and other on-site tenants in support of these functions. As further stated in Chapter 2.0, Harbor-UCLA Medical Center expects increasing demand in its service area, which currently encompasses 10 million people and is expected to grow by an estimated 600,000, through 2030. It is projected that the service area will include an additional 190,000 Medicare-eligible patients by the

[4] *State CEQA Guidelines, Section 15126.6(f) (2)*

[5] *Ibid., Section 15126.6(f) (1)*

buildout horizon, an assumption based on an anticipated increase in the service area population and aging, and is expected to affect demand for certain services as well as the overall volume of patient visits, which is in turn expected to increase by an estimated 20 percent by 2030, even assuming some percentage of future patients transfer back to Martin Luther King Hospital or other hospitals. Further, it is expected that there will be an increasing need for Harbor-UCLA to enhance its outpatient programs and other patient support services. In light of the expected increase in its service area population and increased demand for its services, a physician workforce shortage in Los Angeles, and the lack of plans for the new construction of other acute care hospital facilities in the region by the Master Plan Project buildout horizon, Harbor-UCLA sees a clear need to invest in its facilities and programs at the existing Medical Center Campus in order to continue to fulfill its role as a strategic piece of the healthcare "safety net" of Los Angeles County in general and for South Bay communities in particular. Given the County's ownership of the 72-acre Medical Center Campus property, substantial long-term investment in hospital and related health care and research facilities at the site, and location within the geography such facilities serve, redevelopment of the Medical Center Campus with land uses other than hospital, outpatient, biomedical research and related supporting uses was not considered for further analysis in this Draft EIR.

In addition, this development scenario would not achieve many of the key objectives of the Project including achieving compliance with seismic safety requirements for acute care facilities; supporting the renovation of existing healthcare facilities; providing for a fundamental reorganization, expansion, and integration of outpatient services; renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region; providing opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities; encouraging a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research; and achieving optimum public utilization of land and buildings under the ownership and control of the County. As such, the County did not consider pursuing development of other uses on the Medical Center Campus that are not proposed by the Board of Supervisors or the Harbor-UCLA Master Plan.

3. No Bioscience Tech Park Alternative

As part of its exploration of potential alternatives to the Master Plan Project, the County considered a Project alternative that would implement the Master Plan Project as proposed but without a Bioscience Tech Park component. All other aspects of the Project would be implemented on the Medical Center Campus under this Alternative, including (1) a New Hospital Tower; (2) new and renovated outpatient care facilities (to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower); (3) other services and facilities, including administrative office, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop); (4) long-term buildout of the LA BioMed Campus; and (5) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements.

However, while this alternative would achieve many of the Project objectives, including objectives 1, 2, 3, 4, 6, 7, and 8 discussed above, and would partially achieve objective 5 relative to expansion of existing LA BioMed uses on the Medical Center Campus, this Alternative would not achieve one of the County's key objectives for the Project, which is to provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities.

As stated in Chapter 2.0, Project Description, of this Draft EIR, the proposed Bioscience Tech Park represents an important opportunity to grow the bioscience industry in the County, and unique to the Harbor UCLA Campus location, to take advantage of existing and potential future relationships and research opportunities between a collocated Bioscience Tech Park, the on-site hospital and outpatient facilities, and the existing LA BioMed facility, a privately-operated program that itself has plans for growth on the Medical Center Campus during the course of Master Plan Project buildout. This is consistent with Harbor UCLA's long-standing status as a teaching hospital with an existing affiliation with the David Geffen School of Medicine at UCLA.

Moreover, the availability of a sizeable and currently undeveloped buildable area on the western side of the Medical Center Campus would support a facility of the necessary size, and would allow achievement of this objective without the need for costly acquisition of additional real estate or displacement of existing uses on the Medical Center Camps or at an off-site location. Finally, a facility in this location would also provide needed employment opportunities and, as noted in the Project Description in this Draft EIR, would further strengthen Harbor UCLA's role as a strategic part of the healthcare "safety net" in the South Bay portion of the County.

For these reasons, this development scenario, which would eliminate the Bioscience Tech Park, was not considered for further analysis in this Draft EIR.

E. ANALYSIS FORMAT

In accordance with State *CEQA Guidelines* Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less than, similar to, or greater than the corresponding impacts of the project. Furthermore, each alternative is evaluated to determine whether most of the Project objectives, identified in Chapter 2.0, Project Description, would be feasibly attained by the alternative.[6] The evaluation of each of the alternatives follows the format described below:

- A description of the alternative.
- The environmental impacts of the alternative before and after implementation of reasonable mitigation measures for each environmental issue area analyzed in the EIR are described. Where applicable, the evaluation is divided between temporary impacts that would occur during the Project's construction phase, and impacts that would occur during the Project's operational phase.
- Environmental impacts of the alternative and the Project are compared for each environmental issue area evaluated in Chapter 4.0 the Draft EIR. Where the impact of the alternative would be clearly less adverse than the impact of the Project, the comparative impact is said to be "less." Where the alternative's net impact would clearly be more adverse than the Project, the comparative impact is said to be "greater." Where the impacts of the alternative and Project would be roughly equivalent, the comparative impact is said to be "similar." The evaluation also documents whether compared to the Project an impact would be entirely avoided, whether a significant impact could be reduced to a less than significant level, or whether a significant unavoidable impact would be feasible to mitigate to a less than significant level.
- The comparative analysis of the impacts is followed by a general discussion of the extent to which the underlying purpose and Project objectives are attained by the alternative.

[6] *Ibid., Section 15126.6(c) .*

5.0 ALTERNATIVES
A. ALTERNATIVE 1: NO PROJECT/NO BUILD ALTERNATIVE

A. DESCRIPTION OF THE ALTERNATIVE

Under the No Project/No Build Alternative, the proposed Medical Center Campus Master Plan Project would not be implemented, and the site would remain in its current state. New Hospital Tower would not be constructed on the site, nor would the proposed outpatient care facilities, parking lots and other services facilities be developed. Because it would not meet new seismic requirements scheduled to be effective January 1, 2030 for acute care facilities, the Existing Hospital would not be licensed to operate as an acute care facility after December 31, 2029. The hospital could continue to operate providing non-acute care services. The buildout of the LA BioMed Campus would not occur, and the new Bioscience Tech Park, campus support and required infrastructure would not be constructed. Proposed new amenities on the Medical Center Campus, including the Medical Center Campus reorganization with its new network of pedestrian walkways and landscaped areas, would not be implemented.

B. ENVIRONMENTAL IMPACTS

1. Aesthetics

Under the No Project/No Build Alternative, no construction activities would take place, and the Medical Center Campus Master Plan Project would not be implemented. The existing configuration of the current Medical Center Campus would remain the same. The LA BioMed Campus would not be reconfigured, nor would the new Bioscience Tech Park be constructed. The New Hospital Tower, which is intended as the tallest, most-visible building on the Medical Center Campus, and therefore, its primary focal point, would not be constructed. The proposed Landscape Master Plan would not be implemented, thereby resulting in no new landscaping being planted, no garden installations, plazas, walkways, trails or public art. As such, current visual character, views and light and glare impacts associated with the Medical Center Campus would remain unchanged, and there would be no impact to aesthetics resulting from the No Project/No Build Alternative, including impacts related to visual character, views, and light and glare. In Section 4.A., Aesthetics, of this Draft EIR, it was determined that the Project would result in a less than significant impact with respect to aesthetics. All impacts would be avoided under the No Project/No Build Alternative, as no impacts would occur. As a result, potential impacts to Aesthetics under the No Project/No Build Alternative would be less than under the Project.

2. Air Quality

Under the No Project/No Build Alternative, no construction would occur, and no development would result. Therefore, the Project's less than significant construction emissions would not occur, as no impact would result from this Alternative. Under this Alternative, there would not be an increase in the number of employees, patients, visitors or other patrons on the Medical Center Campus, and there would be no additional vehicle trips resulting. As such, operational emissions under this Alternative would be equivalent to existing conditions. Operational emissions would also be less than those generated by the Project, which would have increased emissions from mobile, area, and stationary sources. Although Project-generated

construction and operational emissions would be less than significant, there would be no increase in emissions under this Alternative. Therefore, there would be no resulting impact under the No Project/No Build Alternative. As a result, construction and operational air quality impacts would be less under the No Project/No Build Alternative than under the Project.

3. Energy

Under the No Project/No Build Alternative, there would be no new additional development on the Medical Center Campus which would consume energy and natural resources, as compared to the current condition. Although energy consumption would be less under this Alternative than under the Project, older, inefficient facilities, practices and machinery would continue to use energy resources in this manner. The Project's sustainable development plan would introduce LEED Silver-level certification for new development, which would incorporate a number of requirements for more efficient facilities and practices throughout the Medical Center Campus. Implementation of the Project's Landscape Master Plan would help reduce dependency on natural resources by capturing and cleaning stormwater runoff and shading buildings to reduce cooling demands. Although this Alternative would not replace existing facilities with newer, more efficient ones, the continued use of such facilities would not represent an adverse impact with regard to energy consumption as no changes to energy demands or applications would occur relative to baseline conditions. Although the Project's energy impacts would be less than significant, the No Project/No Build Alternative would generate no new demand or associated impacts. As a result, energy impacts would be less under the No Project/No Build Alternative than under the Project.

4. Geology and Soils

The No Project/No Build Alternative would not increase the number of people at the Medical Center Campus that could potentially be exposed to seismic hazards compared to the Project. Furthermore this Alternative would not involve any construction that would occur under the Project, including grading and excavation to construct the Project components. Therefore, no impacts relative to seismic or other groundwater and soils geologic hazards would occur under this Alternative. As a result, geology and soils impacts under the No Project/No Build Alternative would be less than those that would occur under the Project.

5. Greenhouse Gas Emissions

The No Project/No Build Alternative would generate no increase in GHG emissions and thus would result in no impacts. Under the Project, GHG emissions would increase during construction and operation but would be less than significant. Therefore, impacts under the No Project/No Build Alternative would not occur, which would be less compared to the Project.

6. Hazards and Hazardous Materials

Under the No Project/No Build Alternative, existing Campus operations would continue unchanged except the existing hospital will no longer be licensed to provide acute care services beyond 2030 and will not provide those services. It is assumed for this analysis that the Existing Hospital will continue to provide non acute medical care. No new uses or activities would be introduced. Hazardous substances used on the Medical Center Campus would be limited to those currently used for medical treatment and research, cleaning and property and equipment maintenance, and landscaping, and would include cleaning agents, paints, pesticides, and other such materials. All hazardous substances would continue to be contained,

stored, and used in accordance with manufacturers' instructions and applicable standards and regulations. The existing buildings on the Site would remain intact, and the potential for release of asbestos-containing materials (ACMs), lead-based paints (LBPs), or polychlorinated biphenyls PCBs in fluorescent light ballasts as the result of building rehabilitation or demolition activities would not occur. In addition, there is no potential for encountering contaminated soil or underground features beneath the Medical Center Campus.

Therefore, no impacts related to hazardous materials would occur under the No Project/No Build Alternative, and impacts would be less than those of the Project. Although buildings on the Medical Center Campus would likely deteriorate and at some point could lead to the release of ACBM, LBPs, and PCBs if preventative maintenance, rehabilitation, or demolition is not undertaken. However, demolition activities for specific buildings or uses are not contemplated as part of this Alternative, and only maintenance is assumed.

7. Hydrology and Water Quality

Under the No Project/No Build Alternative, existing development would remain and no new development or activities would be introduced to the Medical Center Campus. There would be no modifications to the existing drainage patterns, directions, or type, quality and quantity of runoff generated from the Medical Center Campus. Accordingly, no new pollutants would be introduced into the stormwater system via stormwater runoff. Improvements that would be implemented under the Project, such as the Landscape Master Plan, SUSMP and LID BMP's that would result in improved water quality for on-site stormwater runoff, would not occur under the No Project/No Build Alternative. Nonetheless, since no new construction activities or development would occur under this Alternative, this No Project/No Build Alternative would have no construction-related or operational impacts on surface water quality and impacts would be less than those of the Project.

8. Land Use

Under the No Project/No Build Alternative, there would be no changes to land uses on the Medical Center Campus. No new uses or development would be introduced to the Medical Center Campus under this Alternative, and no General Plan amendment, zone change, or other entitlements would be requested. The No Project/No Build Alternative would therefore have no land use impacts related to land use policy consistency or physical compatibility. Therefore, overall impacts related to land use under the No Project/No Build Alternative would be less than those of the Project.

9. Noise

The No Project/No Build Alternative would not introduce new construction, operational noise sources, vibration or new traffic-related noise to the Medical Center Campus. Therefore, this Alternative would result on no construction or operational noise impacts. This Alternative would, therefore, avoid the Project's significant and unavoidable, short-term, construction noise and vibration impacts. Under this Alternative, existing Campus operations would continue as under current conditions, including helicopter operations. Therefore, this Alternative would have no operational noise and vibration impacts, and impacts would be less than those of the Project.

10. Population, Housing and Employment

Under the No Project/No Build Alternative, there would be no expansion of the Medical Center Campus as proposed under the Master Plan, and no new employment opportunities and resulting new employees. The Project involves future development of medical buildings and uses on-site as part of the proposed expansion, removal, replacement, and modification within the existing Campus, which would increase the visitor, patient, and employment population on the Medical Center Campus.The Project would cause a less than significant impact with regard to population, housing and employment. By comparison, the No Project/No Build Alternative would have no impact on population, housing and employment, and therefore impacts would be less than those of the Project.

11. Public Services

a. Fire Protection and Emergency Services

Fire protection and emergency medical services impacts under the Project would be less than significant with implementation of applicable mitigation measures. Under the No Project/No Build Alternative, no increased demand for fire protection and emergency medical services would occur and it would have no effect on emergency response times or emergency access, as could occur under the Project from construction activities, operational traffic, and Medical Center Campus design. Therefore, impacts related to fire protection and emergency services under the No Project/No Build Alternative would be less than those of the Project.

b. Sheriff Protection

Sheriff services impacts under the Project would be less than significant with implementation of applicable mitigation measures. The No Project/No Build Alternative would not change existing conditions or cause a net increase in the level of activity at the Medical Center Campus. Therefore, it would not alter demand for sheriff protection services or affect emergency response times. Impacts related to sheriff protection and emergency response times under the No Project/No Build Alternative would be less than those of the Project.

c. Parks and Recreation

Impacts to parks and recreational facilities under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not increase the on-site residential population or generate related demand for off-site parks and recreational facilities or services. This Alternative would have no impacts on recreational facilities and services or parks, and impacts would be less than those of the Project.

d. Schools

Impacts to schools under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not introduce new development to the Medical Center Campus that would directly or indirectly generate students, and thus no impact would occur. This Alternative would have no impact on schools, and impacts would, therefore, be less than those of the Project.

e. Libraries

Impacts to library facilities under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not increase the residential population on the Medical Center Campus or increase demand for library services, and thus no impact would occur in this regard. There would be no impacts on library services, and impacts would, therefore, be less than those of the Project.

12. Transportation and Parking

a. Construction

Construction activities under the Project would result in significant unavoidable traffic impacts, though such impacts would be temporary in nature. The No Project/No Build Alternative would not generate temporary increases in vehicle trips associated with hauling or workers. No construction traffic impacts would occur and, therefore, traffic impacts would be less than under the Project.

b. Operation

Long-term operation of the Project would result in significant unavoidable traffic impacts even with prescribed mitigation measures. The No Project/No Build Alternative would not generate any new trips or increase demand for parking, no transportation and parking impacts would occur, and all operational traffic and parking impacts would be less than the Project.

13. Utilities and Service Systems

a. Water Supply

Impacts to water supply and related infrastructure under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not change the existing facility or generate a net increase in employees and visitors, nor would it increase or alter landscaped areas. Although the Project would have a less than significant impact with respect to water supply, because the No Project/No Build Alternative would not cause any increase in water demand and thus would not result in any impacts, impacts with respect to water supply would be less than under the Project.

b. Wastewater

Impacts to wastewater conveyance and treatment facilities under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not generate wastewater or require the potential upgrade of any on- or off-site wastewater conveyance systems. Although the Project would have a less than significant impact with respect to wastewater, because the No Project/No Build Alternative would not cause any increase in wastewater generation, impacts with respect to wastewater treatment and conveyance would be less than under the Project.

c. Solid Waste

Impacts to solid waste facilities under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not would not change the existing facility,

create a net increase in employees or visitors, or affect solid waste generation compared to existing conditions. Therefore, impacts on solid waste facilities would be less than under the Project.

C. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

The No Project/No Build Alternative would avoid the Project's significant and unavoidable construction-related traffic impacts, as well as long-term operational traffic impacts at three Caltrans freeway facilities and the following twelve (12) intersections: Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would avoid the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during Phase C, Phase 5, and Phase 6, and would also avoid temporary operational helicopter noise impacts. The No Project/No Build Alternative would also avoid potentially significant impacts (mitigated to less than significant levels under the Project) associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

While the No Project/No Build Alternative would avoid the Project's significant impacts and would not result in any new environmental impacts, it would not achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

The No Project/No Build Alternative would also not achieve the Project's basic objectives to support the renovation of existing health facilities to meet the Affordable Care Act of 2010 and to modernize and integrate healthcare delivery. It would not update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. The No Project/No Build Alternative also would not provide opportunities for development up to 250,000 square feet of additional Bioscience Tech Park and support facilities and 225,000 square feet of expanded LA BioMed facilities. It would not meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would not allow for the fundamental reorganization, expansion and integration of outpatient services; renovate and appropriate new medical Campus construction; encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus. It would not achieve optimum public utilization of land and buildings under the ownership and control of the County. Lastly, the No Project/No Build Alternative would not create durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices.

5.0 ALTERNATIVES
B. ALTERNATIVE 2: REDUCED INTENSITY ALTERNATIVE A – ACUTE BED AND OTHER PLAN REDUCTIONS

A. DESCRIPTION OF THE ALTERNATIVE

Alternative 2, Reduced Intensity Alternative A – Acute Bed and Other Plan Reductions, would implement the Master Plan Project but at a lower overall intensity than proposed under the Project. Specifically, this Alternative would result in the construction of the New Hospital Tower, but with a reduction in the maximum number of licensed acute care beds from 446 to approximately 375, as well as construction of two outpatient buildings (compared to three under the Project), a reduced Central Plant, up to three parking structures with a maximum of 2,300 parking spaces, and partial renovation of the Existing Hospital tower (compared to complete renovation under the Project). This Alternative would also eliminate all retail uses from the development plan. In addition, Alternative 2 would be phased so that the New Hospital Tower would be constructed by 2025, which is prior to new outpatient buildings, with completion of construction activities anticipated in 2027. All development associated with LA BioMed build out and the proposed Bioscience Tech Park, as well as necessary infrastructure, landscaping, circulation, and other Medical Center Campus improvements, would be implemented as under the proposed Master Plan Project.

B. ENVIRONMENTAL IMPACTS

1. Aesthetics

a. Visual Character

(1) Construction

Construction activities typically result in site disturbance, movement of construction equipment, import and export of materials, views of incomplete structures and other activities that generally contrast with the aesthetic character of an area. Under the Reduced Intensity Alternative A, construction activities would be visible at various times from Vermont Avenue, Carson Street, Normandie Avenue, and 220th Street. As with the Project, construction activities would occur over the course of several years and within specific areas of the half-mile-long Medical Center Campus, as well as in limited off-site areas related to infrastructure and utility improvements necessary to serve Reduced Intensity Alternative A. As such, visual character impacts experienced at any single viewing location, for both on-site and off-site construction activities, would be intermittent and temporary. Because adverse visual effects would be temporary and would be confined to portions of the Medical Center Campus or distinct off-site areas at any one time, such effects would not be experienced by nearby viewers continually during the buildout of Reduced Intensity Alternative A. As with the Project, construction impacts would be less than significant. However, because overall construction would be incrementally less and be completed in fewer years than under the Project (completed in approximately 2027 instead of approximately 2030), the impact of construction on visual character under Reduced Intensity Alternative A would be incrementally less under Reduced Intensity Alternative A.

(2) Operation

Reduced Intensity Alternative A would allow for a reduced intensity with respect to the New Hospital Tower and would not completely renovate the existing Hospital Tower. The reduction in beds in the New Hospital Tower could allow for an incrementally smaller building, either in height or profile. Because a complete renovation of the old Hospital Tower would not be implemented, the Reduced Intensity Alternative A may not result in the same aesthetic character of the old Hospital Tower as under the Project. New sidewalks and street scape, internal landscaping, public art and other aesthetic amenities would be the same as under the Project. As with the Project, the transition of the Medical Center Campus to greater density would be consistent with growth trends and buildout in the surrounding area and Reduced Intensity Alternative A would be contained within the existing Medical Center Campus, aside from temporary off-site improvements and would not directly adjoin any other existing neighborhood or community uses. New buildings under the Reduced Intensity Alternative A would be required to implement the Design Guidelines, in which individual buildings must complement each other and the character of surrounding spaces, streets, and walks; maintain view corridors, both to and from buildings; and align axes, corner lines and features of neighboring buildings and spaces. Under the Design Guidelines, overall heights, massing, styles, and materials of neighboring buildings within the Medical Center Campus must be compatible. Views of service areas and mechanical equipment located both on grade and on building roofs must be screened. With the implementation of the Design Guidelines, the massing of buildings within the site would create a visually pleasant skyline effect (cluster) that would contribute to the visual character of the community.

Reduced Intensity Alternative A, as with the Project, would enhance the existing pedestrian experience along Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street with landscaping and streetscape, including the installation of canopy trees, provision of a landscaped parkway between the sidewalk and Carson Street, the removal of chain link fencing and walls along Vermont and Normandie Avenues and 220th Street, and other improvements in visual character and safety along 220th Street. As with the Project, Reduced Intensity Alternative A would create a more aesthetic public environment than under existing conditions. Because it would introduce elements that would enhance the public interface along all adjacent streets, as well as public access to gardens, public art, and other benefits, and maintain a high architectural standard, the Master Plan Project is not considered to substantially degrade the visual character of the Site or its surroundings because of height, bulk, pattern, scale, character, and other features. Impacts with respect to visual character under Reduced Intensity Alternative A would be similar to the Project and less than significant.

b. Views

Other than original and newer buildings and existing landscaping associated with the Medical Center Campus, the local area is not distinguished by historical or architecturally notable buildings or natural areas, focal views of which would be considered visual resources. The reduction in scale of the New Hospital Tower under Reduced Intensity Alternative A has the potential to, but may not necessarily reduce the New Hospital Tower's height or width as represented in the Project's stacking profile. Overall, however, stacking and building heights would be quite similar to that of the Project.

As with the Project, the new buildings of the Reduced Intensity Alternative A would be minimally visible in panoramic views of the Los Angeles Basin and, as such, would not cause any adverse view effects. However, development of the Project has the potential to affect existing views of the Medical Center Campus from adjacent public streets. The views of the Medical Center Campus from Carson Street, Vermont Avenue,

Normandie Avenue, and 220th Street would be improved by new, high quality construction, removal of hedging and fencing materials and surface parking lots, and installation of evergreen/semi-evergreen trees along the Medical Center Campus periphery that allow views into the Project's gardens, paths, buildings and public art. Views from Carson Street would also be upgraded by the streetscape program. Because no existing recognized valued publicly available views or scenic vistas are currently evident across the Medical Center Campus, as with the Project, the Reduced Intensity Alternative A would not block views of existing scenic resources. In addition, the Reduced Intensity Alternative A would upgrade overall views of the Medical Center Campus, while providing for deeper views into the proposed garden areas. The impact of Reduced Intensity Alternative A with respect to views would, thus, be less than significant and similar to that of the Project.

c. Light and Glare

(1) Construction

Lighting during construction would potentially cause minor light spillover in the vicinity of the Medical Center Campus, including the residential neighborhoods to the south, east, and west. However, construction activities would occur primarily during daylight hours and any construction-related illumination would be used for safety and security purposes only. As with the Project, construction lighting under Reduced Intensity Alternative A would only be located in specific locations within the approximately 72-acre site and would not be experienced by any sensitive, off-site receptors for a long duration. Any construction lighting would be limited and directed onto specific locations within construction sites to avoid impacts on-site medical patients. As with the Project, artificial light associated with construction activities would be limited to security lighting and specific construction tasks and would not adversely impact off-site sensitive receptors. Reduced Intensity Alternative A would also have a less than significant impact with respect to construction lighting. However, because overall construction would occur over a shorter timeframe (completed in approximately 2027 instead of approximately 2030 under the Project), construction lighting impacts under Reduced Intensity Alternative A would be incrementally less than those generated by the Project.

(2) Operation

(a) Artificial Light

As with the Project, the security and landscape lighting for Reduced Intensity Alternative A would be located near ground level, generally shielded from adjacent uses by landscaping, and low-intensity in character. Lighting would be directed downward to avoid glare at on-site occupied hospital rooms and to maintain a calm ambience for on-site visitors and employees. Landscaping and rooftop garden lighting would be low-level consistent with the proposed hospital use. Light spillage from the Project's multi-story components would be similar to existing conditions and would not be disruptive of off-site residential uses, the nearest of which would be more than 200 feet to the south of the New Hospital Tower. The removal of surface parking lots, including Parking Lot A, which is visible from residential uses to the east and the surface parking lot in the southwest corner of the Medical Center Campus, which is visible to uses at the south side of 220th Street, would reduce vehicle light sources and security lights currently visible from these residential areas. As with the Project, new lighting sources from Reduced Intensity Alternative A are not expected to substantially increase ambient light or cause light spill onto adjacent light-sensitive receptors. As such, artificial light impacts under Reduced Intensity Alternative A would be similar to those of the Project and less than significant.

(b) Glare

Building surfaces associated with window glass and polished surfaces, such as metallic or glass curtain walls and trim can reflect light. Glare can also occur between neighboring buildings when expanses of glass and metals are used for building sheathing. As with the Project, the Design Guidelines for Reduced Intensity Alternative A would require that building materials, massing, and styles are consistent with neighboring buildings, including the Existing Hospital tower, and to complement the character of the surrounding Medical Center Campus buildings. Buildings using expanses of metals and reflective glass would not meet these criteria, nor would such materials be consistent with the overall use of the Medical Center Campus as a medical facility. As such, Reduced Intensity Alternative A, as with the Project, would not generate glare from reflected sunlight that would alter the character of the off-site areas surrounding the Medical Center Campus. Therefore, glare impacts under Reduced Intensity Alternative A would be similar to the Project and less than significant.

2. Air Quality

a. Consistency with Air Quality Management Plan

(1) Construction

Reduced Intensity Alternative A would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under both Reduced Intensity Alternative A and the Project would not conflict with the long-term employment projections upon which the AQMP is based. Reduced Intensity Alternative would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment and, as such, would not conflict with implementation of AQMP strategies intended to reduce emissions from construction equipment and activities. Reduced Intensity Alternative A would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403. Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies. Although both the Project and Reduced Intensity Alternative A would result in less than significant impacts, since this Alternative would be smaller in terms of total development, it would have incrementally less impact than the Project.

(2) Operation

As with the Project, Reduced Intensity Alternative A would be consistent with growth projections set forth in the AQMP, and would be supportive of relevant Transportation Control Measures aimed at reducing vehicle trips. Both the Project and Reduced Intensity Alternative A would have a less than significant impact relative to the AQMP; however, because Reduced Intensity Alternative A is smaller in total development, it would have incrementally less impact.

b. Violation of Air Quality Standards

(1) Construction

Construction of Reduced Intensity Alternative A has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Medical Center Campus. However, as with the Project, construction-related daily emissions for the criteria and precursor pollutants would not exceed the SCAQMD regional thresholds for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Although emissions would be less than significant under both the Project

and Reduced Intensity Alternative A, because Reduced Intensity Alternative A would involve less construction, it would have incrementally less impact than the Project with respect to the SCAQMD regional thresholds.

(2) Operation

Operation of Reduced Intensity Alternative A has the potential to create air quality impacts based on daily trip generation and energy demand. As discussed in Section 4.B., Air Quality, of the Draft EIR, the Project's net operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed SCAQMD regional thresholds for during interim operations when combined with on-going construction emissions. Additionally at full build-out, operation of the Project would not exceed the SCAQMD numeric indicators. As such both the Project and Reduced Intensity Alternative A would have a less than significant impact with respect to SCAQMD standards. However, because daily trips and the scope of development would be incrementally less under Reduced Intensity Alternative A, impacts relative to SCAQMD thresholds would be less than the Project.

c. Non-Attainment Pollutants

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would result in the emission of criteria pollutants for which the region is in nonattainment; however, the maximum daily emissions from construction of Reduced Intensity Alternative A would not exceed the numeric indicator of significance for criteria pollutants nor their precursors. As with the Project, compliance with CARB and SCAQMD control measures and the same design features implemented by the Project would minimize and reduce construction emissions. Neither Reduced Intensity Alternative A nor the Project would result in a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would involve less construction, it would lower total emissions than the Project.

(2) Operation

Operation of Reduced Intensity Alternative A would result in the emission of criteria pollutants for which the region is in nonattainment; however, as with the Project, maximum daily emissions from operation would not exceed the threshold of significance for any of pollutants in nonattainment nor their precursors. During interim operations that overlap with construction emissions and at full build-out, operation of Reduced Intensity Alternative A would not exceed the applicable thresholds of significance. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would be incrementally smaller in development scope, it would generate fewer total emissions than the Project.

d. Substantial Pollutant Concentrations

As with the Project, Reduced Intensity Alternative A would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the either Reduced Intensity Alternative A or the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Reduced Intensity

Alternative A at full build-out would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of either the Project or Reduced Intensity Alternative A would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks which exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of either the Project or Reduced Intensity Alternative A would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would be incrementally smaller in scale, it would generate fewer total emissions than the Project.

e. Odors

(1) Construction

As with the Project, Reduced Intensity Alternative A may emit odors during construction associated with the use of architectural coatings and solvents. However, SCAQMD Rule 1113 limits the allowable amount of VOCs from architectural coatings and solvents. Since compliance with SCAQMD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Both the Project and Reduced Intensity Alternative A would result in a less than significant impact. Also, because SCAQMD Rule 1113 would be equally enforceable under both the Project and Reduced Intensity Alternative A, impact levels would be similar.

(2) Operation

As with the Project, Reduced Intensity Alternative A does not include any uses identified by the SCAQMD as being typically associated with objectionable or nuisance odors. Waste collection areas and disposal for the Reduced Intensity Alternative A would be covered and situated away from the property line and sensitive off-site uses. Under both the Project and Reduced Intensity Alternative A, medical waste would be properly sealed and stored in accordance with applicable rules to ensure that no objectionable medical waste-related odors would be created. Best management and good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less than significant under both the Project and Reduced Intensity Alternative A and impact levels would be similar.

3. Energy

a. Construction

Construction would entail consumption of diesel for hauling and construction equipment, gasoline for some hauling and workers' transportation, and electricity to provide temporary power for lighting and electronic equipment and to power certain construction equipment. Some heavy-duty construction could be electric or alternatively fueled, such as tower cranes, based on commercial availability. As with the Project, Reduced Intensity Alternative A would utilize electric or alternatively fueled equipment as available and as feasible. It is estimated that the construction of the Project would require approximately 0.002 percent of the statewide annual gasoline consumption and 0.003 percent of the statewide annual diesel consumption. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy. As with the Project, Reduced Intensity Alternative A would also meet or exceed the County's waste diversion targets. Neither the Project nor Reduced Intensity Alternative A would result in the wasteful,

inefficient, and unnecessary consumption of energy during construction, or preempt future energy conservation during construction. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would be incrementally smaller in development scope, it would generate less energy demand than the Project.

b. Operation

Operation of both Reduced Intensity Alternative A and the Project would utilize energy for necessary on-site activities and off-site transportation associated with Campus employees, patients, and visitors traveling to and from the site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, the Project and Reduced Intensity Alternative A would meet or exceed energy standards by incorporating green building measures consistent with County policy that requires LEED Silver-level certification and the County's CCAP. The Project would also provide opportunities for future energy efficiency by promoting solar power and electric or alternatively-fueled vehicles. Neither the Project nor Reduced Intensity Alternative A would result in the wasteful, inefficient, and unnecessary consumption of energy during operation, or preempt future energy conservation during operation. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would be incrementally smaller in development scope, it would generate less overall energy demand than the Project.

4. Geology and Soils

a. Seismic Hazards

The Harbor-UCLA Campus is located within a seismically active region, with the potential for seismic ground shaking. The horizontal peak ground acceleration (PGA) for the site corresponds to the Targeted Maximum Considered Earthquake (MCE_R) of 0.65g. This would be the same under Reduced Intensity Alternative A and the Project. Based on these PGA estimates, ground shaking at the Harbor-UCLA Campus could have a potentially significant impact on people and proposed buildings on the Harbor-UCLA Campus. Although seismic risk exists, Reduced Intensity Alternative A would implement MM-GEO-1, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-1, which requires adherence to the recommendations of an approved Geotechnical Evaluation, would reduce seismic impacts for Reduced Intensity Alternative A and the Project to a less than significant level. With the implementation of MM-GEO-1, the Project and Reduced Intensity Alternative A would have a less than significant and similar impact with respect to seismic hazards.

b. Soil Erosion and Topsoil

Reduced Intensity Alternative A would require the same or potentially less grading, including clearing, excavation, stockpiling, than the Project. As with the Project, all work would be performed in accordance with a National Pollutant Discharge Elimination System (NPDES) Permit, which incorporates a Storm Water Pollution Prevention Program (SWPPP) and Best Management Practices (BMPs) for erosion control. Implementation of BMPs would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. Also, the relatively gentle topographic gradients at the Medical Center Campus would reduce the potential for soil erosion during construction. As with the Project, Reduced Intensity Alternative A would have a less than significant impact with respect to soil erosion and topsoil. However, because the potential exists that less area would be graded under Reduced Intensity Alternative A, Reduced Intensity Alternative A would have incrementally less impact with respect to soil erosion than the Project.

c. Geologic Stability

As with the Project, Reduced Intensity Alternative A could be exposed to differential soil settlement and liquefaction beneath proposed buildings because of the presence of alluvium, possible undocumented fill, and relatively shallow depths to groundwater. If wet or saturated soil conditions are encountered during excavation, instability could present a constraint to the construction of foundations. Because the risk of compressible/collapsible soils and shallow groundwater exists, as with the Project, Reduced Intensity Alternative A would implement MM-GEO-2, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-2, which provides several approaches to address settlement and shallow groundwater, would reduce the potential for these geologic hazards. With the implementation of MM-GEO-2, the Project and Reduced Intensity Alternative A would have a less than significant and similar impact with respect to geologic stability.

d. Expansive and Corrosive Soils

The near-surface soils at the Medical Center Campus are generally sandy silt and clayey and typically expansive when wetted. In addition, on-site soils are potentially corrosive to concrete and metal, which could cause premature deterioration of underground structures or foundations. The risk of expansive and corrosive soils would occur under both Reduced Intensity Alternative A and the Project. As with the Project, Reduced Intensity Alternative A would implement MM-GEO-3, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-3, which provides performance standards and required assessments to address expansive and corrosive soils would reduce the effects of these soils conditions. With the implementation of MM-GEO-3, the Project and Reduced Intensity Alternative A would have a less than significant and similar impact with respect to expansive and corrosive soils.

5. Greenhouse Gas Emissions

a. Consistency with CCAP

As with the Project, Reduced Intensity Alternative A would be consistent with the County's CCAP, which provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County. Based on the conservatively estimated GHG emissions, the Project would result in a net increase in GHG emissions from 2010 levels. However, the potential increase is extremely small compared to the County's total inventory. One the Project objectives to maintain critical trauma services in the South Bay service region of the County of Los Angeles by redeveloping the existing hospital site, would result in more GHG efficiency than developing a new hospital campus on a greenfield site. Therefore, while the Project and Reduced Intensity Alternative A results in a conservatively estimated minimal net increase in GHG emissions, both the Project and Reduced Intensity Alternative A would be consistent with applicable CCAP measure to minimize its GHG emissions. As such, both the Project and Reduced Intensity Alternative A would not be expected to conflict with the County's ability to achieve the CCAP target reduction. Both the Project and Reduced Intensity Alternative A would have a less than significant impact relative to the CCAP and because both the Project and Reduced Intensity Alternative A would be consistent, impact levels would be similar.

b. Greenhouse Gas Reduction Plans

Construction and operation of the Reduced Intensity Alternative A, as with the Project, would be consistent with applicable GHG emissions reductions plans, policies, or regulations. Design features, such as green

building measures would reduce GHG emissions by increasing energy-efficiency beyond regulatory requirements, reducing indoor and outdoor water demand, and incorporating waste reduction measures. The Project would also incorporate components to reduce transportation-related GHG emissions by providing bicycle and end-of-trip facilities, and by being located within one-quarter mile of transit, thereby encouraging alternative forms of transportation. As with the Project, Reduced Intensity Alternative A would be constructed and operated in a manner consistent with a Silver Certification from the USGBC's LEED program. The LEED features that would be incorporated in the Project would include building efficiency measures to reduce energy consumption, water-saving measures, and waste reduction measures. Both the Project and Reduced Intensity Alternative A would be designed to optimize energy performance. Trees planted on the Medical Center Campus as part of the planned landscaping would sequester CO_2 as they age (not included in the quantitative analysis). The Project would reduce indoor water use by a minimum of 20 percent with water fixtures that exceed applicable standards. As a result, construction and operation of the both the Project and Reduced Intensity Alternative A would not have a significant impact with respect to consistency with GHG reduction plans. Because both the Project and Reduced Intensity Alternative A would be consistent with applicable plans, impact levels would be similar.

6. Hazards and Hazardous Materials

a. Hazardous Materials Management

As with the Project, Reduced Intensity Alternative A would require the demolition of some buildings and equipment identified as having ACMs, LPB, and PCBs; the removal and/or relocation of USTs and ASTs that presently contain, or have contained in the past, fuels and other potentially hazardous materials; and the disturbance of soil potentially contaminated with hazardous materials as the result of on-site or off-site LUSTs. Remediation of these materials would be conducted by qualified professionals in accordance with regulations governing these activities, including SCAQMD's Rule 1403 (ACBMs); Cal-OSHA rules (LBP); the federal Toxics Substances Control Act (PCBs); and, for USTs, RCRA Subtitle I, the State Health and Safety Code, and LACFD's enforcement of the State's applicable CCR regulations, with oversight by the RWQCB where groundwater may be affected. Reduced Intensity Alternative A, as with the Project, has the potential to result in accidental upset and release of hazardous materials into the environment, which is a potentially significant impact. In addition, the potential extent of possible contamination of underlying groundwater with petroleum hydrocarbons originating with nearby off-site LUSTs is not known, and construction activities have the potential to result in a significant hazard related to potential contaminated soil and groundwater. As with the Project, Mitigation Measures HAZ-1 through HAZ-4, which require abatement in accordance with the recommendation of the Hazardous Building Materials Survey, removal of USTs pursuant to the LACFD review and closure letter, preparation and adherence to a Soils Management Plan, and investigation of the purpose and potential abandonment of existing on-site groundwater monitoring wells, would be implemented. With the implementation of Mitigation Measures HAZ-1 through HAZ-4, hazardous materials impacts associated with Reduced Intensity Alternative A and the Project would be reduced to less than significant levels. Because Reduced Intensity Alternative A involves demolition and excavation and development in an area with potential groundwater contamination, as under the Project, with mitigation, impacts with respect to hazardous materials management would be similar and less than significant.

b. Airport Safety Provisions

Reduced Intensity Alternative A is located on the same property as the Project, which is not within the vicinity of an airport. The nearest airport is more than two miles away. Because of this distance, neither the

Project nor Reduced Intensity Alternative A would interfere with operations any local airports or airstrips. Impacts regarding airport safety under both Reduced Intensity Alternative A and the Project would, therefore, be similar and less than significant.

c. Emergency Response Plans

Reduced Intensity Alternative A, as with the Project, would not adversely affect existing emergency access routes. Medical Center Campus ingress and egress would be modified to create distinctions between access and parking for the general public and staff, including a new signalized public entrance on Carson Street. Vehicular access and circulation would avoid conflicts with traffic movements on local roadways and would facilitate the provision on-site emergency services. During construction, adjacent streets may be temporarily affected due to construction activity, such as temporary lane closures. Such occurrences would be implemented in accordance with a construction traffic management plan, which would allow for responses to emergency accessibility needs. The existing helistop, which would be temporarily relocated to one of two potential locations at the western end of the Medical Center Campus during construction of the new Hospital Tower, would remain operational. As with the Project, regulatory compliance and project features, such as improved access, would avoid the need to generate new emergency plans beyond those normally implemented to address on-site emergency situations. As with the Project, impacts related to emergency response plans would be less than significant. Impact levels would be similar under both the Reduced Intensity Alternative A and the Project.

7. Hydrology and Water Quality

a. Surface Water Hydrology

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative A would be subject to a Construction General Permit and associated NPDES requirements, which include development and implementation of a SWPPP with appropriate BMPs. BMPs to control stormwater runoff during construction could include, but are not limited to, the use of water bars, silt fences, and staked straw bales. Additional source-control BMPs might also be required to prevent runoff and eliminate non-stormwater discharges. Based on the depth to groundwater within the project site, dewatering and any related runoff are not anticipated. Compliance with NPDES requirements would reduce surface water runoff during construction to a less than significant level under both Reduced Intensity Alternative A and the Project. The level of impact related to surface water hydrology under both scenarios would be similar.

(2) Operation

As with the Project, Reduced Intensity Alternative A would convert more than three acres of existing pavement to turf area. Any proposed new storm drain connections to the reinforced concrete box channel or open channel owned by the Flood Control District would be conducted under a connection permit approved by the District. This permit would require a hydrology analysis and a comparison with the design peak flow rate of the facility. If the calculated peak flow rate exceeded the facility's design peak flow rate, the District will generally require detention to mitigate the increase in peak flow rates. As with the Project, Reduced Intensity Alternative A would be required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (0 percent impervious) based on LID Standards. Several dry wells were previously constructed to meet this

requirement. This approach is likely to be implemented for future areas to be redeveloped under both the Project and Reduced Intensity Alternative A. LID features include resource conservation, flatter wider swales, flatter slopes, turf depression, landscape island storage, rooftop detention/retention, catch basins/seepage pits, sidewalk storage, permeable pavement, and other measures. With the increase in pervious area, the calculated peak flow of the future development will generally be less than under existing conditions; in addition, any future site development will require compliance with County of Los Angeles and LID standards for stormwater management. With implementation of LID measures and permitting from the District related to the reinforced concrete box channel and drainage ditch, surface water impacts associated with both Reduced Intensity Alternative A and the Project would be less than significant. Impacts related to surface water runoff would be similar under both Reduced Intensity Alternative A and the Project.

b. Surface and Groundwater Quality

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative A would be subject to existing regulations governing surface and groundwater quality. The required Construction General Permit and associated NPDES requirements include development and implementation of a SWPPP with appropriate BMPs to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. Compliance with construction phase BMPs and other requirements are considered protective of water quality during construction and would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. The NPDES Construction General Permit and SWPPP establish procedures and action protocols for the handling of construction-related chemicals and encountered groundwater. Based on existing and historical depths to groundwater within the project site, construction dewatering is not anticipated to be required. However, should groundwater be encountered that would require dewatering, the County would require contractors for individual Project components to apply for coverage and adhere to the monitoring and reporting program under RWQCB Order No. R8-2009-0003. Existing regulations would ensure that any potential dewatering activities would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to Dominguez Channel. Therefore, impacts related to surface and groundwater quality would be less than significant and similar under both Reduced Intensity Alternative A and the Project.

(2) Operation

Stormwater discharge may include pollutants of concern, such as sediment, hydrocarbons, oil, grease, heavy metals, nutrients, herbicides, pesticides, fecal coliform bacteria, and trash. This runoff can flow directly into storm drains and continue through pipes until it is released, untreated, into the Dominguez Channel. Untreated stormwater runoff could degrade water quality in surface and waters and can affect drinking water, human health, and plant and animal habitats. Reduced Intensity Alternative A, as with the Project, would utilize landscaping in strategic ways to capture and clean stormwater runoff. Strategies include replacement of three acres of pavement with landscaping. The Project would avoid the use of pollutants, chemicals, or soil amendments that could enter surface water runoff. Organic maintenance methods or Integrated Pest Management may be used. Implementation of County LID features, including bioretention features, modifications to address the potential leaching of nutrients, and post-construction BMPs would ensure that operations would not degrade the quality of receiving waters to levels below standards considered acceptable by the Los Angles RWQCB or other regulatory agencies, or impair the beneficial uses of the receiving waters. With compliance with existing regulations, both Reduced Intensity Alternative A and

the Project would have a similar, less than significant impact, related to surface and groundwater water quality.

8. Land Use

a. Applicable Plans and Policies

As with the Project, Reduced Intensity Alternative A would be consistent with the policies of the SCAG 2008 Regional Comprehensive Plan and Compass Growth Visioning (including the Compass 2% Blueprint Strategy) to focus growth in existing and emerging centers, along major transportation corridors, and in proximity to transit. Reduced Intensity Alternative A would be consistent with SCAG's 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy (2016 RTP/SCS) by enhancing the pedestrian environment within the Medical Center Campus and along Carson Street, and improving pedestrian connectivity between the Medical Center Campus, the surrounding community, and the Carson Street Metro Transit Station. Reduced Intensity Alternative A would be consistent with applicable policies of General Plan Update in that it would be compatible with the existing adjacent off-site land uses, incorporate sustainable design, facilitate multiple modes of transportation (including alternative modes), provide interconnected and safe pedestrian and bicycle circulation, provide required green space and landscaped setbacks, result in less than significant impacts to biological, aesthetic and cultural resources after mitigation, result in less than significant seismic/geotechnical and noise impacts after mitigation, be developed with adequate public service and water, wastewater, and solid waste disposal capacity to serve the Project; and foster regional economic development.

Reduced Intensity Alternative A would also be consistent with the Los Angeles County General Plan's "P" GPLU land use designation, which permits a broad range of public and semi-public facilities and community-serving uses, and with the overall floor area ratio (FAR) not to exceed 3:1. The Project would have a maximum FAR of 0.78 and the Reduced Intensity Alternative A would be incrementally less. As with the Project, Reduced Intensity Alternative A would be consistent with the Los Angeles Planning and Zoning Code and would not exceed the development limits associated with the underlying C-3 zone. The Project and Reduced Intensity Alternative A would have a less than significant and similar impact with respect to applicable plans and policies.

b. Land Use Compatibility

As with the Project, Reduced Intensity Alternative A would alter the existing visual appearance of the Medical Center Campus through denser development than under existing conditions. However, the Site is located within a fully urbanized setting within the 110 Freeway/Carson Station TOD. The area is also undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. Reduced Intensity Alternative A, as with the Project, would provide landscaping and street trees along the street frontages where in some areas such landscaping and trees are lacking, and would be designed in compliance with unifying design guidelines which would improve the visual appearance of the Medical Center Campus. While the densification of land uses at the Medical Center Campus would be noticeable from adjacent off-site land uses, including the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Medical Center Campus and the residential neighborhood to the north), because of the urbanizing trend in the area and proposed streetscape/screening, the Reduced Intensity Alternative A, as with the Project, would result in less than

significant land use incompatibilities with adjacent off-site land uses. However, because Reduced Intensity Alternative A would have incrementally less density than under the Project, it would have less impact with respect to land use compatibility.

9. Noise

a. Construction Noise

As with the Project, construction of Reduced Intensity Alternative A would involve demolition, grading, building construction, and paving. Each stage would involve the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. Demolition typically involves the use of excavator, tractor/loader/backhoe, concrete saw, dozer, water truck, and loader. Grading typically involves the use of drill water truck, dozer, tractor/loader/backhoe, and grader. Building construction typically involves the use of crane, forklift, welder, tractor/loader/backhoe, air compressor, and water truck. Paving typically involves the use of tractor/loader/backhoe, concrete mixer truck, roller, paver, and trencher. The Project would be constructed using typical construction techniques. Construction noise would exceed the significance threshold at the several receptor locations during various development phases. As with the Project, Reduced Intensity Alternative A would implement mitigation measures, such as MM NOISE-1 and project design features to achieve a noise reduction in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. However, even with implementation of the mitigation measure, construction-related noise would exceed the noise threshold at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. Although both the Project and Reduced Intensity Alternative A would result in a significant and unavoidable noise impact, because Reduced Intensity Alternative A is reduced in development scope and duration of construction, construction noise impacts would be incrementally less.

b. Operational Noise

As under the Project, noise sources associated with operation of Reduced Intensity Alternative A, including mechanical equipment, loading dock activity, refuse collection, parking structure activity, and traffic, would increase the ambient noise level at the nearest noise-sensitive receptor, but by a less than the threshold of significance. Composite noise level increases at all other receptor locations are also expected to be less than significant, given their distance from the site and the presence of intervening structures. As such, the operational noise level impacts due to the future operation of Project and Reduced Intensity Alternative A would be less than significant. However, because Reduced Intensity Alternative A is incrementally smaller in development scope than the Project and would generate less traffic, operational noise impacts would be less.

With regard to helicopter-related noise, the Project would result in less than significant impacts at Project buildout once the permanent rooftop helistop on the New Hospital Tower is operational. However, operation of the temporary helistop at either interim location would exceed established noise thresholds at nearby sensitive receptors to the south of the Medical Center Campus, and no mitigation exists that could reduce noise levels to acceptable levels. Therefore, impacts under the Project would be considered significant and unavoidable. Because Reduced Intensity Alternative A would also require operation of the temporary helistop locations (though only one would be operational at any given time, as under the Project), impacts under this alternative would be significant and unavoidable and similar to the Project.

c. Construction Vibration

The construction of Reduced Intensity Alternative A, as with the Project, would generate ground-borne construction vibration during demolition, shoring and excavation, and large bulldozer operation. Vibration velocities from operation of construction equipment would range from approximately 0.076 to 0.089 inches per second PPV at 25 feet from the source of activity. Maximum vibration velocities to which receptors could be exposed range from 0.01 to 0.027 inches per second PPV. This value is considerably lower than the impact threshold of 0.5 inches per second PPV, and as such, construction vibration would be less than significant at the nearest residential building. Although construction vibration levels would be less than significant under both the Project and Reduced Intensity Alternative A would be less than significant, because the development scope and duration of Reduced Intensity Alternative A's construction activities would be incrementally less than under the Project, construction vibration impacts would be less.

d. Operational Vibration

As with the Project, operation of Reduced Intensity Alternative A would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the nearest off-site buildings would be up to 0.01 inches per second PPV and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility. As such, under both the Project and Reduced Intensity Alternative A, vibration impacts associated with operation of the Project would be less than significant. However, because Reduced Intensity Alternative A would be incrementally smaller in development scope than the Project (would generate less traffic), operational vibration impacts would be less.

10. Population, Housing and Employment

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would employ a mobile regional construction work force. Given the mobility and short duration of work at a particular site, a construction labor pool that can be drawn upon in the region and workers are not expected to relocate as a result of such employment opportunities. The number of construction workers would vary from approximately 212 workers per day during less intensive construction activity up to a maximum of approximately 1,650 construction workers on a day during the peak construction period. Because of a large, regional construction pool and the mobility of construction workers, construction activities would not generate a notable demand for housing, or affect population patterns. Although the duration of construction would be incrementally less under Reduced Intensity Alternative A, as with the Project, construction of both Reduced Intensity Alternative A and the Project would have a less than significant impact relative to construction-related population, housing, and employment. However, because of an incrementally reduced scope of development, Reduced Intensity Alternative A would have slightly less impact than under the Project.

(2) Operation

Compared to the Project, Reduced Intensity Alternative A would reduce licensed hospital beds from 446 to approximately 375, construct two outpatient buildings (compared to three under the Project), reduce the

scale of the Central Plant, and only partially renovate of the Existing Hospital tower. There would be incrementally fewer annual patient visits than under the Project and Reduced Intensity Alternative A. Total employment at the site under the Project would represent a small percent of the projected growth in the South Bay Planning Area up to Year 2030 and very small percent of estimated growth in unincorporated Los Angeles County for this same period. Because the Project's employment increase would not exceed local and SCAG's growth projections for the period between 2016 and 2030, Reduced Intensity Alternative A, which would have incrementally fewer employees, would also not exceed growth projections. As with the Project, impacts regarding consistency with the projected employment growth would be less than significant. However, because of the reduced intensity, impacts under Reduced Intensity Alternative A would be incrementally less.

11. Public Services

a. Fire Protection and Emergency Services

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases. These periodic construction activities could temporarily increase demand for fire protection and EMS, and may cause the occasional exposure of combustible materials such as wood, plastics, sawdust, coverings and coatings, heat sources including machinery and equipment sparking, exposed electrical lines, welding activities, and chemical reactions in combustible materials and coatings. However, compliance with California Division of Occupational Safety and Health Administration (Cal/OSHA) and Fire Code requirements; on-site fire suppression equipment specific to construction activities; compliance with applicable codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials would reduce demand for fire protection and EMS during construction to a less than significant level. Emergency access would be provided and maintained throughout construction to existing uses, new uses, and fire hydrants. While Reduced Intensity Alternative A and the Project would require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Medical Center Campus, Reduced Intensity Alternative A, as with the Project, would provide a construction traffic management plan to establish temporary traffic controls, prohibit construction vehicle activities and parking in surrounding off-site areas, and require various safety precautions such as alternate routing and protection barriers. With the implementation of the traffic management plan, impacts related to emergency access, vehicular access, pedestrian and bicycle access and safety, public transit, and construction parking would be less than significant under both Reduced Intensity Alternative A and the Project. Although impacts would be less than significant under both the Project and Reduced Intensity Alternative A, impacts would be less under the Reduced Intensity Alternative A because of the incrementally shorter construction time frame.

(2) Operation

As with the Project, Reduced Intensity Alternative A would be subject to the requirements of the County Code (e.g., Building Code, Fire Code, and Utilities Code) for new construction that address structural design, building materials, site access, fire lanes, fire flow requirements, automatic sprinkler systems, alarms, and smoke detectors. The LACFD would review and approve all plans at the building permit and plan check phases of the Project to ensure compliance with applicable Fire Code requirements, thereby minimizing the

risk of increased operation fire safety hazards. An LACFD-approved Emergency Response Plan would include mapping of site access and emergency exits, evacuation routes for vehicles and pedestrians, and locations of the nearest hospitals and fire stations. Finally, because Reduced Intensity Alternative A would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, fire safety at the Medical Center Campus would be improved.

As with the Project, development of Reduced Intensity Alternative A would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic in the Project vicinity. According to Section 4.L., Transportation and Traffic, of this Draft EIR, because implementation of mitigation measures is not entirely within the control of the County, significant and unavoidable impacts would occur at the several intersections in the area, which could affect LACFD emergency vehicle response times in the area. However, as under the Project, Reduced Intensity Alternative A would provide traffic design measures, including the installation roadway and traffic control improvements that would enable emergency access to the Medical Center Campus. In addition, emergency response is routinely facilitated, particularly for high priority calls, through use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. In light of the above, and the fact that emergency response times to the Medical Center Campus from Station 36 are currently within the LACFD's response time goals, operational impacts under the Project and Reduced Intensity Alternative A on emergency response times would less than significant. However, because visitation and hospital beds would be reduced by approximately 16 percent under Reduced Intensity Alternative A, impacts with relation to emergency response would be incrementally less.

As with the Project, Reduced Intensity Alternative A would require greater fire flows at the site than required under existing conditions. As discussed in Section 4.K.1, Fire Protection and Emergency Services of this Draft EIS, water service to the Medical Center Campus are adequate to meet Project requirements and, as such, would be adequate to meet Reduced Intensity Alternative A fire flow requirements. Impacts related to fire flow would be less than significant under both the Reduced Intensity Alternative A and the Project. However, because of the reduced scope of development under the Reduced Intensity Alternative A, fire flow demand would be incrementally less.

b. Sheriff Protection

(1) Construction

Construction activities associated with Reduced Intensity Alternative A, as under the Project, would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through buildout. These periodic construction activities could temporarily increase demand for police protection associated with patrolling the construction site. However, as required by PDF SHER-1, the construction sites would be fully fenced, lighted with security lighting, and patrolled either by on-site LACSD personnel from the on-site LACSD satellite station or by private security hired by DHS. Furthermore, an LACSD satellite station is located on-site, and the Medical Center Campus has a 24-hour a day LACSD presence, which would both discourage construction site crimes and provide for almost immediate response to any observed or reported construction site crimes that are in process. Therefore, the demand for police protection services during construction of Reduced Intensity Alternative A would not require new or altered police protection facilities to maintain service, and the impact would be less than significant but incrementally reduced compared to the Project due to the reduction in overall construction activities on the Medical Center Campus.

Regarding police access and response times during construction, as would be the case under the Project, construction staging and construction worker parking associated with Reduced Intensity Alternative A would be accommodated on the Medical Center Campus, limiting potential conflicts with traffic on local streets. In addition, as required by the PDF-SHER-2, emergency access would be provided and maintained for existing and new on-site uses, and to off-site uses, throughout construction. Furthermore, while the Project and Reduced Intensity Alternative A would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site, with the implementation of various traffic- and law enforcement-related Project Design Features, as under the Project, impacts on police access and response times during construction would not require new or altered police protection facilities to maintain service, and thus would be less than significant. However, given the reduction in overall development intensity under this Alternative, construction-related impacts would be incrementally reduced.

(2) Operation

The Master Plan Project would result in a net increase of 1,178,071 square feet of building floor area on-site, and net increases in total Campus-wide employees and annual patient visits of 2,030 employees and 185,745 annual patient visits, respectively. This, in turn, would create the need for additional space at LACSD's on-site satellite station to accommodate the additional officers. However, Reduced Intensity Alternative A would result in an overall increase in development intensity compared to existing conditions, but this increase would be less than that of the Project. Therefore, as with the Project, operational impacts on police protection services would be less than significant, but would be incrementally reduced compared to the Project due to the reduction in overall development intensity.

c. Parks and Recreation

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would not physically affect existing public parks and recreational facilities as no such facilities are located on or directly adjacent to the Medical Center Campus. Also, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local parks and recreational facilities to the extent that new recreational facilities would be required or that substantial physical deterioration of such facilities would occur. Construction effects on parks under either the Reduced Intensity Alternative A or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative A would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative A would generate incrementally fewer employees than the estimated 2,030 new employees under the Project. However, Reduced Intensity Alternative A represents a large percentage of the Project's development scale and would likely bring employees and their families to the area. As such, Reduced Intensity Alternative A could create a demand for public parks and recreational facilities. A portion of the new on-site employees would be expected to be derived from the existing local labor pool, and it is likely that these employees and their families likely already generate a demand for public parks and recreational facilities in the local area. Furthermore, any use of existing public parks and recreational

facilities by Project employees and their families would likely be dispersed over a wide geographic area rather than concentrated at any one of the eleven local public parks and recreational facilities. As with the Project, Reduced Intensity Alternative A would have a less than significant impact on parks and recreational facilities. However, because Reduced Intensity Alternative A would have incrementally fewer new employees than under the Project, impacts would be incrementally less.

d. Schools

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would not physically affect existing public schools as no public schools are located on or directly adjacent to the Medical Center Campus. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public schools would be maintained during Project construction. Given the general accessibility of the Medical Center Campus and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and have children that would use local public schools. Hence, new or physically altered local public schools would not be required to provide service to the children of Project construction workers and maintain acceptable service ratios and other performance standards. Construction on schools, as with the Project, would be less than significant and similar under Reduced Intensity Alternative A.

(2) Operation

It is estimated that, under the Project, families of new employees would generate an estimated 29 grade K-5 students, 14 grade 6-8 students, and 18 grade 9-12 students. Reduced Intensity Alternative A would generate incrementally fewer employees and students. It is likely that student attendance under both Reduced Intensity Alternative A and the Project would be split among the 11 elementary and high schools in the local area, and possibly beyond. If all new students were distributed among the nearest schools, it is unlikely that these students alone would necessitate the need to construct new or physically altered school facilities given the small numbers of students involved. As with the Project, impacts on local schools under Reduced Intensity Alternative A and would be less than significant. However, because Reduced Intensity Alternative A is reduced in scale, impacts would be incrementally less.

e. Libraries

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would not physically affect existing libraries, none of which are located on or directly adjacent to the Medical Center Campus. In addition, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local libraries to the extent that new libraries would be required or that substantial physical deterioration of such facilities would occur. Construction effects on libraries under either the Reduced Intensity Alternative A or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative A would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative A would generate incrementally fewer employees than the Project's estimated net increase of 2,030 employees. Reduced Intensity Alternative A, however, represents a large percentage of the Project's development scope and would generate new employees, their families, and demand for library services. As with the Project, this increase in demand would not be expected to be substantial or result in the need for new or physically altered library facilities. A portion of new employees are expected to be derived from the existing local labor pool and thus already generate a demand for public libraries. The existing on-site AF Parlow Library of Health Sciences would be retained under Reduced Intensity Alternative A to help meet the demand for library facilities. Patients and visitors of existing public library facilities would also likely be split among the four public libraries in the vicinity; thus, avoiding the concentration of demand at any one library. As with the Project, Reduced Intensity Alternative A would have a less than significant impact on library services. However, because Reduced Intensity Alternative A would have generate incrementally fewer new employees than under the Project, impacts would be incrementally less.

12. Transportation and Parking

a. Construction

As with the Project, the implementation of a Construction Traffic Management Plan and pedestrian safety program under Reduced Intensity Alternative A would reduce potential construction impacts associated with hauling, deliveries and worker vehicles. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance would minimize the potential disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the commercial zones and residential neighborhoods. However, given the amount of development in the Project area, the uncertainty in terms of timing for each related Project and the potential for overlap of development, the Project could contribute to a cumulatively significant construction impact. Beyond compliance with County requirements regarding haul routes and implementation of traffic controls and safety procedures, no other feasible mitigation measures have been identified. As such, construction traffic impacts, under both Project-specific and cumulative conditions, would be significant and unavoidable. However, because of a shorter construction duration, construction traffic impacts would be incrementally less than under the Project.

b. Operation

(1) Intersection Service Levels

As with the Project, development of Reduced Intensity Alternative A would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic in the Project vicinity. Significant traffic impacts are anticipated at the following twelve (12) intersections: Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. Compared to the Project, intersection traffic would be reduced by approximately 16 percent but are still anticipated to exceed threshold levels. Although implementation of proposed mitigation measures (MM TRAF-1 through MM TRAF-3) would reduce impacts

to less than significant levels for three of these intersections, because there is uncertainty whether other decision-making agencies will implement mitigation measures, impacts are considered significant and unavoidable under both Reduced Intensity Alternative A and the Project. However, because of the reduction in scale of Reduced Intensity Alternative A, impacts would be incrementally less than under the Project.

(2) CMP Transportation System

As with the Project, Reduced Intensity Alternative A would not exceed the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant under both the Reduced Intensity Alternative A and the Project. However, because Reduced Intensity Alternative A would have incrementally fewer new vehicle trips than under the Project, impact levels would be less.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections

As under the Project, development of Reduced Intensity Alternative A would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic at the northbound I-110 Freeway at 228th Street, the southbound 110 Freeway at El Segundo Boulevard, and the northbound I-405 Freeway at the I-710 Freeway. Potential mitigation measures, which include a contribution of a fair share to proposed Caltrans projects to address congestion in the study area (MM TRAF-4) relies on Caltrans cooperation and approval. Because this is out of the County's control, impacts at the three freeway segments are considered significant and unavoidable. However, because Reduced Intensity Alternative A would have incrementally fewer new vehicle trips than under the Project, impact levels would be less. Reduced Intensity Alternative A would also significantly impact the arterial intersection of Western Avenue (State Route 213) and Carson Street because, as with the Project, it would add more than 50 vehicle trips to this intersection. Although incrementally less under Reduced Intensity Alternative A, the impact at this intersection would be considered significant and unavoidable.

(b) Freeway Off-Ramps

As with the Project, Reduced Intensity Alternative A would increase traffic at freeway off-ramps. However, because the off-ramp queue would not extend beyond the length of the ramp onto the mainline of the freeway during the peak arrival period, impacts at freeway off-ramps would be less than significant. Although both the Reduced Intensity Alternative A and the Project would have less than significant impacts, Reduced Intensity Alternative A would result in fewer new vehicle trips than under the Project and less impact at freeway off-ramps.

(4) Public Transit and Alternative Transportation

Reduced Intensity Alternative A would result in an incremental decrease in the Project's estimated ridership of approximately 22 morning and 22 afternoon transit person trips. As with the Project, transit ridership would represent a small percentage of the 1,840 persons-trip capacity within ¼-mile of the Medical Center Campus. Because this is not likely to exceed transit capacity, as with the Project, Reduced Intensity Alternative A would have a less than significant impact on transit and alternative transportation. Although both the Reduced Intensity Alternative A and the Project would have less than significant impacts, Reduced

Intensity Alternative A would result in fewer new transit riders than under the Project and less impact on transit facilities.

(5) Access and Circulation

As under the Project, access to the site under Reduced Intensity Alternative A would be provided via seven driveways. Driveways would be designed to County standards and would accommodate left and right ingress/egress turning movements. Vehicular access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. The existing network of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. As with the Project, impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant. However, because Reduced Intensity Alternative A would generate less overall traffic, potential pedestrian/vehicle conflicts would be incrementally less.

(6) Parking Supply

Reduced Intensity Alternative A would provide approximately 2,300 new parking spaces, which would reduce total parking provided under the Project. As with the Project, total parking is anticipated to exceed County Code requirements. A comprehensive signage and wayfinding plan would be developed to aid visitors and patients in finding ultimate destinations and parking intended for those uses. As with the Project, it is anticipated that Reduced Intensity Alternative A, in accordance with existing and proposed TDM measures or potential LEED requirements for future buildings, would provide additional bicycle parking facilities on the Medical Center Campus beyond what is required by the County Code. Because parking would exceed Code requirements, impacts related to parking supply under both the Project and Reduced Intensity Alternative A would be less than significant and similar.

13. Utilities and Service Systems

a. Water Supply

(1) Construction

Construction of Reduced Intensity Alternative A, as with the Project would include all necessary on- and off-site water system connections and improvements to tie into Cal Water's existing distribution system. All necessary improvements would be verified through the coordination with Cal Water and the LACFD regarding fire flow requirements. Impacts on water distribution systems would be less than significant under both the Project and Reduced Intensity Alternative A. However, because Reduced Intensity Alternative A would have incrementally less overall development than under the Project, impacts on local distribution infrastructure and potential water supply pipeline construction, if necessary, would be less under this Alternative.

(2) Operation

Reduced Intensity Alternative A would result in an incremental decrease in the Project's estimated water demand of 458.6 AFY (or a net increase of 251 AFY over existing conditions), as there would be a reduction

in overall development intensity relative to the Project. As the projected water demand under this Alternative would be within the projected demand for the Project, which was determined in the Project WSA to be within Cal Water's projected supplies, impacts related to water supply would be less than significant under both the Project and Reduced Intensity Alternative A. However, because Reduced Intensity Alternative A would have incrementally less overall development than under the Project, impacts on water supply would be less under this Alternative.

b. Wastewater

(1) Construction

Construction of the Reduced Intensity Alternative A, as with the Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the LACSDs' existing sewer system. In the event that, during development, wastewater lines were found to be substandard or in deteriorated condition, the County would be required to make necessary improvements to achieve adequate service pursuant to applicable County requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer capacity and connection permit from the LACSDs. Impacts on conveyance systems would be less than significant under both the Project and Reduced Intensity Alternative A. However, because Reduced Intensity Alternative A would have less overall development than under the Project, impacts on local conveyance systems and potential sewer line construction would be incrementally less.

(2) Operation

Reduced Intensity Alternative A would result in an incremental decrease in the Project's estimated 171,998 gpd. The Project's wastewater generation represents approximately 0.114 percent of JWPCP's total remaining capacity of 120 mgd. As with the Project, the increase the overall demand on wastewater conveyance and treatment facilities in the area would not exceed the available capacity of affected wastewater facilities and, thus, would not directly or indirectly result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Impacts related to wastewater conveyance and treatment would be less than significant under both the Project and Reduced Intensity Alternative A. However, because Reduced Intensity Alternative A would have less overall development than under the Project, impacts on treatment systems would be incrementally less.

c. Solid Waste

(1) Construction

Reduced Intensity Alternative A, as with the Project, would require demolition of some existing buildings and construction activities that would generate solid waste. Much of this would be accommodated at the County's inert landfill site (Azusa Land Reclamation) or one of a number on inert debris engineered fill operations that are located throughout Los Angeles County. There will be an additional approximately 40 cubic yards of soil removed for soil remediation due to the four Leaking Underground Storage Tanks found near the Central Plant. Not taking into account C&D Debris Recycling and Reuse Program and the Los Angeles County Green Buildings Standard Code (Reduced Intensity Alternative A must recycle or reuse 50 percent of the debris generated), the estimated debris is expected to be similar (or slightly less) to waste

generated by Project construction. Neither the Project nor Reduced Intensity Alternative A would exceed landfill capacity for construction debris or soil waste. Impacts under both the Project and Reduced Intensity Alternative A would have a less than significant and similar impact relative to solid waste capacity.

(2) Operation

Not taking into account the amount of solid waste that could potentially be diverted via source reduction and recycling programs, the Project would generate a net increase of total net increase in waste approximately 2,481 tons per year. If all of the Project's waste were taken to Sunshine Canyon Landfill, the Project's respective additions to the daily disposal, 1.4 tons, would be approximately 0.011 percent of the residual daily capacity at the landfill, assuming no diversion. With 60 percent diversion it would be approximately 0.004 percent. With an approximately 16 percent reduction in the Project's new beds and elimination of the Project's retail uses, Reduced Intensity Alternative A would provide an incremental decrease in operational waste. Because the Project would have not exceed landfill capacity, Reduced Intensity Alternative A, which would generate incrementally less waste, would also not exceed landfill capacity. Under both the Project and Reduced Intensity Alternative A, impacts on landfill capacity would be less than significant. However, because the scope of development under Reduced Intensity Alternative A is reduced, it would have incrementally less impact than the Project.

C. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

Reduced Intensity Alternative A would incrementally reduce the Project's significant and unavoidable traffic impacts at the intersections of Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would also incrementally reduce the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during Phase C, Phase 5, and Phase 6. However, these impacts, while reduced compared to the Project, would remain significant and unavoidable. The significant unavoidable temporary operational helicopter noise impact that would occur under the Project would also occur under Reduced Intensity Alternative A.

Because Reduced Intensity Alternative A would be incrementally reduced compared to the Project, demand for public services and utilities would be incrementally reduced. However, Reduced Intensity Alternative A would have a relatively similar level of impact and require the implementation of mitigation measures, as under the Project, for potentially significant impacts associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

Reduced Intensity Alternative A would incrementally reduce the Project's significant and less than significant impacts, and would not result in any new environmental impacts, and would also provide adequate beds to achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles, although not to the extent the Project would. SB 1953 requires the

replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

Reduced Intensity Alternative A would support, but to a lesser extent, the Project's basic objectives to renovate existing health facilities to meet the Affordable Care Act of 2010 and to modernize and integrate healthcare delivery. It would update most facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. It would substantially meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would allow for the fundamental reorganization, expansion and integration of outpatient services; renovate and appropriate new medical Campus construction. However, because retail uses would be eliminated and outpatient buildings would be reduced from three (under the Project) to two buildings, it would not encourage the same vibrant, mixed-use setting as under the Project and would not achieve optimum public utilization of land and buildings under the ownership and control of the County.

However, Reduced Intensity Alternative A would support the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus. Reduced Intensity Alternative A would also meet the objective of creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices. Reduced Intensity Alternative A would also would provide opportunities for development up to 250,000 square feet of additional bioscience and support facilities in the Bioscience Tech Park and 225,000 square feet of expanded LA BioMed facilities.

5.0 ALTERNATIVES
C. ALTERNATIVE 3: REDUCED INTENSITY ALTERNATIVE B – FURTHER ACUTE BED AND OTHER PLAN REDUCTIONS

A. DESCRIPTION OF THE ALTERNATIVE

Alternative 3, Reduced Intensity Alternative B – Further Acute Bed and Other Plan Reductions, would implement the Master Plan Project but at an even lower overall intensity than proposed under the Project or Alternative 2. The reductions are attributable to a reduction in new outpatient building space and parking spaces under Alternative 3. Specifically, this Alternative would result in the construction of the New Hospital Tower, but with a reduction in the maximum number of licensed acute care beds from 446 to 375, as well as construction of only one outpatient buildings (compared to three under the Project and up to two under Reduced Intensity Alternative A), a reduced Central Plant, two parking structures with up to 1,800 parking spaces (compared to up to three structures with up to 2,300 spaces under Alternative 2), and complete renovation of the Existing Hospital tower (compared to a partial renovation in Alternative 2) in order to accommodate the outpatient services previously planned for the additional two outpatient buildings under the Project. Similar to Alternative 2, this Alternative would also eliminate all retail uses from the development plan. In addition, Alternative 3 would be phased so that the New Hospital Tower would be constructed by 2025, prior to new outpatient uses, with completion of construction activities anticipated in 2028. All development associated with LA BioMed and the proposed Bioscience Tech Park, as well as necessary infrastructure, landscaping, circulation, and other Medical Center Campus improvements would be implemented as under the proposed Master Plan Project.

B. ENVIRONMENTAL IMPACTS

1. Aesthetics

a. Visual Character

(1) Construction

Construction activities typically result in site disturbance, movement of construction equipment, import and export of materials, views of incomplete structures and other activities that generally contrast with the aesthetic character of an area. Under the Reduced Intensity Alternative B, construction activities would be visible at various times from Vermont Avenue, Carson Street, Normandie Avenue, and 220th Street. As with the Project, construction activities would occur over the course of several years and within specific areas of the half-mile-long Medical Center Campus, as well as in limited off-site areas related to infrastructure and utility improvements necessary to serve Reduced Intensity Alternative B. As such, visual character impacts experienced at any single viewing location, for both on-site and off-site construction activities, would be intermittent and temporary. Because adverse visual effects would be temporary and would be confined to portions of the Medical Center Campus or distinct off-site areas at any one time, such effects would not be experienced by nearby viewers continually during the buildout of Reduced Intensity Alternative B. As with the Project, construction impacts would be less than significant. However, because overall construction would be incrementally less and be completed in fewer years than under the Project (completed in

approximately 2028 instead of approximately 2030), the impact of construction on visual character would be incrementally less under Reduced Intensity Alternative B.

(2) Operation

Reduced Intensity Alternative B would allow for a reduced intensity with respect to the New Hospital Tower and would not completely renovate the existing Hospital Tower. The reduction in beds in the New Hospital Tower could allow for an incrementally smaller building, either in height or profile. Because a complete renovation of the old Hospital Tower would not be implemented, the Reduced Intensity Alternative B may not result in the same aesthetic character of the old Hospital Tower as under the Project. New sidewalks and street scape, internal landscaping, public art and other aesthetic amenities would be the same as under the Project. As with the Project, the transition of the Medical Center Campus to greater densification would be consistent with growth trends and buildout in the surrounding area and Reduced Intensity Alternative B would be contained within the existing Medical Center Campus, aside from temporary off-site improvements and would not directly adjoin any other existing neighborhood or community uses. New buildings under the Reduced Intensity Alternative B would be required to implement the Design Guidelines, in which individual buildings must complement each other and the character of surrounding spaces, streets, and walks; maintain view corridors, both to and from buildings; and align axes, corner lines and features of neighboring buildings and spaces. Under the Design Guidelines, overall heights, massing, styles, and materials of neighboring buildings within the Medical Center Campus must be compatible. Views of service areas and mechanical equipment located both on grade and on building roofs must be screened. With the implementation of the Design Guidelines, the massing of buildings within the site would create a visually pleasant skyline effect (cluster) that would contribute to the visual character of the community.

Reduced Intensity Alternative B, as with the Project, would enhance the existing pedestrian experience along Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street with landscaping and streetscape, including the installation of canopy trees, provision of a landscaped parkway between the sidewalk and Carson Street, the removal of chain link fencing and walls along Vermont and Normandie Avenues and 220th Street, and other improvements in visual character and safety along 220th Street. As with the Project, Reduced Intensity Alternative B would create a more aesthetic public environment than under existing conditions. Because it would introduce elements that would enhance the public interface along all adjacent streets, as well as public access to gardens, public art, and other benefits, and maintain a high architectural standard, the Master Plan Project is not considered to substantially degrade the visual character of the Site or its surroundings because of height, bulk, pattern, scale, character, and other features. Impacts with respect to visual character under Reduced Intensity Alternative B would be similar to the Project and less than significant.

b. Views

Other than original and newer buildings and existing landscaping associated with the Medical Center Campus, the local area is not distinguished by historical or architecturally notable buildings or natural areas, focal views of which would be considered visual resources. The reduction in scale of the New Hospital Tower under Reduced Intensity Alternative B is likely to reduce the New Hospital Tower's height or width as represented in the Project's stacking profile. However, as with the Project, the new buildings of the Reduced Intensity Alternative B would be minimally visible in panoramic views of the Los Angeles Basin and, as such, would not cause any adverse view effects. However, development of the Project has the potential to affect existing views of the Medical Center Campus from adjacent public streets. The views of the Medical Center

Campus from Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street would be improved by new, high quality construction, removal of hedging and fencing materials and surface parking lots, and installation of evergreen/semi-evergreen trees along the Medical Center Campus periphery that allow views into the Project's gardens, paths, buildings and public art. Views from Carson Street would also be upgraded by the streetscape program. Because no existing recognized valued publicly available views or scenic vistas are currently evident across the Medical Center Campus, as with the Project, the Reduced Intensity Alternative B would not block views of existing scenic resources. In addition, the Reduced Intensity Alternative B would upgrade overall views of the Medical Center Campus, while providing for deeper views into the proposed garden areas. The impact of Reduced Intensity Alternative B with respect to views would, thus, be less than significant and similar to that of the Project.

c. Light and Glare

(1) Construction

Lighting during construction would potentially cause minor light spillover in the vicinity of the Medical Center Campus, including the residential neighborhoods to the south, east, and west. However, construction activities would occur primarily during daylight hours and any construction-related illumination would be used for safety and security purposes only. As with the Project, construction lighting under Reduced Intensity Alternative B would only be located in specific locations within the approximately 72-acre site and would not be experienced by any sensitive, off-site receptors for a long duration. Any construction lighting would be limited and directed onto specific locations within construction sites to avoid impacts on-site medical patients. As with the Project, artificial light associated with construction activities would be limited to security lighting and specific construction tasks and would not adversely impact off-site sensitive receptors. Reduced Intensity Alternative B would also have a less than significant impact with respect to construction lighting. However, because overall construction would occur over a shorter timeframe (competed in approximately 2028 instead of approximately 2030 under the Project), construction lighting impacts under Reduced Intensity Alternative B would be incrementally less than those generated by the Project.

(2) Operation

(i) Artificial Light

As with the Project, the security and landscape lighting for Reduced Intensity Alternative B would be located near ground level, generally shielded from adjacent uses by landscaping, and low-intensity in character. Lighting would be directed downward to avoid glare at on-site occupied hospital rooms and to maintain a calm ambience for on-site visitors and employees. Landscaping and rooftop garden lighting would be low-level consistent with the proposed hospital use. Light spillage from the Project's multi-story components would be similar to existing conditions and would not be disruptive of off-site residential uses, the nearest of which would be more than 200 feet to the south of the New Hospital Tower. The removal of surface parking lots, including Parking Lot A, which is visible from residential uses to the east and the surface parking lot in the southwest corner of the Medical Center Campus, which is visible to uses at the south side of 220th Street, would reduce vehicle light sources and security lights currently visible from these residential areas. As with the Project, new lighting sources from Reduced Intensity Alternative B are not expected to substantially increase ambient light or cause light spill onto adjacent light-sensitive receptors. As such, artificial light impacts under Reduced Intensity Alternative B would be similar to those of the Project and less than significant.

(ii) Glare

Building surfaces associated with window glass and polished surfaces, such as metallic or glass curtain walls and trim, can reflect light. Glare can also occur between neighboring buildings when expanses of glass and metals are used for building sheathing. As with the Project, the Design Guidelines for Reduced Intensity Alternative B, would require that building materials, massing, and styles are consistent with neighboring buildings, including the Existing Hospital tower, and complement the character of the surrounding Medical Center Campus buildings. Buildings using expanses of metals and reflective glass would not meet these criteria, nor would such materials be consistent with the overall use of the Medical Center Campus as a medical facility. As such, Reduced Intensity Alternative B, as with the Project, would not generate glare from reflected sunlight that would alter the character of the off-site areas surrounding the Medical Center Campus. Therefore, glare impacts under Reduced Intensity Alternative B would be similar to the Project and less than significant.

2. Air Quality

a. Consistency with Air Quality Management Plan

(1) Construction

Reduced Intensity Alternative B would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under both Reduced Intensity Alternative B and the Project would not conflict with the long-term employment projections upon which the AQMP is based. Reduced Intensity Alternative would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment and, as such, would not conflict with implementation of AQMP strategies intended to reduce emissions from construction equipment and activities. Reduced Intensity Alternative B would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403. Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies. Although both the Project and Reduced Intensity Alternative B would be smaller in total development, it would have incrementally less impact.

(2) Operation

As with the Project, Reduced Intensity Alternative B would be consistent with growth projections set forth in the AQMP, and would be supportive of relevant Transportation Control Measures aimed at reducing vehicle trips. Both the Project and Reduced Intensity Alternative B would have a less than significant impact relative to the AQMP; however, because Reduced Intensity Alternative B is smaller in total development, it would have incrementally less impact.

b. Violation of Air Quality Standards

(1) Construction

Construction of Reduced Intensity Alternative B has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Medical Center Campus. However, as with the Project, construction-related daily emissions for the criteria and precursor pollutants would not exceed the SCAQMD regional thresholds for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Although emissions would be less than significant under both the Project

and Reduced Intensity Alternative B, because Reduced Intensity Alternative B would involve less construction, it would have incrementally less impact than the Project with respect to the SCAQMD regional thresholds.

(2) Operation

Operation of Reduced Intensity Alternative B has the potential to create air quality impacts based on daily trip generation and energy demand. As discussed in Section 4.B., Air Quality, of the Draft EIR, the Project's net operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed SCAQMD regional thresholds for during interim operations when combined with on-going construction emissions. Additionally at full build-out, operation of the Project would not exceed the SCAQMD numeric indicators. As such both the Project and Reduced Intensity Alternative B would have a less than significant impact with respect to SCAQMD standards. However, because daily trips and the scope of development would be incrementally less under Reduced Intensity Alternative B, impacts relative to SCAQMD thresholds would be less than the Project.

c. Non-Attainment Pollutants

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would result in the emission of criteria pollutants for which the region is in nonattainment; however, the maximum daily emissions from construction of Reduced Intensity Alternative B would not exceed the numeric indicator of significance for criteria pollutants nor their precursors. As with the Project, compliance with CARB and SCAQMD control measures and the same design features implemented by the Project would minimize and reduce construction emissions. Neither Reduced Intensity Alternative B nor the Project would result in a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would involve less construction, it would fewer total emissions than under the Project.

(2) Operation

Operation of Reduced Intensity Alternative B would result in the emission of criteria pollutants for which the region is in nonattainment; however, as with the Project, maximum daily emissions from operation would not exceed the threshold of significance for any of pollutants in nonattainment nor their precursors. During interim operations that overlap with construction emissions and at full build-out, operation of Reduced Intensity Alternative B would not exceed the applicable thresholds of significance. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would be incrementally smaller in scale, it would generate fewer total emissions than under the Project.

d. Substantial Pollutant Concentrations

As with the Project, Reduced Intensity Alternative B would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the either Reduced Intensity Alternative B or the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Reduced Intensity

Alternative B at full build-out would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of either the Project or Reduced Intensity Alternative B would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks which exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of either the Project or Reduced Intensity Alternative B would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would be incrementally smaller in scale, it would generate fewer total emissions than under the Project.

e. Odors

(1) Construction

As with the Project, Reduced Intensity Alternative B may emit odors during construction associated with the use of architectural coatings and solvents. However, SCAQMD Rule 1113 limits the allowable amount of VOCs from architectural coatings and solvents. Since compliance with SCAQMD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Both the Project and Reduced Intensity Alternative B would result in a less than significant impact. Also, because SCAQMD Rule 1113 would be equally enforceable under both the Project and Reduced Intensity Alternative B, impact levels would be similar.

(2) Operation

As with the Project, Reduced Intensity Alternative B does not include any uses identified by the SCAQMD as being typically associated with objectionable or nuisance odors. Waste collection areas and disposal for the Reduced Intensity Alternative B would be covered and situated away from the property line and sensitive off-site uses. Under both the Project and Reduced Intensity Alternative B, medical waste would be properly sealed and stored in accordance with applicable rules to ensure that no objectionable medical waste-related odors would be created. Best management and good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less than significant under both the Project and Reduced Intensity Alternative B and impact levels would be similar.

3. Energy

a. Construction

Construction would entail consumption of diesel for hauling and construction equipment, gasoline for some hauling and workers' transportation, and electricity to provide temporary power for lighting and electronic equipment and to power certain construction equipment. Some heavy-duty construction could be electric or alternatively fueled, such as tower cranes, based on commercial availability. As with the Project, Reduced Intensity Alternative B would utilize electric or alternatively fueled equipment as available and as feasible. It is estimated that the construction of the Project would require approximately 0.002 percent of the statewide annual gasoline consumption and 0.003 percent of the statewide annual diesel consumption. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy. As with the Project, Reduced Intensity Alternative B would also meet or exceed the County's waste diversion targets. Neither the Project nor Reduced Intensity Alternative B would result in the wasteful,

inefficient, and unnecessary consumption of energy during construction, or preempt future energy conservation during construction. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would be incrementally smaller in scale, it would generate less energy demand than under the Project.

b. Operation

Operation of both Reduced Intensity Alternative B and the Project would utilize energy for necessary on-site activities and off-site transportation associated with Campus employees, patients, and visitors traveling to and from the site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, the Project and Reduced Intensity Alternative B would meet or exceed energy standards by incorporating green building measures consistent with County policy that requires LEED Silver-level certification and the County's CCAP. The Project would also provide opportunities for future energy efficiency by promoting solar power and electric or alternatively-fueled vehicles. Neither the Project nor Reduced Intensity Alternative B would result in the wasteful, inefficient, and unnecessary consumption of energy during operation, or preempt future energy conservation during operation. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would be incrementally smaller in scale, it would generate less overall energy demand than under the Project.

4. Geology and Soils

a. Seismic Hazards

The Harbor-UCLA Campus is located within a seismically active region, with the potential for seismic ground shaking. The horizontal peak ground acceleration (PGA) for the site corresponds to the Targeted Maximum Considered Earthquake (MCE_R) of 0.65g. This would be the same under Reduced Intensity Alternative B and the Project. Based on these PGA estimates, ground shaking at the Harbor-UCLA Campus could have a potentially significant impact on people and proposed buildings on the Harbor-UCLA Campus. Although seismic risk exists, Reduced Intensity Alternative B would implement MM-GEO-1, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-1, which requires adherence to the recommendations of an approved Geotechnical Evaluation, would reduce seismic impacts for Reduced Intensity Alternative B and the Project to a less than significant level. With the implementation of MM-GEO-1, the Project and Reduced Intensity Alternative B would have a less than significant and similar impact with respect to seismic hazards.

b. Soil Erosion and Topsoil

Reduced Intensity Alternative B would require potentially less grading, including clearing, excavation, stockpiling, than the project. As with the Project, all work would be performed in accordance with a National Pollutant Discharge Elimination System (NPDES) Permit, which incorporates a Storm Water Pollution Prevention Program (SWPPP) and Best Management Practices (BMPs) for erosion control. Implementation of BMPs would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. Also, the relatively gentle topographic gradients at the Medical Center Campus would reduce the potential for soil erosion during construction. As with the Project, Reduced Intensity Alternative B would have a less than significant impact with respect to soil erosion and topsoil. However, because the potential exists that less area would be graded under Reduced Intensity Alternative B, Reduced Intensity Alternative B would have incrementally less impact with respect to soil erosion than under the Project.

c. Geologic Stability

As with the Project, Reduced Intensity Alternative B could be exposed to differential soil settlement and liquefaction beneath proposed buildings because of the presence of alluvium, possible undocumented fill, and relatively shallow depths to groundwater. If wet or saturated soil conditions are encountered during excavation, instability could present a constraint to the construction of foundations. Because the risk of compressible/collapsible soils and shallow groundwater exists, as with the Project, Reduced Intensity Alternative B would implement MM-GEO-2, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-2, which provides several approaches to address settlement and shallow groundwater, would reduce the potential for these geologic hazards. With the implementation of MM-GEO-2, the Project and Reduced Intensity Alternative B would have a less than significant and similar impact with respect to geologic stability.

d. Expansive and Corrosive Soils

The near-surface soils at the Medical Center Campus are generally sandy silt and clayey and typically expansive when wetted. In addition, on-site soils are potentially corrosive to concrete and metal, which could cause premature deterioration of underground structures or foundations. The risk of expansive and corrosive soils would occur under both Reduced Intensity Alternative B and the Project. As with the Project, Reduced Intensity Alternative B would implement MM-GEO-3, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-3, which provides performance standards and required assessments to address expansive and corrosive soils, would reduce the effects of these soils conditions. With the implementation of MM-GEO-3, the Project and Reduced Intensity Alternative B would have a less than significant and similar impact with respect to expansive and corrosive soils.

5. Greenhouse Gas Emissions

Consistency with CCAP

As with the Project, Reduced Intensity Alternative B would be consistent with the County's CCAP, which provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County. Based on the conservatively estimated GHG emissions, the Project would result in a net increase in GHG emissions from 2010 levels. However, the potential increase is extremely small compared to the County's total inventory. One the Project objectives to maintain critical trauma services in the South Bay service region of the County of Los Angeles by redeveloping the existing hospital site, would result in more GHG efficiency than developing a new hospital campus on a greenfield site. Therefore, while the Project and Reduced Intensity Alternative B results in a conservatively estimated minimal net increase in GHG emissions, both the Project and Reduced Intensity Alternative B would be consistent with applicable CCAP measure to minimize its GHG emissions. As such, both the Project and Reduced Intensity Alternative B would not be expected to conflict with the County's ability to achieve the CCAP target reduction. Both the Project and Reduced Intensity Alternative B would have a less than significant impact relative to the CCAP and because both the Project and Reduced Intensity Alternative B would be consistent, impact levels would be similar.

Greenhouse Gas Reduction Plans

Construction and operation of the Reduced Intensity Alternative B, as with the Project, would be consistent with applicable GHG emissions reductions plans, policies, or regulations. Design features, such as green

building measures would reduce GHG emissions by increasing energy-efficiency beyond regulatory requirements, reducing indoor and outdoor water demand, and incorporating waste reduction measures. The Project would also incorporate components to reduce transportation-related GHG emissions by providing bicycle and end-of-trip facilities, and by being located within one-quarter mile of transit, thereby encouraging alternative forms of transportation. As with the Project, Reduced Intensity Alternative B would be constructed and operated in a manner consistent with a Silver Certification from the USGBC's LEED program. The LEED features that would be incorporated in the Project would include building efficiency measures to reduce energy consumption, water-saving measures, and waste reduction measures. Both the Project and Reduced Intensity Alternative B would be designed to optimize energy performance. Trees planted on the Medical Center Campus as part of the planned landscaping would sequester CO_2 as they age (not included in the quantitative analysis). The Project would reduce indoor water use by a minimum of 20 percent with water fixtures that exceed applicable standards. As a result, construction and operation of the both the Project and Reduced Intensity Alternative B would not have a significance impact with respect to consistency with GHG reduction plans. Because both the Project and Reduced Intensity Alternative B would be consistent with applicable plans, impact levels would be similar.

6. Hazards and Hazardous Materials

a. Hazardous Materials Management

As with the Project, Reduced Intensity Alternative B would require the demolition of some buildings and equipment identified as having ACMs, LPB, and PCBs; the removal and/or relocation of USTs and ASTs that presently contain, or have contained in the past, fuels and other potentially hazardous materials; and the disturbance of soil potentially contaminated with hazardous materials as the result of on-site or off-site LUSTs. Remediation of these materials would be conducted by qualified professionals in accordance with regulations governing these activities, including SCAQMD's Rule 1403 (ACBMs); Cal-OSHA rules (LBP); the federal Toxics Substances Control Act (PCBs); and, for USTs, RCRA Subtitle I, the State Health and Safety Code, and LACFD's enforcement of the State's applicable CCR regulations, with oversight by the RWQCB where groundwater may be affected. Reduced Intensity Alternative B, as with the Project, has the potential to result in accidental upset and release of hazardous materials into the environment, which is a potentially significant impact. In addition, the potential extent of possible contamination of underlying groundwater with petroleum hydrocarbons originating with nearby off-site LUSTs is not known, and construction activities have the potential to result in a significant hazard related to potential contaminated soil and groundwater. As with the Project, Mitigation Measures HAZ-1 through HAZ-4, which require abatement in accordance with the recommendation of the Hazardous Building Materials Survey, removal of USTs pursuant to the LACFD review and closure letter, preparation and adherence to a Soils Management Plan, and investigation of the purpose and potential abandonment of existing on-site groundwater monitoring wells, would be implemented. With the implementation of Mitigation Measures HAZ-1 through HAZ-4, hazardous materials impacts associated with Reduced Intensity Alternative B and the Project would be reduced to less than significant levels. Because Reduced Intensity Alternative B involves demolition and excavation and development in an area with potential groundwater contamination, as under the Project, with mitigation, impacts with respect to hazardous materials management would be similar and less than significant.

b. Airport Safety Provisions

Reduced Intensity Alternative B is located on the same property as the Project, which is not within the vicinity of an airport. The nearest airport is more than two miles away. Because of this distance, neither the

Project nor Reduced Intensity Alternative B would interfere with operations any local airports or airstrips. Impacts regarding airport safety under both Reduced Intensity Alternative B and the Project would, therefore, be similar and less than significant.

c. Emergency Response Plans

Reduced Intensity Alternative B, as with the Project, would not adversely affect existing emergency access routes. Medical Center Campus ingress and egress would be modified to create distinctions between access and parking for the general public and staff, including a new signalized public entrance on Carson Street. Vehicular access and circulation would avoid conflicts with traffic movements on local roadways and would facilitate the provision on-site emergency services. During construction, adjacent streets may be temporarily affected due to construction activity, such as temporary lane closures. Such occurrences would be implemented in accordance with a construction traffic management plan, which would allow for responses to emergency accessibility needs. The existing helistop, which would be temporarily relocated to one of two potential locations at the western end of the Medical Center Campus during construction of the new Hospital Tower, would remain operational. As with the Project, regulatory compliance and project features, such as improved access, would avoid the need to generate new emergency plans beyond those normally implemented to address on-site emergency situations. As with the Project, impacts related to emergency response plans would be less than significant. Impact levels would be similar under both the Reduced Intensity Alternative B and the Project.

7. Hydrology and Water Quality

a. Surface Water Hydrology

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative B would be subject to a Construction General Permit and associated NPDES requirements, which include development and implementation of a SWPPP with appropriate BMPs. BMPs to control stormwater runoff during construction could include, but are not limited to, the use of water bars, silt fences, and staked straw bales. Additional source-control BMPs might also be required to prevent runoff and eliminate non-stormwater discharges. Based on the depth to groundwater within the project site, dewatering and any related runoff are not anticipated. Compliance with NPDES requirements would reduce surface water runoff during construction to a less than significant level under both Reduced Intensity Alternative Band the Project. The level of impact related to surface water hydrology under both scenarios would be similar.

(2) Operation

As with the Project, Reduced Intensity Alternative B would convert more than three acres of existing pavement to turf area. Any proposed new storm drain connections to the reinforced concrete box channel or open channel owned by the Flood Control District would be conducted under a connection permit approved by the District. This permit would require a hydrology analysis and a comparison with the design peak flow rate of the facility. If the calculated peak flow rate exceeded the facility's design peak flow rate, the District will generally require detention to mitigate the increase in peak flow rates. As with the Project, Reduced Intensity Alternative B would be required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (0 percent impervious) based on LID Standards. Several dry wells were previously constructed to meet this

requirement. This approach is likely to be implemented for future areas to be redeveloped under both the Project and Reduced Intensity Alternative B. LID features include resource conservation, flatter wider swales, flatter slopes, turf depression, landscape island storage, rooftop detention/retention, catch basins/seepage pits, sidewalk storage, permeable pavement, and other measures. With the increase in pervious area, the calculated peak flow of the future development will generally be less than under existing conditions; in addition, any future site development will require compliance with County of Los Angeles and LID standards for stormwater management. With implementation of LID measures and permitting from the District related to the reinforced concrete box channel and drainage ditch, surface water impacts associated with both Reduced Intensity Alternative B and the Project would be less than significant. Impacts related to surface water runoff would be similar under both Reduced Intensity Alternative B and the Project.

b. Surface and Groundwater Quality

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative B would be subject to existing regulations governing surface and groundwater quality. The required Construction General Permit and associated NPDES requirements include development and implementation of a SWPPP with appropriate BMPs to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. Compliance with construction phase BMPs and other requirements are considered protective of water quality during construction and would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. The NPDES Construction General Permit and SWPPP establish procedures and action protocols for the handling of construction-related chemicals and encountered groundwater. Based on existing and historical depths to groundwater within the project site, construction dewatering is not anticipated to be required. However, should groundwater be encountered that would require dewatering, the County would require contractors for individual Project components to apply for coverage and adhere to the monitoring and reporting program under RWQCB Order No. R8-2009-0003. Existing regulations would ensure that any potential dewatering activities would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to Dominguez Channel. Therefore, impacts related to surface and groundwater quality would be less than significant and similar under both Reduced Intensity Alternative B and the Project.

(2) Operation

Stormwater discharge may include pollutants of concern, such as sediment, hydrocarbons, oil, grease, heavy metals, nutrients, herbicides, pesticides, fecal coliform bacteria, and trash. This runoff can flow directly into storm drains and continue through pipes until it is released, untreated, into the Dominguez Channel. Untreated stormwater runoff could degrade water quality in surface and waters and can affect drinking water, human health, and plant and animal habitats. Reduced Intensity Alternative B, as with the Project, would utilize landscaping in strategic ways to capture and clean stormwater runoff. Strategies include replacement of three acres of pavement with landscaping. The Project would avoid the use of pollutants, chemicals, or soil amendments that could enter surface water runoff. Organic maintenance methods or Integrated Pest Management may be used. Implementation of County LID features, including bioretention features, modifications to address the potential leaching of nutrients, and post-construction BMPs would ensure that operations would not degrade the quality of receiving waters to levels below standards considered acceptable by the Los Angles RWQCB or other regulatory agencies, or impair the beneficial uses of the receiving waters. With compliance with existing regulations, both Reduced Intensity Alternative B and

the Project would have a similar, less than significant impact, related to surface and groundwater water quality.

8. Land Use

a. Applicable Plans and Policies

As with the Project, Reduced Intensity Alternative B would be consistent with the policies of the SCAG 2008 Regional Comprehensive Plan and Compass Growth Visioning (including the Compass 2% Blueprint Strategy) to focus growth in existing and emerging centers, along major transportation corridors, and in proximity to transit. Reduced Intensity Alternative B would be consistent with SCAG's 2016 RTP/SCS by enhancing the pedestrian environment within the Medical Center Campus and along Carson Street, and improving pedestrian connectivity between the Medical Center Campus, the surrounding community, and the Carson Street Metro Transit Station. Reduced Intensity Alternative B would be consistent with applicable policies of General Plan Update in that it would be compatible with the existing adjacent off-site land uses, incorporate sustainable design, facilitate multiple modes of transportation (including alternative modes), provide interconnected and safe pedestrian and bicycle circulation, provide required green space and landscaped setbacks, result in less than significant impacts to biological, aesthetic and cultural resources after mitigation, result in less than significant seismic/geotechnical and noise impacts after mitigation, be developed with adequate public service and water, wastewater, and solid waste disposal capacity to serve the Project; and foster regional economic development.

Reduced Intensity Alternative B would also be consistent with the Los Angeles County General Plan's "P" GPLU land use designation, which permits a broad range of public and semi-public facilities and community-serving uses, and with the overall floor area ratio (FAR) not to exceed 3:1. The Project would have a maximum FAR of 0.78 and the Reduced Intensity Alternative B would be incrementally less. As with the Project, Reduced Intensity Alternative B would be consistent with the Los Angeles Planning and Zoning Code and would not exceed the development limits associated with the underlying C-3 zone. The Project and Reduced Intensity Alternative B would have a less than significant and similar impact with respect to applicable plans and policies.

b. Land Use Compatibility

As with the Project, Reduced Intensity Alternative B would alter the existing visual appearance of the Medical Center Campus through denser development than under existing conditions. However, the Site is located within a fully urbanized setting within the 110 Freeway/Carson Station TOD. The area is also undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. Reduced Intensity Alternative B, as with the Project, would provide landscaping and street trees along the street frontages where in some areas such landscaping and trees are lacking, and would be designed in compliance with unifying design guidelines which would improve the visual appearance of the Medical Center Campus. While the densification of land uses at the Medical Center Campus would be noticeable from adjacent off-site land uses, including the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Medical Center Campus and the residential neighborhood to the north), because of the urbanizing trend in the area and proposed streetscape/screening, the Reduced Intensity Alternative B, as with the Project, would result in less than significant land use incompatibilities with adjacent off-site land uses. However, because Reduced Intensity

Alternative B would have incrementally less density than under the Project, it would have less impact with respect to land use compatibility.

9. Noise

a. Construction Noise

As with the Project, construction of Reduced Intensity Alternative B would involve demolition, grading, building construction, and paving. Each stage would involve the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. Demolition typically involves the use of excavator, tractor/loader/backhoe, concrete saw, dozer, water truck, and loader. Grading typically involves the use of drill water truck, dozer, tractor/loader/backhoe, and grader. Building construction typically involves the use of crane, forklift, welder, tractor/loader/backhoe, air compressor, and water truck. Paving typically involves the use of tractor/loader/backhoe, concrete mixer truck, roller, paver, and trencher. The Project would be constructed using typical construction techniques. Construction noise would exceed the significance threshold at the several receptor locations during various development phases. As with the Project, Reduced Intensity Alternative B would implement mitigation measures, such as MM NOISE-1 and project design features to achieve a noise reduction in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. However, even with implementation of the mitigation measure, construction-related noise would exceed the noise threshold a at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. Although both the Project and Reduced Intensity Alternative B would result in a significant and unavoidable noise impact, because Reduced Intensity Alternative B is reduced in scale and duration of construction, construction noise impacts would be incrementally less.

b. Operational Noise

As under the Project, noise sources associated with operation of Reduced Intensity Alternative B, including mechanical equipment, loading dock activity, refuse collection, parking structure activity, and traffic, would increase the ambient noise level at the nearest noise-sensitive receptor, but by a less than the threshold of significance. Composite noise level increases at all other receptor locations are also expected to be less than significant, given their distance from the site and the presence of intervening structures. As such, the operational noise level impacts due to the future operation of Project and Reduced Intensity Alternative B would be less than significant. However, because Reduced Intensity Alternative B is incrementally smaller in scale than the Project and would generate less traffic, operational noise impacts would be less.

With regard to helicopter-related noise, the Project would result in less than significant impacts at Project buildout once the permanent rooftop helistop on the New Hospital Tower is operational. However, operation of the temporary helistop at either interim location would exceed established noise thresholds at nearby sensitive receptors to the south of the Medical Center Campus, and no mitigation exists that could reduce noise levels to acceptable levels. Therefore, impacts under the Project would be considered significant and unavoidable. Because Reduced Intensity Alternative B would also require operation of the temporary helistop locations (though only one would be operational at any given time, as under the Project), impacts under this alternative would be significant and unavoidable and similar to the Project.

c. Construction Vibration

The construction of Reduced Intensity Alternative B, as with the Project, would generate ground-borne construction vibration during demolition, shoring and excavation, and large bulldozer operation. Vibration velocities from operation of construction equipment would range from approximately 0.076 to 0.089 inches per second PPV at 25 feet from the source of activity. Maximum vibration velocities to which receptors could be exposed range from 0.01 to 0.027 inches per second PPV. This value is considerably lower than the impact threshold of 0.5 inches per second PPV, and as such, construction vibration would be less than significant at the nearest residential building. Although construction vibration levels would be less than significant under both the Project and Reduced Intensity Alternative B would be less than significant, because the scope and duration of Reduced Intensity Alternative B's construction activities are incrementally less than under the Project, construction vibration impacts would be less.

d. Operational Vibration

As with the Project, operation of Reduced Intensity Alternative B would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the nearest off-site buildings would be up to 0.01 inches per second PPV and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility. As such, under both the Project and Reduced Intensity Alternative B, vibration impacts associated with operation of the Project would be less than significant. However, because Reduced Intensity Alternative B would be incrementally smaller in scale than the Project (would generate less traffic), operational vibration impacts would be less.

10. Population, Housing and Employment

a. Construction

As with the Project, construction of Reduced Intensity Alternative B would employ a mobile regional construction work force. Given the mobility and short duration of work at a particular site, a construction labor pool that can be drawn upon in the region and workers are not expected to relocate as a result of such employment opportunities. The number of construction workers would vary from approximately 212 workers per day during less intensive construction activity up to a maximum of approximately 1,650 construction workers on a day during the peak construction period. Because of a large, regional construction pool and the mobility of construction workers, construction activities would not generate a notable demand for housing, or affect population patterns. Although the duration of construction would be incrementally less under Reduced Intensity Alternative B, as with the Project, construction of both Reduced Intensity Alternative B and the Project would have a less than significant impact relative to construction-related population, housing, and employment. However, because of an incrementally reduced scope of development, Reduced Intensity Alternative B would have slightly less impact than under the Project.

b. Operation

Compared to the Project, Reduced Intensity Alternative B would reduce hospital beds from 446 to 375, construct one outpatient buildings (compared to three under the Project), reduce the scale of the Central

Plant, and only partially renovate of the Existing Hospital tower. Overall intensity would be reduced compared to the Project and Reduced Intensity Alternative A. There would be incrementally fewer annual patient visits than under the Project and Reduced Intensity Alternative A. Compared to the Project, Reduced Intensity Alternative A would reduce hospital beds from 446 to 375, construct two outpatient buildings (compared to three under the Project), reduce the scale of the Central Plant, and only partially renovate of the Existing Hospital tower. Total employment at the site under the Project would represent a small percentage of the projected growth in the South Bay Planning Area up to Year 2030 and very small percentage of estimated growth in unincorporated Los Angeles County for this same period. Because the Project's employment increase would not exceed local and SCAG's growth projections for the period between 2016 and 2030, Reduced Intensity Alternative B, which would have incrementally fewer employees, would also not exceed growth projections. As with the Project, impacts regarding consistency with the projected employment growth would be less than significant. However, because of the reduced intensity, impacts under Reduced Intensity Alternative B would be incrementally less than the Project.

11. Public Services

a. Fire Protection and Emergency Services

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases. These periodic construction activities could temporarily increase demand for fire protection and EMS, and may cause the occasional exposure of combustible materials such as wood, plastics, sawdust, coverings and coatings, heat sources including machinery and equipment sparking, exposed electrical lines, welding activities, and chemical reactions in combustible materials and coatings. However, compliance with California Division of Occupational Safety and Health Administration (Cal/OSHA) and Fire Code requirements; on-site fire suppression equipment specific to construction activities; compliance with applicable codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials would reduce demand for fire protection and EMS during construction to a less than significant level. Emergency access would be provided and maintained throughout construction to existing uses, new uses, and fire hydrants. While Reduced Intensity Alternative B and the Project would require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Medical Center Campus, Reduced Intensity Alternative B, as with the Project, would provide a construction traffic management plan to establish temporary traffic controls, prohibit construction vehicle activities and parking in surrounding off-site areas, and require various safety precautions such as alternate routing and protection barriers. With the implementation of the traffic management plan, impacts related to emergency access, vehicular access, pedestrian and bicycle access and safety, public transit, and construction parking would be less than significant under both Reduced Intensity Alternative B and the Project. Although impacts would be less than significant under both the Project and Reduced Intensity Alternative B, impacts would be less under the Reduced Intensity Alternative B because of the incrementally shorter construction time frame.

(2) Operation

As with the Project, Reduced Intensity Alternative B would be subject to the requirements of the County Code (e.g., Building Code, Fire Code, Utilities Code, and Subdivision Code) for new construction that address

structural design, building materials, site access, fire lanes, fire flow requirements, automatic sprinkler systems, alarms, and smoke detectors. The LACFD would review and approve all plans at the building permit and plan check phases of the Project to ensure compliance with applicable Fire Code requirements, thereby minimizing the risk of increased operation fire safety hazards. An LACFD-approved Emergency Response Plan would include mapping of site access and emergency exits, evacuation routes for vehicles and pedestrians, and locations of the nearest hospitals and fire stations. Finally, because Reduced Intensity Alternative B would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, fire safety at the Medical Center Campus would be improved.

As with the Project, development of Reduced Intensity Alternative B would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic in the Project vicinity. According to Section 4.L., Transportation and Traffic, of this Draft EIR, because implementation of mitigation measures is not entirely within the control of the County, significant and unavoidable impacts would occur at the several intersections in the area, which could affect LACFD emergency vehicle response times in the area. However, as under the Project, Reduced Intensity Alternative B would provide traffic design measures, including the installation roadway and traffic control improvements that would enable emergency access to the Medical Center Campus. In addition, emergency response is routinely facilitated, particularly for high priority calls, through use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. In light of the above, and the fact that emergency response times to the Medical Center Campus from Station 36 are currently within the LACFD's response time goals, operational impacts under the Project and Reduced Intensity Alternative B on emergency response times would less than significant. However, because visitation and hospital beds would be reduced by approximately 16 percent under Reduced Intensity Alternative B, impacts with relation to emergency response would be incrementally less.

As with the Project, Reduced Intensity Alternative B would require greater fire flows at the site than required under existing conditions. As discussed in Section 4.K.1, Fire Protection and Emergency Services of this Draft EIR, water service to the Medical Center Campus are adequate to meet Project requirements and, as such, would be adequate to meet Reduced Intensity Alternative B fire flow requirements. Impacts related to fire flow would be less than significant under both the Reduced Intensity Alternative B and the Project. However, because of reduced scale under the Reduced Intensity Alternative B, fire flow demand would be incrementally less.

b. Sheriff Protection

(1) Construction

Construction activities associated with Reduced Intensity Alternative B, as under the Project, would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through buildout. These periodic construction activities could temporarily increase demand for police protection associated with patrolling the construction site. However, as required by PDF SHER-1, the construction sites would be fully fenced, lighted with security lighting, and patrolled either by on-site LACSD personnel from the on-site LACSD satellite station or by private security hired by DHS. Furthermore, an LACSD satellite station is located on-site, and the Medical Center Campus has a 24-hour a day LACSD presence, which would both discourage construction site crimes and provide for almost immediate response to any observed or reported construction site crimes that are in process. Therefore, the demand for police protection services during construction of Reduced Intensity

Alternative B would not require new or altered police protection facilities to maintain service, and the impact would be less than significant but incrementally reduced compared to the Project due to the reduction in overall construction activities on the Medical Center Campus.

Regarding police access and response times during construction, as would be the case under the Project, construction staging and construction worker parking associated with Reduced Intensity Alternative B would be accommodated on the Medical Center Campus, limiting potential conflicts with traffic on local streets. In addition, as required by the PDF-SHER-2, emergency access would be provided and maintained for existing and new on-site uses, and to off-site uses, throughout construction. Furthermore, while the Project and Reduced Intensity Alternative B would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site, with the implementation of various traffic- and law enforcement-related Project Design Features, as under the Project, impacts on police access and response times during construction would not require new or altered police protection facilities to maintain service, and thus would be less than significant. However, given the reduction in overall development intensity under this Alternative, construction-related impacts would be incrementally reduced.

(2) Operation

The Master Plan Project would result in a net increase of 1,178,071 square feet of building floor area on-site, and net increases in total Campus-wide employees and annual patient visits of 2,030 employees and 185,745 annual patient visits, respectively. This, in turn, would create the need for additional space at LACSD's on-site satellite station to accommodate the additional officers. However, Reduced Intensity Alternative B would result in an overall increase in development intensity compared to existing conditions, but this increase would be less than that of the Project. Therefore, as with the Project, operational impacts on police protection services would be less than significant, but would be incrementally reduced compared to the Project due to the reduction in overall development intensity.

c. Parks and Recreation

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would not physically affect existing public parks and recreational facilities as no such facilities are located on or directly adjacent to the Medical Center Campus. Also, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local parks and recreational facilities to the extent that new recreational facilities would be required or that substantial physical deterioration of such facilities would occur. Construction effects on parks under either the Reduced Intensity Alternative B or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative B would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative B would generate incrementally fewer employees than the estimated 2,030 new employees under the Project. However, Reduced Intensity Alternative B represents a large percentage of the Project's growth and would potentially bring employees and their families to the area. As such,

Reduced Intensity Alternative B could create a demand for public parks and recreational facilities. A portion of the new on-site employees would be expected to be derived from the existing local labor pool, and it is likely that these employees and their families likely already generate a demand for public parks and recreational facilities in the local area. Furthermore, any use of existing public parks and recreational facilities by Project employees and their families would likely be dispersed over a wide geographic area rather than concentrated at any one of the eleven local public parks and recreational facilities. As with the Project, Reduced Intensity Alternative B would have a less than significant impact on parks and recreational facilities. However, because Reduced Intensity Alternative B would have incrementally fewer new employees than under the Project, impacts would be incrementally less.

d. Schools

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would not physically affect existing public schools as no public schools are located on or directly adjacent to the Medical Center Campus. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public schools would be maintained during Project construction. Given the general accessibility of the Medical Center Campus and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and have children that would use local public schools. Hence, new or physically altered local public schools would not be required to provide service to the children of Project construction workers and maintain acceptable service ratios and other performance standards. Construction on schools, as with the Project, would be less than significant and similar under Reduced Intensity Alternative B.

(2) Operation

It is estimated that, under the Project, families of new employees would generate an estimated 29 grade K-5 students, 14 grade 6-8 students, and 18 grade 9-12 students. Reduced Intensity Alternative B would generate fewer employees fewer students than under the Project and Reduced Intensity Alternative A. It is likely that student attendance under both Reduced Intensity Alternative B and the Project would be split among the 11 elementary and high schools in the local area, and possibly beyond. If all new students were distributed among the nearest schools, it is unlikely that these students alone would necessitate the need to construct new or physically altered school facilities given the small numbers of students involved. As with the Project, impacts on local schools would be less than significant under Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B is reduced in scale, impacts would be incrementally less.

e. Libraries

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would not physically affect existing libraries, none of which are located on or directly adjacent to the Medical Center Campus. In addition, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local libraries to the extent that new libraries would be required or that substantial physical deterioration of such facilities

would occur. Construction effects on libraries under either the Reduced Intensity Alternative B or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative B would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative B would generate incrementally fewer employees than the Project's estimated net increase of 2,030 employees. Reduced Intensity Alternative B, however, represents a large percentage of the Project's development scope and would generate new employees, their families, and demand for library services. As with the Project, this increase in demand would not be expected to be substantial or result in the need for new or physically altered library facilities. A portion of new employees are expected to be derived from the existing local labor pool and thus already generate a demand for public libraries. The existing on-site AF Parlow Library of Health Sciences would be retained under Reduced Intensity Alternative B to help meet the demand for library facilities. Patients and visitors of existing public library facilities would also likely be split among the four public libraries in the vicinity; thus, avoiding the concentration of demand at any one library. As with the Project, Reduced Intensity Alternative B would have a less than significant impact on library services. However, because Reduced Intensity Alternative B would have generate incrementally fewer new employees than under the Project or Reduced Intensity Alternative A, impacts would be incrementally less.

12. Transportation and Parking

a. Construction

As with the Project, the implementation of a Construction Traffic Management Plan and pedestrian safety program under Reduced Intensity Alternative B would reduce potential construction impacts associated with hauling, deliveries and worker vehicles. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance would minimize the potential disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the commercial zones and residential neighborhoods. However, given the amount of development in the Project area, the uncertainty in terms of timing for each related Project and the potential for overlap of development, the Project could contribute to a cumulatively significant construction impact. Beyond compliance with County requirements regarding haul routes and implementation of traffic controls and safety procedures, no other feasible mitigation measures have been identified. As such, construction traffic impacts would be significant and unavoidable. However, because of a shorter construction duration, construction traffic impacts would be incrementally less than under the Project.

b. Operation

(1) Intersection Service Levels

As with the Project, development of Reduced Intensity Alternative B would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic in the Project vicinity. Significant traffic impacts are anticipated at the following twelve (12) intersections: Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street

and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. Compared to the Project, intersection traffic would be reduced by approximately 16 percent but are anticipated to exceed threshold levels. Although implementation of proposed mitigation measures (MM TRAF-1 through MM TRAF-3) would reduce impacts to less than significant levels, because there is uncertainty whether other decision-making agencies will implement mitigation measures, impacts are considered significant and unavoidable under both Reduced Intensity Alternative B and the Project. However, because of the reduction in scale of Reduced Intensity Alternative B, impacts would be incrementally less than under the Project.

(2) CMP Transportation System

As with the Project, Reduced Intensity Alternative B would not exceed the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant under both the Reduced Intensity Alternative B and the Project. However, because Reduced Intensity Alternative B would have incrementally fewer new vehicle trips than under the Project, impact levels would be less.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections

As under the Project, development of Reduced Intensity Alternative B would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic at the northbound I-110 Freeway at 228th Street, the southbound 110 Freeway at El Segundo Boulevard, and the northbound I-405 Freeway at the I-710 Freeway. Potential mitigation measures, which include a contribution of a fair share to proposed Caltrans projects to address congestion in the study area (MM TRAF-4) relies on Caltrans cooperation and approval. Because this is out of the County's control, impacts at the three freeway segments are considered significant and unavoidable. However, because Reduced Intensity Alternative B would have incrementally fewer new vehicle trips than under the Project, impact levels would be less. Reduced Intensity Alternative B would also significantly impact the arterial intersection of Western Avenue (State Route 213) and Carson Street because, as with the Project, it would add more than 50 vehicle trips to this intersection. Although incrementally less under Reduced Intensity Alternative B, the impact at this intersection would be considered significant and unavoidable.

(b) Freeway Off-Ramps

As with the Project, Reduced Intensity Alternative B would increase traffic at freeway off-ramps. However, because the off-ramp queue would not extend beyond the length of the ramp onto the mainline of the freeway during the peak arrival period, impacts at freeway off-ramps would be less than significant. Although both the Reduced Intensity Alternative B and the Project would have less than significant impacts, Reduced Intensity Alternative B would result in fewer new vehicle trips than under the Project and less impact at freeway off-ramps.

(4) Public Transit and Alternative Transportation

Reduced Intensity Alternative B would result in an incremental decrease in the Project's estimated ridership of approximately 22 morning and 22 afternoon transit person trips. As with the Project, transit ridership

would represent a small percentage of the 1,840 persons-trip capacity within ¼-mile of the Medical Center Campus. Because this is not likely to exceed transit capacity, as with the Project, Reduced Intensity Alternative A would have a less than significant impact on transit and alternative transportation. Although both the Reduced Intensity Alternative B and the Project would have less than significant impacts, Reduced Intensity Alternative B would result in fewer new transit riders than under the Project and less impact on transit facilities.

(5) Access and Circulation

As under the Project, access to the site under Reduced Intensity Alternative B would be provided via seven driveways. Driveways would be designed to County standards and would accommodate left and right ingress/egress turning movements. Vehicular access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. The existing network of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. As with the Project, impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant. However, because Reduced Intensity Alternative B would generate less overall traffic, potential pedestrian/vehicle conflicts would be incrementally less.

(6) Parking Supply

Reduced Intensity Alternative B would provide approximately 1,800 new parking spaces, which would reduce total parking provided under the Project. As with the Project, total parking is anticipated to exceed County Code requirements. A comprehensive signage and wayfinding plan would be developed to aid visitors and patients in finding ultimate destinations and parking intended for those uses. As with the Project, it is anticipated that Reduced Intensity Alternative B, in accordance with existing and proposed TDM measures or potential LEED requirements for future buildings, would provide additional bicycle parking facilities on the Medical Center Campus beyond what is required by the County Code. Because parking would exceed Code requirements, impacts related to parking supply under both the Project and Reduced Intensity Alternative B would be less than significant and similar.

13. Utilities and Service Systems

a. Water Supply

(1) Construction

Construction of Reduced Intensity Alternative B, as with the Project would include all necessary on- and off-site water system connections and improvements to tie into Cal Water's existing distribution system. All necessary improvements would be verified through the coordination with Cal Water and the LACFD regarding fire flow requirements. Impacts on water distribution systems would be less than significant under both the Project and Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B would have incrementally less overall development than under the Project, impacts on local distribution infrastructure and potential water supply pipeline construction, if necessary, would be less under this Alternative.

(2) Operation

Reduced Intensity Alternative B would result in an incremental decrease in the Project's estimated water demand of 458.6 AFY (or a net increase of 251 AFY over existing conditions), as there would be a reduction in overall development intensity relative to the Project. As the projected water demand under this Alternative would be within the projected demand for the Project, which was determined in the Project WSA to be within Cal Water's projected supplies, impacts related to water supply would be less than significant under both the Project and Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B would have incrementally less overall development than under the Project, impacts on water supply would be less under this Alternative.

b. Wastewater

(1) Construction

Construction of the Reduced Intensity Alternative B, as with the Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the LACSDs' existing sewer system. In the event that, during development, wastewater lines were found to be substandard or in deteriorated condition, the County would be required to make necessary improvements to achieve adequate service pursuant to applicable County requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer capacity and connection permit from the LACSDs. Impacts on conveyance systems would be less than significant under both the Project and Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B would have less overall development than under the Project, impacts on local conveyance systems and potential sewer line construction would be incrementally less.

(2) Operation

Reduced Intensity Alternative B would result in an incremental decrease in the Project's estimated 171,998 gpd. The Project's wastewater generation represents approximately 0.114 percent of JWPCP's total remaining capacity of 120 mgd. As with the Project, the increase the overall demand on wastewater conveyance and treatment facilities in the area would not exceed the available capacity of affected wastewater facilities and, thus, would not directly or indirectly result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Impacts related to wastewater conveyance and treatment would be less than significant under both the Project and Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B would have less overall development than under the Project, impacts on treatment systems would be incrementally less.

c. Solid Waste

(1) Construction

Reduced Intensity Alternative B, as with the Project, would require demolition of some existing buildings and construction activities that would generate solid waste. Much of this would be accommodated at the County's inert landfill site (Azusa Land Reclamation) or one of a number on inert debris engineered fill operations that are located throughout Los Angeles County. There will be an additional approximately 40 cubic yards of soil removed for soil remediation due to the four Leaking Underground Storage Tanks found

near the Central Plant. Not taking into account C&D Debris Recycling and Reuse Program and the Los Angeles County Green Buildings Standard Code (Reduced Intensity Alternative B must recycle or reuse 50 percent of the debris generated), the estimated debris is expected to be similar (or slightly less) to waste generated by Project construction. Neither the Project nor Reduced Intensity Alternative B would exceed landfill capacity for construction debris or soil waste. Impacts under both the Project and Reduced Intensity Alternative B would have a less than significant and similar impact relative to solid waste capacity.

(2) Operation

Not taking into account the amount of solid waste that could potentially be diverted via source reduction and recycling programs, the Project would generate a net increase of total net increase in waste approximately 2,481 tons per year. If all of the Project's waste were taken to Sunshine Canyon Landfill, the Project's respective additions to the daily disposal, 1.4 tons, would be approximately 0.011`percent of the residual daily capacity at the landfill, assuming no diversion. With 60 percent diversion it would be approximately 0.004 percent. With an approximately 16 percent reduction in the Project's new beds and elimination of the Project's retail uses, Reduced Intensity Alternative B would provide an incremental decrease in operational waste. Because the Project would have not exceed landfill capacity, Reduced Intensity Alternative B, which would generate incrementally less waste, would also not exceed landfill capacity. Under both the Project and Reduced Intensity Alternative B, impacts on landfill capacity would be less than significant. However, because the scope of development under Reduced Intensity Alternative B is reduced, it would have incrementally less impact than under the Project.

C. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

Reduced Intensity Alternative B would incrementally reduce the Project's significant and unavoidable traffic impacts at the intersections of Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would also incrementally reduce the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during Phase C, Phase 5, and Phase 6. However, these impacts, while reduced compared to the Project, would remain significant and unavoidable. The significant unavoidable temporary operational helicopter noise impact that would occur under the Project would also occur under Reduced Intensity Alternative B.

Because Reduced Intensity Alternative B would be incrementally reduced compared to the Project, demand for public services and utilities would be incrementally reduced. However, Reduced Intensity Alternative B would have a relatively similar level of impact and require the implementation of mitigation measures, as under the Project, for potentially significant impacts associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

Reduced Intensity Alternative B would incrementally reduce the Project's significant and less than significant impacts, and would not result in any new environmental impacts, and would also provide adequate beds to achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953

(Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles, although not to the extent the Project would. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

However, Reduced Intensity Alternative B would support, but to a lesser extent than under Reduced Intensity Alternative A, the Project's basic objectives to renovate existing health facilities to meet the intent of the Affordable Care Act of 2010 to modernize and integrate healthcare delivery. It would update most facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. It would substantially meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would also allow for the fundamental reorganization, expansion and integration of outpatient services; renovate and appropriate new medical Campus construction. However, because retail uses would be eliminated and outpatient buildings would be reduced from three buildings (under the Project) to one building, it would not encourage the same vibrant, mixed-use setting as under the Project and would not achieve optimum public utilization of land and buildings under the ownership and control of the County.

Reduced Intensity Alternative B would support the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus. Reduced Intensity Alternative A would also meet the objective of creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices. Reduced Intensity Alternative B would also would provide opportunities for development up to 250,000 square feet of Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities.

5.0 ALTERNATIVES
D. ALTERNATIVE 4: REDUCED INTENSITY ALTERNATIVE C – NEW ACUTE BED HOSPITAL TOWER ONLY

A. DESCRIPTION OF THE ALTERNATIVE

Alternative 4, Reduced Intensity Alternative C – New Acute Bed Hospital Tower Only, would implement the Master Plan Project but would focus development on the replacement of hospital beds with the construction of the New Hospital Tower that meets seismic safety requirements, and reconstruction and replacement of outpatient/medical office, research, utilities, and other supporting uses at the same intensity as under existing conditions. Specifically, this Alternative would result in the construction of the New Hospital Tower with a maximum of 446 licensed acute care beds (the same number as under the Project), or up to 379 budgeted/staffed beds, as well as relocation of all existing outpatient services to renovated space within the Existing Hospital tower, a reduced Central Plant, and complete renovation of the Existing Hospital tower in order to accommodate the outpatient services and other administrative activities previously housed within existing modular buildings throughout the Medical Center Campus. These modular buildings would be removed from the Medical Center Campus. This Alternative would also eliminate all retail uses from the development plan, as would also occur under Alternatives 2 and 3. In addition, Alternative 4 would be phased so that the New Hospital Tower would be constructed by 2025, prior to relocation of outpatient uses to the renovated Existing Hospital tower, with completion of relocation activities anticipated in 2028. No additional development associated with LA BioMed or the proposed Bioscience Tech Park would occur under this Alternative. However, necessary infrastructure, landscaping, circulation, and other Medical Center Campus improvements would be implemented, to the extent necessary to serve proposed uses, as under the proposed Master Plan Project. As such, implementation of this Alternative would result in no net increase in development intensity on the Medical Center Campus relative to existing conditions, as it would maintain the existing capacity of outpatient services (housed in the renovated Existing Hospital tower or existing outpatient buildings) and would provide a comparable level of acute care beds and services as under the Project while meeting State-mandated seismic safety standards.

B. ENVIRONMENTAL IMPACTS

1. Aesthetics

a. Visual Character

(1) Construction

Construction activities typically result in site disturbance, movement of construction equipment, import and export of materials, views of incomplete structures and other activities that generally contrast with the aesthetic character of an area. Under Reduced Intensity Alternative C, construction activities would be visible at various times from Vermont Avenue, Carson Street, Normandie Avenue, and 220th Street. As with the Project, construction activities would occur over the course of several years and within specific areas of the half-mile-long Medical Center Campus, as well as in limited off-site areas related to infrastructure and utility improvements necessary to serve Reduced Intensity Alternative C. As such, visual character impacts

experienced at any single viewing location, for both on-site and off-site construction activities, would be intermittent and temporary. Because adverse visual effects would be temporary and would be confined to portions of the Medical Center Campus or distinct off-site areas at any one time, such effects would not be experienced by nearby viewers continually during the buildout of Reduced Intensity Alternative C. As with the Project, construction impacts would be less than significant. However, because overall construction would be incrementally less and be completed in fewer years than under the Project (completed in approximately 2028 instead of approximately 2030), the impact of construction on visual character would be incrementally less under Reduced Intensity Alternative C.

(2) Operation

Reduced Intensity Alternative C would allow for a reduced intensity overall with provision of the New Hospital Tower and complete renovation of the existing Hospital Tower to house outpatient and administrative functions, but no construction of new outpatient uses or Bioscience Tech Park uses or future expansion of LA BioMed uses. Given that the same number of proposed beds would be housed within the New Hospital Tower, it is anticipated that Reduced Intensity Alternative C would result in a nearly identical building in terms of height, architecture, and profile. Because a complete renovation of the Existing Hospital tower would be implemented, Reduced Intensity Alternative C would result in a similar aesthetic character of the Existing Hospital tower as under the Project. It is anticipated that existing modular buildings that have historically housed outpatient and other services in the north-central portion of the Medical Center Campus (i.e., where new outpatient buildings would be constructed under the Master Plan Project) would be removed. New sidewalks and street scape, internal landscaping, public art and other aesthetic amenities would be similar to under the Project. Unlike the Project, however, Reduced Intensity Alternative C would not result in an overall increase in development intensity on the Medical Center Campus relative to existing conditions, though it would still require temporary off-site improvements but not to the extent the Master Plan Project would. New construction under Reduced Intensity Alternative C, most notably the New Hospital Tower, would be required to implement the Design Guidelines, in which individual buildings must complement each other and the character of surrounding spaces, streets, and walks; maintain view corridors, both to and from buildings; and align axes, corner lines and features of neighboring buildings and spaces. Under the Design Guidelines, overall heights, massing, styles, and materials of newly constructed neighboring buildings within the Medical Center Campus must be compatible. Views of service areas and mechanical equipment located both on grade and on building roofs must be screened. With the implementation of the Design Guidelines, the massing of buildings within the site would create a visually pleasant skyline effect (cluster) that would contribute to the visual character of the community, but at a lower intensity than under the Master Plan Project.

Reduced Intensity Alternative C, as with the Project, would enhance the existing pedestrian experience along Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street with landscaping and streetscape, including the installation of canopy trees, provision of a landscaped parkway between the sidewalk and Carson Street, the removal of chain link fencing and walls along Vermont and Normandie Avenues and 220th Street, and other improvements in visual character and safety along 220th Street. As with the Project, Reduced Intensity Alternative C would create a more aesthetic public environment than under existing conditions. Because it would introduce elements that would enhance the public interface along all adjacent streets, as well as public access to gardens, public art, and other benefits, and maintain a high architectural standard, the Master Plan Project is not considered to substantially degrade the visual character of the Site or its surroundings because of height, bulk, pattern, scale, character, and other features. Similarly, because Reduced Intensity Alternative C would remove all but one of the remaining modular structures from the

property and would provide new, well designed visually compatible structures, landscaping, and other visual improvements on the Medical Center Campus, impacts with respect to visual character under Reduced Intensity Alternative C would be similar to the Project and less than significant.

b. Views

Other than original and newer buildings and existing landscaping associated with the Medical Center Campus, the local area is not distinguished by historical or architecturally notable buildings or natural areas, focal views of which would be considered visual resources. Despite the reduction in overall development intensity, Reduced Intensity Alternative C would construct the New Hospital Tower with a comparable height and bulk as represented in the Project's stacking profile. However, as with the Project, the new buildings of Reduced Intensity Alternative C would be minimally visible in panoramic views of the Los Angeles Basin and, as such, would not cause any adverse view effects. In addition, while development of the Project has the potential to affect existing views of the Medical Center Campus from adjacent public streets, the views of the Medical Center Campus from Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street would be improved by new, high quality construction, removal of hedging and fencing materials and surface parking lots, and installation of evergreen/semi-evergreen trees along the Medical Center Campus periphery that allow views into the Project's gardens, paths, buildings and public art. Views from Carson Street would also be upgraded by the streetscape program. Because no existing recognized valued publicly available views or scenic vistas are currently evident across the Medical Center Campus, as with the Project, Reduced Intensity Alternative C would not block views of existing scenic resources, and in fact given the absence of new outpatient buildings, Bioscience Tech Park buildings, or additional LA BioMed structures, the potential for view obstruction would be incrementally reduced. In addition, Reduced Intensity Alternative C would upgrade overall views of the Medical Center Campus, while providing for deeper views into the proposed garden areas. The impact of Reduced Intensity Alternative C with respect to views would, thus, be less than significant and less than that of the Project.

c. Light and Glare

(1) Construction

Lighting during construction would potentially cause minor light spillover in the vicinity of the Medical Center Campus, including the residential neighborhoods to the south, east, and west. However, construction activities would occur primarily during daylight hours and any construction-related illumination would be used for safety and security purposes only. As with the Project, construction lighting under Reduced Intensity Alternative C would only be located in specific locations within the approximately 72-acre site and would not be experienced by any sensitive, off-site receptors for a long duration. Any construction lighting would be limited and directed onto specific locations within construction sites to avoid impacts on-site medical patients. As with the Project, artificial light associated with construction activities would be limited to security lighting and specific construction tasks and would not adversely impact off-site sensitive receptors. Reduced Intensity Alternative C would also have a less than significant impact with respect to construction lighting. However, because overall construction would occur over a shorter timeframe (competed in approximately 2028 instead of approximately 2030 under the Project), with less overall intensity given the lack of new outpatient buildings or biomedical research uses (e.g., Bioscience Tech Park or LA BioMed), and within a smaller construction footprint on the Medical Center Campus, construction lighting impacts under Reduced Intensity Alternative C would be incrementally less than those generated by the Project.

(2) Operation

(i) Artificial Light

As with the Project, the security and landscape lighting for Reduced Intensity Alternative C would be located near ground level, generally shielded from adjacent uses by landscaping, and low-intensity in character. Lighting would be directed downward to avoid glare at on-site occupied hospital rooms and to maintain a calm ambience for on-site visitors and employees. Landscaping and rooftop garden lighting would be low-level consistent with the proposed hospital use. Light spillage from the Project's multi-story components would not be dissimilar from existing conditions and would not be disruptive of off-site residential uses, the nearest of which would be more than 200 feet to the south of the New Hospital Tower. The removal of surface parking lots, some of which are visible from residential uses to the east and from uses at the south side of 220th Street, would reduce vehicle light sources and security lights currently visible from these residential areas. As with the Project, new lighting sources from Reduced Intensity Alternative C are not expected to substantially increase ambient light or cause light spill onto adjacent light-sensitive receptors. In fact, due to the elimination of new outpatient buildings and new Bioscience Tech Park and LA BioMed structures, artificial light generation under Reduced Intensity Alternative C would be substantially reduced relative to the Master Plan Project. As such, artificial light impacts under Reduced Intensity Alternative C would be less than those of the Project and less than significant.

(ii) Glare

Building surfaces associated with window glass and polished surfaces, such as metallic or glass curtain walls and trim can reflect light. Glare can also occur between neighboring buildings when expanses of glass and metals are used for building sheathing. As with the Project, the Design Guidelines for Reduced Intensity Alternative C would require that building materials, massing, and styles must be consistent with neighboring buildings, including the Existing Hospital tower, and to complement the character of the surrounding Medical Center Campus buildings. Buildings using expanses of metals and reflective glass would not meet these criteria, nor would such materials be consistent with the overall use of the Medical Center Campus as a medical campus. As such, Reduced Intensity Alternative C, as with the Project, would not generate glare from reflected sunlight that would alter the character of the off-site areas surrounding the Medical Center Campus. Furthermore, based on the substantial reduction in development intensity under this Alternative, glare impacts under Reduced Intensity Alternative C would be reduced compared to the Project and would be less than significant.

2. Air Quality

a. Consistency with Air Quality Management Plan

(1) Construction

Reduced Intensity Alternative C would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under both Reduced Intensity Alternative C and the Project would not conflict with the long-term employment projections upon which the AQMP is based. Reduced Intensity Alternative C would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment and, as such, would not conflict with implementation of AQMP strategies intended to reduce emissions from construction equipment and activities. Reduced Intensity Alternative C would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403. Compliance with these requirements is consistent with and

meets or exceeds the AQMP requirements for control strategies. As such, given the substantial reduction in overall development intensity compared to the Project, impacts in this regard under Reduced Intensity Alternative C would be less than the Project and less than significant.

(2) Operation

As with the Project, Reduced Intensity Alternative C would be consistent with growth projections set forth in the AQMP, and would be supportive of relevant Transportation Control Measures aimed at reducing vehicle trips. Both the Project and Reduced Intensity Alternative C would have a less than significant impact relative to the AQMP; however, because Reduced Intensity Alternative C is substantially reduced in terms of overall development intensity, it would have incrementally less impact.

b. Violation of Air Quality Standards

(1) Construction

Construction of Reduced Intensity Alternative C has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Medical Center Campus. However, as with the Project, construction-related daily emissions for the criteria and precursor pollutants would not exceed the SCAQMD regional thresholds for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Although emissions would be less than significant under both the Project and Reduced Intensity Alternative C, because Reduced Intensity Alternative C would involve substantially less construction, it would have incrementally less impact with respect to the SCAQMD regional thresholds.

(2) Operation

Operation of Reduced Intensity Alternative C has the potential to create air quality impacts based on daily trip generation and energy demand. As discussed in Section 4.B., Air Quality, of the Draft EIR, the Project's net operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed SCAQMD regional thresholds for during interim operations when combined with on-going construction emissions. Additionally at full build-out, operation of the Project would not exceed the SCAQMD numeric indicators. As such, both the Project and Reduced Intensity Alternative C would have a less than significant impact with respect to SCAQMD standards. However, because daily trips and the scope of development would be substantially reduced under Reduced Intensity Alternative C, impacts relative to SCAQMD thresholds would be less.

c. Non-Attainment Pollutants

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would result in the emission of criteria pollutants for which the region is in nonattainment. However, maximum daily emissions from construction of Reduced Intensity Alternative C would not exceed the numeric indicator of significance for criteria pollutants nor their precursors. As with the Project, compliance with CARB and SCAQMD control measures and the same design features implemented by the Project would minimize and reduce construction emissions. Neither Reduced Intensity Alternative C nor the Project would result in a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced

Intensity Alternative C would involve substantially less construction, it would result in fewer total emissions than under the Project and impacts would therefore be less.

(2) Operation

Operation of Reduced Intensity Alternative C would result in the emission of criteria pollutants for which the region is in nonattainment. As with the Project, however, such daily emissions from operation would not exceed the threshold of significance for any of pollutants in nonattainment nor their precursors. Even during interim operations that could overlap with construction emissions and at full build-out, operation of Reduced Intensity Alternative C would not exceed the applicable thresholds of significance, though such overlap of operational and construction emissions would be substantially reduced given the lack of outpatient and biomedical research uses proposed under this Alternative. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced Intensity Alternative C would be substantially reduced in terms of development intensity, it would generate fewer total emissions than under the Project and impacts would therefore be less.

d. Substantial Pollutant Concentrations

As with the Project, Reduced Intensity Alternative C would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the either Reduced Intensity Alternative C or the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$, though as noted above, the potential for combined emissions would be incrementally less than under the Project. Operation of Reduced Intensity Alternative C at full build-out, based on the reduced development intensity, would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of either the Project or Reduced Intensity Alternative C would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks which exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of either the Project or Reduced Intensity Alternative C would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced Intensity Alternative C would be substantially reduced in terms of development intensity, it would generate fewer total emissions than under the Project and impacts would be incrementally less.

e. Odors

(1) Construction

As with the Project, Reduced Intensity Alternative C may emit odors during construction associated with the use of architectural coatings and solvents. However, SCAQMD Rule 1113 limits the allowable amount of VOCs from architectural coatings and solvents. Since compliance with SCAQMD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Both the Project and Reduced Intensity Alternative C would result in a less than significant impact. Also, although SCAQMD Rule 1113 would be equally enforceable under both the Project and Reduced Intensity Alternative C, impact levels would be reduced under this Alternative given the substantial reduction in total construction activity on the Medical Center Campus.

(2) Operation

As with the Project, Reduced Intensity Alternative C does not include any uses identified by the SCAQMD as being typically associated with objectionable or nuisance odors. Waste collection areas and disposal for Reduced Intensity Alternative C would be covered and situated away from the property line and sensitive off-site uses. Under both the Project and Reduced Intensity Alternative C, medical waste would be properly sealed and stored in accordance with applicable rules to ensure that no objectionable medical waste-related odors would be created. Best management and good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less than significant under both the Project and Reduced Intensity Alternative C, though impact levels would be incrementally less based on the sizably reduced development intensity and associated potential for new or increased odor sources.

3. Energy

a. Construction

Construction would entail consumption of diesel for hauling and construction equipment, gasoline for some hauling and workers' transportation, and electricity to provide temporary power for lighting and electronic equipment and to power certain construction equipment. Some heavy-duty construction could be electric or alternatively fueled, such as tower cranes, based on commercial availability. As with the Project, Reduced Intensity Alternative C would utilize electric or alternatively fueled equipment as available and as feasible. It is estimated that the construction of the Project would require approximately 0.002 percent of the statewide annual gasoline consumption and 0.003 percent of the statewide annual diesel consumption. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy. As with the Project, Reduced Intensity Alternative C would also meet or exceed the County's waste diversion targets. Neither the Project nor Reduced Intensity Alternative C would result in the wasteful, inefficient, and unnecessary consumption of energy during construction, or preempt future energy conservation during construction. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced Intensity Alternative C would be incrementally smaller in scale, it would generate less energy demand than under the Project and impacts would therefore be reduced.

b. Operation

Operation of both Reduced Intensity Alternative C and the Project would utilize energy for necessary on-site activities and off-site transportation associated with Campus employees, patients, and visitors traveling to and from the site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, the Project and Reduced Intensity Alternative C would meet or exceed energy standards by incorporating green building measures consistent with County policy that requires LEED Silver-level certification and the County's CCAP. The Project would also provide opportunities for future energy efficiency by promoting solar power and electric or alternatively-fueled vehicles. Neither the Project nor Reduced Intensity Alternative C would result in the wasteful, inefficient, and unnecessary consumption of energy during operation, or preempt future energy conservation during construction. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced Intensity Alternative C would be incrementally smaller in scale, it would generate less overall energy demand than under the Project and impacts would therefore be reduced.

4. Geology and Soils

a. Seismic Hazards

The Harbor-UCLA Campus is located within a seismically active region, with the potential for seismic ground shaking. The horizontal peak ground acceleration (PGA) for the site corresponds to the Targeted Maximum Considered Earthquake (MCE_R) of 0.65g. This would be the same under Reduced Intensity Alternative C and the Project. Based on these PGA estimates, ground shaking at the Harbor-UCLA Campus could have a potentially significant impact on people and proposed buildings on the Harbor-UCLA Campus. Although seismic risk exists, Reduced Intensity Alternative C would implement MM-GEO-1, discussed in Section 4.D, Geology and Soils, of this Draft EIR. MM-GEO-1, which requires adherence to the recommendations of an approved Geotechnical Evaluation, would reduce seismic impacts for Reduced Intensity Alternative C and the Project to a less than significant level. With the implementation of MM-GEO-1, the Project and Reduced Intensity Alternative C would have a less than significant impact with respect to seismic hazards, but would be incrementally reduced compared to the Project given the substantial reduction in development intensity on the Medical Center Campus and associated potential to expose people or structures to adverse effects associated with seismic hazards.

b. Soil Erosion and Topsoil

Reduced Intensity Alternative C would require incrementally less grading, including clearing, excavation, stockpiling, than the Project. As with the Project, all work would be performed in accordance with a National Pollutant Discharge Elimination System (NPDES) Permit, which incorporates a Storm Water Pollution Prevention Program (SWPPP) and Best Management Practices (BMPs) for erosion control. Implementation of BMPs would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. Also, the relatively gentle topographic gradients at the Medical Center Campus would reduce the potential for soil erosion during construction. As with the Project, Reduced Intensity Alternative C would have a less than significant impact with respect to soil erosion and topsoil. However, because the potential exists that substantially less area could be graded under Reduced Intensity Alternative C, Reduced Intensity Alternative C would have incrementally less impact with respect to soil erosion than under the Project.

c. Geologic Stability

As with the Project, Reduced Intensity Alternative C could be exposed to differential soil settlement and liquefaction beneath proposed buildings because of the presence of alluvium, possible undocumented fill, and relatively shallow depths to groundwater. If wet or saturated soil conditions are encountered during excavation, instability could present a constraint to the construction of foundations. Because the risk of compressible/collapsible soils and shallow groundwater exists, as with the Project, Reduced Intensity Alternative C would implement MM-GEO-2, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-2, which provides several approaches to address settlement and shallow groundwater, would reduce the potential for these geologic hazards. With the implementation of MM-GEO-2, the Project and Reduced Intensity Alternative C would have a less than significant impact with respect to geologic stability, but would be incrementally reduced compared to the Project given the substantial reduction in development intensity on the Medical Center Campus that could be affected by geologic instability.

d. Expansive and Corrosive Soils

The near-surface soils at the Medical Center Campus are generally sandy silt and clayey and typically expansive when wetted. In addition, on-site soils are potentially corrosive to concrete and metal, which could cause premature deterioration of underground structures or foundations. The risk of expansive and corrosive soils would occur under both Reduced Intensity Alternative C and the Project. As with the Project, Reduced Intensity Alternative C would implement MM-GEO-3, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-3, which provides performance standards and required assessments to address expansive and corrosive soils, would reduce the effects of these soils conditions. With the implementation of MM-GEO-3, the Project and Reduced Intensity Alternative C would have a less than significant impact with respect to expansive and corrosive soils, but would be incrementally reduced compared to the Project given the substantial reduction in development intensity on the Medical Center Campus and associated potential for proposed structures to be adversely affected by such soil conditions.

5. Greenhouse Gas Emissions

Consistency with CCAP

As with the Project, Reduced Intensity Alternative C would be consistent with the County's CCAP, which provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County. Based on the conservatively estimated GHG emissions, the Project would result in a net increase in GHG emissions from 2010 levels. However, the potential increase is extremely small compared to the County's total inventory. One the Project objectives to maintain critical trauma services in the South Bay service region of the County of Los Angeles by redeveloping the existing hospital site, would result in more GHG efficiency than developing a new hospital campus on a greenfield site. Therefore, while the Project and Reduced Intensity Alternative C results in a conservatively estimated minimal net increase in GHG emissions, both the Project and Reduced Intensity Alternative C would be consistent with applicable CCAP measure to minimize its GHG emissions. As such, both the Project and Reduced Intensity Alternative C would not be expected to conflict with the County's ability to achieve the CCAP target reduction. Both the Project and Reduced Intensity Alternative C would have a less than significant impact relative to the CCAP and because both the Project and Reduced Intensity Alternative C would be consistent, impact levels would be similar despite the substantial reduction in overall development intensity under this Alternative.

Greenhouse Gas Reduction Plans

Construction and operation of Reduced Intensity Alternative C, as with the Project, would be consistent with applicable GHG emissions reductions plans, policies, or regulations. Design features, such as green building measures would reduce GHG emissions by increasing energy-efficiency beyond regulatory requirements, reducing indoor and outdoor water demand, and incorporating waste reduction measures. The Project would also incorporate components to reduce transportation-related GHG emissions by providing bicycle and end-of-trip facilities, and by being located within one-quarter mile of transit, thereby encouraging alternative forms of transportation. As with the Project, Reduced Intensity Alternative C would be constructed and operated in a manner consistent with a Silver Certification from the USGBC's LEED program. The LEED features that would be incorporated in the Project would include building efficiency measures to reduce energy consumption, water-saving measures, and waste reduction measures. Both the Project and Reduced Intensity Alternative C would be designed to optimize energy performance. Trees planted on the Medical Center Campus as part of the planned landscaping would sequester CO_2 as they age (not included in

the quantitative analysis). The Project would reduce indoor water use by a minimum of 20 percent with water fixtures that exceed applicable standards. As a result, construction and operation of the both the Project and Reduced Intensity Alternative C would not have a significant impact with respect to consistency with GHG reduction plans. Because both the Project and Reduced Intensity Alternative C would be consistent with applicable plans, impact levels would be similar despite the substantial reduction in overall development intensity under this Alternative.

6. Hazards and Hazardous Materials

a. Hazardous Materials Management

As with the Project, Reduced Intensity Alternative C would require the demolition of some buildings and equipment identified as having ACMs, LPB, and PCBs; the removal and/or relocation of USTs and ASTs that presently contain, or have contained in the past, fuels and other potentially hazardous materials; and the disturbance of soil potentially contaminated with hazardous materials as the result of on-site or off-site LUSTs. Remediation of these materials would be conducted by qualified professionals in accordance with regulations governing these activities, including SCAQMD's Rule 1403 (ACBMs); Cal-OSHA rules (LBP); the federal Toxics Substances Control Act (PCBs); and, for USTs, RCRA Subtitle I, the State Health and Safety Code, and LACFD's enforcement of the State's applicable CCR regulations, with oversight by the RWQCB where groundwater may be affected. Reduced Intensity Alternative C, as with the Project, has the potential to result in accidental upset and release of hazardous materials into the environment, which is a potentially significant impact. In addition, the potential extent of possible contamination of underlying groundwater with petroleum hydrocarbons originating with nearby off-site LUSTs is not known, and construction activities have the potential to result in a significant hazard related to potential contaminated soil and groundwater. As with the Project, Mitigation Measures HAZ-1 through HAZ-4, which require abatement in accordance with the recommendation of the Hazardous Building Materials Survey, removal of USTs pursuant to the LACFD review and closure letter, preparation and adherence to a Soils Management Plan, and investigation of the purpose and potential abandonment of existing on-site groundwater monitoring wells, would be implemented. With the implementation of Mitigation Measures HAZ-1 through HAZ-4, hazardous materials impacts associated with Reduced Intensity Alternative C and the Project would be reduced to less than significant levels. Because Reduced Intensity Alternative C involves demolition and excavation and development in an area with potential groundwater contamination, as under the Project, with mitigation, impacts with respect to hazardous materials management would be less than significant. However, based on the substantial reduction in development intensity on the Medical Center Campus and associated potential to encounter or otherwise expose people to risks associated with hazardous materials conditions, impacts under Reduced Intensity Alternative C would be less than under the Project.

b. Airport Safety Provisions

Reduced Intensity Alternative C is located on the same property as the Project, which is not within the vicinity of an airport. The nearest airport is more than two miles away. Because of this distance, neither the Project nor Reduced Intensity Alternative C would interfere with operations any local airports or airstrips. Impacts regarding airport safety under both Reduced Intensity Alternative C and the Project would, therefore, be similar and less than significant.

c. Emergency Response Plans

Reduced Intensity Alternative C, as with the Project, would not adversely affect existing emergency access routes. Campus ingress and egress would be modified to create distinctions between access and parking for the general public and staff, including a new signalized public entrance on Carson Street. Vehicular access and circulation would avoid conflicts with traffic movements on local roadways and would facilitate the provision on-site emergency services. During construction, adjacent streets may be temporarily affected due to construction activity, such as temporary lane closures, though the need for such closures would be incrementally reduced under this Alternative given the reduction in development intensity. Such occurrences would be implemented in accordance with a construction traffic management plan, which would allow for responses to emergency accessibility needs. The existing helistop, which would be temporarily relocated to the western end of the Medical Center Campus during construction of the new Hospital Tower, would remain operational. As with the Project, regulatory compliance and project features, such as improved access, would avoid the need to generate new emergency plans beyond those normally implemented to address on-site emergency situations. As with the Project, impacts related to emergency response plans would be less than significant, but would be reduced under Reduced Intensity Alternative C compared to the Project.

7. Hydrology and Water Quality

a. Surface Water Hydrology

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative C would be subject to a Construction General Permit and associated NPDES requirements, which include development and implementation of a SWPPP with appropriate BMPs. BMPs to control stormwater runoff during construction could include, but are not limited to, the use of water bars, silt fences, and staked straw bales. Additional source-control BMPs might also be required to prevent runoff and eliminate non-stormwater discharges. Based on the depth to groundwater within the project site, dewatering and any related runoff are not anticipated. Compliance with NPDES requirements would reduce surface water runoff during construction to a less than significant level under both Reduced Intensity Alternative C and the Project. The level of impact related to surface water hydrology under Reduced Intensity Alternative C, however, would be incrementally reduced given the reduction in development intensity and associated extent of impervious surfaces on the Medical Center Campus.

(2) Operation

As with the Project, Reduced Intensity Alternative C would convert more than three acres of existing pavement to turf area. Any proposed new storm drain connections to the reinforced concrete box channel or open channel owned by the Flood Control District would be conducted under a connection permit approved by the District. This permit would require a hydrology analysis and a comparison with the design peak flow rate of the facility. If the calculated peak flow rate exceeded the facility's design peak flow rate, the District will generally require detention to mitigate the increase in peak flow rates. As with the Project, Reduced Intensity Alternative C would be required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (0 percent impervious) based on LID Standards. Several dry wells were previously constructed to meet this requirement. This approach is likely to be implemented for future areas to be redeveloped under both the

Project and Reduced Intensity Alternative C. LID features include resource conservation, flatter wider swales, flatter slopes, turf depression, landscape island storage, rooftop detention/retention, catch basins/seepage pits, sidewalk storage, permeable pavement, and other measures. With the increase in pervious area, the calculated peak flow of the future development will generally be less than under existing conditions; in addition, any future site development will require compliance with County of Los Angeles and LID standards for stormwater management. With implementation of LID measures and permitting from the District related to the reinforced concrete box channel and drainage ditch, surface water impacts associated with both Reduced Intensity Alternative C and the Project would be less than significant. Impacts related to surface water runoff, however, would be less under Reduced Intensity Alternative C given the incremental reduction in development intensity and associated impervious surface area compared to the Project.

b. Surface and Groundwater Quality

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative C would be subject to existing regulations governing surface and groundwater quality. The required Construction General Permit and associated NPDES requirements include development and implementation of a SWPPP with appropriate BMPs to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. Compliance with construction phase BMPs and other requirements are considered protective of water quality during construction and would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. The NPDES Construction General Permit and SWPPP establish procedures and action protocols for the handling of construction-related chemicals and encountered groundwater. Based on existing and historical depths to groundwater within the project site, construction dewatering is not anticipated to be required. However, should groundwater be encountered that would require dewatering, the County would require contractors for individual Project components to apply for coverage and adhere to the monitoring and reporting program under RWQCB Order No. R8-2009-0003. Existing regulations would ensure that any potential dewatering activities would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to Dominguez Channel. Therefore, impacts related to surface and groundwater quality would be less than significant under both Reduced Intensity Alternative C and the Project, but would be reduced under this Alternative given the reduced duration and intensity of construction activities and potential for introduction of pollutants into stormwater flows.

(2) Operation

Stormwater discharge may include pollutants of concern, such as sediment, hydrocarbons, oil, grease, heavy metals, nutrients, herbicides, pesticides, fecal coliform bacteria, and trash. This runoff can flow directly into storm drains and continue through pipes until it is released, untreated, into the Dominguez Channel. Untreated stormwater runoff could degrade water quality in surface and waters and can affect drinking water, human health, and plant and animal habitats. Reduced Intensity Alternative C, as with the Project, would utilize landscaping in strategic ways to capture and clean stormwater runoff. Strategies include replacement of three acres of pavement with landscaping. The Project would avoid the use of pollutants, chemicals, or soil amendments that could enter surface water runoff. Organic maintenance methods or Integrated Pest Management may be used. Implementation of County LID features, including bioretention features, modifications to address the potential leaching of nutrients, and post-construction BMPs would ensure that operations would not degrade the quality of receiving waters to levels below standards considered acceptable by the Los Angles RWQCB or other regulatory agencies, or impair the beneficial uses

of the receiving waters. With compliance with existing regulations, both Reduced Intensity Alternative C and the Project would have a less than significant impact related to surface and groundwater water quality, though impacts under this Alternative would be incrementally reduced.

8. Land Use

a. Applicable Plans and Policies

As with the Project, Reduced Intensity Alternative C would be consistent with the policies of the SCAG 2008 Regional Comprehensive Plan and Compass Growth Visioning (including the Compass 2% Blueprint Strategy) to focus growth in existing and emerging centers, along major transportation corridors, and in proximity to transit. Reduced Intensity Alternative C would be consistent with SCAG's 2016 RTP/SCS by enhancing the pedestrian environment within the Medical Center Campus and along Carson Street, and improving pedestrian connectivity between the Medical Center Campus, the surrounding community, and the Carson Street Metro Transit Station. Reduced Intensity Alternative C would be consistent with applicable policies of General Plan Update in that it would be compatible with the existing adjacent off-site land uses, incorporate sustainable design, facilitate multiple modes of transportation (including alternative modes), provide interconnected and safe pedestrian and bicycle circulation, provide required green space and landscaped setbacks, result in less than significant impacts to biological, aesthetic and cultural resources after mitigation, result in less than significant seismic/geotechnical and noise impacts after mitigation, be developed with adequate public service and water, wastewater, and solid waste disposal capacity to serve the Project; and foster regional economic development.

Reduced Intensity Alternative C would also be consistent with the Los Angeles County General Plan's "P" GPLU land use designation, which permits a broad range of public and semi-public facilities and community-serving uses. The Project would have a maximum FAR of 0.78 and Reduced Intensity Alternative C would be incrementally less with an FAR of approximately 0.5:1. As with the Project, Reduced Intensity Alternative C would be consistent with the Los Angeles Planning and Zoning Code and would not exceed the maximum density or other development standards associated with the underlying C-3 zone. The Project and Reduced Intensity Alternative C would have a less than significant and similar impact with respect to applicable plans and policies.

b. Land Use Compatibility

As with the Project, Reduced Intensity Alternative C would alter the existing visual appearance of the Medical Center Campus through denser development than under existing conditions. However, the Site is located within a fully urbanized setting within the 110 Freeway/Carson Station TOD. The area is also undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. Reduced Intensity Alternative C, as with the Project, would provide landscaping and street trees along the street frontages where in some areas such landscaping and trees are lacking, and would be designed in compliance with unifying design guidelines which would improve the visual appearance of the Medical Center Campus. While the densification of land uses at the Medical Center Campus would be noticeable from adjacent off-site land uses, including the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Medical Center Campus and the residential neighborhood to the north), because of the urbanizing trend in the area and proposed streetscape/screening, Reduced Intensity Alternative C, as with the Project, would result in less than significant land use

incompatibilities with adjacent off-site land uses. However, because Reduced Intensity Alternative C would have substantially less development intensity than under the Project, it would have less impact with respect to land use compatibility.

9. Noise

a. Construction Noise

As with the Project, construction of Reduced Intensity Alternative C would involve demolition, grading, building construction, and paving. Each stage would involve the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. Demolition typically involves the use of excavator, tractor/loader/backhoe, concrete saw, dozer, water truck, and loader. Grading typically involves the use of drill water truck, dozer, tractor/loader/backhoe, and grader. Building construction typically involves the use of crane, forklift, welder, tractor/loader/backhoe, air compressor, and water truck. Paving typically involves the use of tractor/loader/backhoe, concrete mixer truck, roller, paver, and trencher. The Project would be constructed using typical construction techniques. Construction noise would exceed the significance threshold at the several receptor locations during various development phases. As with the Project, Reduced Intensity Alternative C would implement mitigation measures, such as MM NOISE-1 and project design features to achieve a noise reduction in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. However, even with implementation of the mitigation measure, construction-related noise could still exceed the noise threshold at the multi-family residential uses across 220th Street during some phases of construction. Although both the Project and Reduced Intensity Alternative C would result in a significant and unavoidable noise impact, because Reduced Intensity Alternative C in an overall reduced scale and duration of construction, construction noise impacts would be incrementally less.

b. Operation Noise

As under the Project, noise sources associated with operation of Reduced Intensity Alternative C, including mechanical equipment, loading dock activity, refuse collection, parking structure activity, and traffic, would increase the ambient noise level at the nearest noise-sensitive receptor, but by a less than the threshold of significance. Composite noise level increases at all other receptor locations are also expected to be less than significant, given their distance from the site and the presence of intervening structures. As such, the operational noise level impacts due to the future operation of Project and Reduced Intensity Alternative C would be less than significant. However, because Reduced Intensity Alternative C is incrementally smaller in scale than the Project and would generate substantially less traffic, operational noise impacts would be less than under the Project.

With regard to helicopter-related noise, the Project would result in less than significant impacts at Project buildout once the permanent rooftop helistop on the New Hospital Tower is operational. However, operation of the temporary helistop at either interim location would exceed established noise thresholds at nearby sensitive receptors to the south of the Medical Center Campus, and no mitigation exists that could reduce noise levels to acceptable levels. Therefore, impacts under the Project would be considered significant and unavoidable. Because Reduced Intensity Alternative C would also require operation of the temporary helistop locations (though only one would be operational at any given time, as under the Project), impacts under this alternative would be significant and unavoidable and similar to the Project.

c. Construction Vibration

The construction of Reduced Intensity Alternative C, as with the Project, would generate ground-borne construction vibration during demolition, shoring and excavation, and large bulldozer operation. Vibration velocities from operation of construction equipment would range from approximately 0.076 to 0.089 inches per second PPV at 25 feet from the source of activity. Maximum vibration velocities to which receptors could be exposed range from 0.01 to 0.027 inches per second PPV. This value is considerably lower than the impact threshold of 0.5 inches per second PPV, and as such, construction vibration would be less than significant at the nearest residential building. Although construction vibration levels would be less than significant under both the Project and Reduced Intensity Alternative C, because the scope and duration of Reduced Intensity Alternative C's construction activities are substantially less than under the Project, construction vibration impacts would also be incrementally less than those of the Project.

d. Operation Vibration

As with the Project, operation of Reduced Intensity Alternative C would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the nearest off-site buildings would be up to 0.01 inches per second PPV and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility. As such, under both the Project and Reduced Intensity Alternative C, vibration impacts associated with operation of the Project would be less than significant. However, because Reduced Intensity Alternative C would be substantially smaller in scale than the Project (and thus would generate much less traffic), operational vibration impacts would be reduced.

10. Population, Housing and Employment

a. Construction

As with the Project, construction of Reduced Intensity Alternative C would employ a mobile regional construction work force. Given the mobility and short duration of work at a particular site, a construction labor pool that can be drawn upon in the region and workers are not expected to relocate as a result of such employment opportunities. The number of construction workers would vary from approximately 212 workers per day during less intensive construction activity up to a maximum of approximately 1,650 construction workers on a day during the peak construction period. It should be noted that although this level of employment may not be necessary depending on the specific phasing of construction activities, it has been assumed to represent a worst-case condition for the purposes of this analysis. Because of a large, regional construction pool and the mobility of construction workers, construction activities would not generate a notable demand for housing, or affect population patterns. Although the duration and overall intensity of construction would be incrementally less under Reduced Intensity Alternative C, as with the Project, construction of both Reduced Intensity Alternative C and the Project would have a less than significant impact relative to construction-related population, housing, and employment. However, because of an incrementally reduced scope of development, Reduced Intensity Alternative C would have less impact than under the Project.

b. Operation

Compared to the Project, Reduced Intensity Alternative C would result in the same number of licensed hospital beds (446 beds) but would not construct any new outpatient buildings (compared to three under the Project), would reduce the scale of the Central Plant, and would fully renovate of the Existing Hospital tower. Overall intensity would be substantially reduced compared to the Project and Reduced Intensity Alternatives A and B, most notably due to the lack of new construction associated with the Bioscience Tech Park and future expansion of LA BioMed uses. There would be incrementally fewer annual outpatient visits than under the Project and Reduced Intensity Alternatives A and B. Total employment at the site under the Project would represent a small percentage of the projected growth in the South Bay Planning Area up to Year 2030 and very small percentage of estimated growth in unincorporated Los Angeles County for this same period. Because the Project's employment increase would not exceed local and SCAG's growth projections for the period between 2016 and 2030, Reduced Intensity Alternative C, which would have incrementally fewer employees, would also not exceed growth projections. As with the Project, impacts regarding consistency with the projected employment growth would be less than significant. However, because of the reduced intensity, impacts under Reduced Intensity Alternative C would be incrementally less.

11. Public Services

a. Fire Protection and Emergency Services

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases. These periodic construction activities could temporarily increase demand for fire protection and EMS, and may cause the occasional exposure of combustible materials such as wood, plastics, sawdust, coverings and coatings, heat sources including machinery and equipment sparking, exposed electrical lines, welding activities, and chemical reactions in combustible materials and coatings. However, compliance with California Division of Occupational Safety and Health Administration (Cal/OSHA) and Fire Code requirements; on-site fire suppression equipment specific to construction activities; compliance with applicable codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials would reduce demand for fire protection and EMS during construction to a less than significant level. Emergency access would be provided and maintained throughout construction to existing uses, new uses, and fire hydrants. While Reduced Intensity Alternative C and the Project would both require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Medical Center Campus, Reduced Intensity Alternative C, as with the Project, would provide a construction traffic management plan to establish temporary traffic controls, prohibit construction vehicle activities and parking in surrounding off-site areas, and require various safety precautions such as alternate routing and protection barriers. With the implementation of the traffic management plan, impacts related to emergency access, vehicular access, pedestrian and bicycle access and safety, public transit, and construction parking would be less than significant under both Reduced Intensity Alternative C and the Project. Although impacts would be less than significant under both the Project and Reduced Intensity Alternative C, impacts would be less under Reduced Intensity Alternative C because of the substantially shorter construction time frame.

(2) Operation

As with the Project, Reduced Intensity Alternative C would be subject to the requirements of the County Code (e.g., Building Code, Fire Code, and Utilities Code) for new construction that address structural design, building materials, site access, fire lanes, fire flow requirements, automatic sprinkler systems, alarms, and smoke detectors. The LACFD would review and approve all plans at the building permit and plan check phases of the Project to ensure compliance with applicable Fire Code requirements, thereby minimizing the risk of increased operation fire safety hazards. An LACFD-approved Emergency Response Plan would include mapping of site access and emergency exits, evacuation routes for vehicles and pedestrians, and locations of the nearest hospitals and fire stations. Finally, because Reduced Intensity Alternative C would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, fire safety at the Medical Center Campus would be improved.

Unlike the Project, development of Reduced Intensity Alternative C would not measurably increase existing employee population and annual patient visits at the Medical Center Campus, and similarly would not increase operational traffic in the Project vicinity. According to Section 4.L., Transportation and Traffic, of this Draft EIR, because implementation of mitigation measures is not entirely within the control of the County, significant and unavoidable impacts would occur at the several intersections in the area, which could affect LACFD emergency vehicle response times in the area. However, although its implementation would not increase traffic in the area, Reduced Intensity Alternative C would still provide traffic design measures, including the installation roadway and traffic control improvements that would enable emergency access to the Medical Center Campus. In addition, emergency response is routinely facilitated, particularly for high priority calls, through use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. In light of the above, and the fact that emergency response times to the Medical Center Campus from Station 36 are currently within the LACFD's response time goals, operational impacts under the Project and Reduced Intensity Alternative C on emergency response times would less than significant. However, given the lack of expanded outpatient services and new or expanded biomedical research uses, overall traffic impacts and associated potential to affect emergency vehicle response times under Reduced Intensity Alternative C would be incrementally less than under the Project.

As with the Project, Reduced Intensity Alternative C would require greater fire flows at the site than required under existing conditions. As discussed in Section 4.K.1, Fire Protection and Emergency Services of this Draft EIR, water service to the Medical Center Campus are adequate to meet Project requirements and, as such, would be adequate to meet Reduced Intensity Alternative C fire flow requirements. Impacts related to fire flow would be less than significant under both Reduced Intensity Alternative C and the Project. However, because of reduced scale under Reduced Intensity Alternative C, fire flow demand would be incrementally less.

b. Sheriff Protection

(1) Construction

Construction activities associated with Reduced Intensity Alternative C, as under the Project, would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through buildout. These periodic construction activities could temporarily increase demand for police protection associated with patrolling the construction site. However, as required by PDF SHER-1, the construction sites would be fully fenced, lighted with security lighting, and patrolled either by on-site LACSD personnel from the on-site LACSD satellite station or by private security hired by DHS. Furthermore, an LACSD satellite station is located on-site, and the Medical

Center Campus has a 24-hour a day LACSD presence, which would both discourage construction site crimes and provide for almost immediate response to any observed or reported construction site crimes that are in process. Therefore, the demand for police protection services during construction of Reduced Intensity Alternative C would not require new or altered police protection facilities to maintain service, and the impact would be less than significant but incrementally reduced compared to the Project due to the reduction in overall construction activities on the Medical Center Campus.

Regarding police access and response times during construction, as would be the case under the Project, construction staging and construction worker parking associated with Reduced Intensity Alternative C would be accommodated on the Medical Center Campus, limiting potential conflicts with traffic on local streets. In addition, as required by the PDF-SHER-2, emergency access would be provided and maintained to existing and new on-site uses, and to off-site uses, throughout construction. Furthermore, while the Project and Reduced Intensity Alternative C would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site. However, with the implementation of various traffic- and law enforcement-related Project Design Features, as under the Project, impacts on police access and response times during construction would not require new or altered police protection facilities to maintain service, and the impact would be less than significant. However, given the reduction in overall development intensity under this Alternative, construction-related impacts would be incrementally reduced.

(2) Operation

The Master Plan Project would result in a net increase of 1,178,071 square feet of building floor area on-site, and net increases in total Campus-wide employees and annual patient visits of 2,030 employees and 185,745 annual patient visits, respectively. This, in turn, would create the need for additional space at LACSD's on-site satellite station to accommodate the additional officers. However, Reduced Intensity Alternative C would result in the in-kind replacement and/or relocation of existing inpatient hospital beds and outpatient services within the Medical Center Campus and would not result in an overall increase in development intensity compared to existing conditions. Therefore, no new operational impacts on police protection services would occur under Reduced Intensity Alternative C and thus impacts in this regard would be reduced compared to the Project.

c. Parks and Recreation

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would not physically affect existing public parks and recreational facilities as no such facilities are located on or directly adjacent to the Medical Center Campus. Also, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local parks and recreational facilities to the extent that new recreational facilities would be required or that substantial physical deterioration of such facilities would occur. Construction effects on parks under either Reduced Intensity Alternative C or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative C would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative C would generate incrementally fewer employees than the estimated 2,030 new employees under the Project. However, Reduced Intensity Alternative C would not increase the overall intensity of development (square footage of outpatient and support services and number of inpatient hospital beds), and thus it would not have a notable potential to bring additional employees and their families to the area. As such, Reduced Intensity Alternative C would not create a demand, either directly or indirectly, for public parks and recreational facilities. Furthermore, any use of existing public parks and recreational facilities by employees and their families under Reduced Intensity Alternative C, as under existing conditions, would likely be dispersed over a wide geographic area rather than concentrated at any one of the eleven local public parks and recreational facilities. As with the Project, Reduced Intensity Alternative C would have a less than significant impact on parks and recreational facilities. However, because Reduced Intensity Alternative C would have substantially fewer employees than under the Project, impacts would be incrementally less.

d. Schools

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would not physically affect existing public schools as no public schools are located on or directly adjacent to the Medical Center Campus. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public schools would be maintained during Project construction. Given the general accessibility of the Medical Center Campus and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and have children that would use local public schools. Hence, new or physically altered local public schools would not be required to provide service to the children of Project construction workers and maintain acceptable service ratios and other performance standards. Construction impacts on schools, as with the Project, would be less than significant but incrementally reduced under Reduced Intensity Alternative C.

(2) Operation

It is estimated that, under the Project, families of new employees would generate an estimated 29 grade K-5 students, 14 grade 6-8 students, and 18 grade 9-12 students. Reduced Intensity Alternative C would generate fewer employees fewer students than under the Project and Reduced Intensity Alternatives A and B. It is likely that student attendance under both Reduced Intensity Alternative C and the Project would be split among the 11 elementary and high schools in the local area, and possibly beyond. If all new students were distributed among the nearest schools, it is unlikely that these students alone would necessitate the need to construct new or physically altered school facilities given the small numbers of students involved. As with the Project, impacts on local schools would be less than significant under Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C is substantially reduced in development intensity, impacts would be incrementally less.

e. Libraries

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would not physically affect existing

libraries, none of which are located on or directly adjacent to the Medical Center Campus. In addition, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local libraries to the extent that new libraries would be required or that substantial physical deterioration of such facilities would occur. Construction effects on libraries under either Reduced Intensity Alternative C or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative C would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative C would generate incrementally fewer employees than the Project's estimated net increase of 2,030 employees. However, Reduced Intensity Alternative C would not increase the overall intensity of development (square footage of outpatient and support services and number of inpatient hospital beds), and thus it would not have a notable potential to bring additional employees and their families to the area such that there would be an increase in demand for library services. Thus this Alternative would not result in the need for new or physically altered library facilities. Employees working at the Medical Center Campus under Reduced Intensity Alternative C are expected to be derived from the existing local labor pool and thus already generate a demand for public libraries. As under the Project, the existing on-site AF Parlow Library of Health Sciences would be relocated to new space within the New Hospital Tower under Reduced Intensity Alternative C to help meet the demand for library facilities. Patients and visitors of existing public library facilities would also likely be split among the four public libraries in the vicinity; thus, avoiding the concentration of demand at any one library. As with the Project, Reduced Intensity Alternative C would have a less than significant impact on library services. However, because Reduced Intensity Alternative C would generate substantially fewer employees than the Project or Reduced Intensity Alternatives A or B, impacts would be incrementally less.

12. Transportation and Parking

a. Construction

As with the Project, the implementation of a Construction Traffic Management Plan and pedestrian safety program under Reduced Intensity Alternative C would reduce potential construction impacts associated with hauling, deliveries and worker vehicles. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance would minimize the potential disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the commercial zones and residential neighborhoods. However, given the amount of development in the Project area, the uncertainty in terms of timing for each related Project and the potential for overlap of development, the Project could contribute to a cumulatively significant construction impact. Beyond compliance with County requirements regarding haul routes and implementation of traffic controls and safety procedures, no other feasible mitigation measures have been identified. As such, construction traffic impacts would be significant and unavoidable. However, because of a shorter construction duration, construction traffic impacts would be incrementally less than under the Project.

b. Operation

(1) Intersection Service Levels

Unlike the Project, development of Reduced Intensity Alternative C is not expected to result in a net increase in existing employment, population, or annual patient visits at the Medical Center Campus, and thus would not increase operational traffic in the Project vicinity. Significant traffic impacts are anticipated at the following twelve (12) intersections: Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. As Reduced Intensity Alternative C would not increase vehicle trips compared to existing conditions, based on the in-kind replacement of existing inpatient and outpatient facilities, impacts to these intersections are not anticipated. As such, implementation of proposed mitigation measures (MM TRAF-1 through MM TRAF-3) would not be necessary. As such, because of the reduction in development intensity under Reduced Intensity Alternative C, and associated lack of net new vehicle trips generated at the Medical Center Campus, impacts would be incrementally less than under the Project and less than significant. Thus, this Alternative would eliminate the significant unavoidable impact to intersections that would occur under the Master Plan Project.

(2) CMP Transportation System

As with the Project, Reduced Intensity Alternative C would not exceed the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant under both Reduced Intensity Alternative C and the Project. However, because Reduced Intensity Alternative C would result in no net increase in vehicle trips, impact levels would be less compared to the Project.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections

Development under the Master Plan Project would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic at the northbound I-110 Freeway at 228th Street, the southbound 110 Freeway at El Segundo Boulevard, and the northbound I-405 Freeway at the I-710 Freeway, and due to uncertainties regarding implementation of applicable mitigation measures, impacts are considered significant and unavoidable. However, because Reduced Intensity Alternative C would not result in any net new vehicle trips, impact levels would be less than significant without the need for mitigation measures. Reduced Intensity Alternative C would also not significantly impact the arterial intersection of Western Avenue (State Route 213) and Carson Street, as would occur under the Project, because it would not add more than 50 vehicle trips to this intersection. Given the lack of new vehicle trips under Reduced Intensity Alternative C, this Alternative would avoid a significant and unavoidable impact that would occur at this location under the Project.

(b) Freeway Off-Ramps

Unlike the Project, Reduced Intensity Alternative C would not increase traffic at freeway off-ramps. As such, the off-ramp queue would not be expected to extend beyond the length of the ramp onto the mainline of the

freeway during the peak arrival period, and thus impacts at freeway off-ramps would be less than significant. Although both Reduced Intensity Alternative C and the Project would have less than significant impacts, Reduced Intensity Alternative C would result in no new vehicle trips and thus would have an incrementally reduced impact at freeway off-ramps.

(4) Public Transit and Alternative Transportation

Reduced Intensity Alternative C would not result in an increase in transit person trips since the overall intensity of development would be comparable to existing conditions. Because implementation of this Alternative would not increase transit ridership, and thus would not have the potential to exceed transit capacity, Reduced Intensity Alternative C would have a less than significant impact on transit and alternative transportation. Although both Reduced Intensity Alternative C and the Project would have less than significant impacts, Reduced Intensity Alternative C would result in fewer transit riders than under the Project and therefore would have less impact on transit facilities and services.

(5) Access and Circulation

As under the Project, access to the site under Reduced Intensity Alternative C would be provided via seven driveways. Driveways would be designed to County standards and would accommodate left and right ingress/egress turning movements. Vehicular access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. The existing network of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. As with the Project, impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant. However, because Reduced Intensity Alternative C would generate less overall traffic, potential pedestrian/vehicle conflicts would be incrementally less.

(6) Parking Supply

Reduced Intensity Alternative C would not provide any net new parking spaces, but rather would consolidate existing parking spaces on the Medical Center Campus within new surface and structured parking facilities. Nonetheless, as with the Project, total parking is anticipated to exceed County Code requirements. A comprehensive signage and wayfinding plan would be developed to aid visitors and patients in finding ultimate destinations and parking intended for those uses. As with the Project, it is anticipated that Reduced Intensity Alternative C, in accordance with existing and proposed TDM measures or potential LEED requirements for future buildings, would provide additional bicycle parking facilities on the Medical Center Campus beyond what is required by the County Code. Because parking would exceed Code requirements, impacts related to parking supply under both the Project and Reduced Intensity Alternative C would be less than significant and similar.

13. Utilities and Service Systems

a. Water Supply

(1) Construction

Construction of Reduced Intensity Alternative C, as with the Project would include all necessary on- and off-site water system connections and improvements to tie into Cal Water's existing distribution system. All necessary improvements would be verified through the coordination with Cal Water and the LACFD regarding fire flow requirements. Impacts on water distribution systems would be less than significant under both the Project and Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C would have substantially less overall development than under the Project, impacts on local distribution infrastructure and potential water supply pipeline construction, if necessary, would be incrementally less under this Alternative.

(2) Operation

Reduced Intensity Alternative C would result in an incremental decrease in the Project's estimated water demand of 458.6 AFY (or a net increase of 251 AFY over existing conditions), as there would be no net increase in overall development intensity relative to existing conditions. As such, Reduced Intensity Alternative C would be expected to have a water demand comparable to existing conditions, or approximately 208 AFY. As no increase in water demand is anticipated under this Alternative, impacts related to water supply would be less than significant under both the Project and Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C would have substantially less overall development than under the Project, impacts on water supply would be incrementally less.

b. Wastewater

(1) Construction

Construction of Reduced Intensity Alternative C, as with the Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the LACSDs' existing sewer system. In the event that, during development, wastewater lines were found to be substandard or in deteriorated condition, the County would be required to make necessary improvements to achieve adequate service pursuant to applicable County requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer capacity and connection permit from the LACSDs. Impacts on conveyance systems would be less than significant under both the Project and Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C would have substantially less overall development than under the Project, impacts on local conveyance systems and potential sewer line construction would be incrementally less.

(2) Operation

Reduced Intensity Alternative C would not result in any notable increase in wastewater generation, compared to the Project's estimated wastewater generation of 171,998 gpd, which represents approximately 0.114 percent of JWPCP's total remaining capacity of 120 mgd. Given the lack of a measurable increase in wastewater generation on-site, Reduced Intensity Alternative C would not exceed the available capacity of affected wastewater facilities and, thus, would not directly or indirectly result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment

facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Impacts related to wastewater conveyance and treatment would be less than significant under both the Project and Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C would have less overall development than under the Project, impacts on treatment systems would be incrementally less.

c. Solid Waste

(1) Construction

Reduced Intensity Alternative C, as with the Project, would require demolition of some existing buildings and construction activities that would generate solid waste. Much of this would be accommodated at the County's inert landfill site (Azusa Land Reclamation) or one of a number on inert debris engineered fill operations that are located throughout Los Angeles County. There will be an additional approximately 40 cubic yards of soil removed for soil remediation due to the four Leaking Underground Storage Tanks found near the Central Plant. Not taking into account C&D Debris Recycling and Reuse Program and the Los Angeles County Green Buildings Standard Code (Reduced Intensity Alternative C must recycle or reuse 50 percent of the debris generated), the estimated debris is expected to be considerably less than the waste generated by Project construction given the substantial reduction in development intensity. Neither the Project nor Reduced Intensity Alternative C would exceed landfill capacity for construction debris or soil waste. Impacts under both the Project and Reduced Intensity Alternative C would have a less than significant impact relative to solid waste capacity, but impacts under Reduced Intensity Alternative C would be substantially reduced.

(2) Operation

Not taking into account the amount of solid waste that could potentially be diverted via source reduction and recycling programs, the Project would generate a net increase of total net increase in waste approximately 2,481 tons per year. If all of the Project's waste were taken to Sunshine Canyon Landfill, the Project's respective additions to the daily disposal, 1.4 tons, would be approximately 0.011 percent of the residual daily capacity at the landfill, assuming no diversion. With 60 percent diversion it would be approximately 0.004 percent. With the same number of inpatient beds and elimination of the Project's outpatient buildings and proposed Bioscience Tech Park and expanded LA BioMed research uses, Reduced Intensity Alternative C would provide a substantial decrease in operational solid waste generation. Because the Project would have not exceed landfill capacity, Reduced Intensity Alternative C, which would generate incrementally less waste, would also not exceed landfill capacity. Under both the Project and Reduced Intensity Alternative C, impacts on landfill capacity would be less than significant. However, because the scope of development under Reduced Intensity Alternative C is reduced, it would have incrementally less impact than under the Project.

C. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

Unlike Reduced Intensity Alternatives A and B, Reduced Intensity Alternative C would eliminate the Project's significant and unavoidable traffic impacts at the intersections of Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110

Southbound Ramps & 223rd Street. It would also incrementally reduce the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during future construction phases, though impacts in this regard are conservatively considered to remain significant and unavoidable. The significant unavoidable temporary operational helicopter noise impact that would occur under the Project would also occur under Reduced Intensity Alternative C.

Because Reduced Intensity Alternative C would be substantially reduced compared to the Project and Reduced Intensity Alternatives A and B, demand for public services and utilities would be incrementally reduced. However, Reduced Intensity Alternative C would have a relatively similar or incrementally reduced level of impact that would still require the implementation of mitigation measures, as under the Project, for potentially significant impacts associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

Reduced Intensity Alternative C would incrementally reduce the Project's other significant and less than significant impacts, would eliminate the significant traffic impacts of the Project, and would not result in any new or increased environmental impacts, and further, it would achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

Reduced Intensity Alternative C would support, albeit to a lesser extent than under Reduced Intensity Alternatives A and B, the Project's basic objectives to renovate existing health facilities to meet the intent of the Affordable Care Act of 2010 to modernize and integrate healthcare delivery. It would update most facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. It would partially meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would also, to a limited degree, allow for the fundamental reorganization, expansion and integration of outpatient services, and would also renovate and appropriate new Medical Center Campus construction. However, because retail uses and new outpatient buildings would be eliminated, it would not encourage the same vibrant, mixed-use setting as under the Project and would not achieve optimum public utilization of land and buildings under the ownership and control of the County.

Reduced Intensity Alternative C would not support the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus, as all Bioscience Tech Park and expanded LA BioMed uses would be eliminated. However, this Alternative would still meet the objective of creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices, though not to the extent the Master Plan Project would. However, Reduced Intensity Alternative C would not provide any opportunities for development up to 250,000 square feet of additional bioscience and support facilities or 225,000 square feet of expanded LA BioMed facilities.

5.0 ALTERNATIVES
E. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Section 15126.6(e)(2) of the State *CEQA Guidelines* indicates that an analysis of alternatives to a proposed project shall identify an environmentally superior alternative among the alternatives evaluated in an EIR and that if the "no project" alternative is the environmentally superior alternative, the EIR shall identify another environmentally superior alternative among the remaining alternatives. With respect to identifying an Environmentally Superior Alternative among those analyzed in this Draft EIR, the range of feasible Alternatives includes the No Project/No Build Alternative, Reduced Intensity Alternative A, Reduced Intensity Alternative B, and Reduced Intensity Alternative C.

A comparative summary of the environmental impacts anticipated under each Alternative to the environmental impacts associated with the Project is provided in **Table 5-1**, *Comparison of Impacts Associated with the Alternatives and Impacts of the Project*, below, based on the detailed evaluation of the potential impacts associated with each Alternative provided in the previous sections. Pursuant to Section 15126.6(c) of the State *CEQA Guidelines*, the analysis below addresses the ability of the Alternatives to "avoid or substantially lessen one or more of the significant effects" of the Project.

As discussed above, and as depicted in Table 5-1, the No Project/No Build Alternative is considered the overall environmentally superior Alternative as it would avoid nearly all of the impacts that would occur under the Project. Although adverse impacts would be avoided under the No Project/No Build Alternative, it would not achieve the primary beneficial aspects of the Project to implement SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles and to replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

The No Project/No Build Alternative would also not achieve the aesthetic benefits of the Project or achieve optimum public utilization of land and buildings under the ownership and control of the County. As indicated above, without development of Project, the No Project/No Build Alternative would not meet any of the Project objectives. A comparative summary of the extent to which the Project Alternatives would meet the Project's Objectives is summarized in **Table 5-2**, *Comparison of Alternatives - Ability to Meet Project Objectives*. However, note that although Reduced Intensity Alternative A would partially meet the objectives of the Project in the same categories as Reduced Intensity Alternative B, the latter would meet the same objectives to a lesser degree. Furthermore, Reduced Intensity Alternative C would not achieve two of the Project objectives, only partially achieve five of the objectives, and fully achieve only one of the objectives. Nevertheless, in accordance with the State *CEQA Guidelines* requirement to identify an environmentally superior Alternative other than the No Project/No Action Alternative, a comparative evaluation of the remaining Alternatives indicates that Reduced Intensity Alternative C, the New Acute Bed Hospital Tower Only Alternative, would be the environmentally superior Alternative.

Table 5-1

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
A. Aesthetics					
Visual Character					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
Views	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Light and Glare					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation					
Artificial Light	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Glare	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
B. Air Quality					
Consistency with Air Quality Management Plan					

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Violation of Air Quality Standards					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Non-Attainment Pollutants					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Substantial Pollutant Concentrations	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Odors					
Construction	Less than Significant	Less Impact (No Impact)	Similar (Less than Significant)	Similar (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Operation	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
C. Energy					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
D. Geology and Soils					
Seismic Hazards	Less than Significant with Mitigation	Less Impact (No Impact)	Similar Impact (Less than Significant with Mitigation)	Similar Impact (Less than Significant with Mitigation)	Less Impact (Less than Significant with Mitigation)
Soil Erosion and Topsoil	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Geologic Stability	Less than Significant with Mitigation	Less Impact (No Impact)	Similar Impact (Less than Significant with Mitigation)	Similar Impact (Less than Significant with Mitigation)	Less Impact (Less than Significant with Mitigation)
Expansive and Corrosive Soils	Less than Significant with Mitigation	Less Impact (No Impact)	Similar Impact (Less than Significant with Mitigation)	Similar Impact (Less than Significant with Mitigation)	Less Impact (Less than Significant with Mitigation)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
E. Greenhouse Gas Emissions					
Consistency with CCAP	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
Consistency with Greenhouse Gas Reduction Plans	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
F. Hazards and Hazardous Materials					
Hazardous Materials Management	Less than Significant with Mitigation	Less Impact (No Impact)	Similar Impact (Less than Significant with Mitigation)	Similar Impact (Less than Significant with Mitigation)	Less Impact (Less than Significant with Mitigation)
Airport Safety Provisions	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
Emergency Response Plans	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
G. Hydrology and Water Quality					
Surface Water Hydrology					
Construction	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Surface and Groundwater Water Quality					
Construction	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
H. Land Use					
Applicable Plans and Policies	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
Land Use Compatibility	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
I. Noise					
Construction Noise	Significant and Unavoidable	Less Impact (No Impact)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)
Operation Noise	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Construction Vibration	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation Vibration	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
J. Population, Housing and Employment					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
K. Public Services					
Fire Protection and Emergency Services					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Operation	Less than Significant With Mitigation	Less Impact (No Impact)	Less Impact (Less than Significant With Mitigation)	Less Impact (Less than Significant With Mitigation)	Less Impact (Less than Significant With Mitigation)
Sheriff Protection					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant With Mitigation	Less Impact (No Impact)	Less Impact (Less than Significant With Mitigation)	Less Impact (Less than Significant With Mitigation)	Less Impact (Less than Significant With Mitigation)
Schools					
Construction	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Parks and Recreation					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Libraries					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
L. Transportation and Parking					
Construction	Significant and Unavoidable	Less Impact (No Impact)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)
Operation					
Intersection Service Levels	Significant and Unavoidable	Less Impact (No Impact)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)	Less Impact (No Impact)
CMP Transportation System	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)
Caltrans Facilities					
Freeway Mainlines and Intersections	Significant and Unavoidable	Less Impact (No Impact)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)	Less Impact (No Impact)
Freeway Off-Ramps	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)
Public Transit and Alternative Transportation	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Access and Circulation	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)
Parking Supply	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)
M. Utilities and Service Systems					
Water Supply					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Wastewater					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Solid Waste					
Construction	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C

Source: ESA PCR, 2016

Table 5-2

Comparison of Alternatives - Ability to Meet Project Objectives

PROJECT OBJECTIVES & CRITERIA	Alternative 1 No Project/No Build			Alternative 2 Reduced Intensity A			Alternative 3 Reduced Intensity B			Alternative 4 Reduced Intensity Alternative C		
	No	Partial	Yes	No	Partial	Yes	No	Partial	Yes	No	Partial	Yes
1. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.	X					X			X			X
2. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.	X				X			X			X	
3. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways.	X				X			X			X	
4. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.	X				X			X			X	
5. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities.	X				X			X		X		

Table 5-2(Continued)

Comparison of Alternatives - Ability to Meet Project Objectives

PROJECT OBJECTIVES & CRITERIA	Alternative 1 No Project/No Build			Alternative 2 Reduced Intensity A			Alternative 3 Reduced Intensity B			Alternative 4 Reduced Intensity Alternative C		
	No	Partial	Yes	No	Partial	Yes	No	Partial	Yes	No	Partial	Yes
6. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.	X					X			X		X	
7. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.	X				X			X			X	
8. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."	X				X			X			X	
TOTAL OBJECTIVES SCORE	**8**	**0**	**0**	**0**	**6**	**2**	**0**	**6**	**2**	**1**	**6**	**1**

Source: ESA PCR, 2016.

6. Other CEQA Considerations

6.0 OTHER CEQA CONSIDERATIONS

1. INTRODUCTION

This section addresses specific topics including significant unavoidable environmental impacts; reasons why the project is being proposed, notwithstanding its significant unavoidable impacts; growth inducing impacts; potential secondary effects; and less than significant impacts of the proposed Project.

2. SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(b) of the *CEQA Guidelines* requires that an EIR describe significant environmental impacts that cannot be avoided, including those effects that can be mitigated but not reduced to a less than significant level. Following is a summary of the impacts associated with the proposed Master Plan Project that were concluded to be significant and unavoidable in Chapter 4.0, Environmental Impact Analysis, of this Draft EIR.

(a) Noise

(1) Construction

The temporary sound barrier prescribed in Mitigation Measure NOISE-1 and project design feature PDF-NOISE-1, can achieve a noise reduction of 15 dBA or more in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. Therefore, the construction-period L_{eq} would be reduced to below the 60 dBA significance threshold at the south of the Medical Center Campus, Location R3 and the east of the Medical Center Campus, Location R5 and the 65 dBA significance threshold at north of the Medical Center Campus, Location R4. However, even with implementation of the mitigation measure, construction related noise would be a maximum of 83 dBA at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. As this would exceed the significance threshold of 60 dBA, the construction noise impacts would be significant and unavoidable at the single- and multi-residential uses across 220th Street, during Phase C, Phase 5, and Phase 6.

(2) Operation

Operation of the temporary helistop at either potential location (the Interim 1 Helistop location or Interim 2 Helistop location) would exceed noise thresholds at one nearby sensitive receptor location (i.e., residential uses to the south of the Medical Center Campus across 220th Street). While this impact would be temporary, as significant noise impacts would no longer occur at this or any other location once the permanent helistop on the roof of the New Hospital Tower is operational, no feasible mitigation is available to reduce the significance of impacts due to the proximity of both feasible interim locations to noise-sensitive uses. Thus, this impact is considered significant and unavoidable.

(b) Transportation and Traffic

(1) Construction

Despite the incorporation of Project Design Feature PDF TRAF-1, Construction Traffic Management Plan, construction traffic impacts from construction worker vehicles and truck trips, for both Project-level and

cumulative conditions, are conservatively concluded to be significant and unavoidable. However, with implementation of PDF TRAF-1 and PDF TRAF-2, impacts related to construction-related vehicle access, pedestrian and bicycle access and safety, public transit service, and construction parking would be less than significant.

(2) Operation

(a) Intersection Levels of Service

Normandie Avenue & Torrance Boulevard (Intersection #1) - The Project would result in a significant impact at this intersection in the Interim Existing plus 2023 Project plus Cumulative (2023) and Existing plus 2030 Project plus Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as the addition of separate right- turn lanes at the eastbound or westbound approaches, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & Torrance Boulevard (Intersection #2) - The Project would result in a significant impact at this intersection in the Existing plus 2023 Project plus Cumulative and Existing plus 2030 Project plus Cumulative Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as additional northbound or southbound through lanes, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

Normandie Avenue & Carson Street (Intersection #4) - The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Berendo Avenue & Carson Street (Intersection #6) – The Project would result in a significant impact at this intersection under the Existing and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Medical Center Drive & Carson Street (Intersection #7) - The Project would result in a significant impact at this intersection in the Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & Carson Street (Intersection #8) – The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

I-110 Southbound Ramps & Carson Street (Intersection #9) – The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios. The implementation of this mitigation measure would reduce the Project-related impact to a less than significant level and would reduce the cumulative impact to a less than significant level in the AM peak hour. The impact during the PM peak hour would also be reduced, but not below a significant level. This improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, and because the improvement would not fully mitigate the identified impacts in all scenarios, this impact would be considered significant and unavoidable.

Vermont Avenue & 220th Street (Intersection #14) – The Project would result in a significant impact at this intersection under the Existing and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound approaches to provide a dedicated left turn-lane but were determined to conflict with the Los Angeles County Transit Oriented Districts Access Study. The Study calls for curb extensions at all four crossings to shorten the pedestrian crossing distance. The intersection approaches do not have sufficient space to accommodate both curb extensions and additional lanes. Thus, this impact would remain significant and unavoidable.

220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) - As shown in Tables 4.L-24 and 4.L-25, the implementation of Mitigation Measure TRAF-2 would reduce the Project-related impact at this intersection to a less than significant level. However, this improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, this impact is considered significant and unavoidable.

Normandie Avenue & 223rd Street (Intersection #17) - The Project would result in a significant impact at this intersection in the Cumulative (2030) Existing plus 2030 Project and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & 223rd Street (Intersection #19) - The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Thus, this impact would remain significant and unavoidable.

I-110 Southbound Ramps & 223rd Street (Intersection #20) - As shown in Tables 4.L-22 and 4.L-23, the implementation of Mitigation Measure TRAF-3 would reduce the Project-related impact at this intersection to a less than significant level. However, this improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, this impact is considered significant and unavoidable.

Overall, the Project would result in twelve (12) significant and unavoidable impacts to study area intersections, even though Tables 4.L-22 through 4.L-25 show that proposed improvements, if implemented, would reduce impacts at these intersections, because implementation of the proposed improvements is not entirely within the control of the lead agency.

(b) Freeway Mainlines and Intersections

Mitigation Measure TRAF-4 requires that the developer make a fair-share contribution to address potentially significant impacts on freeway mainline segments, intersections under Caltrans jurisdiction, and off-ramps. Caltrans generally considers fair share contributions to constitute full mitigation of a significant impact. In addition, under CEQA Guidelines Section 15130(a)(3) fair share contribution could be considered adequate mitigation for cumulative traffic impacts. Options for addressing the impacts were identified, but because there are no existing projects that identified by Caltrans that would lower the impact below the significance threshold, the significant impacts identified above to Caltrans facilities are conservatively determined to be significant and unavoidable.

3. REASONS WHY THE PROJECT IS BEING PROPOSED, NOTWITHSTANDING ITS SIGNIFICANT UNAVOIDABLE IMPACTS

In addition to identification of the Project's significant unavoidable impacts, Section 15126.2(b) of the CEQA Guidelines also requires a description of the reasons why the Project is being proposed, notwithstanding significant unavoidable impacts associated with the Project. The reasons why the Harbor-UCLA Medical

Center Campus Master Plan Project has been proposed are identified in the Statement of Project Objectives subsection in Chapter 2.0, *Project Description*, of this Draft EIR. The underlying goal or purpose of the Project is to redevelop the County-owned facility to support a modern, integrated healthcare delivery system. The primary objective of the Project is to provide a new hospital tower to replace the acute care functions of the existing hospital before the state law (Alquist Hospital Facilities Seismic Safety Act, also known as Senate Bill 1953) deadline to meet seismic standards for critical trauma/tertiary acute care so that the South Bay service region and the County seamlessly retain the key link in the County-wide trauma hospital safety net. The Project would feature biomedical research and development facilities, and would integrate inpatient and outpatient services in a renovated and expanded setting. The project benefits which are balanced against the remaining significant unavoidable impacts will also be addressed in the Statement of Overriding Considerations that will be made by the Board of Supervisors if they approve the project.

Four Alternatives to the proposed Project were evaluated in Chapter 5.0, *Alternatives*, of this Draft EIR. These include the No Project/No Build Alternative, Reduced Intensity Alternative A, Reduced Intensity Alternative B, and Reduced Intensity Alternative C. Among these alternatives, only the No Project/No Build Alternative would avoid all of the significant unavoidable effects of the proposed Project. However, the No Project/No Build Alternative would result in eventual closure of the existing Hospital, the layoff of a large number of high paid medical sector workers, and lack of achievement of any of the Project objectives, while the three reduced intensity alternatives would result in only partial achievement of the Project objectives. Furthermore, none of the three reduced intensity alternatives would reduce all of the significant unavoidable impacts of the Project (e.g., significant unavoidable construction noise, construction traffic, and operational traffic impacts), though Reduced Intensity Alternative C would eliminate the significant operational traffic impact that would occur under the Project. Finally, since the No Project/No Build Alternative would not meet the underlying purpose of the Project, it is not considered a feasible Project alternative.

In addition to the regulatory and environmental reasons why the Project has been proposed as cited above, there are safety- and licensing-related reasons in support of the proposed development. Such reasons include seismic safety risks associated with older hospital facilities and licensing requirements for acute care facilities such as the Harbor-UCLA Medical Center, which are regulated by OSHPD. As required by OSHPD, all acute care facilities must meet the minimum requirements for seismic safety and other design features in order to remain operational. Aside from the need to update and expand the existing Harbor-UCLA Medical Center facilities to meet current and future health care demands, the ongoing operation of the existing Hospital could not continue in the long-term without significant retrofitting and other physical improvements, which would require closure of the Hospital for the duration of construction activities and the temporary loss of all emergency and acute medical care services in the South Bay community.

4. GROWTH-INDUCING IMPACTS

Section 15126.2(d) of the *CEQA Guidelines* requires an EIR to discuss the ways the proposed Project could foster economic or population growth or the construction of additional housing, directly or indirectly, in the surrounding environment. Growth-inducing impacts include the removal of obstacles to population growth (e.g., the expansion of a wastewater treatment plant allowing more development in a service area) and the development and construction of new service facilities that could significantly affect the environment individually or cumulatively. In addition, growth must not be assumed as beneficial, detrimental, or of little significance to the environment.

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus. The existing Campus contains 1,279,284 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project), 5,464 existing employees, and an estimated 545,079 annual patient visits. The Project encompasses construction of a New Hospital Tower that meets current seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities (including approximately a dozen WWII barracks), reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a small net decrease in inpatient hospital beds (from 453 to 446 beds), a net increase of 1,178,071 square feet of building floor area, and net increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 annual visits or 714 daily visits), respectively.

The Project would not cause a progression of growth beyond the Project Site. The Project Site is located in an area surrounded by urbanized land, is already fully development, and is already served by existing infrastructure (e.g., roads and utilities) and community service facilities (e.g., police, fire, schools, parks, and libraries). The Project's only infrastructure improvements would consist of tie-ins to, and extensions of, the existing utility main-lines already serving the Project area. No extension of roadways, utilities or community services to currently un-served areas would occur. Furthermore, the Project would not include residential development and thus would not directly generate a residential population, and although the Project would increase employment on the Campus, adequate existing and future housing stock is available in the area to accommodate these employees (see Section 4.J., *Population and Housing*, of this Draft EIR for analysis). Furthermore, this increase in employees would not exceed the 2035 SCAG projections for the area identified in the 2012 RTP/SCS. Therefore, the Project would not result in significant growth inducing impacts.

5. POTENTIAL SECONDARY EFFECTS

Section 15126.4(a)(1)(D) of the *CEQA Guidelines* requires a discussion of the potential impacts of mitigation measures only if the mitigation measure(s) would cause one or more significant effects in addition to those that would be caused by the Project as proposed. If so, these effects may be discussed in less detail than the significant effects of the Project. With regard to this section of the *CEQA Guidelines*, the Project's proposed mitigation measures that could cause potential impacts were evaluated to determine if any would cause one or more significant effects. The following provides a discussion of the potential significant adverse secondary effects that could occur as a result of the implementation of the Project mitigation measures, listed by environmental issue area. None of the mitigation measures are found to have adverse secondary significant effects.

(a) Biological Resources

Mitigation Measure BIO-1 (from Initial Study) requires the provision of breeding season avoidance buffers around passerine and raptor nest sites during Project construction and vegetation removal activities, and the implementation of a CDFW-reviewed Nesting Bird Management Plan that includes biologist monitoring of nesting sites and identification of nest-specific mitigation measures to project the birds and their young. This mitigation measure would minimize or avoid overall losses of sensitive resources, and would not result in any significant adverse secondary effects.

(b) Cultural Resources

Mitigation Measure CULT-1 through CULT-4 (from Initial Study) require monitoring, recovery, and documentation of any archaeological and paleontological resources discovered during Project construction. These measures are intended to preserve on-site archaeological and paleontological resources, and would not result in any significant adverse secondary effects.

(c) Geology and Soils

Mitigation Measures GEO-1 through GEO-3 require implementation of all the recommendations in the Preliminary Geotechnical Evaluation (provided in Appendix C of this Draft EIR) regarding seismicity, liquefaction, compressible/collapsible soils and settlement, shallow groundwater, expansive soils, and corrosive soils, including the performance of detailed subsurface geotechnical evaluations of the planned improvement sites and the provision of detailed construction-site specific recommendations for pile/footing foundations and building design and construction. These measures would include the drilling of exploratory borings and the cutting of exploratory excavations at the planned improvement sites, and potentially dewatering and the removal of liquefiable and other adverse soil layers and replacement with compacted fill. While these activities would generate some dust and constructed equipment related air emissions, noise and traffic, these localized impacts have already been incorporated into the Project construction-related air, hydrology and water quality, noise and traffic analyses in Chapter 4.0 of the Draft EIR, and no additional significant adverse secondary effects would occur.

(d) Hazards and Hazardous Materials

Mitigation Measure HAZ-1 requires the abatement of ACMs, LBP, and PCBs in existing on-site buildings in accordance with the recommendations of the Hazardous Buildings Materials Survey prior to renovation or demolition activities. This would include the extraction, removal and disposal of these materials in accordance with the special handling and disposal requirements of applicable federal, state and local regulations. Because this measure would reduce impacts on the environment through characterizing and removing dangerous materials, and because the referenced requirements have been formulated to avoid significant environmental impacts (such as significant health impacts), no significant adverse secondary effects would occur.

Mitigation Measure HAZ-2 requires the implementation of a Los Angeles County Fire Department-approved comprehensive Soils Management Plan for areas of the Project Site identified in the Phase I ESA (included in Appendix E of this Draft EIR) as containing potential soil contamination for which site closure has not been confirmed to be implemented during excavation and grading activities. This measure would include excavation monitoring, laboratory testing of potentially contaminated soils, and the proper removal, handling, transportation, and disposal of any identified contaminated soils at a licensed facility in accordance with applicable federal, state and local laws and regulations. Because this measure would reduce impacts on the environment through characterizing and removing dangerous materials, and because the referenced requirements have been formulated to avoid significant environmental impacts (such as significant health impacts), no significant adverse secondary effects would occur.

Also, while the two mitigation measures above would generate some dust and constructed equipment-related air emissions, noise and traffic associated with required excavations and removal of contaminated

materials and USTs, these localized impacts have already been incorporated into the Project construction-related air, noise and traffic analyses in Chapter 4.0 of the Draft EIR. Therefore, no additional significant adverse secondary effects would occur.

(e) Noise

Mitigation Measure NOISE-1 requires the installation of temporary noise barriers during construction on the Project Site to block the line-of-site between on-site construction equipment and off-site noise-sensitive receptors. The installation of such temporary noise barriers during the construction period could potentially require construction equipment which could generate some temporary air emissions and noise. However, any such impacts are addressed within the construction-related air and noise analyses in Chapter 4.0 of this Draft EIR.

(f) Public Services

Impacts regarding some public services (e.g., parks and recreation, schools, and libraries) would be less than significant and no mitigation measures are required. Therefore, no significant adverse secondary effects would occur due to the implementation of mitigation measures for these environmental topics. However, with regard to fire protection and emergency services, Mitigation Measure FIRE-1 requires that the County Department of Public Works and/or their contractors regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times. Mitigation Measure FIRE-2 requires that prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee. With regard to Sheriff protection, Mitigation Measure SHER-1 requires that security features and personnel be provided throughout construction, Mitigation Measure SHER-2 requires that emergency access be provided during construction, while Mitigation Measure SHER-3 requires that the Project construction contractors regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times. Thus, implementation of these mitigation measures would not result in additional physical impacts to the environment beyond those already anticipated for the Project as discussed in Chapter 4.0 of this Draft EIR.

(g) Transportation and Parking

Mitigation Measures TRAF-1 through TRAF-3 would require restriping at the following existing intersections: I-110 Southbound Ramps & Carson Street; 220th Street/I-110 Northbound Ramps & Figueroa Street; and the I-110 Southbound Ramps & 223rd Street. Other than short disruptions of traffic at these intersections during the restriping, which would occur in accordance with County, City, and/or Caltrans requirements, no physical impacts would occur. Therefore, no significant adverse secondary effects would occur.

Mitigation Measure TRAF-4 requires the developer to contribute fair share funding to Caltrans toward an analysis or improvements on I-110 (Harbor Freeway) in the Project vicinity to offset the additional Project-generated trips that would result on the freeway mainline segments that pass through the affected Caltrans intersection. No physical impacts would occur under this mitigation measure (any future improvement of the I-110 and associated intersections would be subject to separate CEQA review and would be too

speculative to evaluate in the current Draft EIR). Therefore, no significant adverse secondary effects would occur.

6. ENVIRONMENTAL IMPACTS FOUND TO BE LESS THAN SIGNIFICANT (BEFORE MITIGATION) IN THE INITIAL STUDY

Section 15128 of the *CEQA Guidelines* states that an EIR shall contain a brief statement indicating reasons that various possible significant effects of a Project were determined not to be significant and not discussed in detail in the Draft EIR. An Initial Study was prepared for the Project and is included in Appendix A-1 of the Draft EIR. The analysis in the Initial Study determined that the Project would result in less than significant impacts related to Agriculture and Forestry Resources, Biological Resources, Cultural Resources (Historical Resources and Human Remains), Geology and Soils (Fault Rupture, Landslide, and Soils Incapable of Supporting Septic Systems), Hazards and Hazardous Materials (Wildfires), Hydrology and Water Quality (Flooding from 100-Year Floods, and Inundation by Seisch, Tsunami and Mudflows), Land Use (Physically Divide an Established Community, and Conflict with an Applicable Habitat Conservation Plan or Natural Community Conservation Plan), Mineral Resources, and Population and Housing (Displace Substantial Numbers of Existing People or Housing, Necessitating Replacement Housing Elsewhere), and that these issues would thus not be evaluated further in the Draft EIR in accordance with *CEQA Guidelines* Section 15063(c)(3)(A). The basis for the less than significant conclusion regarding these issues is discussed below.

(a) Agriculture and Forestry Resources

The Project Site is not located on or in proximity to any land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and no farmland or agricultural operations occur in the Project area. The Project would not conflict with the existing zoning for an agricultural use, as the site is currently zoned for and contains urban uses. Additionally, no portion of the Project Site is enrolled in a Williamson Act Contract. Project implementation would not result in changes to or cause rezoning of forest land, timber land or timberland zoned for Timberland Production. In addition, the Project area does not include areas zoned or utilized for timberland production. No forest land exists in the Project area; as such, the Project would not result in the loss of forest land or conversion of forest land to non-forest use. As the Project would not have the potential to affect farmland, forest land, or agricultural or forestry operations, no impacts would occur in this regard.

(b) Biological Resources (Riparian Habitat, Wetlands, Conflicts with Local Biological Resources Plans/Ordinances/Policies or Adopted Habitat Conservation Plans)

The Project Site is located in an urbanized area and does not contain riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands, other sensitive natural communities, or federally protected wetlands. Also, the Project Site does not contain biological resources, such as large oak trees, protected by local plans, ordinances or policies (including habitat conservation plans and natural community conservation plans). Furthermore, the Project would include a landscape plan that would provide plantings as required by the County Municipal Code. As the Project would not have the potential to affect these biological resources or conflict with local biological resources plans, ordinances or policies regarding these resources, no impact would occur in this regard.

(c) Cultural Resources (Historical Resources and Human Remains)

With respect to historical resources, a comprehensive Historic Resources Report was prepared by for the Project Site and is included in Appendix A of the Initial Study. According the report, the Project Site does not contain listed historic resources, and while the property as a whole was evaluated in the report as a potential historic district, the report concluded that while the property is significant in the context of World War II military history in Los Angeles, it lacks integrity because there are not enough buildings remaining from the period and the remaining buildings have been substantially altered. As such, the report determined that the property is not eligible for listing in the National Register or California Register as an historic district, and further that none of the individual structures themselves are eligible for listing.

With respect to human remains, the Project Site has been previously graded and developed, and no known traditional burial sites or cemeteries occur on-site. Nevertheless, human remains, if present, could potentially be unearthed during Project construction activities. However, compliance with state law (I.e., Public Resources Code Section 5097.98, State Health and Safety Code Section 7050.5, and California Code of Regulations Section 15064.5(e) would avoid significant impacts to any unanticipated human remains that are unearthed.

(d) Geology and Soils (Fault Rupture, Landslide, and Soils Incapable of Supporting Septic Systems)

According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's General Plan 2035, the Project Site is not located within a seismic or geotechnical hazard zone. Further, the Project Site is not located within a designated Alquist-Priolo Earthquake Fault Zone. As no known earthquake faults or Alquist-Priolo Earthquake Fault Zones existing on or near the site, there would be no potential for surface fault rupture to affect future uses at the site.

With respect to landslides, the terrain of the Project Site is relatively flat as is the terrain of the surroundings. Furthermore, as indicated in Figure 12.1 of the County's General Plan 2035, the Project Site is not located within a seismically induced landslide zone and no sloped areas existing in the immediate vicinity. As such, no landslide impacts would occur.

With respect to the ability of on-site soils to supporting septic systems, the Project would connect to the municipal wastewater system rather than use septic systems or other alternative wastewater disposal systems. Therefore, no impact would occur in this regard.

(e) Hazards and Hazardous Materials (Wildfires)

The Project Site is located within a highly urbanized area surrounded by urban uses, and the site is not located within an identified wildland fire hazard areas or very high fire hazard severity zone based on Figure 12.6, Fire Hazard Severity Zones Policy Map, of the County's General Plan 2035. Therefore, no wildland fire impact would occur.

(f) Hydrology and Water Quality (Flooding from 100-Year Floods, and Inundation by Seisch, Tsunami and Mudflows)

According to Figure 12.2, Flood Hazard Zones Policy Map, of the County's General Plan 2035, the Project Site is not located within a 100-year flood hazard area. The Project Site is also not located within a FEMA-designated 100-year floodplain. Therefore, the Project would not be subject to flooding from 100-year floods, and thus no impact would occur in this regard

With respect to inundation by seisch, tsunamis or mudflows, the Project Site is not located adjacent to a large body of water, is located over five miles from the Pacific Ocean, and is not located adjacent to any hillsides. Therefore, the Project would not be subject to inundation by seisch, tsunamis or mudflows, and no impact would occur.

(g) Land Use (Physically Divide an Established Community, and Conflict with an Applicable Habitat Conservation Plan or Natural Community Conservation Plan)

The Project would involve the renovation and expansion of existing medical uses, and the development of new medical uses, within an already fully developed urbanized campus surrounded on all sides by urban development. Furthermore, none of the four streets bordering the Project Site would be closed, and access to adjacent land uses would be maintained. Therefore, the Project would not physically divide an established community.

With respect to conflicting with a habitat conservation plan or natural community conservation plan, no such plans are applicable to the Project Site.

(h) Mineral Resources

The Project Site is not located within a known mineral resource area and no mineral resources are known to exist at the Project Site or in the surrounding area, as shown in Figure 9.6, Natural Resource Areas, of the County's General Plan 2035. Furthermore, the Project Site is not located within a Mineral Resource Zone and there are no known designated locally-important mineral resources located on the Project Site or in the vicinity, as illustrated in Figure 9.6 of the County General Plan 2035. Therefore, no impact to mineral resources would occur.

(i) Population and Housing (Displace Substantial Numbers of Existing People or Housing, Necessitating Replacement Housing Elsewhere)

The Project Site does not contain existing housing, and the Project would thus not displace existing housing or residents that would necessitate the development of replacement housing elsewhere. Furthermore, the Project would retain the existing on-site jobs and create new on-site jobs, so that existing employees would not be displaced. Thus, no impact would occur.

7. ENVIRONMENTAL IMPACTS FOUND TO BE LESS THAN SIGNIFICANT (BEFORE MITIGATION) IN THE DRAFT EIR

The Environmental impact analysis presented in Chapter 4.0, *Environmental Impact Analysis*, of this Draft EIR concludes that the Project would result in no impacts or less than significant impacts (before mitigation) for the following environmental issues. See the applicable sections of Chapter 4.0 of the Draft EIR for the reasons supporting these conclusions for each environmental issue.

- Aesthetics
    - Visual Character
    - Views
    - Light and Glare
- Air Quality
    - Consistency with Air Quality Management Plan
    - Violation of Air Quality Standards
    - Non-Attainment Pollutants
    - Substantial Pollutant Concentrations
    - Odors.
- Energy
    - Energy Consumption
- Geology and Soils
    - Soil Erosion/Loss of Topsoil
- Greenhouse Gas Emissions
    - Greenhouse Gas Emissions
    - Greenhouse Gas Reduction Plans
- Hazards and Hazardous Materials
    - Airport Safety Provisions
    - Emergency Response Plans
- Hydrology and Water Quality
    - Violation of Water Quality Standards
    - Depletion Groundwater Supplies
    - Alteration of Drainage Patterns Resulting in Substantial Erosion or Siltation
    - Flooding
    - Runoff that Would Exceed Drainage System Capacity
    - Degradation Water Quality

- Land Use and Planning
    - Consistency with Applicable Land Use Plans, Polices, and Regulations
    - Land Use Compatibility
- Noise
    - Off-Site Construction Traffic Noise
    - Operational Traffic Noise
    - Operational Non-Roadway Noise
    - Operational Parking Structure Noise
    - Construction Vibration
    - Operational Vibration
- Population and Housing
    - Project-Related Growth
    - Introduction of Unplanned Infrastructure
- Public Services
    - Fire Protection and Emergency Services
    - Sheriff Protection
    - Parks and Recreation
    - Schools
    - Libraries
- Transportation and Parking
    - CMP Transportation System
    - Public Transit and Alternative Transportation
    - Access and Circulation
    - Parking Supply
- Utilities and Service Systems
    - Water
    - Wastewater
    - Solid Waste

7. References

7.0 REFERENCES

8 CCR Section 1532.1.

14 CCR Section 15000 et seq, State CEQA Guidelines.

17 CCR Sections 95100-95158.

17 CCR Sections 95800 to 96023.

17 CCR Sections 95811, 95812(d).

17 CCR Sections 95811, 95812.

20 CCR Division 3, Chapter 16 and 18

20 CCR, Sections 1605.1(h) and 1605.1(i)

22 CCR sec. 12000 et seq., Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

22 CCR Section 66201.1 et seq.

29 CFR Section 1910, et. seq., Federal Occupational Safety and Health Act of 1970.

40 CFR 131.38, California Toxics Rule.

40 CFR 761, Toxic Substances Control Act (TSCA)

Acoustical Engineering Services (AES), 2016, *Helistop Relocation Noise Impact Study,* Harbor-UCLA Medical Center Campus Master Plan – Environmental Impact Report. June 2016.

American Society of Heating, Refrigerating and Air-Conditioning Engineers, ASHRAE, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size. https://www.ashrae.org/File%20Library/docLib/StdsAddenda/52_2_2012_2015Supplement.pdf. Accessed March 2016.

Anderegg, William R. L., J.W. Prall, J. Harold, S.H., Schneider, Expert Credibility in Climate Change, Proceedings of the National Academy of Sciences of the United States of America. 2010; 107:12107-12109.

Banker's Hill, Hillcrest, Park West Community Preservation Group v. City of San Diego, 139 Cal. App. 4th 249, 279 (2006).

Bies & Hansen, Engineering Noise Control, 1988.

Cal-Adapt, http://cal-adapt.org.

California Air Pollution Control Officer's Association, CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008.

California Air Pollution Control Officers Association, Health Risk Assessments for Proposed Land Use Projects, 2009.

California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, 2013.

California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, 2010.

California Air Resources Board, "Advanced Clean Cars Summary," http://www.arb.ca.gov/msprog/clean_cars/acc%20summary-final.pdf. Accessed March 2015.

California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, 2005.

California Air Resources Board, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm. Accessed February 2016.

California Air Resources Board, "2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition," http://www.arb.ca.gov/cc/inventory/data/bau.htm. Accessed March 2015.

California Air Resources Board, "California Greenhouse Gas 2000-2013 Inventory by Scoping Plan Category - Summary," http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_2000-13_20150831.pdf. Accessed February 2016.

California Air Resources Board, Climate Change Scoping Plan, December 2008.

California Air Resources Board, Final Supplement to the AB 32 Scoping Plan FED, Table 1.2-2, Updated 2020 Business-as-Usual Emissions Forecast, http://www.arb.ca.gov/cc/scopingplan/document/final_supplement_to_sp_fed.pdf.

California Air Resources Board, First Update to the Climate Change Scoping Plan: Building on the Framework, May 2014, http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

California Air Resources Board, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), 2007.

California Air Resources Board, Local Government Operations Protocol, Chapter 10: Wastewater Treatment Facilities, (2008).

California Air Resources Board, "Nitrogen Dioxide – Overview," http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm. Accessed March 2015.

California Air Resources Board, OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment, 6/13/2003, http://www.arb.ca.gov/msei/2001_residential_lawn_and_garden_changes_in_eqpt_pop_and_ act.pdf. Accessed November 2013.

California Air Resources Board, Proposed Early Actions to Mitigation Climate Change in California, 2007.

California Air Resources Board, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, 2007.

California Air Resources Board, Statewide Emission Factors (EF), March 2014.

California Assembly Bill 32.

California Building Standards Commission, 2013 California Green Building Standards Code, 2013.

California Building Standards Commission, Title 24, California Code of Regulations, Part 11, 2010 California Green Building Standards Code (CalGreen).

California Clean Air Act, Chapter 1568 of the Statutes of 1988.

California Climate Change Center, Our Changing Climate: Assessing the Risks to California, 2006.

California Department of Conservation, Landslide and Tsunami Inundation Maps, http://www.conservation.ca.gov/cgs/maps/Pages/Maps.aspx. Accessed December 2015.

California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOC) http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx, Accessed January 12, 2016.

California Department of Finance, "E-5 Population and Housing Estimates for Cities, Counties and the State, January 2011-2014, with 2010 Benchmark," http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php. Accessed November 2015.

California Department of Finance, "Financial & Economic Data: Gross Domestic Product, California," http://www.dof.ca.gov/HTML/FS_DATA/LatestEconData/FS_Misc.htm. Accessed November 2015.

California Department or Transportation (Caltrans), Statewide Transportation Improvement Program.

California Department of Transportation (Caltrans), Technical Noise Supplement (TeNS), 2013.

California Department of Transportation (Caltrans), Transportation Related Earthborne Vibrations, page 4, February 2002.

California Department of Water Resources Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources, July 2006. http://baydeltaoffice.water.ca.gov/climatechange/ DWRClimateChangeJuly06_update8-2-07.pdf. Accessed March 2015.

California Education Code, Article 11, Sections 17078.10-17078.30, Critically Overcrowded School Facilities Program (California Assembly Bill 16).

California Energy Commission, Building Standards Information Bulletin 13-07, December 18, 2013.

California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/Chart.aspx. Accessed December 2013.

California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004, 2006.

California Energy Commission, Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report, CEC-500-2006-118, 2006.

California Energy Commission, Scenarios of Climate Change in California: An Overview, February 2006. http://www.energy.ca.gov/2005publications/CEC-500-2005-186/CEC-500-2005-186-SF.PDF. Accessed March 2015.

California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, 2006.

California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, 2010.

California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.

California Environmental Protection Agency, Office of Health Environmental Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, June Review Draft, June 2014.

California Executive Order B-29-15, April 1, 2015.

California Executive Order B-30-15, April 29, 2015.

California Executive Order S-01-07, January 18, 2007.

California Government Code Sections 54725 through 54740.

California Government Code Sections 65302(b)(2)(A) and (b).

California Government Code Section 66477, Quimby Act.

California Health and Safety Code, Division 20, Chapter 6.7.

California Health and Safety Code Section 25100, et seq.

California Health and Safety Code Section 38551(a).

California Health and Safety Code Section 39607(e).

California Health and Safety Code Sections 4700 through 4859, Los Angeles County Wastewater Ordinance.

California Health and Safety Code Sections 5400 through 5474.

California Health & Safety Code Section 5471, Los Angeles County Connection Fee Ordinance Program.

California Integrated Waste Management Act of 1989 (AB 939).

California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, 2009.

California Public Resources Code, Section 2621-2624, Division 2, Chapter 7.5, Alquist-Priolo Earthquake Fault Zoning Act.

California Public Resources Code, Section 2690-2699, Seismic Hazards Mapping Act.

California Public Resources Code, Section 21000 et seq., California Environmental Quality Act.

California Public Resources Code Section 21002.1(a).

California Public Resources Code, Section 21099, Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects.

California Public Utilities Commission, California Renewables Portfolio Standard, http://www.cpuc.ca.gov/renewables/. Accessed April 2016.

California Senate Bill 50, codified in California Government Code Section 65995 et seq.

California Senate Bill 97 (Chapter 185, Statutes of 2007).

California Senate Bill 375, (Chapter 728, Statutes of 2008).

California Senate Bill 610 (California Water Code [CWC] Section 10910 et seq.)

California Senate Bill 1078 (Chapter 516, Statutes of 2002).

California Senate Bill 1368.

California Senate Bill 1374, Construction and Demolition Waster Materials DivisioN Requirements.

California Senate Bill 1953, Hospital Facilities Seismic Safety Act, Chapter 740, Statutes of 1994.

California Senate Bill X7-7, California Water Conservation Act or 2009.

California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327).

California Urban Water Management Planning Act (California Water Code [CWC] Division 6, Part 2.6, Sections 10610-10656).

California Water Code Section 10617.

California Water Code Section 10644(a).

California Water Service Company (Cal Water), Rancho Dominguez District 2010 Urban Water Management Plan (UWMP).

Cao, et al., 2003. The Revised 2002 California Probabilistic Seismic Hazard Maps. http://www.conservation.ca.gov/cgs/rghm/psha/ofr9608/Pages/Index.aspx, Accessed, April 2015

CEQA Guidelines Section 15124(b).

CEQA Guidelines Sections 15126(c).

CEQA Guidelines Section 15126.2(b).

CEQA Guidelines Section 15126.2(c).

CEQA Guidelines Section 15126.2(d).

CEQA Guidelines Section 15126.4(a)(1)(D).

CEQA Guidelines Section 15126.6(a).

CEQA Guidelines Section 15126.6(c).

CEQA Guidelines Section 15126.6(d).

CEQA Guidelines Section 15126.6(e)(2).

CEQA Guidelines Section 15126.6(f).

CEQA Guidelines Section 15126.6(f)(1).

CEQA Guidelines Section 15126.6(f)(2).

CEQA Guidelines Section 21100(b).

City of Carson General Plan Transportation and Infrastructure Element.

City of Carson Parks. http://ci.carson.ca.us/department/communityservices/parks_rec_parks.asp. Accessed February 2016.

City of Los Angeles, Department of City Planning, 2010 Bicycle Plan: A Component of the City of Los Angeles Transportation Element, adopted by Los Angeles City Council March 1, 2011.

City of Los Angeles, Department of City Planning, Mobility Plan 2035, adopted August 11, 2015.

City of Los Angeles Department of Public Works, LAMC, Methane Ordinance Map A-20960. City Ordinance No. 175,790. (February 4, 2004).

City of Los Angeles, Department of Recreation and Parks, Normandie Recreation Center, http://www.laparks.org/dos/reccenter/facility/normandalerc.htm, Accessed February 2015.

City of Torrance General Plan Circulation and Infrastructure Element.

City of Torrance Parks, http://www.torranceca.gov/Parks/Documents/ParkAmenitiesGrid(2).pdf. Accessed February 2015.

Clean Water Act Section 303(c).

Clean Water Act, CWA Section 303(d), List of Water Quality-Limited Segments Requiring TMDLs (Total Maximum Daily Loads)

Clean Water Act, Section 402, et seq., National Pollutant Discharge Elimination System (NPDES).

County of Los Angeles, Department of Public Works, Roadmap to a Sustainable Waste Management Future, 2014.

County of Los Angeles Department of Public Works, Traffic and Lighting Division, Memorandum of Understanding.

County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035) SCH No. 201108104, Figure 5.14-1. Certified March 24, 2015.

County of Los Angeles, Final Unincorporated Los Angeles County Community Climate Action Plan 2020, (August 2015).

County of Los Angeles Fire Department Health Hazardous Materials Division, http://www.fire.lacounty.gov/wp-content/uploads/2014/03/Hazardous-Waste-Generator-Summary-Requirements.pdf.

County of Los Angeles Metropolitan Transportation Authority (Metro), Congestion Management Plan, 2010.

County of Los Angeles website, http://planning.lacounty.gov/luz/summary/category/commercial_zones/. Accessed December 1, 2015.

Dominguez Channel Watershed Management Area Group, 2014. Draft Coordinated Integrated Monitoring Program For The Dominguez Channel Watershed Management Area Group. http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/dominguez_channel/DominguezChannel_CIMP.pdf. Accessed December 2015.

Edison International, Edison International and Southern California Edison 2015 Annual Report, 2016.

Energy and Environmental Economics (E3), "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios," April 2015.

Federal Antidegradation Policy.

Federal Aviation Administration, FAA Advisory Circular 70/7460-1L (December 4, 2015).

Federal Aviation Regulations, Title 14 Part 77, Objects Affecting Navigable Airspace.

Federal Highway Administration, Roadway Construction Noise Model User's Guide, 2006.

Federal Register, Vol. 72, 26718-26721, "Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California, Final Rule," May 11, 2007.

Federal Register, Vol. 78, No. 123, 38223-38226, June 26, 2013.

Federal Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sections 6901-6992k.

Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, 2016

Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158-172).

County of Los Angeles, 2012, Perkins + Will, Harbor-UCLA Medical Center Campus Master Plan, June 30, 2012. http://ridleythomas.lacounty.gov/PDFs/20120630_HARBOR%20UCLA%20MASTER%20PLAN.pdf. Accessed December 2015.

Institute of Transportation Engineers (ITE), "Improved Estimation for Internal Trip Capture for Mixed-use Developments," ITE Journal, August 2010.

Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition.

Intergovernmental Panel on Climate Change, 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories, 2006.

Intergovernmental Panel on Climate Change, Fifth Assessment Report Synthesis Report, 2014.

Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, 2013.

Los Angeles County Code, Title 12 – Environmental Protection Pertinent to Lighting

Los Angeles County Code, Title 26 – Sign Regulations

Los Angeles County Code, Title 31 – Green Building Standards

Los Angeles County Code Section 12.08.440, Los Angeles County Permissible Construction Equipment Noise at Receptor

Los Angeles County Code, Chapter 12.08, Noise Control.

Los Angeles County Code, Chapter 12.84, Low Impact Development (LID) Ordinance, December 2012.

Los Angeles County Code, Chapter 20.87, Construction and Demolition Debris Recycling and Reuse Program.

Los Angeles County Code, Section 22.52.1120, Parking for Hospitals.

Los Angeles County Code, Section 22.52.1225, Bicycle Parking.

Los Angeles County Code, Title 20, Part 2, Design, Section 12.16.060, Minimum Fire Flow and Fire Hydrant Requirements.

Los Angeles County Code, Title 21, Chapter 21.24, Part 1, Design Standards.

Los Angeles County Code, Title 21, Chapter 21.24, Part 2, Mapping Specifications, Section 21.44.250.

Los Angeles County Code, Title 21, Chapter 21.24, Part 3, Local Streets and Ways, Section 21.24.220.

Los Angeles County Code, Title 22, County Planning and Zoning Code.

Los Angeles County Department of Health Services, Security Management Plan for the Harbor-UCLA Medical Center, Policy No. 405, effective date March 1996, last revised March 2011.

Los Angeles County Department of Parks and Recreation, http://parks.lacounty.gov/wps/portal/dpr/Parks. Accessed February 2015.

Los Angeles County Department of Parks and Recreation, Email Correspondence, Clement Lau, Department Facilities Planner II, February 22, 2016.

Los Angeles County Department of Public Works, Building and Safety Division, https://dpw.lacounty.gov/epd/swims/docs/pdf/methane/Methane%20Packet.pdf.

Los Angeles County General Plan Update (2035) Safety Element (Chapter 12).

Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 3, Guiding Principles, adopted October 6, 2015.

Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 4, Noise Element, adopted October 6, 2015.

Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 6, Land Use Element, adopted October 6, 2015.

Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 7, Mobility Element, adopted October 6, 2015.

Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 9, Conservation and Natural Resources Element, adopted October 6, 2015.

Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 10, Parks and Recreation Element, adopted October 6, 2015.

Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 12, Safety Element, adopted October 6, 2015.

Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 13, Public Services and Facilities Element, adopted October 6, 2015.

Los Angeles County Department of Regional Planning, 2014. Public Review Draft Los Angeles County General Plan 2035, Chapter 8 – Air Quality. http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter8_2014.pdf. Accessed March 2015.

Los Angeles County Department of Regional Planning, West Carson Transit Oriented District Specific Plan, http://planning.lacounty.gov/tod/plans.

Los Angeles County Fire Code, Title 32, Section 105.7.10.1, Land Development Review.

Los Angeles County Fire Code, Title 32, Section 503.1.2, et seq.

Los Angeles County Fire Code, Title 32, Section 903.2.11.3.

Los Angeles County Fire Code, Title 32, Section 903.7.

Los Angeles County Fire Department, Letter Correspondence, Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, February 10, 2016.

Los Angeles County Fire Department Strategic Plan, Engineering our Future, 2012.

Los Angeles County Fire Department 2014 Statistical Summary.

Los Angeles County Integrated Waste Management Plan 2014 Annual Report.

Los Angeles County Office of Emergency management, About OEM, http://lacoa.org/aboutoem.html. Accessed July 2015.

Los Angeles County Ordinance No. 11743, Section 12.08.530, Residential Air-Conditioning and Refrigeration Equipment Standards.

Los Angeles County Parks Proposition A.

Los Angeles County Public Libraries, Letter Correspondence, Chief Deputy Director Yolanda De Ramus, February 12, 2016.

Los Angeles County Sheriff Department, Letter Correspondence, Captain Britta S. Steinbrenner, County Services Bureau, March 18, 2016.

Los Angeles County Sheriff Department, Letter Correspondence, Captain Chris E. Marks, Carson Station Commander, March 22, 2016.

Los Angeles County Sheriff Department, Letter Correspondence, Director Tracey Jue, Facilities Planning Division, March 31, 2016.

Los Angeles County Zoning Code, Section 22.72.030, County of Los Angeles Library Facilities Mitigation Fee Ordinance.

Los Angeles Department of Water and Power, 2012 Power Integrated Resource Plan, (2012) C-11.

Los Angeles Neighborhood Land Trust, Email Correspondence, Mark Glassrock, Director of Special Projects, February 29, 2016.

Los Angeles Regional Water Quality Control Board, Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted June 13, 1994 http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/. Accessed June 16, 2015.

Los Angeles Times, Regulators detail Exide battery plant closure after decades of pollution, http://www.latimes.com/local/lanow/la-me-ln-exide-plant-closure-20150312-story.html#page=1, Accessed August 2015

Los Angeles Times Transcript: Governor Jerry Brown's January 5, 2015, Inaugural Address, http://www.latimes.com/local/political/la-me-pc-brown-speech-text-20150105-story.html. Accessed March 2, 2015.

Los Angeles Unified School District, Commercial/Industrial Development School Fee Justification Study, September 27, 2010.

Los Angeles Unified School District, Developer Fee Program Office, Sonja White, Analyst, April 13, 2015.

Los Angeles Unified School District, Fingertip Facts 2013-2014.

Los Angeles Unified School District, Letter Correspondence, Rena Perez, Director, Master Planning and Demographics, January 29, 2016.

National Flood Insurance Act of 1968.

National Research Council, Advancing the Science of Climate Change, 2010.

Ninyo & Moore, Hazardous Building Material Survey, Harbor UCLA Medical Center, May 13, 2015.

Ninyo & Moore, Phase I Hazardous Materials Assessment, Harbor UCLA Medical Center, April 20, 2015.

Ninyo & Moore, Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan, April 2015.

Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2015.

Office of Statewide Health Planning & Development, California's Hospital Seismic Safety Law: Its History, Implementation and Progress, http://www.oshpd.ca.gov/FDD/SB1953/SeismicReport.PDF. 2005.

Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature, July 2003, http://www.pacinst.org/reports/climate_change_and_california_water_resources.pdf. Accessed March 2015.

Parmesan, C and Galbraith, H, 2004. Observed Ecological Impacts of Climate Change in North America. Arlington, VA: Pew. Cent. Glob. Clim. Change.

Parmesan, C., 2004. Ecological and Evolutionary Response to Recent Climate Change.

PBL Netherlands Environmental Assessment Agency and the European Commission Joint Research Center, Trends in Global CO2 Emissions 2014 Report, 2014.

Perkins + Will, Harbor UCLA Medical Center Master Plan, Utility and Circulation Existing Conditions Assessment, July 11, 2011.

Perkins +Will. Harbor-UCLA Campus Master Plan Addendum. June 2012.

Safe Drinking Water Act (SDWA) of 1974.

Sanitation Districts of Los Angeles County. http://www.lacsd.org/. Accessed February 2016.

Sanitation Districts of Los Angeles County. Joint Water Pollution Control Plant (JWPCP). http://www.lacsd.org/wastewater/wwfacilities/jwpcp/default.asp. Accessed February 2016.

Sanitation Districts of Los Angeles County. Wastewater Collection Systems. http://www.lacsd.org/wastewater/wwfacilities/wcs.asp. Accessed February 2016.

Sanitation Districts of Los Angeles County. Wastewater Treatment and Water Reclamation. http://www.lacsd.org/wastewater/wwfacilities/moresanj.asp. Accessed February 2016.

Sempra Energy, 2015 Annual Report, 2016.

South Coast Air Quality Management District, 2003 Air Quality Management Plan, Appendix V: Modeling and Attainment Demonstrations, 2003, V-4-24.

South Coast Air Quality Management District, 2012 Air Quality Management Plan, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2012-air-quality-management-plan/final-2012-aqmp-(february-2013)/main-document-final-2012.pdf. Accessed March 2015.

South Coast Air Quality Management District, Agenda No. 8b, Potential Impacts of New OEHHA Risk Guidelines on SCAQMD Programs, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2014/may-specsess-8b.pdf?sfvrsn=4. Accessed March 2015.

South Coast Air Quality Management District, AQMD Website, http://www.aqmd.gov/aqmp/2012aqmp/index.htm.

South Coast Air Quality management District, AQMD Website, http://www.aqmd.gov/home/tools/public/find.

South Coast Air Quality Management District, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.

South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). Accessed March 2015.

South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, 2014.

South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, 2008.

South Coast Air Quality Management District, Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds, 2006.

South Coast Air Quality Management District, "Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting #15," September 28, 2010. http://www.aqmd.gov/ceqa/handbook/GHG/2010/sept28mtg/sept29.html. Accessed March 2015.

South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, 2005.

South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.

South Coast Air Quality Management District, Historical Data by Year, http://www.arb.ca.gov/msei/2001_residential_lawn_and_garden_changes_in_eqpt_pop_and_ act.pdf. Accessed February 2016.

South Coast Air Quality management District, Historical Data by Year, http://www.aqmd.gov/home/;ibrary/air-quality-data-studies/historical-data-by-year. Accessed February 2016.

South Coast Air Quality Management District, Minutes of the June 5, 2015 Meeting, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2015/2015-Jul10-001.pdf?sfvrsn=8, Accessed September 28, 2015.

South Coast Air Quality Management District, Multiple Air Toxics Exposure Study, MATES IV Carcinogenic Risk Interactive Map, http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iv. Accessed March 2015.

South Coast Air Quality Management District, SCAQMD Risk Assessment Procedures for Rules 1401 and 212, November 1998.

South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, 2011.

South Coast Air Quality Management District, http://www2.aqmd.gov/webappl/matesiii/. Accessed February 2016.

Southern California Association of Governments, 2008 Regional Comprehensive Plan.

Southern California Association of Governments, 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy, April 2012.

Southern California Association of Governments, Compass Growth Visioning, Compass Blueprint 2% Strategy.

State of California Department of Health Services, Community Noise Compatibility Guidelines.

State of California, General Plan Guidelines, 2002.

State of California, Office of Planning and Research, Technical Advisory, p. 5.

State of California's Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act).

State Water Resources Control Board, General Storm Water Permit (Water Quality Order 99-08-DWQ).

State Water Resources Control Board, Resolution No. 68-16.

State Water Resources Control Board. http://geotracker.waterboards.ca.gov/gama/gamamap/public/default.asp?CMD=runreport&myaddress=harbor+ucla+medical+center%2C+carson%2C+ca. Accessed, April, 2015.

State Water Resources Control Board, 2015 Emergency Water Conservation Regulations Fact Sheet, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/fs_conservreg_032715.pdf. Accessed June 2015.

Transportation Research Board, Transportation Research Circulator No. 212, Interim Materials on Highway Capacity, 1980.

U.S. Census Bureau, "California, Population of Counties by Decennial Census: 1900 to 1990," http://quickfacts.census.gov/qfd/states/06000lk.html. Accessed January 2015.

U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2012, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_df.html&sid=US. Accessed March 2016.

U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2014, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=US. Accessed March 2016.

U.S. Environmental Protection Agency, Airdata, http://www.epa.gov/airdata/ad_rep_mon.html. Accessed January 2015.

U.S. Environmental Protection Agency, Airdata, Areas for Criteria Pollutants, http://www.epa.gov/oaqps001/greenbk/index.html. Accessed February 2016

U.S. Environmental Protection Agency, "EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks," http://www.epa.gov/oms/climate/documents/420f12051.pdf. August 2012. Accessed March 2015.

U.S. Environmental Protection Agency, Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006, Chapter 8: Waste, (2008).

U. S. Environmental Protection Agency, The Green Book Non-attainment Areas for Criteria Pollutants, http://www.epa.gov/oaqps001/greenbk/index.html. Accessed February 2016.

Water Replenishment District of Southern California. http://www.wrd.org/engineering/introduction-groundwater-basins-los-angeles.php. Accessed December 2015.

West Basin Municipal Water District, Water Recycling Master Plan.

Yarne & Associates, Inc., on behalf of California Water Service Company (Cal Water), Harbor-UCLA Medical Center Campus SB610 Water Supply Assessment" prepared for California Water Service Company 2632 West 237th Street Torrance, California 90505. April 21, 2016.

8. List of EIR Preparers and Organizations and Persons Consulted

8.0 LIST OF EIR PREPARERS AND ORGANIZATIONS AND PERSONS CONTACTED

LEAD AGENCY

County of Los Angeles
Department of Public Works
900 S. Fremont Ave.
Alhambra, CA 91803-1331

- Clarice Nash, Project Manager

ENVIRONMENTAL IMPACT REPORT PREPARATION

ESA PCR
80 South Lake Avenue, Suite 570
Pasadena, CA 91101
Website: www.esassoc.com

- Anne Doehne, Associate Principal (Principal-in-Charge)
- David Crook, Principal Planner (Project Manager)
- Lorena Christman, Principal Planner
- Robert Hillman, Senior Planner II
- Jessie Fan, Associate Planner
- Heidi Rous, Principal, Director of Air Quality, Climate & Acoustics
- Alan Sako, Senior Engineer
- Kyle Kim, Senior Engineer
- Terry Keelan, Publications Director
- Greg Spalek, Director of Graphic Services
- Denise Kaneshiro, Senior Graphics Specialist

Traffic and Circulation

Fehr & Peers
600 Wilshire Blvd, Suite 1050
Los Angeles, CA 90017
Website: http://www.fehrandpeers.com

- Netai Basu, Senior Associate
- Michael Samuelson, Transportation Planner

Geotechnical Engineer

Ninyo & Moore
Geotechnical and Environmental Sciences Consultants

475 Goddard, Suite 200
Irvine, California 92618

Website: http://www.ninyoandmoore.com

- Michael Rogers, PG, CEG, Senior Geologist
- Jalal Vakili, PhD, PE, Principal Engineer

Hazards and Hazardous Materials

Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618

Website: http://www.ninyoandmoore.com

- John Jay Roberts, PG, CEG, Senior Geologist
- Michael Rogers, PG, CEG, Senior Geologist
- Patrick Cullip, Senior Staff Engineer

Helicopter Operations

Heliport Consultants
148 Gazania Court
Thousand Oaks, CA 91362
Website: http://www.bennettgroup.biz

- Ricarda Bennett, Principal

Helicopter Acoustics

Acoustical Engineering Services
22801 Crespi Street
Woodland Hills, California 91364
Website: http://www.aesacoustics.com

- Amir Yazdanniyaz, PE, Principal
- Sean Bui, PE, Principal

Water Supply Assessment

California Water Service Company
2632 West 237th Street
Torrance, California 90505

Website: https://www.calwater.com

- Jeff L. Yarne, Consultant

AGENCIES CONSULTED

County of Los Angeles Department of Public Works, Traffic & Lighting Division

900 S. Fremont Ave.
Alhambra, CA 91803-1331

- Suen Fei Lau, Associate Civil Engineer

County of Los Angeles Fire Department

Prevention Services Bureau
Forestry Division
1320 North Eastern Avenue
Los Angeles, CA 90063-3294

- Kevin T. Johnson, Acting Chief

County of Los Angeles Sheriff's Department

Carson Station
21356 Avalon Blvd.
Carson, CA 90745

- Chris E. Marks, Captain, Carson Station Commander
- Britta S. Steinbrenner, Captain, County Services Bureau
- Karl R. Schow, Captain, Transit Bureau South

Sheriff's Department Headquarters
Facilities Planning Bureau
4700 Ramona Boulevard
Monterey Park, CA 91745-2169

- Tracey Jue, Director
- Lester Miyoshi, Departmental Facilities Planner

Los Angeles County Department of Parks and Recreation

County of Los Angeles
Department of Parks and Recreation
Planning and CEQA Section
510 S. Vermont Avenue
Los Angeles, CA 90020

- Clement Lau, AICP, Departmental Facilities Planner II

County of Los Angeles Public Library

County of Los Angeles Public Library

7400 East Imperial Hwy.

Downey, CA 90242

- Yolanda De Ramus, Chief Deputy Director

Los Angeles Neighborhood Land Trust (Parks)

Los Angeles Neighborhood Land Trust
315 W. 9th St., Suite 950
Los Angeles, CA 90015

- Mark Glassock, MPH, Director of Special Projects

City of Torrance Community Services Department (Parks)

City of Torrance
Community Services Department
3031 Torrance Blvd, Torrance, CA 90503

- John Jones, Community Services Director

City of Carson Parks & Recreation Department (Parks)

City of Carson
Parks & Recreation Department
2400 E Dominguez St, Long Beach, CA 90810

- Cedric L. Hicks, Sr., Director of Community Services

Los Angeles Unified School District (Schools)

Los Angeles Unified School District
Facilities Planning Division
Master Planning & Demographics
333 S. Beaudry Ave., 23rd Floor
Los Angeles, CA 90017

- Rena Perez, Director

9. Standard Terms, Definitions, and Acronyms

9.0 STANDARD PROJECT TERMS, DEFINITIONS, AND ACRONYMS

STANDARD TERMS AND DEFINITIONS

- ***Bioscience Tech Park:*** The proposed 250,000-square foot facility proposed for the western end of the Harbor-UCLA Medical Center Campus. It would house biomedical research facilities that would operate independently of LA BioMed, and is anticipated to be constructed between 2020 and Master Plan Project Buildout.
- ***CII:*** Children's Institute International, a tenant on the Harbor-UCLA Medical Center Campus, occupying the Burton E. Green Campus, a 23,435-square foot building in the northwest corner of the Campus.
- ***Existing Hospital Tower:*** Refers to the main seven-story, 446-bed County hospital building on the Harbor-UCLA Medical Center Campus. Constructed in 1962, the Hospital underwent expansion between 2010 and 2013 (see ***Replacement Project***).
- ***Harbor General Hospital:*** Los Angeles County Harbor General Hospital, the current Harbor-UCLA Medical Center hospital's predecessor, founded in 1946 following the purchase of the property from the federal government. It originally occupied the administration building and barracks built in the 1940s, which were replaced in 1962 by construction of a new hospital building. See ***Existing Hospital Tower***.
- ***Harbor-UCLA Medical Center:*** Generally refers to the entire 72-acre Medical Center Campus, including the County Hospital and Clinics as well as other tenants including LA BioMed, MFI, and the Children's Institute (see ***CII***).
- ***LA BioMed:*** Los Angeles Biomedical Research Institute, a not-for profit biomedical research institute and the second-largest leasehold tenant on the Harbor-UCLA Medical Center Campus.
- ***LA BioMed Campus:*** The 11.4-acre campus, located within the south-central Medical Center Campus and fronting on 220th Street, which houses the consolidated facilities of LA BioMed.
- ***Master Plan:*** Harbor-UCLA Medical Center Campus Master Plan
- ***Medical Center Campus:*** The 72-acre Harbor-UCLA Medical Campus, bounded by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west.
- ***MFI:*** Harbor-UCLA Medical Foundation, Inc.
- ***New Hospital Tower:*** The proposed new hospital tower, to be built as a replacement for the existing Hospital, which will be decommissioned for inpatient acute care functions by 2030 in accordance with the requirements of SB 1953, the Alquist Hospital Seismic Safety Act of 1983.
- ***PCDC:*** Primary Care and Diagnostics Center, a facility within the Hospital
- ***Project:*** Harbor-UCLA Medical Center Campus Master Plan Project
- ***Project Site:*** See ***Medical Center Campus***.

- ***Replacement Project:*** The Emergency Room and Surgery Building Replacement Project, an expansion of the Existing Hospital Tower building undertaken between 2010 and 2013. This project expanded the existing emergency room from 25,000 square feet/42 emergency bays to 75,000 square feet/80 emergency bays and added 190,000 square feet of space containing surgery suites, adult and pediatric triage, and a new entrance lobby, and waiting area. A new heliport and 544-space parking structure were also constructed.

ACRONYMS AND ABBREVIATIONS

Acronym	Description
2016 RCP/SCS	2016 – 2040 Regional Transportation Plan/Sustainable Communities Strategy
µg	microgram
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ACM	asbestos-containing material
ADA	American with Disabilities Act
AF	acre-feet
AFY	acre-feet per year
Air Basin	South Coast Air Basin
Alquist-Priolo Act	The Alquist-Priolo Fault Zoning Act of 1972
ANSI	American National Standard Institute
APRMI	ArchaeoPaleo Resource Management, Inc.
AQMP	Air Quality Management Plan
ASCE	American Society of Civil Engineers
ASCE Bulletin 7	American Society of Civil Engineer Bulletin 7
AST	aboveground storage tank
ASTM	American Society of Testing and Materials
ATCM	airborne toxic control measure
BACT	Best Available Control Technology
Basin	Los Angeles Basin
Basin Plan	Water Quality Control Plan
BAU	Business-As-Usual
BEP	Business Emergency Plan
BMPs	Best Management Practices
BTEX	benzene, toluene, ethylbenzene, and xylenes
C&D	Construction and Demolition
CAAQS	California Ambient Air Quality Standards
Cal/EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
California Register	California Register of Historical Resources
CALINE	California Line Source
Cal/OSHA	California Division of Occupational Safety and Health
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board

Acronym	Description
CAT	Climate Action Team
CCAR	California Climate Action Registry
CCR	California Code of Regulations
cd/m^2	candelas per square meter
Central Basin	Central Basin of the Coastal Plain of the Los Angeles Groundwater Basin
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
Cfs	cubic feet per second
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol
CHMIRS	California Hazardous Material Incident Report System
CHRIS	California Historical Resources Information System
CHR Status Code	California Historic Resources Status Code
CWIMB	California Integrated Waste Management Board
CIWMP	Countywide Integrated Waste Management Program
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	equivalent mass of carbon dioxide
Compass Report	Southern California CBGV Compass Blueprint Growth Visioning Report
COMPSTAT	Crime Control Model Computer Statistics
Conservation Element	City of Los Angeles General Plan Conservation Element
Construction General Permit	General Permit for Storm Water Discharges from Construction Activities, NPDES Permit No. CAS000002
County	County of Los Angeles
County Department of Public Works	Los Angeles County Department of Public Works
County Flood Control	Los Angele County Flood Control District
CUP	Conditional Use Permit
dB	decibel
dBA	A-weighted dB scale
dBC	C-weighted dB scale
DDT	dichloro-diphenyl-trichloroethane
Design Guidelines	Citywide Design Guidelines
DHS	Los Angeles County Department of Health Services
DNL	Day-Night Average Level
DOGGR	California Department of Conservation, Division of Oil, Gas, and Geothermal Resources
DOSH	Department of Occupational Safety and Health
DPR	California Department of Parks and Recreation

Acronym	Description
Draft EIR	Draft Environmental Impact Report
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
Earthquake Fault Zones	Regulatory zones established by the State Geologist around the surface traces of active faults
EIR	Environmental Impact Report
EMFAC	emission factors
ERNS	Emergency Response Notification System
ETO	ethylene oxide
FAA	Federal Aviation Administration
FAR	floor:area ratio
FHWA	Federal Highway Administration
FIND	Facility INformation Detail
FTA	Federal Transit Administration
General Permit	SWRCB Order No. 2009-0009-DWQ
GHG	greenhouse gas
gpm	gallons per minute
Growth Vision	SCAG's Compass Blueprint Growth Visioning Program
GWP	global warming potential
H_2S	hydrogen sulfide
HABS	Historic American Buildings Survey
HAZNET	Hazardous Waste Information System
HAZUS	Federal Emergency Management Agency's HAZARDS U.S. Assessment Program
HCM	Highway Capacity Manual
HFC	hydrofluorocarbon
HHWE	Household Hazardous Waste Element
HPOZ	Historic Preservation Overlay Zone
HRA	Health Risk Assessment
HVAC	Heating, ventilation, and air conditioning
HWCL	Hazardous Waste Control Law
IIPP	Injury and Illness Prevention Program
IPCC	Intergovernmental Panel on Climate Change
IT	Information Technology
kVA	kilovolt amperes
kWh	kilowatt hours
LADOT	City of Los Angeles Department of Transportation
LAFD	City of Los Angeles Fire Department
LARWQCB	Los Angeles Regional Water Quality Control Board
LBP	lead-based paint
LCD	liquid crystal display

Acronym	Description
LCS	lead-containing surface
L_{dn}	Day-Night Average Level
LEED	Leadership in Energy and Environmental Design
LEL	Lower Exposure Limit
L_{eq}	Equivalent Sound Level
LID	Low Impact Development
L_{max}	Maximum Sound Level
LOS	Level of Service
LQG	Large-Quantity Generator
LUST	Leaking Underground Storage Tank
MATES	Multiple Air Toxics Exposure Study
Metro	Los Angeles County Metropolitan Transportation Authority
MMT	million metric tons
$MTCO_2e$	Metric Ton Carbon Dioxide Equivalent
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
National Register	National Register of Historic Places
NDFE	Nondisposal Facility Elements
NHPA	National Historic Preservation Act
NO	nitric oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NOC	Network Operations Center
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
O_3	ozone
OHP	State Office of Historic Preservation
O&M	Operations and Maintenance
OSHA	Federal Occupational Safety and Health Administration
OSHPD	California Office of Statewide Health Planning and Development
Pb	lead
PCBs	Polychlorinated Biphenyls
PEL	Permissable Exposure Limits
PFCs	Perfluorocarbons
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
Police Department	Los Angeles Police Department
ppm	parts per million

Acronym	Description
ppmv	parts per million by volume
PPV	peak particle velocity
PRC	Public Resources Code
psi	pounds per square inch
PST	Pacific Standard Time
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RD	Reporting District
REC	Recognized Environmental Condition
REL	reference exposure level
RTIP	Regional Transportation Improvement Program
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCEC	Southern California Earthquake Center
Seismic Hazards Mapping Act	Seismic Hazards Mapping Act of 1970
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SLM	Sound Level Meter
SO_2	sulfur dioxide
SO_4	sulfates
SQG	Small-Quantity Generator
SSC	suspended sediment concentration
SRRE	Source Reduction and Recycling Element
Standards	Secretary of the Interior's Standards or Secretary of the Interior's Standards for Rehabilitation
Status Code	California Historic Resources Status Code
STEL	Short Term Exposure Limit
SUSMP	Standard Urban Stormwater Mitigation Plan
SWEEPS	Statewide Environmental Evaluation and Planning System
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TER	Technology Equipment Room
TMDL	Total Maximum Daily Load
TOD	Transit Overlay District
TPH	Total Petroleum Hydrocarbons

Acronym	Description
TRPH	Total Recoverable Petroleum Hydrocarbons
Transportation Element	City of Los Angeles General Plan Transportation Element
TSCA	Toxic Substances Control Act of 1976 (15 United States Code, Section 2601)
TSS	total suspended solids
UEL	Upper Exposure Limit
UPS	Uninterruptible Power Supplies
URBEMIS	Urban Emissions
USC	United States Code
USEPA	United States Environmental Protection Agency
USGBC	United States Green Building Council
UST	underground storage tank
V/C	volume to capacity
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WDR	Waste Discharge Requirements
WWII	World War II

Enclosure B

4.0 MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP), which is provided in **Table 4-1**, *Mitigation Monitoring and Reporting Program,* has been prepared pursuant to Public Resources Code Section 21081.6 and State Guidelines Section 15097, which require adoption of a MMRP for projects in which the Lead Agency has adopted mitigation to avoid significant environmental effects. The County of Los Angeles is the Lead Agency for the proposed Harbor-UCLA Medical Center Campus Master Plan Project (Master Plan Project or Project) and therefore is responsible for implementing the MMRP. The primary purpose of the MMRP is to ensure that the mitigation measures identified in the Initial Study (IS), and Draft and Final EIR (designated by the respective environmental issue within Chapter 4.0 of the EIR) are implemented, thereby minimizing identified environmental effects. For convenience of tracking, this MMRP also includes the proposed Project Design Features (PDFs) identified throughout Chapter 4.0 the Draft EIR. The PDFs are specific design elements that have been incorporated into the Project, or standard procedures, and reflected in the construction specifications and final plans implemented in accordance with County protocol to prevent the occurrence of or to minimize the significance of potential environmental effects. Because PDFs have been incorporated into the Project, they do not constitute mitigation measures, as defined by Section 15126.4 of the State CEQA Guidelines (Title 14 of the California Code of Regulations).

The MMRP for the proposed Project will be in place through all phases of the Project, including design (preconstruction), construction, and operation (both prior to and post-occupancy).

Each mitigation measure is categorized by impact area, with an accompanying identification of:

- The phase of the project during which the measure should be monitored;
  - Pre-construction
  - Construction
  - Prior to occupancy
  - Post-occupancy
- The enforcement agency; and
- The monitoring agency.

Table 4-1

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
4.B AIR QUALITY						
PDF AQ-1: The Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following: ▪ The Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris. ▪ The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code. ▪ The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of	Project Design/Pre-Construction	Los Angeles County Department of Public Works (LACDPW)	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means. ▪ The Project would include lighting controls with occupancy sensors to take advantage of available natural light. ▪ The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent. ▪ Project buildings shall be constructed with solar-ready rooftops that provide for the installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading. ▪ The Project would be designed and						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care. ▪ To encourage carpooling and the use of electric vehicles by project employees and visitors, the County shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces. ▪ The Project shall appropriate incorporate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).						
PDF AQ-2: The Project shall implement the following measures during construction activities: ▪ The Project shall require construction contractor(s) to utilize off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA	Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
Tier 4 off-road emissions standard for equipment rated at 50 hp or greater during Project construction. ▪ To the extent possible, pole power will be made available for use with electric tools, equipment, lighting, etc. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment. ▪ The Project shall encourage construction contractors to apply for SCAQMD "SOON" funds, which provides funds to accelerate the clean-up of off-road diesel vehicles, such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/Implementation/ SOONProgram.htm. ▪ In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
construction shall be limited to five minutes at any location. ▪ The County shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits. ▪ The Project shall comply with the applicable provisions of SCAQMD Rule 403 to minimize generation of fugitive dust. Active demolition or grading construction areas and unpaved roads shall be controlled by temporary covers or wetted sufficiently to reduce dust. ▪ Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation. ▪ On-site vehicles shall be limited to 15 miles per hour on unpaved roadways. ▪ Haul trucks carrying dirt, soil, sand, or other loose material shall be covered and maintain a freeboard height of 12 inches. ▪ Prior to leaving areas of active construction, haul trucks would be inspected and put through procedures as necessary to remove loose debris from tire wells and on the truck exterior to prevent track out. ▪ Construction areas shall install						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
temporary fencing, if necessary, to prevent debris and material movement on the site and into patient care buildings or to off-site areas. ▪ The County shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust. ▪ All coatings used on-site shall comply with SCAQMD Rule 1113, as applicable. The project will strive to utilize material which is pre-primed or pre-painted. Additionally, the project shall limit daily application of architectural coatings applied on-site to 170 gallons per day with an average of 50 grams VOC per liter of coating, less water and less exempt compounds, or equivalent usage resulting in similar or less VOC emissions. For example, stains, specialty primers, and industrial maintenance coatings allowed by Rule 1113 that contain VOCs at a level of 100 grams per liter of coating, less water and less exempt compounds would be limited to 85 gallons per day on site						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
4.D GEOLOGY AND SOILS						
MM-GEO-1: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate potential fault rupture, seismic ground shaking, and liquefaction hazards identified under Impact GEO-1: ▪ *Seismicity:* Structural elements of future improvements shall be designed to resist or accommodate appropriate site-specific ground motions and conform to the current seismic design standards. ▪ *Liquefaction:* An assessment of the liquefaction potential and seismically induced dynamic settlement shall be made prior to detailed design and construction of the proposed Project. Structural design and mitigation techniques, such as in-situ ground modification or supporting	Construction Post-occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
foundations with piles at depths designed specifically for liquefaction, shall be included. To evaluate the potential liquefaction hazard for the Project, a subsurface evaluation could be performed. Site-specific geotechnical evaluations that assess the liquefaction and dynamic settlement characteristics of the on-site soils shall include the drilling of exploratory borings, evaluation of groundwater depths, and laboratory testing of soils. Methods for construction in areas with a potential for liquefaction hazard may include in-situ ground modification, removal of liquefiable layers and replacement with compacted fill, or support of Project improvements on piles at depths designed specifically for liquefaction. Pile foundations can be designed for a liquefaction hazard by supporting the piles in dense soil or bedrock located below the liquefiable zone or other appropriate methods as evaluated during the site-specific evaluation. Additional recommendations for mitigation of liquefaction may include densification by installation of stone columns, vibration, deep dynamic compaction, and/or compaction grouting.						
MM-GEO-2: All recommendations	Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate unstable soil hazards identified under Impacts GEO-3: ▪ *Compressible/Collapsible Soils and Settlement:* An assessment of the potential for soils that are prone to settlement shall be made prior to detailed design and construction of Project improvements, and mitigation techniques shall be developed, as appropriate, to reduce impacts related to settlement to low levels. During the detailed design phase of the Project components, surface reconnaissance and site-specific geotechnical evaluations shall be performed to assess the settlement potential of the on-site natural soils and undocumented fill. This may include detailed surface reconnaissance to evaluate site	Post-occupancy					

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
conditions, drilling of exploratory borings or test pits, and laboratory testing of soils, where appropriate, to evaluate site conditions. Prescribed mitigation measures for soils with the potential for settlement include removal of compressible/collapsible soil layers and replacement with compacted fill; surcharging to induce settlement prior to construction of new fills; and specialized foundation design, including the use of deep foundation systems to support structures. Varieties of in-situ soil improvement techniques are also available, such as dynamic compaction (heavy tamping) or compaction grouting. ▪ *Shallow Groundwater:* A subsurface exploration shall be performed during the detailed design phase of future improvements to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and construction of Project improvements. Assessment of the potential for shallow groundwater would be evaluated during the design phase of the Project and mitigation techniques would be developed, as						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
appropriate, to reduce the impacts related to shallow groundwater to low levels. Therefore, potential impacts due to groundwater would be reduced with incorporation of techniques such as construction dewatering.						
MM-GEO-3: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate expansive soils hazards identified under Impacts GEO-4. ▪ *Expansive Soils:* An assessment of the potential for expansive soils will be conducted during the detailed design and construction phases of the Project. Mitigation techniques such as over excavation and replacement with non-expansive soil, soil treatment, moisture management, and/or specific structural design for	Construction Post-occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
expansive soil conditions would reduce the impact from expansive soils to low levels. ▪ *Corrosive Soils:* An assessment of the potential for corrosive soils will be conducted during the detailed design phase of the Project through a subsurface evaluation including soil testing and analysis of soils at foundation design depths. Laboratory tests would include corrosivity tests to evaluate the corrosivity of the subsurface soils. Data will be reviewed by a corrosion engineer and mitigation techniques suitable for the proposed Project will be implemented as appropriate. Mitigation of corrosive soil conditions could include the use of concrete resistant to sulfate exposure. Corrosion protection for metals used in underground foundations or structures in areas where corrosive groundwater or soil could potentially cause deterioration could include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the appropriate type of cement and water/cement ratio.						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
Specific measures to reduce the potential effects would be developed in the design phase and would reduce impacts related to corrosive soils to low levels.						
4.F HAZARDS AND HAZARDOUS MATERIALS						
MM-HAZ-1: The abatement of ACMs, LBP, and PCBs in existing on-site buildings shall be conducted in accordance with the recommendations of the Hazardous Building Materials Survey prepared for the Harbor-UCLA Campus, which are as follows: ▪ The identified ACMs and surfaces containing LBP should not be disturbed. Prior to renovation or demolition activities which would disturb identified ACMs, and LCSs, a licensed abatement removal contractor shall remove the ACMs and LCS, and perform paint stabilization activities as needed. The licensed abatement contractor shall maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal, or other regulated activities. ▪ The identified surface containing LBP shall not be disturbed. Any LBP in a non-intact condition shall be abated or the component properly removed or	Construction Post-occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
encapsulated. Lead containing ceramic tiles shall be removed prior to demolition activities. Any lead related removal activities shall be performed in accordance with the OSHA Lead in Construction Standard, Title 8 California Code of Regulations (CCR) 1532.1. ▪ Proper LBP waste stream categorization is required. Prior to any demolition activities, a composite sample of the representative LBP material (ceramic tiles and loose and flaking paint) shall be analyzed for total lead for comparison with the Total Threshold Limit Concentration in accordance with EPA reference method SW-846. If the concentration of total lead is greater than or equal to 1,000 milligrams per kilogram (mg/kg), the LBP waste material shall be disposed at a landfill which can receive such wastes. If the concentration is less than 50 mg/kg the sample may be disposed as construction debris, if it is to remain in California. If the total lead result is greater than or equal to 50 mg/kg and less than 1,000 mg/kg, the sample shall be further analyzed for soluble lead by the Waste Extraction Test for comparison with the Soluble Threshold Limit Concentration as described in Title 22 CCR 66261.24a. Additionally, if						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
the result is greater than or equal to 100 mg/kg the sample shall be further analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure for comparison with the Resource Conservation and Recovery Act (RCRA) limits. Based on the results of the soluble and leachable analysis the waste material may require disposal as a RCRA-Hazardous waste or non-RCRA-(California-) Hazardous waste. ▪ Miscellaneous hazardous building materials shall be removed and properly recycled or disposed by the licensed abatement contractor prior to renovation or demolition activities. Contractor shall provide proper manifesting for all hazardous materials removed and recycled to prove the disposal of all materials was completed in accordance with local, state, and federal requirements. ▪ Abatement monitoring consulting services shall be performed by a third-party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances (asbestos and lead), verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
abatement activities.						
MM-HAZ-2: Prior to initiation of excavation and grading activities in the areas identified in the Phase I Assessment as containing potential soil contamination or for which site closure is not confirmed (from either on- or off-site USTs/LUSTs or ASTs), Harbor-UCLA shall retain a qualified environmental consultant to prepare a Soils Management Plan for each development phase to be submitted to the Los Angeles County Fire Department for review and approval. The Soils Management Plan shall be implemented during excavation and grading activities for proposed improvements in the areas identified in the Phase I assessment as containing potential soil contamination to ensure that site closure is property implemented and any contaminated soils encountered are properly identified, removed and disposed of off-site. The plan shall include the following: ▪ A qualified environmental consultant shall be present as necessary during grading and excavation activities to monitor compliance with the Soils Management Plan and to actively monitor the soils and excavations for evidence of contamination. ▪ Any soil encountered during	Construction Post-occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
excavation or grading activities that appears to have been affected by hydrocarbons or any other contamination shall be evaluated, based upon appropriate laboratory analysis, by a qualified environmental consultant prior to off-site disposal at a licensed facility. ▪ All identified contaminated soils shall be properly removed, handled and transported to an appropriately licensed disposal facility, in accordance with the Soils Management Plan prepared for each respective development phase.						
4.I NOISE						
PDF-NOISE-1: The Project contractor(s) will equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards.	Construction	LACDPW	LACDPW			
PDF-NOISE-2: On-site construction equipment staging area shall be located as far as feasible from sensitive uses/hospital patient buildings.	Construction	LACDPW	LACDPW			
PDF-NOISE-3: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited near sensitive uses/patient buildings.	Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
PDF-NOISE-4: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent feasible.	Construction	LACDPW	LACDPW			
PDF NOISE-5: Effective noise barriers will be designed and erected as needed to shield on-site uses from excessive construction-related noise.	Construction	LACDPW	LACDPW			
PDF NOISE-6: To reduce the potential for serious construction-related vibration effects to on-site operating rooms or other vibration sensitive medical uses (such as laboratories), the Project contractor(s) shall perform appropriate study of the potential for peak particle velocities to reach or exceed 0.008 inches per second PPV whenever construction involving the use of heavy duty equipment is planned within 125 feet of such an on- site medical use. If, based on site-specific conditions, this study indicates potential for detrimental effects, strategies to minimize the effects shall be incorporated into the construction plan.	Pre-construction Construction	LACDPW	LACDPW			
PDF-NOISE-7: As required by LACC, an acoustical analysis of the mechanical plans of the proposed buildings will be prepared by a qualified acoustical engineer, prior to issuance of building permits, to ensure that all mechanical equipment would be designed to meet	Prior to Issuance of Building Permits	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
noise limits in Table 4.I-6.						
MM-NOISE-1: Temporary noise barriers shall be used to block the line-of-site between the construction equipment and noise-sensitive receptors during project construction, as follows: ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the southern boundary of the Project construction site to reduce construction noise at the single- and multi-family residential uses across 220th Street during Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed. ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundaries of the Project construction site to reduce construction noise at the multi-family residential uses across Carson Street during Phase 4. ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundary of the Project construction site to reduce construction noise at	Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
the single-family residential uses across Vermont Avenue during Phase 2, Phase 4, and Phase 5.						
4.K.1 FIRE SERVICES						
PDF-FIRE-1: The County's, designers, construction contractors, and tenants for/of development under the Project will implement the conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, which are included in Appendix J-1, *Fire Department Correspondence*, of this Draft EIR. The LACFD conditions of approval referenced above are summarized below and include, but are not limited to, the following: ▪ Provide multiple ingress/egress access for circulation of traffic and emergency response vehicles. ▪ Every building constructed shall be accessible to Fire Department apparatus by way of Fire Apparatus Access Roads of not less than the minimum widths prescribed in Fire Code Section 503.2.1, with roadways extending to within 150 feet of all	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
portions of the exterior walls when measured by an unobstructed route around the exterior of the building. ▪ Fire Apparatus Access Roads shall be a minimum unobstructed width of 28 feet exclusive of shoulders and have unobstructed vertical clearance "clear to sky" ▪ Dead-end Fire Apparatus Access Roads in excess of 150 feet in length shall be provided with an approved Fire Department turnaround. ▪ Provide approved signs or other approved notices or markings that include the words "NO PARKING – FIRE LANE". ▪ Fire Apparatus Access Roads must be installed and maintained in a serviceable manner prior to and during the time of construction. ▪ Approved building address numbers, building numbers, or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property. ▪ The method of gate control shall be						

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
subject to review by the Fire Department prior to approval, and shall meet specified width, positioning, emergency power, and emergency access requirements. ▪ The development may require fire flows up to 8,000 gpm at 20 psi residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, the installation of an automatic fire sprinkler system, and type(s) of construction used. ▪ Fire hydrant spacing shall be every 300 feet for both the public and the on-site hydrants, with no portion of a lot frontage more than 200 feet via vehicular access from a public hydrant, and no portion of a building exceeding 400 feet via vehicular access from public fire hydrant. ▪ All required public fire hydrants shall be installed, tested, and accepted prior to beginning construction. ▪ Provide a Fire Department-approved fire sprinkler system in all proposed buildings.						
MM FIRE-1: The Project construction	Pre-construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
contractors will regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times.	Construction					
4.K.2 SHERIFF PROTECTION						
PDF-SHER-1: The County Department of Public Works shall provide the LACSD CSB with the on-site satellite station space, locker space, and associated parking spaces, required to serve the Project. This shall include, at a minimum, the existing amount of satellite station space (927 sf), locker room space (1,672 sf), and associated parking spaces, plus an additional 36 percent (approximately 1,000 sf) of this operational space and associated parking to serve the net increase in on-site employees and patients under the Project.	Pre-construction Construction	LACDPW	LACDPW			
PDF-SHER-2: Project design shall adhere to the Crime Prevention Through Environmental Design (CPTED) principles. This shall include, but not be limited to, the provision of physical design features that discourage crime such as defensible space, territoriality, surveillance, lighting, landscaping, and physical security. The CPTED features shall be identified on the design plans for the Project which shall be	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
provided to the LACSD for review and approval.						
MM SHER-1: During Project construction, construction sites will be fully fenced, lighted with security lighting, and patrolled by either the LACSD on-site satellite station personnel (either sworn officers or contract security guards) or private security hired by DHS.	Pre-construction Construction	LACDPW	LACDPW			
MM SHER-2: Emergency access to the LACSD will be provided and maintained to existing and new uses on-site uses, and to off-site uses, throughout construction.	Pre-construction Construction	LACDPW	LACDPW			
MM SHER-3: The Project construction contractors will regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times.	Pre-construction Construction	LACDPW	LACDPW			
MM SHER-4: The Security Management Plan for the Harbor-UCLA Campus will be updated by DHS, in consultation with the LACSD, to address the proposed physical and operational changes to the Campus	Prior to Occupancy	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
under the Project. At a minimum, the primary security features and measures currently in place at the Campus under the Security Management Plan will carried forward under the Project.						
4.K.5 LIBRARIES						
PDF-LIBRARIES-1: The AF Parlow Library of Health Sciences, an existing LACDHS-operated library on the Project Site available for use by doctors, medical students, fellows, faculty, nurses, and allied health professionals affiliated with the medical center, will be retained and relocated to other building space on the HUCLA Campus.	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
4.L TRANSPORTATION AND TRAFFIC						
PDF TRAF-1: Construction Traffic Management Plan: A detailed Construction Traffic Management Plan including street closure information, detour plans, haul routes, and staging plans would be prepared and submitted to the County for review and approval. The Construction Traffic Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements as appropriate: ▪ Prohibition of construction worker parking on nearby residential streets. ▪ Prohibition of construction-related vehicles parking or staging on surrounding public streets. ▪ Temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
▪ Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate. ▪ Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible.						
PDF TRAF-2: Pedestrian Safety: The construction contractor(s) would plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. The contractor(s) would maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. Temporary pedestrian facilities would be adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. Covered walkways would be provided where pedestrians are exposed to potential injury from falling objects. The contractor would keep sidewalks open during construction except when it	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
is absolutely required to close or block the sidewalks for construction staging. Sidewalks shall be reopened as soon as reasonably feasible taking construction and construction staging into account.						
MM TRAF-1: I-110 Southbound Ramps & Carson Street (Intersection #9) - Subject to approval by Caltrans, the existing southbound approach on the Interstate I-110 off-ramp shall be restriped to convert the existing left-turn lane to a left-/right-turn lane.	Pre-construction Construction	LACDPW	LACDPW			
MM TRAF-2: 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) - Subject to approval by Caltrans and the City of Carson, an additional northbound through lane shall be striped and the existing through lane shall be restriped as a through/right-turn lane. The eastbound approach shall be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane.	Pre-construction Construction	LACDPW	LACDPW			

Table 4-1 (Continued)

Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementation Phase	Enforcement Agency	Monitoring/ Reporting Agency	Compliance Verification		
				Initial	Date	Comments
MM TRAF-3: I-110 Southbound Ramps & 223rd Street (Intersection #20) - Subject to approval by Caltrans, the southbound approach shall be restriped from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach shall be restriped to change the existing right-turn lane to a through/right-turn lane. Under this mitigation, parking shall be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane.	Pre-construction Construction	LACDPW	LACDPW			

Enclosure C

CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS AND FACTS IN SUPPORT OF FINDINGS FOR THE FINAL HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT ENVIRONMENTAL IMPACT REPORT

1.0 Introduction

Pursuant to the California Environmental Quality Act (CEQA; *California Public Resources Code*, Section 21081), the potential environmental effects of the proposed Harbor-UCLA Medical Center Campus Master Plan Project (Project) have been analyzed in a Draft Environmental Impact Report (Draft EIR or EIR) dated August 17, 2016 (State Clearinghouse No. 2014111004). In accordance with Section 15121 of the State *CEQA Guidelines*, the Draft EIR provides specific information regarding the environmental effects associated with development of the Project, and ways to minimize any significant environmental effects through mitigation measures or reasonable alternatives to the Project. A Final EIR has been prepared that incorporates the Draft EIR and contains all comments received on the Draft EIR, responses to the individual comments, revisions, clarifications, and corrections to the Draft EIR, and a Mitigation Monitoring and Reporting Program (MMRP) for the Project.

1.1 Statutory Requirements for Findings

The State *CEQA Guidelines* (Guidelines, *California Code of Regulations,* Title 14, Section 15091) state that no public agency shall approve or carry out a project which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

3. Specific economic, legal, social, technological, or other considerations, including provision for employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

The County of Los Angeles (County) as the lead agency has made specific findings regarding each potentially significant impact associated with the Project. These findings, along with evidence in support of the findings, are found below in Sections 3, Findings, and Section 4, Significant Effects that Cannot be Mitigated to Below the Level of Significance. Section 5, Findings on Project Alternatives, provides written findings on each of the alternatives addressed in Chapter 5.0, Alternatives, of the Draft EIR.

The Draft EIR discloses the environmental impacts expected to result from Project construction and operation. The Draft EIR states that prior to mitigation, Project implementation would result in potentially significant impacts to Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Noise, Fire Protection and Emergency Services, Sheriff Protection, and Transportation and Traffic. Mitigation measures have been developed that can reasonably reduce several impacts to a less than significant level. However, significant environmental impacts for Noise and Transportation and Traffic cannot be mitigated feasibly to a level considered less than significant; for these environmental issues,, impacts are considered significant and unavoidable. In accordance with Section 15093(b) of the State *CEQA Guidelines*, the County has prepared a Statement of Overriding Considerations that states the specific benefits of the Project which outweigh its remaining environmental impacts..

1.2 Certification

The County of Los Angeles Board of Supervisors hereby certifies and finds the Final Environmental Impact Report for the Harbor-UCLA Medical Center Campus Master Plan Project, County of Los Angeles, California, State Clearinghouse No. 2014111004, has been completed in compliance with CEQA and State *CEQA Guidelines*. The County of Los Angeles Board of Supervisors has received, reviewed, and considered the information contained in the EIR, all hearings, and submissions of testimony from officials representing the County, as well as from other agencies, organizations, and private individuals with a particular vested interest in the Project. Having received, reviewed, and considered the foregoing information, and recommendations of the County staff, as well as any and all other information in the record, and herein, the County of Los Angeles Board of Supervisors hereby makes findings pursuant to and in accordance with Section 21081 of the Public Resources Code and CEQA Guidelines Sections 15090 and 15091 and hereby certifies that:

1. The Final EIR has been completed in compliance with CEQA;

2. The Final EIR was presented to the Board of Supervisors as the decision-making body of the County and that the decision-making body reviewed and considered the information contained in the Final EIR prior to approving the project; and

3. The Final EIR reflects the County's independent judgement and analysis.

1.3 Project EIR and Discretionary Actions

The Final Harbor-UCLA Medical Center Campus Master Plan Project EIR (Final EIR) was prepared as a Project EIR pursuant to CEQA and State *CEQA Guidelines*. The Final EIR provides information necessary to the County to make a final decision on the requested discretionary actions for the Project. Discretionary actions that would be required for the Project are anticipated to include certification of the Final EIR; approval of demolition, excavation, and building approvals for non-acute care buildings and ancillary structures; review and approval of proposed acute care facilities (i.e., New Hospital Tower) by the California Office of Statewide Health Planning and Development (OSHPD); approval of the haul route; helistop permit approval by the California Department of Transportation (Caltrans) Division of Aeronautics; and other entitlements and approvals as may be required.

2.0 Procedural Compliance with CEQA

The County published the Draft EIR on August 17, 2016. A Final EIR was prepared in the fall of 2016 in accordance with CEQA and State *CEQA Guidelines*. As authorized in State *CEQA Guidelines* Section 15084(d)(2), the County retained a consultant to assist with the preparation of the environmental documents. The County, acting as Lead Agency, has directed, reviewed and edited as necessary all material prepared by the consultant, and such material reflects the County's independent judgment. The key milestones associated with the preparation of the EIR are summarized in Section 2.1, Public Notification and Outreach, below. In addition, an extensive public involvement and agency notification effort was conducted to solicit input on the scope and content of the EIR and to solicit comment on the results of the environmental analysis presented in the Draft EIR.

2.1 Public Notification and Outreach

2.1.1 Notice of Preparation, Initial Study, and Scoping

In accordance with Section 15063(a) of the State CEQA Guidelines, the County prepared an Initial Study. The Initial Study, provided in Appendix A of the Draft EIR, determined that the Project had the potential to result in significant impacts associated with a number of environmental issues that were further discussed in the Draft EIR. Based on the Initial Study, issues for which no significant impacts are anticipated to occur include Aesthetics (scenic resources within a scenic corridor); Agriculture and Forestry Resources and Mineral Resources;

Biological Resources (riparian habitat or other sensitive natural community, federally protected wetlands, conflicts with local policies or ordinance protecting biological resources, and conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan); Cultural Resources; Geology and Soils (rupture of a known earthquake fault within an Alquist-Priolo Earthquake Fault Zoning Map, landslides, or soils capable of supporting a septic tank or alternative wastewater disposal system); Hydrology and Water Quality (placement of housing or other structures within a 100-year flood hazard area, exposure of people or structures to significant risk of flooding, or inundation by tsunami, seiche or mudflow); Land Use (physical division of an established community or conflict with any applicable habitat conservation plan or natural community conservation plan); and Population and Housing (displacement of existing housing or people requiring housing elsewhere). See Appendix A of the Draft EIR for the NOPs, Initial Studies, and Scoping Meeting Materials.

Pursuant to the provision of Section 15082 of the State *CEQA Guidelines*, the County circulated a Notice of Preparation (NOP) to state, regional, and local agencies, and members of the public for a 30-day scoping period commencing November 3, 2014 and ending December 2, 2014 and for a second 30-day period commencing June 29, 2015 and ending July 29, 2015. The purposes of the NOPs were to formally convey that the County was preparing a Draft EIR for the Project, and to solicit input regarding the scope and content of the environmental information to be included in the Draft EIR.

Both NOPs included notification that public scoping meetings would be held in an open house format to further inform public agencies and other interested parties of the Project and to solicit input regarding the Draft EIR. The meetings were held November 12, 2014 between 5:30 p.m. and 7:30 p.m. and on July 15, 2015, from 5:30 p.m. to 7:30 p.m. at the Parlow Library on the Harbor-UCLA Campus. The meetings provided interested individuals, groups, and public agencies the opportunity to view materials, ask questions, and provide comments to the Lead Agency regarding the scope and focus of the Draft EIR as described in the respective NOPs and Initial Studies.

Seven written comment letters responding to the NOP were submitted to the County by public agencies, interested parties, and individuals during the scoping period. Comment letters were received from the following: State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit; State of California, Department of Transportation (Caltrans); State of California, Native American Heritage Commission; Metropolitan Transportation Authority (Metro); the Southern California Association of Governments (SCAG); South Coast Air Quality Management District (SCAQMD); Los Angeles Unified School District (LAUSD); the County of Los Angeles Fire Department; the County Sanitation Districts; the City of Carson; and two individuals. No written comments were received on the scope and content of the Draft EIR at the public scoping meeting.

2.1.2 Public Review of Draft EIR and Public Outreach

In accordance with State CEQA Guidelines Section 15085, upon completion of the Draft EIR and publication on August 16, 2016, a Notice of Availability (NOA) as well as CD copies of the Draft EIR were submitted to the State Clearinghouse, Governor's Office of Planning and Research, for distribution to State Agencies. The Draft EIR was circulated for a 45-day public review period between August 17, 2016 and October 3, 2016, in compliance with Section 15105(a) of the State CEQA Guidelines. As required under Section 15086 of the State CEQA Guidelines, a NOA requesting comments on the Draft EIR and CDs of the Draft EIR were distributed to approximately 37 public agencies, utilities, and other organizations. In addition, copies of the NOA were mailed to organizations or individuals who had previously requested notice or expressed an interested in the Project, commented on the Project during the public review period, or attended the public scoping meeting conducted for preparation of the Draft EIR. Furthermore, copies of the NOA were mailed to approximately 1,350 property owners and occupants within a 500-foot radius of the site. Newspaper advertisements of the NOA and Draft EIR comment period and information regarding the public meeting were placed in the Daily Breeze and La Opinión and ran on August 17, 2016.

The NOA and Draft EIR were posted on the County's website for viewing and downloading at http://dpw.lacounty.gov/pmd/CampusMasterPlans/. In addition, hard copies of the Draft EIR were available for public viewing at the following locations:

- Carson Library
  151 E. Carson Street, Carson, CA 90745
- Harbor Gateway Library
  24000 S. Western Avenue, Harbor City, CA 90710
- Southeast Branch Library
  23115 Arlington Avenue, Torrance, CA 90501
- Wilmington Library
  1300 N. Avalon Boulevard, Wilmington, CA 90744
- Lomita Library
  24200 Narbonne Avenue, Lomita, CA 90717
- Dr. Martin Luther King, Jr. Library
  17906 S. Avalon Boulevard, Carson, CA 90746
- Katy Geissert Civic Center Library
  3301 Torrance Boulevard, Torrance, CA 90503
- Harbor-UCLA Medical Center Inpatient Tower Information Desk
  1000 Carson Street, Torrance, CA 90509

The public meeting was held to provide project information, present a summary of the Draft EIR's analysis of the proposed Project, the public review process, and how to submit written comments on the Draft EIR. The meeting was held on September 8, 2016 from 5:30 P.M. to 7:30 P.M. at the Harbor-UCLA Medical Center Parlow Library, located at 1000 West Carson Street, Torrance, California 90509. There were approximately five attendees from the public and no public agency representatives.

During the comment period from August 17, 2016 to October 3, 2016, written comments on the Draft EIR were received by the County of Los Angeles Department of Public Works. A total of nine (9) comment letters were received, including eight (8) letters from public agencies, no letters from organizations, and one (1) letter from an individual. The majority of the comments received on the Draft EIR were similar in theme and issue to topics raised during the scoping review and early public outreach prior to preparation of the Draft EIR. The comments and responses are found in Chapter 2.0, Comments and Responses, of the Final EIR.

The County has reviewed all comments received during the public review and comment period and determined that no substantial new environmental issues have been raised and that all issues raised have been adequately addressed in the Draft EIR and/or in the Final EIR's Responses to Comments, Corrections and Additions to the Draft EIR, and the MMRP.

2.1.3 Final EIR and Board of Supervisors Proceedings

The Final EIR for the Master Plan Project dated November 2016 consists of the following documents:

- Draft EIR and all associated Technical Appendices dated August 2016
- Responses to Comments, Revisions, Clarifications, and Corrections to the Draft EIR, and Mitigation Monitoring and Reporting Program, which includes:
    - All comments received by the County during the 48-day public review and comment period on the Draft EIR;
    - Responses to the written comments on the Draft EIR;
    - Other information provided by the County for decision makers, agencies, and the public.

The Final EIR was posted for viewing on the same website noted above for the posting of the Draft EIR: http://dpw.lacounty.gov/pmd/CampusMasterPlans/. Hard copies were provided for public viewing at the same locations used for distribution of the Draft EIR.

The County of Los Angeles Board of Supervisors will be scheduled to consider recommendations for approval of the proposed Master Plan Project at a noticed public meeting at the Kenneth Hahn Hall of Administration Room 381B, 500 West Temple Street, Los Angeles, California.

2.1.4 Record of Proceedings and Custody of Documents

In accordance with CEQA, the Record of Proceedings for the Master Plan Project consists of the following documents:

- All public notices issued by the County in conjunction with the proposed project, including the NOP and NOA;
- Final EIR for the proposed project, including the Draft EIR and all associated appendices, comments received by the County during the public review and comment period on the Draft EIR, responses to comments on the Draft EIR, and the MMRP;
- Any documents cited in the Draft and Final EIR;
- Any other relevant materials required to be in the Record of Proceedings in accordance with *California Public Resources Code* Section 21167.(e).

The location of the documents and other materials constituting the record of the proceedings upon which the Board's decision is based in this matter is the County of Los Angeles, CEO, located at the Kenneth Hahn Hall of Administration, Room 754, 7th Floor, Capital Programs/Property Development and Financing Section.

2.2 Project Description

Proposed Master Plan Project components include the following: (1) a New Hospital Tower; (2) new and renovated outpatient care facilities (to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower); (3) other services and facilities, including administrative office, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop); (4) long-term buildout of the LA BioMed Campus; (5) new Bioscience Tech Park; and (6) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements.

A New Hospital Tower will be constructed as part of the Master Plan Project and will house the acute care functions that previously existed in the Existing Hospital Tower. As shown in Table 2-1 in Chapter 2.0, Project Description, of the Draft EIR, the New Hospital Tower/inpatient facilities would contain a total floor area of approximately 1,202,655 square feet and 446 staffed patient beds, interventional services, and an inpatient imaging department at Project buildout. Similar to the Existing Hospital Tower, the total number of budgeted/staffed inpatient beds in the New Hospital Tower would be 379 beds, or approximately 85% of the 446 licensed beds. The New Hospital Tower will be constructed to meet increasing state law seismic requirements for acute care facilities as mandated by SB 1953.

The Existing Hospital Tower will be decommissioned before January 1, 2030 due to the SB 1953 mandates that acute care services can no longer be provided in buildings built before 1973. The Existing Hospital Tower Primary Care and Diagnostic Center would be retained and used for

outpatient and hospital support, outpatient imaging, administrative offices, and other related uses. An additional 156,000 square feet of medical office and other outpatient services would also be accommodated in the renovated Existing Hospital tower. Renovation of the 1963 portions of the Existing Hospital tower by repurposing the building for non-acute care and other activities, including administrative office, outpatient services, storage and other Medical Center Campus support services would comply with this requirement since the Existing Hospital Tower would no longer require licensing as an acute care facility.

The Harbor-UCLA Medical Center Master Plan Project proposes the development of up to 250,000 square feet of new biomedical research facilities, collectively referred to as the Bioscience Tech Park, on the western end of the Medical Center Campus (refer to Figure 2-6 in Chapter 2.0, Project Description, of the Draft EIR, for the location of the Bioscience Tech Park within the larger Harbor-UCLA Medical Center Campus). Bioscience Tech Park facilities would be physically separated from, and not affiliated with, LA BioMed Campus facilities. It is assumed that development of the Bioscience Tech Park would be implemented over an approximately 10-year period between 2020 and Master Plan Project buildout in 2030, and would consist of multiple buildings and associated surface and structured parking. It is further assumed, for the purposes of the analysis presented in this Draft EIR, that approximately 50 percent of the Bioscience Tech Park, or approximately 125,000 square feet, would be constructed by the year 2023, with the remainder constructed by 2030.

LA BioMed's programs and approximately 700 full-time and part-time employees have historically been housed in scattered buildings throughout the central portion of the Harbor-UCLA Medical Center Campus. LA BioMed is currently in the process of consolidating its operations within an 11.4-acre leasehold campus (LA BioMed Campus) encompassing the south-central portion of the larger Harbor-UCLA Medical Center Campus, fronting on 220th Street. The new LA BioMed Campus is currently developed with 20 existing buildings ranging in age, including four buildings already constructed by LA BioMed. LA BioMed is undertaking additional near-term improvements on its campus, including the construction of two new buildings, renovation of an existing building, and demolition of three existing buildings, for an overall net increase of approximately 70,700 square feet of developed floor area within the LA BioMed campus. The majority of LA BioMed employees are already housed on its campus and no net increase in the number of LA BioMed employees, research personnel, or visitors are proposed as part of the consolidation of its operations. Construction of these near-term improvements is expected to be completed in the first half of 2017, pending final County approvals. These near-term improvements were the subject of separate review by the County completed in 2014 and are not part of the Harbor-UCLA Medical Center Master Plan Project.

However, to accommodate future expansion of LA BioMed programs, the Master Plan Project anticipates construction of up to 225,000 square feet of additional floor area on the LA BioMed Campus as part of Project buildout, which is addressed in this Draft EIR. Moreover, as LA BioMed consolidates operations on its new 11.4-acre campus, it will vacate buildings it currently occupies elsewhere on the Harbor-UCLA Medical Center Campus. These buildings, totaling approximately 95,000 square feet, and their ultimate disposition (i.e., demolition and replacement with new facilities), are also considered part of the Master Plan Project and are addressed in this

Draft EIR. It is assumed for the purposes of the analysis in this Draft EIR that up to 50 percent of LA BioMed's projected expansion (or approximately 112,500 square feet) would be constructed by 2023, with the remainder constructed by Master Plan Project buildout in 2030.

The Project assumes a total of approximately 2,457,355 square feet of developed floor area on the Harbor-UCLA Campus, an increase of approximately 1,178,071 square feet over the existing approximately 1,279,284 square feet. This increase is due largely to the development of a new hospital tower, three new outpatient buildings, and the Bioscience Tech Park. The campus-wide floor:area ratio (FAR) would increase from 0.40:1 to 0.78:1. The number of licensed in-patient hospital beds would decrease slightly from 453 to 446. New buildings would be up to four stories in height compared to the existing buildings, which are predominantly one story; the tallest existing on-site building (the existing eight-story Hospital Tower) would be retained and a second eight-story building (New Hospital Tower) would be constructed. Campus-wide parking would increase from 3,186 spaces (including 281 spaces in an off-site parking lot) to 4,240 spaces (including spaces in the Bioscience Tech Park and in the off-site parking lot), due largely to the replacement of several on-site surface parking lots with three- to five-level parking structures. The number of Campus-wide employees would increase from approximately 5,464 to approximately 7,494. For more details about the other facilities and construction phasing proposed under the Master Plan Project, see Chapter 2.0, Project Description, of the Draft EIR.

2.2.1 Project Objectives

Section 15124(b) of the State CEQA Guidelines requires that an EIR Project Description contain a statement of objectives for the proposed project and recommends that the statement of objectives include the underlying purpose of the project.

The overall goal of the Master Plan Project is to redevelop the County-owned Harbor-UCLA Medical Center Campus to support a modern, integrated healthcare delivery system. It will provide a New Hospital Tower to replace the acute care functions in the Existing Hospital Tower before the state law deadline to meet seismic standards for critical trauma/tertiary acute care services so that the South Bay service region and the County seamlessly retain this key link in the County-wide trauma hospital safety net which features biomedical research and development facilities and integrates inpatient and outpatient services in a renovated and expanded setting.

The goal is supported by the following Master Plan Project objectives:

1. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital Tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.

2. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate

healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.

3. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways;

4. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.

5. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as up to 225,000 square feet of expanded LA BioMed facilities.

6. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.

7. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.

8. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."

3.0 Findings on Environmental Impact Analysis

The following discussion provides the findings for each environmental impact addressed in the Harbor-UCLA Medical Center Campus Master Plan Project EIR. The discussion of findings begins with those impacts found to have no impact or a less than significant impact on the environment, as determined either in the Project's Initial Study (contained in Appendix A of the Draft EIR) or in Chapter 4.0, Environmental Impact Analysis, of the Draft EIR. Second, the findings for those environmental impacts that were determined to be potentially- significant, but that are reduced to less than significant with implementation of applicable mitigation measures, are then presented. Lastly, the findings for those impacts that would remain significant, even after implementation of applicable mitigation measures, are discussed. It should be noted that within each of these findings categories, impacts are presented in the order they are addressed in the Initial Study and/or Draft EIR, as applicable. Therefore, environmental issues from the various sections of the Draft EIR may appear in one or more of these categories, though each specific impact is only addressed once, where appropriate, below.

3.1 Findings on "No Impact" and "Less Than Significant Impacts"

Based on the environmental issue assessments in the Initial Study and Draft EIR, the County has determined that the Master Plan Project will have no impact or a less than significant impact for the environmental issues summarized in this section. The evidence provided for each environmental issue can be found in the Initial Study, provided in Appendix A of the Draft EIR, and Chapter 4.0, Environmental Impact Analysis, of the Draft EIR.

Project design features (PDFs) are design elements that are incorporated into the project specifications and plans to prevent or reduce potential environmental impacts. Because the PDFs are part of the project design, they are not part of the mitigation measures as defined by CEQA. Nonetheless, as these PDFs would reduce Project-related impacts through their implementation as part of the Project, they are described in this section.

3.1.1 Aesthetics

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for aesthetics, including the following: scenic vista; scenic resources within a state-designated scenic highway; existing visual character or quality of the site and its surroundings; and creating a new source of substantial light or glare. No PDFs were required in the Master Plan Project that would apply to aesthetics and visual resources. Section 4.A, Aesthetics, of the Draft EIR found that no mitigation was required for the following reasons:

- The Master Plan Project would generate temporary adverse visual character impacts resulting from construction and landscaping activities, as well as off-site infrastructure improvements. Construction would occur in specified phases that would be temporary in nature and not encompass the site at any one time; construction is not considered to substantially degrade the existing visual character of the site and surrounding area. During operation, the visual character of the Medical Center Campus would be enhanced by high quality architecture and landscaping, including landscaping improvements along the public sidewalks. The Project would also be consistent with aesthetic policies of the Los Angeles County General Plan. Because of improvements in the public realm and consistency with the General Plan, operation is not considered to substantially degrade the existing visual character of the site and surrounding area.

- The Harbor-UCLA Medical Campus is not located within a state scenic highway. The closest state highways to the Medical Campus include the Harbor Freeway, less than 0.10 miles to the east, and the San Diego Freeway, approximately two miles to the north and east. Neither has been designated an official scenic highway by the California Department of Transportation on the California Scenic Highway Mapping System. The Medical Campus is therefore not visible from or located within the corridor of a designated state scenic highway. Although Project implementation would result in the removal over time of numerous trees and other landscaping throughout the Medical Campus, new landscaping, including trees, would be planted as part of the proposed improvements and would ultimately increase the amount of landscaping and number of trees compared to existing conditions.

- The Master Plan Project would not substantially obstruct focal or panoramic views across the Medical Center Campus or substantially alter an existing recognized scenic vista or valued publicly available view as a result of view obstruction. The Project's tallest building would be visible from 220th Street. However, the deep setback of more than 200 feet from the nearest building corner to the street, the northwest orientation of the building, and new perimeter streetscape along 220th Street would reduce the visual effect to a less than significant level.

- New light sources associated primarily with any new entrance/wayfinding signs, light spill from taller buildings, landscape lighting, and security lighting. All light sources would be low-level and directed downward to maintain ambient and point source lighting consistent with the on-site hospital use. As such, the Master Plan Project would not substantially alter the character of off-site areas surrounding the Medical Center Campus or result in substantial light spill and/or glare onto adjacent light-sensitive residential uses. The Harbor-UCLA Master Plan Design Guidelines would require that buildings be compatible with the style, materials, and massing of other Project buildings, the function of which are to serve as a medical campus. It is not anticipated that expanses of reflective glass and metals would be implemented in building design. As such, the Project would not cause adverse glare impacts.

3.1.2 Agricultural and Forestry Resources

Finding. The Master Plan Project would have no impact based on CEQA's thresholds of significance for agricultural and forestry resources, including the following: converting Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; and conflict with existing zoning for agricultural use or a Williamson contract. Attachment B, Explanation of Checklist Determinations, of the Initial Study, provided in Appendix A of the Draft EIR, found that no mitigation was required for the following reasons:

- The Medical Campus and surrounding area do not contain agricultural uses or related operations; refer to Figure 9.5, Agricultural Resource Areas Policy Map, of the County's Draft General Plan 2035. The Medical Campus is not located on designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program.

- The Medical Campus is located in the C-3 Unlimited Commercial Zone and is designated for Public and Semi Public use in the Los Angeles County General Plan. Agricultural uses are not permitted within the C-3 zone and the Medical Campus is not within a designated Agricultural Opportunity Area or under a Williamson Act contract. Further, no agricultural zoning is present in the surrounding area and no nearby lands are enrolled under the Williamson Act.

3.1.3 Air Quality

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for air quality, including the following: conflict with or obstruct implementation of the South Coast Air Quality Management District's (SCAQMD) 2012 Air Quality Management Plan (AQMP); violate any air quality standard or contribute substantially to an existing or projected air quality violation; result in in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard; expose sensitive receptors to substantial pollutant concentrations; and create objectionable odors affecting a substantial number of people. Section 4.B, Air Quality, of the Draft EIR found that no mitigation was required for the following reasons:

- Construction and operation of the Project would not conflict with the growth projections in the SCAQMD AQMP and would comply with applicable control measures.

- Construction of the Project would not exceed the applicable SCAQMD daily numeric indicators for VOC, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators.

- Construction of the Project would not exceed the SCAQMD daily regional numeric indicators. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational emissions at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators.

- Construction of the Project would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Project at full build-out would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of the Project would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks that exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of the Project would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS.

- Construction and operation of the Project would not create or introduce objectionable odors affecting a substantial number of people.

Two PDFs that would reduce the project's potential air quality impacts are listed below:

PDF AQ-1: Green Building Measures: The Master Plan Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following:

- The Project would implement a construction waste management plan to recycle and/or salvage nonhazardous construction debris that meets or exceeds the County's adopted Construction and Demolition Debris Recycling and Reuse ordinance.

- The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code.

- The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means.

- The Project would include lighting controls with occupancy sensors to take advantage of available natural light.

- The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent.

- Project buildings shall be constructed with solar-ready rooftops that would allow for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.

- The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care.

- To encourage carpooling and the use of electric vehicles by project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.

- The Project shall appropriate incorporate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).

PDF AQ-2: Construction Measures: The Project shall implement the following measures during construction activities:

- The Project shall require construction contractor(s) to utilize off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 4 off-road emissions standard for equipment rated at 50 hp or greater during Project construction. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment.

- To the greatest extent possible, electric power will be made available for use for electric tools, equipment, lighting, etc.

- The Project shall encourage construction contractors to apply for SCAQMD "SOON" funds, which provides funds to accelerate the use of less polluting off-road diesel vehicles, such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/Implementation/SOONProgram.htm.

- In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.

- The Applicant shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits.

- The Project shall comply with the applicable provisions of SCAQMD Rule 403 to minimize generation of fugitive dust. Active demolition or grading construction areas and unpaved roads shall be controlled by temporary covers or wetted sufficiently to reduce dust.

- Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation.

- On-site vehicles shall be limited to 15 miles per hour on unpaved roadways.

- Haul trucks carrying dirt, soil, sand, or other loose material shall be covered and maintain a freeboard height of 12 inches.

- Prior to leaving areas of active construction, haul trucks would be inspected and put through procedures as necessary to remove loose debris from tire wells and on the truck exterior to prevent track out.

- Construction areas shall install temporary fencing, if necessary, to prevent debris and material movement on the site and into patient care buildings or to off-site areas.

- The Applicant shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust.

- All coatings used on-site shall comply with SCAQMD Rule 1113, as applicable. The project will strive to utilize material which is pre-primed or pre-painted. Additionally, the project shall limit daily application of architectural coatings applied on-site to 170 gallons per day with an average of 50 grams VOC per liter of coating, less water and less exempt compounds, or equivalent usage resulting in similar or less VOC emissions. For example, stains, specialty primers, and industrial maintenance coatings allowed by Rule

1113 that contain VOCs at a level of 100 grams per liter of coating, less water and less exempt compounds would be limited to 85 gallons per day on site.

3.1.4 Biological Resources

Finding. The Master Plan Project would have no impact based on CEQA's thresholds of significance for biological resources, including the following: having a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, polities, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means; conflict with local policies or ordinances protecting biological resources; and conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Attachment B, Explanation of Checklist Determinations, of the Initial Study, provided in Appendix A of the Draft EIR, found that no mitigation was required for the following reasons:

- The Medical Campus is located in an urbanized area, and as such does not contain any riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetland or other sensitive natural communities as indicated in the County or in regulations by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. The Project is not located within a Significant Ecological Area ("SEA") or coastal resource area.

- The Medical Campus is located in a highly urbanized area surrounded by residential uses and commercial development. Neither the Medical Campus nor its surroundings contains wetlands as defined by Section 404 of the federal Clean Water Act.

- The Medical Campus and the surrounding area are completely developed and urbanized. No locally protected biological resources, such as Wildflower Reserve Areas, SEAs, sensitive environmental resource areas ("SERAs"), or oak trees protected under the Oak Tree Permits (Chapter 22.56 – Part 16) ("Oak Tree Ordinance") of the County Municipal Code ("Municipal Code"), exist on-site. The Project would incorporate a landscape plan which would include the planting of various species of trees (evergreen/semi-evergreens, palm trees, and flowering deciduous trees), and other ornamental plantings, including shrubs, turf, and groundcover, in courtyards, gardens, and other open space features.

- The Medical Campus is not located within a SEA. Additionally, there is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan in place for the Medical Campus.

3.1.5 Cultural Resources

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for cultural resources, including the following: causing a substantial

adverse change in significance of a historical resource; and disturbance of human remains. No PDFs were required in the Master Plan Project that would apply to cultural resources. Attachment B, Explanation of Checklist Determinations, of the Initial Study, provided in Appendix A of the Draft EIR, found that no mitigation was required for the following reasons:

- The Medical Campus has not been evaluated or identified as significant in any previous historic resource surveys, nor is it currently designated a landmark at the national, state, or local levels. The property as a whole was evaluated as a potential historic district in the Historic Resource Report provided as Attachment A to the Initial Study (which itself is included as Appendix A to the Draft EIR), and resources were evaluated for individual eligibility as well. The Historic Resource Report concluded that the property is significant in the context of World War II military history in Los Angeles, since it was one of a small number of facilities constructed in the region to serve medical needs during World War II. However, the property is lacking in integrity – the ability to convey its significance – because there are not enough buildings remaining from the period of significance; the remaining buildings have been altered to the point that they no longer contribute to an historic district; and enough new buildings have been added that the property no longer represents an intact historic environment. With respect to the individual eligibility of buildings, while some buildings retain integrity from the period of significance, they do not effectively convey the history or significance of the Station Hospital on their own. As such, the property is not eligible for listing in the National Register or the California Register as a historic district, and none of the buildings are individually eligible for listing in the National Register or the California Register.

- The Medical Campus has been previously graded and developed, and no known traditional burial sites or cemeteries have been identified on the property. Nonetheless, development of the Project would require grading, excavation, and trenching that may extend into native soils. While the uncovering of human remains is not anticipated, compliance with state law (i.e., Public Resources Code Section 5097.98, State Health and Safety Code Section 7050.5, and California Code of Regulations Section 15064.5(e)) would reduce potential impacts during Project construction to a less than significant level, and no mitigation measures are necessary. Operations during and following Project buildout would not result in impacts on human remains.

3.1.6 Energy

Finding. The Master Plan Project would have a less than significant impact based on CEQA's threshold of significance for energy: result in wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preempt future energy development or future energy conservation. Section 4.C, Energy, of the Draft EIR found that no mitigation was required for the following reasons:

- Impacts regarding the wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preemption of future energy conservation would be less than significant. The Project would incorporate

energy efficiency measures and comply with applicable measure to reduce energy consumption and would allow for future energy conservation.

PDF AQ-1, Green Building Measures, as listed above in Subsection 3.1.3, Air Quality, would serve to enhance energy efficiency and meet County sustainability requirements.

3.1.7 Geology and Soils

Finding. The Master Plan Project would have no impact or a less than significant impact based on CEQA's thresholds of significance for geology and soils, including the following: exposing people or structure to potential substantial adverse effects involving the rupture of a known earthquake fault or landslides; substantial soil erosion or loss of topsoil; be located on soil that could result in subsidence; and have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available. Attachment B, Explanation of Checklist Determinations, and Section 4.D, Geology and Soils, of the Draft EIR found that no mitigation was required for the listed thresholds of significance for the following reasons:

- According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a seismic or geotechnical hazard zone. Further, the Medical Campus is not located within a designated Alquist-Priolo Earthquake Fault Zone. As no known earthquake faults or Alquist-Priolo Earthquake Fault Zones exist on or near the Medical Campus, there would be no potential for surface fault rupture to affect future uses. The terrain of the Medical Campus is relatively flat. The proposed grading and development would not have an adverse effect on geologic stability on-site or off-site in adjacent areas. According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a seismically induced landslide zone and no sloped areas exist in the immediate area.

- The Project would be built out in compliance with the County's Low Impact Development (LID) ordinance, which requires new development to include features and practices that provide physical, biological, and chemical controls that remove pollutants from stormwater runoff generated on a project site. Typical LID features include bioretention or infiltration, which are intended to reduce and slow peak stormwater flows discharged off-site compared to existing conditions. Since these and other LID compliance practices and feature area intended to prevent, among other potential impacts, erosion and sedimentation conveyed by stormwater and discharged to off-site storm drain infrastructure and receiving water bodies, compliance with County LID requirements would prevent erosion of soil on the Project Site.

- Historic subsidence is not known to have occurred on the Harbor-UCLA Campus and it does not lie within a mapped subsidence area according to the County of Los Angeles Safety Element. Therefore, the potential for subsidence on the Project site is relatively low.

- The Medical Campus is located in an urbanized area with wastewater infrastructure already in place. New development proposed as part of Project implementation would connect to existing off-site infrastructure and would not use septic tanks or alternative wastewater disposal systems.

3.1.8 Greenhouse Gas Emissions

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for greenhouse gas emissions, including the following: generating greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and conflicting with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Section 4.E, Greenhouse Gas Emissions, of the Draft EIR found that no mitigation was required for the following reasons:

- Impacts from short- and long-term increases in GHG emissions would be less than significant. The Master Plan Project would generate GHG emissions due to construction and operational activities; however, the net increase in annual GHG emissions, directly and indirectly, would be consistent with the Los Angeles County *Community Climate Action Plan*.

- Construction and operation of the Master Plan Project would not conflict with applicable GHG emissions reductions plans, policies, or regulations. As a result, construction and operation of the Project would not have a significance impact with respect to consistency with GHG reduction plans.

PDF AQ-1, Green Building Measures, and PDF AQ-2, Construction Measures, as listed above in Subsection 3.1.3, Air Quality, would serve to reduce Project-related greenhouse gas emissions.

3.1.9 Hazards and Hazardous Materials

Finding. The Master Plan Project would have no impact or a less than significant impact based on CEQA's thresholds of significance for hazards and hazardous materials, including the following: creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; result in a safety hazard for people residing or working in the project area if the site is within an airport land use plan, within two miles of a public airport, or within the vicinity of a private air strip; impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and expose people or structures to a significant risk of loss, injury, or death involving wildfires. Attachment B, Explanation of Checklist Determinations, of the Initial Study, provided in Appendix A of the Draft EIR, and Section 4.F, Hazards and Hazardous Materials, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- Construction also would involve the short-term use and disposal of hazardous substances such as paint, adhesives, surface coatings, finishing materials, and cleaning agents during building finishing activities. The use and disposal of such materials would take place in

accordance with applicable federal, state, and local regulations governing health and safety and such activities are not anticipated to create a significant hazard to the public or environment. Project operations would involve the use and storage of limited quantities of hazardous materials such as cleaning solvents, painting supplies, and pesticides used for landscaping. Additionally, waste generated by general hospital operations typically includes regulated medical waste, "sharps" containers, pharmaceutical waste, chemo waste, and pathological waste, and the nature of future hospital operations on the Campus will not significantly differ from existing daily operations. Furthermore, future expanded LA BioMed operations and operation of the proposed Biotech Science Campus on the Harbor-UCLA Campus would involve the use of limited quantities of potentially hazardous materials typical of those used in biomedical research facilities. All potentially hazardous materials and waste handled on the Harbor-UCLA Campus would be used, stored, and disposed of in accordance with manufacturer instructions and applicable federal, state, and local health and safety regulations.

- Harbor-UCLA is not located within an airport land use plan or the vicinity of a private airstrip; the nearest public airports are between four and 11 miles away. The Project proposes relocation of the existing helistop to a temporary and, ultimately, permanent location on the Harbor-UCLA Campus during Master Plan Project buildout. Helistop operations during construction and following buildout would not differ substantively from existing helistop operations in terms of the number of flights, composition of the helicopter fleet, or proposed flight paths.

- Impacts regarding emergency response plans would be less than significant. The Project would not use hazardous materials or have on-site hazardous conditions that would conflict with or obstruct implementation of any emergency response plans.

3.1.10 Hydrology and Water Quality

Finding. The Master Plan Project would have no impact or a less than significant impact based on CEQA's thresholds of significance for hydrology and water quality, including the following: violation of water quality standards or waste discharge requirements; substantially deplete groundwater supplies or interfere substantially with groundwater recharge; substantially alter existing drainage pattern of the site or area which would result in erosion, siltation, or flooding; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; substantially degrade water quality; place housing within a 100-year flood hazard area; place structures within a 100-year flood hazard area which would impede or redirect flood flows; expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam; and inundation by seiche, tsunami or mudflow. Attachment B, Explanation of Checklist Determinations, of the Initial Study, provided in Appendix A of the Draft EIR, and Section 4.G, Hydrology and Water Quality, of the Draft EIR found that no mitigation was required for the following reasons:

- With compliance with regulatory requirements governing stormwater management and water quality during construction and following buildout of Master Plan Project components, impacts on water quality or related to waste discharge (i.e., construction dewatering) would be less than significant.

- Project-related excavation is not expected to extend to the depth of groundwater beneath the Harbor-UCLA Campus, with only temporary dewatering anticipated in the event seepage is encountered at shallower depths than anticipated. Project implementation would increase pervious area on the Campus over existing conditions through the introduction of more landscaped area and does not propose withdrawal of groundwater to meet water demand. The Project's indirect employment-related population growth would not substantially increase demand on groundwater supplies serving the Project Site.

- The Project would redevelop the already fully developed Harbor-UCLA Campus, and, with compliance with NPDES regulations and County LID requirements governing construction and post-project stormwater management and water quality, would not substantially alter existing drainage patterns in a manner that would result in substantial erosion or siltation.

- The Project would redevelop the already fully developed Harbor-UCLA Campus and would not substantially alter existing topography or affect the course of any streams or rivers. Neither construction nor operations would increase surface runoff in a manner that would result in flooding.

- With adherence to County connection permit requirements and compliance with County LID requirements, the volumes of runoff discharged to the County's storm drain system following Project buildout would be similar or reduced compared to existing conditions and would not provide additional sources of polluted runoff.

- With compliance with County NPDES and LID requirements, the Project is not anticipated to substantially degrade water quality.

- According to Figure 12.2, Flood Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a 100-year flood hazard area. Therefore, the Project would not place housing within a 100-year flood plain.

- The Medical Campus is not located within a FEMA-designated 100-year floodplain. Therefore, the Project would not place structures within a 100-year floodplain that would impede or redirect flood flows. Thus, no impact would occur with regard to floodplains.

- The Medical Campus is not located within a 100-year floodplain. No dams or levees are present on or near the Medical Campus. According to Figure 12.4, Dam and Reservoir Inundation Areas, of the County's Draft General Plan 2035, the Medical Campus is not located within a flood hazard area due to failure of a dam or reservoir. Therefore, flooding resulting from a dam or levee failure would not occur.

- The Medical Center is not adjacent to any large body of water, and therefore there is no potential for seiche hazards. The Medical Campus is located approximately 5.2 miles east of the Pacific Ocean. According to Figure 12.3, Tsunami Hazard Areas, of the County's Draft General Plan 2035, the Medical Campus is not located within a tsunami hazard area. The Medical Campus is located within a relatively flat and highly urbanized area surrounded by residential uses and commercial development and as such is not in an area susceptible to mudflows.

3.1.11 Land Use and Planning

Finding. The Master Plan Project would have no impact or a less than significant impact based on CEQA's thresholds of significance for land use and planning, including the following: physically divide an established community; conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect; and conflict with any applicable habitat conservation plan or natural community conservation plan. Attachment B, Explanation of Checklist Determinations, of the Initial Study, provided in Appendix A of the Draft EIR, and Section 4.H, Land Use and Planning, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- The Project would be consistent with applicable RCP policies, including focusing growth in existing urban centers, creating walkable mixed-use development, targeting commercial and employment growth within walking distance of existing transit stations, injecting new life into under-used areas, preserving established neighborhoods, and protecting open space, environmentally-sensitive areas, and farmland. The Project would also include sustainability features in accordance with the County's Green Building Program to reduce energy consumption, GHG emissions and pollution.

- The Project would be compatible with existing adjacent off-site land uses because the nature (type, scale, height, location) of the existing on-site land uses would not substantially change under the Project, nor would the character of the area as perceived by the existing adjacent off-site land uses.

- The Medical Campus is not located within a Significant Ecological Area (SEA). Additionally, there is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan in place for the Medical Campus. Therefore, Project implementation would not conflict with any Habitat Conservation Plan, and no impacts would occur in this regard.

3.1.12 Mineral Resources

Finding. The Master Plan Project would have no impact based on CEQA's thresholds of significance for mineral resources, including the following: result in the loss or availability of a known mineral resources that would be of value to the region and the residents of the state; and result in the loss of availability of a locally-important mineral resource recovery site delineated on

a local general plan, specific plan, or other land use plan. Attachment B, Explanation of Checklist Determinations, of the Initial Study, provided in Appendix A of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- The Medical Campus is not located within a known mineral resource area and no mineral resources are known to exist at the Medical Campus or in the surrounding area, as shown in Figure 9.6, Natural Resource Areas, of the County's Draft General Plan 2035. Therefore, no impact to mineral resources would occur.

- The Medical Campus is not located within a Mineral Resource Zone and there are no known designated locally-important mineral resources located on the Medical Campus or in the vicinity, as illustrated in Figure 9.6, Natural Resource Areas, of the County's Draft General Plan 2035. Therefore, no impact to mineral resources would occur.

3.1.13 Noise

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for noise, including the following: construction traffic noise exceed 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transient lodging; increase ambient noise levels by 5 dBA CNEL or more at a land use currently experiencing noise levels characterized as "normally acceptable" or "conditionally acceptable"; or increase ambient noise levels by 3 dBA CNEL or more at a land use currently experiencing "normally unacceptable" or "clearly unacceptable" noise levels; helicopter operations generate noise levels in excess of 65 dBA CNEL at a sensitive land use and increase ambient noise levels by 1.5 dBA CNEL or more? Would maximum noise levels from a single helicopter operation cause an incremental noise increase of 5 dBA L_{max} or more, compared to existing helicopter operations, at a sensitive land use; operational (i.e., non-roadway) noise sources such as building mechanical/electrical equipment or outdoor amenity spaces exceed ambient noise levels at noise sensitive uses, thus causing a violation of the County Noise Ordinance; maximum noise (L_{max}) generated from the operation of the parking structure (e.g., car alarms) exceed the average (L_{eq}) ambient noise level by 10 dBA ; construction activities cause ground-borne vibration levels to exceed the applicable building damage threshold of 0.5 inch-per-second PPV at the nearest residential buildings ; construction and operational activities cause ground-borne vibration levels to exceed 0.04 inch per second PPV at nearby residential uses. Section 4.I, Noise, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- The Project's truck trips would result in a total noise level (exiting plus project trucks) of approximately 61.9 dBA, L_{eq} at 25 feet distance along Carson Street, 62.8 dBA along 220th Street, 61.5 dBA along Vermont Street, and 61.9 dBA along Figueroa Street. The noise levels by truck trips would be below the significance thresholds of 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transit lodging.

- Project implementation would increase noise levels at adjacent noise-sensitive receptors in the Project area as the result of increased Project traffic, but traffic would not exceed established noise thresholds at those receptors and impacts would be less than significant. Helicopter activity associated with use of the proposed Interim 1 and 2 Helistops would exceed established thresholds at sensitive land uses, which is a significant, although temporary and periodic, impact.

- Project implementation would not increase noise levels at adjacent noise-sensitive receptors in the Project vicinity.

- Project implementation, including noise from the parking structure, would increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. However, Project-related noise generation would not exceed established thresholds.

- Construction activities would result in sporadic, temporary vibration effects adjacent to the Project area. However, ground-borne vibration levels would not exceed established thresholds.

- The nearest residential uses, R3 would be exposed to maximum vibration velocities during construction of approximately 0.027 inches per second PPV. As this value is lower than the 0.04 inches per second PPV significance threshold for human perception, vibration impacts associated with construction would be less than significant at the nearest residential building. Operation of the Project would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration generated by each of the above-mentioned activities would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the closest off-site buildings would be up to 0.01 inches per second PPV and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility.

Seven PDFs would be implemented to reduce Project-generated noise and are listed below:

PDF-NOISE-1: The Project contractor(s) will equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards.

PDF-NOISE-2: On-site construction equipment staging area shall be located as far as feasible from sensitive uses/hospital patient buildings.

PDF-NOISE-3: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited near sensitive uses/patient buildings.

PDF-NOISE-4: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent feasible.

PDF NOISE-5: Effective noise barriers will be designed and erected as needed to shield on-site uses from excessive construction-related noise.

PDF NOISE-6: To reduce the potential for construction-related vibration effects to on-site operating rooms or other vibration sensitive medical uses (such as laboratories), the Project contractor(s) shall perform appropriate study of the potential for peak particle velocities to reach or exceed 0.008 inches per second PPV whenever construction involving the use of heavy duty equipment is planned within 125 feet of such an on- site medical use. If, based on site-specific conditions, this study indicates potential for detrimental effects, strategies to minimize the effects shall be incorporated into the construction plan.

PDF-NOISE-7: As required by LACC, an acoustical analysis of the mechanical plans of the proposed buildings will be prepared by a qualified acoustical engineer, prior to issuance of building permits, to ensure that all mechanical equipment would be designed to meet noise limits in Table 4.I-6.

3.1.14 Population, Housing, and Employment

Finding. The Master Plan Project would have no impact or a less than significant impact based on CEQA's thresholds of significance for population, housing, and employment, including the following: inducing substantial population growth in an area; displacing substantial numbers of existing housing, necessitating the necessitating the construction of replacement housing elsewhere; and displacing substantial numbers of people, necessitating the construction of replacement housing elsewhere. Attachment B, Explanation of Checklist Determinations, of the Initial Study, provided in Appendix A of the Draft EIR, and Section 4.J, Population, Housing, and Employment, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- Given the temporary nature of the construction activity, the mobility of construction workers, and availability of a labor pool to draw upon in the area, construction workers would not have a notable impact on the demand for housing, nor affect general housing occupancy and population patterns. Thus, construction activities would not cause growth (i.e. new housing or employment generators) or accelerate development that exceeds projected/planned levels for the year of the Project occupancy/buildout, as compared to growth otherwise occurring, and would not result in a significant adverse physical change in the environment. Operation of the Master Plan Project would create new employment opportunities. The Project's contributions to employment would be consistent with SCAG's short-term and long-term growth projections for the South Bay Cities Subregion, unincorporated Los Angeles County communities and all of Los Angeles County, and would help the County meet or exceed its economic development objectives per the General Plan Economic Development Element, and housing allocation established in the SCAG RHNA.

- There is no existing housing on the Medical Campus. Thus, the Project would not displace any housing or associated residential population.

- There are no residential uses on the Medical Campus. According to the Master Plan, the number of jobs on the Medical Campus is estimated to increase by almost 2,500 or 45 percent at Project buildout. Thus, the Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

3.1.15 Parks and Recreation

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for parks and recreation, including the following: require new or physically altered parks or recreational facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives; increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; and include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Section 4.K.3, Parks and Recreation, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- Project construction and operation would not create a demand for parks and recreational facilities that would require new or physically altered parks and recreational facilities or result in substantial physical deterioration of such facilities. In addition, the Project would not include new recreational facilities or require the construction or expansion of existing facilities.

3.1.16 Schools

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for schools, including the following: require the addition of new or physically altered school facilities to maintain acceptable service ratios or other performance standards, the construction of which would result in a substantial adverse physical impact. Section 4.K.4, Schools, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- Project construction and operation would not be expected to create a demand for schools that would require new or physically altered public schools, the construction of which would result in a substantial adverse physical impact.

3.1.17 Libraries

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for libraries: require the addition of new or physically altered library facilities to maintain acceptable service ratios, the construction of which would result in a

substantial adverse physical impact on the environment. Section 4.K.5, Libraries, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- Project construction and operation would not be expected to create a demand for libraries that would require new or physically altered public libraries, the construction of which would result in a substantial adverse physical impact.

PDF-LIBRARIES-1, listed below, would reduce the project's potential library impacts:

PDF-LIBRARIES-1: The AF Parlow Library of Health Sciences, an existing LACDHS-operated library on the Project Site available for use by doctors, medical students, fellows, faculty, nurses, and allied health professionals affiliated with the medical center, will be retained and relocated to other building space on the HUCLA Campus.

3.1.18 Transportation and Traffic

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for transportation and circulation, including the following: conflict with an applicable congestion management program or other standards established by the county congestion management agency for designated roads or highways; substantially increase hazards due to a design feature; result in inadequate emergency access; and conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Section 4.L, Transportation and Traffic, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- The Project would not meet the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater.

- Transit ridership generated by the Project would not exceed the residual capacity of the public transit system under Future Interim (2023) and Buildout (2030) conditions. Therefore, impacts with respect to transit would be less than significant. With regard to other alternative transportation modes, the Project would be supportive of and would not conflict with applicable alternative transportation policies, plans, and programs.

- Site access would be provided via seven driveways designed to County standards that would accommodate left and right ingress/egress turning movements. The existing network of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated.

Two PDFs that would reduce the project's potential transportation and circulation impacts are listed below:

PDF-TRAF-1: Construction Traffic Management Plan: A detailed Construction Traffic Management Plan including street closure information, detour plans, haul routes, and staging plans would be prepared by the construction contractor for each development phase or individual improvement, as appropriate, and submitted to the County for review and approval. This requirement would be included in the construction bid documents for each future development phase or individual improvement as part of the Master Plan Project. The Construction Traffic Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements as appropriate:

- Prohibition of construction worker parking on nearby residential streets.
- Prohibition of construction-related vehicles parking or staging on surrounding public streets.
- Temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.
- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.
- Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible.

PDF-TRAF-2: Pedestrian Safety: The construction contractor(s), as required by construction bid documents for each development phase or individual improvement, would plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. The contractor(s) would maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. Temporary pedestrian facilities would be adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. Covered walkways would be provided where pedestrians are exposed to potential injury from falling objects. The contractor would keep sidewalks open during construction except when it is absolutely required to close or block the sidewalks for construction staging. Sidewalks shall be reopened as soon as reasonably feasible taking construction and construction staging into account.

3.1.19 Water Supply

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for water supply, including the following: create water or wastewater

system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; and have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other land uses. Section 4.M.1, Water Supply, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- The proposed Project would require construction of some new on-site domestic water and fire water conveyance facilities (pipelines, sub-meters, and other connections) and the connection of this system to the existing off-site facilities discussed above. This would require on-site trenching for new or relocated water lines and welding activities to connect the new hardware. No active water lines serving adjacent properties bisect the Project Site, so there would be no potential to interrupt water service to adjacent properties (such as due to inadvertent damage of existing lines) during construction. No additional environmental effects would occur beyond short-term construction-related effects as once constructed these facilities would operate passively with little, if any, operational activity needed.

- The Harbor-UCLA Master Plan Project's increase in demand is not considered part of the demand forecast for the Dominguez system; therefore, it was treated in the WSA as additive since the total projected increase in demand from 2025 to 2030 for the Dominguez system is 346 AFY while the Harbor-UCLA Medical Campus project increase is 197 AFY, or approximately 57 percent of the Dominguez system increase. Nonetheless, based on the information and analysis presented in the Project WSA, the Harbor-UCLA Master Plan Project demand in 2030 represents only 0.8 percent of total Dominguez system demand, and therefore implementation of the Master Plan Project would not affect the ability of Cal Water to provide an adequate supply to meet water demands in the Project's service area.

3.1.20 Wastewater

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for wastewater, including the following: exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board; require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; and result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Section 4.M.2, Wastewater, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reason:

- Although construction and operation of the Project would result in an increase in wastewater generation that would increase the overall demands on wastewater conveyance and treatment facilities in the area, this increase would not exceed the available capacity of affected wastewater facilities and thus would not, directly or

indirectly, result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

3.1.21 Solid Waste

Finding. The Master Plan Project would have a less than significant impact based on CEQA's thresholds of significance for solid waste, including the following: generate solid waste in excess of the permitted capacity of the disposal facilities serving the Project; and conflict with federal, state, and local statutes, ordinances, policies, and regulations related to solid waste. Section 4.M.3, Solid Waste, of the Draft EIR, found that no mitigation for the listed thresholds was required for the following reasons:

- The Project would generate construction debris due to demolition and removal of multiple buildings throughout the Campus, grading and excavation, and construction of new buildings. Disposal of waste materials would achieve a minimum diversion or recycling rate of 50 percent, as required by County regulations, and adequate capacity exists at the County's C&D disposal sites.

- The Project would generate construction debris due to demolition and removal of multiple buildings throughout the Campus, grading and excavation, and construction of new buildings. Disposal of waste materials would achieve a minimum diversion or recycling rate of 50 percent, as required by County regulations, and adequate capacity exists at the County's C&D disposal sites.

3.2 Findings on Significant Environmental Impacts that can be Reduced to a Less Than Significant Level

The County found that the following environmental impacts can and will be mitigated to be a less than significant level upon implementation of the mitigation measures in the Final EIR's MMRP. These findings are based on analysis found in Attachment B, Explanation of Checklist Determinations, of the Initial Study, provided in Appendix A of the Draft EIR and Chapter 4.0, Environmental Impact Analysis, of the Draft EIR. Explanations for each finding are provided below.

3.2.1 Biological Resources

Impact: Candidate, Sensitive, or Special Status Species

As discussed under Checklist Question IV(a and d) in Attachment B, Explanation of Checklist Determinations, of the Initial Study, the Medical Campus contains several landscaped courtyards with mature specimen trees, but landscaping is generally sparse on the Medical Campus. The Medical Campus does not act as a migratory corridor or support resident terrestrial wildlife

movement as it is surrounded by urban development that extends for miles. No aquatic habitat is present on or adjacent to the Medical Campus to support fish species. The highly developed conditions of the Medical Campus and surrounding area preclude its use as a native wildlife nursery site. The Medical Campus does not contain native trees that are regulated by the County, nor are other candidate, sensitive plant, or special status plant species present on-site. Mature trees on the Medical Campus may potentially serve as habitat and nesting site for migratory birds, which are not considered sensitive species but are regulated under the federal Migratory Bird Treaty Act. Therefore, removal of on-site trees may result in a potentially significant impact. MM BIO-1 can reduce the potential impacts on migratory birds resulting from tree removal to a less than significant level.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following mitigation measure is feasible and is adopted to mitigate potentially significant impacts on candidate, sensitive, or special status species to a less than significant level:

MM BIO-1: If the nesting season cannot be avoided and construction or vegetation removal occurs between March 1st to September 15th (January 1st to July 31st for Raptors), the County shall do one of the following to avoid and minimize impacts to nesting birds[1]:

a) Implement a 300-foot minimum avoidance buffers for all passerine birds and 500 foot minimum avoidance buffer for all raptors species. The breeding habitat/nest site shall be fenced and/or flagged in all directions. The nest site area shall not be disturbed until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young will no longer be impacted by the project.[2]

b) Develop a project specific Nesting Bird Management Plan. The site-specific nest protection plan shall be submitted to CDFW for review. The Plan should include detailed methodologies and definitions to enable a CDFW-qualified avian biologist to monitor and implement nest-specific buffers based upon the life history of the individual species; species sensitivity to noise, vibration, and general disturbance; individual bird behavior; current site conditions (screening vegetation, topography, etc.), ambient levels of human activity; the various project-related activities necessary to construct the Project, and other features. This Nesting Bird Management Plan shall be supported by a Nest Log, which tracks each nest and its outcome. The Nest Log will be submitted to CDFW at the end of each week.

1 Qualified avian biologist shall establish the necessary buffers to avoid take of nest as defined in FGC 3503 and 3503.5

2 NOTE: Buffer area may be increased if any endangered, threatened, or CDFW species of special concern are identified during protocol or pre-construction presence/absence surveys.

c) The County may propose an alternative plan for avoidance of nesting birds for submittal to CDFW.

Rationale for Finding

Migratory birds regulated by the federal Migratory Bird Treaty Act may nest in the mature trees on the Medical Campus. By avoiding tree removal during nesting season in accordance with MM BIO-1, migratory birds would be avoided and impacts on candidate, sensitive, or special status species would be mitigated to a less than significant level.

3.2.2 Cultural Resources

Impact: Archaeological Resources

As discussed under Checklist Question V(b) in Attachment B, Explanation of Checklist Determinations, of the Initial Study, the Medical Campus is located within a highly urbanized area and has been subject to physical disruption over the course of several decades since it was first developed in 1943. For this reason, it is likely that any resources that may have been present on the property have been disturbed or removed. Nonetheless, previously undiscovered buried archaeological resources could still exist on the property. Implementation of the Project would require grading, excavation, and trenching into native soils, which could result in direct impacts to undiscovered resources. Therefore, project construction may result in a potentially significant impact on archaeological resources. MM CULT-1, CULT-2, and CULT-3 will reduce the potential impacts on archaeological resources resulting from project construction to a less than significant level.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following mitigation measures are feasible and are adopted to mitigate potentially significant impacts on archaeological resources to a less than significant level:

CULT-1: If any archaeological materials are encountered during the course of the Project development, work in the area shall cease and deposits shall be treated in accordance with Federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2. As part of this effort, the services of an archaeologist meeting the Secretary of the Interior Professional Qualification Standards for Archaeology shall be secured by contacting the California Historical Resources Information System South Central Coastal Information Center (CHRIS-SCCIC) at Cal State University Fullerton, or a member of the Register of Professional Archaeologists (RPA) to assess the resources and evaluate the impact. In addition, if it is determined that an archaeological site is a historic resource, the provisions of Section 21084.1 of the Public Resources Code and *CEQA Guidelines* Section 15064.5 would be implemented.

CULT-2: If any archaeological materials are encountered during the course of the Project development, a report on the archaeological findings shall be prepared by the qualified archaeologist. A copy of the report shall be submitted to the CHRIS-SCCIC.

CULT-3: If any archaeological materials are encountered during the course of the Project development, recovered archaeological materials shall be curated at an appropriate accredited curation facility. If the materials are prehistoric in nature, affiliated Native American groups (identified by the Native American Heritage Commission) may be consulted regarding selection of the curation facility.

Rationale for Finding

Implementation of the Project would require grading, excavation, and trenching into native soils, which could result in direct impacts to undiscovered resources. By providing measures in the case of an accidental discovery of an archaeological resource in accordance with MM CULT-1, CULT-2, and CULT-3, impacts on previously unknown archaeological resources discovered during project construction would be mitigated to a less than significant level.

Impact: Paleontological Resources

As discussed under Checklist Question V(c) in Attachment B, Explanation of Checklist Determinations, of the Initial Study, it is likely that any paleontological resources once present on the property have been disturbed or removed. Nonetheless, previously undiscovered buried resources could still exist on the property. Development of the Project would require grading, excavation, and trenching into native soils that could contain undiscovered paleontological resources. Therefore, project construction may result in a potentially significant impact on paleontological resources. MM CULT-4 will reduce the potential impacts on paleontological resources resulting from project construction to a less than significant level.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following mitigation measure is feasible and is adopted to mitigate potentially significant impacts on paleontological resources to a less than significant level:

MM CULT-4: If any paleontological materials are encountered during the course of Project development, work in the area shall be halted. The services of a qualified paleontologist shall be secured by contacting the Los Angeles County Natural History Museum to assess the resources. In addition, a report on the paleontological findings shall be prepared by the qualified paleontologist and a copy of the paleontological report shall be submitted to the Los Angeles County Natural History Museum.

Rationale for Finding

Implementation of the Project would require grading, excavation, and trenching into native soils, which could result in direct impacts to undiscovered paleontological resources. By providing

measures in the case of an accidental discovery of a paleontological resource in accordance with MM CULT-4, impacts on previously unknown paleontological resources discovered during project construction would be mitigated to a less than significant level.

3.2.3 Geology and Soils

Impact: Fault Rupture, Seismic Shaking, and Ground Failure

As discussed under Threshold GEO-1 in Section 4.D, Geology and Soils, in the Draft EIR, the Project site is not transected by any known active or potentially active faults. The active Newport-Inglewood fault is located approximately 3.4 miles northeast and the active Palos Verdes fault is located approximately 3.7 miles southwest of the estimated center of the Project site. The Project is not located within a State of California Earthquake Fault Zone; therefore, the potential for surface rupture at the site is relatively low and is considered a less than significant impact. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

The Harbor-UCLA Campus is located within a seismically active region, and thus the potential for seismic ground shaking exists at the site. However, the level of ground shaking at a given location depends on many factors, including the size and type of earthquake, the distance from the earthquake, and subsurface geologic conditions. The type of construction also affects how particular structures and improvements perform during ground shaking.

A site-specific analysis was conducted to evaluate the potential levels of ground shaking that could occur. The 2013 CBC recommends that the design of structures be based on spectral response accelerations in the direction of maximum horizontal response (5 percent damped) having a 1 percent probability of collapse in 50 years. These spectral response accelerations represent the Risk-Targeted Maximum Considered Earthquake (MCE_R) ground motion. The horizontal peak ground acceleration (PGA) that corresponds to the MCE_R for the site was calculated at 0.65g using the USGS web-based seismic design tool (USGS, 2014). The mapped and design PGA were estimated to be 0.62g and 0.43g, respectively, using the USGS (2014) calculator and the American Society of Civil Engineers 7-10 Standard. These ground motion estimates do not include near-source factors that may be applicable to the design of the structures on-site. Based on these PGA estimates, ground shaking at the Harbor-UCLA Campus could have a potentially significant impact on people and proposed buildings on the Harbor-UCLA Campus.

According to the Seismic Hazard Zones Map, the Harbor-UCLA Campus is not in an area susceptible to liquefaction; historic high groundwater depths of 48 to 60 feet in the Project vicinity limit the potential for liquefaction that could adversely affect Project buildings and structures. However, the site could be subject to seismically-induced soil settlement, which could have a significant impact on people and proposed buildings on the Harbor-UCLA Campus.

Therefore, earthquake fault rupture, seismic shaking, and ground failure may result in a potentially significant impact. MM GEO-1 can reduce the potential impacts on people or structures from fault rupture, seismic shaking, and ground failure to a less than significant level.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following mitigation measure is feasible and is adopted to mitigate potentially significant impacts of fault rupture, seismic shaking, and ground failure to a less than significant level:

MM GEO-1: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of the Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate potential fault rupture, seismic ground shaking, and liquefaction hazards identified under Impact GEO-1:

- *Seismicity:* Structural elements of future improvements shall be designed to resist or accommodate appropriate site-specific ground motions and conform to the current seismic design standards.

- *Liquefaction:* An assessment of the liquefaction potential and seismically induced dynamic settlement shall be made prior to detailed design and construction of the proposed Project. Structural design and mitigation techniques, such as in-situ ground modification or supporting foundations with piles at depths designed specifically for liquefaction, shall be included.

To evaluate the potential liquefaction hazard for the Project, a subsurface evaluation could be performed. Site-specific geotechnical evaluations that assess the liquefaction and dynamic settlement characteristics of the on-site soils shall include the drilling of exploratory borings, evaluation of groundwater depths, and laboratory testing of soils.

Methods for construction in areas with a potential for liquefaction hazard may include in-situ ground modification, removal of liquefiable layers and replacement with compacted fill, or support of Project improvements on piles at depths designed specifically for liquefaction. Pile foundations can be designed for a liquefaction hazard by supporting the piles in dense soil or bedrock located below the liquefiable zone or other appropriate methods as evaluated during the site-specific evaluation. Additional recommendations for mitigation of liquefaction may include densification by installation of stone columns, vibration, deep dynamic compaction, and/or compaction grouting.

Rationale for Finding

The project may expose people or structures to potential substantial adverse effects, including the risk or loss, injury, or death, involving earthquake fault ruptures, seismic shaking, and ground failure. By implementing MM GEO-1, these impacts would be mitigated to a less than significant level.

Impact: Unstable Soils

As discussed under Threshold GEO-3 in Section 4.D, Geology and Soils, in the Draft EIR, the Project area is underlain by older alluvial deposits which are generally unconsolidated, reflecting a depositional history without substantial loading, and may be subject to collapse. Older undocumented fill soils related to the previous development at the Project Site may also be potentially compressible or collapsible. Due to the presence of potentially compressible/collapsible soils at the site, there is a potential for differential settlement, which could cause damage to Project improvements.

Proposed construction activities in the Project area would include excavation and site grading for new medical, office and retail structures, pedestrian areas, landscaping, open space areas, and parking area improvements. Areas of shallower perched groundwater may be encountered during excavations. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. If wet or saturated soil conditions are encountered during excavation, instability could occur and present a constraint to the construction of foundations.

Therefore, compressible/collapsible soils and liquefaction may result in a potentially significant impact. MM GEO-2 can reduce the potential impacts of unstable soils and liquefaction on the project to a less than significant level.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following mitigation measure is feasible and is adopted to mitigate potentially significant impacts of unstable soils and liquefaction to a less than significant level:

MM-GEO-2: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of the Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate unstable soil hazards identified under Impacts GEO-3:

- *Compressible/Collapsible Soils and Settlement:* An assessment of the potential for soils that are prone to settlement shall be made prior to detailed design and construction of

Project improvements, and mitigation techniques shall be developed, as appropriate, to reduce impacts related to settlement to low levels.

During the detailed design phase of the Project components, surface reconnaissance and site-specific geotechnical evaluations shall be performed to assess the settlement potential of the on-site natural soils and undocumented fill. This may include detailed surface reconnaissance to evaluate site conditions, drilling of exploratory borings or test pits, and laboratory testing of soils, where appropriate, to evaluate site conditions.

Prescribed mitigation measures for soils with the potential for settlement include removal of compressible/collapsible soil layers and replacement with compacted fill; surcharging to induce settlement prior to construction of new fills; and specialized foundation design, including the use of deep foundation systems to support structures. Varieties of in-situ soil improvement techniques are also available, such as dynamic compaction (heavy tamping) or compaction grouting.

- *Shallow Groundwater:* A subsurface exploration shall be performed during the detailed design phase of future improvements to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and construction of Project improvements. Assessment of the potential for shallow groundwater would be evaluated during the design phase of the Project and mitigation techniques would be developed, as appropriate, to reduce the impacts related to shallow groundwater to low levels. Therefore, potential impacts due to groundwater would be reduced with incorporation of techniques such as construction dewatering.

Rationale for Finding

The project may result in a significant impact if it would be located on a geologic unit or soil that is unstable or that would become unstable, potentially resulting in lateral spreading, subsidence, liquefaction, or collapse. By implementing MM GEO-2, these impacts would be mitigated to a less than significant level.

Impact: Expansive and Corrosive Soils

As discussed under Threshold GEO-4 in Section 4.D, Geology and Soils, in the Draft EIR, the near-surface soils in the Project site are generally clayey and sandy silt soils. Clayey soils are typically expansive when wetted, and could have an adverse effect on proposed Project buildings. The Project site is located in a geologic environment that could potentially contain soil conditions that are corrosive to concrete and metal, which could cause premature deterioration of underground structures or foundations.

Therefore, expansive and corrosive soils may result in a potentially significant impact. MM GEO-3 can reduce the potential impacts of expansive and corrosive soils on the project to a less than significant level.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following mitigation measure is feasible and is adopted to mitigate potentially significant impacts of unstable soils and liquefaction to a less than significant level:

MM-GEO-3: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of the Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate expansive soils hazards identified under Impacts GEO-4.

- *Expansive Soils:* An assessment of the potential for expansive soils will be conducted during the detailed design and construction phases of the Project. Mitigation techniques such as over excavation and replacement with non-expansive soil, soil treatment, moisture management, and/or specific structural design for expansive soil conditions would reduce the impact from expansive soils to low levels.

- *Corrosive Soils:* An assessment of the potential for corrosive soils will be conducted during the detailed design phase of the Project through a subsurface evaluation including soil testing and analysis of soils at foundation design depths. Laboratory tests would include corrosivity tests to evaluate the corrosivity of the subsurface soils. Data will be reviewed by a corrosion engineer and mitigation techniques suitable for the proposed Project will be implemented as appropriate. Mitigation of corrosive soil conditions could include the use of concrete resistant to sulfate exposure. Corrosion protection for metals used in underground foundations or structures in areas where corrosive groundwater or soil could potentially cause deterioration could include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the appropriate type of cement and water/cement ratio. Specific measures to reduce the potential effects would be developed in the design phase and would reduce impacts related to corrosive soils to low levels.

Rationale for Finding

The Project may result in significant impacts if it would be located on expansive or corrosive soils. By implementing MM GEO-3, these impacts would be mitigated to a less than significant level.

3.2.3 Hazards and Hazardous Materials

Impact: Transport, Use, or Disposal of Hazardous Materials

As discussed under Threshold HAZ-1, HAZ-2, and HAZ-3 in Section 4.F, Hazards and Hazardous Materials, in the Draft EIR, project construction would require the remediation of

buildings and equipment identified as having ACMs, LPB, and PCBs; the removal and/or relocation of USTs and ASTs that presently contain, or have contained in the past, fuels and other potentially hazardous materials; and the disturbance of soil potentially contaminated with hazardous materials as the result of on-site or off-site LUSTs. Remediation of these materials would be conducted by qualified professionals in accordance with regulations governing these activities, including SCAQMD's Rule 1403 (ACBMs); Cal-OSHA rules (LBP); the federal Toxics Substances Control Act (PCBs); and, for USTs, RCRA Subtitle I, the State Health and Safety Code, and LAFD's enforcement of the State's applicable CCR regulations, with oversight by the RWQCB where groundwater may be affected. Nonetheless, construction-related activities have the potential to result in accidental upset and release of hazardous materials into the environment, which is a potentially significant impact.

Although no public or private schools are located in proximity to the Medical Center Campus, the Harbor-UCLA Kindercare child care center is located along the north side of Carson Street approximately 200 feet north of the Medical Center Campus. Since construction activities would have a limited potential to result in the incidental release of existing sources of contamination, and thus could affect children and staff at the facility, impacts to the existing child care facility would be considered potentially significant.

At the locations of five USTs removed in 1994, some staining and moderate hydrocarbon contamination of nearby soil samples was observed, according to the Phase I Assessment prepared for the Harbor-UCLA Campus. Documentation of cleanup activities at this location does not extend past 2000 and it is not clear whether proper soil excavation, soil vapor remediation, and site closure were completed. Moreover, the potential extent of possible contamination of underlying groundwater with petroleum hydrocarbons originating with nearby off-site LUSTs is not known, although the potential for Project-related excavation to intercept groundwater at depths of 48-60 feet bgs, or historic high groundwater at 30 bgs, is low. Nonetheless, Project construction activities have the potential to result in a significant hazard to the public or environment as the result of disturbance of potentially contaminated soil and groundwater due to the unknown cleanup status of the documented USTs.

Therefore, the transport, use, or disposal of hazardous materials may result in a potentially significant impact. MM HAZ-1 and HAZ-2 can reduce the potential impacts resulting from hazardous materials to a less than significant level.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following mitigation measures are feasible and are adopted to mitigate potentially significant impacts of hazardous materials on the environment to a less than significant level:

MM-HAZ-1: The abatement of ACMs, LBP, and PCBs in existing on-site buildings shall be conducted in accordance with the recommendations of the Hazardous Building Materials Survey prepared for the Harbor-UCLA Campus, which are as follows:

- The identified ACMs and surfaces containing LBP shall not be disturbed. Prior to renovation or demolition activities which would disturb identified ACMs, and LCSs, a licensed abatement removal contractor shall remove the ACMs and LCS, and perform paint stabilization activities as needed. The licensed abatement contractor must maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal, or other regulated activities.

- The identified surface containing LBP shall not be disturbed. Any LBP in a non-intact condition shall be abated or the component properly removed or encapsulated. Lead containing ceramic tiles shall be removed prior to demolition activities. Any lead related removal activities shall be performed in accordance with the OSHA Lead in Construction Standard, Title 8 California Code of Regulations (CCR) 1532.1.

- Proper LBP waste stream categorization is required. Prior to any demolition activities, a composite sample of the representative LBP material (ceramic tiles and loose and flaking paint) shall be analyzed for total lead for comparison with the Total Threshold Limit Concentration in accordance with EPA reference method SW-846. If the concentration of total lead is greater than or equal to 1,000 milligrams per kilogram (mg/kg), the LBP waste material must be disposed at a landfill which can receive such wastes. If the concentration is less than 50 mg/kg the sample may be disposed as construction debris, if it is to remain in California. If the total lead result is greater than or equal to 50 mg/kg and less than 1,000 mg/kg, the sample must be further analyzed for soluble lead by the Waste Extraction Test for comparison with the Soluble Threshold Limit Concentration as described in Title 22 CCR 66261.24a. Additionally, if the result is greater than or equal to 100 mg/kg the sample must be further analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure for comparison with the Resource Conservation and Recovery Act (RCRA) limits. Based on the results of the soluble and leachable analysis the waste material may require disposal as a RCRA-Hazardous waste or non-RCRA-(California-) Hazardous waste.

- Miscellaneous hazardous building materials shall be removed and properly recycled or disposed by the licensed abatement contractor prior to renovation or demolition activities. Contractor shall provide proper manifesting for all hazardous materials removed and recycled to prove the disposal of all materials was completed in accordance with local, state, and federal requirements.

- Abatement monitoring consulting services shall be performed by a third-party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances (asbestos and lead), verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the abatement activities.

MM-HAZ-2: Prior to initiation of excavation and grading activities in the areas identified in the Phase I Assessment as containing potential soil contamination or for which site closure is not confirmed (from either on- or off-site USTs/LUSTs or ASTs), Harbor-UCLA shall retain a

qualified environmental consultant to prepare a Soils Management Plan for each development phase to be submitted to the Los Angeles County Fire Department for review and approval. The Soils Management Plan shall be implemented during excavation and grading activities for proposed improvements in the areas identified in the Phase I assessment as containing potential soil contamination to ensure that site closure is property implemented and any contaminated soils encountered are properly identified, removed and disposed of off-site. The plan shall include the following:

- A qualified environmental consultant shall be present as necessary during grading and excavation activities to monitor compliance with the Soils Management Plan and to actively monitor the soils and excavations for evidence of contamination.
- Any soil encountered during excavation or grading activities that appears to have been affected by hydrocarbons or any other contamination shall be evaluated, based upon appropriate laboratory analysis, by a qualified environmental consultant prior to off-site disposal at a licensed facility.
- All identified contaminated soils shall be properly removed, handled and transported to an appropriately licensed disposal facility, in accordance with the Soils Management Plan prepared for each respective development phase.

Rationale for Finding

Demolition of existing buildings, grading, and excavation could result in the potential release of hazardous materials during removal and/or remediation of existing on-site USTs, ASTs, PCBs, ACMs, and LBP, or the disturbance of on-site soil that may be contaminated by past USTs on the Campus or underlying groundwater that may be contaminated by nearby off-site LUSTs. Potentially significant impacts related to hazards and hazardous materials would be less than significant with compliance with applicable regulatory requirements and implementation of MM HAZ-1 and HAZ-2.

3.2.4 Noise

Impact: Construction Noise

As discussed under Threshold NOISE-1 in Section 4.I, Noise, in the Draft EIR, Project construction would require the use of mobile heavy equipment with high noise level characteristics. Individual pieces of construction equipment that would be used for Project construction produce maximum noise levels of 74 dBA to 85 dBA at a reference distance of 50 feet from the noise source. These maximum noise levels would occur when equipment is operating under full power conditions. However, equipment used on construction sites often operate under less than full power conditions. To more accurately characterize construction-period noise levels, the average (Hourly L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage and are typically attributable to multiple pieces of equipment operating simultaneously. Construction noise levels would exceed the Project's significance

threshold at three receptor locations during multiple construction phases. Therefore, construction noise may result in a potentially significant impact. MM NOISE-1 can reduce the potential impacts from construction noise to a less than significant level.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following mitigation measure is feasible and is adopted to mitigate potentially significant impacts of construction noise to a less than significant level:

MM NOISE-1: Temporary noise barriers shall be used to block the line-of-site between the construction equipment and noise-sensitive receptors during project construction, as follows:

- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the southern boundary of the Project construction site to reduce construction noise at the single- and multi-family residential uses across 220th Street during Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed.

- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundaries of the Project construction site to reduce construction noise at the multi-family residential uses across Carson Street during Phase 4.

- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundary of the Project construction site to reduce construction noise at the single-family residential uses across Vermont Avenue during Phase 2, Phase 4, and Phase 5.

Rationale for Finding

Construction-related activities on the Medical Center Campus have the potential to result in significant impacts at nearby sensitive receptors. Using temporary noise barriers in accordance with MM NOISE-1, can achieve a noise reduction of 15 dBA or more in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. Therefore, the construction-period L_{eq} would be reduced to below the 60 dBA significance threshold at the south of the Medical Center Campus, Location R3 and the east of the Medical Center Campus, Location R5 and the 65 dBA significance threshold at north of the Medical Center Campus, Location R4; noise impacts at these locations will be mitigated to a less than significant level.

3.2.5 Fire Protection and Emergency Services

Impact: Fire Protection and Emergency Medical Services

The Master Plan Project would have a potentially significant impact based on CEQA's thresholds of significance for fire protection and emergency services regarding the need for new fire

facilities, or the expansion, consolidation or relocation of an existing fire station, to maintain services, which would result in a substantial adverse physical impact on the environment. Section 4.K.1, Fire Protection and Emergency Services, of the Draft EIR, found that the Project would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing fire station to maintain service due to compliance with County Code and LACFD requirements with implementation of PDF-FIRE-1 and MM-FIRE-1 and MM-FIRE-2 that address fire safety, emergency access, emergency response times, and fire flow.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following Project Design Feature and mitigation measures are feasible and are adopted to mitigate potentially significant impacts to fire protection and emergency services to a less than significant level:

PDF-FIRE-1: The applicants, designers, construction contractors, and tenants for/of development under the Project will implement the conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, which are included in Appendix G-1, Fire Department Correspondence, of the Draft EIR.

The LACFD conditions of approval referenced above are summarized below and include, but are not limited to, the following:

- Provide multiple ingress/egress access for circulation of traffic and emergency response vehicles.
- Every building constructed shall be accessible to Fire Department apparatus by way of Fire Apparatus Access Roads of not less than the minimum widths prescribed in Fire Code Section 503.2.1, with roadways extending to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.
- Fire Apparatus Access Roads shall be a minimum unobstructed width of 28 feet exclusive of shoulders and have unobstructed vertical clearance "clear to sky"
- Dead-end Fire Apparatus Access Roads in excess of 150 feet in length shall be provided with an approved Fire Department turnaround.
- Provide approved signs or other approved notices or markings that include the words "NO PARKING – FIRE LANE".
- Fire Apparatus Access Roads must be installed and maintained in a serviceable manner prior to and during the time of construction.

- Approved building address numbers, building numbers, or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property.

- The method of gate control shall be subject to review by the Fire Department prior to approval, and shall meet specified width, positioning, emergency power, and emergency access requirements.

- The development may require fire flows up to 8,000 gpm at 20 psi residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, the installation of an automatic fire sprinkler system, and type(s) of construction used.

- Fire hydrant spacing shall be every 300 feet for both the public and the on-site hydrants, with no portion of a lot frontage more than 200 feet via vehicular access from a public hydrant, and no portion of a building exceeding 400 feet via vehicular access from public fire hydrant.

- All required public fire hydrants shall be installed, tested, and accepted prior to beginning construction.

- Provide a Fire Department-approved fire sprinkler system in all proposed buildings.

MM-FIRE-1: The Project construction contractors shall regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times.

MM-FIRE-2: Prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee, as applicable.

Rationale for Finding

Implementation of the Project may have the potential to result in significant impacts on fire protection and emergency services. The Project would have less than significant impacts on fire protection and emergency services with implementation of the Project Design Features and mitigation measures provided in this section.

3.2.6 Sheriff Protection

Impact: Addition of Sheriff Facilities

As discussed under Threshold SHER-1 in Section 4.K.2, Sheriff Protection, in the Draft EIR, construction activities associated with the Project would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through the year 2030. These periodic construction activities could temporarily increase demand for police protection associated with patrolling the

construction site. The Project would result in a net increase of up to 1,178,071 square feet of building floor area on-site, and net increases in total Campus-wide employees and annual patient visits of up to 2,030 employees and 185,745 annual patients' visits. This would translate to a net increase in the daily on-site population of up to 2,744 persons (an approximately 36 percent increase over the existing on-site daily population of 7,560).[3]. Based on the existing officer to daytime population ratio at the Project Site of 1:71.3, and the existing annual crimes per capita at the Project Site of 0.009, the Project would result in an increase in demand for up to 38 additional officers (both LACSD sworn officers and non-LACSD security guards, a 36 percent increase over the 106 existing officers), and an increase in on-site crimes of an estimated 25 crimes per year. This, in turn, would create the need for additional space at LACSD's on-site satellite station to accommodate the additional officers. Therefore, implementation of the Project may result in a potentially significant impact on sheriff protection. PDF-SHER-1, PDF-SHER-2, MM SHER-1, MM SHER-2, MM SHER-3, and MM SHER-4 can reduce the potential impacts from to a less than significant level.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The following Project Design Features and mitigation measures are feasible and are adopted to mitigate potentially significant impacts to sheriff protection to a less than significant level:

PDF-SHER-1: The County Department of Public Works shall provide the LACSD CSB with the on-site satellite station space, locker space, and associated parking spaces, required to serve the Project. This shall include, at a minimum, the existing amount of satellite station space (927 sf), locker room space (1,672 sf), and associated parking spaces, plus an additional 36 percent (approximately 1,000 sf) of this operational space and associated parking to serve the net increase in on-site employees and patients under the Project.

PDF-SHER-2: Project design shall adhere to the Crime Prevention Through Environmental Design (CPTED) principles. This shall include, but not be limited to, the provision of physical design features that discourage crime such as defensible space, territoriality, surveillance, lighting, landscaping, and physical security. The CPTED features shall be identified on the design plans for the Project which shall be provided to the LACSD for review and approval.

MM SHER-1: During Project construction, construction sites shall be fully fenced, lighted with security lighting, and patrolled by either the LACSD on-site satellite station personnel (either sworn officers or contract security guards) or private security hired by DHS.

[3] The total net increase in daytime population at the Project Site was estimated by adding the net increase in on-site employees (2,030) to the net increase in daily patient visits (714). The net increase in daily patient visits (714) was estimated by dividing the total net increase in annual patient visits (185,745) by the total number of weekdays per year (260). This provides a conservative estimate since it assumes that daily patient visits occur only during weekdays since most of the on-site clinics and other on-site patient-serving uses are only open during weekdays.

MM SHER-2: Emergency access to the LACSD shall be provided and maintained to existing and new on-site uses, and to off-site uses, throughout construction.

MM SHER-3: The Project construction contractors shall regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times.

MM SHER-4: The Security Management Plan for the Harbor-UCLA Campus shall be updated by DHS, in consultation with the LACSD, to address the proposed physical and operational changes to the Campus under the Project. At a minimum, the primary security features and measures currently in place at the Campus under the Security Management Plan shall be carried forward under the Project.

Rationale for Finding

Implementation of the Project may have the potential to result in significant impacts on sheriff protection. The Project would have less than significant impacts on sheriff protection with implementation of the Project Design Features and mitigation measures provided in this section.

4.0 Significant Effects that Cannot be Mitigated to Below the Level of Significance

In accordance with State *CEQA Guidelines* Section 15126.2(b), environmental analysis in the EIR must consider the significant environmental impacts that are significant and unavoidable upon Project implementation. These findings are based on analysis found in Chapter 4.0, Environmental Impact Analysis, of the Draft EIR. Explanations for each finding are provided below. Significant and unavoidable noise and traffic impacts would occur with Project implementation; therefore, preparation of a Statement of Overriding Considerations is required.

4.1 Noise

Impact: Construction Noise

As discussed under Threshold NOISE-1 in Section 4.I, Noise, in the Draft EIR, Project construction would require the use of mobile heavy equipment with high noise level characteristics. As stated above in Section 3.2.4, the construction-period L_{eq} would be reduced to below the 60 dBA significance threshold at the south of the Medical Center Campus, Location R3 and the east of the Medical Center Campus, Location R5 and the 65 dBA significance threshold at north of the Medical Center Campus, Location R4. However, sensitive receptors at the single- and multi-family residential uses across 220th Street will have construction-related noise exceed the significance threshold of 60 dBA.

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR to address noise impacts where improvements are considered feasible. The following mitigation measures are feasible and are adopted to mitigate potentially significant impacts on some receptor locations:

MM NOISE-1: Temporary noise barriers shall be used to block the line-of-site between the construction equipment and noise-sensitive receptors during project construction, as follows:

- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the southern boundary of the Project construction site to reduce construction noise at the single- and multi-family residential uses across 220th Street during Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed.

- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundaries of the Project construction site to reduce construction noise at the multi-family residential uses across Carson Street during Phase 4.

- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundary of the Project construction site to reduce construction noise at the single-family residential uses across Vermont Avenue during Phase 2, Phase 4, and Phase 5.

Rationale for Finding

The temporary sound barriers prescribed in Mitigation Measure NOISE-1 can achieve a noise reduction of 15 dBA or more in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. However, even with implementation of the mitigation measure, construction-related noise could reach up to approximately 85 dBA at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. As this will exceed the significance threshold of 60 dBA, construction noise impacts would be significant and unavoidable at the single- and multi-family residential uses across 220th Street, during Phase C, Phase 5, and Phase 6.b.

Impact: Operational Helicopter Noise

As discussed under Threshold NOISE-3 in Section 4.I, Noise, in the Draft EIR, a permanent new Helistop would be located on the rooftop of the New Hospital Tower. However, as previously discussed, following demolition of the existing helistop and prior to construction of the New Hospital Tower and permanent new Helistop, two interim helistops would be constructed for temporary use. The relocation of the existing Helistop to the Interim 1 Helistop location would result in a significant impact, which would be temporary while the permanent Helistop is constructed on the rooftop of the New Hospital Tower. Noise impacts associated with the relocation to the existing Helistop to the Interim 2 Helistop location would also result in a significant impact, which would be temporary while the permanent Helistop is constructed at the

roof level of the future hospital building. However, there are no feasible mitigation measures to reduce the increase at receptor R3 below the level of significance. Therefore, the impact would be significant and unavoidable; however, impacts would be temporary, lasting only until the implementation of the future permanent Helistop location.

Finding

The County finds that there are no feasible mitigation measures to reduce the increase of operational noise at receptor R3 below the level of significance. Operational helicopter noise will be significant and unavoidable.

Rationale for Finding

Temporary helicopter operations associated with use of the Interim 1 Helistop and Interim 2 Helistop would result in significant and unavoidable, albeit temporary and periodic, impacts at receptor R3. There are no feasible mitigation measures to reduce the noise increases caused by the use of these interim helistops below the level of significance at receptor R3. Therefore, the impacts of temporary use of the Interim 1 Helistop and Interim 2 Helistop would be significant and unavoidable. However, impacts would last only until completion of the permanent Helistop location on the rooftop of the proposed New Hospital Tower. Noise impacts associated with use of the permanent Helistop would be less than significant.

4.2 Transportation and Traffic

Impact: Construction Traffic

As discussed under Threshold TRAF-1 in Section 4.L, Transportation and Traffic, in the Draft EIR, with the incorporation of PDF-TRAF-1, construction traffic impacts would be less than significant. However, given the amount of development in the Project area, the uncertainty in terms of timing for each related Project and the potential for overlap of development, the Project could contribute to a cumulatively significant construction impact.

Finding

The County finds that no other feasible mitigation measures have been identified to mitigate potentially significant impacts on the environment. This impact is conservatively concluded to be significant and unavoidable.

Rationale for Finding

Despite the incorporation of PDF-TRAF-1, Construction Traffic Management Plan, construction traffic impacts from construction worker vehicles and truck trips, for both Project-level and cumulative conditions, are conservatively concluded to be significant and unavoidable.

Impact: Operational Traffic at Intersections

As discussed under Threshold TRAF-2 in Section 4.L, Transportation and Traffic, in the Draft EIR, the traffic impact analysis determined that the proposed development would generate significant traffic impacts at twelve (12) of the 22 analyzed intersections under future plus Project conditions. Three mitigation measures can be applied to three intersections with potentially significant impacts at Intersection #9 (I-110 Southbound Ramps and Carson Street), #15 (220th Street/I-110 Northbound Ramps and Figueroa Street), and #20 (I-110 Southbound Ramps and 223rd Street).

Finding

The County finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR to address traffic impacts where improvements are considered feasible. The following mitigation measures are feasible and are adopted to mitigate potentially significant impacts on intersections:

MM TRAF-1: I-110 Southbound Ramps & Carson Street (Intersection #9) - Subject to approval by Caltrans, the existing southbound approach on the Interstate I-110 off-ramp shall be restriped to convert the existing left-turn lane to a left-/right-turn lane.

MM TRAF-2: 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) - Subject to approval by Caltrans and the City of Carson, an additional northbound through lane shall be striped and the existing through lane shall be restriped as a through/right-turn lane. The eastbound approach shall be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane.

MM TRAF-3: I-110 Southbound Ramps & 223rd Street (Intersection #20) - Subject to approval by Caltrans, the southbound approach shall be restriped from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach shall be restriped to change the existing right-turn lane to a through/right-turn lane. Under this mitigation, parking shall be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane.

Although these such changes or alterations would avoid or substantially lessen the significant environmental effect as identified in the Final EIR, they are within the responsibility and jurisdiction of another public agency and not the agency making the finding, and thus their implementation cannot be guaranteed.

Rationale for Finding

Although the mitigation measures listed above would reduce impacts at those intersections, the Project would still result in significant and unavoidable impacts at all twelve intersections. Because implementation of the proposed improvements is not entirely within the control of the County, the operational traffic impacts at these intersections are still considered significant and unavoidable.

Impact: Freeway Mainlines and Intersections

As discussed under Threshold TRAF-4 in Section 4.L, Transportation and Traffic, in the Draft EIR, the surrounding freeways (I-405, I-710, SR-91, and I-110) are operating at or near capacity during the peak period. When additional traffic trips are assigned to those freeways, existing LOS should be maintained. Analysis of the arterial intersection of Western Avenue (State Route 213) & Carson Street was conducted using the Highway Capacity Manual (HCM) methodology in response to a request from Caltrans. Caltrans, LADOT and the City of Torrance have jointly agreed to modify the signal in the near term at this location by implementing protected left-turn phasing on the eastbound and westbound approaches. The intersection is operating at LOS E under Existing and Existing plus Project conditions. Under Interim Development (2023) and Cumulative (2030) conditions in both the AM and PM peak hours, the intersection is projected to decline to LOS F without or with the addition of Project traffic. Because the Project would add more than 50 trips in both the AM and PM peak hours during the Cumulative (2030) condition, the impact would be a potentially significant impact. Therefore, the project may result in a potentially significant impact on freeway segments and intersections under Caltrans jurisdiction.

Finding

The County finds that no feasible mitigation measures or alterations to the Project are available which avoid or substantially lessen the significant environmental effect as identified in the Final EIR, as such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Thus, such changes or alterations cannot be guaranteed.

Rationale for Finding

Although the Project would increase traffic on the freeway mainline segments, in light of the nature of regional nature of the freeway system, improvements to Caltrans freeway facilities tend to be beyond the feasibility of any individual Project to implement. Thus, Caltrans allows development projects to pay a fair share or an equitable percentage contribution toward the estimated cost of an improvement. The fair share is calculated as the Project's percentage of the total projected traffic growth on a freeway mainline segment over a 25-year period. The fair share is a contribution toward the improvement and maintenance of a shared facility that benefits the Project and the region. Options for addressing the impacts were identified, but because there are no existing projects that were identified by Caltrans that would lower the impact below the significance threshold, the significant impacts identified above to Caltrans facilities are conservatively determined to be significant and unavoidable.

5.0 Findings on Project Alternatives

Because the Project would result in significant and unavoidable environmental impacts after implementation of the above-outlined mitigation measures, the County considered the potential for environmentally superior alternatives to the Project. In accordance with State *CEQA*

Guidelines Section 15126.6(a), an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. The Project's objectives are provided above in Section 2.2.1, Project Objectives. The State *CEQA Guidelines* emphasize that the selection of project alternatives be based primarily on the ability to reduce significant impacts relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."[4] The State *CEQA Guidelines* further direct that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are analyzed.[5]

These findings compare and contrast the alternatives analyzed in the Draft EIR to show the feasibility of alternatives through site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the County can reasonably acquire, control or otherwise have access to the alternative site. Based on the alternatives analysis, an environmentally superior alternative is to be designated. In general, the environmentally superior alternative is the alternative with the least adverse impacts on the environment. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify another environmentally superior alternative among the other alternatives.[6]

5.1 Alternatives Screened Out From Detailed Consideration in the EIR

A total of seven (7) alternatives were analyzed in the Draft EIR, as seen in Chapter 5.0, Alternatives, of the Draft EIR. Three of the seven alternatives were considered but not selected for further analysis. The remaining four of which, including the "no project" alternative noted previously and three other "build" alternatives, are comprehensively evaluated below in Section 5.2, Alternatives Analyzed in the EIR. The three alternatives that were considered but rejected after initial analysis included Alternative Off-Site Locations, Alternative On-Site Uses, and a No Bioscience Tech Park Alternative.

According to the State *CEQA Guidelines*, the following factors may be used to eliminate alternatives from detailed consideration: the alternative's failure to meet most of the basic Project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts. Alternatives that have been considered and rejected as infeasible are discussed below.

4 CEQA Guidelines Section 15126.6(b).
5 Ibid., Section 15126.6(f).
6 Ibid., Section 15126.6(e) (2).

5.1.1 Alternative Off-Site Locations

In making the decision to include or exclude analysis of an alternative site, the "key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR". If no feasible alternative locations exist, the EIR must disclose the reasons for this conclusion.[7]

The Medical Center Campus is unique in the Project area (West Carson and vicinity) because of its size, current uses, availability for development, and central location with respect to the sizeable daytime employee population and 24-hour residential populations within the surrounding communities. The Medical Center Campus is also highly visible and easily accessible from major roadways (Vermont Avenue, Normandie Avenue, Carson Street and 220th Street) and the Harbor Freeway.

Within unincorporated Los Angeles County, and in the Project area (West Carson) there is a scarcity of vacant properties, or developed properties suitable for redevelopment, that are similarly sized to the Medical Center Campus, are proximate to existing public services with easy access from an existing public road and freeway visibility, and are near compatible uses. Furthermore, to replace the entire existing Medical Center Campus, which has been located here since 1943 and serves many thousands of people, to a completely new and undeveloped location would likely result in impacts greater than the Project, while redevelopment of an already urbanized site elsewhere in the region would not serve the population that currently relies on the services provided at the Medical Center Campus. Furthermore, acquisition of a similarly sized property, whether public or private, would involve substantial capital costs that would not otherwise be necessary at the existing Medical Center Campus, as the Project Site is currently under the sole ownership of the County of Los Angeles.

Implementation of the Project at an off-site location, therefore, would not meet the Project objectives of modernizing and renovating the current Medical Center Campus or optimizing use of County property and resources. In addition, the County did not consider implementation of other alternatives discussed in this chapter at any off-site locations, based on the discussion above regarding the Project. For these reasons, this development scenario, was not considered for a feasible alternative to the Project.

5.1.2 Alternative On-Site Uses

As discussed in Chapter 2.0, Project Description, of the Draft EIR, the existing Medical Center Campus has been utilized for hospital, outpatient, research, and other related activities for many decades, with substantial investment by the County and other on-site tenants in support of these functions. As further stated in Chapter 2.0, Harbor-UCLA Medical Center expects increasing

[7] Ibid., Section 15126.6(f) (2).

demand in its service area, which currently encompasses 10 million people and is expected to grow by an estimated 600,000, through 2030. It is projected that the service area will include an additional 190,000 Medicare-eligible patients by the buildout horizon, an assumption based on an anticipated increase in the service area population and aging, and is expected to affect demand for certain services as well as the overall volume of patient visits, which is in turn expected to increase by an estimated 20 percent by 2030, even assuming some percentage of future patients transfer back to Martin Luther King Hospital or other hospitals. Further, it is expected that there will be an increasing need for Harbor-UCLA to enhance its outpatient programs and other patient support services. In light of the expected increase in its service area population and increased demand for its services, a physician workforce shortage in Los Angeles, and the lack of plans for the new construction of other acute care hospital facilities in the region by the Master Plan Project buildout horizon, Harbor-UCLA sees a clear need to invest in its facilities and programs at the existing Medical Center Campus in order to continue to fulfill its role as a strategic piece of the healthcare "safety net" of Los Angeles County in general and for South Bay communities in particular. Given the County's ownership of the 72-acre Medical Center Campus property, substantial long-term investment in hospital and related health care and research facilities at the site, and location within the geography such facilities serve, redevelopment of the Medical Center Campus with land uses other than hospital, outpatient, biomedical research and related supporting uses was not considered for further analysis as a feasible alternative.

In addition, this development scenario would not achieve many of the key objectives of the Project including achieving compliance with seismic safety requirements for acute care facilities; supporting the renovation of existing healthcare facilities; providing for a fundamental reorganization, expansion, and integration of outpatient services; renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region; providing opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities; encouraging a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research; and achieving optimum public utilization of land and buildings under the ownership and control of the County. As such, the County did not consider pursuing development of other uses on the Medical Center Campus that are not proposed by the Board of Supervisors or the Harbor-UCLA Master Plan.

5.1.3 No Bioscience Tech Park Alternative

As part of its exploration of potential alternatives to the Master Plan Project, the County considered a Project alternative that would implement the Master Plan Project as proposed but without a Bioscience Tech Park component. All other aspects of the Project would be implemented on the Medical Center Campus under this Alternative, including (1) a New Hospital Tower; (2) new and renovated outpatient care facilities (to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower); (3) other services and facilities, including administrative office, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop); (4) long-term buildout of the LA BioMed Campus; and

(5) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements.

However, while this alternative would achieve many of the Project objectives, including objectives 1, 2, 3, 4, 6, 7, and 8 discussed above, and would partially achieve objective 5 relative to expansion of existing LA BioMed uses on the Medical Center Campus, this Alternative would not achieve one of the County's key objectives for the Project, which is to provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities.

As stated in Chapter 2.0, Project Description, of the Draft EIR, the proposed Bioscience Tech Park represents an important opportunity to grow the bioscience industry in the County, and unique to the Medical Center Campus location, to take advantage of existing and potential future relationships and research opportunities between a collocated Bioscience Tech Park, the on-site hospital and outpatient facilities, and the existing LA BioMed facility, a privately-operated program that itself has plans for growth on the Medical Center Campus during the course of Master Plan Project buildout. This is consistent with Harbor UCLA's long-standing status as a teaching hospital with an existing affiliation with the David Geffen School of Medicine at UCLA.

Moreover, the availability of a sizeable and currently undeveloped buildable area on the western side of the Medical Center Campus would support a facility of the necessary size, and would allow achievement of this objective without the need for costly acquisition of additional real estate or displacement of existing uses on the Medical Center Camps or at an off-site location. Finally, a facility in this location would also provide needed employment opportunities and, as noted in the Chapter 2.0, Project Description, in the Draft EIR, would further strengthen Harbor UCLA's role as a strategic part of the healthcare "safety net" in the South Bay portion of the County. For these reasons, this development scenario, which would eliminate the Bioscience Tech Park, was not considered for further analysis as a feasible alternative for the Project.

Findings

The County finds that the three alternatives above are eliminated from further consideration due to their infeasibility and/or failure to meet most Project objectives.

5.2 Alternatives Analyzed in the EIR

5.2.1 No Project/No Build Alternative

Under the No Project/No Build Alternative, the proposed Medical Center Campus Master Plan Project would not be implemented, and the site would remain in its current state. New Hospital Tower would not be constructed on the site, nor would the proposed outpatient care facilities, parking lots and other services facilities be developed. Because it would not meet new seismic requirements scheduled to be effective January 1, 2030 for acute care facilities, the Existing Hospital would not be licensed to operate as an acute care facility after December 31, 2029. The

hospital could continue to operate providing non-acute care services. The buildout of the LA BioMed Campus would not occur, and the new Bioscience Tech Park, campus support and required infrastructure would not be constructed. Proposed new amenities on the Medical Center Campus, including the Medical Center Campus reorganization with its new network of pedestrian walkways and landscaped areas, would not be implemented.

Summary of Environmental Effects and Achievement of Project Objectives

The No Project/No Build Alternative would avoid the Project's significant and unavoidable construction-related traffic impacts, as well as long-term operational traffic impacts at three Caltrans freeway facilities and the following twelve (12) intersections: Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would avoid the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during Phase C, Phase 5, and Phase 6, and would also avoid temporary operational helicopter noise impacts. The No Project/No Build Alternative would also avoid potentially significant impacts (mitigated to less than significant levels under the Project) associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

While the No Project/No Build Alternative would avoid the Project's significant impacts and would not result in any new environmental impacts, it would not achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

The No Project/No Build Alternative would also not achieve the Project's basic objectives to support the renovation of existing health facilities to meet the Affordable Care Act of 2010 and to modernize and integrate healthcare delivery. It would not update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. The No Project/No Build Alternative also would not provide opportunities for development up to 250,000 square feet of additional Bioscience Tech Park and support facilities and 225,000 square feet of expanded LA BioMed facilities. It would not meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would not allow for the fundamental reorganization, expansion and integration of outpatient services; renovate and appropriate new medical Campus construction; encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus. It would not

achieve optimum public utilization of land and buildings under the ownership and control of the County. Lastly, the No Project/No Build Alternative would not create durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices.

Findings

The County finds that the No Project/No Build Alternative is infeasible because, although it is environmentally superior to the proposed project, it would not meet the Project objectives as effectively as the Master Plan Project would. The No Project/No Build Alternative would also not provide the benefits and opportunities that would be implemented with the Master Plan Project. Although adverse impacts would be avoided under the No Project/No Build Alternative, it would not achieve the primary beneficial aspects of the Project to implement SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles and to replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030. As indicated above, without development of the Master Plan Project, the No Project/No Build Alternative would not be a feasible alternative for the Master Plan Project.

5.2.2 Reduced Intensity Alternative A – Acute Bed and Other Plan Reductions

The Reduced Intensity Alternative A – Acute Bed and Other Plan Reductions would be implemented at a lower overall intensity than proposed under the Project. Specifically, this Alternative would result in the construction of the New Hospital Tower, but with a reduction in the maximum number of licensed acute care beds from 446 to approximately 375, as well as construction of two outpatient buildings (compared to three under the Project), a reduced Central Plant, up to three parking structures with a maximum of 2,300 parking spaces, and partial renovation of the Existing Hospital tower (compared to complete renovation under the Project). This Alternative would also eliminate all retail uses from the development plan. In addition, Reduced Intensity Alternative A would be phased so that the New Hospital Tower would be constructed by 2025, which is prior to new outpatient buildings, with completion of construction activities anticipated in 2027. All development associated with LA BioMed build out and the proposed Bioscience Tech Park, as well as necessary infrastructure, landscaping, circulation, and other Medical Center Campus improvements, would be implemented as under the proposed Master Plan Project.

Summary of Environmental Effects and Achievement of Project Objectives

Reduced Intensity Alternative A would incrementally reduce the Project's significant and unavoidable traffic impacts at the intersections of Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110

Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would also incrementally reduce the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during Phase C, Phase 5, and Phase 6. However, these impacts, while reduced compared to the Project, would remain significant and unavoidable. The significant unavoidable temporary operational helicopter noise impact that would occur under the Project would also occur under Reduced Intensity Alternative A.

Because Reduced Intensity Alternative A would be incrementally reduced compared to the Project, demand for public services and utilities would be incrementally reduced. However, Reduced Intensity Alternative A would have a relatively similar level of impact and require the implementation of mitigation measures, as under the Project, for potentially significant impacts associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

Reduced Intensity Alternative A would incrementally reduce the Project's significant and less than significant impacts, and would not result in any new environmental impacts, and would also provide adequate beds to achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles, although not to the extent the Project would. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

Reduced Intensity Alternative A would support, but to a lesser extent, the Project's basic objectives to renovate existing health facilities to meet the Affordable Care Act of 2010 and to modernize and integrate healthcare delivery. It would update most facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. It would substantially meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would allow for the fundamental reorganization, expansion and integration of outpatient services; renovate and appropriate new medical Campus construction. However, because retail uses would be eliminated and outpatient buildings would be reduced from three (under the Project) to two buildings, it would not encourage the same vibrant, mixed-use setting as under the Master Plan Project.

However, Reduced Intensity Alternative A would support the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus. Reduced Intensity Alternative A would also meet the objective of creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices. Reduced Intensity Alternative A would also provide opportunities for development up to 250,000 square feet of additional bioscience and support facilities in the Bioscience Tech Park and 225,000 square feet of expanded LA BioMed facilities.

Findings

The County finds that the Reduced Intensity Alternative A would only partially meet the Project's basic objectives and would not avoid the Project's significant environmental impacts. While Reduced Intensity Alternative A would continue to provide benefits and opportunities of bioscience and support facilities, the alternative would only incrementally reduce the Project's significant and unavoidable impacts. Elimination of all retail uses and the decrease of outpatient buildings to two instead of three under the Master Plan Project would not achieve the optimum public utilization of land and buildings on the Medical Center Campus.

5.2.3 Reduced Intensity Alternative B – Further Acute Bed and Other Plan Reductions

The Reduced Intensity Alternative B – Further Acute Bed and Other Plan Reductions would be implemented at an even lower overall intensity than proposed under the Master Plan Project or Reduced Intensity Alternative A. The reductions are attributable to a reduction in new outpatient building space and parking spaces under Reduced Intensity Alternative B. Specifically, this Alternative would result in the construction of the New Hospital Tower, but with a reduction in the maximum number of licensed acute care beds from 446 to 375, as well as construction of only one outpatient buildings (compared to three under the Project and up to two under Reduced Intensity Alternative A), a reduced Central Plant, two parking structures with up to 1,800 parking spaces (compared to up to three structures with up to 2,300 spaces under Reduced Intensity Alternative A), and complete renovation of the Existing Hospital tower (compared to a partial renovation in Reduced Intensity Alternative A) in order to accommodate the outpatient services previously planned for the additional two outpatient buildings under the Master Plan Project. Similar to Reduced Intensity Alternative A, Reduced Intensity Alternative B would also eliminate all retail uses from the development plan. In addition, Reduced Intensity Alternative B would be phased so that the New Hospital Tower would be constructed by 2025, prior to new outpatient uses, with completion of construction activities anticipated in 2028. All development associated with LA BioMed and the proposed Bioscience Tech Park, as well as necessary infrastructure, landscaping, circulation, and other Medical Center Campus improvements would be implemented as under the proposed Master Plan Project.

Summary of Environmental Effects and Achievement of Project Objectives

Reduced Intensity Alternative B would incrementally reduce the Project's significant and unavoidable traffic impacts at the intersections of Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would also incrementally reduce the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th

Street during Phase C, Phase 5, and Phase 6. However, these impacts, while reduced compared to the Project, would remain significant and unavoidable. The significant unavoidable temporary operational helicopter noise impact that would occur under the Project would also occur under Reduced Intensity Alternative B.

Because Reduced Intensity Alternative B would be incrementally reduced compared to the Project, demand for public services and utilities would be incrementally reduced. However, Reduced Intensity Alternative B would have a relatively similar level of impact and require the implementation of mitigation measures, as under the Project, for potentially significant impacts associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

Reduced Intensity Alternative B would incrementally reduce the Project's significant and less than significant impacts, and would not result in any new environmental impacts, and would also provide adequate beds to achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles, although not to the extent the Project would. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

However, Reduced Intensity Alternative B would support, but to a lesser extent than under Reduced Intensity Alternative A, the Project's basic objectives to renovate existing health facilities to meet the intent of the Affordable Care Act of 2010 to modernize and integrate healthcare delivery. It would update most facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. It would substantially meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would also allow for the fundamental reorganization, expansion and integration of outpatient services; renovate and appropriate new medical Campus construction. However, because retail uses would be eliminated and outpatient buildings would be reduced from three buildings (under the Project) to one building, it would not encourage the same vibrant, mixed-use setting as under the Project and would not achieve optimum public utilization of land and buildings.

Reduced Intensity Alternative B would support the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus. Reduced Intensity Alternative B would also meet the objective of creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices. Reduced Intensity Alternative B would also provide opportunities for development up to 250,000 square feet of Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities.

Findings

The County finds that the Reduced Intensity Alternative B would only partially meet the Project's basic objectives and would not avoid any of the Project's significant environmental impacts. While Reduced Intensity Alternative B would continue to provide benefits and opportunities of bioscience and support facilities, the alternative would only incrementally the Project's significant and unavoidable impacts. Elimination of all retail uses and the decrease of outpatient buildings to one instead of three under the Master Plan Project would not achieve the optimum public utilization of land and buildings on the Medical Center Campus. Reduced Intensity Alternative B would achieve the Project's objectives and incrementally reduce significant and unavoidable environmental impacts to an even lesser extent than Reduced Intensity Alternative A would. .

5.2.4 Reduced Intensity Alternative C – New Acute Bed Hospital Tower Only

Reduced Intensity Alternative C – New Acute Bed Hospital Tower Only, would implement the Master Plan Project but would focus development on the replacement of hospital beds with the construction of the New Hospital Tower that meets seismic safety requirements, and reconstruction and replacement of outpatient/medical office, research, utilities, and other supporting uses at the same intensity as under existing conditions. Specifically, this Alternative would result in the construction of the New Hospital Tower with a maximum of 446 licensed acute care beds (the same number as under the Project), or up to 379 budgeted/staffed beds, as well as relocation of all existing outpatient services to renovated space within the Existing Hospital tower, a reduced Central Plant, and complete renovation of the Existing Hospital tower in order to accommodate the outpatient services and other administrative activities previously housed within existing modular buildings throughout the Medical Center Campus. These modular buildings would be removed from the Medical Center Campus. This Alternative would also eliminate all retail uses from the development plan, as would also occur under Reduced Intensity Alternatives A and B. In addition, Reduced Intensity Alternative C would be phased so that the New Hospital Tower would be constructed by 2025, prior to relocation of outpatient uses to the renovated Existing Hospital tower, with completion of relocation activities anticipated in 2028. No additional development associated with LA BioMed or the proposed Bioscience Tech Park would occur under this Alternative. However, necessary infrastructure, landscaping, circulation, and other Medical Center Campus improvements would be implemented, to the extent necessary to serve proposed uses, as under the proposed Master Plan Project. As such, implementation of this Alternative would result in no net increase in development intensity on the Medical Center Campus relative to existing conditions, as it would maintain the existing capacity of outpatient services (housed in the renovated Existing Hospital tower or existing outpatient buildings) and would provide a comparable level of acute care beds and services as under the Project while meeting State-mandated seismic safety standards.

Summary of Environmental Effects and Achievement of Project Objectives

Unlike Reduced Intensity Alternatives A and B, Reduced Intensity Alternative C would eliminate the Project's significant and unavoidable traffic impacts at the intersections of Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would also incrementally reduce the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during future construction phases, though impacts in this regard are conservatively considered to remain significant and unavoidable. The significant unavoidable temporary operational helicopter noise impact that would occur under the Project would also occur under Reduced Intensity Alternative C.

Because Reduced Intensity Alternative C would be substantially reduced compared to the Project and Reduced Intensity Alternatives A and B, demand for public services and utilities would be incrementally reduced. However, Reduced Intensity Alternative C would have a relatively similar or incrementally reduced level of impact that would still require the implementation of mitigation measures, as under the Project, for potentially significant impacts associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

Reduced Intensity Alternative C would incrementally reduce the Project's other significant and less than significant impacts, would eliminate the significant traffic impacts of the Project, and would not result in any new or increased environmental impacts, and further, it would achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

Reduced Intensity Alternative C would support, albeit to a lesser extent than under Reduced Intensity Alternatives A and B, the Project's basic objectives to renovate existing health facilities to meet the intent of the Affordable Care Act of 2010 to modernize and integrate healthcare delivery. It would update most facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. It would partially meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would also, to a limited degree, allow for the fundamental reorganization, expansion and integration of outpatient services, and would also renovate and appropriate new Medical Center Campus construction. However, because retail uses and new outpatient buildings would be eliminated, it would not encourage the same vibrant, mixed-use setting as under the Project and would not achieve optimum public utilization of land and buildings.

Reduced Intensity Alternative C would not support the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus, as all Bioscience Tech Park and expanded LA BioMed uses would be eliminated. However, this Alternative would still meet the objective of creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices, though not to the extent the Master Plan Project would. However, Reduced Intensity Alternative C would not provide any opportunities for development up to 250,000 square feet of additional bioscience and support facilities or 225,000 square feet of expanded LA BioMed facilities.

Findings

The County finds that Reduced Intensity Alternative C would not achieve two of the Project objectives, only partially achieve five of the objectives, and fully achieve only one of the objectives, and would only eliminate one of the Project's significant environmental impacts. Although Reduced Intensity Alternative C would not provide benefits and opportunities of bioscience and support facilities, the alternative would reduce, and in some cases, eliminate, the Project's significant and unavoidable impacts. Elimination of all retail uses and outpatient buildings would not achieve the optimum public utilization of land and buildings on the Medical Center Campus. Nevertheless, in accordance with the State *CEQA Guidelines* requirement to identify an environmentally superior Alternative other than the No Project/No Action Alternative, a comparative evaluation of the remaining Alternatives indicates that Reduced Intensity Alternative C would be the environmentally superior Alternative.

6.0 Findings on Responses to Comments on the Draft EIR and Revisions in the Final EIR

The Responses to Comments, provided as Chapter 2.0 of the Final EIR, includes the comments received during the public review period on the Draft EIR and the County's responses to these comments. The focus of the Responses to Comments is on the disposition of significant environmental issues as raised in the comments, as specified by State CEQA Guidelines Section 15088(c). The County provided a written proposed response to each public agency on comments made by that public agency pursuant to State CEQA Guidelines Section 15088(b).

The purpose of the Final EIR is to respond to all comments received by the County regarding the environmental information and analyses contained in the Draft EIR. Revisions, Clarifications, and Corrections to the Draft EIR, provided as Chapter 3.0 of the Final EIR, includes any clarifications/corrections to the text, tables, figures, and appendices of the Draft EIR generated either from responses to comments or independently by the County. The County finds that comments made on the Draft EIR, the responses to these comments, and revisions to the Draft EIR clarify or update the analysis presented in the document but do not change the analysis or conclusions of the Draft EIR.

Accordingly, no significant new information, as described in State CEQA Guidelines Section 15088.5, was added to the EIR after the Draft EIR was made available for public review.

The comments, responses to comments, and the clarifications to the Draft EIR do not trigger the need to recirculate the EIR pursuant to State CEQA Guidelines Section 15088.5. These changes merely clarify or update the discussion but do not change the analysis or conclusions of the Draft EIR. Based on the analysis in the Draft EIR, the comments received, and the responses to these comments, no substantial new environmental issues have been raised that have not been adequately addressed in the Draft EIR. Also, no changes to the analysis or conclusions of the Draft EIR are necessary based on the comments, the responses to the comments, and the revisions to the Draft EIR noted above.

STATEMENT OF OVERRIDING CONSIDERATIONS

The EIR has identified and analyzed significant environmental impacts that will occur as a result of the proposed Harbor-UCLA Medical Center Campus Master Plan Project. Implementation of the project design features and mitigation measures, as discussed in the Draft EIR, can mitigate these impacts to be considered less than significant except for significant and unavoidable impacts in noise (construction and operation) and transportation and traffic (construction and operation). Implementation of the Project would result in the following significant and unavoidable impacts and would require adoption of a Statement of Overriding Considerations:

- **Noise (Construction).** The temporary sound barriers prescribed in Mitigation Measure NOISE-1 can achieve a noise reduction of 15 dBA or more in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. However, even with implementation of the mitigation measure, construction-related noise could reach up to approximately 85 dBA at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. As this will exceed the significance threshold of 60 dBA, construction noise impacts would be significant and unavoidable at the single- and multi-family residential uses across 220th Street, during Phase C, Phase 5, and Phase 6.b.

- **Noise (Operation – Temporary Helistops Only).** Temporary helicopter operations associated with use of the Interim 1 Helistop and Interim 2 Helistop would result in significant and unavoidable, albeit temporary and periodic, impacts at receptor R3. There are no feasible mitigation measures to reduce the noise increases caused by the use of these interim helistops below the level of significance at receptor R3. Therefore, the impacts of temporary use of the Interim 1 Helistop and Interim 2 Helistop would be significant and unavoidable. However, impacts would last only until completion of the permanent Helistop location on the rooftop of the proposed New Hospital Tower. Noise impacts associated with use of the permanent Helistop would be less than significant.

- **Transportation and Traffic (Construction).** Despite the incorporation of PDF-TRAF-1, Construction Traffic Management Plan, construction traffic impacts from construction worker vehicles and truck trips, for both Project-level and cumulative conditions, are conservatively concluded to be significant and unavoidable.

- **Transportation and Traffic (Operation).** The Project would generate significant traffic impacts at twelve (12) of the 22 analyzed intersections under future plus Project conditions. Although the mitigation measures would reduce impacts at those

intersections, the Project would still result in significant and unavoidable impacts at all twelve intersections. Because implementation of the proposed improvements is not entirely within the control of the County, the operational traffic impacts at these intersections are still considered significant and unavoidable.

- **Transportation and Traffic (Operation).** Although the Project would increase traffic on the freeway mainline segments, in light of the nature of regional nature of the freeway system, improvements to Caltrans freeway facilities tend to be beyond the feasibility of any individual Project to implement. Thus, Caltrans allows development projects to pay a fair share or an equitable percentage contribution toward the estimated cost of an improvement. The fair share is calculated as the Project's percentage of the total projected traffic growth on a freeway mainline segment over a 25-year period. The fair share is a contribution toward the improvement and maintenance of a shared facility that benefits the Project and the region. Investigation of potential mitigation measures were conducted as described in Section 4.L, including potential fair share contributions, but in the absence of specific improvements linked to a reasonable mitigation plan tied to actual mitigation of the impacts, no fair share contribution can be calculated or made as an adequate mitigation measure. Therefore, impacts to these intersections were concluded to be significant and unavoidable in the EIR.

The County, as the lead agency, is responsible for deciding whether to approve the Project notwithstanding its adverse environmental impacts in accordance with CEQA *State Guidelines* Section 15093, which provide as follows:

a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."

b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

After consideration of the significant and unavoidable environmental impacts of the Harbor-UCLA Medical Center Campus Master Plan Project, the County of Los Angeles Board of Supervisors hereby determines that all feasible mitigation measures have been adopted to minimize, substantially reduce, or avoid the significant impacts identified in the Draft EIR, and that no additional feasible mitigation is available to further reduce significant impacts. Further, the Board finds that economic, legal, social, technological, and other considerations of the Master Plan Project outweigh the significant and unavoidable impacts described above, and adopts the following Statement of Overriding Considerations. In making this finding, the Board of

Supervisors has balanced the benefits of the proposed project against its significant and unavoidable environmental impacts and has indicated its willingness to accept those impacts. Each benefit set forth below constitutes an overriding consideration warranting approval of the Project, independent of other benefits and despite each and every unavoidable impact:

1. The Harbor –UCLA Campus Master Plan (2012) goals as a foundational document for the realization of the Project can be implemented with Project approval bringing multiple benefits, specifically the realization of an inclusive planning effort to develop a coherent physical master plan to enhance the unique and highly interactive relationship between the clinical, educational, and research components of the campus.

   By approving the Master Plan as a foundational document, the County acknowledges each of the benefits outlined therein for the vision of a renovated and improved campus to achieve the project goals and objectives in the public interest.

   The Harbor-UCLA Master Plan can have the dual benefit of enhancing its contribution to the local and regional economy by expanding and improving the Harbor-UCLA facilities and programs. With the presence of prominent health-related tenants, including LA BioMed with a planned future buildout of up to 225,000 additional square feet within its leasehold, along with a large and well-established hospital and future development of additional biomedical research uses within the proposed Bioscience Tech Park, the Harbor-UCLA Medical Center Campus possesses many of the constituent elements needed to foster the growth of a biomedical cluster.

   The Master Plan foundation for the Project brings the additional project benefits of an enhanced campus for patients, visitors and staff; one which engages the Carson Street and the surrounding community by aligning community services along this major street; and providing the phasing strategy that permits continuous campus operations during phased improvement construction.

   The project benefits resulting from the master plan consideration of the quality of the physical environment of the new project also include a friendlier and more easily accessible place for patients, enhanced integration of the campus with Carson Street activity, enhanced integration of the campus with transit oriented development along Vermont Avenue and Carson Street and enhanced operational efficiency with improved layout for LA BioMed improvments .

2. The Harbor –UCLA Master Plan Project's overarching goal can be implemented with Project approval bringing multiple benefits, specifically the redevelopment of County –owned Harbor- UCLA medical center campus to support a modern integrated health care delivery system. It will provide a New Hospital Tower to replace the acute care functions in the Existing Hospital Tower before the state law deadline to meet seismic standards for critical trauma/tertiary acute care services so the South Bay service region and the County seamlessly retain this key link in the County-wide trauma hospital safety net which features biomedical

research and development facilities, and integrates inpatient and outpatient services in a renovated and expanded setting.

3. Project approval will implement the project objectives and realize the following specific benefits:

   a. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital Tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.

   b. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.

   c. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways;

   d. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.

   e. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as up to 225,000 square feet of expanded LA BioMed facilities.

   f. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.

   g. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.

   h. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions,

and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."

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Enclosure D

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

CONSULTANT'S UTILIZATION PARTICIPATION FOR HARBOR UCLA MEDICAL CENTER MASTER PLAN IMPLEMENTATION PROJECT MEDICAL PLANNING SERVICES

SELECTED FIRM

Consultant Name (Prime with subcontractors* listed below) *only subconsultants with Utilization Participation are listed.	Local SBE	SBE	Minority	Women	Disadvantaged	DisabledVet
Jensen Partners						

NON-SELECTED FIRMS

Consultant Name (identified only firm's with utilization)	Local SBE	SBE	Minority	Women	Disadvantaged	DisabledVet
RBB Architects Inc			X			
ECG Management Consultants						

Enclosure E

Harbor-UCLA MEDICAL CENTER

CAMPUS MASTER PLAN

COUNTY OF LOS ANGELES
HARBOR-UCLA MEDICAL CENTER

JUNE 30TH, 2012

THE FUTURE OF HARBOR - UCLA MEDICAL CENTER

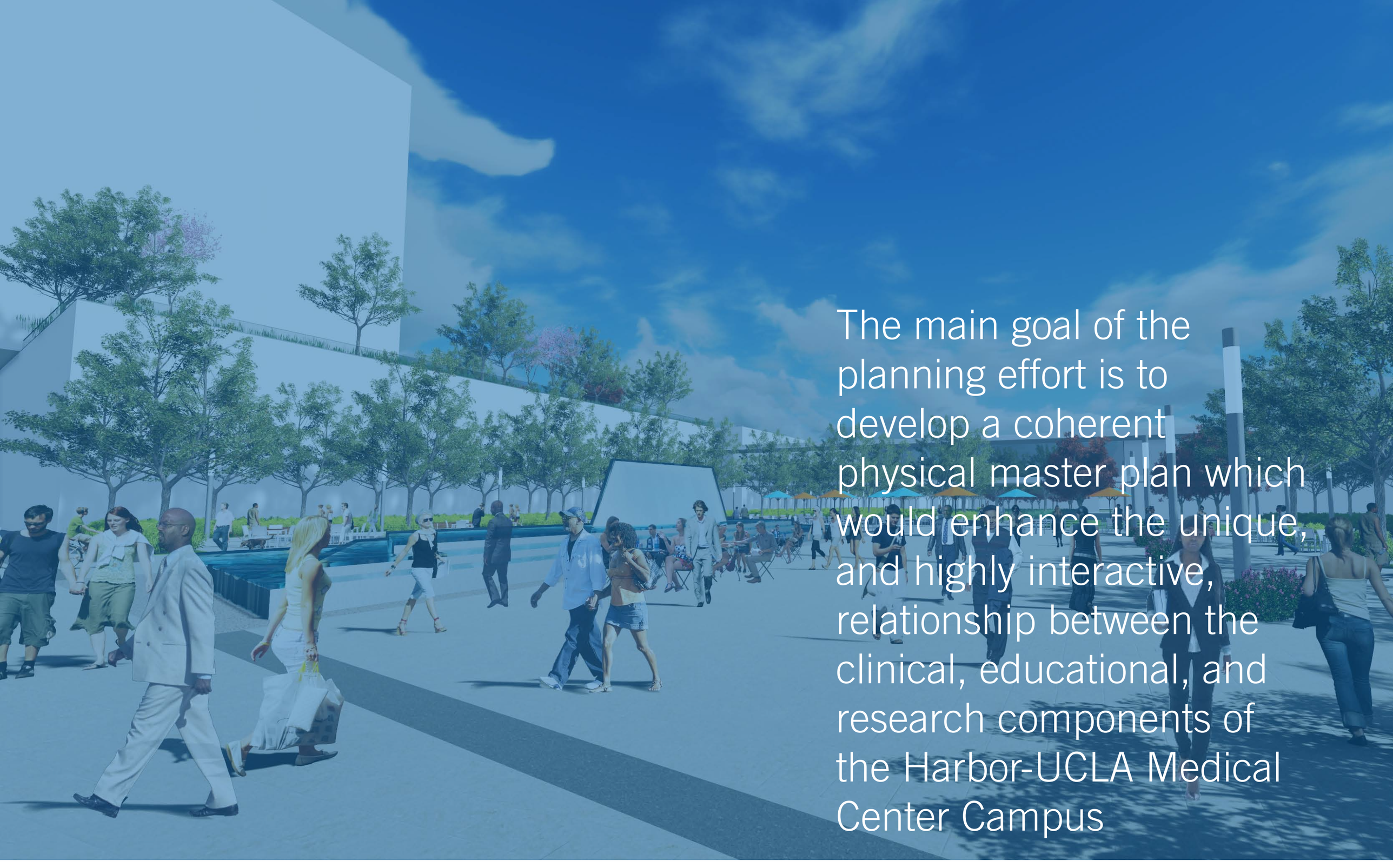
PERKINS+WILL

prepared by

PERKINS+WILL

617 West 7th Street, Suite 1200
Los Angeles, CA 90017
T 213.270.8400
F 213.270.8410
www.perkinswill.com

CONTENTS



The main goal of the planning effort is to develop a coherent physical master plan which would enhance the unique, and highly interactive, relationship between the clinical, educational, and research components of the Harbor-UCLA Medical Center Campus

EXECUTIVE SUMMARY

Harbor-UCLA is a tertiary medical center, licensed for 446 inpatient beds and operates more than 70 primary and specialty-care clinics, staffed by more than 4,000 dedicated individuals, and supported by an annual operating budget of $677 million (fiscal year 2011-2012). The campus is a key component in the County of Los Angeles' 4,000 square-mile healthcare safety net for its 10.3 million residents, many thousands of whom are uninsured or under insured and dependent on the County's Department of Health Services.

Harbor-UCLA has been affiliated with the UCLA School of Medicine since 1951. Today, the medical center is an important training ground with more than 290 full-time faculty physicians - all with a teaching appointment with UCLA's David Geffen School of Medicine -- and 120 part-time faculty physicians, and 360 volunteer faculty physicians.

With residency and fellowship programs in all medical and surgical specialties, and an international reputation as a premier teaching hospital, Harbor-UCLA attracts hundreds of top medical school graduates from across the nation each year. Because many of its graduating Resident Physicians and Fellows stay locally to practice medicine, Harbor-UCLA's training programs are a continual and important source of new medical expertise for Southland communities.

Key to Harbor-UCLA's ability to attract and retain many outstanding, experienced faculty physicians as well as to draw top residency candidates is its partnership with Los Angeles Biomedical Research Institute (LA BioMed) with many faculty who are researchers as well as clinicians.

For more than 50 years, Harbor-UCLA has been affiliated with and has conducted a broad range of important medical research with LA BioMed. This collaboration has resulted in the modern cholesterol test, important contributions to treatments for aneurisms, cancer, infectious diseases, pulmonary disorders, and other conditions, as well major clinical discoveries in perinatal, vaccine, and women's care research. Funded research expenditures exceed $40 million annually for more than 100 projects, making LA BioMed one of the top 20 independent research institutes in the nation.

The research, education, and clinical mission are carried out on campus in facilities, which for the most part, were originally designed between the 1940's to 1960s. Over the years these facilities have become increasingly inefficient to operate and maintain, creating the need for a comprehensive study of the physical planning potential. This imperative was further increased by California's Senate Bill 1953 (SB 1953) which mandates acute care services no longer be provided after January 1, 2030 in buildings built before 1973, impacting the existing Hospital, except for the Primary Care and Diagnostic Center (PCDC) building. The context of healthcare reform with an ever increasing focus on outcomes, performance, and reduced reimbursement also create an additional imperative to change operational models which in turn impacts physical plant requirements.

The main goal of the planning effort is to develop a coherent physical master plan which would enhance the unique, and highly interactive, relationship between the clinical, educational, and research components of the Harbor-UCLA Medical Center Campus. The physical master plans are augmented and supported by a programmatic assessment of Harbor-UCLA intended to validate the existing Harbor-UCLA and MLK Hospital planning initiatives, identify opportunities for future operational improvements, project future patient demand and define future services offered on the campus.

The master plan defines a radically different future campus than exists today. A new Hospital Tower connected to the existing buildings that will remain, will be the main focal point and new center of the campus. Outpatient facilities are consolidated into a sub-campus close to each other, LA BioMed and the New Hospital Tower. New LA BioMed facilities are consolidated into another sub-campus close to the outpatient facilities and the new Hospital Tower. Open plazas and landscaped areas for pedestrian circulation form the core of the campus and join the Hospital, LA BioMed and Outpatient campus. This new open space will enhance the patient, visitor, and staff experience on the campus. Patient and visitor vehicular entrances and parking are realigned off Carson Street and staff vehicular entrances are provided off Vermont Avenue and 220th Street. By re-configuring parking in this way, travel distances, vehicular circulation and wayfinding will be improved. The west side of the campus is reserved for future development. Spatial program for the campus includes core County of Los Angeles healthcare services, and research facilities focused on wellness; and retail/commercial services which support the campus' core mission. The new campus also engages Carson Street and the surrounding community by aligning services utilized by the community towards this major thoroughfare.

01 INTRODUCTION

The Harbor-UCLA Medical Center is currently in the process of master planning the existing campus site bound by Carson Street to the north, Vermont Avenue to the east, 220th Street to the south, and Normandie Avenue to the west

MASTER PLAN CONTEXT / PURPOSE

The Harbor-UCLA Medical Center Campus Master Plan establishes a forward thinking and durable framework for near and long- term campus revitalization intended to guide growth and development of the campus, as well as impact development in the surrounding area. The master plan includes analysis, recommendations, and proposals for the campus' land use, the surrounding community's population, economy, housing, transportation, community facilities, etc. The master plan is based on public input, surveys, planning initiatives, existing development, and physical characteristics, social and economic conditions.

The master plan provided an opportunity to envision a future campus that puts the health of the community first.

The master plan process considered various issues to inform future campus planning:

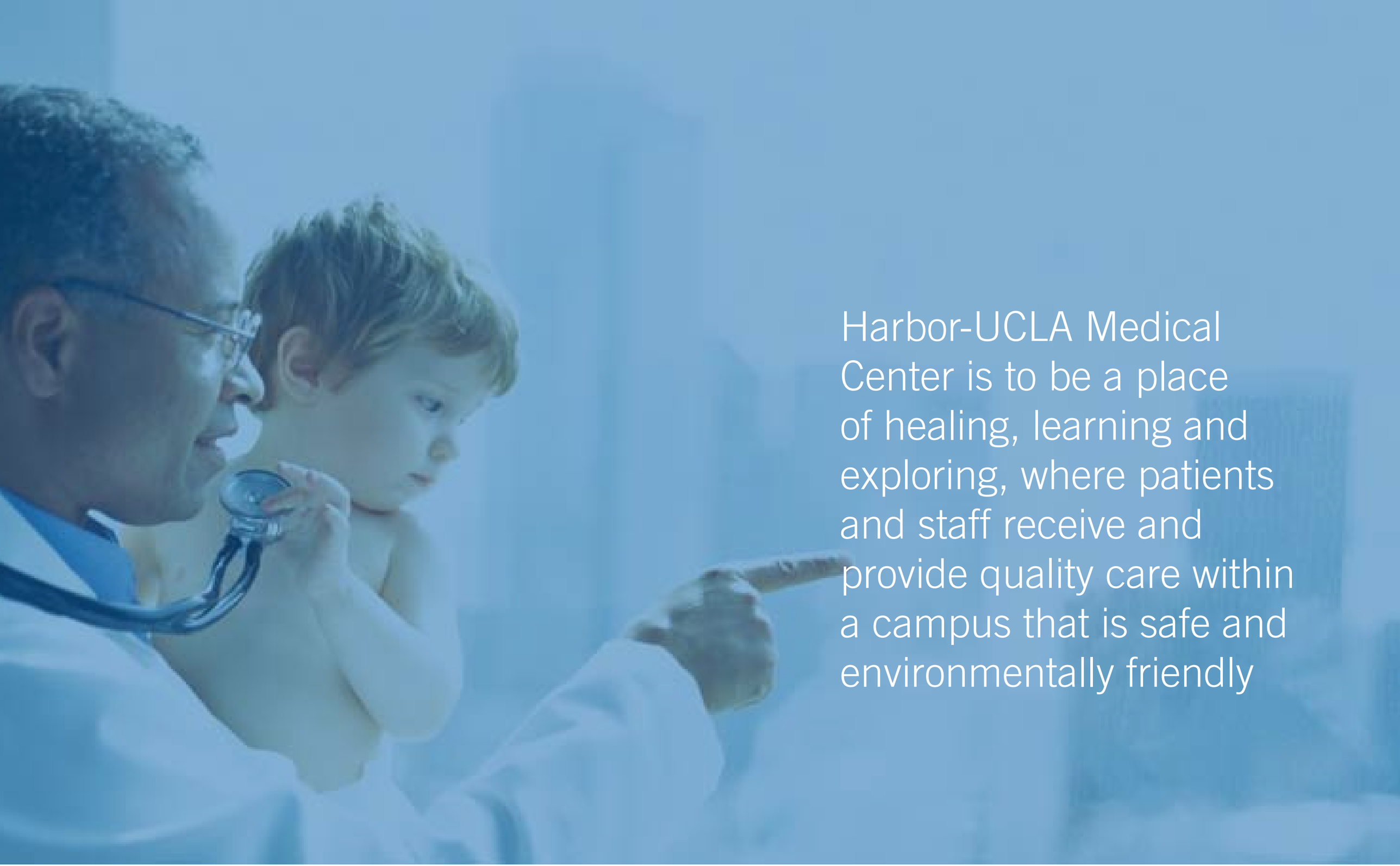
- Patients: Who are our patients now and in the future?
- Program Distribution: Which programs should be offered on the Harbor-UCLA campus?
- Care Models: How will the delivery of healthcare services change in the future?
- Affiliation: What additional affiliations will be needed to optimize value (e.g., FQHC, home care, etc.)?
- LA BioMed: How will LA BioMed's future impact future County and other campus programs?
- Efficiency: How might we treat patients more efficiently and, therefore, be able to care for more patients?
- Wellness: How can we reinforce health maintenance and illness prevention?

Comprehensive strategic, operational, physical and program planning enables reduction of risks and maximization of opportunities to achieve long-term excellence in:

- Pace-setting clinical quality
- Fiscal responsibility and exemplary stewardship
- Attracting the best clinicians and teaming partners
- Efficient quality care delivery: doing more with less
- Robust clinical teaching and research impact
- Catalyzing economic growth and P3 investment
- Community health improvement
- Meeting the needs of the under served

The master plan also considers the quality of the built environment of the new Harbor-UCLA Medical Center:

- Create a friendlier, more easily accessible place for patients
- Enhance the integration of the campus with Carson Street activity
- Enhance the integration of the campus with transit oriented development along Vermont Avenue and Carson Street
- Improve the physical relationships between Harbor-UCLA and LA BioMed to enhance the operational efficiency of the campus



Harbor-UCLA Medical Center is to be a place of healing, learning and exploring, where patients and staff receive and provide quality care within a campus that is safe and environmentally friendly

MASTER PLANNING PRINCIPLES

Harbor-UCLA Medical Center is to be a place of healing, learning and exploring, where patients and staff receive and provide quality care within a campus that is safe and environmentally friendly. A facility which promotes new ways of delivering care, adapts to a changing workforce, interacts with community, and provides services with available resources. Consistent with Harbor-UCLA's Vision Mission Planning Principles which guide the master plan are as follows:

These principles were developed through public outreach, interactions with the County of Los Angeles Second Supervisorial District leadership and County of Los Angeles leadership staff from: Chief Executive Office; Department of Health Services; Department of Mental Health; Harbor-UCLA Medical Center; and Department of Public Works.

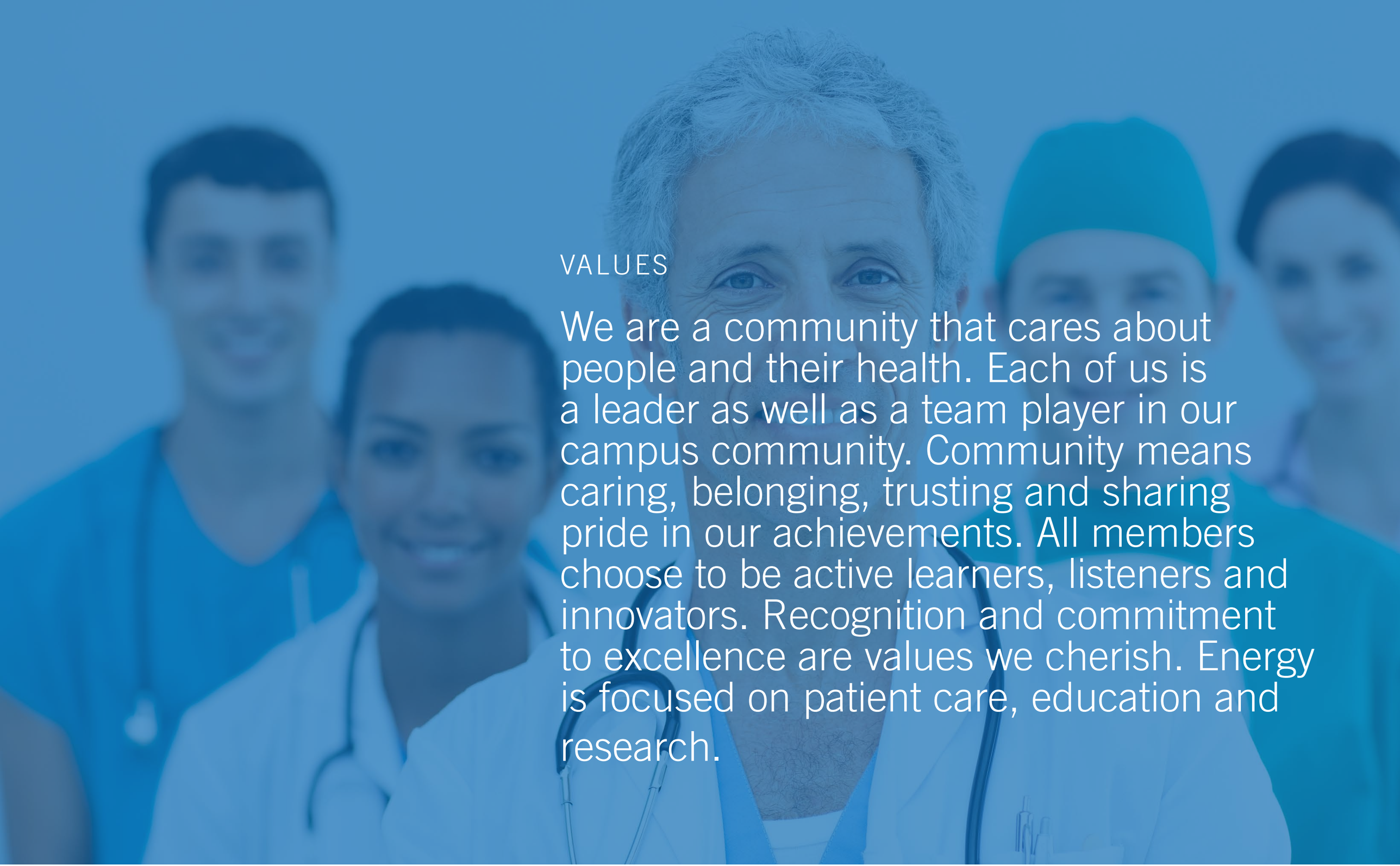
- Achieve optimum public utilization of County of Los Angeles controlled land and buildings.
- Redevelop the Harbor-UCLA Medical Center campus to support an integrated healthcare delivery model.
- "First, do no harm" to the environment by developing the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations. Create durable, adaptable green infrastructure and buildings, promote resource-efficient transportation solutions, and seek climate positive outcomes. Establish goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste. Accommodate changing sustainable design practices, from current standards to a future vision for a Regenerative Campus.
- Provide for a fundamental reorganization, expansion and integration of outpatient services with the specific goals of being more community based and patient centered, more efficient, and configured to maximize clear wayfinding on campus.
- Catalyze economic growth and public/private development opportunities.
- Update facilities to modern standards.
- Consolidate inpatient and outpatient services to dedicated buildings to optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs.
- Identify strategies that optimize synergies between LA BioMed and encourage a mixed-use and vibrant campus setting.

VISION

Harbor-UCLA Medical Center…the center of an integrated, regional healthcare delivery system, which excels in patient-centered care, medical education, and research.

MISSION

The mission of Harbor-UCLA Medical Center is to provide high-quality, cost-effective, patient-centered care through leadership in medical practice, education, and research. Services are provided through an integrated healthcare delivery system to residents of Los Angeles County regardless of ability to pay.



VALUES

We are a community that cares about people and their health. Each of us is a leader as well as a team player in our campus community. Community means caring, belonging, trusting and sharing pride in our achievements. All members choose to be active learners, listeners and innovators. Recognition and commitment to excellence are values we cherish. Energy is focused on patient care, education and research.

ACKNOWLEDGEMENTS

The following were instrumental in the preparation of this master plan:

MASTER PLAN PROJECT TEAM

PERKINS+WILL
Campus Master Planner

Gabrielle Bullock, Managing Principal
Jean Mah, Planning Principal
Nick Seierup, Design Principal
Blair McCarry, Sustainability Principal
Russell Triplett, Senior Project Manager
Larry Metcalf, Senior Medical Planner
Mark Tagawa, Senior Project Designer
Kamala Subbarayan, Urban Planning
Juan Portuese, Designer
David Manzano, Designer
Kay Chang, Designer
Jean-Claude Lesaca, Project Coordinator

DAVIS LANDGON
Cost Estimation

Paul Abernathy
Rick Lloyd

ECONOMIC & PLANNING SYSTEMS
Economic Development

Jason Moody, Principal
Benjamin Sigman, Vice President

KIMLEY-HORN AND ASSOCIATES INC.
Civil Engineering

Nikki Kerry, Project Manager
David Bossu, Project Engineer
Jason A. Marechal, Senior Project Engineer, Civil
Serine Ciandella, Senior Project Engineer, Traffic

KURT SALMON
Medical Programming

Jeff Hoffman, Senior Partner
Craig Acosta, Partner
Harvey Makadon, MD, Associate Partner
Rob Langheim, Senior Manager
Micheel Bernard, Senior Consultant
Mick Orr, Consultant
Scott Madsen, Analyst

LERCH BATES
Materials Management

Dan Feeman, Project Manager

SWA GROUP
Landscape Architecture

David Berkson, Principal
Kevin Slawson, Senior Project Designer, Project Manager
Steve Rydzon, Associate
Christopher Hall, Designer
Pavel Petrov, Designer

SYSKA HENNESSY GROUP
Mechanical, Electrical, Plumbing Engineering

Robert Tomlinson, Senior Project Manager
Luke McGuire, Mechanical Engineer
Andrew Reilman, Mechanical Engineer

THE ROBERT GROUP
Community Outreach

Christine M. Robert, President
Arcelia Arce, Project Manager
Paige Prager, Assistant Project Manager

VANTAGE TECHNOLOGY CONSULTING GROUP
Technology

Phil Crompton, Principal

WALKER PARKING CONSULTANTS
Parking

Dan Johns, Managing Principal
Ezra Kramer, Parking Planner
Pari Ashabi, Parking Designer

WALTER P. MOORE & ASSOCIATES
Stuctural Engineering

Daniel Traub, S.E., Principal

COUNTY, REGIONAL AGENCIES AND ORGANIZATIONS

COUNTY OF LOS ANGELES SECOND SUPERVISORIAL DISTRICT

The Honorable Mark Ridley-Thomas, Supervisor
Yolanda Vera, Senior HealthServices & Advocacy Deputy
Dan Rosenfeld, Senior Economic Development, Sustainability & Mobility Deputy
Karla Sayles, Assistant Health Services & Advocacy Deputy

COUNTY OF LOS ANGELES CHIEF EXECUTIVE OFFICE

William Fujioka, Chief Executive Officer
Rita Robinson, Deputy Chief Executive Officer
Jan Takata, Senior Manager, CEO
Sabra White, Manager, CEO
Tracy Holcombe, Principal Analyst, CEO

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

David Howard, Assistant Deputy Director
Andy Moey, Capital Projects Program Manager
Clarice Nash, Project Manager

COUNTY OF LOS ANGELES DEPARTMENT OF HEALTH SERVICES

Mitchell H. Katz, M.D., Director
Mark Ghaly, M.D., MPH, Chief Deputy Director
Delvecchio Finley, Chief Executive Officer, Harbor-UCLA Medical Center

THE HARBOR-UCLA MEDICAL CENTER STAFF

Thank you also to all who volunteered their time and opinions in stakeholder interviews and presentations. Individuals are listed in the Appendix.

MASTER PLAN PROCESS

Perkins+Will was selected by the Chief Executive Office of the County of Los Angeles, and supported by the Administration of the Harbor-UCLA Medical Center staff to lead the development of a new master plan for Harbor-UCLA Medical Center.

The master plan effort includes consideration of current conditions and future needs of the Harbor-UCLA Medical Center Hospital and Clinics, the LA BioMed Research Foundation, the Medical Foundation, Inc. (MFI), and the Department and Faculty Administration component of the UCLA Teaching Program at the site. We developed a Community Outreach program to reach out to the local community, Community Organizations, and selected Stakeholders to get their thoughts and ideas for their vision of the future for the Harbor-UCLA Medical Center campus.

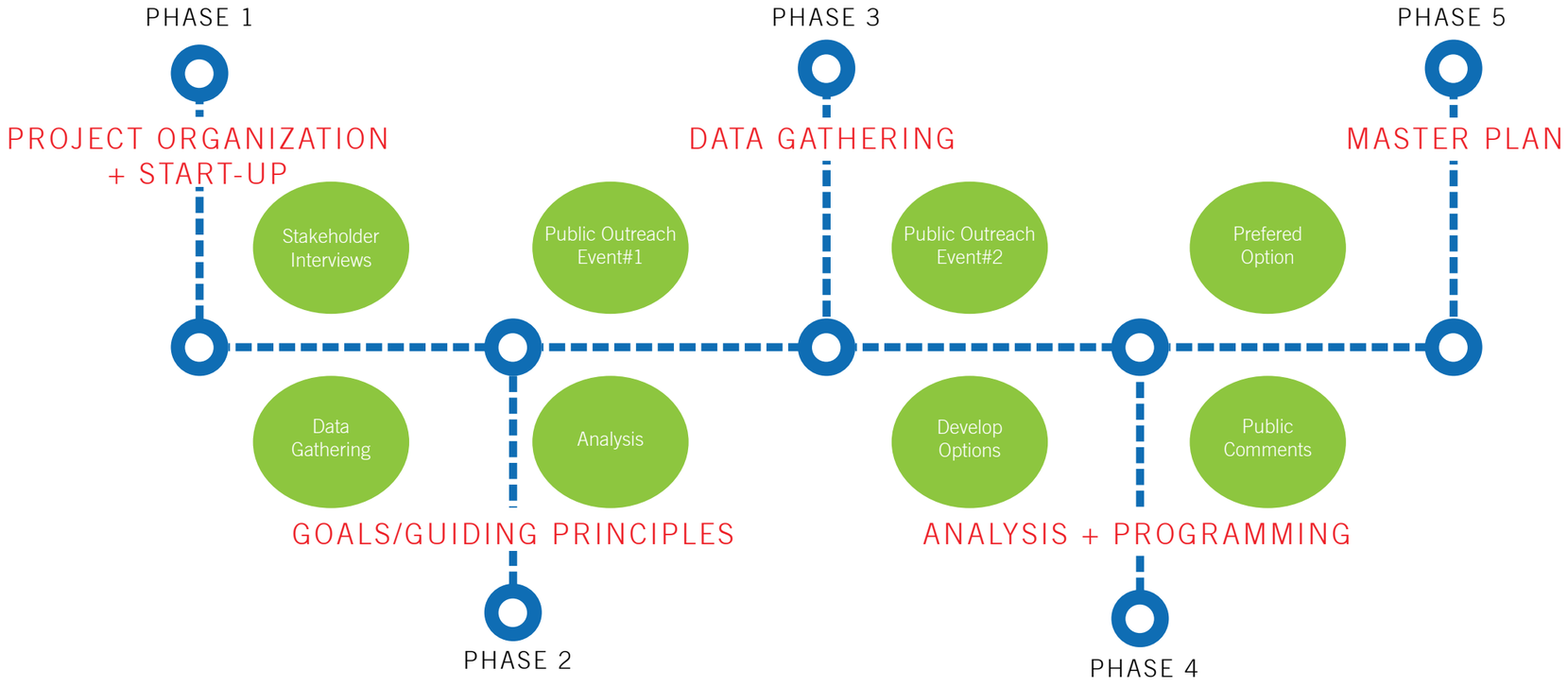
This report summarizes the master plan process conducted by Perkins+Will in association with Davis Langdon, Epsys Inc., Kimley-Horn, Kurt Salmon, Lerch Bates, Vantage Technology inc., Walter P. Moore, Walker Parking, and The Robert Group.

DIAGRAMMING THE MASTER PLAN PROCESS

The master plan process is an opportunity to develop a collective vision for the future development of the Harbor-UCLA Medical Center Campus and to become a catalyst for a positive economic and social impact in the adjacent and greater community that the medical center serves. This process provided an opportunity to bring together the active, but sometimes uninvolved constituency of neighbors, business owners, and medical center patients and visitors.

The master plan process as developed was structured in five separate phases. Phase 1 consisted of defining the overall goals and guiding principles defined and established by the entire project team. Phase 2 was the development of the guiding principles including near-term, short-term and long-term (2030) needs and goals for the medical campus and future development. Phase 3 consisted of data gathering and researching the existing physical, clinical, operational and economic constraints that could inform or impact the future planning. Phase 4 consisted of the analysis of all the information gathered in the previous phase. The master planning phase will be based upon an analysis of the information gathered.

Phase 5 of the master planning process is the actual master plan development and reporting to the project stakeholders.



02 BACKGROUND

The Harbor-UCLA Medical Center Campus occupies a 72 acre site in southern Los Angeles County

REGIONAL CONTEXT

The Harbor-UCLA Medical Center located at 1000 West Carson Street is bound by Carson Street to the north, Vermont Avenue to the east, 220th Street to the south, and Normandie Avenue to the west. The project is located in unincorporated Los Angeles County, with the border for the City of Los Angeles running on the eastern side of Normandie Avenue. The Harbor-UCLA Medical Center Campus occupies a 72-acre site in southern Los Angeles County. The medical campus is easily accessible from several Southern California freeways. The 110 and 405 freeways are accessible from Carson Street on the east of the campus.

The City of Carson is to the east of the campus and the City of Torrance on the west. The campus is near the beach front Cities of Redondo Beach, and Palos Verdes Estates. To the south of the campus is the Port of Los Angeles

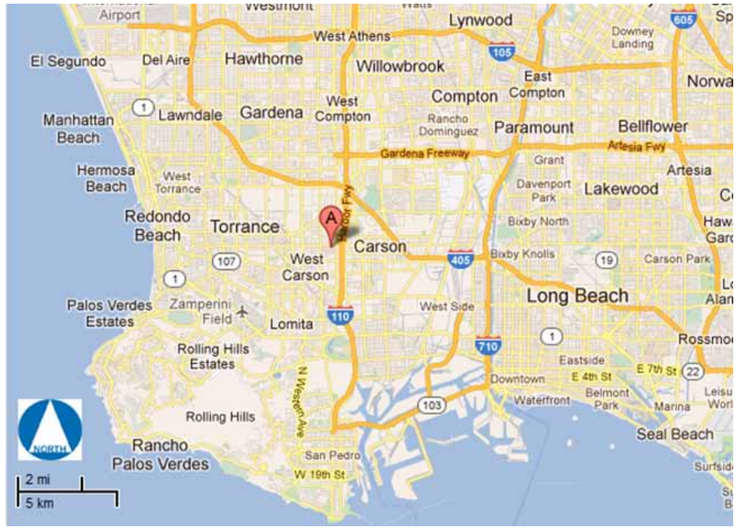
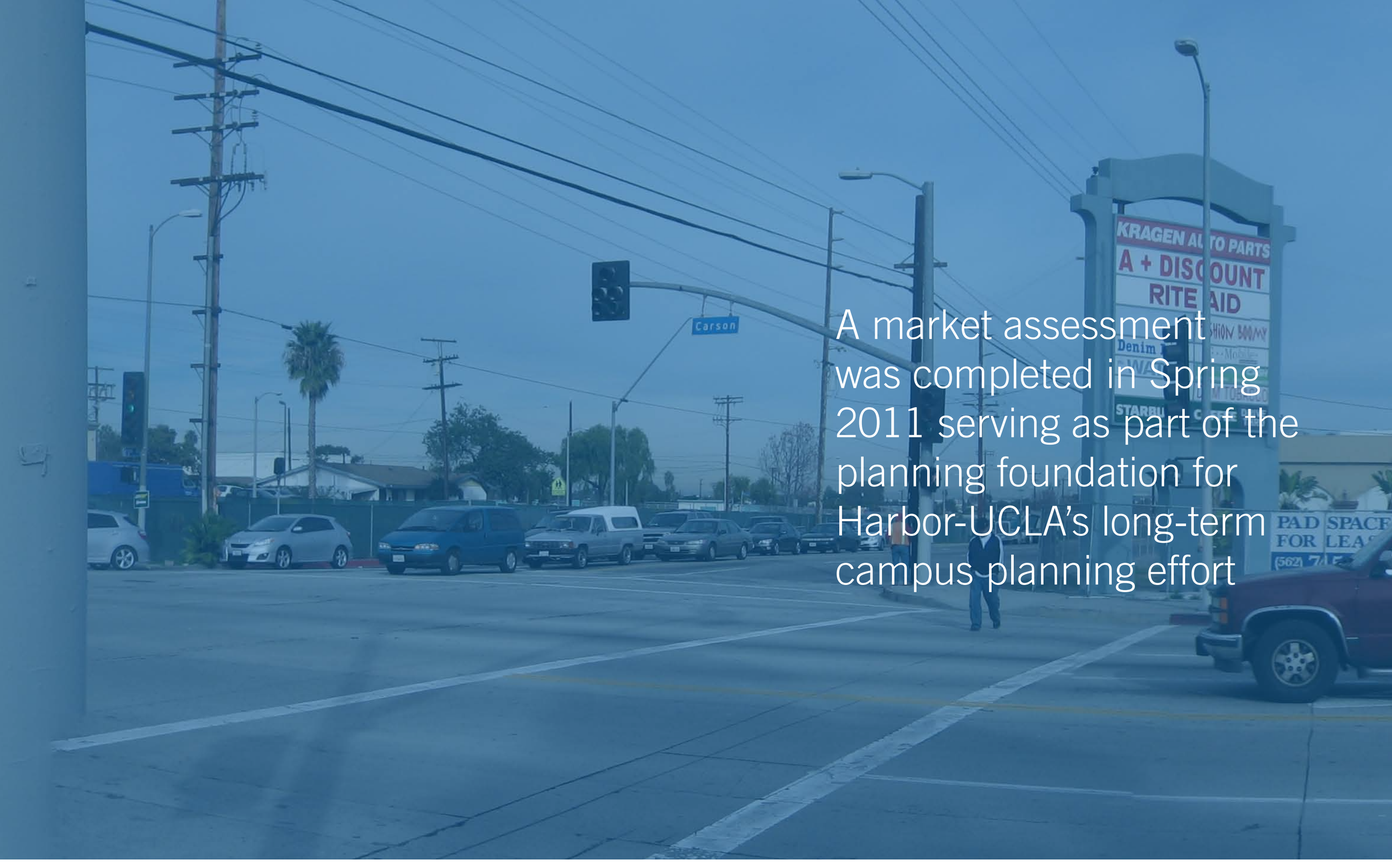


FIG. 01 - Map illustrating the regional context of the Harbor-UCLA Medical Center Campus Master Plan area.



A market assessment was completed in Spring 2011 serving as part of the planning foundation for Harbor-UCLA's long-term campus planning effort

MARKET ASSESSMENT

A market assessment was completed in Spring 2011, serving as part of the planning foundation for Harbor-UCLA's long-term campus planning effort. The County of Los Angeles anticipates significant restructuring of the existing campus, consistent with a 2030 planning horizon, and asked the planning team to evaluate the Harbor-UCLA market as well as Harbor-UCLA's place in the market to ensure essential healthcare services continue to be provided to residents living in the South Bay Region.

Following the collection of internal and external data, site tours of the Harbor-UCLA campus, and interviews with key executive and physician leaders, a Market Assessment was completed that focused on the following areas:

- Current State – A thorough analysis of key market characteristics and drivers to identify trends that will impact Harbor-UCLA
- Future State – An evaluation of future market considerations that Harbor-UCLA will need to anticipate and prepare for in order to remain successful
- Future Practice of Medicine – Clinical care models and operational principles that will be incorporated into the campus planning effort

Key findings and preliminary considerations were developed based on this assessment and are included in the following pages:

CURRENT STATE

An assessment of the current state included a study of patient volume coming to Harbor-UCLA, how patients have historically been reimbursed, overall health of those living in the service area, Harbor-UCLA's clinical service offerings, and its relationship with other healthcare entities. Preliminary conclusions based on the Current State Assessment are as follows:

Patient Origin - Harbor-UCLA plays a critical role in meeting the healthcare needs of people in the greater South Bay Region, particularly those living within 15 miles of the Harbor-UCLA campus

Population Health - Greater focus on health and wellness is needed in the community as rates of obesity and diabetes continue to increase, which will result in preventable future demand for healthcare services

Care Coordination - Harbor-UCLA's continuum of patient care is limited, making it difficult to provide coordinated care for patients in the community; Harbor-UCLA has a significant opportunity to improve its coordination efforts with its health centers as well as other federally qualified health centers in the region

Positioning - Harbor-UCLA is positioned to be the tertiary medical center in the South Bay Region with its current breadth of services, residency programs, existing infrastructure, and MLK serving as a sophisticated community hospital

FUTURE STATE

The planning team then studied how Harbor-UCLA's market will likely evolve over the next 10 to 20 years and what Harbor-UCLA must do to prepare for this change. Service area population and aging estimates were studied, expected changes in physician and nursing supply / demand were assessed, and reimbursement / funding changes were considered resulting in the following key conclusions:

Population Growth and Aging - Harbor-UCLA will see an increasing demand for healthcare services in the future due to population growth and aging and already low healthcare utilization rates today

Workforce Changes - Future physician and nursing shortages in The County of Los Angeles will compel Harbor-UCLA to rethink how it provides care in the community moving forward

Funding - Harbor-UCLA will likely benefit from the expansion of Medicaid beneficiaries resulting from Health Reform, however, this reimbursement stream will continue to pay below cost, and other reimbursement streams will see declines in growth rates (e.g., Medicare)

Harbor-UCLA Response - Harbor-UCLA will need to (1) enhance its operating performance – near-term and long-term, (2) define new care models, (3) lead in activities to better manage the health of the residents of the County of Los Angeles, and (4) grow intelligently in order to remain a viable and successful safety net provider

FUTURE PRACTICE OF MEDICINE

The planning team, having an opportunity to lead the majority of campus planning engagements for North America's leading academic medical centers, has gained valuable insights and deep expertise in best practices, which will be incorporated in Harbor-UCLA's campus planning effort. For this section of the report, key planning principles have been outlined for all components of Harbor-UCLA's campus, including the following areas:

On-Campus Ambulatory Care - Emphasis on patient-centered, coordinated care that is consolidated on campus and connected throughout all clinics in the community.

Ideal Patient Experience® - Enhancing the care experience from the patient's perspective and identifying specific metrics to inform the ongoing management process of patient care

Inpatient Services - Designing new facilities with flexibility in order to accommodate unpredictable changes in medicine and technology over the lifespan of the building

Medical Education - Accommodate space that supports Harbor-UCLA's teaching mission, including sufficient conference and teaching space, access to Electronic Health Records (EHRs), and patient simulation

Information Technology - Plan future building technology infrastructure in a manner that serves as a foundation for further IT advances; this infrastructure will emphasize flexibility, scalability and adaptability

Research - Support translational and clinical research by developing appropriate space for clinical researchers in their hospital related activities and ensuring connectivity remains between clinical, teaching, and research activities

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CONTEXT AND COMMUNITY

The following represents the local context and community development that were reviewed during the Harbor-UCLA Medical Center Campus Master Plan analysis effort.

• The Harbor-UCLA Medical Center Campus is within 1 mile of several jurisdictions including the County of Los Angeles, City of Torrance, City of Los Angeles, and the City of Carson.

• The overriding land use throughout the surrounding area is residential with small and medium scale commercial developments to the north and east of the project site.

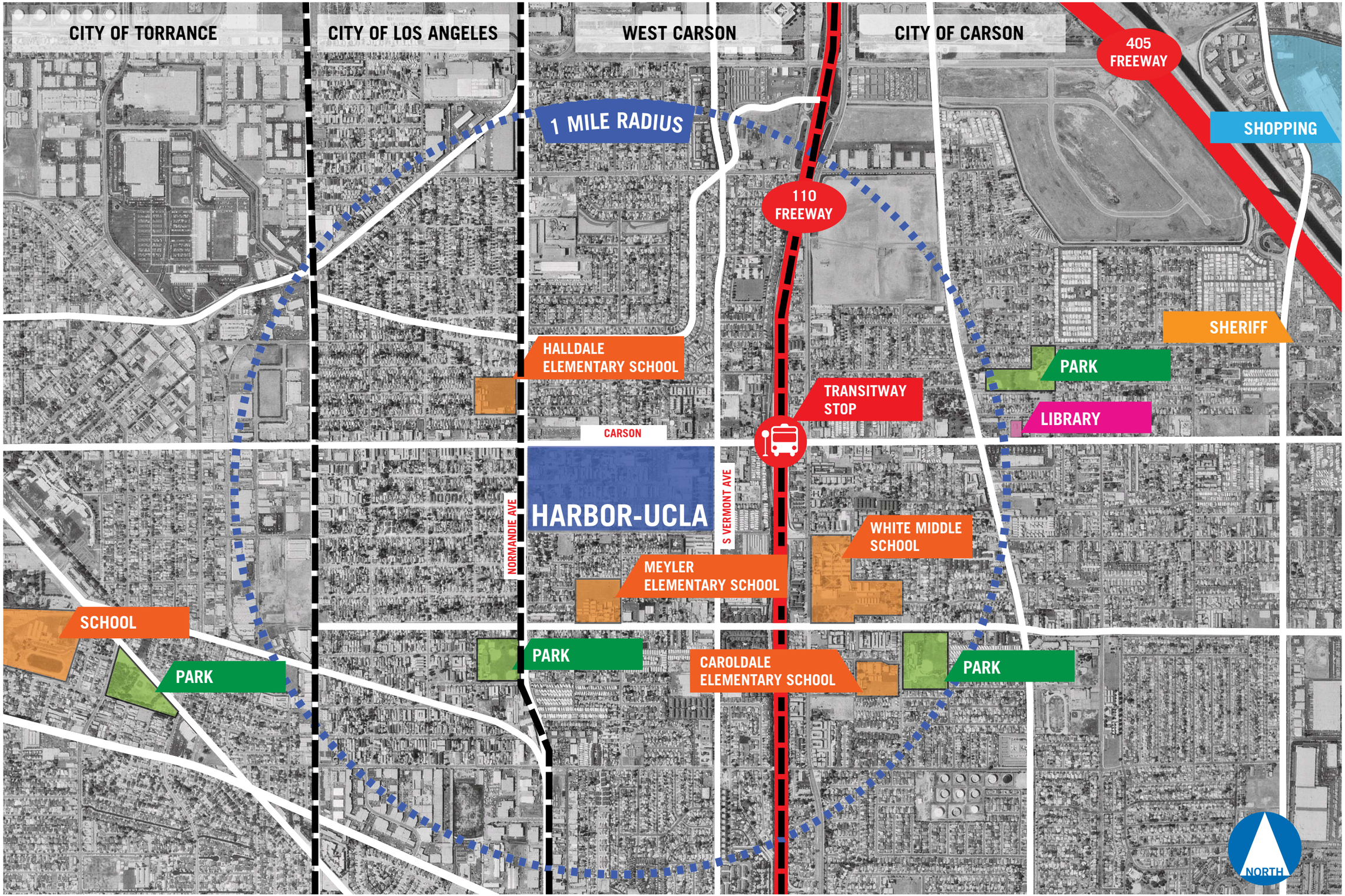
• Some of the commercial properties to the north of the campus show signs of neglect.

• Mixed scale housing directly adjoins the south, east and west boundaries of the site. Along 220th Street there are single family homes with multi-family dwellings to the east.

• Parks and open space lie within one mile of the campus, but are too remote for the campus community to utilize them regularly during a typical work day.

• There is a potential connection to the City of Carson as the city develops the Carson Street Master Plan just east of the Harbor-UCLA Medical Center site.

• A connection is possible to the Harbor Transitway bus line in the 110 Freeway, providing an interface with regional public transportation.


CITY OF TORRANCE
CITY OF LOS ANGELES
WEST CARSON
CITY OF CARSON
405 FREEWAY
SHOPPING
1 MILE RADIUS
110 FREEWAY
SHERIFF
HALLDALE ELEMENTARY SCHOOL
PARK
TRANSITWAY STOP
LIBRARY
CARSON
HARBOR-UCLA
NORMANDIE AVE
S VERMONT AVE
WHITE MIDDLE SCHOOL
MEYLER ELEMENTARY SCHOOL
SCHOOL
PARK
PARK
CAROLDALE ELEMENTARY SCHOOL
PARK
NORTH

Harbor-UCLA has a significant economic impact on surrounding jurisdictions and the County as a whole as a result of the spending by campus tenants and their employees in the regional economy

Image: The South Bay; © Neil Kremer

ECONOMIC CONTEXT

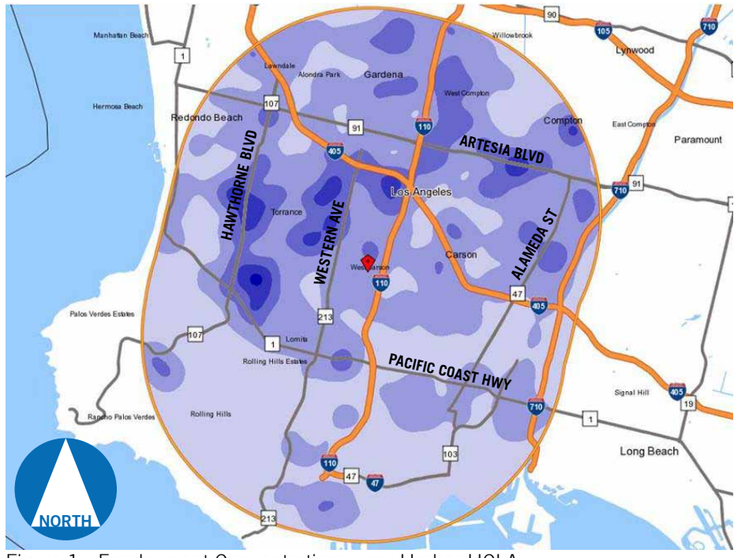


Figure 1 - Employment Concentrations near Harbor-UCLA

Legend: Employment Concentration

High Low

With more than 3.8 million jobs, the County of Los Angeles is one of the top employment centers in the United States and home to nearly 30 percent of the jobs in California. The County contains key economic clusters in healthcare, entertainment, trade and logistics, and a variety of high-tech fields. Employment concentrations in these clusters significantly exceed the national averages. The healthcare sector alone accounts for about nine percent of the County's employment and is one of the few sectors that has experienced steady growth over the last four years, weathering the "Great Recession" that commenced in 2008 (the County's current unemployment rate of slightly over 12 percent compares to 7.5 percent in 2008 and is just below 5 percent in 2006).

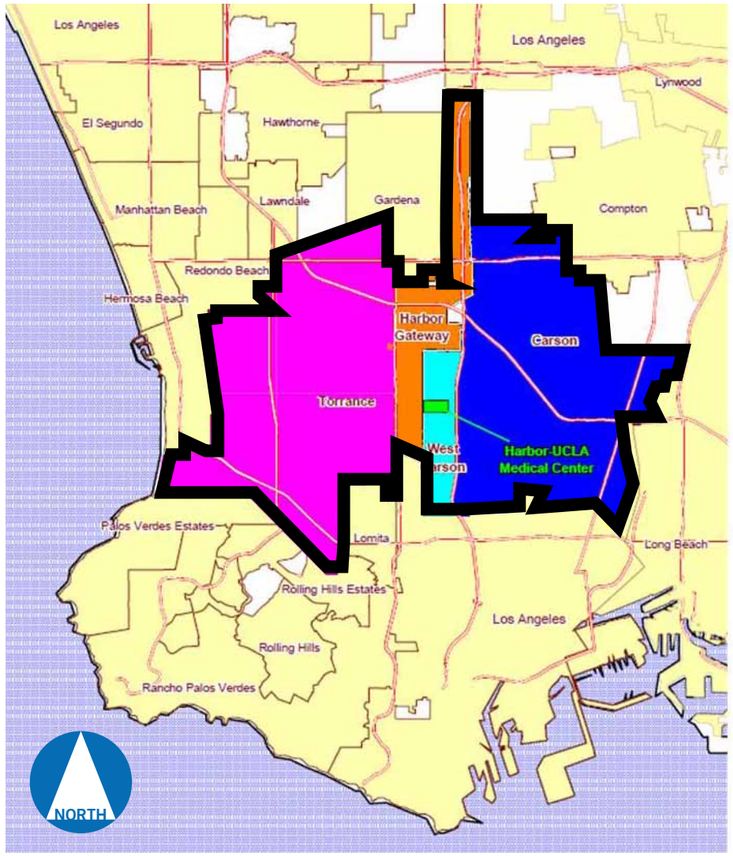
The Local Study Area economy parallels the County of Los Angeles as a whole, but exhibits relatively high employment concentrations in the manufacturing, trade, and logistics sectors. For example, almost one in five Local Study Area jobs is in the manufacturing sector. This economic orientation reflects the distinctive characteristics of the location, adjacent to major transportation corridors and logistics facilities (e.g., Port of Los Angeles), and the significant labor force supported by large and diverse residential communities contained within and nearby the Local Study Area.

The cities of Torrance and Carson are both home to a number of relatively large employers with major manufacturing and logistics facilities in the automobile, technology, aerospace/defense, and energy sectors. However, it is worth noting that the combined employment at the Harbor-UCLA campus of over 5,000 direct jobs makes it far and away the largest employer in the Local Study Area.

Although the Harbor-UCLA campus is a key job generator, many of the employment nodes in the Local Study Area are located elsewhere. In particular, the greatest employment concentrations are located in Torrance between State Route 107 (Hawthorne Boulevard) and State Route 213 (Western Avenue), as shown in Figure 1.

The South Bay offers a solid industrial base, strong transportation and other infrastructure, diverse workforce and residential communities that will support a wide range of healthcare related activities and sectors at Harbor-UCLA

Image: The South Bay; ©Neil Kremer



Above: Local Study Area includes the cities of Torrance, Carson, parts of Los Angeles, and un-incorporated County of Los Angeles

ECONOMIC IMPACTS

PURPOSE AND SCOPE

This section evaluates the economic and fiscal impacts of Harbor-UCLA on local and regional communities. The analysis endeavors to inform the master plan process and to provide a "baseline" from which the economic and fiscal implications of various master plan alternatives may be evaluated. This section includes the following primary components of analysis:

1. Regional Socioeconomic Context documents the existing demographic and economic conditions within the local and regional area as relevant to the Harbor-UCLA campus.

2. Primary Economic Impact Analysis estimates the primary economic impacts from Harbor-UCLA campus that are derived from the spending of the hospital, other campus tenants, and associated staff members.

3. Secondary Economic Impact Analysis describes Harbor-UCLA's secondary economic impacts, focusing on its relationship to the biomedical industry and local real estate market.

4. Fiscal Impact Analysis evaluates the impacts of the Harbor-UCLA campus on the General Fund budgets of neighboring jurisdictions (i.e., the cities of Los Angeles, Carson, and Torrance).

PROGRAM AND GEOGRAPHIC FOCUS

The Harbor-UCLA campus includes the County hospital and support facilities as well as important tenants such as the Los Angeles Biomedical Research Institute (LA BioMed), the Medical Foundation, Inc. (MFI), the Children's Institute, and others. Although the campus itself is located in a relatively small unincorporated enclave of the County of Los Angeles, the programs, services, and activities of its tenants extend beyond these boundaries and impact neighboring jurisdictions and the broader Los Angeles region. Consequently, this analysis evaluates the role of the Harbor-UCLA hospital and other tenants located on campus within several distinct, yet inter-related geographic areas. .

• West Carson: The Harbor-UCLA campus is located within the community of West Carson, a Census Designated Place (CDP) located in unincorporated County of Los Angeles. This community is relatively small (2.26 square miles) and surrounded on all sides by relatively dense, urbanized, and incorporated cities.

• Local Study Area: Given Harbor-UCLA's position immediately adjacent to several neighboring communities, this study has defined a "Local Study Area" that reflects the primary "sphere of influence" from the perspective of economic and fiscal impacts. The Local Study Area includes the cities of Torrance and Carson, a portion of the City of Los Angeles referred to as the Harbor Gateway Community, and West Carson.

• County of Los Angeles: Since Harbor-UCLA's position within the County of Los Angeles is critical to its function and success and because the facility is managed by the County of Los Angeles Department of Health Services, the County as a whole

As the largest employer in the Local Study Area, Harbor-UCLA has a significant economic impact on surrounding jurisdictions and the County as a whole as a result of the spending by campus tenants and their employees in the regional economy.

is considered important to the analysis.

KEY FINDINGS

The key findings from this economic and fiscal analysis are summarized below.

The Harbor-UCLA campus is strategically situated within a robust and diverse regional economy which, although still recovering from the so-called "great recession", maintains long-term assets and growth prospects that if appropriately leveraged could significantly contribute to the success of the master plan. The so-called South Bay, in particular, offers a solid industrial base, strong transportation and other infrastructure, diverse workforce and residential communities that will support a wide range of healthcare related activities and sectors at Harbor-UCLA. The cities of Torrance and Carson, for example, are home to relatively large employers with major manufacturing and logistics facilities in the automobile, technology, aerospace/defense, and healthcare. In addition, the South Bay is home to some of the most exclusive communities in the LA region, (most clustered along the coast), as well as a number of relatively affordable areas further inland.

As the largest employer in the Local Study Area, Harbor-UCLA has a significant economic impact on surrounding jurisdictions and the County as a whole as a result of the spending by campus tenants and their employees in the regional economy. Specifically, combined the Harbor-UCLA tenants spend about $307 million on goods and services, about 85 percent of which is capture in the County, and $451 million on wages and salaries. This activity generates an estimated 5,500 direct and 8,700 indirect and induced jobs in the County (a total of about 14,200 jobs). If 100 percent of the spending by Harbor-UCLA tenants were captured locally, its economic impact in the County would increase by about 2,200 additional jobs.

Los Angeles has a well-developed biomedical sector, sustained by a variety of high-profile companies, research institutions, and other public and nonprofit entities (including Harbor-UCLA tenants), that support the field in a variety of ways. Overall, the County had about 45,000 biomedical jobs in 2009, representing about 26 percent of all biomedical jobs in California, a State consistently ranked number one in the United States for biomedical and biotechnology activity. The County's biomedical sector has exhibited relatively fast growth rates over the last decade, proving to be more resilient than other high tech sectors and the economy as a whole even during the recent downturn, underscoring its importance in sustaining the regions long-term competitiveness.

The Local Study Area has a sizable biomedical sector with about 28 separate firms, ranging from large and established bio-medical companies such as Physical Optics Corp., and PolyPeptide Laboratories to a variety of smaller firms. LA BioMed, the largest tenant on the Harbor-UCLA campus behind the hospital itself, is often cited as one of the critical ingredients to creating the type of environment, synergies, and industry connections that have been critical to the formation of biomedical clusters elsewhere. Indeed, LA BioMed attracts significant research funding and is responsible for a variety of medical accomplishment, as reflected by numerous patents, license agreements, and at least five spin-off firms. However, similar to the biomedical sector in the LA region as a whole, the Local Study Area does not appear to have a high profile reputation or identifiable nucleus of activity in the biomedical industry.

With the presence of LA BioMed and other prominent health-related tenants along with a large and well-established hospital, the Harbor-UCLA campus possesses many of the constituent elements needed to foster the growth of a biomedical cluster. However, to date this combination of assets has resulted in relatively modest value capture in terms of the emergence of a strong, local hub or cluster of biomedical activity. This analysis identified only three private sector establishment with operations in the Local Study Area and a direct connection to the Harbor-UCLA campus (NovaDigm Therapeutics and Emmaus Medical, Inc., both LA BioMed "spin-offs, and Insight Health Corp., a major Harbor-UCLA vendor). Consequently, the master plan effort could seek to better leverage the Harbor-UCLA assets and improve the local "value capture" from its programs and activities.

...the master plan process could seek to further leverage potential linkages with surrounding neighborhoods.

The existing impact of the Harbor-UCLA campus on the local real estate market appears to be focused on immediately adjacent commercial centers. Although this analysis identified about 15 healthcare-related tenants in the commercial centers across the street, (including 3 pharmacies), a larger health-care cluster of the type that often emerges adjacent to major hospitals has not developed significantly beyond this immediate area. Given the potential for hospitals to generate demand for retail, office, and even residential uses (e.g., from both patients seeking complimentary services as well as healthcare tenants and employees), the master plan process could seek to further leverage potential linkages with surrounding neighborhoods.

The Harbor-UCLA campus appears to have a minimal fiscal impact on the General Fund budgets of the incorporated cities located nearby. This is because the bulk of tax revenues and public service costs generated by Harbor-UCLA appear to be captured on campus or in West Carson and thus accrue to the County rather than neighboring jurisdictions.

EXISTING CAMPUS

The 72-acre site of th Harbor-UCLA Medical Center Campus is located in unincorporated County of Los Angeles designated as West Carson. The site is relatively flat with a slight grade change along the length of Carson Street along the north edge of the campus. The major development was as a military installation comprised of wooden barracks that were designed for seven years of use. The barracks were arranged along an east to west network of internal campus roadway system. Development since the County purchased the property from the Federal Government for use as a County Hospital has followed the major grid axis on the site.

The following represents the issues that were reviewed during the Harbor-UCLA Medical Center Campus Master Plan analysis effort.

• Currently, LA BioMed facilites take up the largest portion of campus land area due to their low-density buildings. The majority of the County of Los Angeles healthcare functions are located on the eastern half of the site. Large tenants such as the Medical Foundation Inc. Building, Children's Institute International, and Imaging Center are clustere on the western edge of the campus.

• There is no coherent design aesthetic that ties the campus buildings together as a campus. Instead the site is characterized by a mix of different styles, materials and finishes.

• Much of the site is organized in small low-rise modular buildings that spread the campus functions over most of the available land, making the site relatively low density.

• Much of the internal road system on the site does not include sidewalks that would allow pedestrians to safely share roadways with vehicles.

• Landscaping is sparse and mostly consists of turf that is costly to maintain and offers little in the way of amenities for the campus users and visitors.

• Parking is scattered throughout the site mostly in remote lots and on internal streets making wayfinding for visitors new to the site especially difficult. Much of the circulation from parking to destination is confusing and meanders in and out of buildings.

CARSON STREET

NORMANDIE AVENUE

VERMONT AVENUE

220th STREET

PARKING

N33

N34

N26-A

N26-B

N26

N28

N22

N17

N18

N24

N20

N21

N14

N16

N12

N11

N7

N6

N8

N9

LOT B

PCD C

LOT C

HOSPITAL

1 EAST

2 EAST

A.F. PARLOW LIBRARY

CHILDREN'S INSTITUTE INTERNATIONAL

N31

N32

N25

C 3

C 2

C1

B 2

B1

B 2 WEST

B3

B3 ANNEX

B4

HOSPITAL EXPANSION

AMBULANCE PARKING

LOT A

18

16

14

IMAGING CENTER

E6

E5

E4

E3

E 2

E1

E1 ANNEX

D1

D 2.5

ANNEX D2

ANNEX D5

D3

D 3.5

D 4.5

D 5

D 5.5

D 6

D9

1 SOUTH

2 SOUTH

3 SOUTH

CARPOOL PARKING

HARBOR-UCLA PROFESSIONAL BUILDING

ST. JOHN'S CARDIO-VASCULAR RESEARCH CENTER

RB2

J3

LIU RESEARCH CENTER

WALTER P. MARTIN RESEARCH CENTER

F 0

F1

F 2

F3

F3.5

F4

F 4.5

H1

F 5

F 5 ANNEX

F 6

F 7

F8

F9

LOT D

PARKING STRUCTURE

WARE-HOUSE #2

CENTRAL PLANT

WAREHOUSE # 1

LOADING DOCK

EMERGENCY GENERATOR

J4

J2

L4

HANLEY-HARDISON RESEARCH CENTER

T1

M1

F10

LA BIOMED PARKING LOT

LEGEND

EXISTING CAMPUS USE PLAN

- LA BIOMED
- OUTPATIENT
- HOSPITAL
- HOSPITAL EXPANSION
- TREATMENT
- DIAGNOSTICS
- ADMINISTRATION
- EDUCATION
- MATERIALS MANAGEMENT
- FACILITIES MANAGEMENT
- UTILITIES
- PARKING
- CHILDREN'S INSTITUTE INT.
- LABIOMED SITE BOUNDARY
- PROPERTY LINE
- HELIPAD

0' 100' 200'

N

TENANTS

The largest tenant on the Harbor-UCLA Medical Campus is LA BioMed. They have constructed four buildings on the campus and have negotiated a new ground lease for a fifth structure. LA BioMed also leases some of the existing military barracks for use as research facilities and logistical support.

The Harbor-UCLA Medical Foundation, Inc. (MFI) was founded in 1963 as a nonprofit organization, whose mission is to generate revenue from patient care activities for enrichment of the clinical, research and educational environment at Harbor-UCLA Medical Center. In October, 1989, MFI opened the 45,000-square-foot Harbor-UCLA Professional Building.

The Harbor-UCLA Diagnostic Imaging Center was dedicated on October 3, 1987. This joint venture between Los Angeles County and International Imaging, Inc., made imaging services (including computed tomography, mammography, ultrasound and noninvasive vascular imaging) available to inpatients and outpatients.

CARSON STREET

PARKING
N33
N26-A
N26-B
N22
N17
N18
N26
N28
N24
N20
N21
N14
N16
N12
N11
N7
N6
N8
N9
LOT B
PCD C
LOT C
N34
PARKING
PARKING
CHILDREN'S INSTITUTE INTERNATIONAL
N31
PARKING
N25
C 3
C 2
C1
B1
B 2 WEST
B 2
B3
B3 ANNEX
B4
PARKING
HOSPITAL
1 EAST
2 EAST
A.F. PARLOW LIBRARY
HOSPITAL EXPANSION
N32
NORMANDIE AVENUE
VERMONT AVENUE
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IMAGING CENTER
E6
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E4
E3
E 2
E1
ANNEX
E1
D1
ANNEX D2
ANNEX D5
D 2.5
D3
D 3.5
D 4.5
D 5
D 5.5
D 6
D9
AMBULANCE PARKING
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ST. JOHN'S CARDIO-VASCULAR RESEARCH CENTER
RB2
J3
LIU RESEARCH CENTER
WALTER P. MARTIN RESEARCH CENTER
F 0
F1
F 2
F3
F3.5
F4
F 4.5
F 5 ANNEX
F 5
F 6
F 7
F8
F9
H1
PARKING
LOT D
PARKING STRUCTURE
WARE-HOUSE #2
CENTRAL PLANT
WAREHOUSE # 1
LOADING DOCK
EMERGENCY GENERATOR
J4
J2
L4
HANLEY-HARDISON RESEARCH CENTER
T1
M1
F10
220th STREET
LA BIOMED PARKING LOT

LEGEND

- LA BIOMED
- LA COUNTY
- IMAGING CENTER
- CHILDREN'S INSTITUTE INTERNATIONAL
- MFI PROFESSIONAL BUILDING
- LABIOMED SITE BOUNDARY
- PROPERTY LINE

EXISTING TENANTS PLAN

0' 100' 200'

N

CAMPUS DEVELOPMENT HISTORY

Campus circa 1944 - Photo LA BioMed

Campus circa 1970 - Photo LA BioMed

The Harbor-UCLA Medical Center Campus was originally planned as a medical facility that opened on the site in 1943 as the U.S. Army's Port of Embarkation Hospital. This facility was a receiving point for the wounded that returned from the Pacific theater during World War II. Situated on a tract of 72 acres (0.32 km^2), it had an administration building and a large number of barracks wards arranged under a cottage system.

In February 1946, the County purchased the facility from the Federal Government in order to decentralize the activities of the County of Los Angeles General Hospital, one of the largest institutions of its kind in the world, and founded a branch hospital to serve the Harbor and Long Beach.

The biggest change to Harbor-UCLA Medical Center Campus during the 1960s and 1970s was construction of the 450,000 square- foot Unit 1, what is now the "main" hospital. The original Army barracks, erected in 1943, were built to last only seven years. Sixty-Eight years latter one third of the barracks are still in current use on the campus. The barracks are used as research facilities by LA BioMed, outpatient clinics, and other uses by the County of Los Angeles Public Works and other County agencies.

There is currently a new renovation to the main hospital in progress. The new work is the Surgery and Emergency Room Replacement Project. The project will increase the size of the existing emergency room from 25,000 square feet with 42 emergency treatment bays to about 75,000 square feet with 80 emergency treatment bays. The project also adds 190,000 sq. ft. of new hospital facilities housing 16 surgery suites, adult and pediatric triage and a new entrance, lobby and waiting area. Other features include a new heliport, and a new 544 vehicle parking structure that is already in use on the campus.

CARSON STREET

PARKING
N33
N34
N26-A
N26-B
N26
N28
N22
N17
N18
N24
N20
N21
N14
N16
N7
N6
N8
N9
N12
N11
LOT B
PCD C
LOT C
HOSPITAL
1 EAST
2 EAST
A.F. PARLOW LIBRARY
CHILDREN'S INSTITUTE INTERNATIONAL
N31
N32
N25
C 3
C 2
C1
B 2
B1
B 2 WEST
B3
B3 ANNEX
B4
PARKING
HOSPITAL EXPANSION
NORMANDIE AVENUE
VERMONT AVENUE
18
16
14
IMAGING CENTER
E6
E5
E4
E3
E 2
E1
E1 ANNEX
D1
D 2.5
D3
D 3.5
ANNEX D2
ANNEX D5
D 4.5
D 5
D 5.5
D 6
D9
AMBULANCE PARKING
LOT A
1 SOUTH
2 SOUTH
3 SOUTH
CARPOOL PARKING
HARBOR-UCLA PROFESSIONAL BUILDING
PARKING
ST. JOHN'S CARDIO-VASCULAR RESEARCH CENTER
RB2
J3
LIU RESEARCH CENTER
WALTER P. MARTIN RESEARCH CENTER
F 0
F1
F 2
F3
F3.5
F4
F 4.5
F 5
F 5 ANNEX
F 6
F 7
F8
F9
H1
PARKING
LOT D
PARKING STRUCTURE
WARE-HOUSE #2
CENTRAL PLANT
WAREHOUSE # 1
LOADING DOCK
EMERGENCY GENERATOR
J4
J2
L4
HANLEY-HARDISON RESEARCH CENTER
T1
M1
F10
220th STREET
LA BIOMED PARKING LOT

LEGEND

CAMPUS DEVELOPMENT HISTORY PLAN

- TEMPORARY / MODULAR
- 1940-1950
- 1960-1970
- 1980-1990
- 2000-PRESENT
- LABIOMED SITE BOUNDARY
- PROPERTY LINE

0’ 100’ 200’

N

Pioneering research in many fields such as reproductive endocrinology, genetics, infectious diseases, trauma and respiratory medicine has brought worldwide attention to Harbor-UCLA Medical Center Campus

CAMPUS ACCOMPLISHMENTS

Pioneering research in many fields such as reproductive endocrinology, genetics, infectious diseases, trauma and respiratory medicine has brought worldwide attention to Harbor-UCLA Medical Center Campus. Among the major milestones at Harbor-UCLA are:

- The world's first ovum transfer program, led by Dr. John Buster, to help infertile couples. In 1984, we were the first institution in the world to achieve successful pregnancies using the technique of ovum transfer.
- The discovery by A.F. Parlow, PhD of the molecular structure of the human follicle stimulating hormone (FSH) and luteinizing hormone. Dr. Parlow also developed an antisera which made possible neonatal screening for hypothyroidism, a common cause of mental retardation. The Parlow Pituitary Hormone and Antisera Laboratory produces highly purified pituitary components which are used in research and therapy around the world. One of the hormones produced, human growth hormone, is used to prevent severe growth retardation in thousands of children around the world.
- Internationally renowned genetics research to help treat and prevent short stature, lead by Dr. David Rimoin. He was responsible for early work on disorders of growth hormone metabolism, for expanding the knowledge of dwarfism and developing the $2.2 million Skeletal Dysplasia Center at Harbor-UCLA.
- Dr. John Michael Criley's cardiac research into improved cardiac resuscitation techniques and better training of emergency paramedics, leading to the country's first hospital-based paramedic training program.
- A major discovery in defining the basic biochemical defect in a skin disease, known as x-linked ichthyosis. Dr. Larry Shapiro's discovery that this was a hereditary disease was a significant breakthrough and led to improved treatment strategies.
- Dr. Michael Kaback's advances in developing and improving screening for Tay-Sachs disease, an inherited, fatal disorder. Harbor-UCLA has become the headquarters for the California and international screening programs for the disease.
- Definitive studies of lung surfactant have resulted in saving the lives of thousands of premature infants who would have died because of immature lungs.
- The establishment of the UCLA Center for Vaccine Research. Work at the center has contributed to the licensure of several new vaccines and to the establishment of new national recommendations for childhood immunizations. These new vaccines have protected millions of newborns, children and adults from diseases such as meningitis, whooping cough and pneumonia.
- The development of scintimammography to detect breast cancer without invasive biopsies, is one of the many imaging procedures developed at Harbor-UCLA.
- A detachable balloon catheter, an artificial elbow, and an implant for use in maxillofacial surgery, are among the many devices developed here.
- The receipt of a $1 million grant from the Robert Wood Johnson Foundation and Pew Charitable Trust to redesign how patient care is delivered. Harbor-UCLA was one of 20 hospitals nationwide -- and the only one on the west coast -- to be awarded the grant. As a result, culture shifts occurred which emphasize leadership, community and the development of interdisciplinary collaboration. The grant also provided seed money and resources to assist with individual and group development.

Dr. Christos Emmanouilides MD at the Harbor-UCLA Medical Center Pediatrics department. Photo - Harbor-UCLA Pediatrics

- Being selected as one of 40 sites nationwide to conduct a landmark research study on diseases affecting women. The Women's Health Initiative (WHI), a $625 million, 15-year project, is the first study to examine the health of a very large number of women over a long period of time.
- The involvement of family members in the care of patients in the ICUs by developing educational materials in English and Spanish. The program was developed by Marissa Camanga-Reyes, RN, MN, CCRN.
- Improved pain management in infants and children at Harbor-UCLA which was the result of research done by Deon Hall, RN and the pediatric ward nurses.

Other research programs which have achieved international acclaim in the past 50 years include: Dr. Dana Street's reconstructive surgery on thalidomide babies to reconstruct their deformities to allow more normal functioning; the $3 million NASA contract to develop a urinary system for space suits; hyperbaric chamber research; landmark respiratory disease and exercise studies in Dr. Karl Wasserman's computerized exercise laboratory; and Dr. Ronald Swerdloff's research into male contraceptive methods.

LA BIOMED INNOVATIONS

1960s

Institute scientists achieved successful fertilization through artificial implantation of the ovum, a breakthrough that would lead to the world's first ovum transfer birth some 20 years later. The Institute's investigators created the paramedic model for emergency care that is now a life-saving standard nationwide and identified the genetic basis for the skin disease, x-linked ichthyosis.

1970s

The institute's developmental biology research team discovered the key to stimulating human growth. Other teams of Institute investigators pioneered diagnostic tests that remain the standard today, including the modern cholesterol test. They created a testing and outreach program that has virtually eliminated new cases of Tay-Sachs disease in high-risk populations. They also developed a thyroid deficiency test for infants now used in most of the industrialized world to help prevent irreversible developmental disabilities. In addition, the Institute patented an implant that helped surgeons reconstruct severely injured jaws.

1980s

In the 1980s, the institute founded a Perinatal Clinical Research Center, one of eight in the United States. Institute investigators helped develop refined synthetic surfactants that have saved the lives of thousands of premature babies, and they evaluated vaccines for influenza, herpes simplex and much more. They also performed the first ovum transfer, laying the groundwork for a procedure that's resulted in more than 47,000 births to infertile couples in the U.S. alone.

1990s

Institute advances included the use of non-invasive techniques for detecting breast cancer, development an inexpensive treatment for eye diseases that's saved the sight of thousands of children in underdeveloped nations, the use of antiviral medications to treat HIV infections, stent technology to treat devastating abdominal aneurysms and an enzyme replacement therapy to help victims of a devastating genetic disorder, Hurler-Scheie disease. The Institute's scientists also played key roles in the development of innovative approaches to prenatal care which have virtually eliminated in this country maternal-fetal transmission of the virus which causes AIDS.

2000 & beyond

Institute investigators developed new rehabilitation strategies for millions of sufferers of Chronic Obstructive Pulmonary Disease (COPD) and other disorders. The Institute spawned four new biotechnology startups, which are already generating $6 million in economic activity in the region.

EXISTING SITE PHOTOS

Main Hospital Entrance

Typical WWII barrack structure

Modular building MFI offices and clinic

Typical WWII barrack structure


Canopy connecting modular buildings


Campus mechanical equipment

B-3 Annex - WWII Buildings in disrepair


Open drainage channel along 220th Street


Typical modular building


Central plant generators


Central plant equipment


Outdated electrical gear in Main Hospital


Typical cottage

Typical modular campus support building

Existing interface with mechanical systems and modular buildings

Building N32 - Typical modular building

Park-N-Ride lot at Harbor Freeway

New Emergency Department construction

LA Bio-Med Hanley-Hardison Research Center

LA Bio-Med Walter P. Martin Research Center

LA Bio-Med Steve C.K. Liu Research Center

LA Bio-Med Saint John's Cardiovascular Research Center

Existing Hospital Tower

Existing parking structure with Photovoltaic cells

Typical campus walkway

County Medical Offices N-25 Building

New elevator connection to Existing Hospital Tower

Parking at campus edge facing Carson Street

Typical internal campus street

Campus edge at Carson Street

Accessible ramps interfacing with WWII modular buildings

EXISTING BUILDING CONDITIONS

The adjacent plan illustrates the overall conditions of the buildings that make up the current Harbor-UCLA Campus. Most of the campus functions on the site are housed in the original army barracks that were part of the 1940's U.S. Army's Port of Embarkation Hospital. These buildings were temporary and were designed to have a life span of approximately seven years. The original barracks are currently in poor condition and have been classified as having only a 'short-term use' (replacement needed immediately or within 5 years). Buildings built later, having better conditions have been classified 'medium-term use' (replacement needed within 5-20 years) The newest, more technologically current buildings on the site have been classified as having a 'long-term use' (replacement needed within 20+ years).

CARSON STREET

PARKING
N33
N34
N26-A
N26-B
N26
N28
N22
N17
N18
N24
N20
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N14
N16
N7
N6
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N9
N12
N11
LOT B
PCD C
LOT C
HOSPITAL
1 EAST
2 EAST
A.F. PARLOW LIBRARY
CHILDREN'S INSTITUTE INTERNATIONAL
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N32
N25
C 3
C 2
C1
B 2
B1
B 2 WEST
B3
B3 ANNEX
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AMBULANCE PARKING
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VERMONT AVENUE
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D 6
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L4
HANLEY-HARDISON RESEARCH CENTER
T1
M1
F10
220th STREET
LA BIOMED PARKING LOT

LEGEND

- SHORT TERM USE
- MEDIUM TERM USE
- LONG TERM USE
- LABIOMED SITE BOUNDARY
- PROPERTY LINE

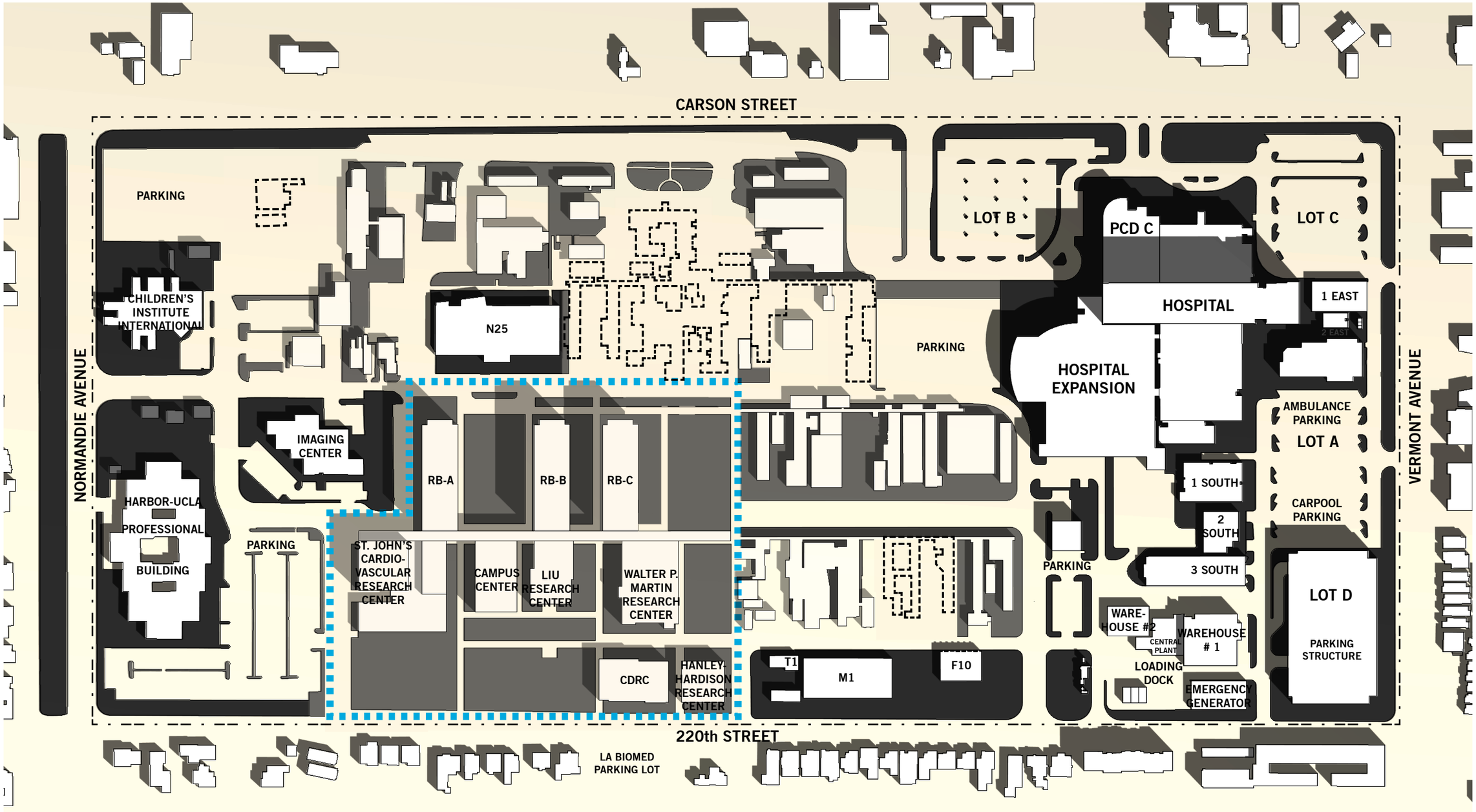
EXISTING BUILDING CONDITIONS PLAN

0’ 100’ 200’

N

LA BIOMED MASTER PLAN

LA BioMed (Los Angeles Biomedical Research Institute) is one of the country's leading nonprofit biomedical research institutes. It conducts biomedical research, trains young scientists and provides community services, including childhood immunization and nutrition assistance. The adjacent drawing illustrates the consolidation of facilities into a comprehensive and cohesive master plan on the Harbor-UCLA Medical Center Campus.



LEGEND

LA BIOMED MASTER PLAN

- LABIOMED SITE BOUNDARY
- PROPERTY LINE
- VACATED LABIOMED BUILDING

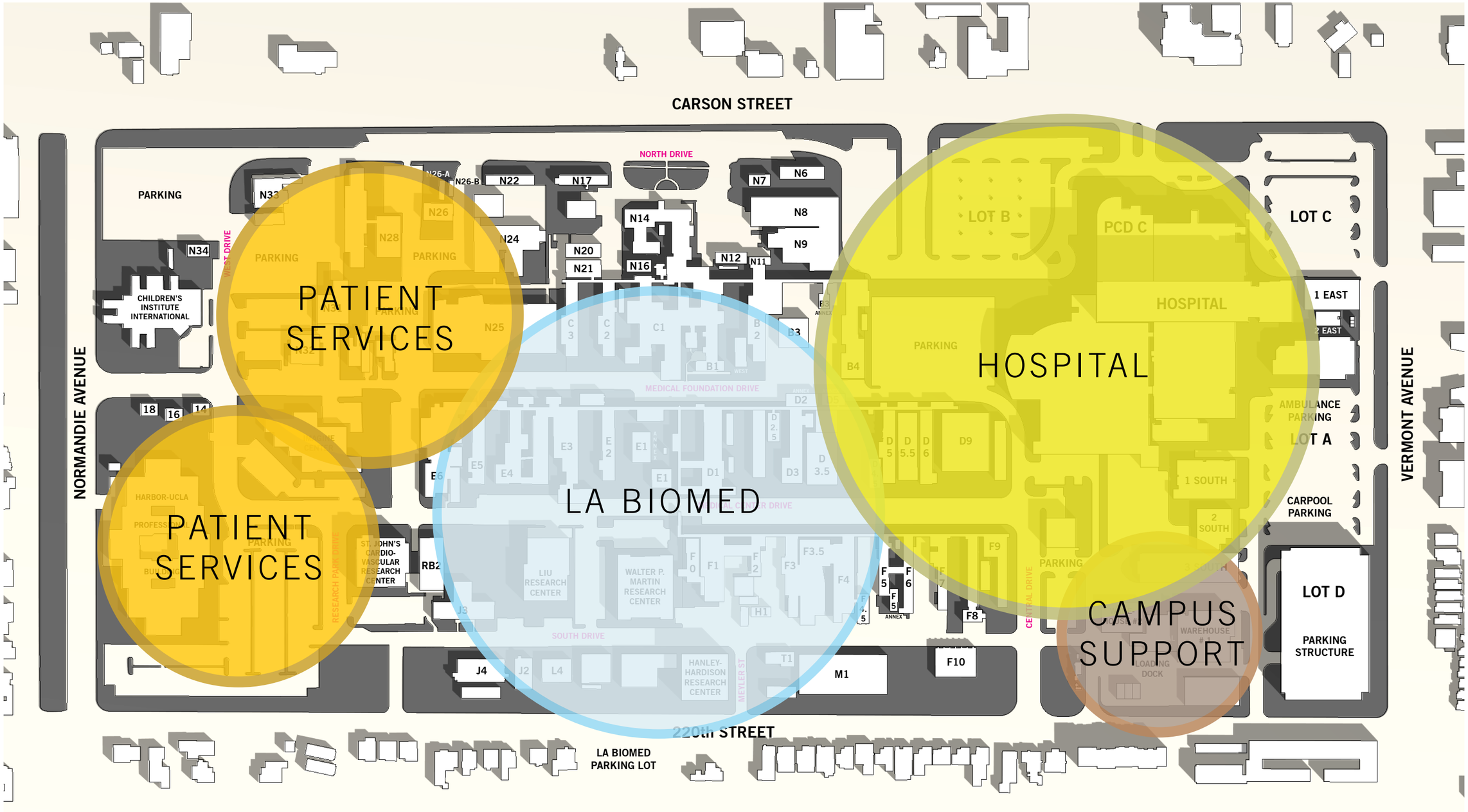
0’ 100’ 200’

N

EXISTING ZONING

There is a stark contrast between the east and west sides of the campus with the hospital resting on the east quarter of the site. The remaining three quarters of the campus predominately contains World War II era barracks being utilized as clinics, offices and research laboratories. The Los Angeles Biomedical Research Institute (LA BioMed) occupies the central 16.5 acres of the campus using a long-term lease agreement with the County. Parking areas are well distributed along the perimeter equally serving the various programmatic needs of the campus. The site seems to be severely under-parked which is evidenced by countless rows of makeshift parking along the three primary east/west axes.

In the adjacent plan, the circle representing the approximate zone of LA BioMed appears to be the largest on the site due to the scattered nature of its buildings. Much LA BioMed's functions are spread out in small, low-rise modular buildings that take up much of the land area of the campus.



EXISTING ZONING PLAN

0’ 100’ 200’ N

EXISTING SITE CIRCULATION

SITE ACCESS

Vehicular access to the campus is provided by a number of entrances from all four perimeter streets. The main entrance, on Carson Street, across from Children's Institute International, is the only signalized entrance. A second signalized entrance, to the west of the existing signal, is planned as part of the current construction.

Other entrances to the site consist of:

- An unsignalized entry road (Medical Foundation Drive) from Normandie Avenue;
- An unsignalized driveway from Normandie Avenue directly serving the Harbor-UCLA Professional Building;
- Two unsignalized entrances on Vermont Avenue, currently chained, and not available for public access;
- Five unsignalized entrances on 220th Street, including an entrance just to the west of Vermont Avenue leading to the new parking structure.

ON-SITE CIRCULATION

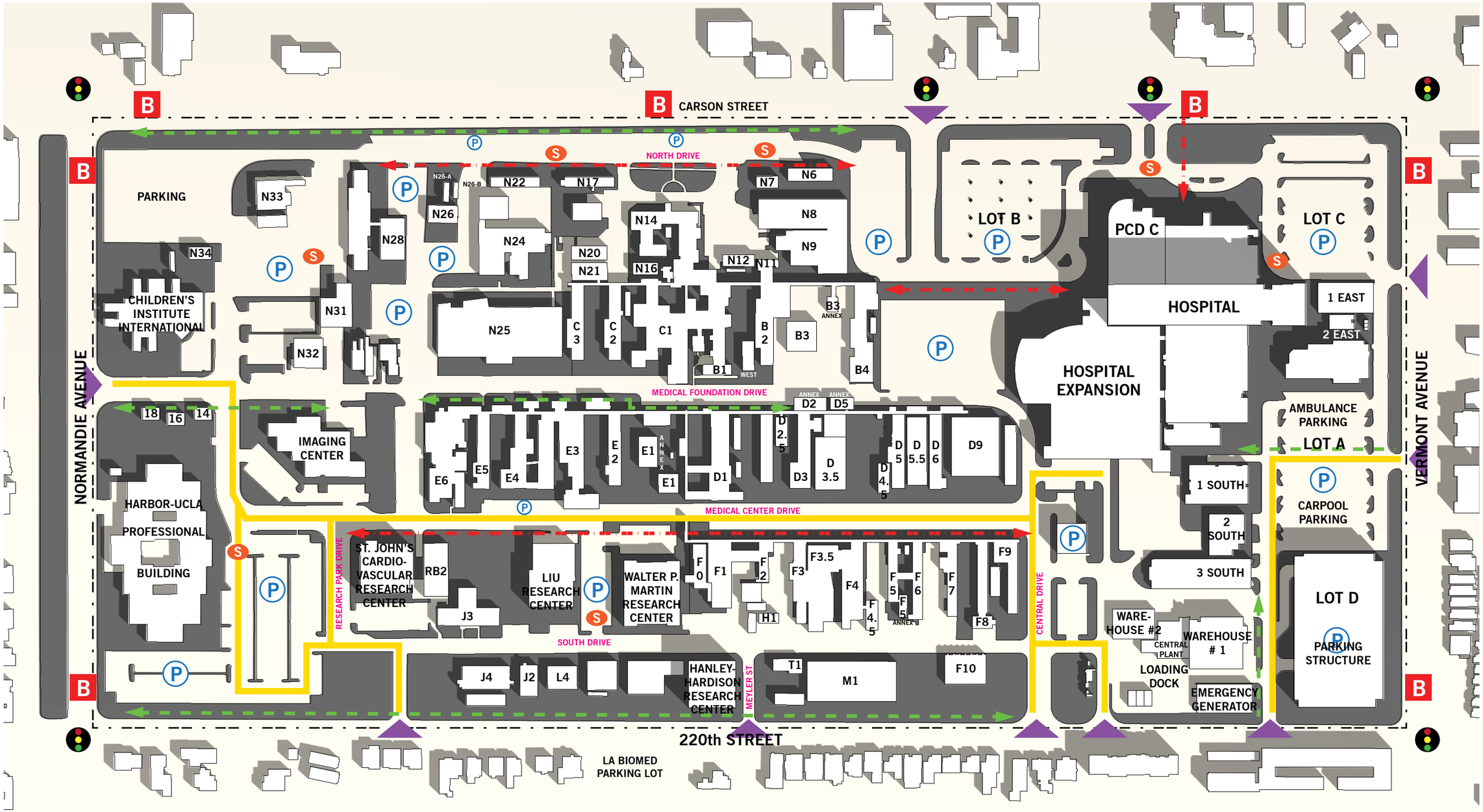
The street system providing circulation throughout the site consists of a series of two-lane roads and drives traversing the campus, most of them with parallel, angled, or 90-degree parking allowed on one or both sides. Most intersections of two roadways or drive aisles are stop-sign controlled. There are no traffic signals on the campus itself.

Four roadways allow for east-west movement through the majority of the campus:

- North Drive
- Medical Foundation Drive
- Medical Center Drive
- South Drive

North-south movement for vehicles through the site is limited, with most of the north-south segments extending no more than one campus "block" or dead-ending into a parking area. The current construction poses even more constraints to movement through the eastern 1/3 of the site.

Most of the on-site roadways do not provide sidewalks or curbs. Pedestrians walking from one building to another, or to and from their car must share the roadways with vehicular traffic.



LEGEND

- PARKING
- SHUTTLE BUS STOPS
- STOP LIGHTS
- FIRE DEPT. FIRE LANE ACCESS
  26'0" ACCESS ROAD
- BUS STOP
- PRIMARY PEDESTRIAN ROUTE
- SECONDARY PEDESTRIAN ROUTE
- CAMPUS ENTRY
- PROPERTY LINE

EXISTING SITE CIRCULATION PLAN

0' 100' 200'

N

WAYFINDING

The campus can be a confusing place to navigate for visitors to the site. Fortunately, most of the roads through the Harbor-UCLA Medical Center campus are named, and most intersections of two roadways have street name signs. In addition, most buildings or trailers have a building number (consisting of a letter and a number) or a building name, or both, visible to the driver, but finding a specific building can be difficult for those not familiar with the site. There are few directional signs, primarily posted at the main entrances from the public street system, and there are a few directory boards located throughout the campus. Drivers unfamiliar with the campus would benefit from more wayfinding assistance at the numerous on-site intersections and decision points throughout the campus. Some roadways dead-end into parking areas, and some have little room for maneuvering or turning around.

TRANSIT SERVICE

The Harbor-UCLA Medical Center campus is served by three public transit systems – LA Metro, Torrance Transit, and Gardena Municipal Bus Lines – and by its own on-campus shuttle service.

- Metro Lines 202 and 550 travel along Vermont Avenue, with bus stops at the Carson Street intersection and near 220th Street.
- Torrance Transit Lines 1 and 3 travel along Carson Street, with bus stops just east of Normandie Avenue, at South Budlong Avenue (roughly half-way between Normandie Avenue and Vermont Avenue) and at the main hospital entrance.
- Gardena Municipal Bus Line 2 travels along Normandie Avenue adjacent to the project site. Bus stops are provided on either side of the Carson intersection.
- An on-campus shuttle circulates through the campus for visitors and employees, with designated stops at several locations throughout the campus.

SURROUNDING STREET SYSTEM

Carson Street is a four-lane divided roadway with two travel lanes in each direction, turn pockets at intersections, and signals at major intersections. Along the project frontage, Carson Street has a painted center median, and numerous left-turn pockets providing access to the business properties on the north side of the street. An un-signalized crosswalk across Carson Street is provided mid-block at Budlong Avenue. On-street parallel parking is allowed on both sides of the street, with some time restrictions at times of the day. The posted speed limit along the project frontage is 35 miles per hour (MPH). Sidewalks are provided along both sides of the street.

220th Street is a two-lane undivided roadway along the south project frontage. On-street parallel parking is allowed along the south side of the street between Normandie Avenue and Vermont Avenue, and along the north side of the street between Normandie Avenue and the Central Drive entrance to the campus. Sidewalks are provided along both sides of the street.

Normandie Avenue is a four-lane divided roadway along the west project frontage, with two travel lanes in each direction, and a painted center median. Parking is allowed along portions of the street, and restricted by painted red curbs along others. The posted speed limit along the project frontage is 35 MPH. Sidewalks are provided along both sides of the street.

Vermont Avenue is a four-lane divided roadway along the east project frontage, with two travel lanes in each direction, and a continuous two-way left-turn lane in the center. On-street parallel parking is allowed on both sides of the street, except for between 3:00 and 5:00 AM. The posted speed limit along the project frontage is 40 MPH. Sidewalks are provided along both sides of the street.

The four intersections at the corners of the Harbor-UCLA Medical Center campus are all signalized, with crosswalks across all four legs of each intersection.

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EXISTING PARKING

PARKING LOCATION LEGEND

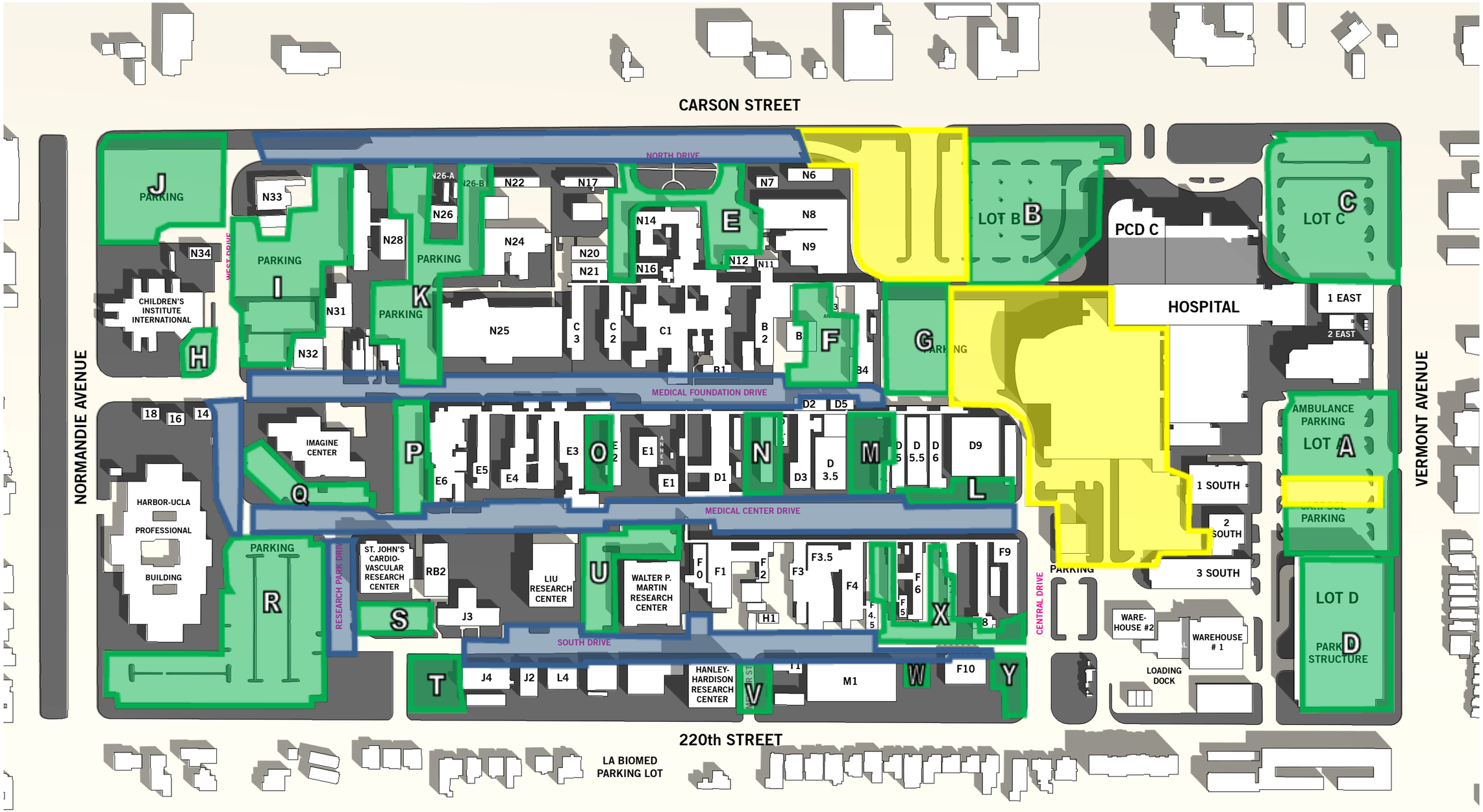
OFF-STREET PARKING		
AREA	STANDARD	ADA
A	116	4
B	193	29
C	134	10
D	525	10
E	51	9
F	37	4
G	103	1
H	9	1
I	136	11
J	109	0
K	110	7
L	24	2
M	32	2
N	29	2
O	8	1
P	42	3
Q	38	3
R	256	15
S	33	2
T	44	0
U	52	6
V	11	0
W	5	0
X	54	0
Y	17	2
TOTAL	2,168	124

ON-STREET PARKING		
LOCATION	STANDARD	ADA
NORTH DR	141	2
MED FOUNDATION DRIVE	157	2
MED CENTER DRIVE	179	4
SOUTH DRIVE	92	9
WEST DRIVE	16	0
RESEARCH PARK DRIVE	11	0
TOTAL	596	17
OFF-CAMPUS PARKING (NOT SHOWN)		
LOCATION	STANDARD	ADA
220TH	84	3
LOT V	173	0
CHILD CARE	21	0
TOTAL	278	3
GRAND TOTAL		
LOCATION	STANDARD	ADA
OFF-STREET	2,168	124
ON-STREET	596	17
CAMPUS TOTAL	2,764	141
OFF CAMPUS TOTAL	278	3
GRAND TOTAL	3,042	144
	3,186	

OBSERVED SUPPLY

Parking supply was inventoried on May 4, 2011. During this time there was significant impact on the parking supply from construction of the Harbor-UCLA Medical Center Surgery and Emergency Room Replacement Project. The overall campus parking supply was documented as 2,905 spaces which include those serving LA BioMed. In addition to on-site parking facilities, there are three off-campus lots which are used by either LA BioMed staff or Harbor-UCLA staff, which provide an additional 281 spaces, bringing the entire parking supply serving those on campus to 3,186 spaces. During this interim construction period staff was also asked to utilize the Los Angeles Department of Transportation Park and Ride Lot located on Carson Street just west of the Harbor Freeway (US 110), which contains roughly 143 parking stalls.

The areas highlighted in yellow indicate that the area was not in service due to construction. The green areas are off-street parking supply while the blue areas are the on-street parking supply. The adjacent table corresponds to the map and parking area indicators (letters) on the map.



LEGEND

- OFF-STREET PARKING
- ON-STREET PARKING
- CONSTRUCTION ZONE (PARKING UNAVAILABLE)

EXISTING PARKING PLAN

0’ 100’ 200’

N

OBSERVED PARKING OCCUPANCY

OFF-STREET PARKING		
AREA	STANDARD	ADA
A	62	3
B	189	23
C	132	7
D	517	7
E	43	7
F	36	3
G	100	0
H	6	0
I	128	3
J	52	0
K	98	3
L	19	2
M	28	1
N	25	1
O	6	0
P	34	0
Q	32	2
R	168	8
S	21	2
T	32	0
U	33	4
V	4	0
W	2	0
X	45	0
Y	14	1
TOTAL	1,826	77

ON-STREET PARKING		
LOCATION	STANDARD	ADA
NORTH DR	137	2
MED FOUNDATION DRIVE	143	1
MED CENTER DRIVE	162	2
SOUTH DRIVE	69	5
WEST DRIVE	8	0
RESEARCH PARK DRIVE	7	0
TOTAL	526	10
OFF-CAMPUS PARKING (NOT SHOWN)		
LOCATION	STANDARD	ADA
220TH	82	2
LOT V	94	0
CHILD CARE	15	0
TOTAL	191	2
GRAND TOTAL		
LOCATION	STANDARD	ADA
OFF-STREET	1,826	77
ON-STREET	526	10
CAMPUS TOTAL	2,352	87
OFF CAMPUS TOTAL	191	2
GRAND TOTAL	2,543	89
	2,632	

PARKING CONTINUED

OBSERVED DEMAND

Parking demand was also observed on May 4, 2011. The observed demand was 2,439 vehicles on campus and an additional 193 off campus for a total of 2,632 vehicles generated by the campus land uses. The Park and Ride Lot was not counted. The construction on campus removed a significant portion of visitor and patient parking at the Harbor-UCLA main entrance, which was apparent with very high parking occupancy in that area. In other areas there was ample parking, and in some cases restricted to specific user groups and under-utilized. Many vehicles were parked along Vermont Avenue and 220th Street as well, which were likely generated by Harbor-UCLA. The parking occupancy count may be misleading because overall the numbers suggest that the parking supply is adequate. But severe localized shortfalls were observed, which means the parking supply should be realigned with user groups as best possible. The table to the left highlights parking area occupancy; the color green is below 75% occupied, the color yellow is between 75% and 85% occupied, and the color red is above 85% occupied.

CODE REQUIRED PARKING

The most recent reason for the Harbor-UCLA campus to perform an analysis of the minimum parking requirements per the County Code was for the Final Mitigated Negative Declaration for the Harbor-UCLA Medical Center Surgery and Emergency Room Replacement Project dated February 24, 2006. The applicable County Code requirement is as follows:

County of Los Angeles Code Chapter 22.52.1120 Hospitals, convalescent hospitals, adult residential facilities and group homes for children.

A. Every hospital shall have two automobile parking spaces, plus adequate access thereto, for each patient bed. The parking may be within 500 feet of the exterior boundary of the lot or parcel containing the main use. At least 25 percent of the required parking shall be reserved and marked for the use of employees only.

B. Outpatient clinics, laboratories, pharmacies and other similar uses shall have one parking space for each 250 square feet of floor area when established in conjunction with a hospital.

The minimum requirement as calculated by Sigma Engineering, Inc. upon completion of the Harbor-UCLA Medical Center Surgery and Emergency Room Replacement Project is 2,709 spaces. This information can be found on pages 42 and 43 of the Final Mitigated Negative Declaration for that project.

In regard to County Code requirements for linear distance between parking and the land use it serves, the code 22.52.1120(A) reads, “parking may be within 500 feet of the exterior boundary of the lot or parcel containing the main use”. The Supervising Regional Planner for the County of Los Angeles Department of Regional Planning provided that the current interpretation for a hospital is that the campus is counted as a whole and not in lots or parcels. Therefore the parking requirements need not be provided within a specified linear distance if within the campus boundaries. But lots located outside of the campus boundaries must be within 500 feet to be included to meet the minimum parking requirement. Aside from the Park and Ride Lot, which is being used as overflow during the construction period, all lots noted within the observed parking supply off-campus lots are within 500 feet of the campus.

ITE RECOMMENDED PARKING SUPPLY			
USE	ITE PARKING RATIO	SIZE	SPACES
HOSPITAL BEDS	4.92 SPACES / 1 BED	553 BEDS	2,721
OUTPATIENT USE			
COUNTY	4.74 SPACES / 1,000 SF	140,270 SF	665
PROFESSIONAL BUILDING	4.30 SPACES / 1,000 SF	54,087 SF	233
CHILDRENS INSTITUTE INT'L	4.74 SPACES / 1,000 SF	23,435 SF	111
AMERICAN HEALTH SVCS	4.74 SPACES / 1,000 SF	14,400 SF	68
LA BIOMED WOMEN'S HEALTH	4.74 SPACES / 1,000 SF	5,775 SF	27
CHILDCARE CENTER	3.70 SPACES / 1,000 SF	4,360 SF	16
OUTPATIENT USE SUBTOTAL		242,327 SF	1,120
RESEARCH USE	2.50 SPACES / 1,000 SF	253,612 SF	634
TOTAL ESTIMATED DEMAND			4,475

ITE PROJECTED PARKING DEMAND

Minimum parking requirements must be met, but may not provide adequate supply to meet demand. Therefore, other sources should be consulted or site-specific studies should be performed to best understand Harbor-UCLA parking demand. It has been a campus policy to meet or exceed the minimum parking requirement, but no prior studies could be produced which suggest an adequate amount of parking to meet campus demand. Very basic information from the Institute of Transportation Engineers ("ITE") publication Parking Generation can be used to develop order of magnitude calculations of parking demand for the various land uses on the Harbor-UCLA campus. When these ratios are applied, we project parking demand of 4,475 for the existing campus using the base data from the Final Mitigated Negative Declaration. This projection is based on national averages and therefore should be tailored to the market (commuting trends and demographics served) and specific site (transit availability). The tailored parking demand number for the Harbor-UCLA campus upon completion of the Harbor-UCLA Medical Center Surgery and Emergency Room Replacement Project is 3,702 spaces (2,640 Staff and Physician + 1,062 Visitor and Patient).

Parking demand from the national source data is then refined to account for site and market conditions.

STAFF AND PHYSICIAN DEMAND				
	ITE BASED DEMAND PROJECTION	SITE/MARKET MODE SPLIT	SITE/MARKET CAPTIVE ADJUSTMENT	RECOMMENDED SPACES
HOSPITAL BEDS	2,177	86.7%	100.0%	1,887
OUTPATIENT USE				
ON-CAMPUS COUNTY CLINICS	222	86.7%	95.0%	183
PROFESSIONAL BUILDING	78	86.7%	98.0%	66
CHILDRENS INSTITUTE INT'L	37	86.7%	100.0%	32
AMERICAN HEALTH SVCS	23	86.7%	100.0%	20
LA BIOMED WOMEN'S HEALTH	9	86.7%	100.0%	8
CHILDCARE CENTER	5	86.7%	100.0%	4
RESEARCH USE**	634	86.7%	80.0%	440
	3,185			2,640

VISITOR AND PATIENT DEMAND				
	ITE BASED DEMAND PROJECTION	SITE/MARKET MODE SPLIT	SITE/MARKET CAPTIVE ADJUSTMENT	RECOMMENDED SPACES
HOSPITAL BEDS	544	86.7%	100.0%	472
OUTPATIENT USE				
ON-CAMPUS COUNTY CLINICS	443	86.7%	100.0%	384
PROFESSIONAL BUILDING	155	86.7%	100.0%	134
CHILDRENS INSTITUTE INT'L	74	10.0%	100.0%	7
AMERICAN HEALTH SVCS	23	86.7%	100.0%	39
LA BIOMED WOMEN'S HEALTH	18	86.7%	100.0%	16
CHILDCARE CENTER	11	86.7%	100.0%	10
	1,290			1,062

CODE PARKING RATIO				
USE	CODE PARKING RATIO	SIZE	SPACES	
HOSPITAL BEDS	2 SPACES / 1 BED	553 BEDS	1,106	
OUTPATIENT USE	1 SPACE / 250 SF			
ON-CAMPUS COUNTY CLINICS		140,270 SF	561	
PROFESSIONAL BUILDING		54,087 SF	216	
CHILDRENS INSTITUTE INT'L		23,435 SF	94	
AMERICAN HEALTH SVCS		14,400 SF	58	
LA BIOMED WOMEN'S HEALTH		5,775 SF	23	
CHILDCARE CENTER		4,360 SF	17	
OUTPATIENT SUBTOTAL		242,327 SF	969	
RESEARCH USE	1 SPACE / 400 SF	253,612 SF	634	
TOTAL REQUIRED SPACES			2,709	

*Using Means of Transportation to work data for Torrance and Carson Combined.
**Square footage is wholly inclusive of LA BioMed space. ITE Parking Generation does not include the category "Research" and therefore, we utilize the County Minimum Requirement of 1 space per 4-- SF (or 2.5 spaces per 1,000 SF)
† Children are the patients and are dropped off, so very few vehicles are generated for visitor/patient from this land use.

EXISTING LANDSCAPE

The hospital campus is well planted with several landscaped courtyards and mature specimen trees. The adjacent diagram illustrates trees that are healthy, symmetrical, and have good structure. Every attempt should be made to box and preserve these trees during future construction. The east part of the site is primarily planted with Chinese Elm trees. The rest of the site does not have a discernible planting hierarchy which may contribute to way-finding problems and a lack of internal campus identity

The campus perimeter is predominately lined with an eight-foot high chain link fence and concrete block wall. The north and south fences contain dense plantings of Bougainvillea vine which helps buffer the campus edge along the public realm. The west side of the campus has portions of open fence and solid concrete block wall framing both sides of the entry. The east side contains a low three foot wall topped with a five-foot chain link fence buffered by a generous planting edge. All four sides contain five foot wide curb adjacent sidewalks.

The campus entry on Carson Street is open and highly visible. An assortment of perimeter street trees occur around the hospital area, and with the exception of the Bougainvillea vine, the rest of the campus lacks landscape along the public edge. This lack of landscape, combined with a heterogeneous mix of tree and shrub species may contribute to an overall lack of identity within the surrounding community.

The County currently outsources the landscape maintenance to an independent contractor that works six days a week with an estimated annual budget of $200,000. The campus does not have a central control for the irrigation system, and several instances of hand watering were observed during site visits. The hospital is required to provide maintenance to the curb edge on all sides which includes the street planting along South Vermont Avenue.

Several patches of turf are prevalent throughout the central and east sides of the campus, and were under utilized by pedestrians. At an estimated expense of $0.276 per square foot (irrigation and maintenance costs), the turf areas alone consume roughly 35% of the annual site landscape budget.

CARSON STREET

NORMANDIE AVENUE

VERMONT AVENUE

220th STREET

NORTH DRIVE

WEST DRIVE

MEDICAL FOUNDATION DRIVE

MEDICAL CENTER DRIVE

RESEARCH PARK DRIVE

SOUTH DRIVE

MEYLER ST

CENTRAL DRIVE

PARKING

CHILDREN'S INSTITUTE INTERNATIONAL

IMAGINE CENTER

HARBOR-UCLA PROFESSIONAL BUILDING

ST. JOHN'S CARDIO-VASCULAR RESEARCH CENTER

LIU RESEARCH CENTER

WALTER P. MARTIN RESEARCH CENTER

HANLEY-HARDISON RESEARCH CENTER

LA BIOMED PARKING LOT

LOT B

PCD C

HOSPITAL

LOT C

1 EAST

AMBULANCE PARKING

LOT A

1 SOUTH

2 SOUTH

3 SOUTH

LOT D

PARKING STRUCTURE

WARE-HOUSE #2

WAREHOUSE # 1

LOADING DOCK

LEGEND

- EXISTING TURF AREA - 260,095 SF
- EXISTING TREE
  - 1 - FLOSS SILK TREE
  - 2 - NAKED CORAL TREE
  - 3 - WEEPING FIG
  - 4 - EVERGREEN ASH
  - 5 - JACARANDA
  - 6 - AMERICAN SWEET GUM
  - 7 - CANARY ISLAND PINE
  - 8 - LONDON PLANE TREE
  - 9 - BALD CYPRESS
  - 10 - CHINESE ELM

EXISTING LANDSCAPE PLAN

0’ 100’ 200’

N

ENGINEERING BACKGROUND

MECHANICAL

CENTRAL PLANT OVERVIEW

The Existing Central Plant consists of a boiler room, a main chiller room and an attached lower level step down small chiller room. The cooling tower is in the mechanical yard near the Central Plant. In general, all systems and equipment are well maintained and in good operating condition.

The Existing Hospital and Central Plant are compliant with Office of Statewide Health Planning and Development (OSHPD) criteria until the year 2030. However, the Existing Central Plant building does not meet the seismic requirements to serve new hospital (I) occupancy and it is not suitable for use past the 2030 date. The Central Plant also requires expansion in capacity to serve the master plan load growth.

BOILER PLANT

Three (3) gas fired steam boilers are installed in the boiler room. H-1 and H-2 are 400 HP boilers with steam capacity of 13,800 lbs. /hr and H-3 is 300 HP boiler with steam capacity of 10,400 lbs/hr. The steam boilers are operating at 80-100 psi high pressure steam. The boilers have been upgraded to meet current requirements of the South Coast Air Quality Management District and are properly permitted. The Boilers are reported, by the plant operators, to be in good condition with all tubes operating. Boiler capacity is sufficient to handle all existing loads and the new Surgery and Emergency Room Replacement Project that is under construction with a spare capacity of 16,588 LB/HR.

CHILLER PLANT

Four (4) centrifugal water chillers are installed in two chiller rooms. CH-1 is a 1,264 ton chiller. CH-2 is an 800 ton chiller and CH-4 is a 1,000 ton chiller. CH-1, -2 and -4 are located in the main chiller room. Ch-3 is a 750 ton chiller. CH-3 is located in the smaller chiller room attached to the Central Plant on the lower ground level. All chillers are in good operating condition. CH-1, 2 and 4 were recently installed. While CH-3 is an older R-11 machine, but it is in good condition and sufficient quantities of R-11 refrigerant were salvaged when CH-1, 2 and 4 were replaced that it can be left in service for a considerable period of time.

The total capacity of the chiller plant is 3,814 tons with chilled water pumping capacity of 6,065 gpm. The secondary chiller water system will distribute 2,490 gpm to the hospital campus, fully operating the three (3) parallel secondary pumps, only 41% of the total primary pumps capacity. The capacity of the plant provides for the current building loads and the anticipated new Surgery and Emergency Room Replacement Project loads with 1250 tons of spare capacity.

COOLING TOWER YARD

One (1) cooling tower with three (3) cells is installed in the south yard. Each cell is rated 1,200 tons with 2,800 gpm condenser water flow capacity. Towers are built up wood type with PVC fill. They are well maintained and in good condition

UTILITY DISTRIBUTION SYSTEM

The steam distribution system consists of 6" high pressure steam line with 3" pumped condensate return line from the Central Plant boiler room down into an underground trench which is connected to the hospital basement and then distributed to each of the mechanical rooms in the basement. Chilled water distribution system consists of 10" main chilled water supply and return lines from the Central Plant chiller room down into trench and to the hospital building distributed to each of the mechanical fan rooms to serve air-handling units, AHUs. Condenser water piping from the cooling tower yard is buried underground and feeds the Central Plant and is distributed to each of the chillers in the chiller rooms.

HOSPITAL BUILDING HEATING, VENTILATING AND AIR CONDITIONING, HVAC SYSTEMS

A typical mechanical room with steam to heating hot water and domestic hot water heat exchangers is provided in the basement. Space heating hot water is generated by heat exchanger and then distributed to the heating coils in air-handling units, AHUs, with floor mounted end-suction circulating pumps. A steam pressure reducing station is installed in the same room with the heat exchangers. Exchangers and piping appears to be in good condition.

Two mechanical fan rooms are provided on each floor to circulate air. The units serving the new intensive care units, ICUs, have been upgraded to single zone constant volume type. The majority of the air handlers are the original constant volume dual duct units with chilled water and heating hot water coils. The units are operating, and in fair condition. These units however do not contain pre and after filters that meet the current OSHPD filter requirements. There are approximately 90 tons of perimeter fan coils provided for patient bedrooms. These should be replaced on an as needed basis if the rooms remain.

PLUMBING

CENTRAL PLANT AND SITE UTILITIES

The high pressure gas main from the street and one of the 8" domestic/Fire lines serving the buildings is located next to the Central Plant cooling tower yard. The natural gas system is brought to the building from the meter and regulator assembly which is adjacent to the water service next to the cooling tower. It is a 6" welded steel pipe system which is regulated down to medium pressure and feeds the boilers in the plant. The gas regulator assembly is maintained by the Gas Company and is reported to not have any leaks. Spare capacity is available should additional gas be required. Gas meter/regulator assembly is maintained by the Gas Co.

The main systems and equipment for the Central Plant have been well maintained and are in good operating condition. Incoming 6" domestic water (raw water) is a pumped system and is distributed throughout the hospital. Two (2) raw water pumps, RWP-1 at 5 H.P., RWP-2 is 15 H.P. These have been well maintained and have been rebuilt. The water softening system is fed off of the pumped raw water system and is original to the facility. No problems were reported for this system.

The original compressed air system is located within the Central Plant and distributes throughout the hospital. There are two bulk oxygen tanks located at the southeast side of the Central Plant and is piped via a 3" underground line in the tunnel to feed the risers within the hospital.

Adjacent to the Central Plant is the emergency generator building and power plant. The power plant is provided with two underground fuel oil tanks, one 10,000 gallon and one 25,000 tank. The generator building has two 15,000 gallon fuel oil tanks for the generators. All of the tanks are monitored by a monitoring system with sensors in the interstitial space of the double wall tanks and has non-brine pipe monitoring.

HOSPITAL BUILDING PLUMBING SYSTEMS

South mechanical room (ME 247): Domestic hot water generators HG-1, HG-2 are vertical, semi-instantaneous type heaters rated at 1915 GPH each and 1575 gallons storage each tank. These provide hot water for floors 1, 2 and 3 and are heated by 15# steam from the Central Plant. They are operating and in good condition considering the age of the heaters.

Mechanical room (ME 100): Domestic hot water generators HG-3, HG-4 are semi-instantaneous type heaters, horizontal, rated at 785 GPH each, 680 gallons storage each and provide hot water for floors 4 through 8. They are heated by 15# steam from the Central Plant. They are operating and in good condition considering the age of the heaters.

MEDICAL VACUUM

The medical vacuum system consists of 3 vacuum pumps and a 200 gal receiver. They are each sized for 50% of the load and alternate between cycles. Vacuum pump #3 had been replaced a week prior to site visit. Vacuum pump #2 was replaced approximately 6 months ago and vacuum pump #1 is scheduled to be replaced. Motors have been rebuilt and are in very good condition.

MEDICAL AIR

The medical air system consists of eight compressors and two receiver tanks with desiccant dryers and filter system. System is fairly new and has approximately 20%-25% spare capacity. Additionally, there is a back-up bulk medical air manifold system which consists of 18 cylinders racked within the room.

FIRE PROTECTION

The fire sprinkler and standpipe system is fully operational and consists of multiple 6"/8" wet pipe risers and distribute throughout each floor. Pressure appears adequate with approximately 80-85 psi at the riser valves. Some previous leakage and age is evident.

ELECTRICAL

ELECTRICAL OVERVIEW:

The campus has both normal and emergency power. The normal 12 kV switchgear capacity receives its incoming supply from Southern California Edison (SCE). The highest campus's normal power demand is approximately 7 mega volt amp (MVA) which is approximately 28% of 24 MVA which can be provided by SCE. The existing substation 7 and Central Plant electrical distribution equipment are the original equipment and are at the end of their useful service life and should be considered for replacement as part of any Central Plant upgrades. All of the existing electrical distribution system equipment in the main hospital is at the end of its useful service life and will require replacement as part of any future planned upgrades. All of the substations are over 40 years old. Although the systems have been well maintained, the equipment will require replacement due to its age including the distribution feeders. The conduit infrastructure can be re-used assuming the electrical rooms remain in the same locations.

EMERGENCY POWER SYSTEM

The existing generator plant is approximately 8 years old. The 12 kV generators provide 100% back up power to the campus and have a capacity of 12.5 MVA (five running and one spare). The normal 12 kV switchgear capacity receives its incoming supply from SCE and has a capacity of 24 MVA. The generators provide 100% back up power to the campus and are in good condition. The existing campus 12 kV summer time peak electrical load is approximately 7 MVA or 28% of the normal power main switchgear capacity and 56% of the emergency generator plant capacity.

DISTRIBUTION SYSTEM OVERVIEW

Under the current Surgery and Emergency Room Replacement Project ,a new SCE service feed will be constructed to replace the existing service drop located on 220th Street. The new underground 66-12 kV service feeder will supply the existing SCE substation located in the southwest corner of the generator building that distributes power to the main campus 12 kV, 1200A switchgear lineup located in the generator building. The 12 kV, 1200A switchgear is double ended with a tie breaker that separates the incoming utility normal power and the generator Plant emergency power. Emergency power is supplied from (6) 2 mega watts (MW), 12 KV emergency generators. The main 12 KV switchgear in turn distributes power to 12 KV substations (Sub) 1 through 7 throughout the site

LIGHTING, LIGHTING CONTROL AND SECURITY SYSTEM

The existing light fixtures are original fixtures and have been retrofitted with energy saving ballasts. A lighting control system that is Title 24 compliant will need to be provided as part of the conversion to outpatient uses. Additionally, a security system with access control will be required due to various tenants occupying the facility.

CIVIL

Existing utility maps and as-built drawings in the project vicinity were collected and analyzed which included on-site utilities within the medical facility as well as utilities within the public right-of way adjacent to the Harbor-UCLA. Additional utility information was collected to analyze system capacity, design standards, and feasibility of connection to the existing system. A site visit was performed and included a meeting with Harbor-UCLA maintenance personnel to discuss the layout, operation, and deficiencies in the campus utility systems.

EASEMENTS

Several easements exist within the site as provided by what appears to be a previous survey, dated May 3, 2011, provided by the hospital and confirmed with our own review of a recent Preliminary Title Report dated August 29, 2011.The easements include a 10 foot wide gas easement in the old Meyler Street right-of-way, a 15 foot wide storm drain easement, a 7-foot wide sewer easement, a 2.5' wide easement for storm drain purposes and a 30 by 32 foot County of Los Angeles easement for road purposes. A 12' wide underground tunnel was shown as an encumbrance on the document provided by the hospital, although an easement for this could not be located on the current title search. The referencing document was a Department of Public Works construction drawing.

Many of the easements listed in the provided Title Report either are of a non-plottable nature due to the lack of legal description to specifically locate the easement or do not directly affect the subject property, rather those items fall within the dedicated roadways adjacent to the property.

WATER

There are three water providers within the vicinity of the Medical Center including The Metropolitan Water District (MWD), the California Water Service Company's Rancho Dominguez District (CWS), and the City of Los Angeles Department of Water and Power (LADWP). The California Water Service Company (CWS) owns and maintains distribution mains within the roadways around the medical center that range in size from 6-inches to 33-inches in diameter. Based on preliminary utility research and conversations with facility staff, the medical center is currently served off of the CWS mains at 4 connection points with a backup system connection off of the LADWP main that is not continuously operational.

The four connections to the CWS water system are made at various locations. One connection is made from the 220th Street main line, approximately 450 feet west of Vermont Avenue and is near the Central Plant. Another single connection is made from the Vermont Avenue main line approximately 300 feet north of 220th street. The final two connections are made from the Carson Street main. One of the Carson Street connections is located adjacent to the main hospital entrance off of Carson Street, approximately 600 feet west of Vermont Avenue. The other Carson Street connection is located close to mid-block, approximately 1400 feet west of Vermont Avenue. The LADWP connection is made from Normandie Avenue, approximately 300 feet south of Carson Street.

Existing pressure tests were obtained from CWS for different locations near the medical center during late 2009 and 2010 at three locations including Carson Street and Normandie Avenue, 220th Street and Vermont Avenue, just west of Vermont Avenue, and 220th Street and Vermont Avenue, just east of Vermont Avenue. The pressure test results are summarized below:

Location	Static Pressure	Residual Pressure	Total Flow Observed	Calc. Flow at 20 PSI
220th and Vermont, West of Vermont	78 psi	63 psi	4545 gpm	9434 gpm
Carson and Normandie	75 psi	68 psi	2148 gpm	6538 gpm
220th and Vermont East of Vermont	80 psi	28 psi	1358 gpm	1467 gpm

The 220th Street and Vermont Avenue, east of Vermont Avenue pressure test was obtained from a hydrant connected to a 6-inch water main in 220th Street which may have caused the significant pressure drop for this test compared to the other two fire flow tests which were taken off of 10-inch or larger mains. Although there appears to be significant pressures in the area, future development should verify if the existing system can supply adequate pressures and flows to the site based on final development type and building fire flow requirements. If future services are anticipated to be taken off of 6-inch or 8-inch mains in the street, additional fire flow tests should be conducted from hydrants connected to the mains that are anticipated for connection to verify the pressure and flow in the system at that location.

MWD owns a 78-inch transmission main in 220th Avenue. Given the size of the pipeline, it is highly unlikely that any service connections will be allowed off of this pipeline as MWD typically does not allow individual connection to its distribution mains. This is currently the only known MWD transmission main in the area.

Based on the 1993 District 5 Interceptor Relief Trunk Sewer As-Built plans, an LADWP 30-inch water main is shown on Normandie Avenue. No flow tests were performed on this system, though facility staff indicated that when the on-site system was originally connected to the LADWP main, the high pressure in the system caused damage to several on-site water mains. Subsequently, a pressure regulator was placed on this connection.

The on-site water system is looped and consists of 10-inch and 12-inch main lines. Generally, water mains are located in the main north-south and east-west roads. The system was overhauled recently after the connection to the LAWPD water main caused multiple system failures. The water pipe network is relatively new and maintenance should not be a major issue. Most of the on-site building fire services are connected to the on-site looped system, though the site water plan indicates that the hospital fire service is taken directly from the Vermont Avenue water main. The site is served by the County of Los Angeles Fire Department, which is currently compiling an inventory of all site fire services. Domestic water is provided by connections to the on-site water system.

County of Los Angeles Fire Department personnel indicated that the on-site fire flow requirement will be determined using Table B105.1 from the California Fire Code. The maximum required fire flow established in Table B105.1 is 6,000 gallons per minute (gpm) at 20 pounds per square inch residual pressure for type IA, IB, IIA, and IIIA building construction types. The maximum required fire flow for type IIB, IIIB, IV, V-A, and V-B building construction is 8,000 gpm as 20 psi residual pressure. Required fire flows are also based on building square footages. The County of Los Angeles Fire Code allows for a 50% reduction of the required fire flows for buildings as approved by the fire department on a project-by-project basis. Hydraulic modeling of the on-site and off-site water distribution systems will be required by the fire department for new building construction on the campus.

RECLAIMED WATER

Reclaimed Water is currently not provided to the existing campus. Kimley-Horn looked into the opportunities for serving Harbor-UCLA with recycled water for landscape irrigation.

According to Earl Hartling, Water Recycling Coordinator with the Sanitation Districts of the County of Los Angeles (LACSD), their recycling efforts are concentrated in the eastern areas of the County and there are no plans to extend the system to the Torrance area in LACSD's District Number 5.

West Basin Municipal Water District (WBMWD) does have recycled water distribution systems in the west County area per Joe Walters, Manager of Business Development and Regulatory Affairs at West Basin. The closest facilities WBMWD has to the project site are about 3 miles away, with no future plans for extending their system to the vicinity of the project.

SEWER

The sewer system in the public right-of-way is owned and maintained by the County of Los Angeles Sanitation District (LACSD). Several large trunk sewers exist around the perimeter of the project including a 90-inch and a 63-inch sewer in Normandie Avenue, a 63-inch sewer within the easement at the southern end of the Harbor-UCLA, a 55-inch sewer that runs through roughly the center of the campus site within the abandoned Meyler Street Alignment (Joint Outfall D, Unit 8), a 66-inch, 78-inch, and 8-inch sewer in Vermont, and a 66-inch sewer in Carson which eventually turns to the north just west of Berendo Street. Additionally, an 8-inch sewer runs east on Carson from Berendo, and a 24-inch sewer appears to run west down Carson toward Normandie, however, no as-built drawings were received for the area between Normandie and Berendo therefore, this sewer location and alignment could not be verified at this time.

Analysis of the on-site sewer plan and conversations with facility staff indicate that the portion of the site east of Central Drive, approximately 25% of the campus area, including the hospital, central plant, and cooling tower is served by sewer mains in Vermont Avenue, 220th Street, and Carson Street. The remaining 75% of the campus site area, west of Central Drive, is served by an on-site sewer network that discharges to the Sanitation District Joint Outfall D, Unit 8 trunk sewer through a single point of connection. Generally, the District strived to limit individual connections to its trunk sewer system; therefore, the campus may be limited to the existing single connection to Joint Outfall D, Unit 8. Site staff has indicated that there are currently no capacity issues with the on-site sewer system and that the pipes are in good condition. The sizes of the on-site main lines are unknown.

The County of Los Angeles Sanitation District has a will-serve process which includes published estimated loadings for sanitary sewer based on proposed site uses. In a letter dated August 24, 2011, the District indicated that the Joint Outfall D Unit 8 trunk sewer has a capacity of 28.4 million gallons per day (mgd) and a measured peak flow rate of 17.0 mgd as of 2008. In addition, the downstream sewage treatment facility, the Joint Water Pollution Control Plant in Carson, CA has a design capacity of 400 mgd and currently processes and average flow of 278.8 mgd. Both facilities have significant excess capacity for on-site development.

New development will require a sewer study that verifies the capacity of the on-site sewer system and obtaining a will-serve letter from the Sanitation District. In addition, any construction, horizontal or vertical, within a Sanitation District easement, requires a build-over permit from the District.

STORM DRAIN

The County of Los Angeles Flood Control District owns and maintains the 208th Street Storm Drain which runs through Harbor-UCLA in a 15-foot wide easement. This storm drain line runs through the site in the north-south direction as an 8-foot high by 4-foot wide reinforced concrete box culvert (RCB). Near 220th Street, it turns westerly and flows as an open channel in an easement toward Normandie Avenue. On-site storm drain systems flow into the box culvert. Drawings for the 208th Street Drainage were obtained from the county of Los Angeles Flood Control District and included previous improvements made to Harbor-UCLA for the Surgery and Emergency Room Replacement Project.

The on-site storm drain network is operated and maintained by site staff. They have indicated that there are currently minimal problems with ponding and flooding. There were drainage issues previously in the southwest corner of the campus that were alleviated by a new connection to the County channel and some re-routing of the on-site drains. Staff has indicated that the on-site drainage system is very brittle and difficult to connect to. It is likely that significant redevelopment would require an overhaul of the on-site drainage system. In addition, plans for the Surgery and Emergency Room Replacement project specify a compressible material backfill over the existing RCB in traffic areas. This indicated that the RCB is also brittle and any construction, horizontal or vertical within the vicinity of the RCB may require similar special treatment.

New connection to the RCB or open channel owned by the Flood Control District will require a connection permit. This permit will require a proposed hydrology analysis and a comparison with the design peak flow rate of the existing facility. If the calculated peak flow rate exceeds the design peak flow rate of the facility, the District will generally require detention to mitigate the increase in peak flow rates. There are two typical design storms for development project in the County of Los Angeles. The 50-year capital flood event is used for major drainage courses and draining natural sumps where 3' of ponding or more is possible. The 25-year urban flood event is used for all other urbanized conditions. It is likely that the urban flood event will be used for on-site hydrology calculations.

Based on a rough, preliminary calculation utilizing County methods, the peak site runoff during a 25-year storm event is approximately 2.0 cfs per acre.

The County of Los Angeles determines the allowable amount of runoff that can enter its system based on historical records. The original hydrology records for the 208th Street drain date back to 1976; the drain was originally designed to accommodate the 10-year storm. The 10-year storm runoff, calculated with methods utilized in 1976, was 135 cfs for the 76 acres of area (subareas 8A, 9A, and 10A as depicted in the hydrology calculations). The hydrologic yield was 1.8 cfs per acre. The downstream County system that the 208th Street storm drain connects to is undersized for the historical 10-year event by approximately 16%. Reducing the historical hydrologic yield by 16% results in an adjusted hydrologic yield of 1.5 cfs per acre. It is likely that the allowable flow rate allowed at connections to the County storm drain will be limited to 1.5 cfs per acre. Given that the approximate site peak runoff is 2.0 cfs per acre, it is likely that detention facilities will be required for redeveloped areas.

STORMWATER MANAGEMENT

The County of Los Angeles Low impact Development Standards Manual of 2009 outlines the requirements for stormwater management in the County. Specifically, the manual sets for the criteria for stormwater treatment, hydromodification, and low impact development (LID). LID is a stormwater management strategy that aims to have developed site hydrology mimic undeveloped site hydrology.

The standard method for treating stormwater in the County of Los Angeles is through the application of LID Best Management Practices (BMPs). The LID Manual establishes a hierarchy of BMPs to be used for development sites as outlined below:

1. Infiltration BMPs
2. Storage and Reuse BMPs
3. Filtration and Biofiltration BMPs

A development site is required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (i.e. 0 percent impervious) where technically feasible. If infiltration and reuse are not technically feasible, then the excess volume may be directed to a filtration BMP with Engineered soils or a Biofiltration BMP; in both cases, the excess volume may only be discharged gradually.

In addition to the excess volume requirement, the County also requires that the entire 0.75-inch rainfall event be treated to remove urban stormwater pollution. This can be accomplished by utilizing a BMP that captures the developed runoff volume, or alternatively by a BMP that is design to treat a flow rate that corresponds to a rainfall intensity of 0.75 inches per hour. Oftentimes the volume and treatment requirements are met by the same BMP. Based on preliminary calculations, the required treatment flow rate is approximately 0.17 cfs per acre based on a flow rate design and the required treatment volume is approximately 2,200 cubic feet per acre based on a volume design. The excess volume to be infiltrated, reused, or stored is approximately 1,940 cubic feet per acre. Previously approved grading plans for the emergency/surgery replacement indicate that several dry wells are utilized in the new development area. It is likely that future development projects will utilize dry wells for infiltration to accommodate both the treatment and excess volume requirements. It is highly recommended that upstream pre-treatment devices accompany infiltration BMPs in order to maintain the infiltration BMP effectiveness.

In addition to the LID requirements set for the LID manual, the County also establishes hydromodification requirements that require the difference in peak flow rate, flow velocity, total volume, and depth/width of flow for the 2-, 5-, 10-, 25-, and 50-year storm with several exceptions. One exception is that a proposed project would not add impervious area beyond what exists pre-construction. Since the campus is fully developed and highly impervious, the hydromodification requirement will likely not be applied to the campus redevelopment.

Year	Requirement
2002	NPC 2
2008*	SPC 2 / NPC 3
2030	SPC 3, 4, 5 / NPC 5

*Possible extension to 2013

Table 1 - SB1953 Requirements

STRUCTURAL

The structural portion of the master plan for Harbor-UCLA Medical Center was developed based upon performing a structural assessment of the existing facility, a review of legislative requirements and determining the future needs of the hospital. The structural assessment was performed for the buildings expected to impact future campus development. The assessment consisted of a brief visual review of the condition of the existing structures and a determination of the seismic classifications as defined by the California Building Code. A primary component of the seismic portion of the assessment is the requirement for acute care facilities to be compliant with the SB 1953 requirements by the 2030 deadline.

SB 1953 OVERVIEW

The Alquist Hospital Seismic Safety Act was passed by the Legislature in 1973 to require that acute care hospitals be constructed to remain operation after a seismic event. During the 1994 Northridge Earthquake many of the older hospital buildings sustained substantial damage and the Legislature amended the Alquist Act with SB 1953. The amendment requires hospitals to evaluate and rate the seismic performance of all their acute care hospital buildings. Based on the outcome of the evaluation, the buildings may be required to be retrofitted to sustain a major seismic event or no longer be used for acute care. Hospitals were required to submit compliance plans to OSHPD by January 1, 2002 to indicate what is being planned to meet the requirements for nonconforming buildings. The evaluation includes both the structural (SPC) and non-structural (NPC) performance of a building and places it in a category on a scale of 1 to 5.

It is required that the buildings meet the compliance deadlines shown in Table 1 to continue operation as an acute care facility. The purpose of these requirements is to strengthen older hospital buildings to resist major earthquakes.

The SB 1953 performance category status shown in Table 5 was provided by Harbor-UCLA Medical Center for review. The report noted that all the buildings except for the new Surgery and Emergency Room Replacement Project are to be retrofitted, as needed, to meet the 2008 (2013 with extension) requirement of SPC 2 / NPC 3 and then to be removed from acute care services in 2030.

EXISTING BUILDINGS ASSESSMENT

A structural assessment was performed for the Harbor-UCLA Medical Center buildings expected to impact future campus development. The primary purpose of the assessment was to perform an evaluation of each building's seismic vulnerability. The buildings' anticipated performance during a seismic event was reviewed based on seismic performance categories developed by OSHPD.

EXISTING MAIN HOSPITAL DESCRIPTION

The main hospital structure was constructed in 1959 and consists of an eight-story center patient tower with seismically separated two-story south and north wings. There is a basement located under the structure with a sub-basement under the south wing. The center tower is rectangular with a footprint of 201 ft by 81 ft. The smaller wing sections are connected to each side of the tower on the longitudinal sides. The south wing is 185 ft by 149 ft. and the north wing is 185 ft by 119 ft. There is also an addition housing the PCDC department in the northwest corner (permit date 1989) and a cafeteria attached to the south wing (permit date 1975).

The floors are constructed of two-way concrete flat slabs that span 22 to 33 ft between columns with capitals. The columns are supported on spread footings. The lateral resistance is provided by concrete shearwalls. The shearwalls are located at the perimeter for the first two levels and within the interior of the building the full height.

A site visit was performed to observe the general condition of the buildings. Most of the structure was concealed by architectural finishes, however in areas where ongoing work was occurring and in mechanical rooms the structure was able to be observed. Based on the age of the building it may be expected that some areas may have experienced some level of deterioration if the finishes were removed. For the limited areas observed the concrete slab did not exhibit any significant

deterioration. In the penthouse areas there was noticeable deterioration in some areas that appeared to be in the process of being renovated as part of the current work being performed at the hospital.

EXISTING CENTRAL PLANT DESCRIPTION

The Central Plant was originally constructed in 1959 with upgrade and expansion permit dates of 1989 and 1994. The structure has two levels and partial basement. It is constructed with a concrete flat slab and structural steel.

SURGERY AND EMERGENCY ROOM REPLACEMENT DESCRIPTION

There is a new Surgery and Emergency Room replacement project currently under construction located on the southwest corner of the main hospital. The new building is structural steel with two floors above grade and a basement. The addition is currently under construction and will have SB 1953 ratings of SPC 5 and NPC 4 (Ref. Table 1).

GEOLOGICAL REVIEW

The medical center campus is located in an area that is subject to strong ground shaking in the event of an earthquake. This is common in Southern California and requires that buildings meet stringent building code requirements to mitigate the hazard.

GEOTECHNICAL REVIEW

The Geotechnical reports related to the recent and current construction projects were made available for review (Ref. 8, 9, 10 & 11). Based on these documents the natural soils are clays underlain by silty sand. Ground water was encountered at 65 ft below grade. The site is not within the Alquist-Priola earthquake fault zone for surface rupture. The reports note the potential for surface rupture, liquefaction and landslides as low. The closest active fault is the Palos Verdes Fault which is 5.6 km away. The expected seismic settlement is on the order of ½". Based on this information, there are no restrictions presented in the reports which would prohibit construction of new buildings on the campus.

HAZARDOUS MATERIAL STUDIES

Reports from 2007 and 2008 regarding testing for hazardous materials at the new Emergency Room addition and at an existing fuel tank were also provided (Ref. 12 & 13). The findings of the reports are that the level of hazardous materials tested for did not exceed allowable government agency levels and/or at levels higher than that naturally occurring in the geological area.

SUMMARY OF COMPLETED AND ONGOING SEISMIC RETROFITS

Main Hospital
The central tower portion had a seismic retrofit per the as-built drawings dated 2001. The lateral system was strengthened with new concrete shearwalls and frames attached to the exterior of the building. The new structural elements are located in a U-shape at the east and west ends of the building. The interior of the structure was not strengthened per the as-built drawings. The building has a SB 1953 rating of SPC 2 (Ref. 2).

The south and north wings had seismic retrofits that are in the final stages of completion at the time of this report, 2011. The south wing had new concrete shearwalls added and strengthening of existing shearwalls. The steel penthouse was strengthened with braces and rigid frames. The north wing work consisted of detaching and strengthening the canopy. Both wings will achieve a SB 1953 rating of SPC 2 (Ref. 3).

The current ongoing seismic retrofit also consists of anchorage and bracing of the non-structural equipment within the critical care areas and source equipment. The work was performed within the main hospital and equipment that supported the hospital that included the central plant. The areas identified above will have a SB 1953 rating of NPC 3 (Ref. 3).

Structural Performance Category (SPC)	
SPC 1	Buildings posing a significant risk of collapse and a danger to the public.
SPC 2	Buildings in compliance with the pre-1973 California Building Standards Code or other applicable standards, but not in compliance with the structural provisions of the Alquist Hospital Facilities Seismic Act. These buildings do not significantly jeopardize life, buy may not be repairable or functional following strong ground motion.
SPC 3	Buildings in compliance with the structural provisions of the Alquist Hospital Facilities Seismic Safety Act, utilizing steel moment-resisting frames in regions of high seismicity and constructed under a permit prior to October 25, 1994. These buildings may experience structural damage which does not significantly jeopardize life, but may not be repairable or functional following strong ground motion.
SPC 4	Buildings in compliance with the structural provisions of the Alquist Hospital Facilities Seismic Act, but may experience structural damage which may inhibit ability to provide services to the public following strong ground motion.
SPC 5	Buildings in compliance with the structural provisions of the Alquist Hospital Facilities Seismic Act, and reasonable capable of providing services to the public following strong ground motion.

Table 2 - Performance Categories Established by OSHPD

(CBC Table 2.5.3 Summary)

Non-Structural Performance Category (NPC)	
NPC 1	Buildings with equipment and systems not meeting the bracing and anchorage requirements of any other NPC.
NPC 2	The following systems are braced or anchored in accordance with CBC. • Communications systems. • Emergency power supply • Fire alarm systems • Emergency lighting equipment and signs in the means of egress
NPC 3	The building meets the criteria for NPC 2 and in critical care areas, clinical laboratory service, pharmaceutical service spaces, radiological service spaces, and central and sterile supply areas, and specific components as listed in the CBC that have to meet the bracing and anchorage requirements.
NPC 4	The building meets the criteria for NPC 3 and all architectural, mechanical, electrical systems, components and equipment, and hospital equipment meet the bracing and anchorage requirements of California Building Code.
NPC 5	The building meets the criteria of NPC 4 and onsite supplies of water and holding tanks for wastewater, sufficient for 72 hours emergency operations, are integrated into the building plumbing systems. As an alternative, hook ups to allow for the use of transportable sources of water and sanitary waste water disposal have been provided. An onsite emergency system is incorporated into the building electrical system for critical care areas. Additionally, the system shall provide for radiological services and an onsite supply for 72 hours of acute care operations.

Table 3 – Nonstructural Performance Categories Established by OSHPD

(CBC Table 11.1 Summary)

Building	2008 (2013)	2030
Central Tower	SPC 2 / NPC 3	Delicense Acute Care
North Wing	SPC 2 / NPC 3	Delicense Acute Care
South Wing	SPC 2 / NPC 3	Delicense Acute Care
PCDC	SPC 3 / NPC 2	Delicense Acute Care
Cafeteria	SPC 4 / NPC 3	Delicense Acute Care
Central Plant	SPC 4 / NPC 4	Delicense Acute Care
Communications Bldg.	SPC 4 / NPC 4	Delicense Acute Care
Surgery/Emergency	SPC 5 / NPC 4	Continue Usage

Table 5 – Current Harbor/UCLA Compliance Plan (Ref. 7)

SEISMIC EVALUATION OF THE EXISTING BUILDINGS

The original main hospital was constructed in 1959 prior to the passage of the Alquist Hospital Seismic Safety Act. With the recent retrofits the seismic performance category has been upgraded to SPC 2 / NPC 3 classifications. This will allow the hospital to remain as an acute care facility until the year 2030. According to the definition provided by OSHPD, a SPC 2 classification does not significantly jeopardize life safety, however it may not be repairable or able to function after a large seismic event. This does not meet the requirements of SB 1953 for the buildings to remain operational after an earthquake.

By year 2030, the nonconforming main hospital buildings are required to be retrofitted to a SPC 4 / NPC 5 classification, delicensed as an acute care facility or demolished. The hospital's current compliance plan shows the intention to delicense the buildings from acute care services.

The PCDC and cafeteria portion of the main hospital meet SB 1953 structural requirements but the interconnection with the original hospital will make using the facility as an acute care facility past 2030 challenging.

The Central Plant is classified as SPC 4 / NPC 3. The structural classification allows it to remain in operation beyond 2030 if the NPC classification is upgraded to NPC 5.

The communications building is classified as SPC 4 / NPC 4 and would also require an NPC upgrade to level 5 to remain in operation past 2030.

The Surgery and Emergency Room Replacement Project currently under construction will meet the current code and is not affected by the SB 1953 requirements.

The communications building '2 East' located near Vermont Avenue is to remain and has a SPC 4 rating. The building was determined to be an important part of the campus that is not easily replaced based on its contents. The current non-structural classification will need to be upgraded from a NPC 4 to NPC 5 as part of the construction to meet the requirements set forth in SB 1953.

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EXISTING INFORMATION TECHNOLOGY

Harbor-UCLA medical applications reside in the Hospital's Data Center located on the Level B. The County's planned deployment of a centralized electronic health record (EHR) system would result in the creation of one or more regional data centers and may reduce (but not totally eliminate) the need for data center space on campus.

Harbor-UCLA utilizes Centrex services and an Avaya Telephone Switch to provide telephone services throughout the campus, with ties to the remote (off-site) clinics. The existing telephone switch is also capable of providing Voice over IP (VoIP) services but the current network infrastructure prevents a complete rollout of this technology at this time. The telephone switch is located in Building 2E (off Vermont, between Building 1E and the AF Parlow Library), which also houses the Main Point of Entry (MPOE) for the campus. Accordingly, this is a key building from a technology perspective

There is a connection from AT&T's Torrance Central Exchange Office to the campus, which runs down Carson Street and onto Vermont Avenue before entering Building 2E. Time Warner provides the Enterprise Wide Area Network (WAN) connectivity, with AT&T acting as the backup.

The on-campus cabling infrastructure takes two primary routes, with the original cabling meandering between the buildings on the north side of campus and a newer run of optical fiber cabling running down Medical Center Drive. The original cabling has expanded organically over time and there are little or no records of the cable types, quantities and routes taken. The newer cabling has much better documentation with cable types, quantities and routes specified.

Harbor-UCLA is affiliated to UCLA through the School of Medicine, but there are no technology links required at this time as shared applications are all web-based. LA BioMed has its own network and support staff, but there is a significant amount of coordination between the County and LA BioMed staff since there are a number of doctors requiring access to both the County and LA BioMed's systems. Currently this is typically done with two separate computers, but the Harbor-UCLA is looking for a better solution.

All Harbor-UCLA PCs are application/software locked for security and management reasons. There is no public wireless available on campus – this is a big dis-satisfier staff would like addressed if possible.

CARSON STREET

NORTH DRIVE

PARKING

N33

N34

WEST DRIVE

CHILDREN'S INSTITUTE INTERNATIONAL

N26-A

N26-B

N22

N17

N7

N6

N26

N14

N8

N28

PARKING

N24

N20

N9

N21

N16

N12

N11

LOT B

PCD C

LOT C

HOSPITAL

1 EAST

2 EAST

N31

PARKING

N25

C 3

C 2

C1

B 2

B3

B3 ANNEX

N32

B1

B4

PARKING

MEDICAL FOUNDATION DRIVE

D2

D5

AMBULANCE PARKING

LOT A

NORMANDIE AVENUE

VERMONT AVENUE

18

16

14

IMAGINE CENTER

E6

E5

E4

E3

E 2

E1

E1

D1

D 2. 5

D3

D 3.5

D 4. 5

D 5

D 5.5

D 6

D9

1 SOUTH

MEDICAL CENTER DRIVE

CARPOOL PARKING

2 SOUTH

HARBOR-UCLA PROFESSIONAL BUILDING

PARKING

RESEARCH PARK DRIVE

ST. JOHN'S CARDIO-VASCULAR RESEARCH CENTER

RB2

J3

LIU RESEARCH CENTER

WALTER P. MARTIN RESEARCH CENTER

F 0

F1

F 2

F3

F3.5

F4

F 4. 5

F 5

F 5 ANNEX

F 6

F 7

F9

F8

H1

PARKING

CENTRAL DRIVE

3 SOUTH

WARE-HOUSE #2

WAREHOUSE # 1

LOT D

PARKING STRUCTURE

LOADING DOCK

SOUTH DRIVE

J4

J2

L4

HANLEY-HARDISON RESEARCH CENTER

MEYLER ST

T1

M1

F10

220th STREET

LA BIOMED PARKING LOT

LEGEND

- INCOMING SERVICES
- DATA CENTER
- TELECOM BUILDING
- CAMPUS CABLING DISTRIBUTION
- BUILDINGS IN THIS AREA FED VIA UNDERGROUND CABLE (NO RECORDS)

EXISTING INFORMATION TECHNOLOGY PLAN

0’ 100’ 200’

N

EXISTING CAMPUS MATERIALS MANAGEMENT

The Materials Management (MM) department is responsible for the development, maintenance and coordination of all supply support systems, 24 hours a day, 365 days a year. They are responsible for the Loading Dock function, shipping and receiving, supply replenishment and Warehouse's #1 and #2. A brief overview of the current operations, equipment and departmental space follows.

WAREHOUSE #1

Warehouse #1 (WH#1) is the main portal into Harbor-UCLA for the majority of medical supplies, forms, housekeeping supplies and paper goods, and a wide variety of additional products. The Loading Dock, administrative / purchasing offices, shipping / receiving function and main storeroom are located in this space.

The storeroom space provides bulk and small unit of measure storage on two levels, connected by an 8,000 lb. freight elevator, and a recently installed 5,000 lb. freight elevator. The Loading Dock is connected directly to the second level of the Storeroom, and provides four (4) truck positions in its current configuration. The department also has responsibility for the Bed Storage, Salvage, and Emergency Supply stores function in Warehouse #2 (WH #2). The Loading Dock and WH #2 will be addressed in separate sections within this report.

The equipment and systems within the WH #1 Storeroom are adequate, but not state of the art. Shelving is basic bulk / pallet racking and hand stack shelving. Order picking is not automated. Electric Tug Vehicles and transport carts are used to transport supplies through the connecting tunnel to the Main Hospital, but all other transport and order picking systems are manual.

The large 8,000 lb. storeroom freight elevator is a major concern. It is subject to frequent break-downs, and has operational issues (loads must be centered to avoid deck tilt which shuts the elevator down, etc.) that hamper the efficiency of the department. The 5,000 lb. elevator does not provide access to the tunnel. Additional concerns include roof leaks, and a desire for improved departmental / supply loss security.

Based on space programming criteria, and experience with healthcare facilities of similar size and complexity, the WH #1 Storeroom, in its current configuration, does appear to be adequately sized to accommodate the campus at the point the Surgery and Emergency Room Replacement Project is completed.

WAREHOUSE #2

The WH #2 storeroom is currently utilized for bed storage, disaster supply storage and as a collection space for obsolete and broken equipment slated for salvage. The bed storage function was relocated to this location as part of the interim logistic plan put in place during construction of the Surgery and Emergency Room Replacement Project.

Equipment within WH #2 consists of vertical bed storage racking and bulk pallet storage shelving. Salvage equipment is staged on carts and open floor space.

This space is currently operating at near its capacity. Bed storage racking is consistently full. The disaster supplies stored here are constant in volume, representing a three day supply of the essential items needed to support the operations of the facility. Access to these supplies must be maintained so that they can be rotated and replenished when needed. The salvage

equipment staging function is the most difficult to manage and accommodate within this space. The many types, sizes and quantities of salvage equipment that may need staging at any given time make space allocation difficult. The equipment often must be held for long periods of time waiting for pick up.

LOADING DOCK

The WH #1 / WH #2 Loading Dock was expanded and reconfigured as part of the LB 2006 Phase II Materials Management Logistics Report plan to maintain operations during the time the new Surgery and Emergency Room Replacement Project is under construction. Alternate delivery locations for dietary supplies and clean / soiled linen where also identified in the report, and are currently in use. When the S/E Replacement project is complete, the linen and dietary receiving function will relocate to the new S/E loading dock. The WH #1 / WH #2 Loading Dock will remain basically the same at this point. The cardboard baler will move back the main loading dock when the Surgery and Emergency Room Replacement Project is complete.

The main WH #1 Dock has three (3) truck positions, each with a dock leveler. There is a fourth dock position, located between WH #1 and WH #2 that is seldom used. It does not have a dock lift or dock leveler.

A dock study performed by Lerch Bates as part of the 2006 Phase II Logistics Study indicated that four (4) truck positions would be the minimum recommended to ensure an efficient dock operation, if dietary supplies and linen had a separate docking location.

LINEN SERVICES

The delivery of clean linen, and the pick-up of soiled line are currently performed in an interim location, as called for in the interim logistics plan to allow operations to continue during construction of the Surgery and Emergency Room Replacement Project. Clean Linen is delivered to the Clinic entrance, and transported via elevator #12 to the Linen stores area. A laundry service trailer is currently parked in this same location for the collection of soiled linen. This function will be relocated to the Main loading dock once the Surgery and Emergency Room Replacement Project is complete.

The department currently maintains a three (3) day supply of linen on-site. Linen is picked-up by the Medical Center's contracted laundry service every day except Friday. Departmental Linen inventories are replenished using a PAR re-supply model. Linen chutes are currently used to transport soiled linen vertically in the existing building. Linen is currently provided to Bungalow Clinics one (1) time per week. Bungalow deliveries are by Medical Center owned trucks with lift gates. Scrubs are currently provided on a manual exchange system..

WASTE MANAGEMENT

The Environmental Services Department is responsible for the collection, transport and processing of the Medical Centers' waste stream This includes:

- General Waste (GW)
- Regulated Medical Waste (RMW)
- Sharps Containers
- Pharmaceutical Waste
- Chemo Waste
- Pathological Waste

All waste processing equipment and staging space is currently located at the WH #1 Loading Dock. The equipment consists of an older Mark Costello brand Retort Sterilizer, a 40 cubic yard Compactor / Container and a cardboard baler.

Regulated Medical Waste is currently sterilized in the Retort Sterilizer, and then added to the General Waste compactor / container. The 40 cubic yard Compactor / Container is pulled (emptied) four to five times per week. Twenty six (26) additional three (3) cubic yard "dumpsters" are located throughout the campus. These are also emptied four (4) days per week. Hazardous waste is collected as needed in a chain-link enclosure located at the WH #1 Loading Dock.

03 PLANNING AND STANDARDS

By developing the Harbor-UCLA Medical Center campus into a “total health” environment, the campus can actualize its role as a central community resource that focuses on health management and care

SUSTAINABILITY

By developing the Harbor-UCLA Medical Center campus into a “total health” environment, the campus can actualize its role as a central community resource that focuses on health management and care. Harbor-UCLA Medical Center will be a regenerative place of healing, moving beyond carbon neutrality to a campus that improves the conditions for community health. Harbor-UCLA Medical Center can contribute to the health of the community and surrounding environment through this commitment to long-term sustainability.

The campus master plan expands current thinking beyond systems that “do less harm” through reducing negative resource impacts to create a campus that “heals.” Enhancing long-term sustainability is one of the key principles guiding this master plan. One of the linchpins of successful green building is an integrated design process that considers sustainability from the very beginning of each project. Sustainability and green building techniques should be integrated into all buildings from the beginning of design, through construction, to building occupancy and daily use. Various standards and guidelines aim to reduce resource and energy consumption, encourage water and solid waste recycling, integrate renewable energy generation, enable rainwater capture, support walking, and support occupant and environmental health. Green building techniques in buildings are intended to be integrated with campus infrastructure such as integrated stormwater and wastewater treatment. Together, all of these elements will effectively lower resource and energy requirements, reduce greenhouse gas emissions, and enhance long-term sustainability. The goals of the master plan are intended to evolve over time to accommodate new technology and green building practices.

- Green Building Metrics: Future buildings on the campus to meet the requirements of the USGBC’s Leadership in Energy and Environmental Design Rating System (LEED) for Healthcare, [Platinum] certification and achieves the majority of “petals” of the ILBI’s Living Building Challenge 2.0.

- Reducing Energy Demand: For each project, develop an energy simulation model that achieves an Energy Use Index (EUI) of approximately 75% below regional average. Renewable energy sourcing to meet the 2030 Challenge® carbon neutral goal. The catalyst for such drastic energy reduction is optimized solar management and high-performance envelope, coupled with system innovations. Also controlled natural ventilation systems coupled with displacement delivery and direct outside air fan systems deliver ventilation air.

- Renewable Energy Sources: Once the systems virtually eliminate thermal energy needs, electrical power generation becomes the primary focus.

- Water Balance: The campus to reduces total water consumption by 60%. On-site wastewater treatment removes harmful contaminants from discharge water and facilitates water reuse. A water positive development is the ultimate goal.

- Net-zero Waste: Using proven approaches, the Harbor-UCLA can reduce its waste generation.

- Material Health: Material Health refers to the impact of building materials on the health of building users and occupants. Future Harbor-UCLA Medical Center buildings and operations will prioritize material health and avoid building products that are harmful to humans, animals and the environment when healthier alternatives are available. The Living Building Red List, Perkins+Will Precautionary List, and Proposition 65 all filter material choices. Future buildings will prioritize indoor pollutant source control and specification of low-emitting, formaldehyde-free materials.

Above: Perkins+Will Precautionary List
www.transparency.perkinswill.com

METRICS

Implementing the Harbor-UCLA Medical Center Campus Master Plan can be aided by a standardized approach to third-party certification systems. As the master plan is implemented these recognized systems can be utilized for environmental performance certification.

- LEED for Healthcare Rating System / Green Guide for Healthcare: Campus Buildings are designed to meet the requirements of the USGBC's LEED for Healthcare, [Platinum] certification and incorporates LEED Pilot credits on healthy materials selection.

- LEED Application Guide for Multiple Buildings and On-Campus Building Projects: Utilize to exploit economies of scale and the unique challenges and opportunities inherent in campus projects.

- Living Building Challenge: Achieve a majority of "petals" of the International Living Building Institute's Living Building Challenge 2.0.

- 2030 Challenge: Goals of each project to meet the 2030 Challenge relative to reduction requirements for the year constructed.

- Targeting 100!: Utilize tools and approaches from research to meet the 2030 Challenge for the hospital.

Above: LEED for Healthcare Rating System

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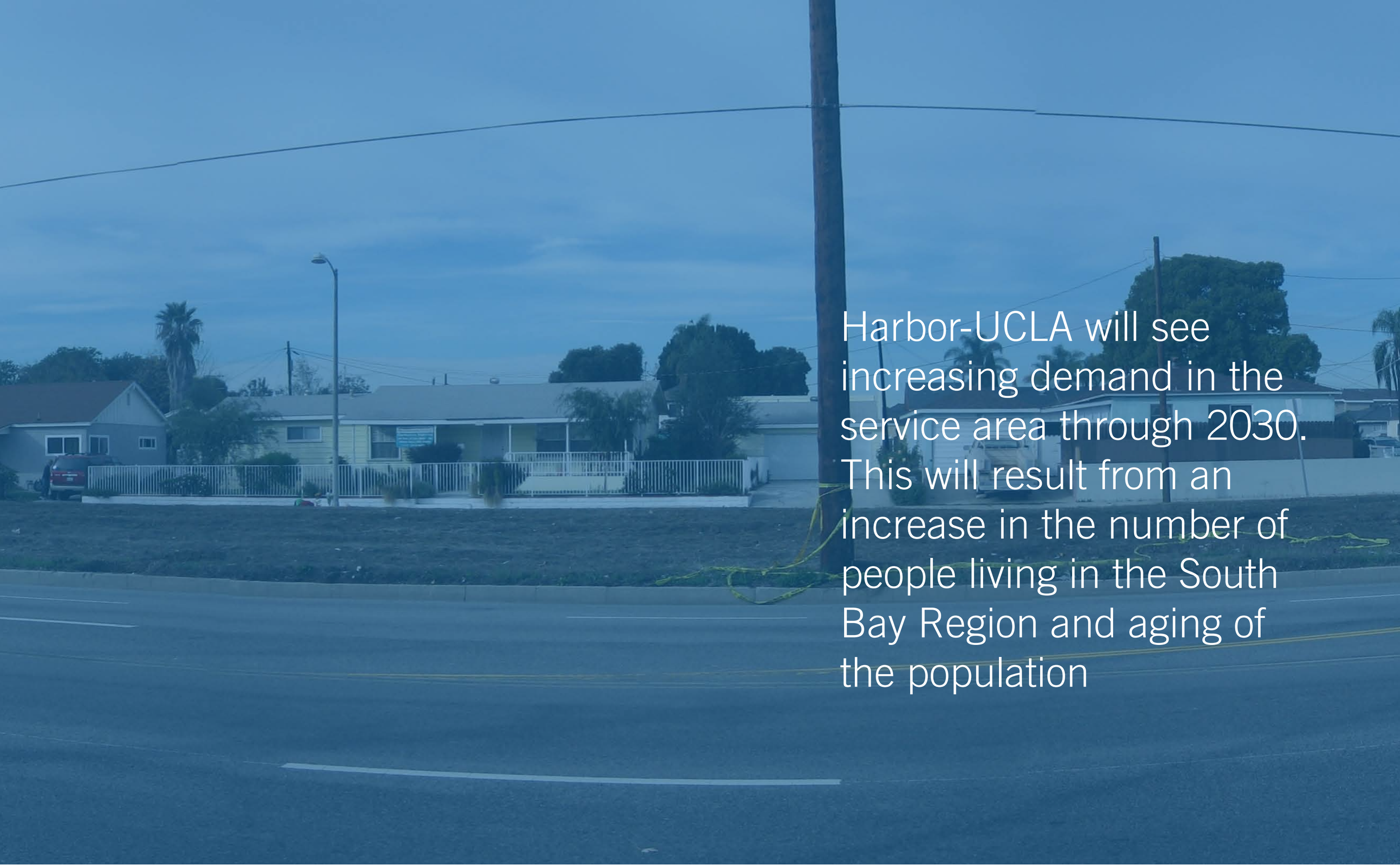


Harbor-UCLA will see increasing demand in the service area through 2030. This will result from an increase in the number of people living in the South Bay Region and aging of the population

MARKET PROJECTIONS

The planning team recognizes that many organizations are challenged to build facility infrastructure supporting health services in the current economic environment, with Harbor-UCLA as no exception. Projecting future demand for healthcare services that can be supported by Harbor-UCLA is a critical step prior to building development. In this section, the planning team has developed a comprehensive demand forecast organizing inpatient volume by service line, key ancillary activity, and on-campus patient clinic visits.

In this analysis, services have been evaluated based on their historical patient demand, anticipated demographic trends, and campus capabilities. Projections extend out 20 years to 2030.

LONG TERM DEMAND ANALYSIS

Harbor-UCLA will see increasing demand in the service area through 2030. This will result from an increase in the number of people living in the South Bay Region and aging of the population, with the greatest aging occurring during the 2020 to 2030 time period as an increasing number of boomers move into the age 75+ age cohort.

KEY FINDINGS

- Service area population will increase by over 600,000 people over the next 20 years
- It is anticipated that an additional 190,000 Medicare-eligible residents will be living in the service area over the planning horizon
- Limited facility expansion and an aging healthcare workforce will restrict access to healthcare services
- The service area has a very low inpatient utilization rate of 95.9 compared to the national average of 122.1, representing limited opportunity for reductions in patient utilization
- Harbor-UCLA has low volume in key services including Pediatrics, Maternity, and Cardiovascular Surgery and Kidney Transplantation
- Assuming a percentage of Harbor-UCLA's volumes transition back to MLK Hospital, Harbor-UCLA will still experience a potential increase from 24,500 to 32,000 total discharges
- Future patient visits are anticipated to increase from 340,000 to 410,000 visits reflecting a slightly higher growth rate in outpatient versus inpatient volume

PRELIMINARY CONCLUSIONS

- Harbor-UCLA is a vital asset to the South Bay Region and thus warrants future investment to provide tertiary acute care services in the community, while maintaining its teaching and research missions
- Expanded access to Medi-Cal and a shifting of patients to Medicare over the next 20 years will not result in an out-migration of volume for Harbor-UCLA. This prediction is due to physician workforce shortages and limited facility investment in the region
- Increased coordination between Harbor-UCLA and other community resources (e.g., Family Health Centers, FHCs, Federally Qualified Health Centers, FQHCs) will be important to maintain already low utilization rates in the service area and it is believed that there is limited opportunity to reduce these rates further
- Harbor-UCLA warrants future investment to meet future demand while at the same time working to improve operational effectiveness

In determining the space allocation for the recommended scenario, six primary categories were defined. The categories were organized according to department functionality and service scope

PROGRAM

CLINICAL SPACE PROGRAMMING CATEGORIES

In determining the space allocation for the recommended scenario, six primary categories were defined. The categories below were organized according to department functionality and service scope. These include patient beds, diagnostic and treatment services, clinical support, support services, teaching, and primary care and specialty clinics.

PATIENT BEDS	• Patient care units inclusive of acute care, critical care, psychiatry, pediatrics post-partum neonatology
DIAGNOSTIC AND TREATMENT	• Emergency and Urgent Care • Interventional services such as cath labs, interventional radiology and surgery. • Bronchoscopy and endoscopy • Major imaging modalities such as CT, MRI, ultrasound, X-ray, radiation oncology, PET and nuclear medicine • Labor and Delivery • Cancer services
CLINICAL SUPPORT	• Emergency transport services, laboratory, pharmacy, respiratory therapy, and trauma services
SUPPORT SERVICES	• Non-clinical support services to include administration, EVS, materials management, patient transport, admitting, biomedical engineering, gift shop, cafeteria, food services, security, general conference rooms, social services, case management and patient family services
TEACHING	• Classrooms and teaching labs • Simulation space • Staff education and administration • Student health

PROGRAM SUMMARY

The adjacent diagram is a summary of the total campus programmed space. The master plan is comprised of four major program categories. The Hospital Category represents the Inpatient functions that make up the majority of the new buildings proposed as part of the master plan. The Outpatient Category includes clinical spaces that are not part of the New Hospital. The Other Services Category includes all other program that will support the mission of the campus. Finally, Campus Support includes support spaces for the physical operation of the campus.

All square footage totals are given as Building Gross Square Footage or BGSF. BGSF is defined as the total area occupied by the building measured from exterior to exterior. This area will include all mechanical chases, corridors, elevator/stair wells, mechanical penthouses/rooms, and building skin typically not included in a space program.

1,600,000 square feet PROPOSED
980,000 square feet EXISTING

HOSPITAL
Total BGSF: 1,158,540 SF

FUTURE HOSPITAL STRUCTURE

- Inpatient and Acute Care Services, 446 Patient Beds, (Currently 367 staffed beds) Interventional Services, Inpatient Imaging Department, etc.

NEW EMERGENCY DEPARTMENT / SURGERY BUILDING

- Emergency Department Surgery

EXISTING TOWER AND PCDC

- Outpatient and Hospital Support, Outpatient Imaging, Dept., Administrative Offices, etc.

OUTPATIENT
Total BGSF: 261,518 SF

BUILDING A

- Medical Foundation Offices, OB/GYN, Surgery, Internal Medicine, Neurology, Pediatrics, etc.

BUILDING B

- Specialty Clinic Services, Classrooms/Labs, Library, Outpatient Imaging including MRI; CT, etc.

BUILDING C

- Mental Health, Social Services, etc.

OTHER SERVICES
Total BGSF: 125,600 SF

Meeting Spaces, Wellness Training, Post-Medical Care, Preventive Care, Nutrition Classes, etc.

Potential Commercial / Retail Uses

- Fitness Center, Herbal Shop, Bookstore, Juice Bar, Yoga Studio, Massage Therapy, Aromatherapy, Child Care, Health Food Market, Fitness/Exercise Store, etc.

CAMPUS SUPPORT
Total BGSF: 57,400 SF

CENTRAL PLANT

WATER TREATMENT

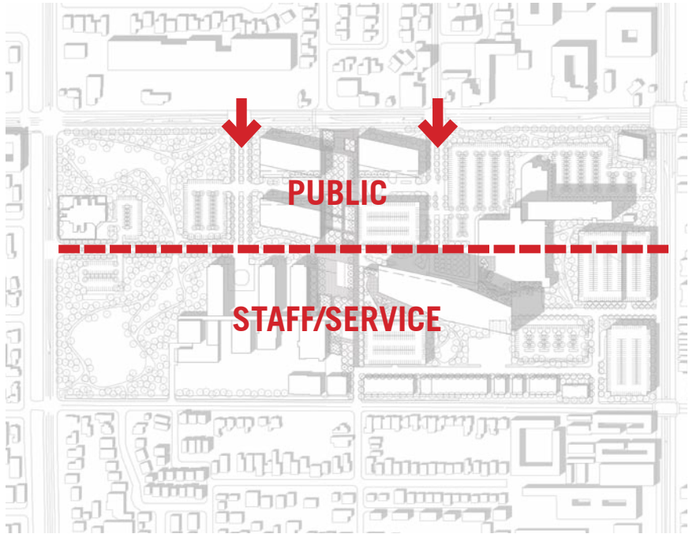
WAREHOUSES/MATERIAL MANAGEMENT

LOADING DOCK

MASTER PLAN DESIGN PRINCIPLES

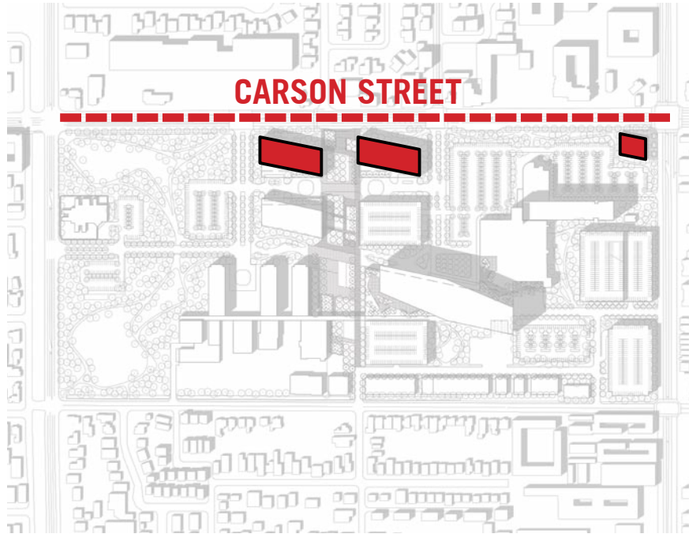
The analyses and studies revealed six underlying principles that began to shape and define the master plan.

These design principles relate to the new operational efficiency of the new Harbor-UCLA campus, the role of the campus in the surrounding community, and the experience of the campus to its users and visitors.



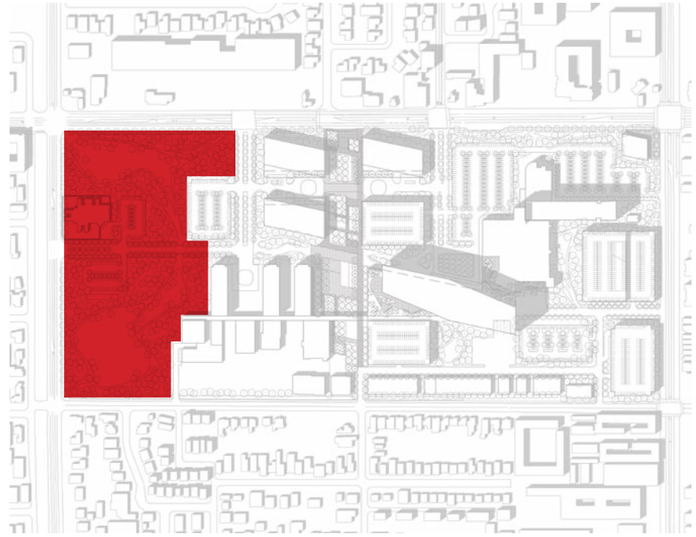
ORGANIZATIONAL CLARITY

The site will be zoned with public accessible zones to the north, and staff/service to the south. Public entry drives lead directly from Carson Street to the arrival plazas of the New Hospital and LA BioMed.



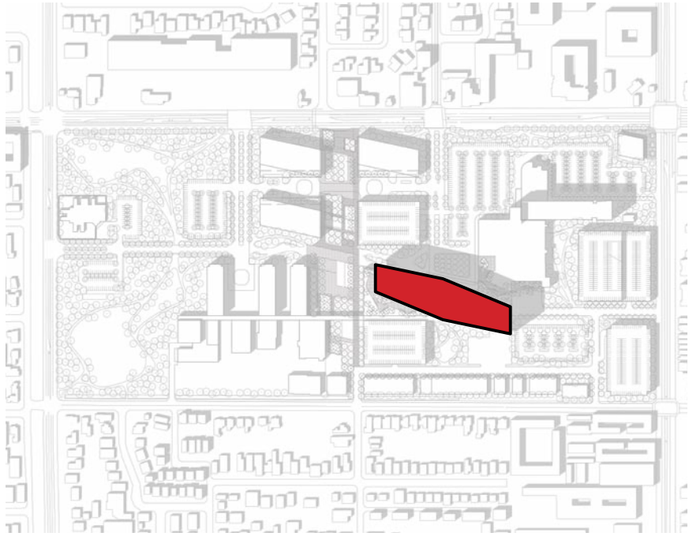
COMMUNITY INTERACTION

Commercial and community based interaction will be encouraged along Carson Street.



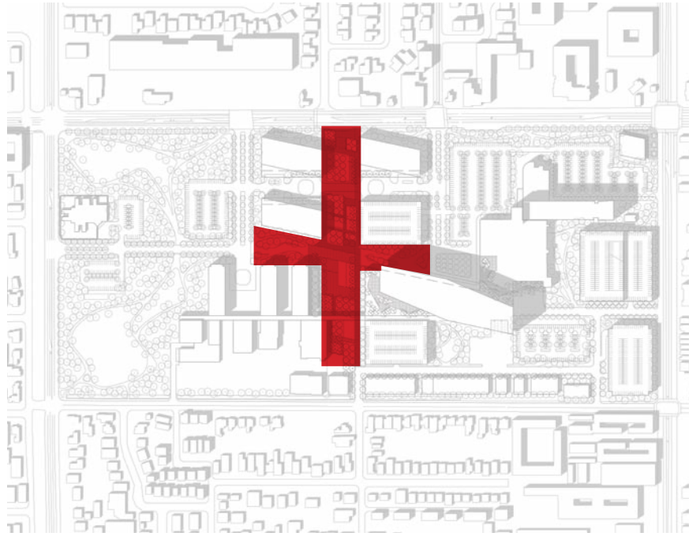
DEVELOPMENT FLEXIBILITY

The west portion of the campus is land banked and designated for future development.



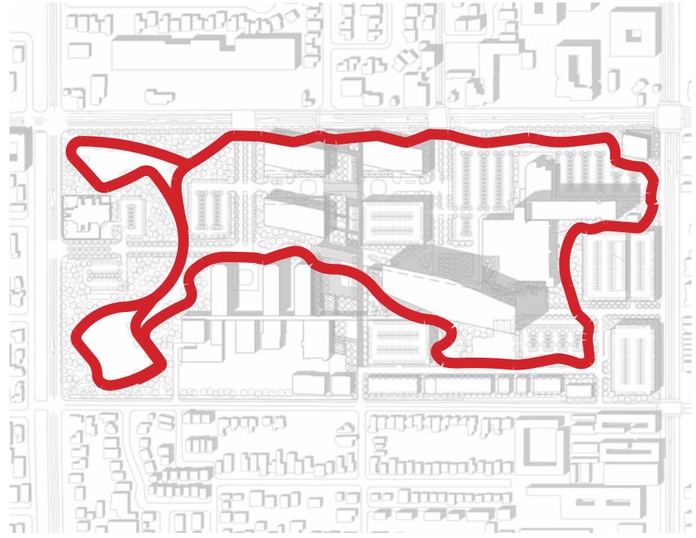
ICON

The New Hospital Patient Tower will be the tallest and most visible building on the site. Its siting will define the tower as the destination on the medical campus.



CENTRAL GARDEN

A central pedestrian spine connects the campus in the north/south direction.

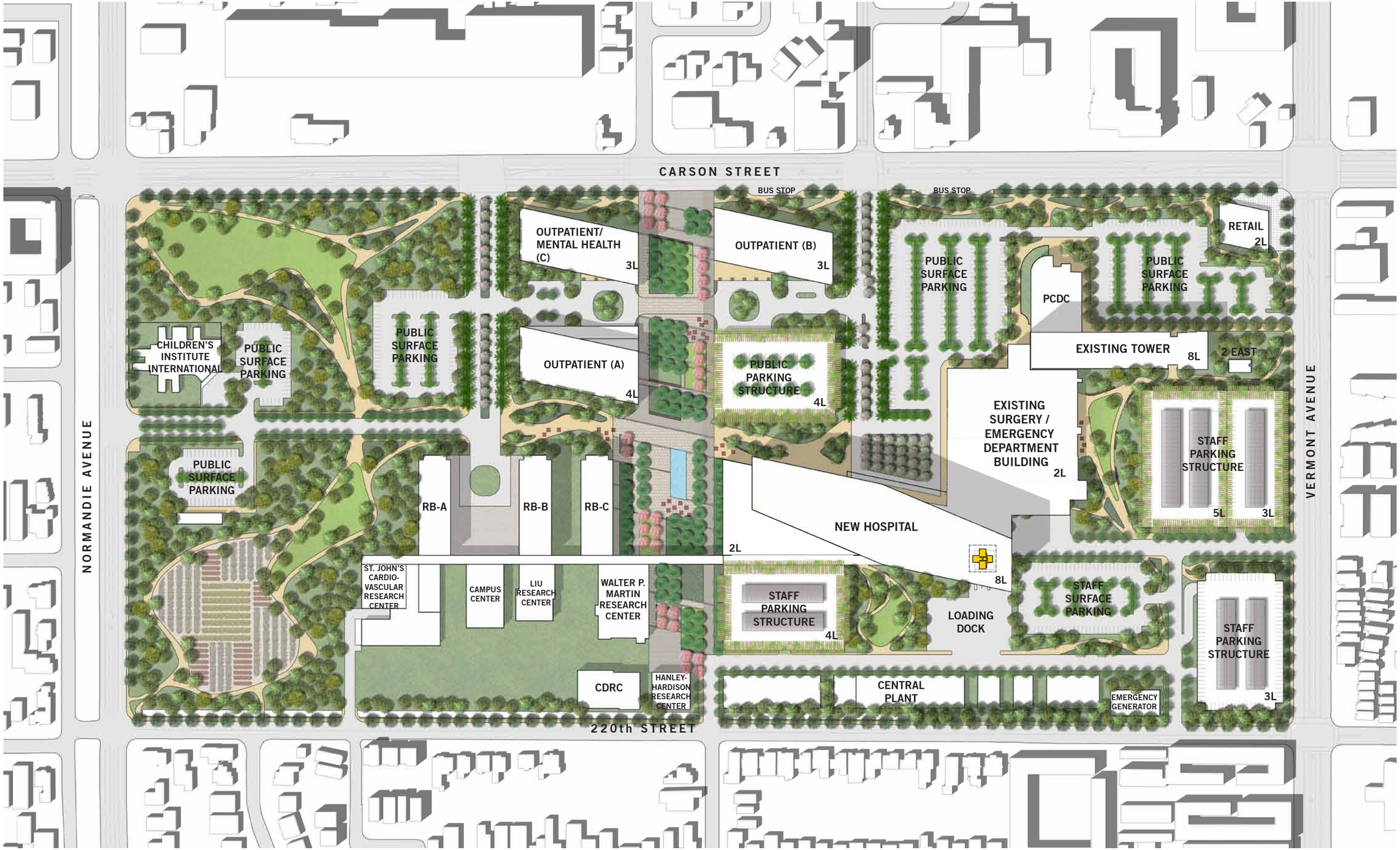


FITNESS TRAIL

A network of pedestrian oriented pathways and gardens weaves through the campus.

CAMPUS SITE PLAN

Through a phased development plan, a campus emerges that is both dynamic and sympathetic to its surroundings. It engages and interacts with the community while clarifying its own site organization. Pathways and healing gardens are woven into the uses and functions of the campus and link the site from end to end. Further defined in the Landscape Plan, the Central Plaza is the heart of the campus connecting the Hospital, Outpatient and Research facilities.

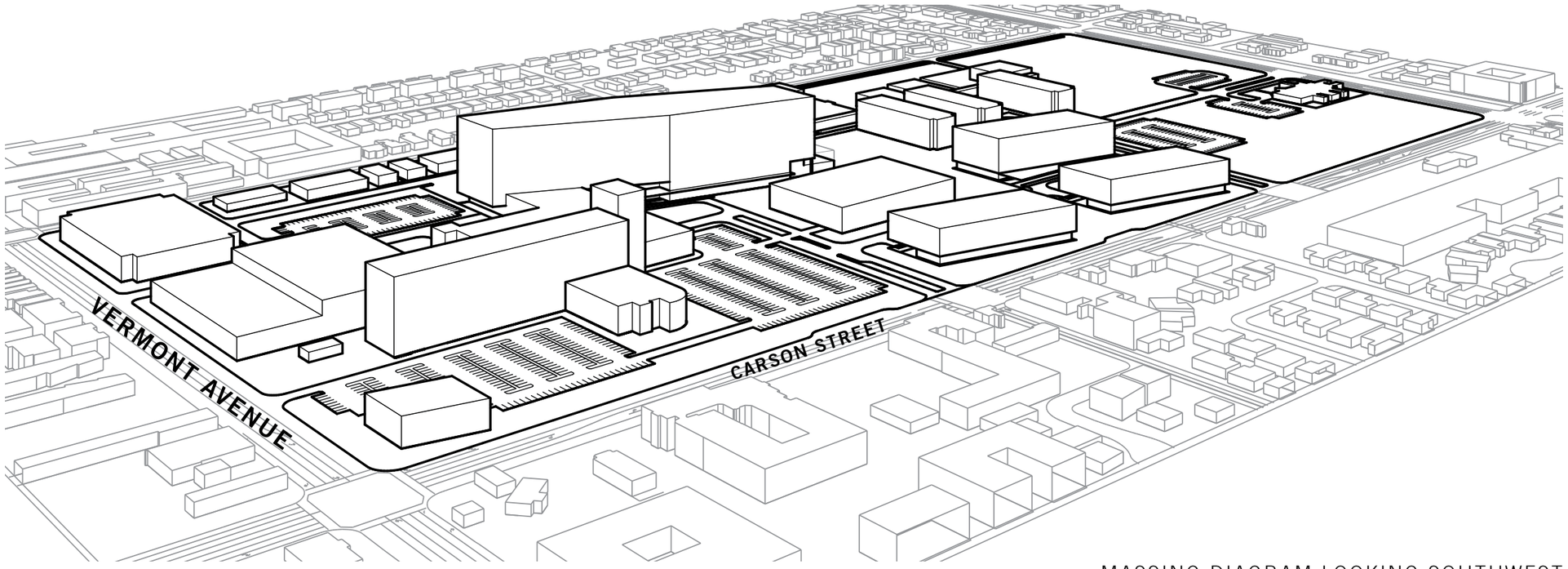


CAMPUS SITE PLAN

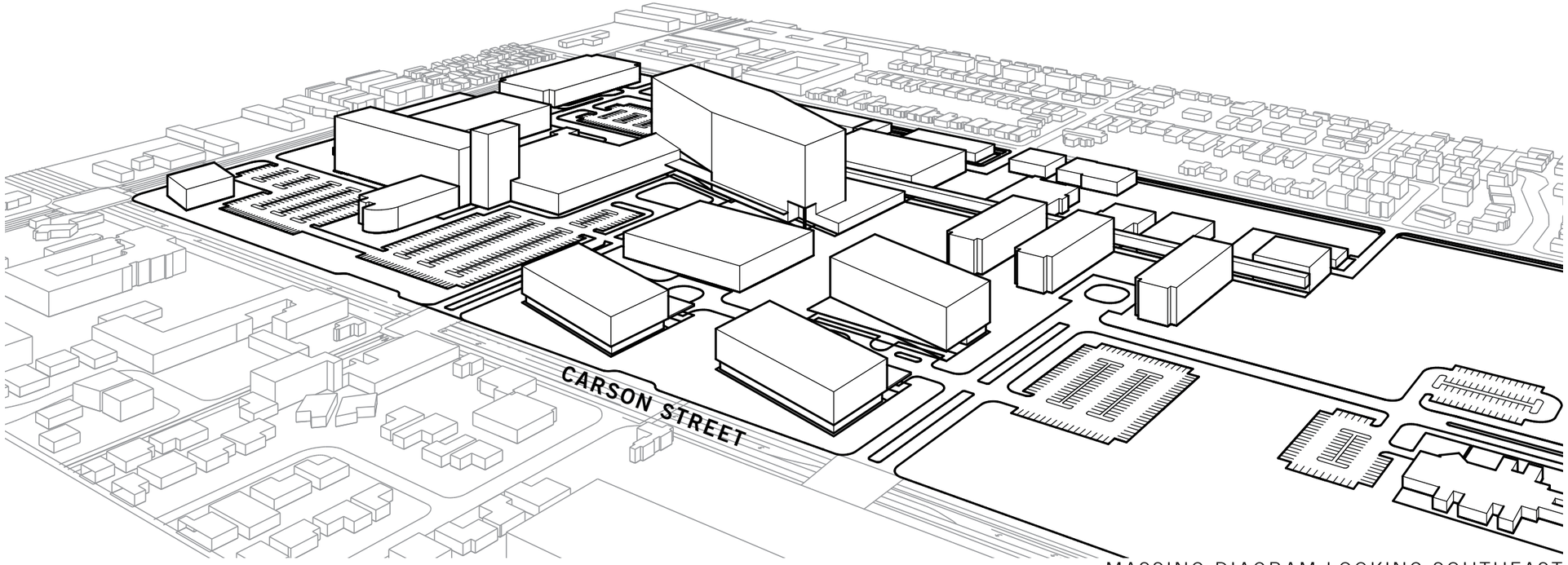
0’ 50’ 200’ N

MASSING DIAGRAMS

The master plan attempts to consolidate the scattering of programs across the site, while also softening the built environment through the addition of gardens and plazas for patients, staff and public. The New Hospital Tower and Outpatient facilities are rotated off of the north/south city grid to better align with the appropriate solar orientation maximizing the amount of natural daylight that penetrates the building. Although larger in size, the new buildings are scaled appropriately for the surrounding community. Articulation in the building mass through ground floor arcades and covered pathways offer a domestic scale and humane quality to the campus architecture.



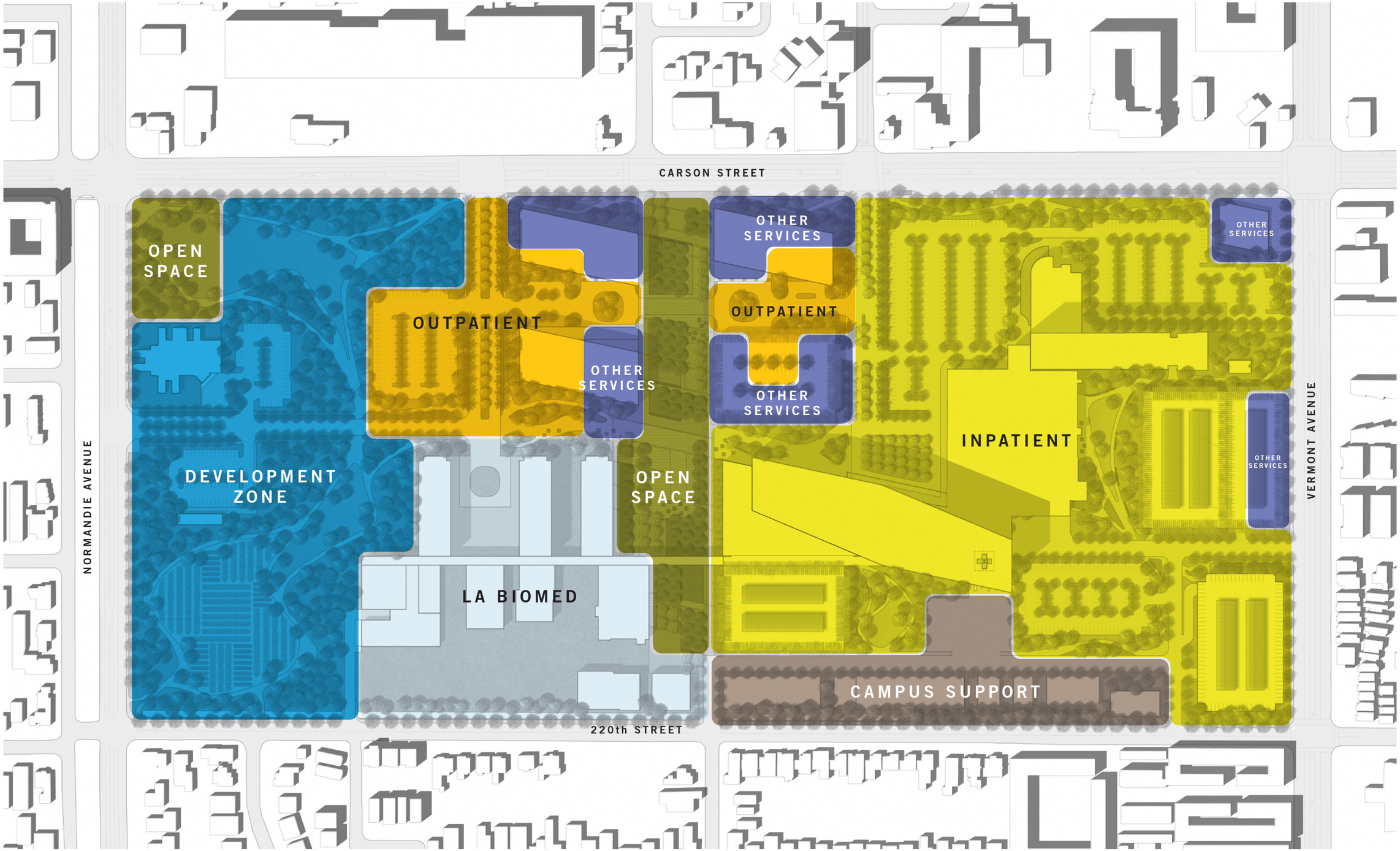
MASSING DIAGRAM LOOKING SOUTHWEST



MASSING DIAGRAM LOOKING SOUTHEAST

CAMPUS USE AREAS

The adjacent plan shows the various campus use areas that divide the functions of the campus throughout the site. New Inpatient Services are organized near the center of the campus connected to the New Surgery and Emergency Room Building. Outpatient Services and “Other Services” are aligned along Carson Street. LA BioMed is consolidated to form a small campus within the larger campus. The west side of the campus is cleared and becomes available for future development. Campus Support buildings and services are grouped near the south of the campus facing inward, away from residential zones.

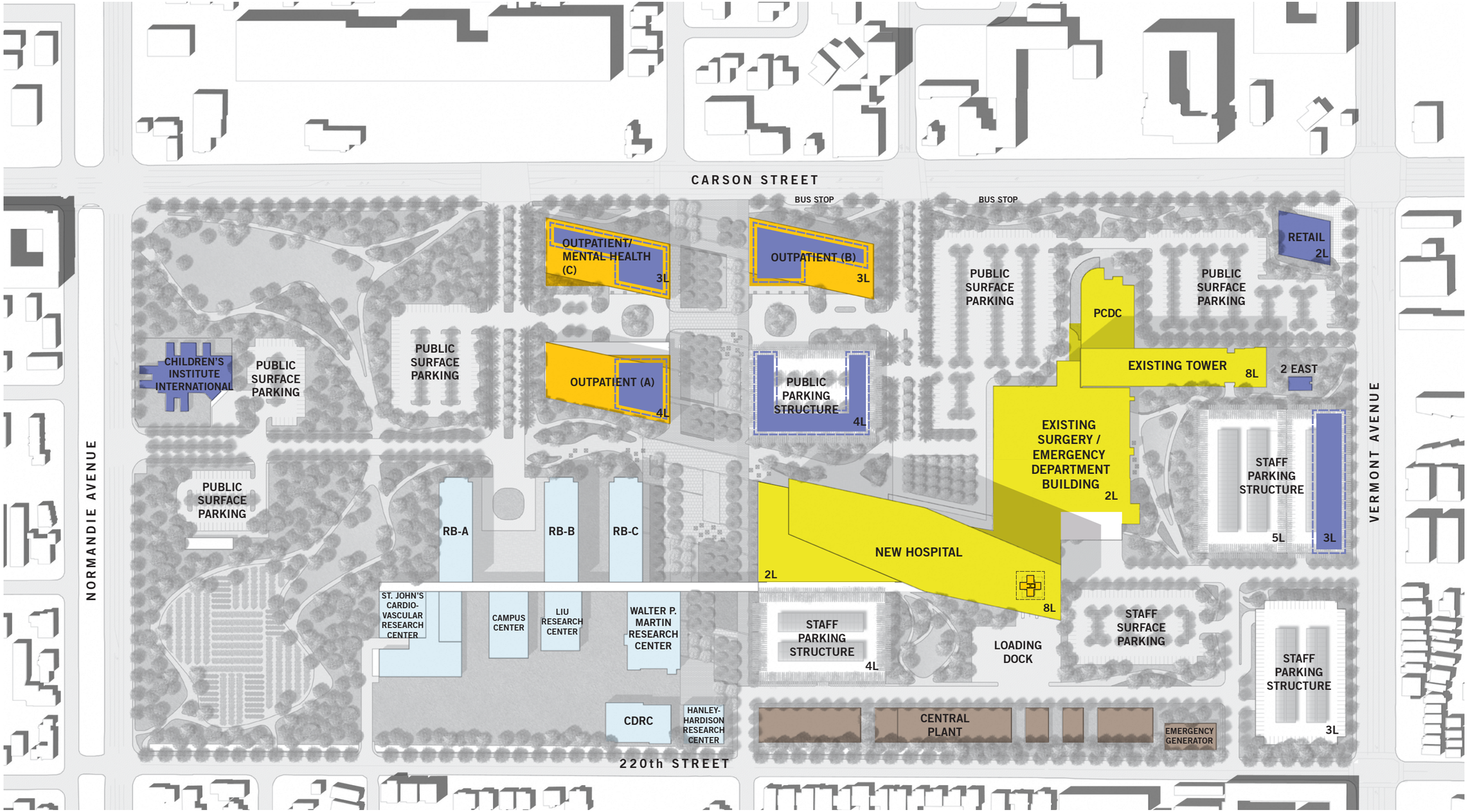


CAMPUS USE AREAS PLAN

0’ 50’ 200’ N

PROGRAM PLAN

The adjacent plan shows a more detailed configuration of the major campus functions. Hospital functions will be consolidated into new buildings. The diagnostic and treatment functions of the hospital are located in the first hospital floor connected to a bed tower above. The Existing Hospital Tower will be retrofitted with spaces to support the new hospital. The Outpatient Buildings will include spaces for “Other Services” on the ground floors of each building. These spaces will take advantage of their prominent Carson Street frontage.



PROGRAM PLAN

LEGEND

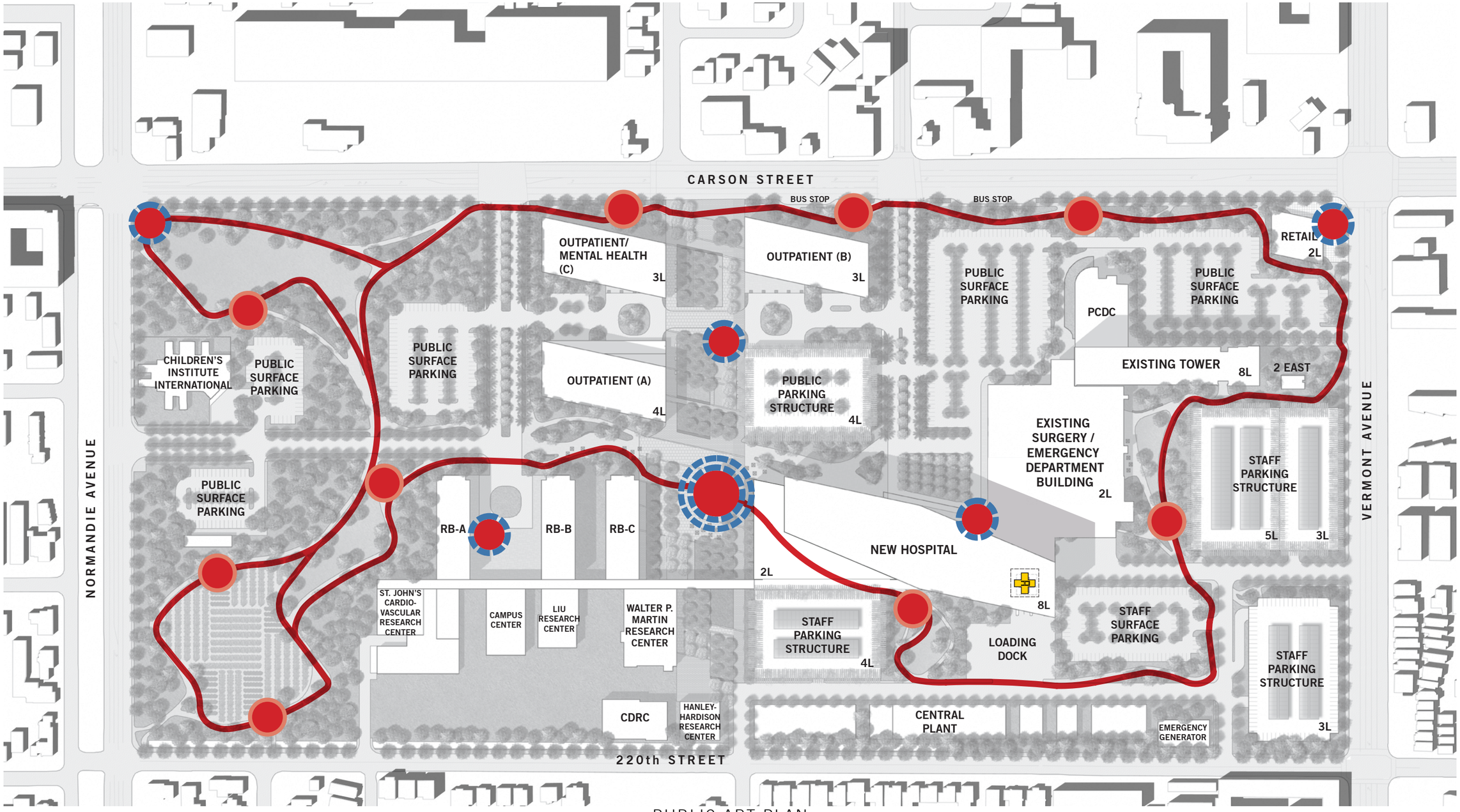
- INPATIENT
- OUTPATIENT
- OTHER PROGRAM
- CAMPUS SUPPORT
- LA BIOMED

0’ 50’ 200’ N

PUBLIC ART PLAN

Artistic and cultural resources are key elements of the future Harbor-UCLA Medical Center which can reflect the campus' healthcare, medical education and research mission. Art improves the quality of the built environment, it animates and humanizes spaces and draws people into them. Art may be therapeutic, beautiful, fun or thought provoking as it reflects and informs the heritage and character of the campus and community. Art can assist in revealing that which is special about the Harbor-UCLA Medical Center Campus and contributes to a sense of place.

Implementation of the master plan should incorporate a program of design, visual, performing, literary, and community arts. Each project is to follow the County of Los Angeles art policy that provides for civic art in capital improvement projects. The County of Los Angeles Civic Art Program integrates the skills of artists into capital improvement and major development projects, enhancing the County of Los Angeles for those who live here now and contributing to the creation of a legacy for generations to come. The County of Los Angeles Civic Arts Commission, Clinical Staff and Hospital Administration should be involved in identifying the range of situational, spatial, aesthetic, and healing opportunities that art as a modality and physical presence might serve for each project under the master plan. Planning for the use of art should take into account successful case studies that demonstrate how healthcare, arts and medicine art intrinsically related. According to the National Endowment for the Arts (source: the NEA website, April 2012), http://www.nea.gov/resources/accessibility/artsnhealth_top.html, "The Arts in Healthcare is an international movement that works to infuse the full spectrum of the arts into healthcare settings, including design, visual, performing and literary arts, resulting in programs and healthcare environments that are welcoming and uplifting for caregivers, patients, their families and visitors." Best practices "encompass a broad array of approaches that take place in both inpatient and outpatient settings including hospitals, rehabilitation centers, hospices, mental health facilities, community health centers, nursing and convalescent homes, assisted living facilities, and private practices." The National Endowment for the Arts' Office for Accessibility has compiled some examples of outstanding arts programs from around the country to encourage and assist the development of similar activities. They are available in a November 2008 report at: http://www.nea.gov/resources/accessibility/Arts-and-Healthcare-Best-Practices.pdf.



PUBLIC ART PLAN

LANDMARK ART INSTALLATION

IDENTITY ART INSTALLATION

DISCOVERY ART INSTALLATION

0’ 50’ 200’ N

For the purposes of the master plan, Art includes, but is not limited to, sculpture, murals, portable paintings, earth works and water works, neon, mosaics, photographs, prints, film, sound, video, and combinations or forms of media and new genres, plus campus fixtures such as grates, street lights, seating, and other design enhancements.

The Arts Program shall engage and consider all campus users. Art can be within the environment itself with patients and families interacting as observers and as active patient therapy. An Arts Program can result in positive results including reducing patient, family and staff stress, lowering patient's symptomatic distress, increased patient's pain tolerance and shortened length of hospital stay. Campus visitors can benefit by art's part in the creation of successful and engaging public spaces, supporting way-finding, and providing opportunities for education and learning. Public art on the campus also fosters positive community identity and strengthens connections of the campus to the community.

The site plan on the previous page identifies multiple exterior potential sites for permanent public artworks including major commissions of outdoor sculpture. The main pedestrian plaza area in the center of the campus can also be utilized for temporary installations and performances. There are also many other opportunities across the site, and both inside and outside buildings, for art glass, terrazzo floor design, tile mosaic murals, artist-designed seating, video, light based artwork, etc. Within the various areas of the campus, the guiding principles will be expressed in different ways, based on the needs and interests of the users. The following are "creative directions," in the sense that they will inform the way an Art Program is developed for different areas throughout the campus.

- Thoughts and feelings to be communicated through art.
- Where possible, patients and families should be included in the process of art selection and integration.
- Celebrate renewal and change.
- Be pervasive, interactive and cross mediums.
- Express a shared humanity.
- Support a sense of community, family, and the cycle of life.
- Reflect moments of revelation, beauty and serenity.
- Art is experienced in unexpected places and in unexpected ways.
- Evoke strength, the power of the human spirit, the capability of the human intellect and the limitlessness of human ingenuity.
- Promote calm, peace, comfort, and confidence.
- Reveal beauty in a myriad of ways, in a variety places and through many different faces.
- Express a sense of perspective, invite introspection
- Bring forth smiles, pleasure and the joy of life.
- Explore the mysteries of how science, technology and people combine to advance healthcare knowledge.
- Reflect holistic wellness of mind, body and spirit.
- Create an identity and a sense of place.
- In parking areas and main campus entrances provide a positive reception where visitors are welcomed first and foremost, and then directed.
- In public lobbies highlight the presence of space, light, color and transformation.
- Use art to build anticipation for the discovery of more to follow in the interior spaces.
- Adult and view gardens to be carefully designed according to the latest in healing garden research and embodying Harbor-UCLA's holistic approach to wellness for everyone on campus offering a source of curative respite to patients, visitors, families and staff.
- Views of rooftops and parking structure top levels could be enhanced by site-specific commissions seen from above and at a distance.
- Primary interior spaces, including lobbies and reception to provide each entry with a unique character that is appropriate to the users and feels welcoming, warm and inviting.
- Hospital patient rooms to include capacity for patients and family to influence their environment. An enormous variety of opportunities can be available, including personal content, interactive works, and the possibility of creating artwork.
- Staff areas to also include capacity for users to influence their environment.

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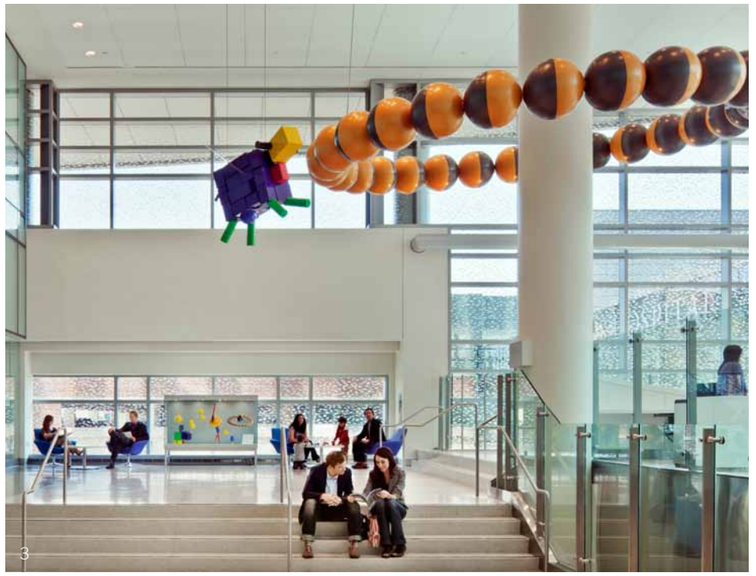

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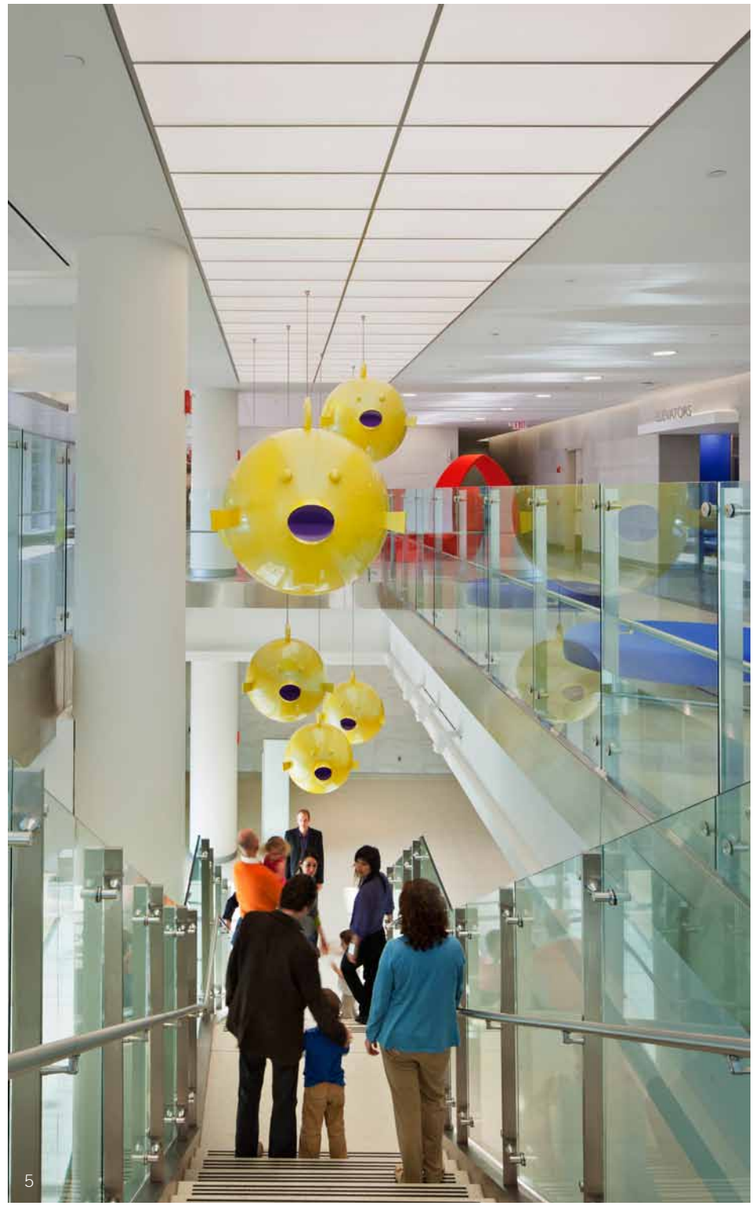

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1,2) Art Glass in Corridor; © Artist: Gordon Huether;St Joseph's Hospital and Medical Center, Neuroscience Tower; Phoenix, Arizona ; Architect: Perkins+Will ; Photo: Delasso/Visus, LTD.

3) Robert Israel; *Cow Jumping Over The Moon*, 2012; Curator: Nancy Rosen, Nancy Rosen Incorporated. Photo; Eduard Hueber, Arch Photo, Inc. ; Johns Hopkins Hospital, Charlotte R. Bloomberg Children's Center; Baltimore, Maryland ; Architect: Perkins+Will
4) Curtain Wall Color and Glass Collaboration with Artist Spencer Finch; 2012; Curator: Nancy Rosen, Nancy Rosen Incorporated; Johns Hopkins Hospital, Charlotte R. Bloomberg Children's Center; Baltimore, Maryland ; Architect: Perkins+Will

5) Robert Israel; *School of Puffer Fish*, 2012; Curator: Nancy Rosen, Incorporated. Photo: Eduard Hueber, Arch Photo, Inc. ; Johns Hopkins Hospital, Charlotte R. Bloomberg Children's Center; Baltimore, Maryland ; Architect: Perkins+Wil

FUTURE HEALTHCARE EXPANSION OPPORTUNITIES

Although the campus is presently programmed for a capacity of 445 inpatient beds and over 300,000 square feet of outpatient clinics, it is understood that in the ever-changing healthcare environment, additional beds or other functions may need to be accommodated in the future. Expansion of inpatient and outpatient space, sharing common treatment and diagnostic functions, must be accommodated in the future.

Open areas are reserved around the new Hospital building to accommodate future expansion beyond the 2030 master plan planning horizon. Further, an opportunity to “land bank” the west side of the campus was realized as planning options were explored. This approach identifies major open areas that would remain available for future development. The County could later determine the best use based upon future demands for usable area. These issues were considered in the design, analysis, and evaluation of the planning options developed during the master planning process.

FUTURE BUILD-OUT PLAN

FUTURE BUILDING

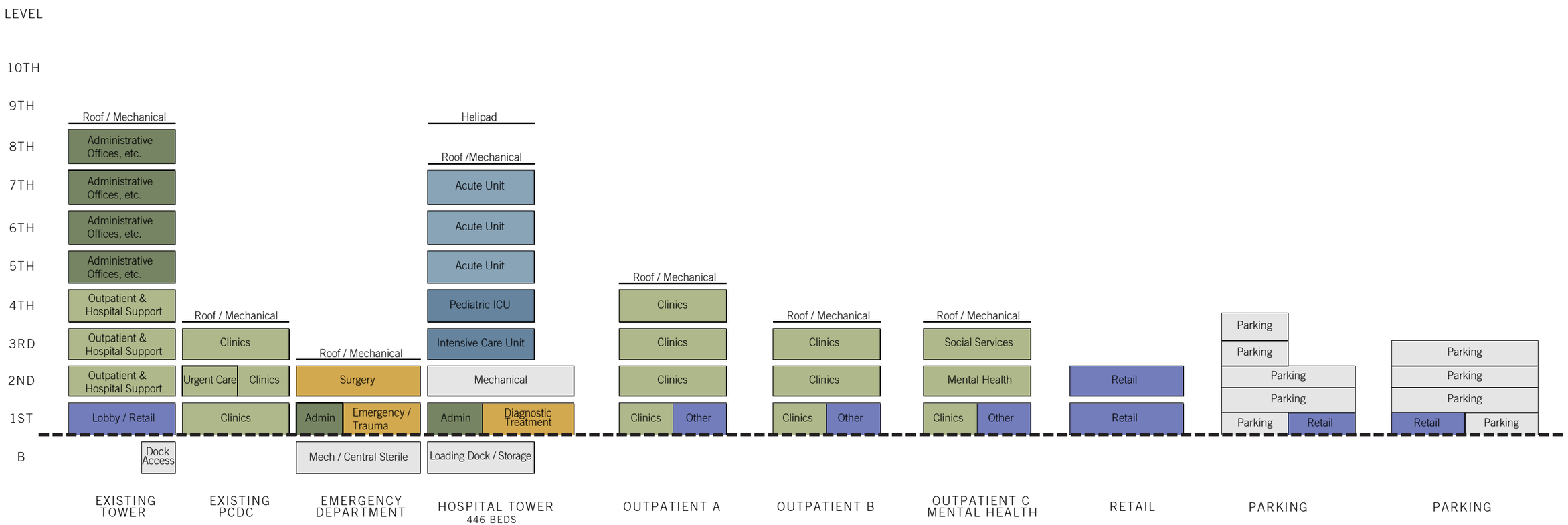
0' 50' 200'

N

STACKING DIAGRAM

The master plan programming includes a new Hospital Tower for 446 beds, connected to the Existing Emergency Department, the Existing PCDC (Primary Care and Diagnostic Center) and the Existing Hospital Tower. The Existing Hospital Tower will not be able to function as an inpatient facility past January 2030. For the master plan we intend to reuse the Existing Hospital Tower to accommodate Outpatient and Hospital support and other programming as shown in the stacking diagram.

The detached structures include three Outpatient Clinical Buildings labeled A, B, and C. Each of these buildings has allocation space for other program uses such as retail, or other expanded programing such as community support functions. The stacking diagram is illustrative of the organization of the programing based on the developed master plan. As future buildings get developed the distribution of the programming as shown in the stacking diagram will be revised as needed.

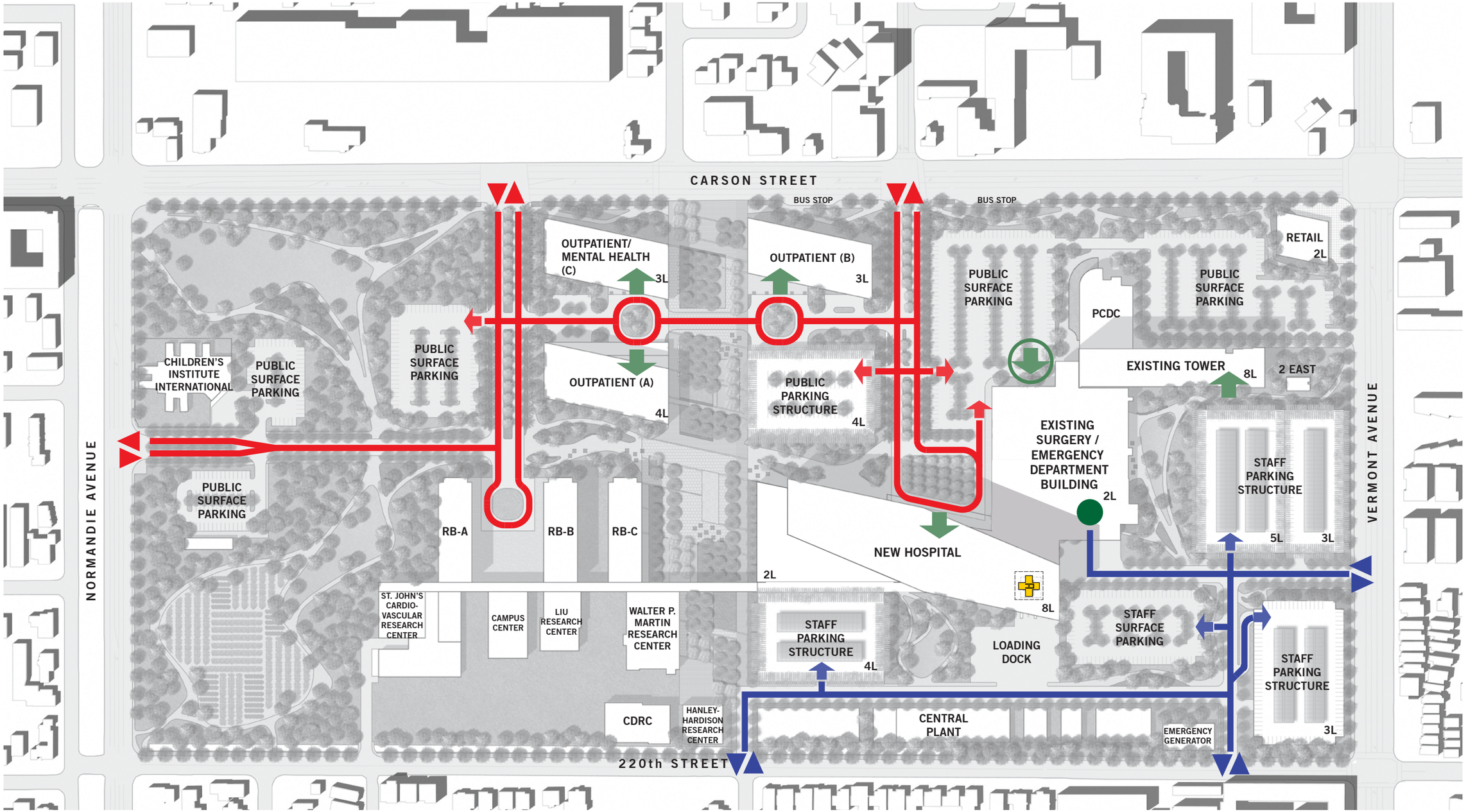


STACKING DIAGRAM

VEHICULAR CIRCULATION

The master plan seeks to separate the access and the on-site circulation and parking for staff and the public, with campus entries and staff parking near the southeast area of the campus, and access and parking for the public from Carson Street, on the north.

Access to the Harbor-UCLA Medical Center will be augmented with the addition of a signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. Sidewalk connections to the public transit system will continue to be provided, and on-site sidewalks will be added along the primary routes between the main parking areas and the primary Hospital and Outpatient buildings. Circular pick-up / drop-off loading zones will be provided at the main entrances to each of the Hospital and Outpatient buildings.



VEHICULAR CIRCULATION PLAN

LEGEND

- PUBLIC ENTRY/EXIT TO CAMPUS
- STAFF ENTRY/EXIT TO CAMPUS
- PUBLIC ENTRY/EXIT TO PARKING
- STAFF ENTRY/EXIT TO PARKING
- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- PRIMARY PUBLIC VEHICULAR CIRC.
- PRIMARY STAFF VEHICULAR CIRC.
- AMBULANCE EMERGENCY ENTRY

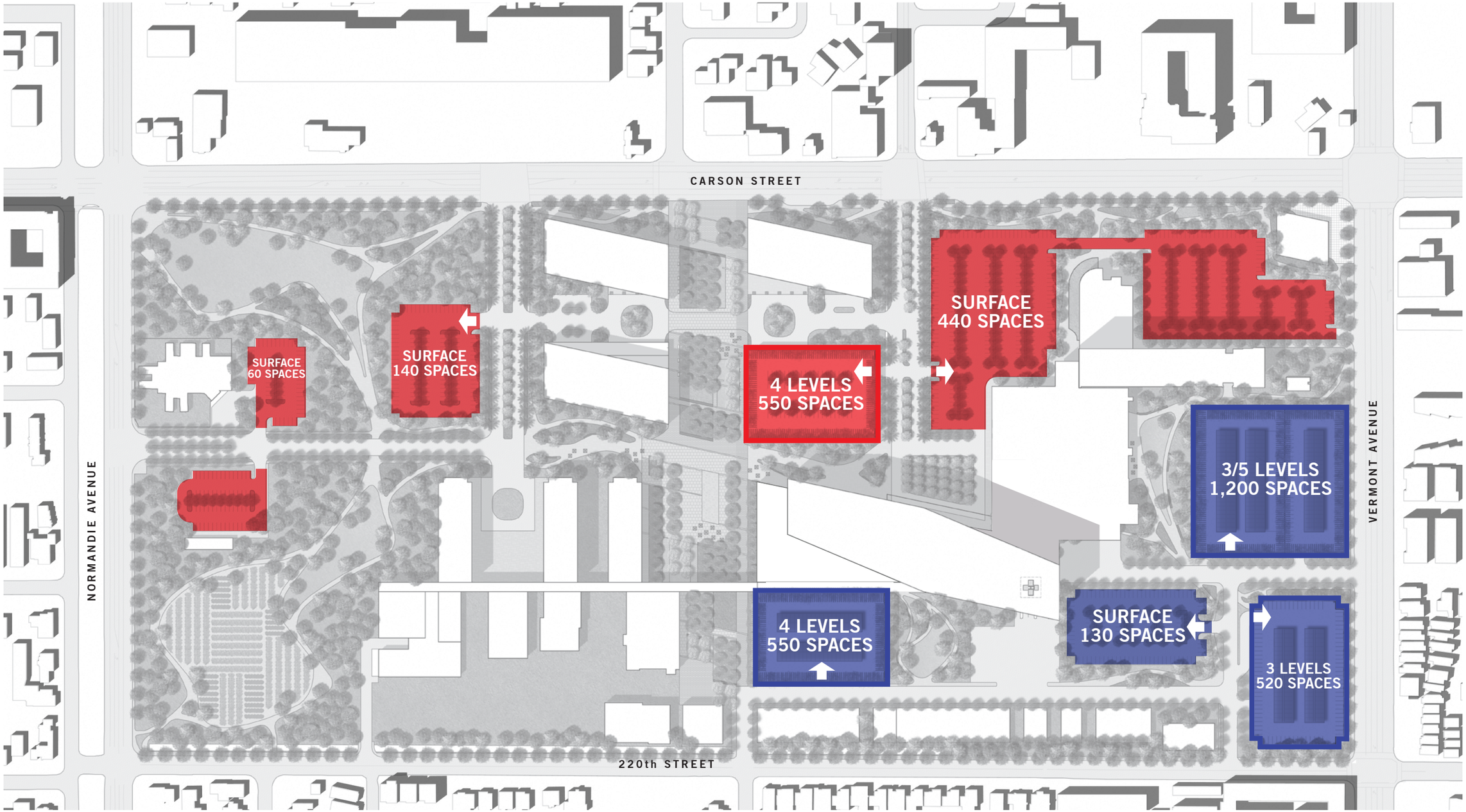
0' 50' 200' N

PARKING

The master plan concept provides reasonable walking distances from proposed location of the parking structures to destination points. The outpatient staff & physician user group will be farthest from their intended supply and will need to walk past visitor & patient parking supply on their way to and from their vehicles. Enforcement is the key to prevent outpatient staff & physicians from parking in the visitor & patient intended stalls. Monitoring will be required in all visitor & patient parking supply.

- This concept provides good vehicular connectivity and circulation to different zones, as well as surrounding streets. Still, a comprehensive signage and wayfinding package should be developed to aid visitors & patients in finding their ultimate destination and the parking supply intended for their use.

- The visitor surface parking, located nearest the new Emergency Department, is not adequate for the required Inpatient visitor & patient demand projections. The additional surface stalls, in the northeast surface lot, are too far for hospital visitors to park. Therefore some stalls within the parking structure located adjacent to the Outpatient buildings should be set aside for Emergency Department use.



PARKING PLAN

LEGEND

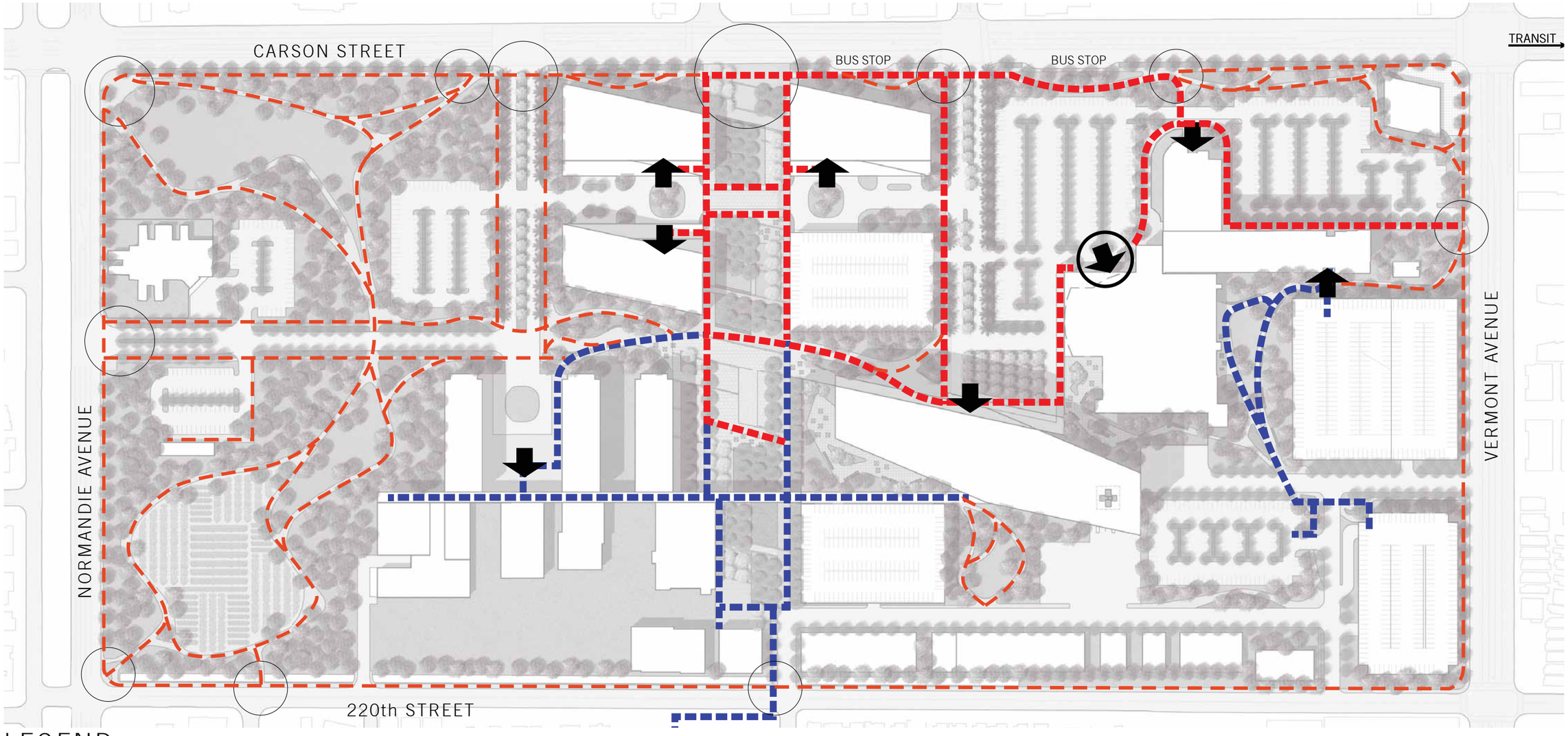
VISITOR / PATIENT PARKING

STAFF PARKING

0’ 50’ 200’ N

PEDESTRIAN CIRCULATION

A continuous pedestrian circulation network will ensure campus connectivity and shared use by all. Several north/south walks and promenades connect the heart of the campus with the public edge along Carson Street, while a comprehensive network of walks and trails direct pedestrians east/west through campus. The circulation hierarchy will allow for direct access from parking areas to building entries with a secondary system connecting parks, courtyards and plazas that allow for a more leisurely stroll through campus. Paving types should not be dictated by this circulation system, rather by the spatial qualities and programmatic needs of each space.



LEGEND

- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- CAMPUS ENTRIES
- PRIMARY PUBLIC PEDESTRIAN CIRCULATION
- PUBLIC PEDESTRIAN CIRCULATION
- PRIMARY STAFF PEDESTRIAN CIRCULATION

0’ 50’ 200’ N

Creating a cohesive campus-like setting where collaboration between doctors, researchers, and the general public will further the medical center's reputation as a vital public service to the community of South Los Angeles

LANDSCAPE CONCEPTS

MASTER PLAN GOALS

The landscape master plan for the Harbor-UCLA Medical Center will strive to create a cohesive campus-like setting where collaboration between doctors, researchers, and the general public will continue the hospitals reputation as a vital public service to the South Bay community.

The goal of this master plan is to establish guidelines that will guide future development of open space throughout the campus in a manner that will collectively unify and reinforce the hospitals identity within the community. This will be achieved with three key strategies:

LANDSCAPE FRAMEWORK

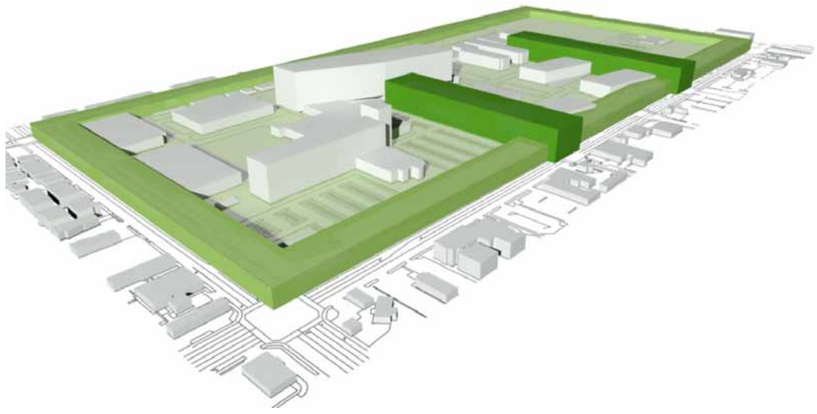
Establish a framework and spatial hierarchy system which organizes open space program around adjacent building uses, and connect these spaces with a pedestrian circulation network that clearly defines both visual and physical linkages throughout the campus.

ENVIRONMENTAL STEWARDSHIP

Utilize landscape as a medium to help reduce dependency on natural resources. This can be achieved by reducing water demands, capturing and cleaning stormwater runoff, and shading buildings to help reduce cooling demands.

QUALITY OF LIFE

Create outdoor spaces that can accommodate both active social gatherings and passive gardens which enrich the lives of both staff and the public. These spaces can provide a unique amenity that will maximize the opportunity for interaction between hospital staff and researchers while providing more intimate areas for contemplation and relaxation. Further building on the hospital's goal of preventative healthcare, the campus can provide areas for exercise which help maintain staff's endurance during long shifts and educate the public about the advantages of healthy lifestyles.



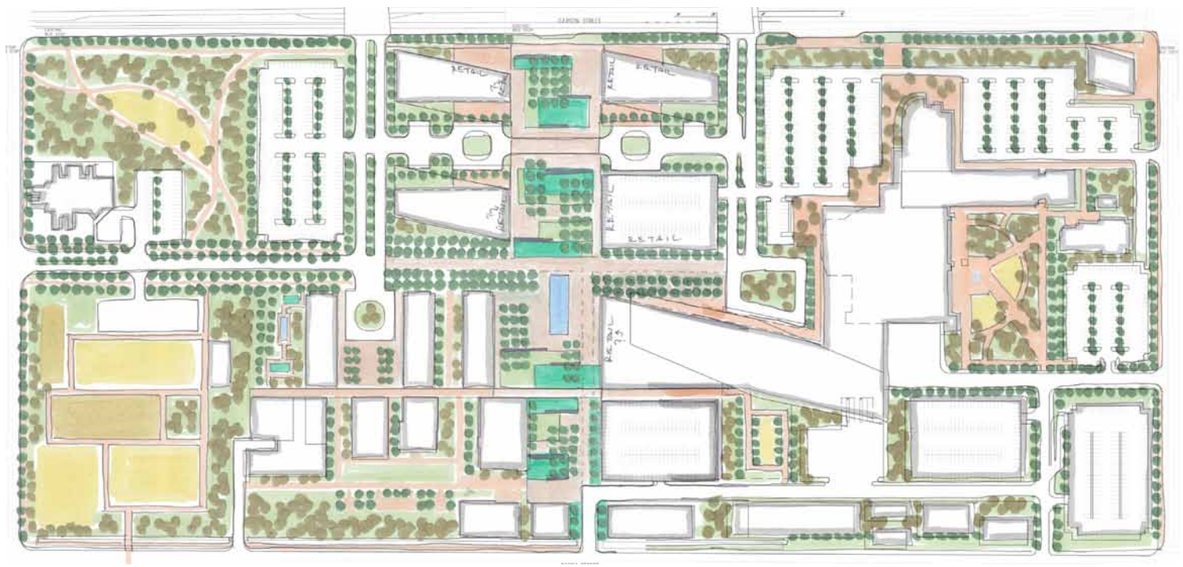
Vegetative Layering Diagram - Multiple layers of landscape help define the campus perimeter and clearly identify the main entries.

LANDSCAPE FRAMEWORK

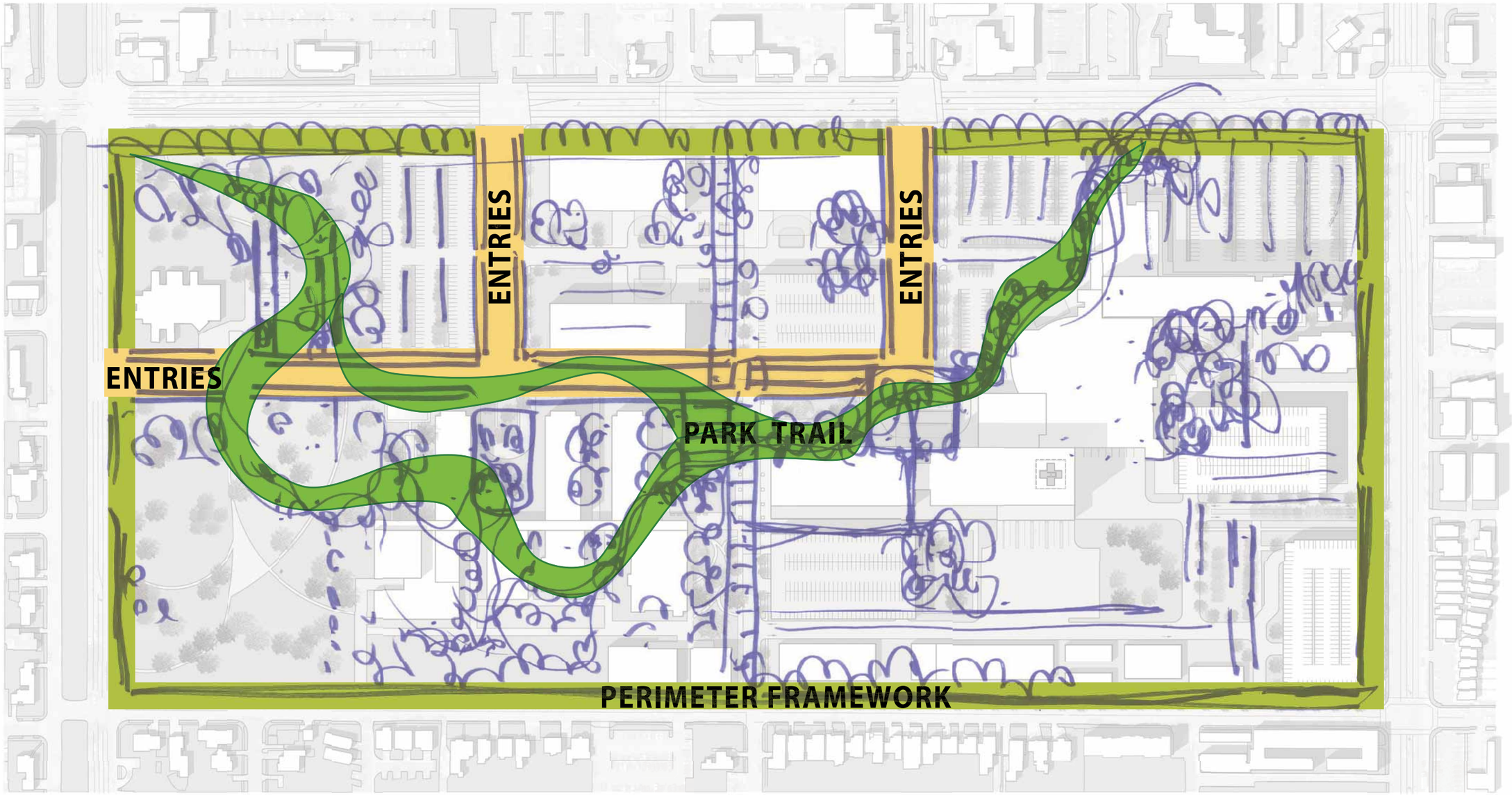
The existing campus lacks identity along Carson Street and has a poor visual connection to the surrounding residential community. Utilizing a vegetative layering strategy that clearly identifies the campus perimeter, entries, and interior open space the campus will begin to visually establish itself and provide a seamless visual connection to the adjacent community.

The campus periphery should be lined with a consistent, 35’ to 45’ high evergreen / semi-evergreen tree which has an upright formal character that maintains views into the campus from surrounding streets. The next layer will consist of highlighting the two main entries off of Carson Street by using a mix of palm trees and flowering deciduous trees. The palm trees will be the tallest trees on campus and establish a clear visual gateway while the flowering canopy trees provide a needed pedestrian scale. The final layer of landscape will consist of courtyard gardens and plazas that provide a diverse and appealing spatial quality throughout the site.

This strategy of using medium sized trees along the perimeter that are highlighted by taller trees at the entry will help the campus seamlessly rest within the surrounding residential community while maintaining its unique identity.



Preliminary landscape master plan development sketch.



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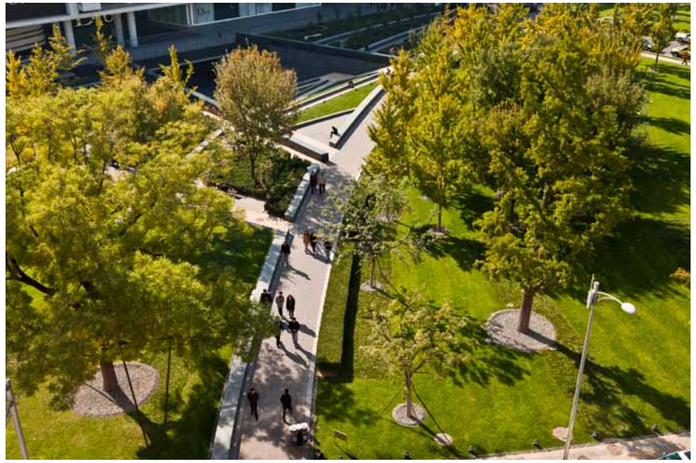


Continuous pedestrian paths that connects buildings, plazas, and courtyards

Informal park trails used for relaxation and exercise

Tree lined plaza with accent paving bands

LANDSCAPE PLAN

Utilizing a strong landscape framework and pedestrian circulation system, the proposed landscape master plan will provide a variety of open space courtyards, gardens, and plazas that will collectively define The Harbor-UCLA Medical Center. With over 20 medical centers throughout the Los Angeles area competing for top talent, this master plan will create a distinctive environment that will help attract doctors and researchers to this unique workplace setting.

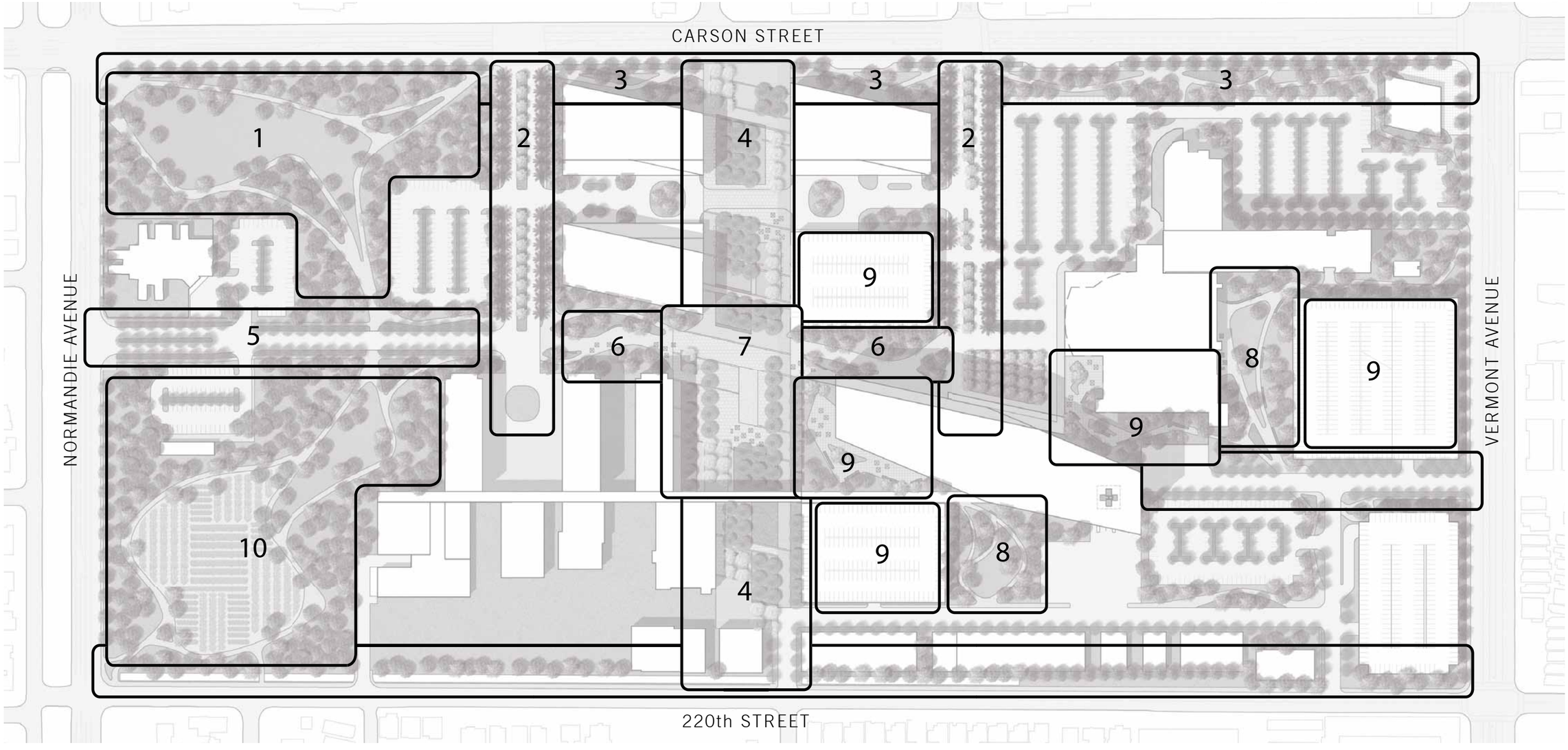
Serving as the ceremonial heart of the campus, the Central Garden Spine will attract staff and patients from the surrounding outpatient, research, and hospital buildings to relax and socialize in a lush garden setting. From garden benches to cafe tables, from shaded tree bosques to large open plazas, the central garden will offer a diverse experience.

Along the west edge of the campus lies a large park and fitness trail that will permeate throughout the campus providing a continuous circulation system that allows staff and guests to easily get to their destinations with little interruption by automobiles. This pedestrian trail will also connect buildings with shaded courtyards where staff can relax and decompress.


CARSON STREET
NORMANDIE AVENUE
VERMONT AVENUE
220th STREET
0’ 50’ 200’
N

LANDSCAPE PROGRAM

1. WEST PARK
2. MAIN CAMPUS ENTRY
3. CARSON STREET LANDSCAPE EDGE
4. CENTRAL SPINE GARDENS
5. LA BIOMED ENTRY
6. PARK PLAZA
7. CENTRAL PLAZA
8. COURTYARD GARDENS
9. ROOF TOP GARDENS
10. EDUCATIONAL GARDEN


CARSON STREET
NORMANDIE AVENUE
VERMONT AVENUE
220th STREET
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CIVIL ENGINEERING CONCEPTS

DOMESTIC AND FIRE WATER SYSTEM

The ability to supply water is a function of both available resources and conveyance. As with the existing system, there are two water purveyors within the vicinity of Harbor-UCLA including the California Water Service Company's Rancho Dominguez District (CWS) and the City of Los Angeles Department of Water and Power (LADWP). It is anticipated that the two purveyors who currently provide water service to the campus, CWS and LADWP, will continue to do so as a primary provider of services and a secondary backup provider of services, respectively.

The proposed conveyance system will closely match the existing conveyance system and consist of a looped combined domestic and fire water network primarily consisting of 12-inch mains, generally located within the primary vehicular circulation areas. Existing pressures and flows indicate the ability to support future development on the campus.

As the system was overhauled recently after the connection to the LAWPD water main caused multiple system failures, the water pipe network can be phased over time to allow for replacement of the existing infrastructure with the development of the master plan. It is likely new connections to the CWS water system will be made at various locations off Carson Street, Vermont Avenue and 220th Street as entry points to the campus are developed.

RECLAIMED WATER

Reclaimed Water is currently not provided to the existing campus and the irrigation system is currently being served from the CWS municipal domestic water system. Future opportunities for potential water sources for irrigation use include continuing with the municipal potable water supply, a future municipal recycled water supply, an on-site integrated storm water management system, and/or an on-site recycled water system.

CARSON STREET

BUS STOP

BUS STOP

OUTPATIENT/ MENTAL HEALTH (C) 3L

OUTPATIENT (B) 3L

PUBLIC SURFACE PARKING

RETAIL 2L

PUBLIC SURFACE PARKING

PCDC

CHILDREN'S INSTITUTE INTERNATIONAL

PUBLIC SURFACE PARKING

PUBLIC SURFACE PARKING

EXISTING TOWER 8L

2 EAST

OUTPATIENT (A) 4L

PUBLIC PARKING STRUCTURE 4L

EXISTING SURGERY / EMERGENCY DEPARTMENT BUILDING 2L

STAFF PARKING STRUCTURE 5L 3L

NORMANDIE AVENUE

VERMONT AVENUE

PUBLIC SURFACE PARKING

RB-A

RB-B

RB-C

NEW HOSPITAL

2L

ST. JOHN'S CARDIO-VASCULAR RESEARCH CENTER

CAMPUS CENTER

LIU RESEARCH CENTER

WALTER P. MARTIN RESEARCH CENTER

8L

STAFF PARKING STRUCTURE 4L

LOADING DOCK

STAFF SURFACE PARKING

STAFF PARKING STRUCTURE 3L

CDRC

HANLEY-HARDISON RESEARCH CENTER

CENTRAL PLANT

EMERGENCY GENERATOR

220th STREET

PARKING PLAN

LEGEND

- EXISTING SEWER SYSTEM
- PROPOSED SEWER SYSTEM
- EXIST. POINT OF CONNECTION
- PROPOSED POINT OF CONNECTION
- EXISTING WATERLINE
- PROPOSED WATERLINE
- EXISTING WATER POINT OF CONN.
- PROP. WATER POINT OF CONN

0' 50' 200' N

With the development of the master plan, elimination of the use of the municipal water supply system for irrigation is desired. A combination of water conservation measures described in the landscape section, and an integrated storm water management system with a future ability to use either a municipal recycled water supply and/or on-site recycled water system is anticipated.

Recycling efforts of County of Los Angeles Sanitation Districts (LACSD) and West Basin Municipal Water District (WBMWD) are currently concentrated outside the immediate vicinity of the medical campus with no future plans for extending their system to the vicinity of the project.

SEWER

Like water, the ability to supply sewer is a function of both available resources and conveyance. As with the existing system, County of Los Angeles Sanitation Districts (LACSD) will continue to be the primary provider of sanitary sewer service to the campus. In addition, it is anticipated the trunk sewers that exist around the perimeter of the project and through the medical campus will remain with the development of the master plan.

The proposed sanitary sewer conveyance system will closely match the existing conveyance system and consist of a network of sewer pipes generally located within the primary vehicular circulation areas. Existing capacities indicate the ability to support the future development on the campus.

As with the existing system, we anticipate approximately 75 percent of the existing campus including new hospital, LA BioMed campus and proposed outpatient clinics will continue to be served by an on-site sewer network that discharges to Sanitation District Joint Outfall D, Unit 8 trunk sewer in the old Meyer Street Right-of-Way through a single point of connection. The existing connection can be used until such time a new connection might be warranted with development of the central plant and back of the house operations at the campus. The remaining 25 percent of the campus area, including the PCDC, existing tower and Surgery and Emergency Room Replacement Project will likely still continue to be served by sewer mains in Vermont Avenue, 220th Street, and Carson Street.

STORM DRAIN

As with the other utilities, proposed drainage conveyance systems and hydrologic boundaries will closely match the existing conditions. The backbone of the proposed drainage system will continue to be the County of Los Angeles 208th Street Storm Drain which runs through the Medical Center in a 15-foot wide easement. This storm drain is an 8-foot high by 4-foot wide reinforced concrete box culvert (RCB). A new connection may or may not be proposed.

It is generally anticipated with the increase in previous area, the calculated peak flow of the future development will generally be less than the existing condition; in addition, any future site development will require compliance with the County of Los Angeles Low Impact Development (LID) standards for storm water management and is also a significant element of the proposed site sustainability approach.

As with the improvements made to the Harbor UCLA Medical Center for the Surgery Emergency Replacement Project, a portion of the new hospital might span the 208th Street Storm Drain. The hospital foundation will likely need to be designed and constructed in a manner that does not load the existing box culvert during construction or after completion unless a full removal and replacement is considered. Construction Drawings for the emergency/surgery replacement center specified a lightweight Styrofoam backfill over the existing RCB in traffic areas. We anticipate a portion of the 208th Street RCB may require similar treatments in traffic areas.

The County of Los Angeles determines the allowable amount of runoff that can enter its system based on historical records. It is likely that the flow rate allowed at connections to the County Storm Drains will be required to match the original system design flow rate. With the increase in pervious area, an integrated storm water management approach and the implementation of the County LID Standards, the requirements to detain flows to meet existing design flow rates will be minimized. Future non-County development (LA BioMed campus and current open space) should consider similar allowable peak flow attenuations.

STORMWATER MANAGEMENT

The County of Los Angeles Low Impact Development (LID) Standards Manual of 2009 outlines the requirements for stormwater management in the County. Specifically, the manual sets forth the criteria for stormwater treatment, hydromodification, and low impact development (LID). LID is a stormwater management strategy that aims to have developed site hydrology mimic undeveloped site hydrology. In addition, project sustainability goals including promoting harvesting urban runoff for irrigation, treatment, and infiltration are met with this integrated storm water approach.

The standard method for treating stormwater in the County of Los Angeles is through the application of LID Best Management Practices (BMPs). The LID Manual establishes a hierarchy of BMPs to be used for development sites as outlined below:

1. Infiltration BMPs
2. Storage and Reuse BMPs
3. Filtration and Biofiltration BMPs

A development site is required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (i.e. 0 percent impervious) where technically feasible. In addition, a developed site is required to treat the entire 0.75-inch rainfall to remove urban stormwater pollution. These volume and treatment BMPs can be met by the same BMP or alternatively separate BMPs.

In addition to the LID requirements set for the LID manual, the County also establishes hydromodification requirements that require the difference in peak flow rate, flow velocity, total volume, and depth/width of flow for the 2-, 5-, 10-, 25-, and 50-year storm with several exceptions. One exception is that a proposed project would not add impervious area beyond what exists pre-construction. Since the campus is fully developed and highly impervious, the hydromodification requirement will likely not be applied to the campus redevelopment.

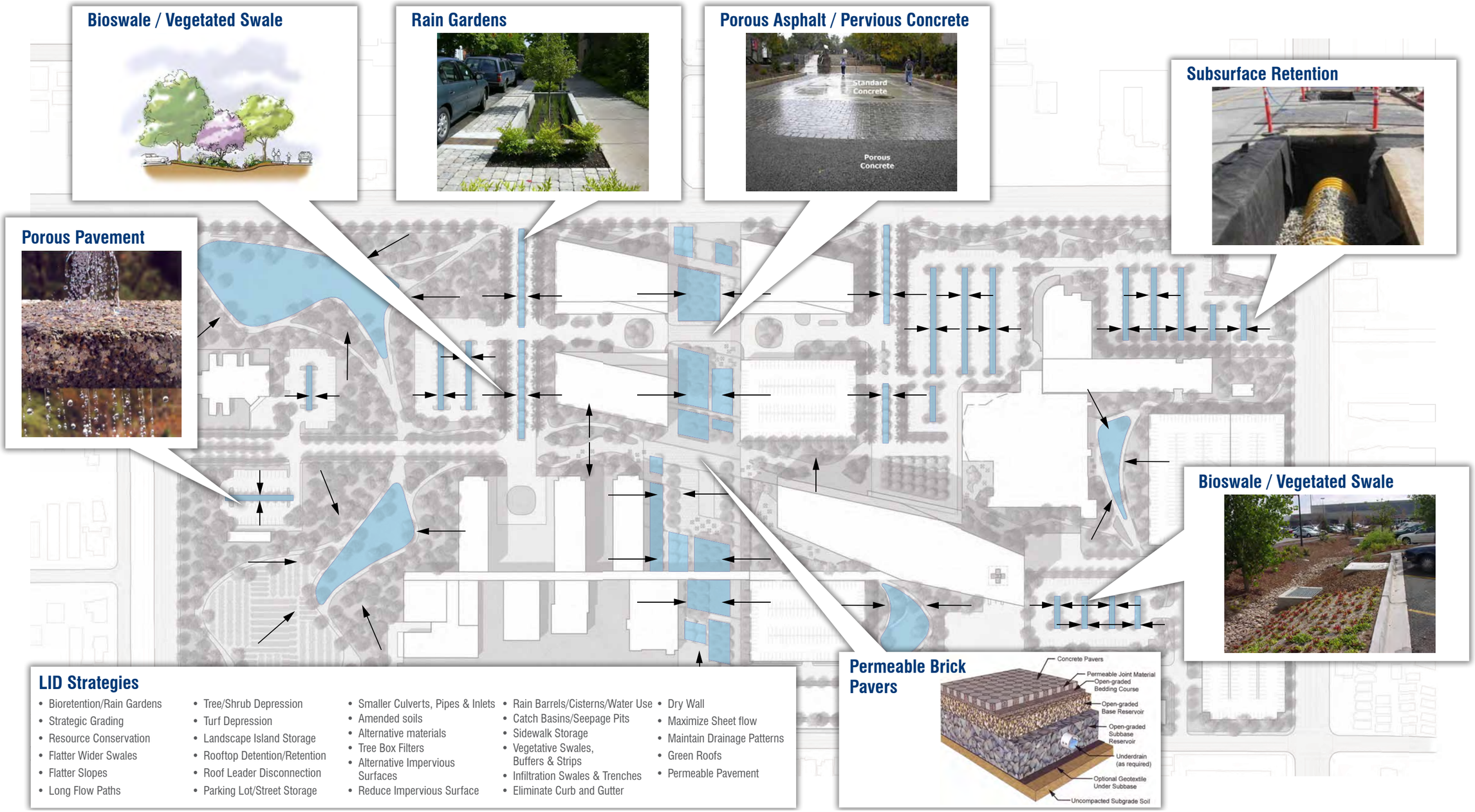


EXHIBIT C

Depiction of how several potential LID techniques might be employed to provide both or alternative volume and flow rate BMPs.

STRUCTURAL ENGINEERING CONCEPTS

The structural portion of the master plan for the hospital is to construct a new multi-story acute care hospital building. The new building will be located adjacent to the Surgery and Emergency Room Replacement Project. It is intended to remain seismically separated from existing buildings. The proposed location will allow the continued use of the Surgery and Emergency Room Replacement Project currently under construction. The new hospital building will replace the existing main hospital and allow the campus to remain in compliance with SB 1953 requirements for an acute care facility past the year 2030. A new detached parking structure will be provided to serve the needs of the hospital.

The proposed location of the replacement hospital is intersected by an existing underground culvert. As part of the construction of the new facility, the existing site condition will need to be resolved by either rerouting the culvert or the structure being designed to accommodate the culvert. It is anticipated that relocation of the culvert may not be a viable option. Therefore it will be required that special consideration be provided by the design professionals concerning the new hospital tower design and layout to accommodate the culvert. It would be expected that initially an attempt would be to provide a layout of the columns and foundations that would have minimal impact on the existing culvert. However if any loading conditions are determined to be located that will impact the existing culvert, then additional foundation beams and supports, such as transfer beams will be required in order to bridge the culvert. There is also the possibility that the culvert will be required to be re-built as part of the new proposed buildings. It is expected that a unique solution will be necessary to fully address this issue. The specifics of the solution are most appropriately addressed during the early planning and preliminary design of the new hospital tower and supporting facilities.

New outpatient buildings will be constructed on the north end of the site. The buildings are to be low rise structures. A new parking structure is to be constructed to serve these buildings and located to serve more than one building. An area within the campus would be designated for possible future expansion of the outpatient buildings as the hospital needs increase. This will allow for shared use of the infrastructure such as the parking structures between buildings.

The central plant will be replaced to serve the changing needs of the hospital. The new central plant is designated to be constructed adjacent to the existing facility on the south end of the site along 220th street. The intention is that the proximity of the existing central plant to the new facility will allow it to remain in operation until the new facility comes onto line.

The communications building ‘2 East’ located near Vermont Avenue is to remain. The building was determined to be an important part of the campus that is not easily replaced based on its contents. The current non-structural classification will need to be upgraded from a NPC 4 to NPC 5 as part of the construction to meet the requirements set forth in SB 1953.

Based on the information provided by Harbor-UCLA Medical center, the existing main hospital has a seismic classification of SPC 2 after the current seismic retrofit is completed. The buildings will not meet the requirements of SB 1953 to remain as an acute care facility past the year 2030. The plan is for the main tower and PCDC buildings to remain and have their use changed to services that are not required to have an acute care license. The existing north and south wings of the hospital would be demolished. The facades of the buildings adjacent to the demolished buildings will have to be renovated to accommodate this change.

SUSTAINABILITY

It is desired that sustainability strategies be incorporated into the structural design of the campus. The following are recommended structural sustainability strategy goals for the campus.

- Provide cement replacement with fly ash utilizing the following recommended replacement percentages.
- Foundations – 40% to 60%
- Columns, Walls and Slab-on-Grade – 25% to 40%
- Elevated Structures – 25%
- Utilize high recycled content steel rebar and structural steel
- Use regional materials extracted and manufactured within 500 miles
- Design building for Disaster Resilience

MEP ENGINEERING CONCEPTS

MECHANICAL

The mechanical, plumbing and electrical systems portion of the master plan is to provide a new Central Plant to replace the existing plant since the equipment will be at end of it useful life by 2030 and the building will not comply with 2030 (OSHPD) seismic code requirements. A new plant should be constructed as a part of the new (2030) hospital project. Plant capacity is estimated at 5,000 tons cooling and 40,000 lbs/hr steam to serve the anticipated 2030 campus loads.

The new Central Plant that will provide the cooling and heating service to the campus will be designed in modular fashion. This will permit the Central Plant to expand as other buildings come online such as Outpatient Clinics and LA BioMed buildings. The plant will be equipped with high efficiency chillers, cooling towers, variable speed pumps and steam boilers. The hospital should consider a cogeneration plant that will generate heating, cooling and electricity. Since this campus has a high heating requirement, cogeneration plant should a good fit. A cogeneration feasibility study will be required to determine the capacity and type of fuel. The cogeneration plant will not replace emergency generators.

Reliability must be incorporated into the design. The health of the facility and its occupants is quite dependant on the mechanical, electrical and plumbing, MEP, engineering systems of the building. The design must allow these systems to stay on-line in the event of electrical power failure, mechanical failure or simply maintenance requirements of a portion of the system.

The building heating, ventilating and air conditioning, HVAC, systems should be designed to meet the future healthcare and energy codes, and best practices for energy efficiency and sustainability. HVAC systems would satisfy code required filtration and air change rates and air flow pressurization needs of each suite and room. Flexibility will be included in future designs. The ductwork distribution systems on each floor should match up to the greatest extent possible to the smoke compartments which will both minimize fire/smoke dampers and the associated maintenance and it will enable future renovation without affecting adjacent suites. Piping distribution systems on each floor can form loops with isolation valves at quartiles to allow for modification without disrupting much of the adjacent operating space in the future.

An advance smart-building energy management control system, EMCS, should be integrated with existing and new campus direct digital control, DDC, system. A new complete system of DDC control panels, sensors, electric actuators and control points will be required to monitor and control all the mechanical, environmental, electrical and plumbing systems of the new project.

Advanced healthcare HVAC concepts to be considered include displacement and natural ventilation systems and decoupled heating and cooling radiant system with direct outside air systems, DOAS. Heat recovery and indirect evaporative cooling can reduce site energy use. Solar thermal and solar photovoltaic, PV, installations at the building and site level will help achieve high performance energy design goals

PLUMBING

The new Central Plant would include new heat exchangers for domestic hot water, water softening and purification systems, Medical vacuum and medical compressed air systems and be sized to provide an additional 20% capacity for the existing buildings as well as the new clinics and hospital addition to accommodate usage to the year 2030 and beyond.

The hospital would also need consideration for supplemental water and wastewater tanks sufficient for 72 hour emergency operations for acute care as well as additional on-site fuel supply for emergency generator operation.

At the new building, low water use fixtures will be provided and an in-building gray water collection system for use in landscaping irrigation is envisioned. Also being considered and planned for is a central black water system which will take waste water from the hospital building and process it into treated water (gray water) that can be used for landscaping and an possible other site non potable water needs like cooling tower make-up water. This system will save large amounts of water that would normally go into the street sewer system.

Storm water for the new roof areas will be drained by gravity through the inside storm leaders, storm house drains and storm house sewer. Rain water harvesting systems will be considered. Plumbing fixtures on all floors will be drained by gravity through soil, waste and vent stocks, house drains and house sewers. Consideration will be given to in-building gray water collection systems for water reuse piped to irrigation needs.

Domestic cold and hot water will be distributed throughout the building by a multiple riser system. Loops will be provided on each floor to provide maximum flexibility for future renovations.

Medical gas systems will include: medical compressed Air System, medical vacuum system and medical gas systems (O2, N2O, N2 and CO2). Complete fire protection sprinkler systems will be provided for each building in accordance with building codes.

ELECTRICAL

A new Southern California Edison, SCE, service feed will be constructed as part of the new surgery and emergency room replacement project. The new upgraded service feeder will replace the existing service drop located on 220th Street. The new underground 66-12 kV service feeder will supply the existing SCE substation located in the southwest corner of the generator building that distributes power to the main 12 kV, 1200A switchgear lineup located in the generator building. The 12 kV, 1200A switchgear is double ended with a tie breaker that separates the incoming utility normal power and the generator plant emergency power. Emergency power is provided from (6) 2000 kW, 12 kV emergency generators that provide 100% back up power to the campus.

The anticipated 12 kV load for future is approximately 15.3 MVA which includes 8.3 MVA of new load for the new surgery and emergency room replacement project facility as well and the new hospital addition. The electrical load for the medical support and outpatients services will be slightly less than the existing hospital. In lieu of upgrading the existing generator plant and switchgear, it is recommended that a separate SCE service feeder be provided to the new hospital as well as a separate dedicated generator plant since the existing generator and switchgear building size will not easily accommodate expansion for adding two more generators and additional switchgear sections required to serve the new hospital. Upgrading the existing generator plant and switchgear will require temporary facilities and interruption of existing services to allow increasing the size of the building and equipment.

Equipment will be so arranged as to minimize any future service interruptions to hospital functions during routine maintenance activities. Location of redundant equipment and the separation of emergency and normal power systems along with redundant equipment rooms and feeder pathways will enhance reliability.

The fire alarm system shall comply with requirements of National Fire Protection Association, NFPA. The fire alarm system shall incorporate an emergency voice and communications system, as defined by NFPA 72. The fire alarm system shall be an addressable multiplexed microprocessor controlled fire alarm and life safety system, which shall be network based with distributed network nodes and amplification.

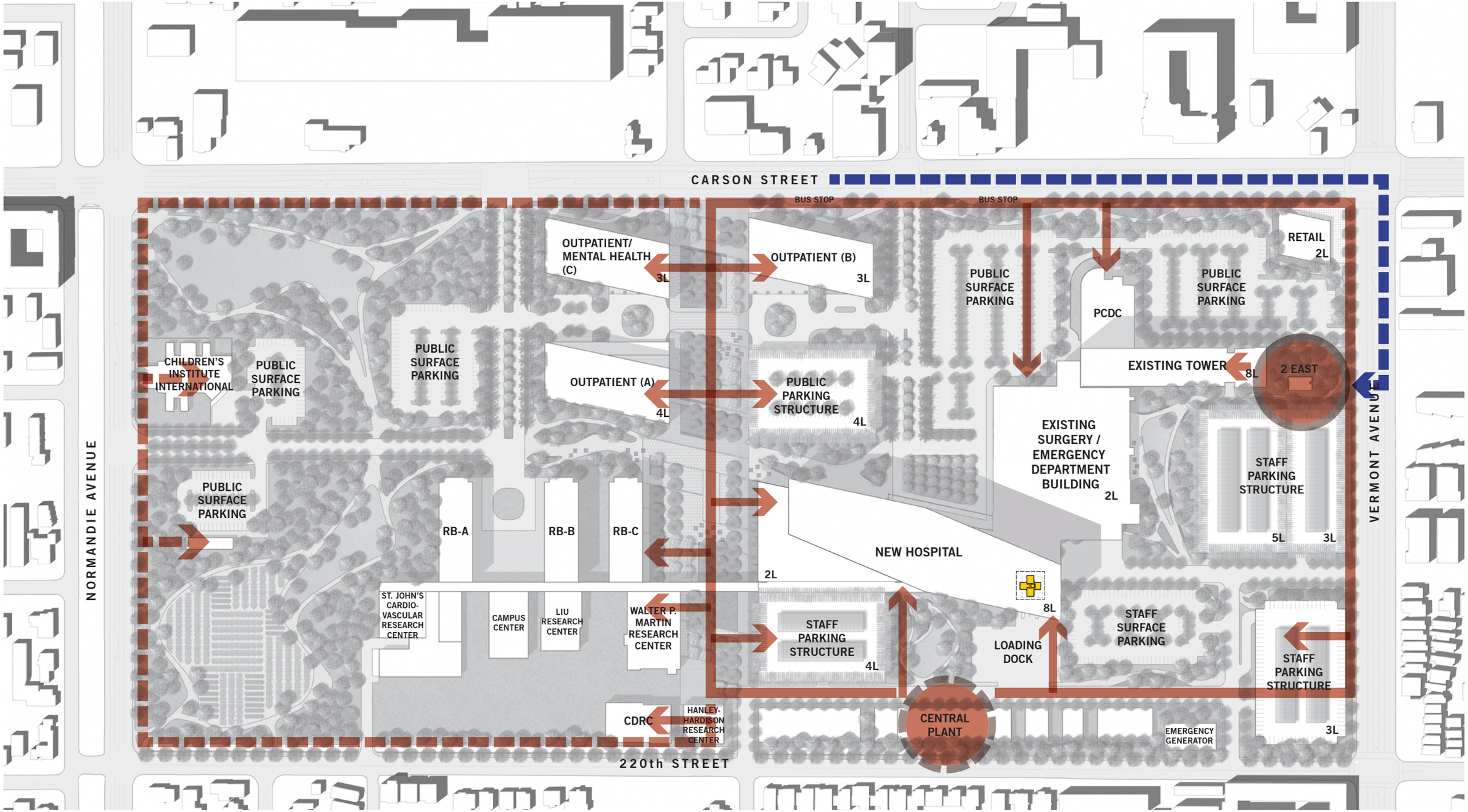
INFORMATION TECHNOLOGY

The following assessment of Technology and Low Voltage Systems takes into account the County's upcoming migration to a County-wide Electronic Medical Record and makes a series of recommendations regarding the technologies and the physical requirements of the infrastructure needed to support these systems. The planned construction and upgrade of the campus' infrastructure and facilities is the ideal time to make a significant step towards the next generation of technologies that can offer significant improvements in efficiency, patient safety and satisfaction and staff morale. As connections to the surrounding community, County Hospitals and other medical entities will be planned for, ensuring sufficient capacity and interoperability between systems.

The impact of existing facilities and the phased nature of the plan must be taken into account. Even though parts of the campus will be demolished and/or re-purposed and replaced with new buildings, the campus technology systems must be able to support the remaining facilities until new spaces are available. Phasing of construction shall ensure the technology infrastructure and support spaces are constructed at the appropriate point of each stage of work, taking advantage of modular design principles to minimize investment in the full build-out of these spaces until they are needed. Care must also be taken to manage the impact of legacy systems to avoid a "haves and have nots" situation between buildings on campus

DATA SERVICES

The deployment of the planned centralized County-wide Electronic Medical Record system will result in the creation of one or more regional Data Centers and would reduce (but not totally eliminate) the need for Data Center space on campus. Accordingly, assuming the existing on-site Data Center will be de-commissioned at the same time as the Hospital, a Technology Equipment Room (TER) should be planned to house the local data systems and other voice and low voltage systems for the campus. The proposed location for this TER is the new Central Plant development adjacent to 220th Street since abundant power and cooling will be available to support the equipment in the TER. The TER should be approximately 2,000 sq. ft. in size (assuming the



INFORMATION TECHNOLOGY PLAN

LEGEND

- TELECOM BUILDING
- DATA CENTER
- INCOMING SERVICES CONNECTION
- FUTURE CAMPUS DIST. LOOP
- NEW CAMPUS DISTRIBUTION LOOP

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County houses its Electronic Medical Record systems in one of more off-site enterprise Data Centers) and supported by dedicated generator-backed Uninterruptible Power Supplies (UPS), specifically design cooling, and augmented fire protection systems. Associated space for a Network Operations Center (NOC) of approximately 200 sq. ft. plus sufficient storage, burn-in / maintenance and other support spaces should be provided adjacent to the Technology Equipment Room.

TELEPHONE SERVICES

The Hospital currently utilizes Centrex services and an Avaya Telephone Switch to provide telephone services throughout the campus, with ties to the remote clinics. The existing telephone switch is also capable of providing Voice over IP (VoIP) services but the current network infrastructure prevents a complete rollout of this technology at this time. The telephone switch is fairly new and is capable of supporting the campus' voice requirements well into the future.

The telephone switch is located in Building 2E (off Vermont, between Building 1E and the AF Parlow Library), which also houses the Main Point of Entry (MPOE) for the campus. Accordingly, this is a key building from a technology perspective. This building should remain in place in its current function, primarily due to the cost of relocating the equipment and cabling terminations that are housed in this building.

EXTERNAL CONNECTIVITY

The campus is connected to AT&T's Torrance Central Office that provides telephone and data connectivity to the campus. In addition, Time Warner provides the Enterprise Wide Area Network (WAN) connectivity, with AT&T acting as the backup. Both AT&T and Time Warner cabling runs down Carson Street onto Vermont Avenue before entering the Main Point of Entry Building (Building 2E) for the campus. As technology systems, including the proposed County-wide Electronic Medical Record, continue to advance and gain importance at Harbor-UCLA this limited external connectivity represents a single point of failure. Accordingly, we recommend that the campus identify a second entry point onto campus that does not utilize the same pathways (both on and off campus) that the primary connections use. Both the Harbor and Gardena Central Offices could be utilized for this purpose. Ideally, this second set of connections should terminate in a second, new Main Point of Entry facility co-located with the new Technology Equipment Room (proposed for the new Central Plant) and geographically separate from the MPOE in Building 2E.

ON-CAMPUS CABLING

The campus has an underground cabling infrastructure that services all of the buildings on the campus. This cabling takes two routes, with the original cabling meandering between the buildings on the north side of Medical Foundation Drive (and poorly documented) and a newer run of optical fiber cabling originating the Building 2E and running down Medical Center Drive to support the Harbor-UCLA buildings on each side of the Drive (documentation exists.)

The master plan calls for a central services spine (co-located with the existing waste water easement running between Carson and 220th Streets through the middle of campus. The installation of a new underground campus distribution spine, consisting of a series of 4-inch conduits to support optical fiber and possibly copper cabling, connected to the new Technology Equipment Room and coordinated with the other services utilizing this utility corridor is recommended. In order to provide resilient and, as needed, redundant connections for the campus buildings, the creation of a pair of underground ductbank loops connected to the central spine is recommended. This will allow campus buildings to be connected with dual connections to the campus loop and eliminates technology system outages caused by single points of failure.

PHYSICAL SPACE FOR IT SUPPORT STAFF

Currently, IT Support Staff (including the Chief Information Officer) are accommodated in the Barracks buildings. Space should be provided on-site for IT Support Staff – offices, conference rooms and storage - preferably not in the Hospital buildings themselves, but instead in a Medical Office Building or other office space co-located with other Administration departments to allow potential sharing of resources. Note that this does not include the need for a Data Center / Technology Equipment Room, Network Operations Center and other technical facilities in this space, since these facilities should be included in other new campus buildings.

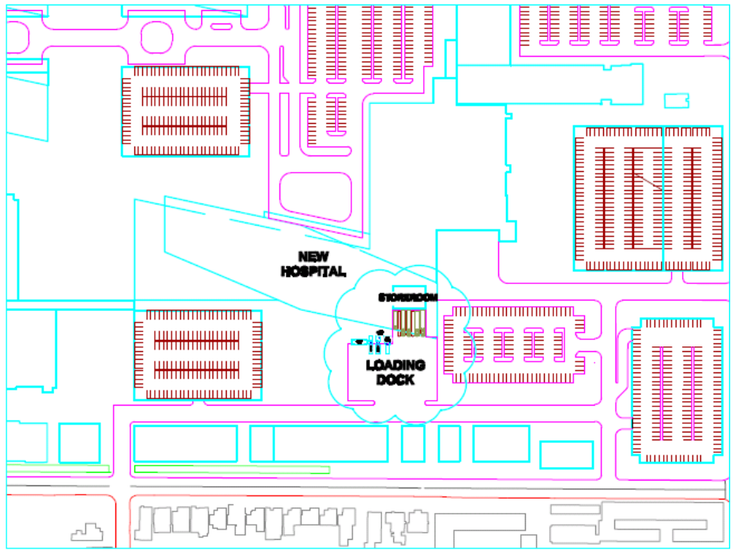
MIGRATION TOWARDS COUNTY STANDARDS FOR IT INFRASTRUCTURE AND SYSTEMS

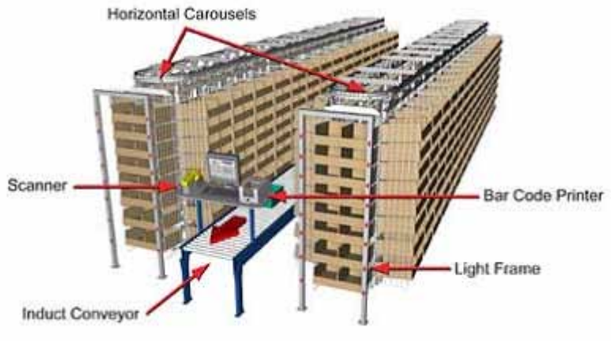
Currently IT network and telephone systems do not adhere to County standards (which are currently based on Cisco equipment), nor does the structured cabling system. Over time the campus should align its standards with those of the County to benefit from the advantages of being part of a larger entity, such as reduced costs, larger pool of skilled employees, and enhanced management and maintenance capabilities. The move to the Electronic Medical Record system could act as a catalyst to accelerate this migration.

CONNECTION TO LA BIOMED

Currently LA BioMed has its own network and support staff, but there is a significant amount of coordination between the County and LA BioMed staff due to Doctors requiring access to both the County and LA BioMed's systems. Currently this is typically done with two separate computers, but increased network connectivity between Harbor-UCLA and LA BioMed is anticipated and provisions made to connect the LA BioMed facilities into the Harbor-UCLA campus-wide infrastructure.

CAMPUS MATERIALS MANAGEMENT





The campus master plan site will incorporate new Materials and Waste Management facilities. The functional spaces will include:

- A new Materials Management Storeroom
- A new Loading Dock.
- A new Waste Management Center

The new Loading Dock and Waste Management Center will be located at the back of the new Hospital Tower, with the new Storeroom located on the lower level of the new tower (right). This location provides direct adjacency to the majority of the Campuses' medical / surgical beds, who typically use the most supplies and linens, and generate the greatest volumes of medical waste.

MATERIALS MANAGEMENT / STOREROOM

The new Storeroom will replace the Warehouse #1 and #2 functions. All Campus supplies will be delivered to the new dock, and will be received and stored within the new building, and outgoing shipping will occur here. Supplies will be distributed to the new Hospital Tower, Surgery and Emergency Room Replacement Project, Outpatient buildings and all other ancillary departments from this centralized location.

The Storeroom will include bulk supply holding, small unit of measure supply holding, secure stores, appropriate warehouse management software, computers and work stations.

Various "state of the art" supply replenishment systems may be considered to enhance the efficiency of the storeroom, including vertical and horizontal supply carousels, pick-to-light order fulfillment systems (right).

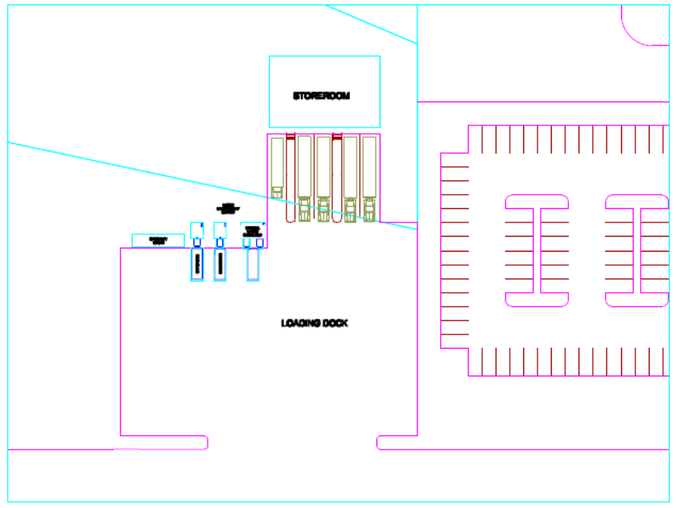
SUPPLY / WASTE / LINEN DISTRIBUTION

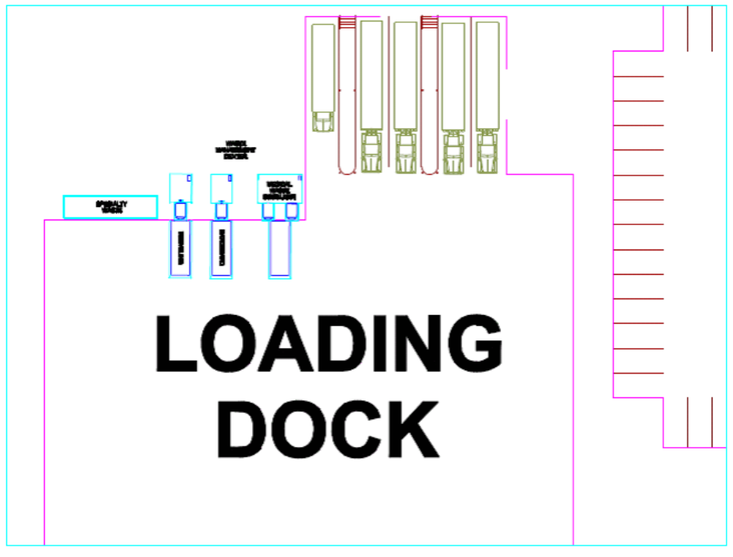
All campus departments and buildings will be supported by the new Storeroom and Loading Dock. Supplies and clean linen will be distributed from the Storeroom, and all waste and soiled linen will be returned to the Loading Dock / Waste Management Center.

These commodities will be moved through appropriately sized and located "service" corridors, and over-land routes to and from Storeroom and various end-users.

In the new Main Hospital Tower, supplies, linen and waste will be moved manually through the lower level service corridors to the appropriate service elevator, where they will be moved vertically to the end user.

Electric Tug vehicles are currently used to transport carts from the Warehouse and Loading Dock to the main hospital departments, and would remain the recommended method to move supplies, waste and linen to the more remote Hospital and Outpatient Tower users. These battery-powered vehicles transport a "train" of one to three carts per trip (below).





Above: Loading dock configurations for the New Hospital Tower

WASTE MANAGEMENT

To best accommodate the future needs of the campus, a new Waste Management Center will be developed as component of the new Loading Dock. The Waste Management Center concept will provide the space and equipment needed to ensure the safe and efficient collection, segregation, staging, transportation and processing of all waste streams generated within the campus.

Waste will be collected from the new Main Hospital building in carts, and will be moved manually down the nearest service elevator to the lower level, moved to the Waste Management Center and dumped into the appropriate waste container.

Waste from the Outpatient Towers, Surgery and Emergency Room Replacement Project and other remote locations can be collected in standard Tilt-Truck carts from the point of generation, and returned by tug vehicle back to the Waste Management Center for disposal, eliminating the need for the waste hauler to make individual pick-ups at each remote building location.

The Waste Management Center will insure flexibility for adapting to changes in waste collection and processing equipment and operations as they become available. In addition, the provision of adequate space for appropriate waste processing, cardboard recycling and food waste composting equipment will allow for more efficient and sustainable waste management practices.

At a minimum, the new Waste Management Center shall include the following elements:

- Confidential Waste Container Holding
- Hazardous Waste Holding
- Radioactive Waste Holding
- Chemo waste Holding
- Universal / E-Waste Collection Area
- Recycled Waste Collection Area
- Broken / Obsolete Equipment Staging Area
- Soiled Linen Cart Holding
- RMW Sterilization Unit
- Food Waste Composter / Container
- Cardboard Compactor / Container

LOADING DOCK

The Loading Dock will be sized and designed to the meet the needs of the master plan re-development, and provides the opportunity to significantly enhance the efficiency of the Dock function.

To gain this efficiency, an adequate number of clean and soiled truck positions must be provided, along with all required dock lift, leveling and safety equipment. Based on Lerch Bates previous Loading Dock studies, information provided by users, and projections of increased dock activity based on master plan space programming, the Five (5) truck positions planned for the new Dock will provide adequate capacity for the re-developed campuses projected volumes (left).

The new Loading Dock will centralize the Receiving function, and consolidate on-campus truck traffic to a single location. The new Dock will include the following elements:

1. Clean Receiving Dock:

- Dock Control Office
- Three (3) Semi-Truck Positions
- One (1) Straight Truck Position
- Stair / Ramp

2. Soiled Dock:

- One (1) Semi-Truck Position

ECONOMIC IMPACTS

INTRODUCTION

This section describes the economic and fiscal impacts of the Harbor-UCLA Medical Center Campus Master Plan. The findings build on the analysis of existing conditions, and compare these baseline impacts to those projected at build-out of the master plan, planned for 2030. The evaluation is based on the scale and character of programming and operations planned for both Harbor-UCLA and the supporting/complimentary uses on site, including LA-BioMed, medical office tenants, and commercial services. Specifically, the analysis focuses on the increased economic activity from these tenants at build-out of the master plan in the context of the local and regional economy. The physical improvements to the site are also considered to the extent that they contribute to the economic and fiscal profile of the campus.

Ultimately, the economic and fiscal impacts generated by the Harbor-UCLA campus will depend on how the master plan is implemented over time and the manner in which the facilities, programming, and tenants relate to the broader community. Thus, a primary goal of this analysis is to inform campus planners and practitioners (e.g., County and hospital staff) about the potential contribution of the Harbor-UCLA campus to the local and regional economy so that the on-going implementation of the master plan maximizes positive impacts (and minimizes any negative ones).

The fiscal and economic analysis has been conducted with reference to several overlapping and inter-related geographies and impact categories. The region is defined as the County of Los Angeles while the Local Study Area refers to the cities of Torrance, Carson, the Harbor Gateway Community of Los Angeles and the unincorporated community of West Carson

The type of impacts evaluated in these areas is summarized below:

1. Primary Economic Impacts from Harbor-UCLA Medical Center Campus Master Plan are based on the direct, on-site employment and spending of the hospital and other campus tenants and their ripple affect through the regional economy.

2. Secondary Economic Impacts from the Harbor-UCLA Medical Center Campus Master Plan refer to the role of the campus tenants in enhancing local and regional economic competitiveness, primarily through their contribution to the bio-medical sector and to a lesser extent by supporting demand in the local real estate market.

3. Fiscal Impacts from the Harbor-UCLA Medical Center Campus Master Plan refer to its potential effect on the General Fund budgets of neighboring jurisdictions (i.e., the cities of Los Angeles, Carson, and Torrance).

KEY FINDINGS

The key findings from this economic and fiscal analysis are summarized below.

- The build-out of the Harbor-UCLA Medical Center Campus Master Plan will substantially increase the scale and intensity of economic activity on the campus, already the largest employment generator in the Local Study Area. The total number of jobs on-site is estimated to increase by almost 1,500, or 27 percent, with the largest growth generated by Harbor-UCLA (1,174 new jobs) and LA BioMed (205 new jobs), respectively. These estimates include the impact of healthcare reform, which is expected to improve the overall efficiency in the provision of medical services on campus, suggesting that the overall level of programming provided by Harbor-UCLA will actually expand faster than on-site employment. By way of example, total patient discharges are projected to increase by 31 percent by build-out while diagnostic and treatment services by 58 percent.

- At build-out of the master plan, the Harbor-UCLA tenants are projected to spend about $362 million collectively on goods and services and $597 million on wages/salaries and benefits. This activity is estimated to generate about 18,060 direct, indirect and induced jobs† in the County, a 27 percent increase over the existing employment impact. These estimates assume an 85 percent capture of Harbor-UCLA tenant spending in the County, consistent with existing spending patterns. If 100 percent of the spending by Harbor-UCLA tenants were captured locally, its economic impact in the County would increase to about 20,800 jobs.

- In addition to the impact of campus operations, build-out of the master plan will generate significant one-time construction jobs during implementation. Specifically, the approximately $1.3 billion in construction activity implemented over the next 20 years will generate almost 500 direct jobs plus an more than 600 indirect and induced jobs on average per year (about 1,100 total average jobs per year). These estimates are reported separately from the on-going operational impacts since presumably construction of the master plan will be complete at build-out.

- Given that the on-site spending and employment growth projected for the campus will be accompanied by significant upgrading of facilities and infrastructure, the overall effect of the master plan will be to create a large and modern nucleus of activity in the healthcare and biomedical fields. This is significant because neither the Local Study Area nor County as a whole currently possesses a high profile destination or identifiable center of activity for the biomedical sector despite a relatively strong presence of firms, research, and heal care services overall. Consequently, the master plan effort has the potential to create a local hub or cluster of biomedical activity in the South Bay region and ultimately improve the local "value capture" of direct spending and other "secondary" economic benefits. Thus, by expanding and improving the Harbor-UCLA facilities and programs, the master plan can have the dual benefit of enhancing its contribution to the local and regional economy.

- Given the potential for hospitals and related activities to generate demand for retail, office, and even residential uses (e.g., from both patients seeking complimentary services as well as healthcare tenants and employees), build-out of the master plan is likely to generate demand for a variety of real estate products in surrounding neighborhoods. However, it is unclear how this new demand will be accommodated given the relatively built-out and residential nature of immediately surrounding neighborhoods. Ultimately, these land use impacts will depend on a variety of factors, including the decisions of individual property owners and local land us planning (e.g., in the communities of Torrance, Carson, West Carson, and Harbor Gateway). Currently, there appears to be some available capacity in nearby business parks as well as receptivity by the owners of adjacent commercial centers to absorb "spill-over" market demand.

- The Harbor-UCLA campus currently appears to have a minimal fiscal impact on the General Fund budgets of the incorporated cities located nearby (these impacts are captured on campus or in the immediately adjacent unincorporated areas). However, the increased activity resulting from build-out of the master plan, in terms of both expanded services, on-site employment, and patient visits, may change this dynamic. Nevertheless, the net budgetary impact of this new activity is likely to be negligible since it will generate both increased General Fund revenues, (e.g., sales and property tax) as well as costs (e.g., from added traffic and safety patrol).

† "Direct" impacts refer to the economic effects of total Harbor-UCLA direct employment and spending. "Indirect" impacts represent economic effects on industries that supply Harbor-UCLA. "Induced" impacts represent economic effects on all local industries as a result of the new personal spending by employees in the direct and indirect categories generated by Harbor-UCLA.

Establish a framework and spatial hierarchy system which organizes open space program around adjacent building uses

CAMPUS STANDARDS

DESIGN GUIDELINES

Harbor-UCLA Medical Center Campus includes healthcare, teaching, and research. The campus must meet rapidly changing demands for people, programs, space, equipment, access and services critical to 24-hour operations, while reflecting an overall sense of wellness and healing.

CAMPUS DESIGN PHILOSOPHY

Campus planning, landscape and architectural controls allow development to occur in a unified and ordered manner without sacrificing the opportunity for diversity in the buildings or exterior spaces. Moreover, the architecture, while diverse in form, functions and scale, should be largely organized to form strong, coherent edges to open spaces and streets. Buildings are to be positioned, not as individual elements of the campus, but as a series of edges that reinforce the organization of open space and circulation. The philosophy of the master plan is based on the positioning of potential building sites around defined open spaces, inter-related pedestrian and vehicular corridors, and infrastructure routes.

Exterior open space allows access to buildings, contributes to institutional image, creates places for people, and furthers a campus character of wellness and healing. It is what is seen from the windows of campus buildings. It gives campus users comfort, respite and a place for social interaction. Landscaping is to be designed to enhance orientation, safety, security and comfort while providing the opportunities for relaxation and reflection

The proposed buildings will remain over time, although the medical and education programs will certainly change. However, with flexible internal building design, these new facilities can accommodate Harbor-UCLA Medical Center's mission late into the century.

CHARACTER

The Design of individual buildings is to relate to neighboring structures, open spaces, and landscape, taking into account the following site factors:

- Potential to complement the character of surrounding spaces, streets, and walks;
- View corridors, both to and from buildings;
- Alignment of axis, cornice lines, and features of neighboring buildings and spaces;
- Overall heights, massing, styles, and materials of neighboring buildings;
- Overall scale, styles, and materials of existing buildings;
- Screening of unsightly views of service areas and mechanical equipment located both on grade and on building roofs;
- Campus circulation;
- Solar orientation and other environmental influences.

BUILDING IMAGE

The new campus should have a clear identity with high visibility. The buildings should convey the advancement of medicine, the progressive nature of medical studies at Harbor-UCLA, and sense of welcome to the public. The “state-of-the art” nature of the activities contained within would imply an image that will signify the great medical advances anticipated in the next century. The New Hospital will become the dominant architectural element in the center of the campus. It must convey the inspiration and promise of medicine, along with the openness, accessibility, and human scale inherent on a campus.

EXTERIOR SPACES

The campus includes exterior spaces in a variety of scales, styles and functions. Together they create an organized system of places that provide order and orientation. These spaces fit together so that functions are accommodated and character unified across the entire campus.

SUSTAINABILITY

Harbor-UCLA Medical Center is to be a regenerative place of healing, moving beyond carbon-neutrality to a development that restores ecosystems and biodiversity and improves the conditions for community health.

- The campus is energy and water self-sufficient and operates emission-free
- The campus is built using healthy and equitably sourced materials
- The campus celebrates connection to the healthy, restorative natural world that surrounds it. It is a place where caregivers want to work and members want to heal, a place where caregivers connect the work they do within the walls with the natural cycles they witness around them
- The campus is resilient to climate and system impacts, continuing to be a functional community resource in times of crisis

SUSTAINABILITY IDEALS

The goal of the project’s sustainability methodology is to identify the negative impacts of the facility’s operations on the site, community, and environment, and to mitigate them through the informed design of its systems.

Work toward a campus that:

- Produces all of its own energy on-site from renewable resources, which includes energy produced from its own waste and wastewater
- Uses no municipal water and produces no effluent discharge
- Recovers and converts all of its (non-recyclable and non-compostable) solid waste into energy to be used on site
- Produces energy from the waste removed from on-site wastewater treatment and reuses the purified water
- Achieves carbon neutrality by reducing its emissions and offseting the remaining unavoidable portion through renewable sourcing strategies and formation of community partnerships

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PLANTING ZONES

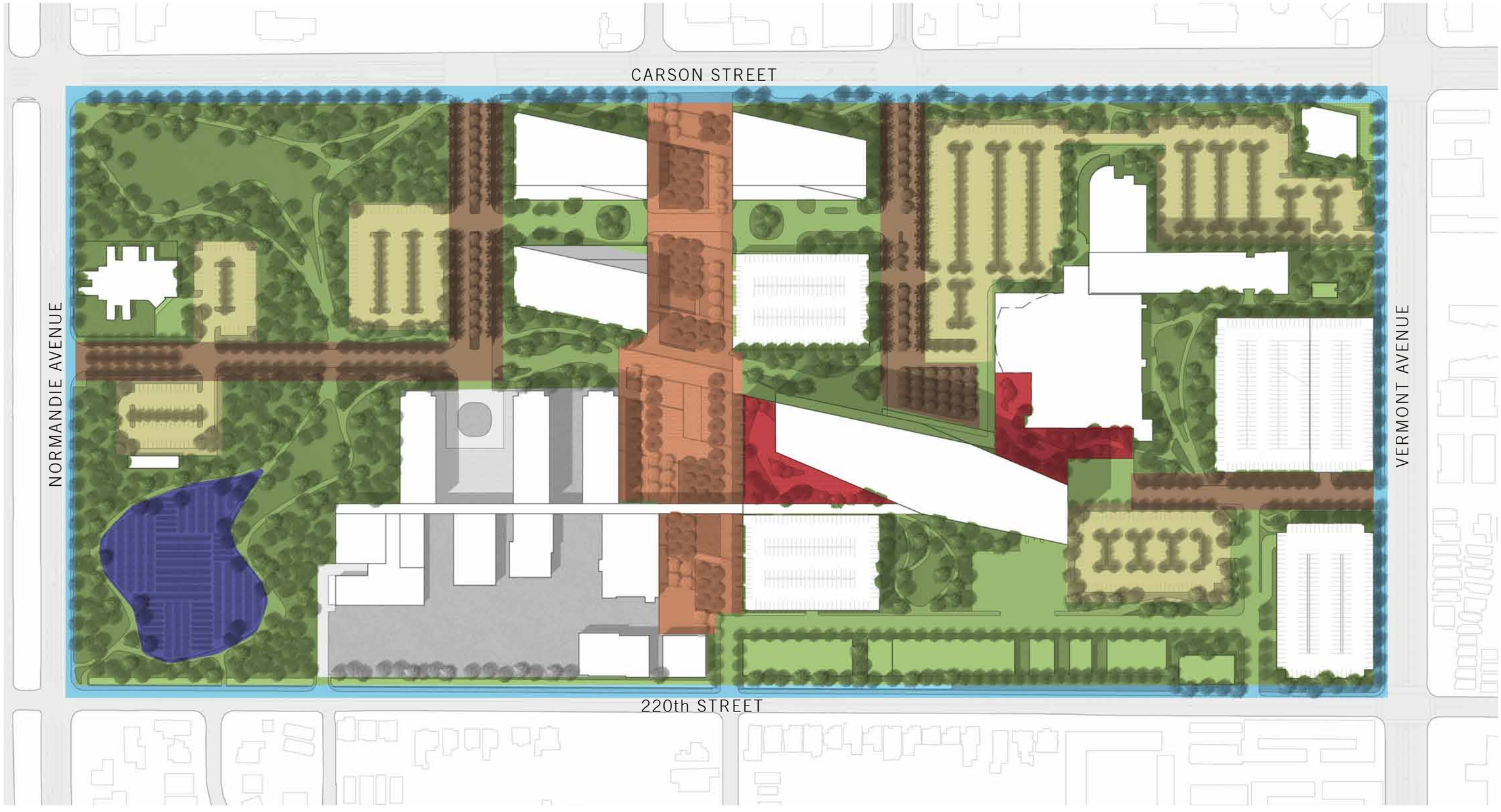
The planting concept positions the campus in an informal park setting that is segmented by entry drives and the Central Garden Spine. Other planting zones will help define diverse open space programs. Using formal and informal planting arrangements with evergreen and deciduous trees, the landscape will help enhance the overall open space experience.

Formal spacing with a singular tree species will help define the campus perimeter within the surrounding community. Campus entries will introduce accent trees and palms to signify gateway entries. The central garden spine will be composed of evergreen trees and flowering accent trees arranged in formal tree bosques. The formality of the entries and central spine will be broken up by informal drifts of deciduous and evergreen trees that meander throughout the campus.

Plant species will be predominately native or culturally native (adapted) that help further create a unique campus setting. Once established, these plants require less water and routine maintenance than the existing landscape helping to reallocate financial resources to improve the overall quality of the campus open space.

LEGEND

- PARK AND TRAIL LANDSCAPE
- PERIMETER LANDSCAPE
- DEMONSTRATION GARDEN
- PARKING LOT LANDSCAPE
- ENTRY LANDSCAPE
- CENTRAL SPINE LANDSCAPE
- ROOF TOP GARDENS


CARSON STREET
NORMANDIE AVENUE
VERMONT AVENUE
220th STREET

0’ 50’ 200’ N

Linear precast concrete pavers

Integral color concrete paving with sawcut joints

Stabilized decomposed granite

PAVING ZONES

Most of the campus will use cast-in-place concrete paving, including perimeter sidewalks, entries, and major east/west sidewalks. Concrete is cost efficient and relatively maintenance free. Integral color, hand seeded aggregate, and sand blast finishes can help create variety in this paving type and begin to define different areas of the campus, such as the east/west/ plazas that feed off of the Central Garden Spine.

Precast concrete unit pavers will be the predominant paving type with the Central Garden Spine. This paving type will give the spine a fine-grain texture helping to signify its prominence on campus. Several module sizes can be used to help further break up the scale of the spine, however a consistent color tone should be maintained to unify this important area.

Decomposed granite paths used along the west side of the campus is a very cost effective and maintenance free material that will create a unique experience in a park-like setting. As these trails extend east along Carson Street the paving material should change to cast-in-place concrete which is a more appropriate material along this urban edge.

Depending on the structural drainage strategy utilized by the roof gardens, either cast-in-place concrete or precast concrete unit pavers will be used. If concrete is used, hand seeded aggregate and sawcut joints should maintain the intimate quality of these spaces.

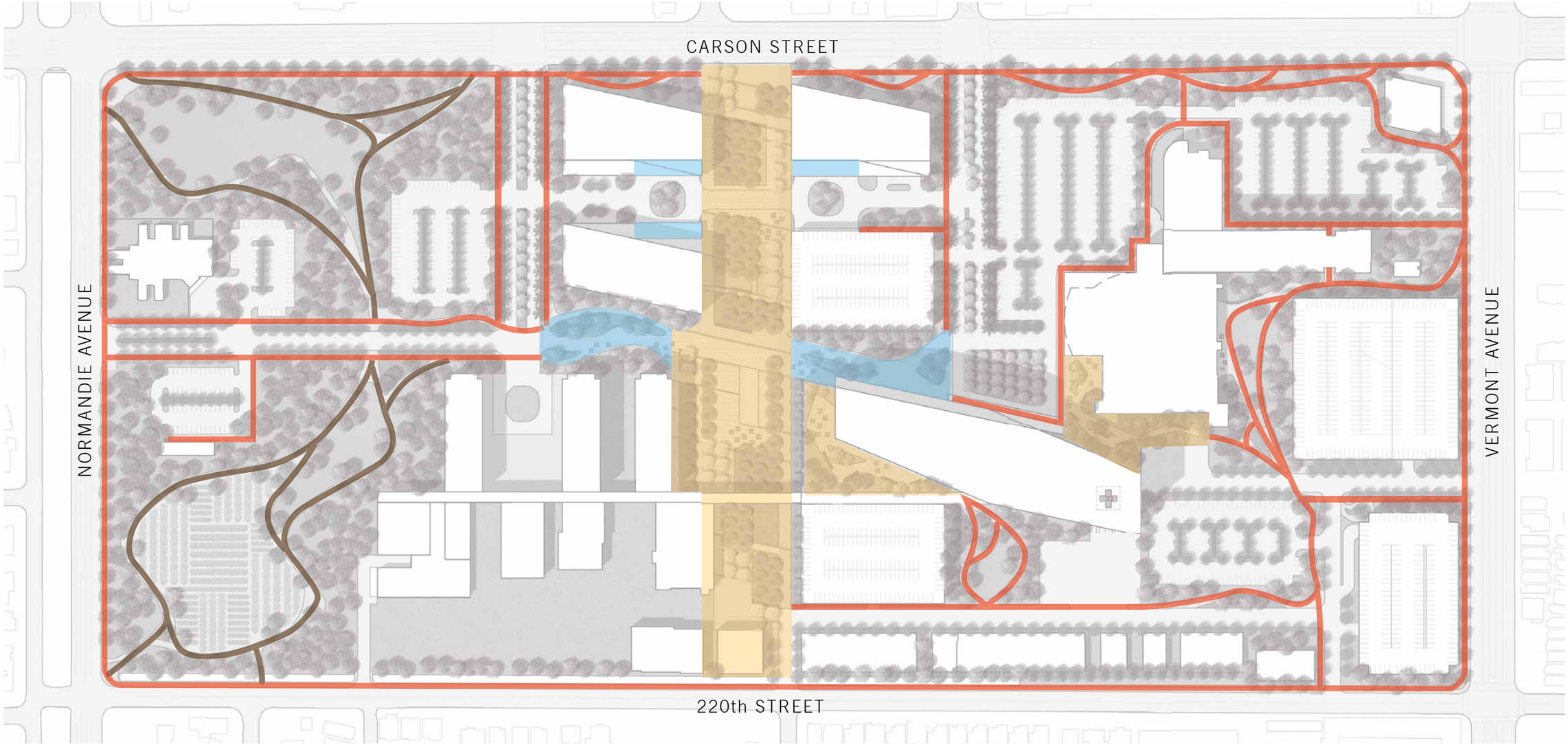
LEGEND

PRECAST CONCRETE UNIT PAVERS

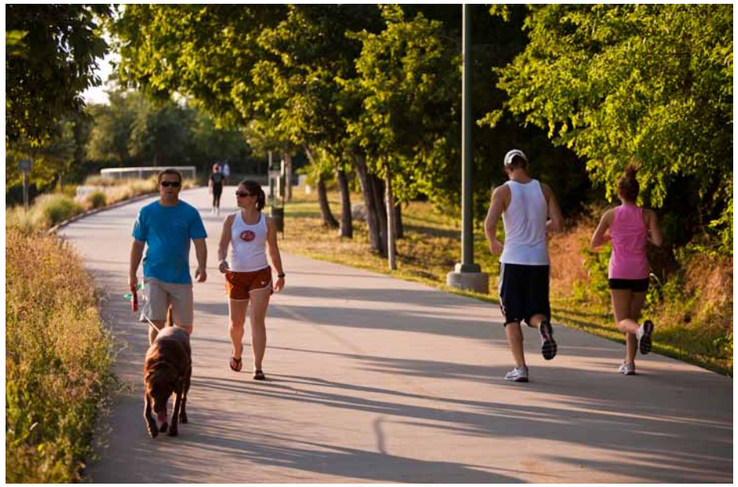
ENHANCED INTEGRAL COLOR CONCRETE

INTEGRAL COLOR CONCRETE

STABILIZED DECOMPOSED GRANITE


CARSON STREET
NORMANDIE AVENUE
VERMONT AVENUE
220th STREET

0’ 50’ 200’ N



Hospital staff and community exercise trail

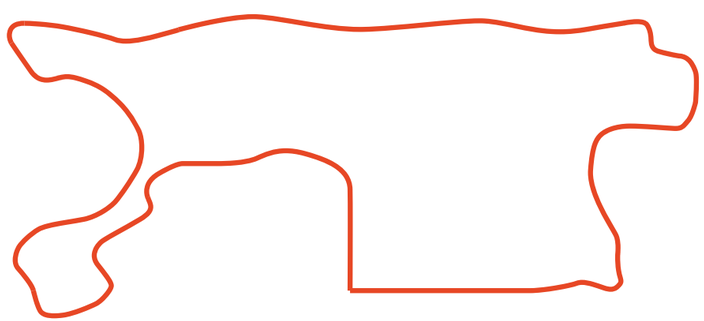
Bicycle path on stabilized decomposed granite

Exercise par course stations located throughout the trail

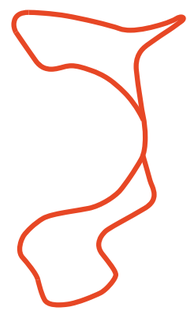
FITNESS TRAIL

One of the most requested open space amenities by hospital staff during the preliminary master plan analysis was an exercise area that can be used during breaks from their long shifts. With the consolidation of existing research and hospital departments into new buildings, a significant amount of open space can be utilized as an outdoor fitness and wellness trail. The trail wraps the interior perimeter of the site and forms a continuous 1.6 mile loop that is interrupted by vehicular crossings only four times. These crossings will use traffic calming strategies such as paving delineation, speed bumps and speed islands (widened speed bumps with a walking surface no top.) Multiple permutations of the fitness trail loop can be used by staff to add diversity to their workouts. A series of fitness stations that provide areas to stretch and strength train are located throughout the campus to add further variety.

LEGEND

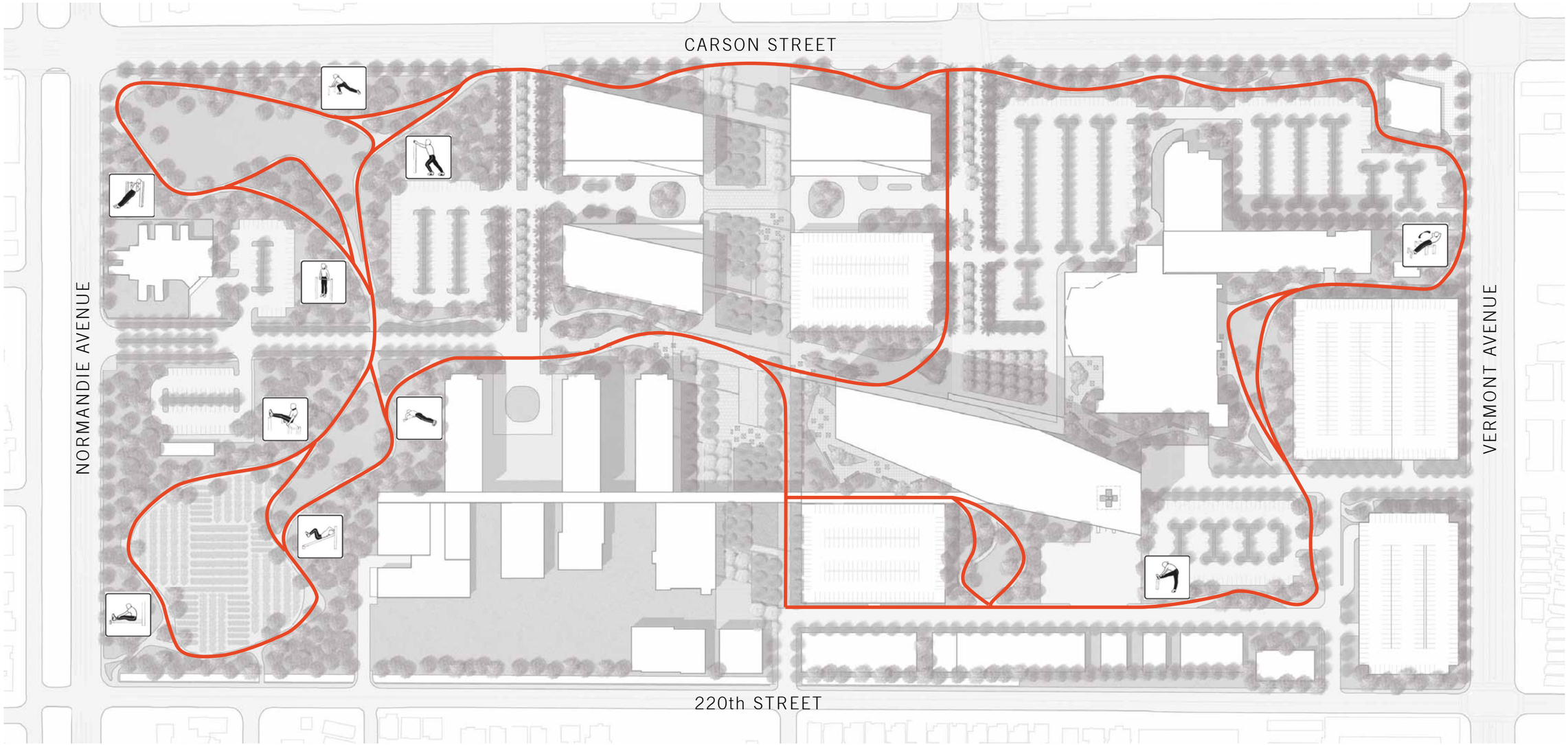


1.6 Mile Loop



0.7 Mile Loop

CAMPUS TRAIL AND EXERCISE CIRCUIT


CARSON STREET
NORMANDIE AVENUE
VERMONT AVENUE
220th STREET

0’ 50’ 200’ N

Photovoltaic panels shading parking areas

Tree shaded parking areas

LANDSCAPE SUSTAINABILITY

Reducing natural resource demands is a key goal of this master plan. By utilizing landscape in strategic ways it can perform a variety of tasks beyond aesthetics including lowering potable water demands, reducing heat island effects, and mitigating building cooling demands.

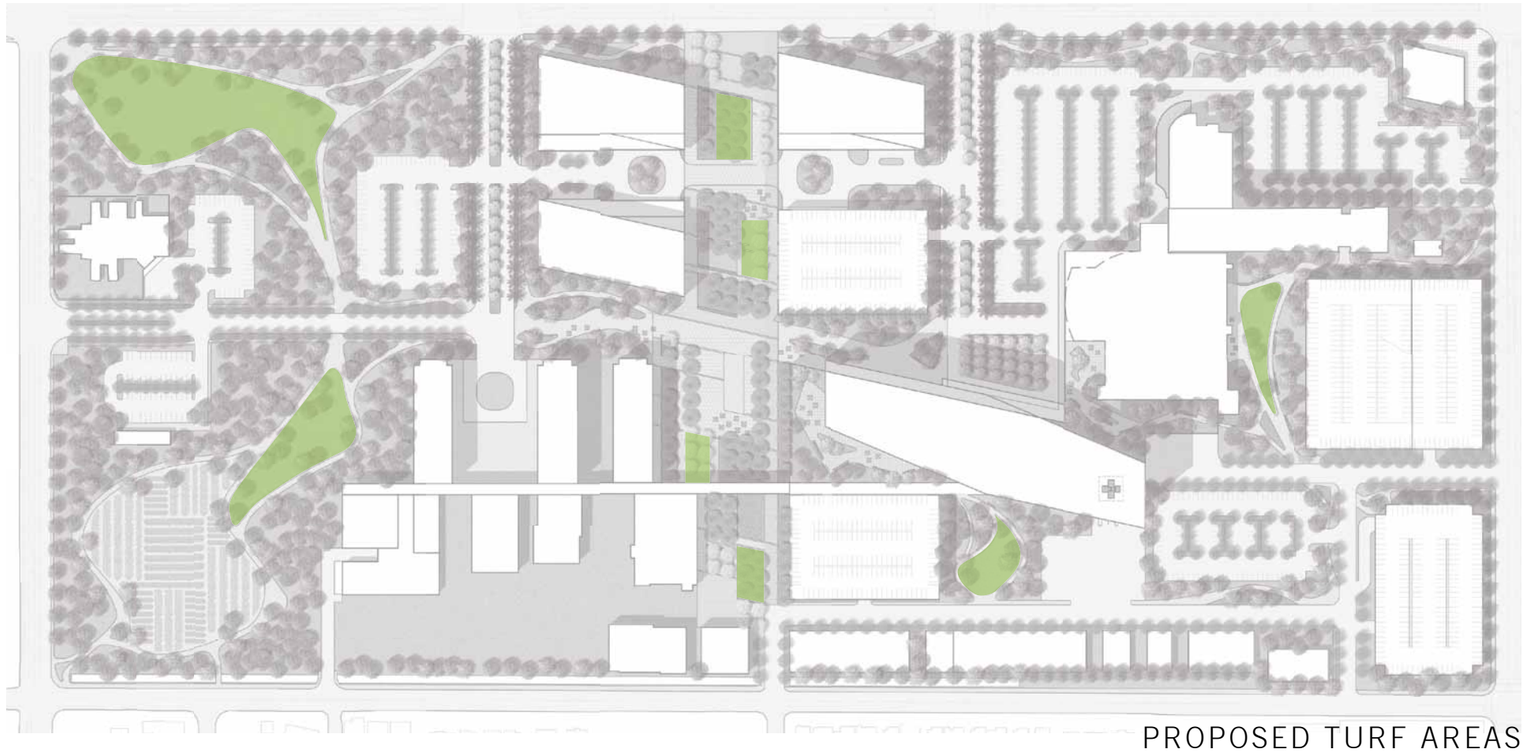
Campus turf areas have been substantially reduced compared to existing conditions. By reassigning over 3 acres of turf area to low water use plants, the campus will save about 7 million gallons a year and an estimated $15,000 reduction in their annual water bill.

Recent studies have found that urban environments with low density tree coverage are on average 10 degrees warmer throughout the night than similar areas that have more shade. This phenomenon is called the urban heat island effect. By using trees in the parking areas to create a dense canopy of shade, the asphalts solar absorption rate will be greatly reduced This means surrounding buildings will cool down earlier in the evening. Furthermore, incorporating green roofs will also help reduce the buildings solar absorption and cooling demands during warmer daytime hours.

LEGEND

- SHADE STRUCTURE / PHOTOVOLTAIC PANELS
- PARKING LOT TREE PLANTING
- ROOF GARDENS
- NEW TURF AREA

URBAN HEAT ISLAND MITIGATION EXHIBIT



PROPOSED TURF AREAS

0’ 50’ 200’ N

Existing campus tree photos

Existing tree exhibit illustrating which trees on campus should be protected and preserved prior to new construction work

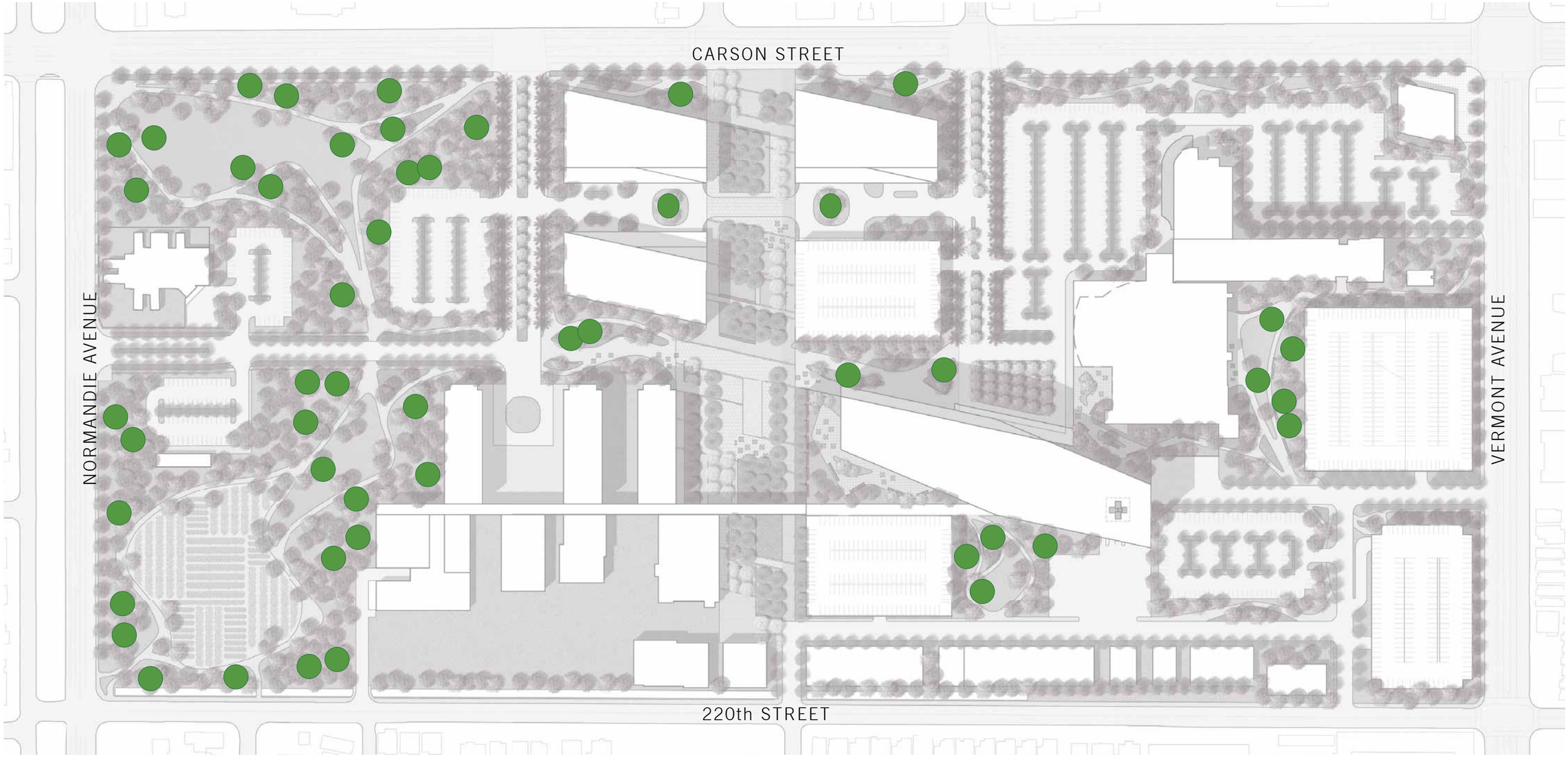
SALVAGED AND RELOCATED TREE LOCATIONS

The Harbor-UCLA Medical Center has several mature tree specimens that were cataloged during early site analysis studies with recommendations to salvage and relocate for future use. Most of the trees selected are suitable for helping to establish the west park area landscape that calls for a rich variety of tree types. This area can be used as a staging ground for these tree until other areas on campus become available for relocations. Other areas on campus suitable for relocating existing trees are the courtyards, and garden areas just east and west of the central spine.

With Evergreen Ash selected as a preferred street tree species, many of the existing Evergreen Ash Trees can be located along the periphery of the park helping to extend the park character out to the public edge. Other accent specimens such as the Jacaranda, Coral Tree, and Silk Tree are suitable for relocation to the courtyard gardens.

LEGEND

PROPOSED RELOCATED TREE LOCATIONS


CARSON STREET
NORMANDIE AVENUE
VERMONT AVENUE
220th STREET

0’ 50’ 200’ N

Vegetated swale in a zero curb parking area

Stormwater directed into bioretention areas

Central curb cut in parking island collects stormwater runoff.

LANDSCAPE DRAINAGE STRATEGY

Stormwater capture is a key strategy to improving water quality, reducing infrastructure capacity loads, and minimizing irrigation needs. Capitalizing on conducive soil conditions, the master plan drainage strategy utilizes landscape as the main collector of stormwater drainage. The landscape can hold and clean the water as it recharges underground aquifers, or just slowly release back into the county drainage system.

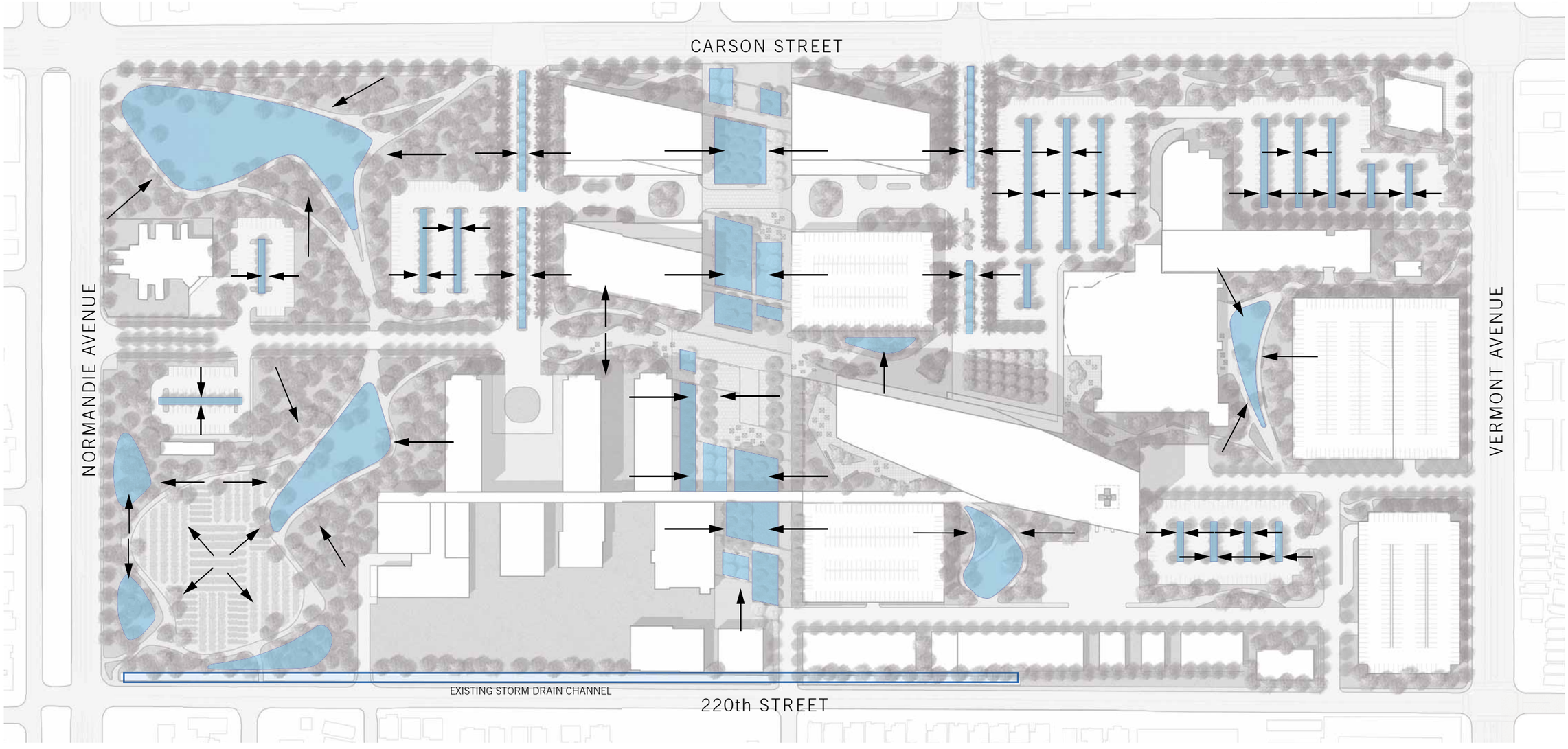
Parking area will be designed with curb stops at each parking space and zero-curbs around vegetated swales that will capture stormwater. Paving areas around plazas and courtyards will be uniformly pitched into adjacent planting areas. The large turf areas in the west park will be graded to retain stormwater during large events along with other smaller swales and retention areas throughout the park.

The existing open drainage culvert along the 220th Street will remain. A new ornamental fence with vines will help screen this element from public view.

LEGEND

LANDSCAPE RETENTION AREA

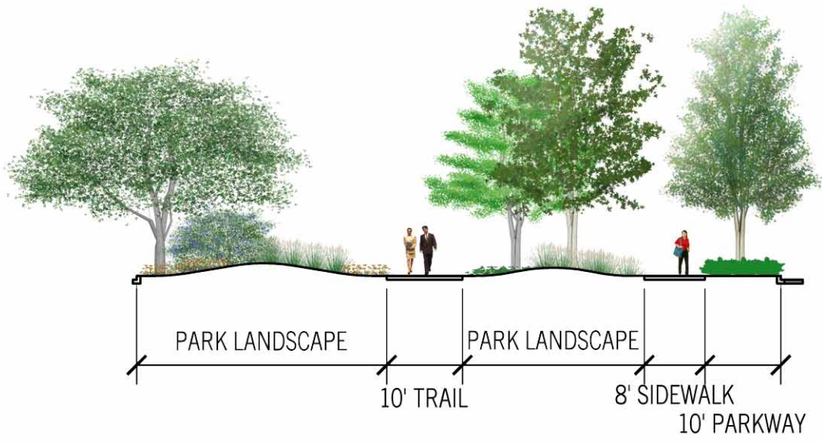
DRAINAGE DIRECTION


CARSON STREET
NORMANDIE AVENUE
VERMONT AVENUE
EXISTING STORM DRAIN CHANNEL
220th STREET

0’ 50’ 200’ N

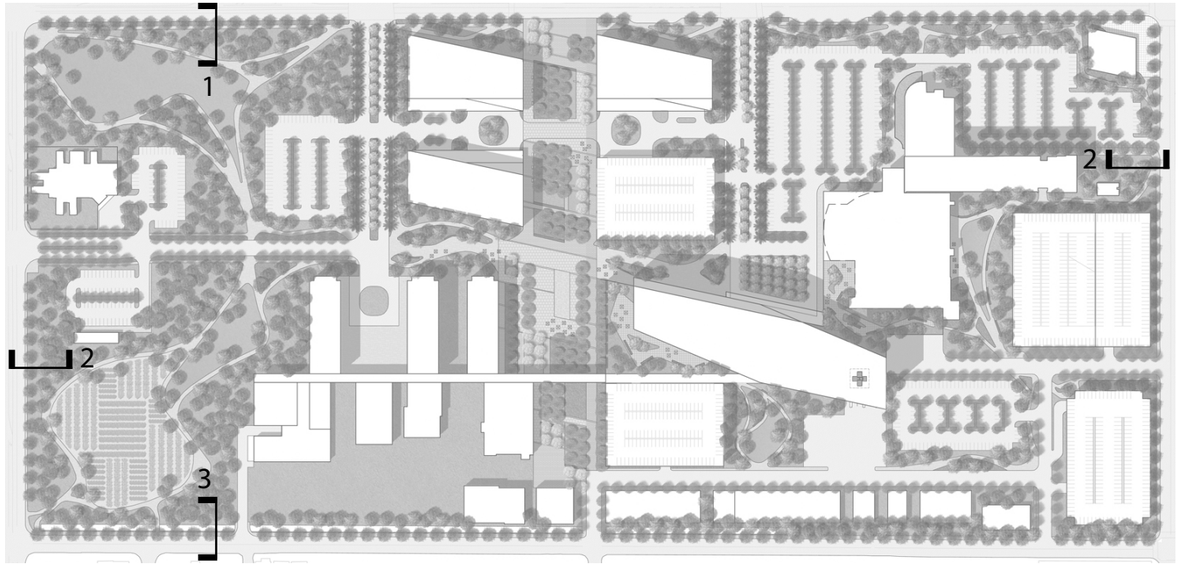
PERIMETER STREETSCAPE

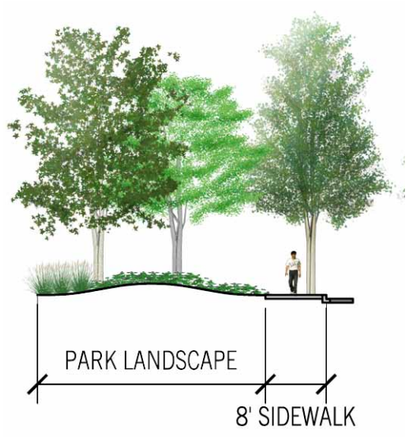
Planting a uniform perimeter streetscape will establish a strong visual statement for the campus within its predominately residential context. A single row of trees along the curb edge will occur in sidewalk planters with the exception of 220th street along the southern edge where the narrow sidewalk mandates tree grates. The single row of trees along Carson Street will be planted in a 10' wide planter at the curb edge which will help buffer pedestrians from the busy traffic street. Removal of the existing chain link fence around the perimeter of the campus will help create a sense of openness and accessibility for nearby residents. A new ornamental fence planted with vines along 220th street will help ensure pedestrian safety adjacent to the existing open drainage channel.



SECTION 1 - CARSON STREET

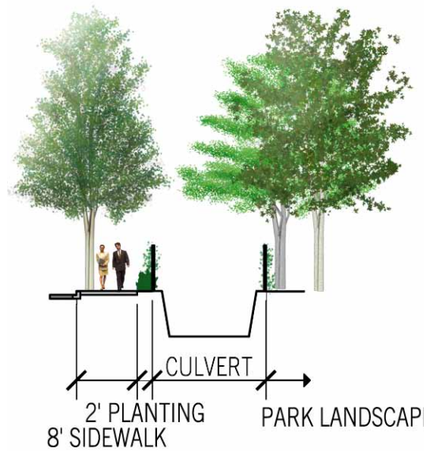
1"=20'





SECTION 2 - NORMANDIE & VERMONT STREETS

1"=20'

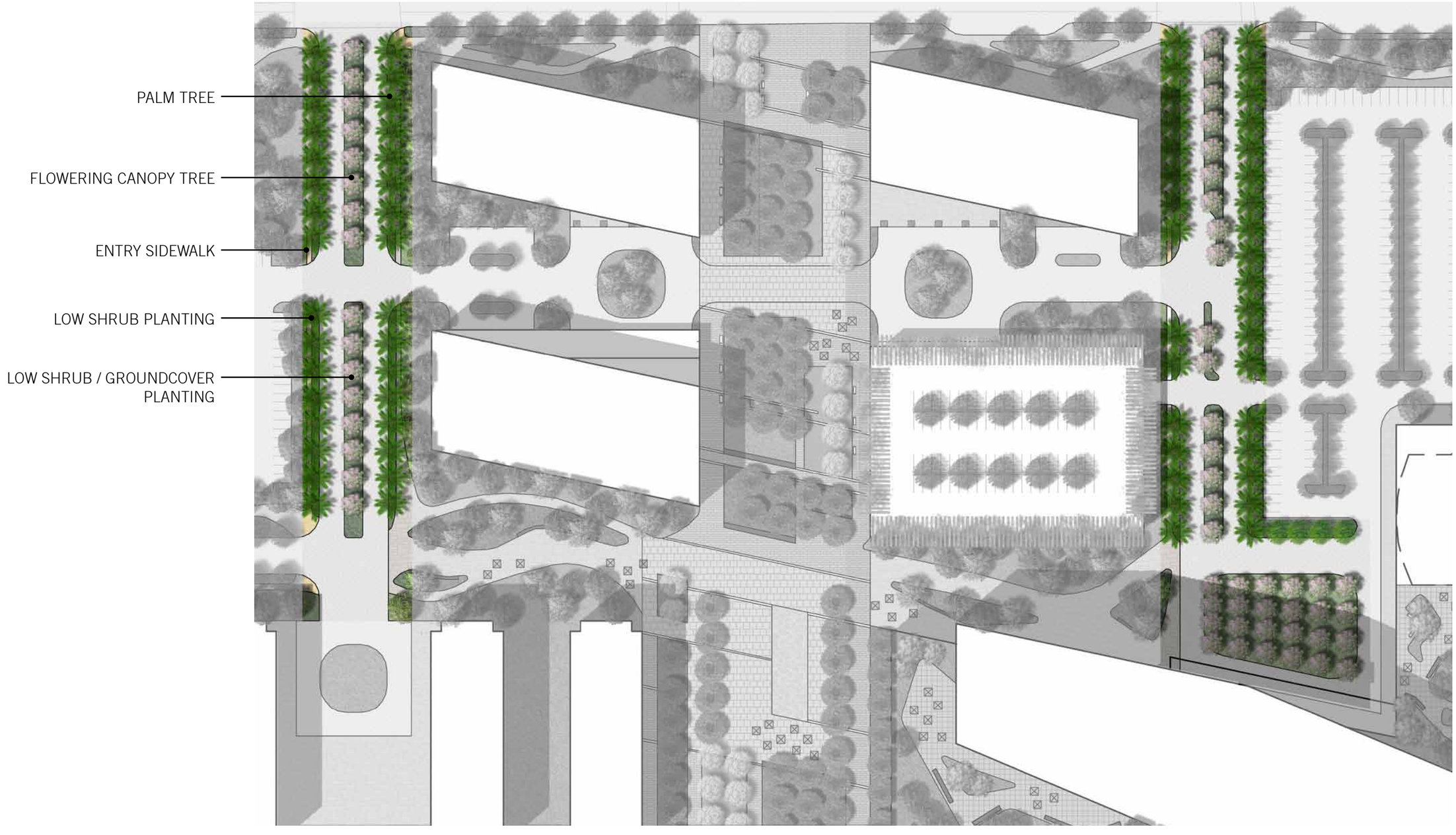


SECTION 3 - 220th STREET

1"=20'

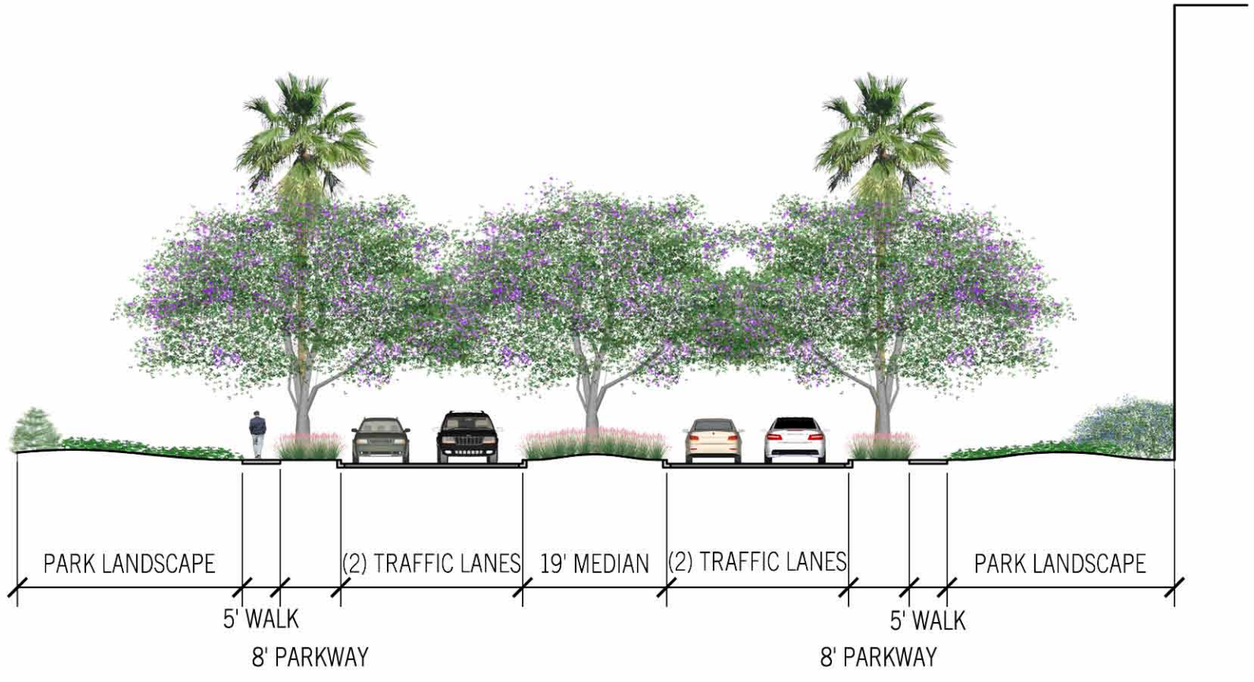
CAMPUS ENTRY DRIVES

The two campus entry drives are important entry gateways for the Harbor-UCLA Medical Campus. These entries will be easily recognizable and visually connect to the main hospital and adjacent parking areas, helping to simplify wayfinding within the campus. The tallest trees on campus, Hybrid Fan Palms, are spaced 30 feet on center and will create an iconic entry experience for patients and guests. To ensure an appropriate spatial scale as the palm trees grow to over 60 feet high, flowering canopy trees are planted in the median and 30 feet on center between each palm tree. As these trees mature, the canopies will grow over the entry drive and create a unique gateway experience. This combination of trees will create a prominent scale with seasonal color which will create a unique identity for the campus.


PALM TREE
FLOWERING CANOPY TREE
ENTRY SIDEWALK
LOW SHRUB PLANTING
LOW SHRUB / GROUNDCOVER PLANTING
N

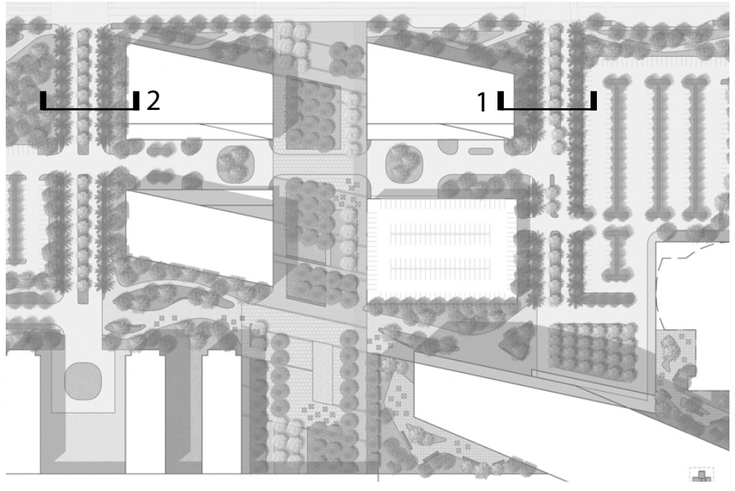
1”=100’

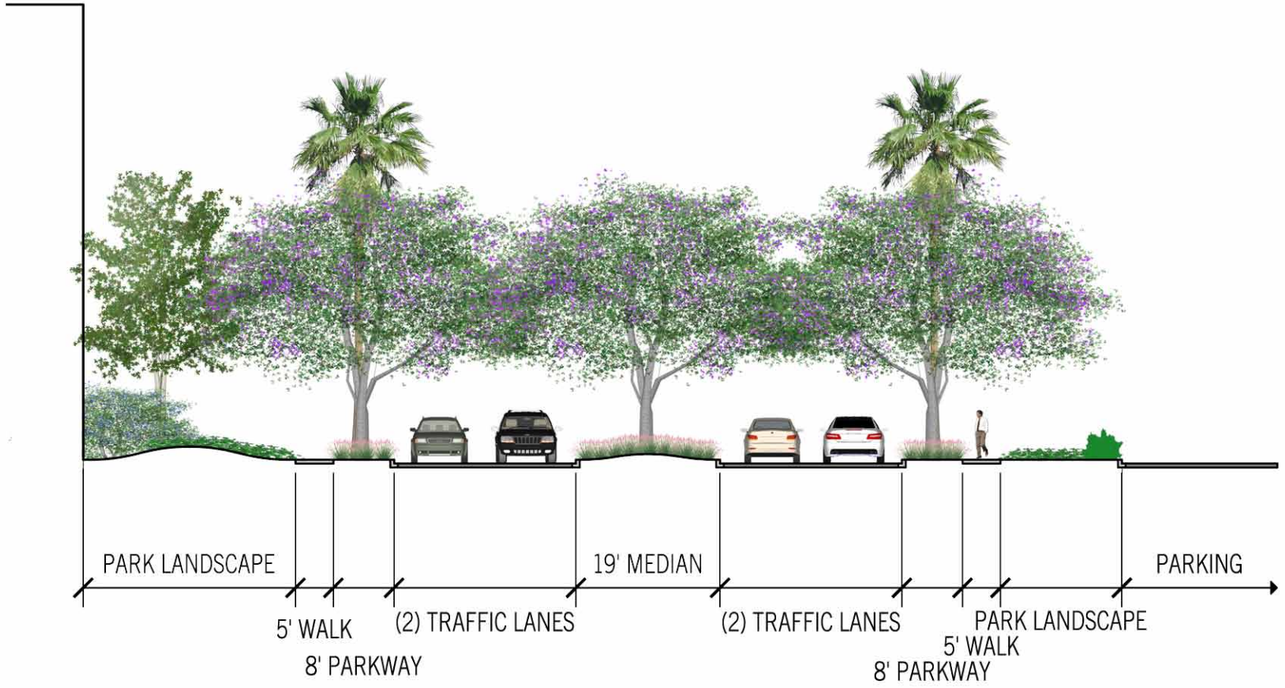
VIEW OF THE WEST ENTRY DRIVE FACING NORTH



SECTION 1 - EAST ENTRY DRIVE

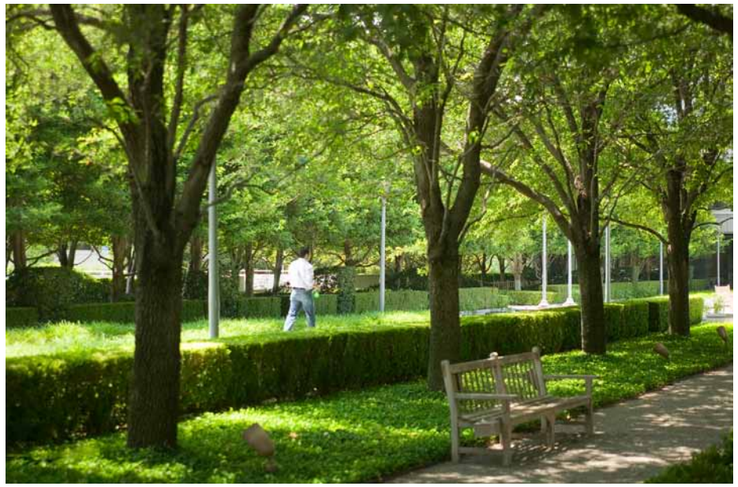
1”=20’





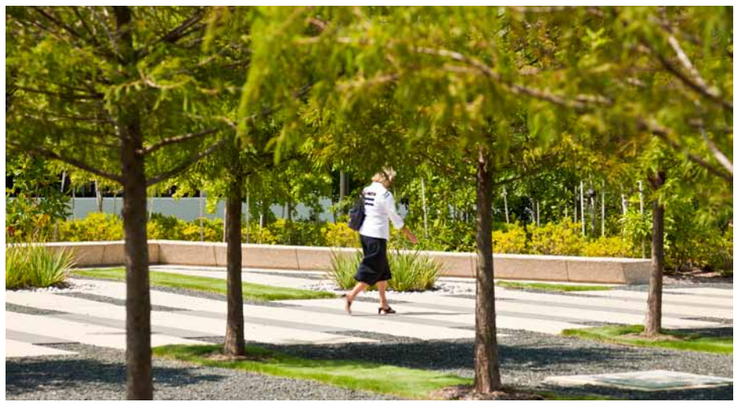
SECTION 2 - WEST ENTRY DRIVE

1”=20’



Linear garden planting a shaded seating

Vertical sculptural fountain element



Pedestrian promenade with tree bosques and seat walls

CENTRAL GARDEN SPINE

As the geographic center and symbolic heart of the campus, the Central Garden Spine is the primary outdoor gathering space for the Harbor-UCLA Medical Center. The master plan has strategically framed this area with the three main campus programs: Hospital, Outpatient Buildings, and the LA BioMed campus. The central plaza and north/south pedestrian promenades will seamlessly connect all three uses and provide areas for social interaction and individual relaxation.

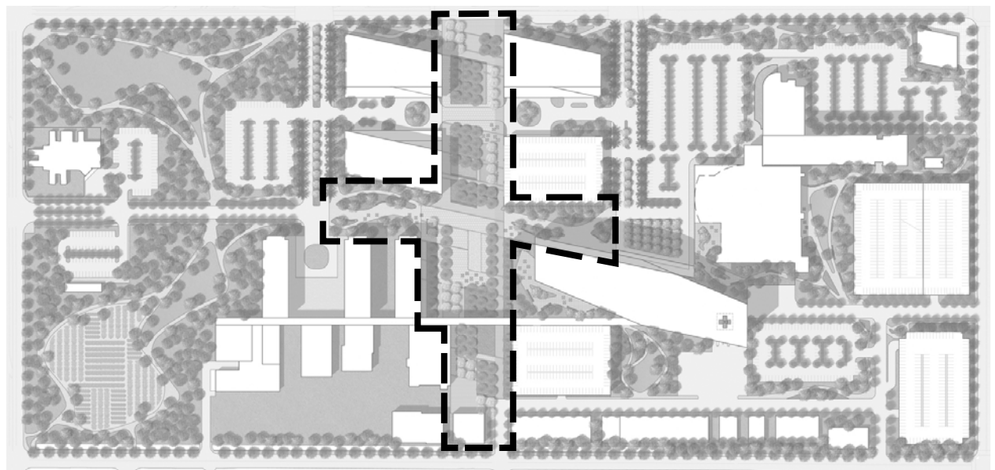
Two different tree types help define this area. The primary tree will be an upright evergreen canopy tree planted in groups which, is accentuated by rows of flowering accent trees. Offsetting linear allee's of accent trees drift through the central spine helping to reinforce the north/south orientation of the space, while angular paving bands that extend the adjacent building geometry help reinforce the east/west pedestrian circulation.

The central spine is composed of four segments with two distinct characteristics. The two north segments adjacent to the outpatient buildings have an intimate scale created by dense tree bosques that create multiple shaded seating areas along the promenades and within the garden. A small plaza located along the west side of the parking structure will serve the ground floor retail that frames the west edge of the spine.

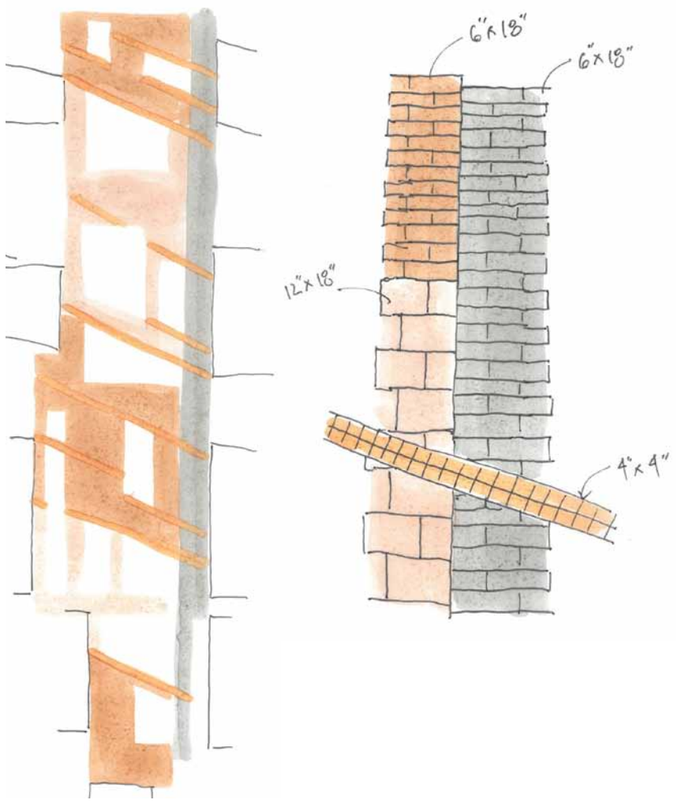
The central location of the third segment defines the main plaza area which features a fountain, cafe tables, shaded seating areas and a large event area. The campus medical library will be relocated to define the west edge of the plaza and help ensure a activity throughout the plaza. Evergreen and flowering accent trees frame the plaza area and offer shaded seating for spectators during events or casually enjoying their lunch.

The fourth segment is similar to the first two in that linear arrangements of tree bosques and accent trees create seating areas and help visually provide a connection to the rest of the central spine. With the pedestrian bridge and a heavy planting of trees along the south edge of the plaza, the fourth segment will be mostly used by LA BioMed and hospital staff. A small plaza located at the southern edge will provide a more private event space for hospital and LA BioMed functions.

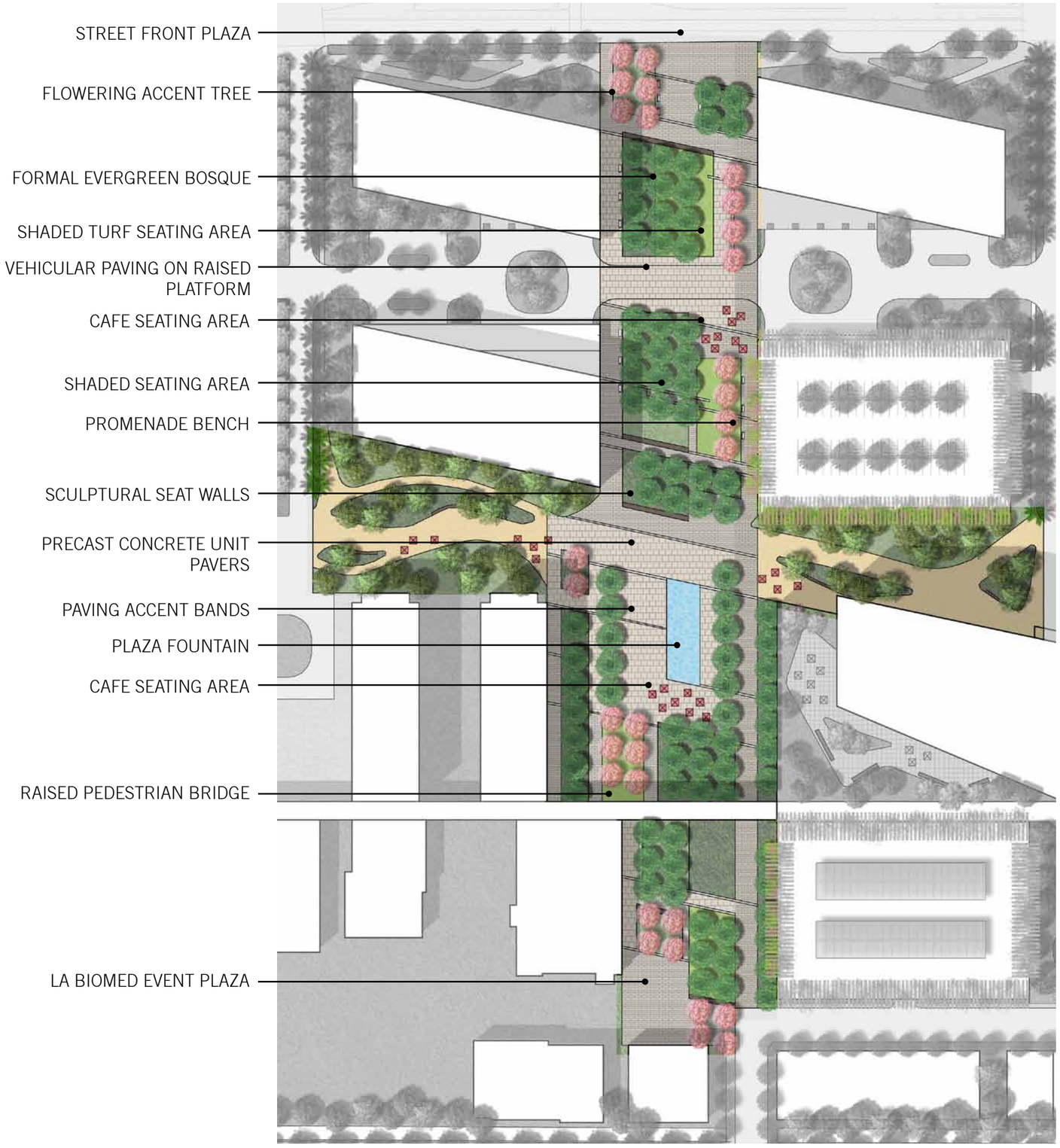
The central garden spine plaza area is flanked by two informal plazas that provide east/west transitional links to LA BioMed and main hospital. These plazas have a distinctly different design character that will reinforce the north/south axis of the central spine, and continue the natural landscape vocabulary of the west park and the Carson Street frontage throughout the campus; helping to reinforcing a continuous pedestrian circulation system.



Conceptual framework diagram

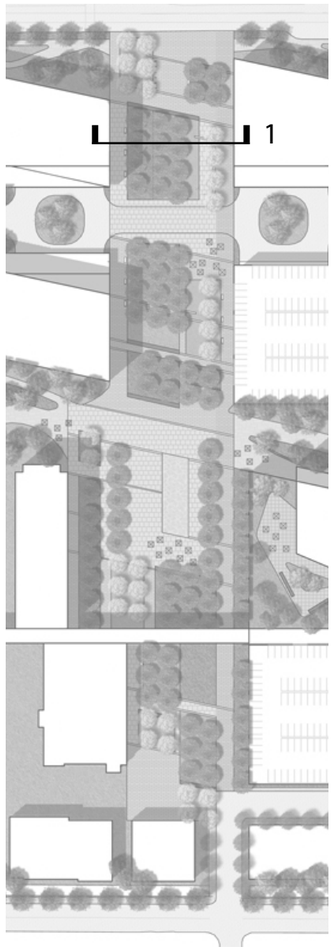


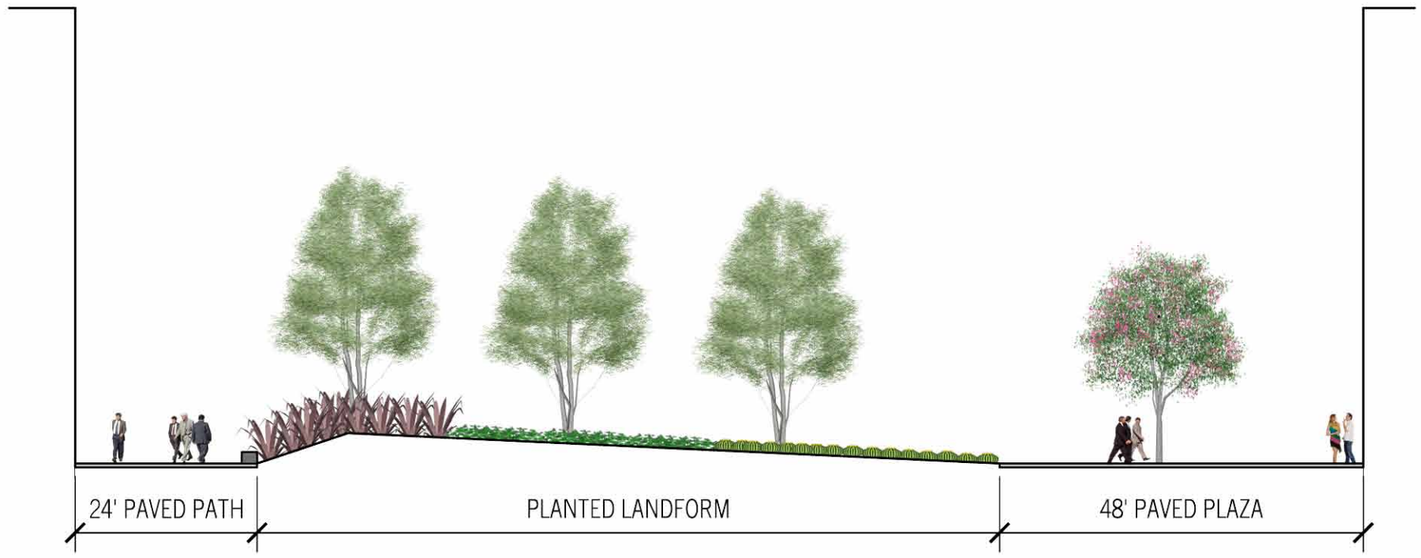
Conceptual paving typology diagram



VIEW OF THE CENTRAL GARDEN SPINE MAIN PLAZA AREA FACING SOUTH

View of the shaded tree bosque along the central garden spine facing south



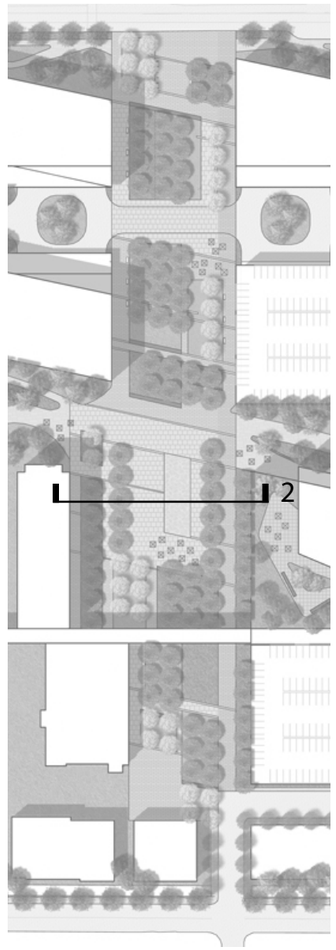


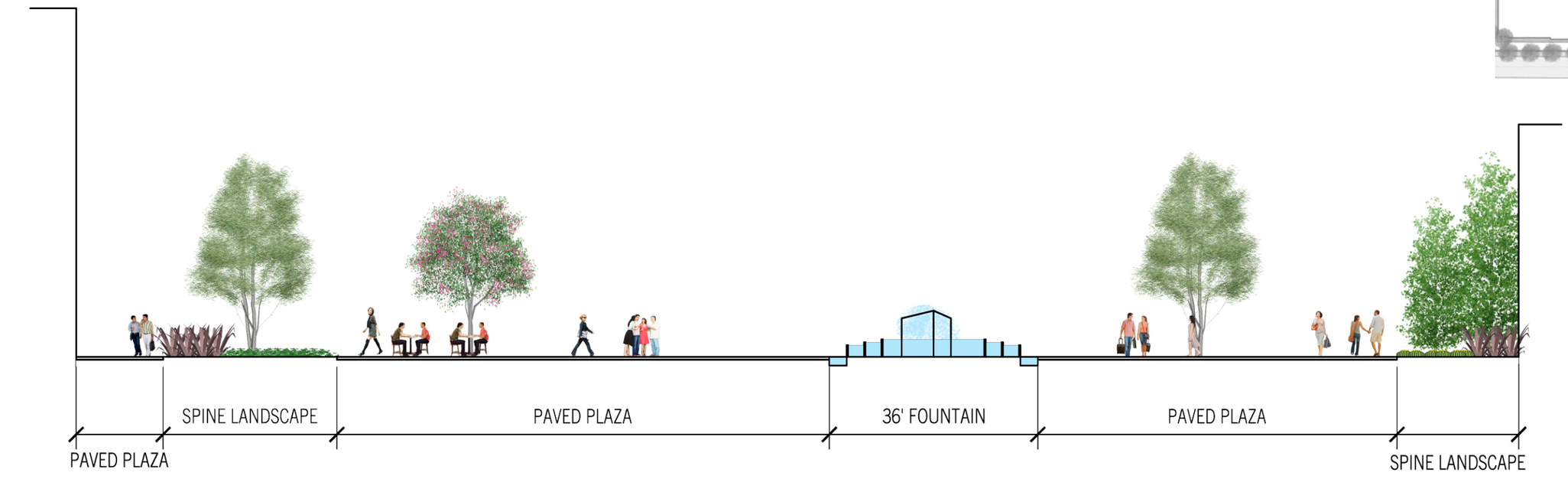
SECTION 1 - PLAZA GARDENS

1"=20'

VIEW OF THE CARSON STREET PLAZA AREA ALONG THE CENTRAL SPINE

View of the west informal plaza area facing the west entry drive

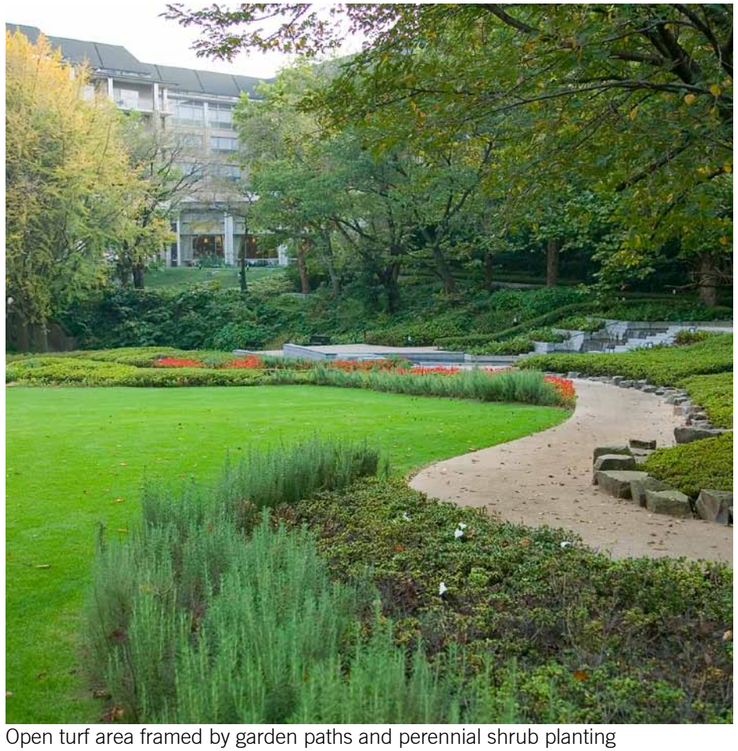




SECTION 2 - MAIN PLAZA

1”=20’

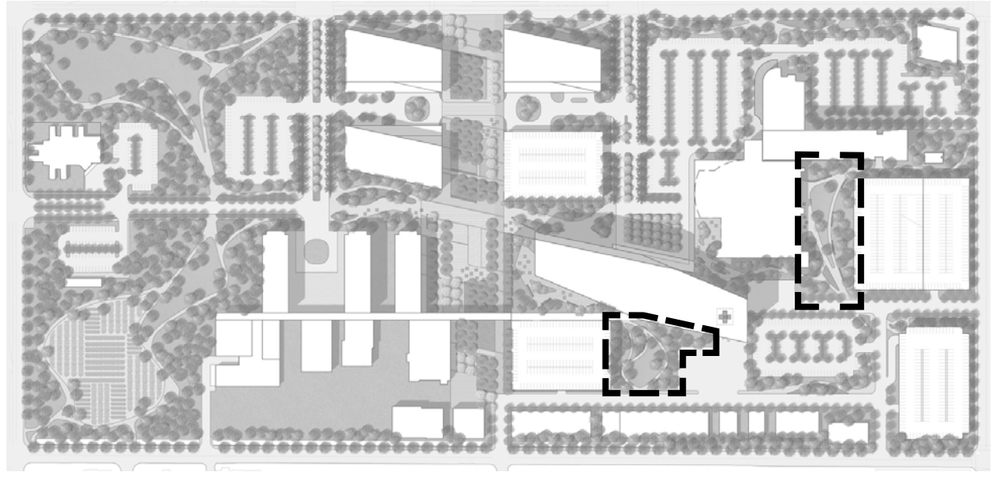
Shaded seating areas

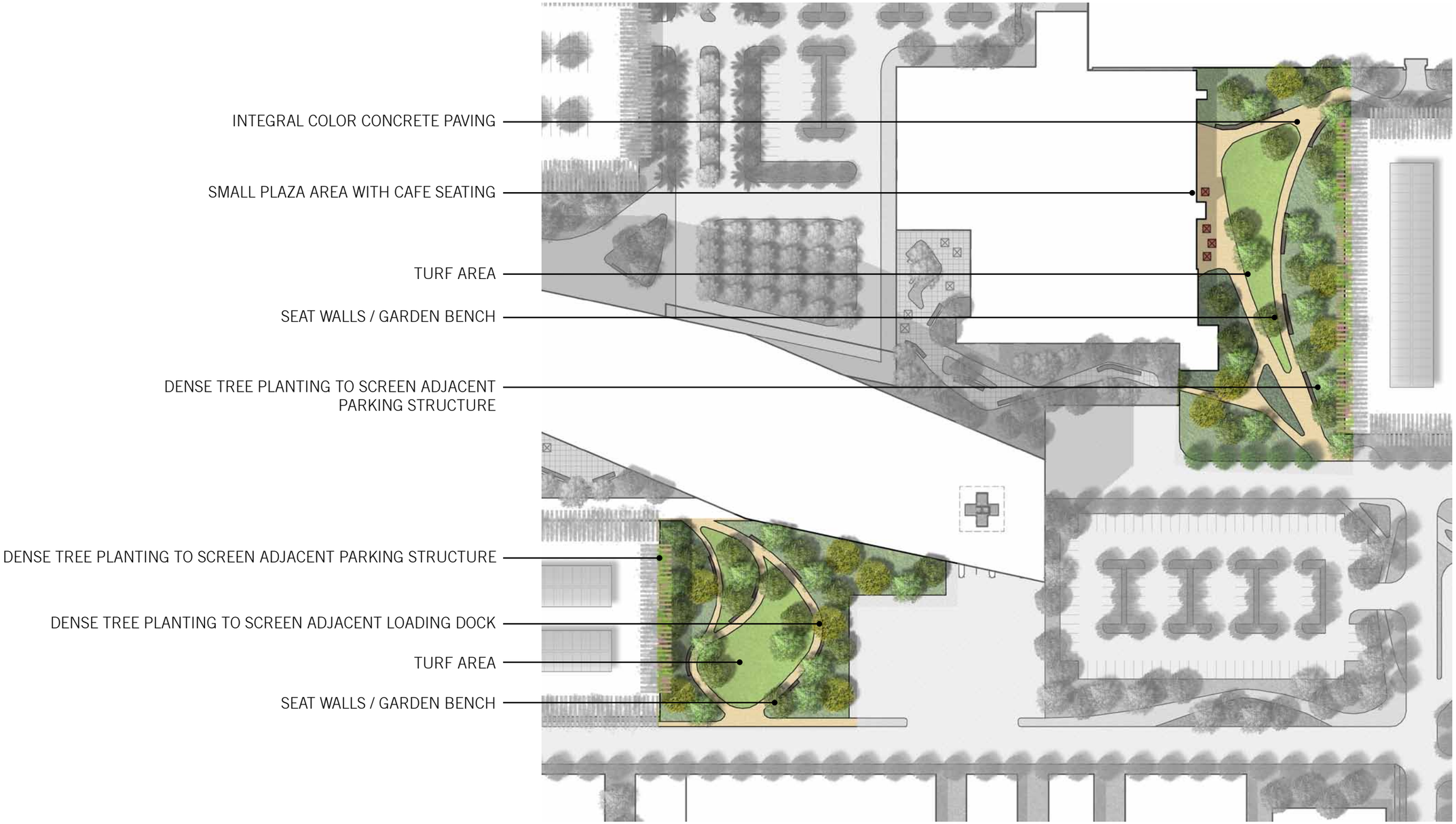


Open turf area framed by garden paths and perennial shrub planting

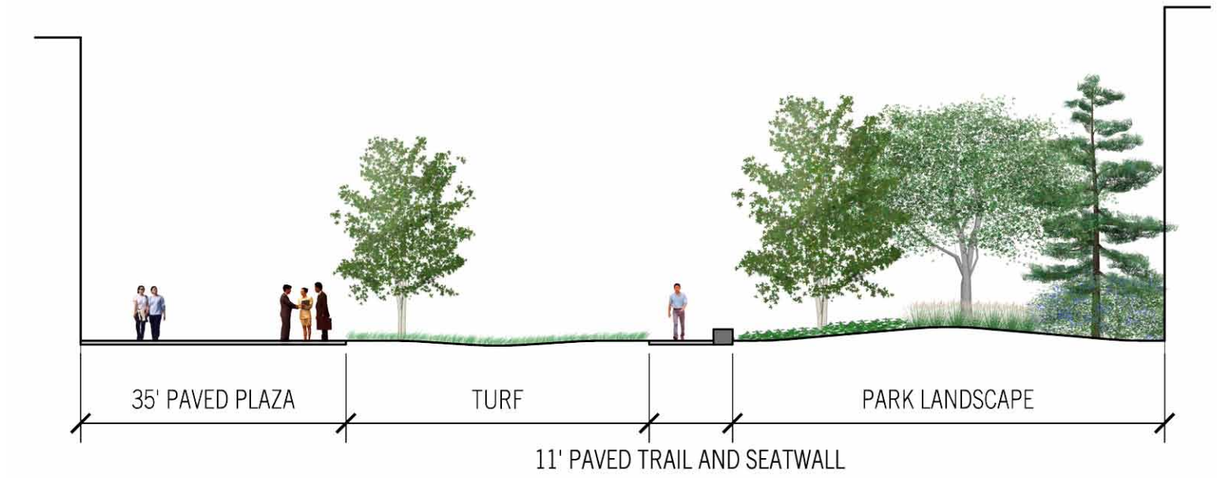
COURTYARD GARDENS

Two courtyard gardens along the south and east sides of the main hospital building will provide respite areas for hospital staff. These gardens will be framed with an informal mix of evergreen and deciduous trees that provide seating around a central lawn area. The lawn can be used as event space or everyday passive uses such as eating lunch or reading a magazine. The east courtyard will be heavily used by staff going to parking areas from the hospital. To accommodate this anticipated use, pedestrian circulation has been divided into two paths that provide a direct connection to the hospital, and another that connects to a small plaza area with cafe tables. To ensure maximum use of the south courtyard which has a more intimate scale, the pedestrian circulation helps create several small seating areas that can be simultaneously occupied by different groups. Shaded seating around the perimeter faces a central lawn area with a bright southern sunlight exposure.



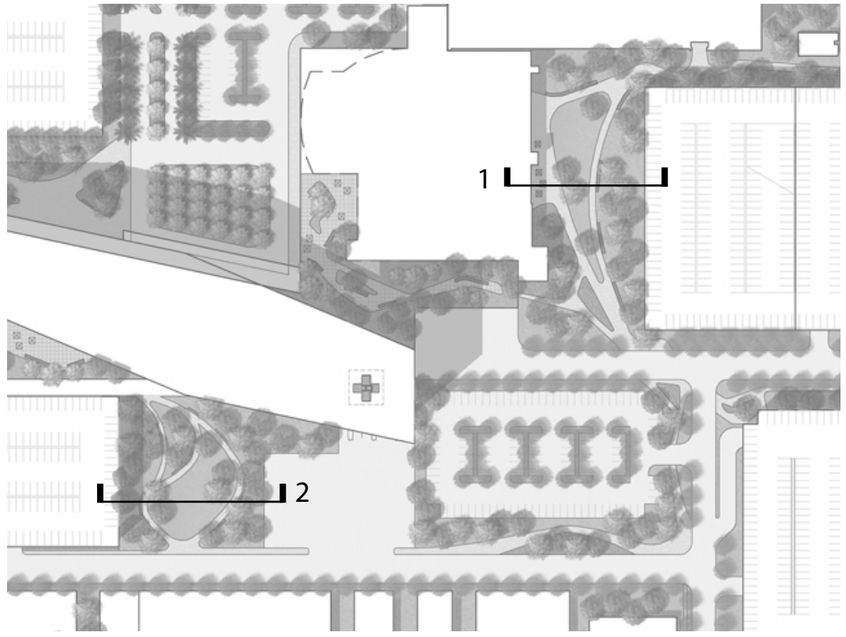

INTEGRAL COLOR CONCRETE PAVING
SMALL PLAZA AREA WITH CAFE SEATING
TURF AREA
SEAT WALLS / GARDEN BENCH
DENSE TREE PLANTING TO SCREEN ADJACENT PARKING STRUCTURE
DENSE TREE PLANTING TO SCREEN ADJACENT PARKING STRUCTURE
DENSE TREE PLANTING TO SCREEN ADJACENT LOADING DOCK
TURF AREA
SEAT WALLS / GARDEN BENCH
N
1”=100’

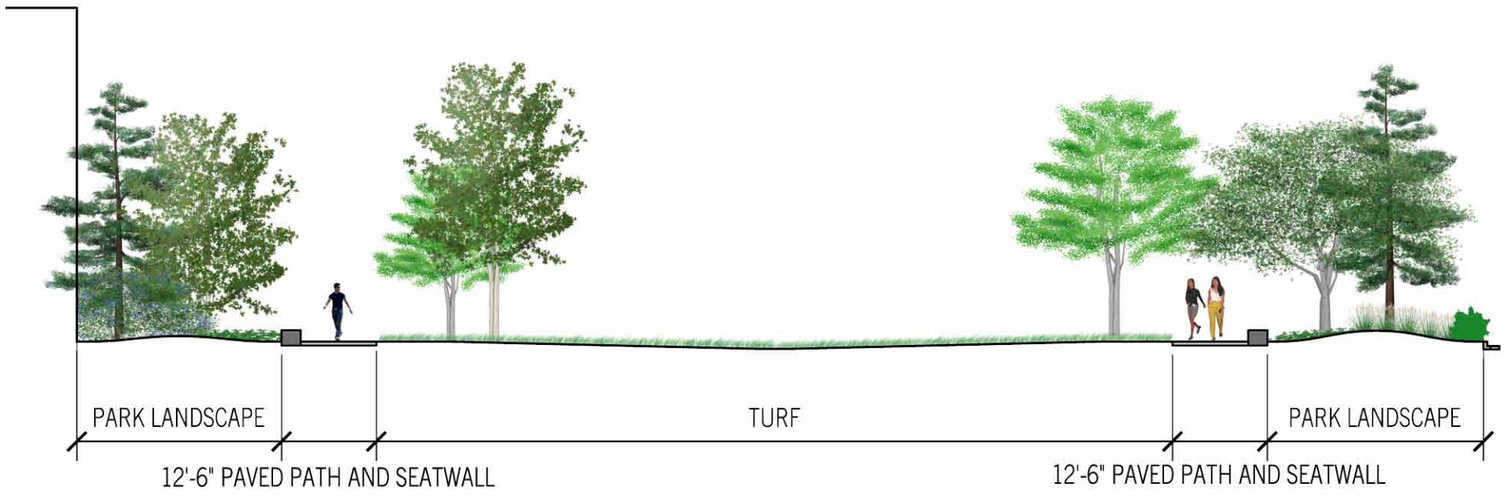
VIEW OF THE EAST HOSPITAL COURTYARD FACING SOUTH



SECTION 1 - EAST HOSPITAL COURTYARD

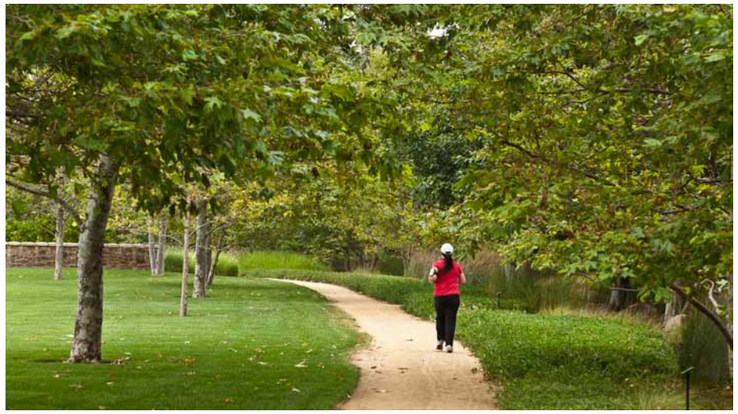
1”=20’





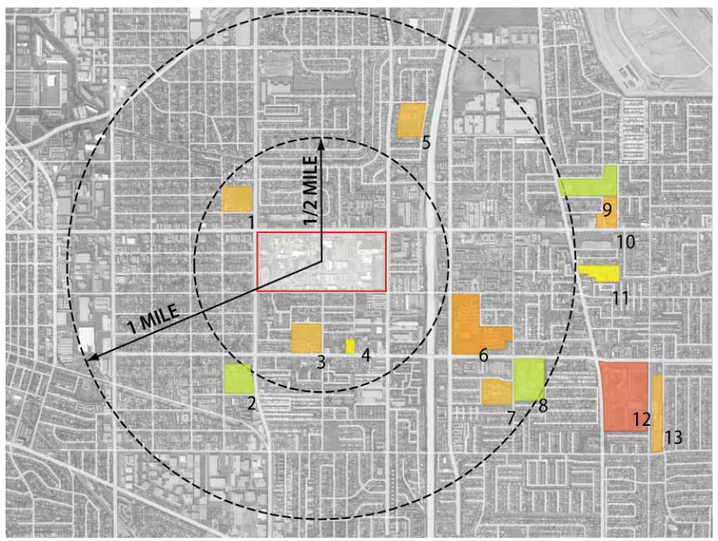
SECTION 2 - SOUTH HOSPITAL COURTYARD

1”=20’



Stabilized decomposed granite fitness trail

Informal park planting



1 - Halldale Elementary School
2 - Normandale Recreation Center
3 - Meyler Street Elementary School
4 - Zion Lutheran Elementary School
5 - Van Deene Elementary School
6 - White Middle School
7 - Caroldale Avenue Elementary School
8 - Veterans Sports Complex
9 - Carson Park
10 - Carson Street Elementary School
11 - St. Philomena Elementary School
12 - Carson High School
13 - Dolores Street Elementary School

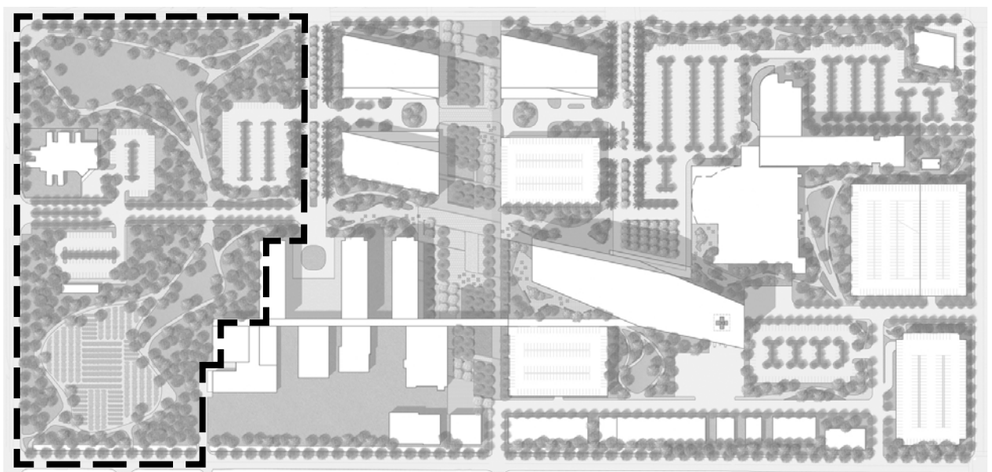
Local school and park context map

WEST SIDE INTERIM PARK

By consolidating most of the campus uses into larger buildings, the west side of the campus has become available for future hospital expansion and development. Until the County determines the best use for this land, the master plan has proposed interim uses that provide direct amenities to hospital staff and surrounding community.

The west side of the campus is divided by the west entry road into two parcels which collectively contain a 14 acre urban park. The northwest parcel features a diverse network of paths and trails through undulating landforms planted with an eclectic mix of trees and shrubs. The large central lawn space can stage both campus and community events creating a perfect medium for better engagement with the local community. A fitness trail with exercise stations are integrated into the park area which provide a unique amenity for hospital staff, and an opportunity to help educate the community about the benefits of a more active lifestyle.

The southwest parcel continues the park-like quality and fitness trail around a smaller turf area and demonstration garden that can showcase native plants or small agricultural plots. This garden can be used as an educational tool that demonstrates how to grow fruits and vegetables and potentially cooking classes that teach the community how to cook with these items. With 11 schools within a 20 to 25 minute walk of the campus, the interim parks along with county and hospital staff, can serve as a significant resource that actively helps integrates the key preventative healthcare goal; teach people how to live a healthy lifestyle by utilizing better nutrition with increased daily activity.



CARSON STREET LANDSCAPE BUFFER

OPEN TURF EVENT LAWN

SCULPTURAL LANDSCAPE BERMS

FITNESS STATION

STABILIZED DECOMPOSED GRANITE FITNESS TRAIL

TREE LINED WEST ENTRY DRIVE

COMMUNITY PARKING AREA

OPEN LAWN AREA

COMMUNITY EDUCATION FACILITY

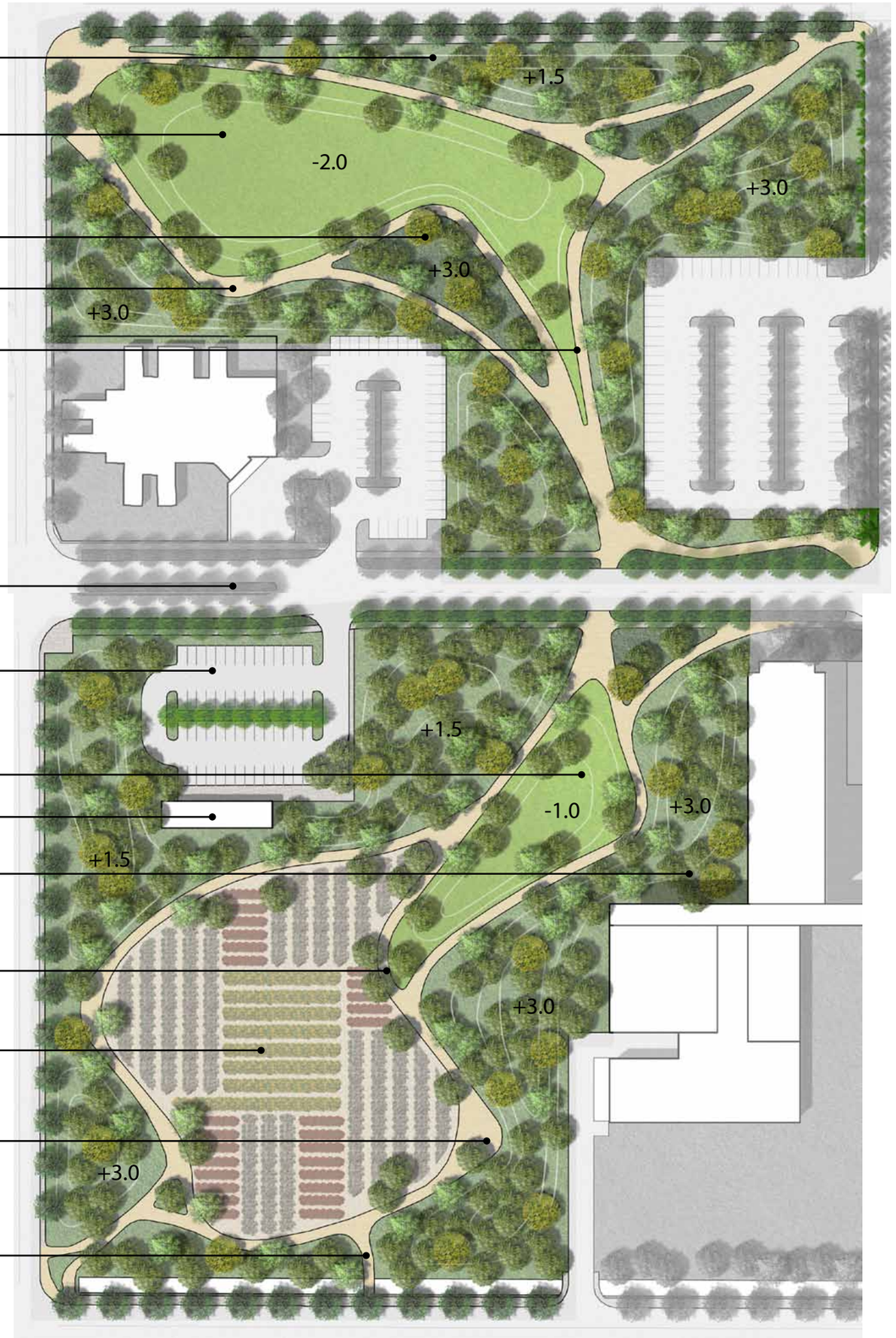
DENSE TREE SCREENING ALONG LA BIOMED EDGE

INFORMAL TREE DRIFTS

DEMONSTRATION GARDEN

FITNESS STATION

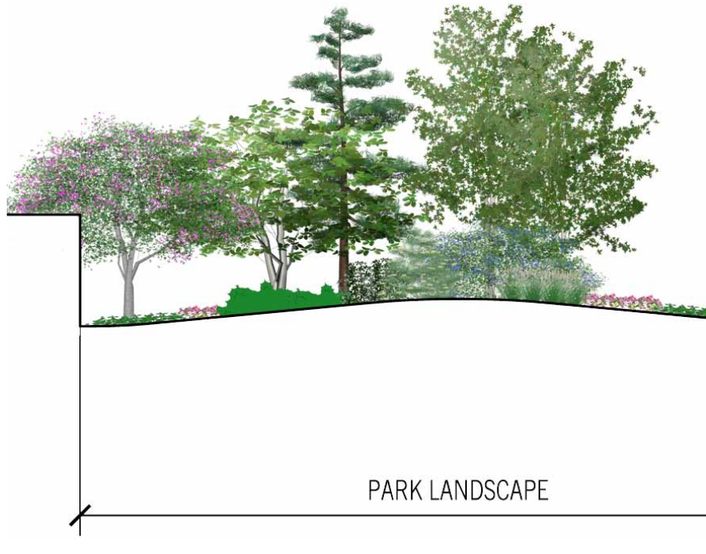
PROPOSED BRIDGE CONNECTION OVER EXISTING DRAINAGE CULVERT



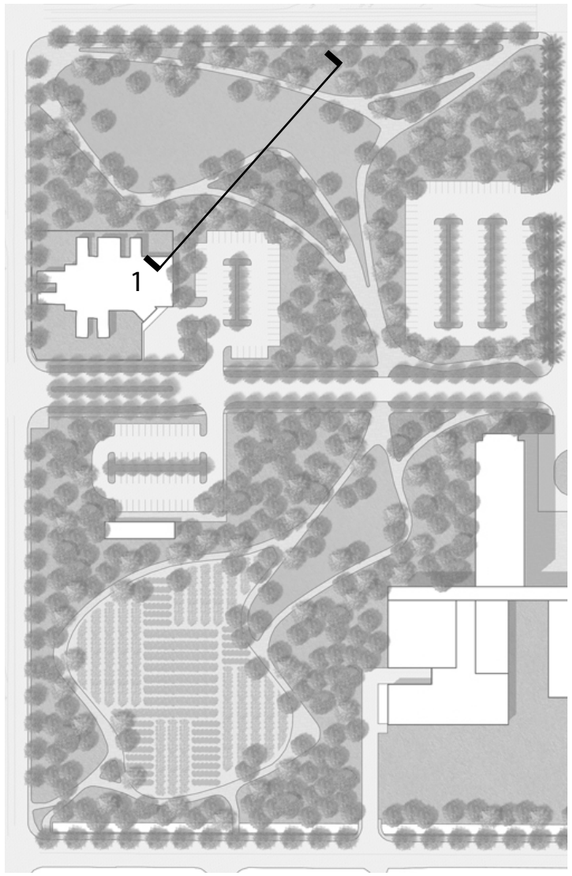
N

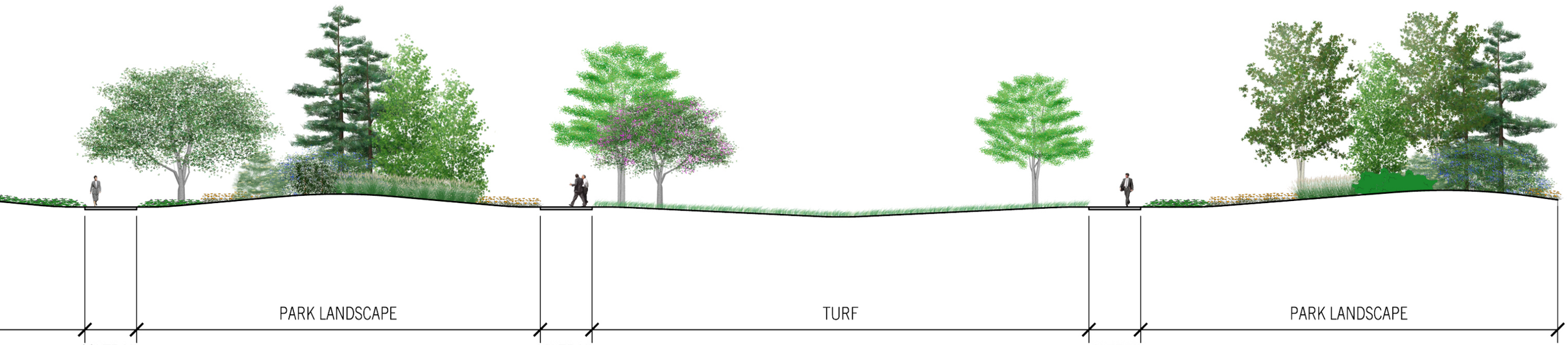
1”=100’

View of the northwest park open turf area



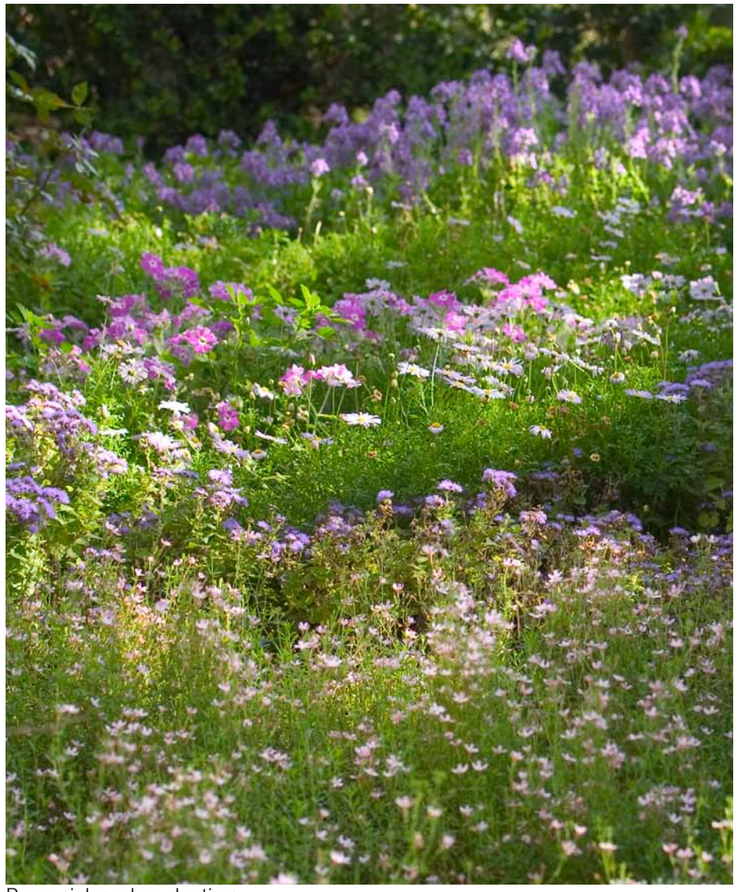
View along the park fitness trail and open turf area





SECTION 1 - NORTHWEST PARK

1”=20’

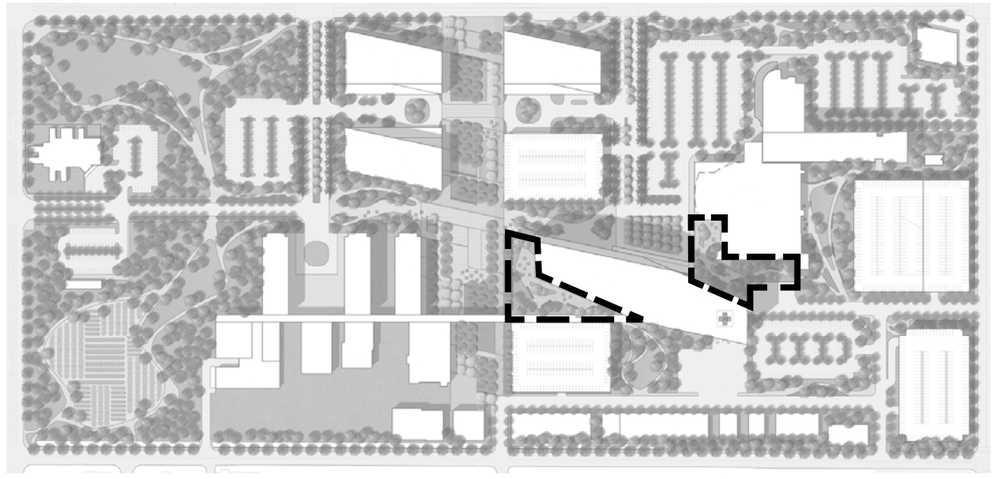


Perennial garden planting

Small garden fountain

ROOF GARDENS

The hospital roof gardens will be some of the most ornamental gardens on campus featuring flowering canopy trees with perennial shrubs, and planter pots with annual color. These healing gardens will offer a visually distinct outdoor environment that can be enjoyed by actively sitting on a shaded bench and reading a book, or from adjacent hospital rooms where patients can view from their bed. Garden amenities include benches and seat walls, cafe tables with umbrellas, and small courtyard fountains that fill the garden with the tranquil sound of falling water.



SCULPTURAL BERMS WITH FLOWERING ACCENT TREES

CAFE TABLES AND CHAIRS

SCULPTURAL BERMS WITH FLOWERING ACCENT TREES

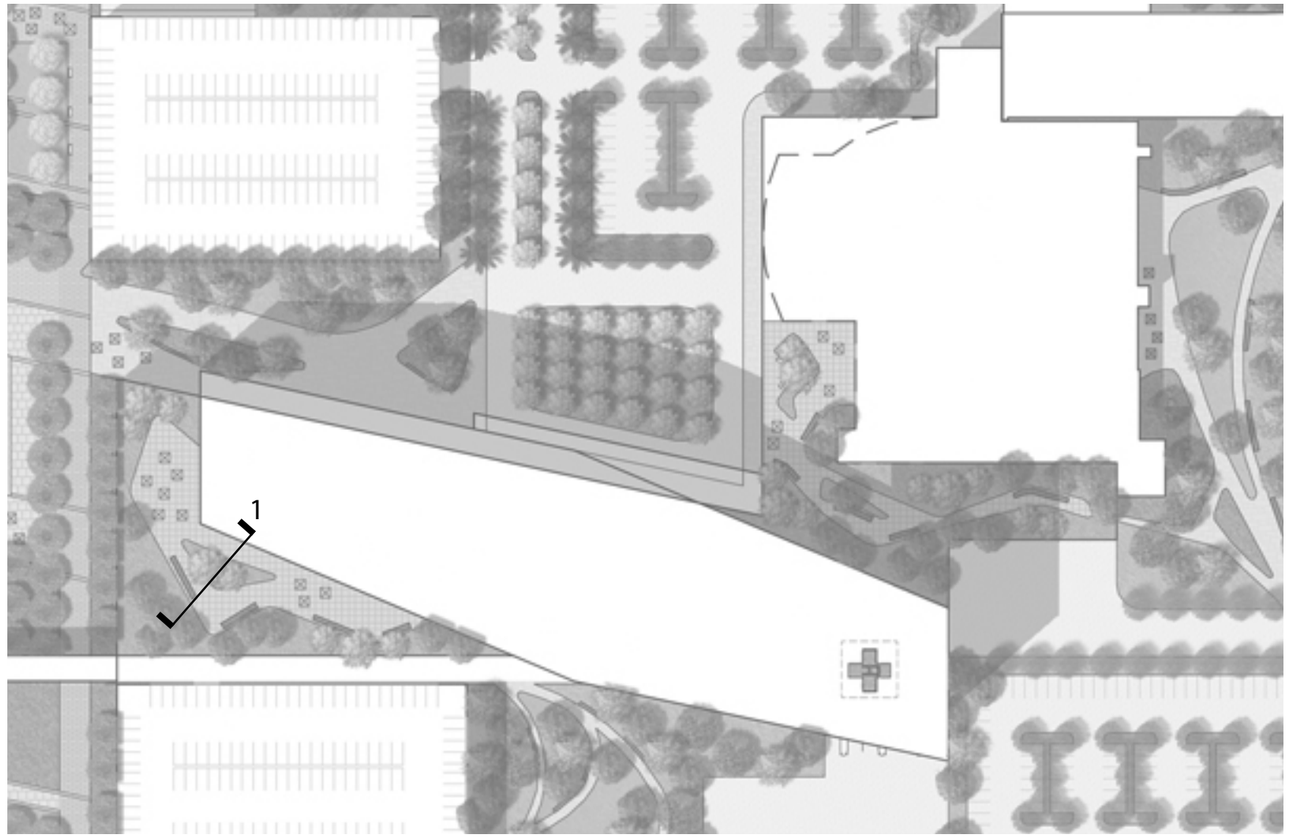
GARDEN BENCH / SEAT WALL

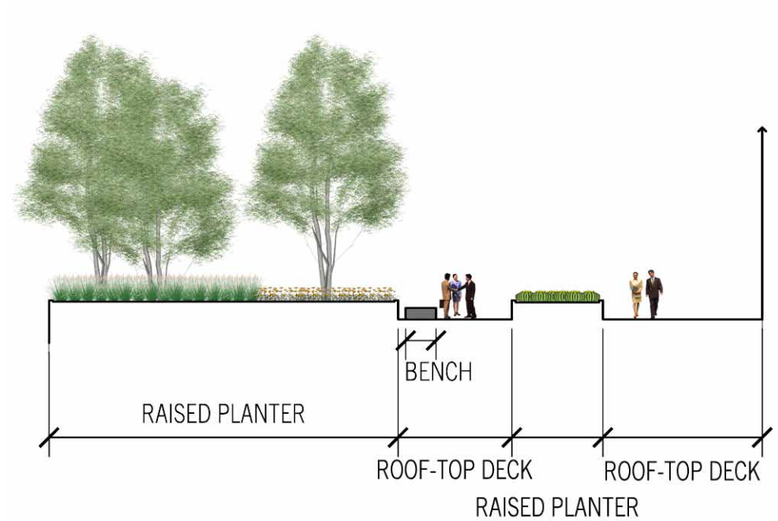
PERENNIAL GARDEN UNDERSTORY PLANTING

N

1”=100’

VIEW OF THE CENTRAL GARDEN AREA FROM THE ADJACENT ROOF GARDEN



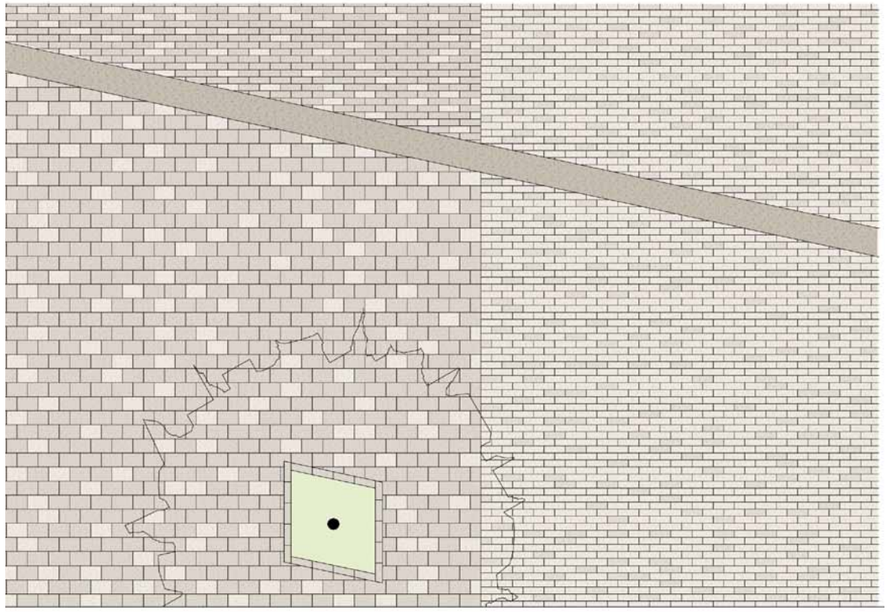


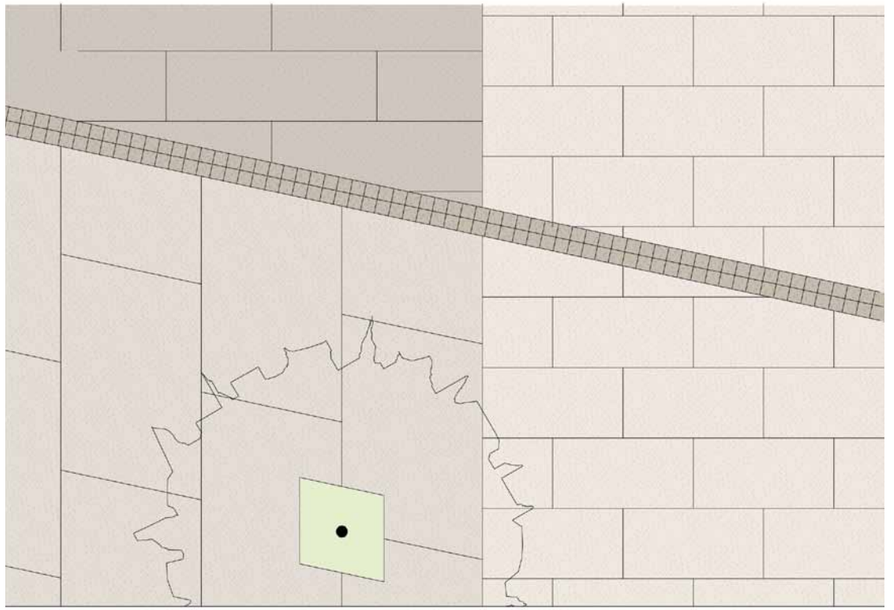
SECTION 1 - SOUTHWEST ROOF GARDEN

1”=20’

PAVING MATERIALS

Paving throughout the campus will be predominately cast-in -place concrete. To maintain a level of quality, the concrete should be integral color with sawcut joints. Hand seeded aggregate and sandblast finish may be used in appropriate areas such as courtyards and small plazas. The Central Garden Spine should feature concrete unit pavers that will give the plazas and promenades a unique character. Stabilized de-composed should be used for the park paths along the west edge of campus.





Two examples of paving in the Central Garden Spine plaza. The top image shows a variety of precast concrete unit paver modules that give a subtle texture to the plaza. The overall color of the pavers should be similar with only the angular cast-in-place concrete band providing contrast. The bottom example shows concrete paving with angular sawcut joints and a precast unit paver band.

SITE AMENITIES

Central Garden Spine fountain should have a vertical element that creates a substantial presence in the plaza area. This element can be integrated with a series of offsetting plinths have a more intimate character. To decrease long term maintenance costs, the fountain mechanics should be kept to a minimum.

The campus should contain a variety of seating types and materials. The Central Garden Spine should contain formal benches along the main north/south promenades that combine wood and steel materials. Linear stone or precast concrete seat walls will help reinforce the east/west circulation through the spine area. Cafe tables under trees that are moveable will enhance the dynamic character of the plaza. Smaller gardens and courtyards should have benches that are predominately wood. Roof gardens should feature lounge furniture.

PLANT LIST

Trees:
1. *Fraxinus uhdei: Evergreen Ash
2. Platanus Mexicana: Mexican Sycamore

Shrubs and Groundcover
1. Callistemon ‘Little John’
2. *Carissa macrocarpa, Natal Plum
3. Hesperaloe parvifolia, Red Yucca
4. Leucophyllum spp.
5. Muhlenbergia cappilaris, Pink Muhley
6. Olea ‘Little Ollie’, Dwarf Olive
7. *Rhaphiolepis indica, India Hawthorn
8. *Rosmarinus officinalis, Rosemary

*Indicates Preferred Species

PERIMETER LANDSCAPE

The perimeter landscape character is used to create an identity for the campus through a landscape framework that also acts as a passive perimeter fence, and used to enhance the pedestrian experience around the perimeter of the site.

The perimeter framework is constructed with a single tree and hedge species that wraps the site and acts as a clearly identifiable landscape element. The tree species selected are climate appropriate and have large canopies, which at maturity should provide full canopy coverage and enhance the pedestrian experience. A low hedge in the parkway along Carson Street acts to buffer the vehicular traffic to further enhance the pedestrian experience.

A climate appropriate hedge of a single species has been added to the back of walk along the perimeter landscape. The hedge, of a single species, acts as an identifiable edge treatment that wraps the site and works with the perimeter tree to create the unified framework treatment. The perimeter hedge also acts as a passive fence and can be maintained below 3’-6” to allow for sight lines into the campus.

The perimeter is broken down into three conditions. Along Carson Street the perimeter tree is centered in a hedged parkway with a second hedge at the back of walk. Along Normandie Avenue and Vermont Avenue the perimeter tree is planted in landscaped tree wells within the perimeter walk with the perimeter hedge occurring at the back of walk. Along 220 Street the perimeter tree continues in tree grates at the back of curb. Along the back of walk a hedge and vine will screen the ornamental fencing securing the drainage culvert area.

Fraxinus uhdei, Evergreen Ash

Carissa macrocarpa, Natal Plum

Rhus inegrifolia, Lemonade Berry

Rosmarinus offcianalis, Rosemary

PLANT LIST

Trees:
1. *Jacaranda mimosifolia, Jacaranda
2. Olea europea, Olive Tree
3. *Washingtonia filabusta, Hybrid Fan Palm

Shrubs and Groundcover
1. Agapanthus spp.
2. Hemerocallis spp.
3. *Hesperaloe parvifolia, Red Yucca
4. *Muhlenbergia cappilaris, Pink Muhley

*Indicates Preferred Species

ENTRY LANDSCAPE

The Entry Landscape has a more ornamental plant palette than the surrounding park and perimeter landscapes which will significantly accent the entry experience. The more noticeable plant material will also act as way-finding devise, directing people to the project entries. The height of the trees will be taller than the surrounding perimeter streetscape which will serve as a gateway that enhances the entry experience.

There are two entry conditions: the main entries and the secondary entries. The main entries will consist of an alternating ornamental canopy tree and Hybrid Fan Palms. The secondary entrances will consist of the ornamental canopy tree only planted in formal allees with sidewalks separated from the street by a eight foot parkway.

Jacaranda mimosifolia, Jacaranda

Washingtonia filabusta, Hybrid Fan Palm

Hesperaloe parvifolia, Red Yucca

Muhlenbergia cappilaris, Pink Muhley

CENTRAL SPINE LANDSCAPE

The Central Spine Landscape acts as the heart of the project and should have the most ornamental landscape. The plant palette is made up of native and low-water-use plants that have a highly ornamental value. The ground plane plants should be arranged in mono-culture groups that result in a highly graphic, textured, and colorful landscape. To reinforce the graphic character of the ground plane the trees should be arranged in formal bosques and consist of two tree species. The main species is an evergreen to semi-evergreen canopy tree that is interrupted by north/south allees of secondary accent trees. The accent tree consists of a more ornamental flowering species and provides seasonality to the central spine area.

PLANT LIST

Trees:

1. *Cercis occidentalis, Western Redbud (Accent Tree)
2. Chilopsis linearis, Desert Willow (Accent Tree)
3. Olea europea, Olive Tree (Main Tree)
4. *Dalbergia sissoo, Indian Rosewood (Main Tree)

Shrubs and Groundcover

1. *Aeonium spp.
2. *Agave attenuate, Foxtail Agave
3. Bougainvillea spp.
4. *Dudleya spp.
5. *Echeveria spp.
6. Festuca mairei, Atlas Fescue
7. *Furcrea foetida, Mauritius Hemp
8. Grevillea spp.
9. Hakea spp.
10. Hebe spp.
11. Lantana spp.
12. *Kniphofia uvaria, Red Hot Poker
13. *Phormium tenax, New Zealand Flax
14. *Sedum spp.
15. *Senecio talinoides mandraliscae, Blue Chalksticks

*Indicates Preferred Species


Cercis occidentalis, Western Redbud


Dalbergia sissoo, Indian Rosewood


Aeonium spp.


Agave attenunata, Foxtail Agave


Dudleya spp.


Echeveria, spp


Furcrea foetida, Mauritius Hemo


Kniphofia uvaria, Red Hot Poker


Phormium tenax, New Zealand Flax


Sedum spp.


Senecio talinoides mandraliscae, Blue Chalksticks

PLANT LIST

Trees:
1. *Alnus rhombifolia, White Elder (R,T)
2. *Chilopsis linearis, Desert Willow (F,R)
3. Juglans californica, California Black Walnut (F,C)
4. *Pinus coulteri, Coulter Pine (F)
5. Pinus sabiniana, Foothill Pine (F)
6. Pinus torreyana, Torrey Pine (F)
7. *Plantanus racemosa, California Sycamore (F,R,T)
8. *Quercus agrifolia, Coast Live Oak (F)
9. *Quercus lobata, Valley Oak (F)
10. *Umbellularia californica, California Bay Laurel (F,R,T)

Shrubs
1. Agave spp., Agave (M,S)
2. *Arctostaphylos spp., Manzanita (C,S)
3. Berberis nevinii, Nevin's barberry (C,S)
4. *Ceanothus spp, California Lilac (C,S)
5. Dendromecon hardfordii, Island Bush Poppy (C,S)
6. Dudleya spp., Dudleya (M,S)
7. *Fremontodendron californica, Flannel Bush (C,S)
8. Garrya elliptica, Coast Silk Tassel (C,S,R)
9. *Heteromeles arbutifolia, Toyon (C,S,R)
10. Lavatera assurgentifolia, Tree Mallow (C,S,R)
11. Malosma laurina, Laurel Sumac (C,S)
12. Myrica californica, Pacific Wax Myrtle (C,S,R)
13. Prunus illicifolia, Hollyleaf Cherry (C,S)
14. *Rhamnus californica, California Coffeeberry (C,S,R)
15. *Rhus integrifolia, Lemonade Berry (C,S)
16. Rhus ovata, Sugar Bush (C,S)
17. *Salvia spp, Sage (California Native Species Only) (C,S,M)

Groundcover
1. *Arctostaphylos spp., Groundcover Manzanita (F,M,S)
2. *Baccharis pilularis 'Pigeon Point', Prostrate Coyote Bush (F,M,S)
3. Calamagrotis foliosus, Mendocino Reed Grass (M,R)
4. Carex spissa, San Diego Sedge (M,R)
5. *Ceanothus spp., Groundcover California Lilac (F,M,S)
6. Eriogonum fasciculatum, Groundcover Buckwheat (F,M,S)
7. Iva hayesiana, Poverty Weed (F,S,R)
8. *Leymus condensatus 'Canyon Prince', Giant Wild Rye (M,R)
9. *Muhlenbergia rigens, Deer Grass (M,S,R)
10. Salvia spp, Groundcover Sage (F,M,S,R)

*Indicates Preferred Species

PARK & TRAIL LANDSCAPE

The park landscape consists of a series of informal California native chaparral, forest, meadow, and riparian gardens that surround a drought tolerant lawn suitable for play and exercise. The California native plant material is set in large drifts that draw the user into and through the park and trail landscapes. The adjoining trail landscape continues plant material and forms used in the park to create an informal park-like landscape that meanders through the campus providing a setting for an exercise trail that creates a circuit around the campus.

The park and trail landscape plants consist entirely of California native species which are selected for their climate appropriateness, low water use, low maintenance, informal character, seasonality, and variety of visual interest. California natives were also selected to give the appearance of hiking through the local open spaces and to preserve and promote the natural history of the region.

The California native plants should be set into plant communities based on their water and care needs in order to minimize water use and maximize plant health. The plant list includes a key at the end of each species that indicates which plant community is acceptable for each plant.

"F" = Forest/Forest Understory
"C" = Chaparral
"M" = Meadow
"S" = Scrubland
"R" = Riparian/Wetland
"T" = Tree suitable to be planted in Turf

Chilopsis linearis, Desert Willow

Pinus coulteri, Coulter Pine

Quercus agrifolia, Coast Live Oak

Quercus lobata, Valley Oak

Ubellularia californica, California Bay Laurel

Arctostaphylos spp, Shrub Form Manzanita

Arctostaphylos spp, Groundcover Form Manzanita

Ceanothus spp., Shrub Form California Lilac

Fremontodendron californica, Flannel Bush

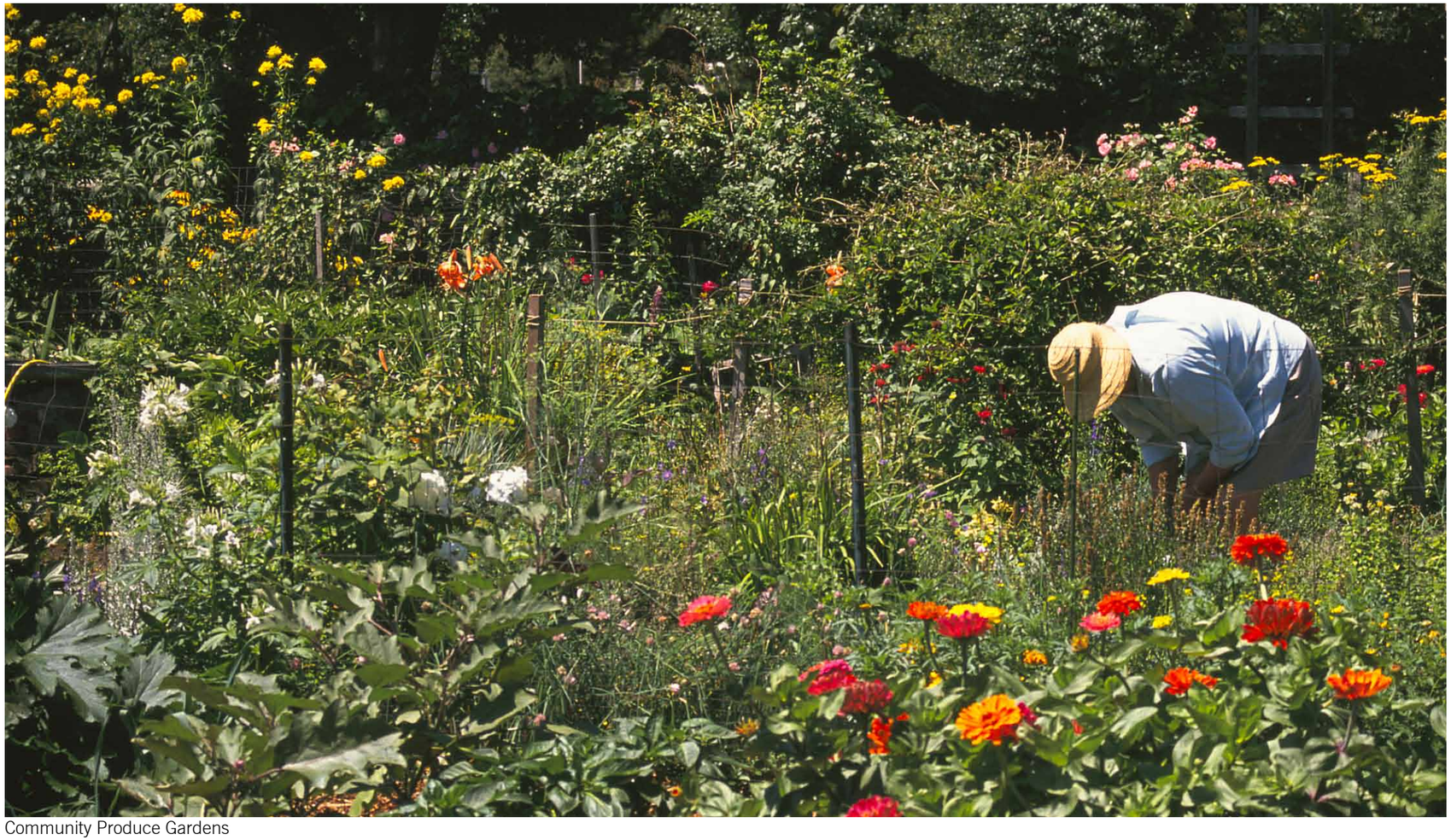
Heteromeles arbutifolia, Toyon

Leymus condensatus ‘Canyon Prince’, Giant Wild Rye

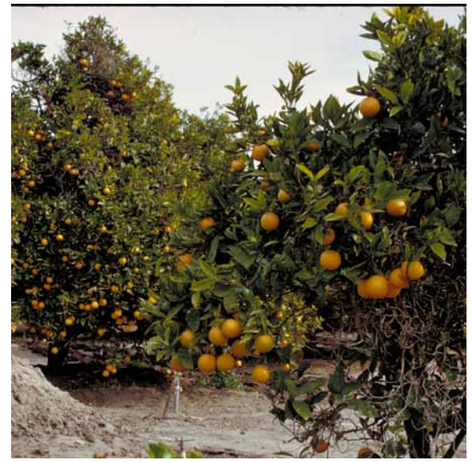
Muhlenbergia rigens, Deer Grass

EDUCATIONAL GARDENS

The Educational Gardens are an interim use designated as Future Development and act as an educational tool for the community. Multiple rotating garden programs can be showcased in conjunction with preventive care curriculum. Programming options could include community produce gardens and orchards in conjunction with healthy eating classes; bio-remediation wetlands with environmental pollution classes, or California Native gardens with hiking or outdoor exercise classes.



Community Produce Gardens



Community Agriculture/Orchards

Wetlands and Bio-Swale Education

Xeric and Native Plant Demonstration and Gar-

PLANT LIST

Trees:

1. *Alnus rhombifolia, White Alder
2. Platanus racemosa, California Sycamore
3. Populus fremontii, Western Cottonwood
4. Salix laevigata, Red Willow
5. *Tipuana tipu, Tipu Tree (Do not plant in swales.)

Shrubs & Groundcover for Swales

1. *Carex divulsa, Berkley Sedge
2. Carex pansa, California Meadow Sedge
3. Carex spissa, San Diego Sedge
4. Juncus effuses, Common Rush
5. *Juncus patens, Common Rush
6. Festuca mairei, Atlas Fescue
7. Leynus condensatus ‘Canyon Prince’, Giant Wild Rye
8. *Lobelia laxifolora, Mexican Lobelia
9. Muhlenbergia rigens, Deer Grass

Perimeter Hedge

1. Carissa macropcarpa, Natal Plum
2. *Ligustrum ‘Taxanum’, Privet
3. Rhaphiolepis spp., India Hawthorn
4. *Rhus integrifolia, Lemonade Berry

*Indicates Preferred Species

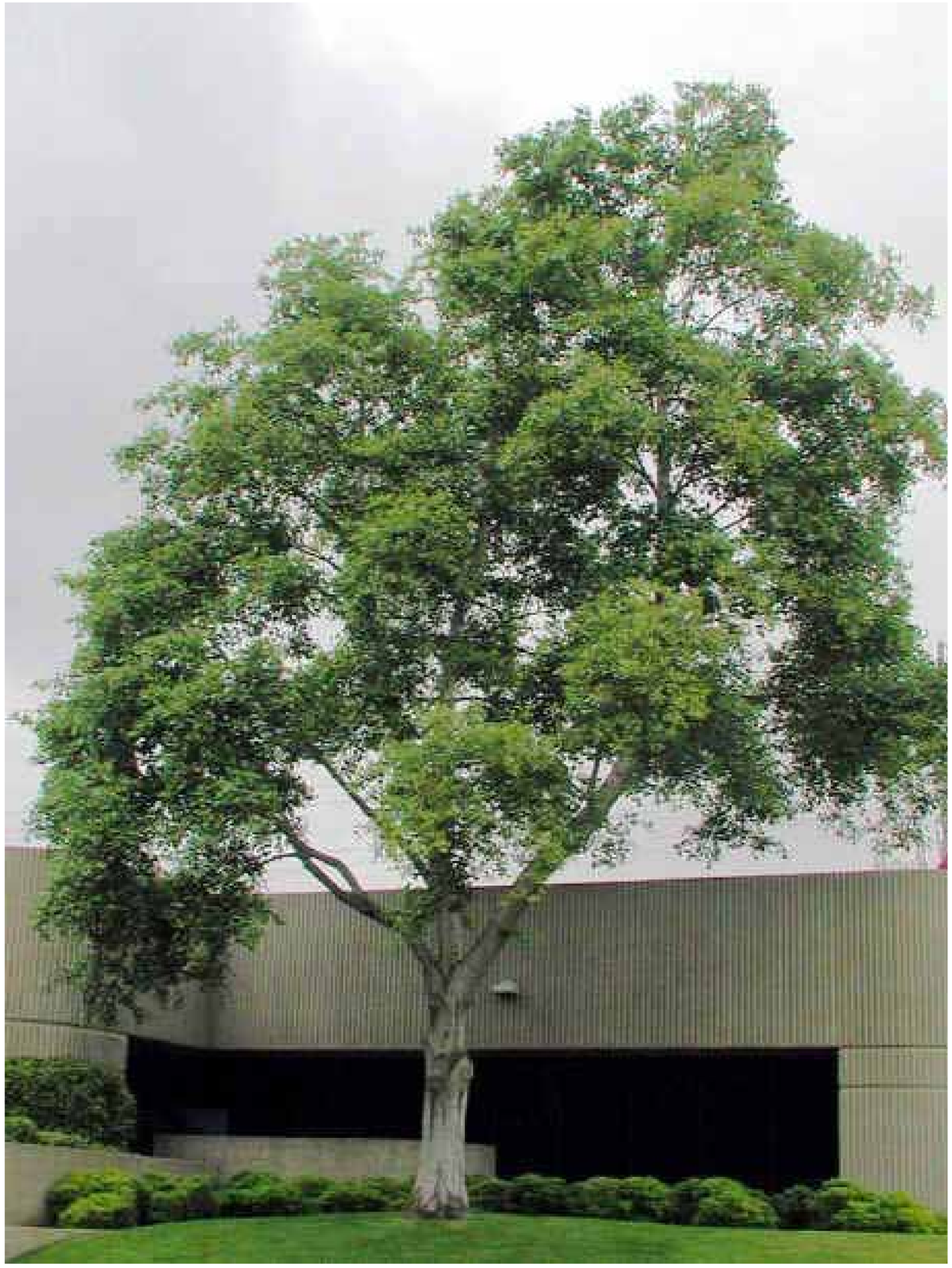
PARKING LOT LANDSCAPE

The Parking Lot Landscape consists of two planting types: a bio-swale planting and a perimeter planting. Both of which consist of plants that are native or climate appropriate and adaptable to the unique conditions found in each of the planting area.

The bio-swale planting areas occur on the interior of each lot. All parking lot runoff should be directed to the planting areas which act as a detention basin for storm run-off. Due to seasonal conditions the trees, shrubs and groundcover selected for these areas can handle periodic submersions and long periods of saturated soil.

The perimeter planting consists of a single hedge species that wraps the parking lot. The hedge acts as a screening devise, screening parked cars from the adjacent campus.

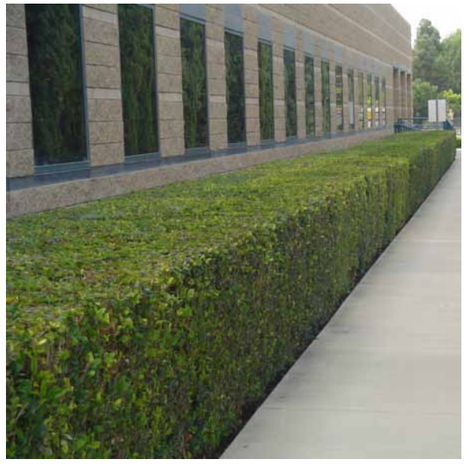
The trees in each parking lot should consist of a single tree species that is adaptable to the parking lot conditions (swale or no swale). Trees should be planted at a size and spacing that minimizes the heat island effect creating by the parking lots.



Alnus rhombifolia, White Alder

Tipuana tipu, Tipu Tree

Juncus patens, Common Rush



Ligustrum j. ‘texanum, Privet

Carex divulsa, Berkley Sedge

Lobelia laxiflora, Mexican Lobelia

Rhus integrifolia, Lemonade Berry

PLANT LIST

Trees:
1. *Cercis occidentalis, Western Redbud (Accent Tree)
2. *Olea europea, Olive Tree (Main Tree)

Shrubs and Groundcover
1. *Aeonium spp.
2. Agave attenuate, Foxtail Agave
4. Dudleya spp.
5. *Echeveria spp.
6. *Festuca mairei, Atlas Fescue
7. Furcrea foetida, Mauritius Hemp
11. *Lantana spp.
14. *Sedum spp.
15. Senecio talinoides mandraliscae, Blue Chalksticks

*Indicates Preferred Species

ROOF TOP GARDENS

The Roof-Top Gardens continue the graphic character of the central spine. The major difference between the Central Spine and Roof-Top Gardens is the plant palette. Due to conditions normally associated with roof-top planting the plant palette for the gardens has been pared down to focus on plants that thrive in shallower soil profiles and require less water and maintenance.

Cercis occidentalis, Western Redbud

Olea europea, Olive Tree

Festuca mairei, Atlas Fescue

Aeonium spp.

Echeveria, spp

Lantana spp.

Sedum spp.

04 IMPLEMENTATION

PHASING

The ability to serve patients and therefore maintain continuous campus operations is of paramount importance to the Harbor-UCLA community. The diagrams on the following pages illustrate a strategy to maintain continuous campus operations by grouping major construction into phases that would be implemented over time. These phases have been arranged to follow the phasing designed for the LA BioMed Campus Master Plan as close as possible.

Each phase is shown with a ‘Demolish’ and ‘Build’ sub-phase to accommodate the relocation of existing campus program. Final phasing and implementation of future campus construction projects will be contingent on further study and findings by the future project management teams; this phasing sequence is not final and should be used as a guide to how the Campus master plan may be completed.

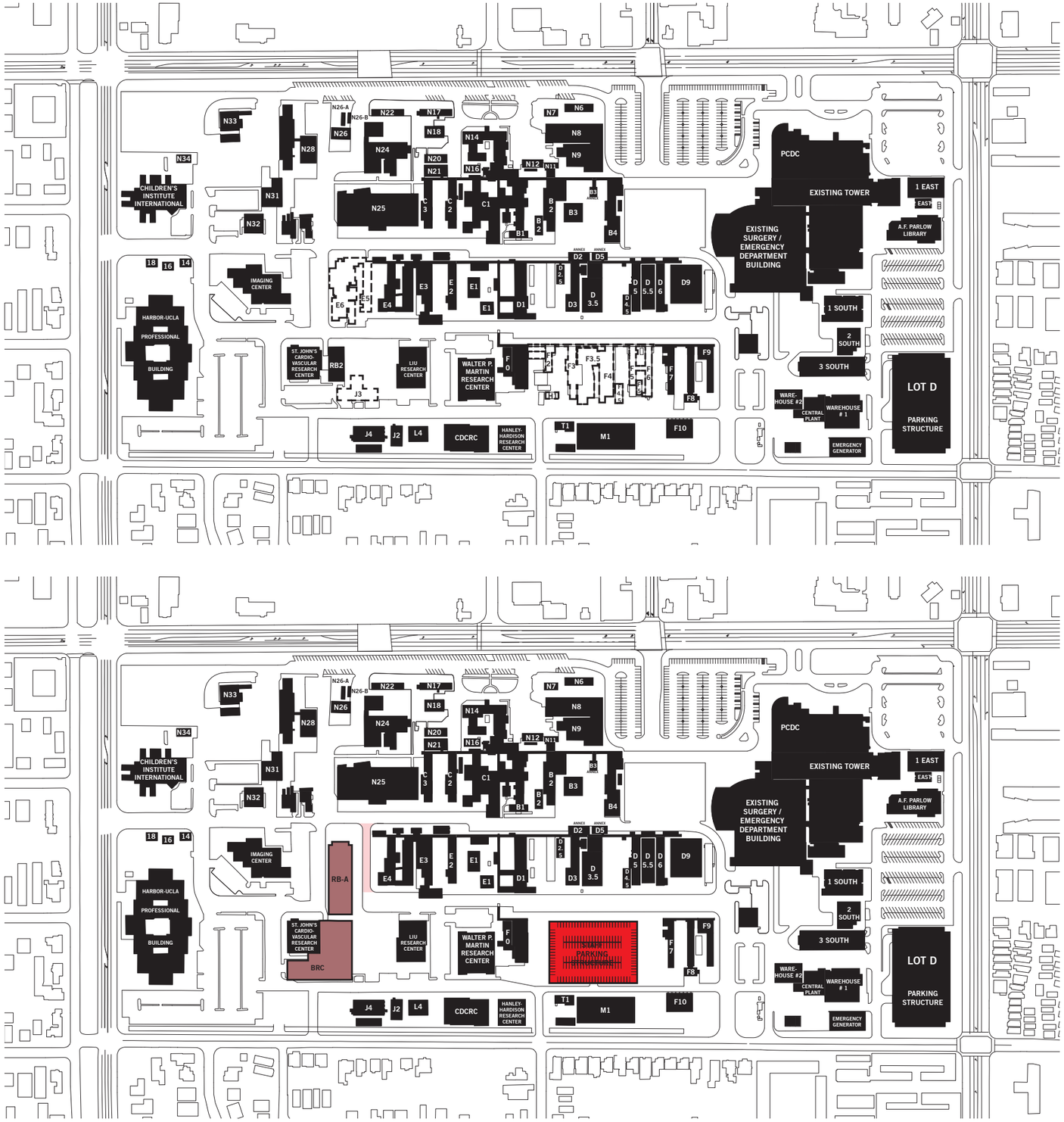
PHASE 01

DEMOLISH

• The initial phase of the master plan requires the demolition and temporary relocation of various campus facilities buildings to clear the site for the new Staff Parking Structure
• Many of the noted buildings are currently vacant. Occupied areas will need to be relocated into on-site temporary locations.

BUILD

• The Staff Parking Structure is constructed on the southeast end of the site
• LA BioMed CDCRC is under construction just west of the existing Hanley Hardison Research Center, to be completed in September 2012.
• LA BioMed buildings RB-A and the BRC are constructed on the west end of the LA BioMed Campus. .
• The proposed Parking Structure is served by an existing water line that is currently serving facilities being demolished. Provide plumbing for future water line to be built in Phase 03.



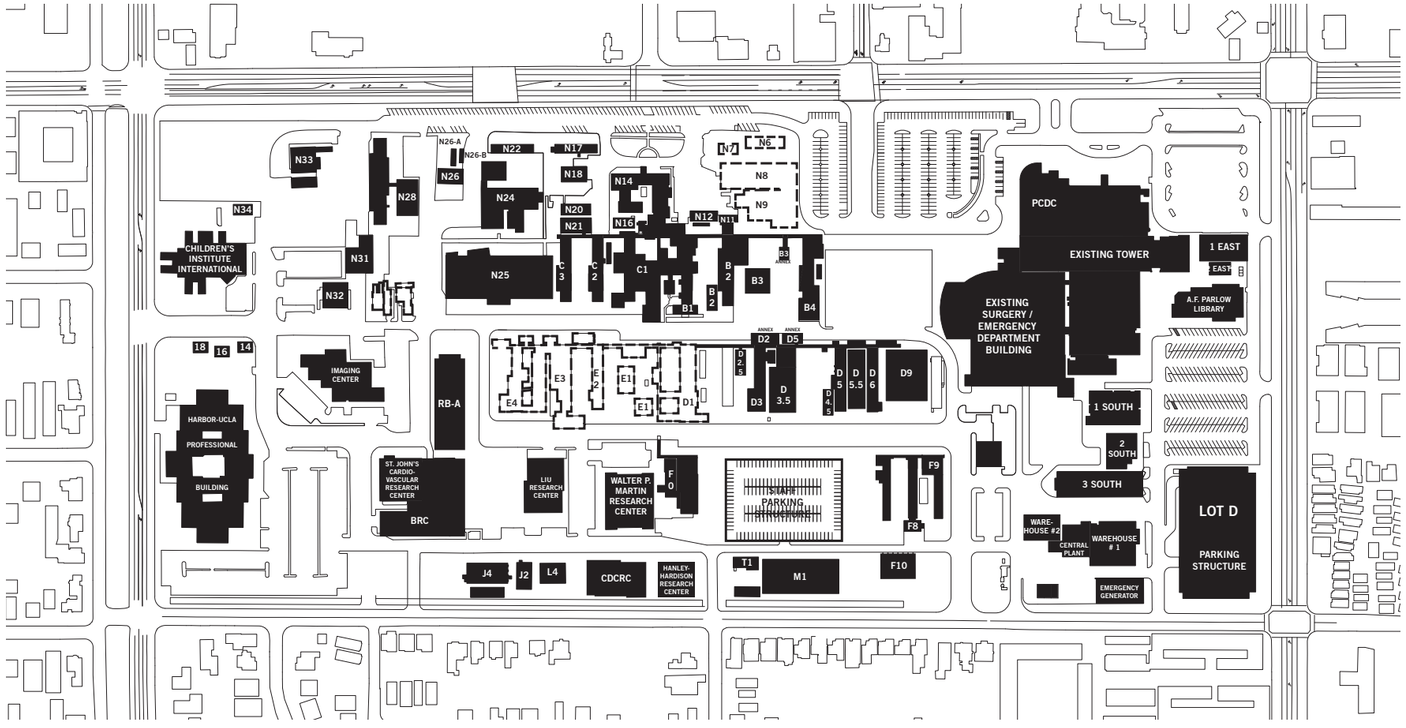
LEGEND

- Building
- Building Under Construction
- LA BioMed Building under construction
- Building to be demolished

PHASE 02

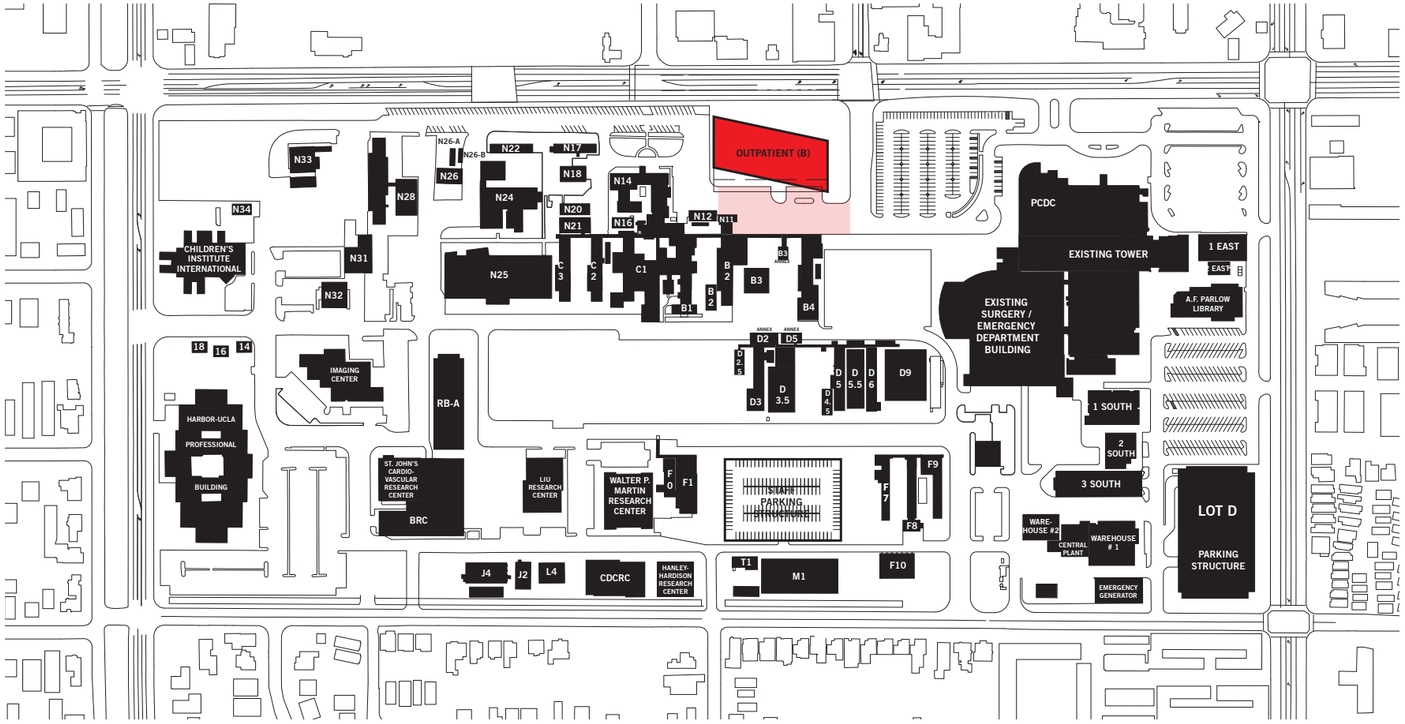
DEMOLISH

• The second phase requires the demolition and temporary relocation of Medical Records and Radiology Files at the north end of the campus as well as a group of temporary bungalows occupied by LA BioMed near the center of the site.
• These functions will need to be relocated into on-site or off-site temporary locations



BUILD

• Outpatient Building B is constructed on the north end of the campus. Drop-off and service entrances are integrated into the existing vehicular circulation paths.
• Outpatient Building B is served by a connection to current sewer and water serving the demolished Medical Records and Radiology building. Plumb Outpatient Building A for future infrastructure built in Phase 03.



LEGEND

- Building
- Building Under Construction
- LA BioMed Building under construction
- Building to be demolished

N

PHASE 03

DEMOLISH

• The remaining LA BioMed buildings in the New Outpatient Zone are demolished and their program is relocated into the newly constructed LA BioMed RB-A, BRC, and CDCRC
• The remaining medical clinics in the new Outpatient Zone are demolished and their program is relocated into the new Outpatient Building B
• Quality Assessment Resource Management is demolished and relocated to accommodate the new Central Plant.

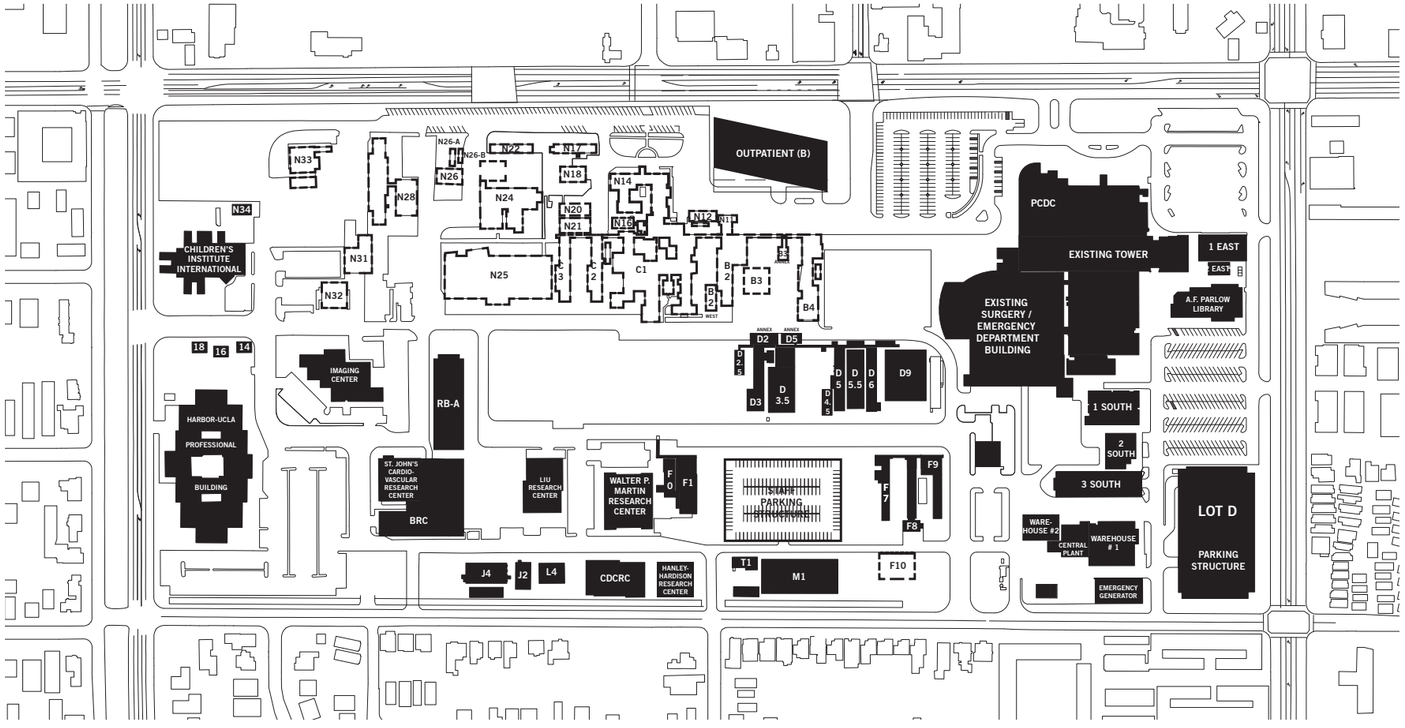
BUILD

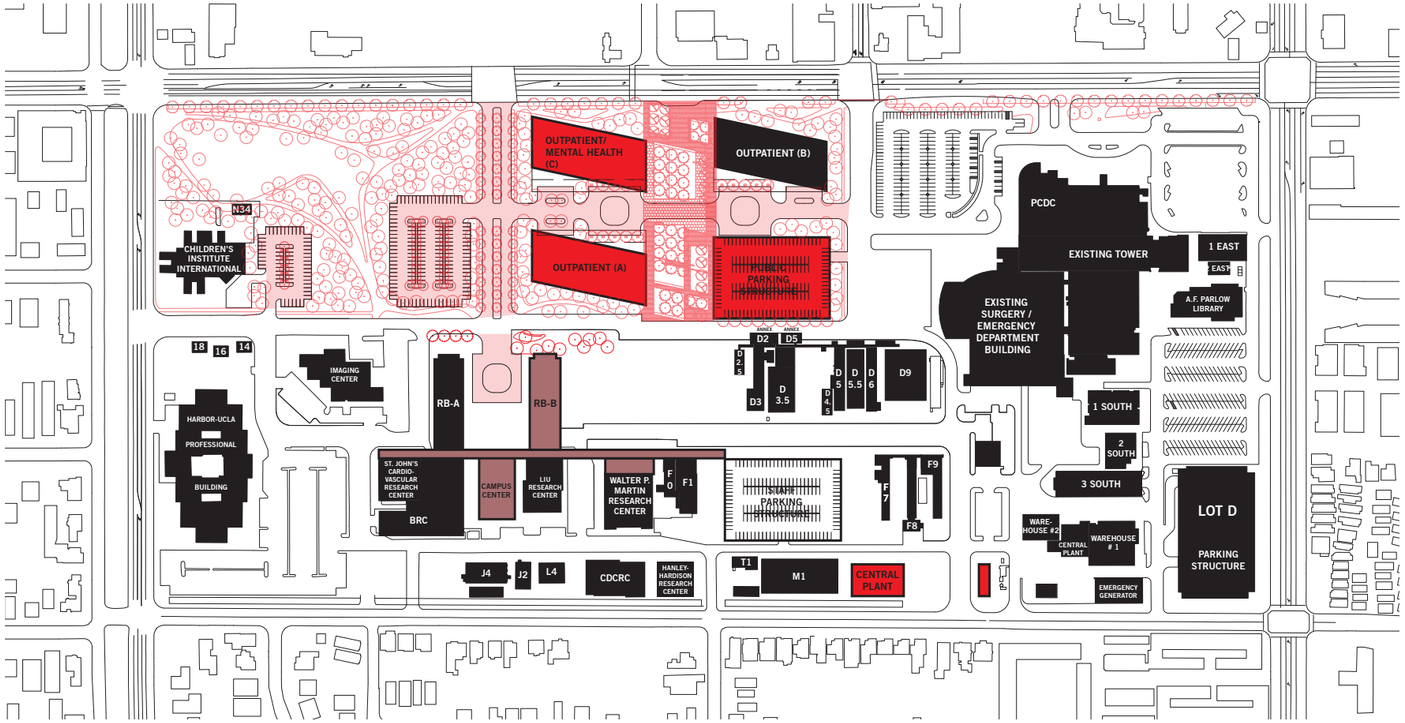
• Outpatient Building A and C are constructed to complete the Outpatient Zone on the north end of the campus
• The new public Parking Structure is constructed south of the new Outpatient Building B to meet the anticipated demand of the remaining Outpatient Buildings A and C
• The Outpatient Zone entry plaza and new west entrance off of Carson Street are constructed and integrated into the existing vehicular circulation.
• Half of the New Central Plant and Cooling Towers are constructed to meet the demand of the new outpatient buildings
• Carson Streetscape and sidewalk improvements and northern half of the central garden spine complete the Outpatient Building Area.
• West Carson Entry Drive street trees and median are planted
• Northwest park area begins and serves as a staging area for relocated trees during construction
• New infrastructure to support Outpatient A, B and C within the new circulation roadways and parking areas proposed. Includes West Entrance and area between Outpatient. Connect to existing water system just east of Main Entry Drive.

LEGEND

Building
Building Under Construction
LA BioMed Building under construction
Building to be demolished

N





PHASE 04

DEMOLISH

• The remaining old LA BioMed and old Outpatient Buildings can be demolished and program can be relocated to completed LA BioMed buildings RB-A, RB-B; and Outpatient A,B, or C respectively as needed
• Vacant land to the northwest of the site can be used as interim staff/public parking as needed.

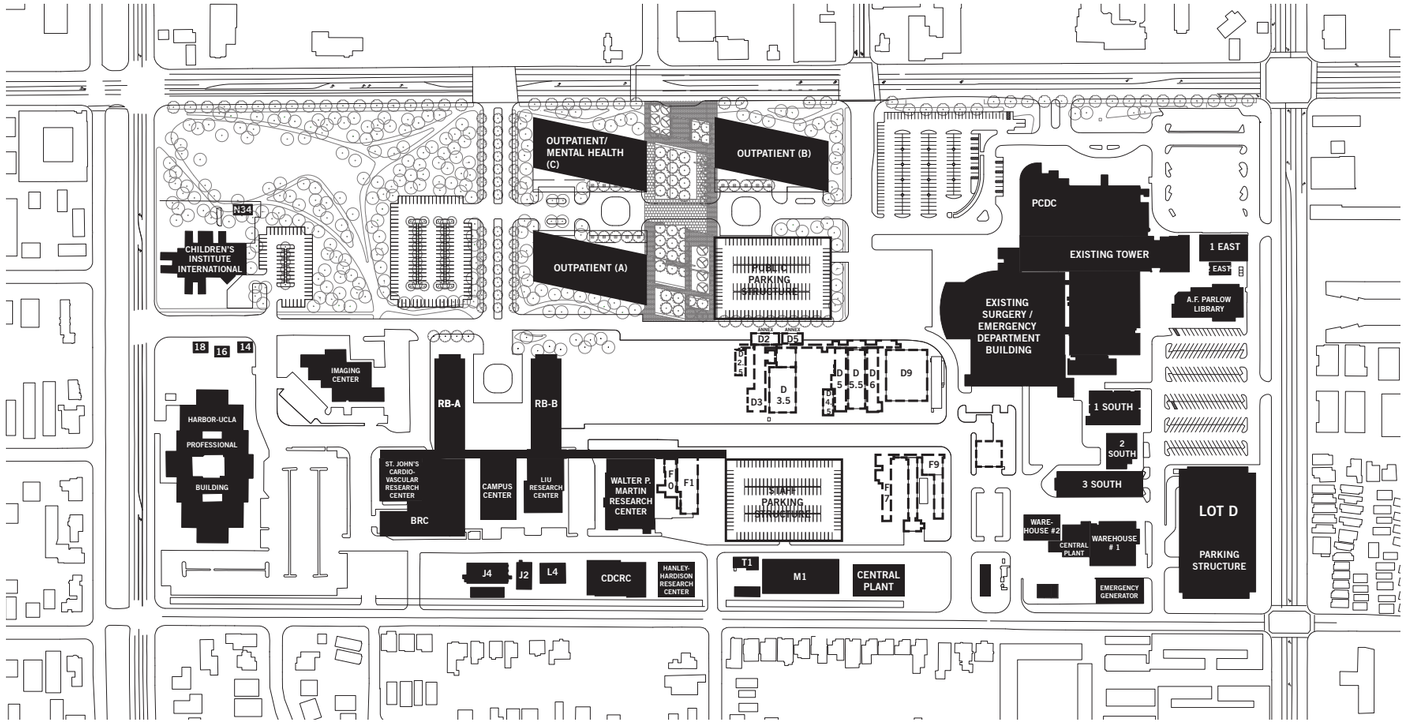
BUILD

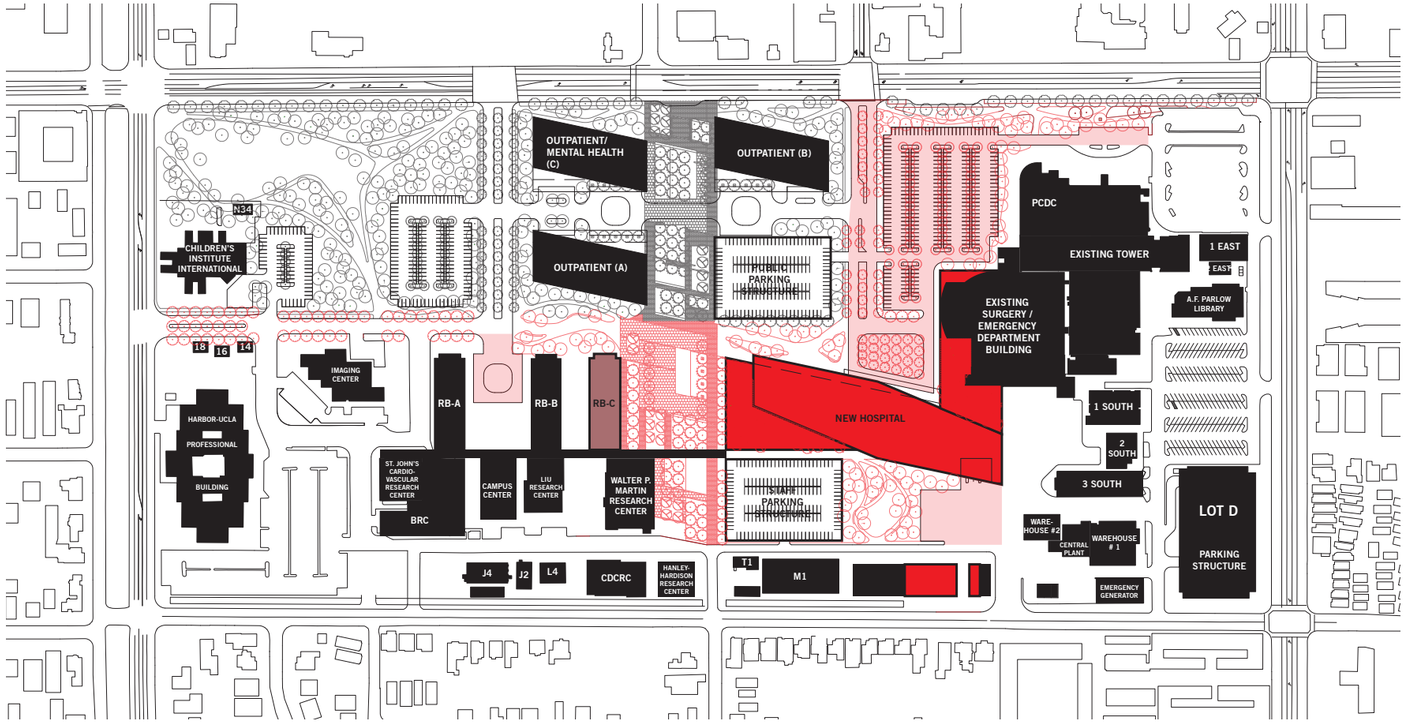
• The Hospital Tower is constructed near the center of the site.
• The main entry plaza is re-configured along with the adjacent surface parking lot
• The second half of the new Central Plant and Cooling Towers are constructed to meet the demand of the new hospital towers.
• Remainder infrastructure west of Existing ED Building to support New Hospital and complete the new infrastructure network for buildings of previous phases.
• The final LA BioMed building, RB-C completes the LA BioMed Master Plan.

LEGEND

- Building
- Building Under Construction
- LA BioMed Building under construction
- Building to be demolished

N





PHASE 05

DEMOLISH

• The remaining old hospital support buildings to the east of the site can be decommissioned and demolished after the New Hospital Tower is built and Existing Hospital Tower is remodeled.
• The South Wing attached to the Existing Hospital Tower is demolished to accommodate the new Staff Parking Structure.
• The north wing is demolished after the Existing Hospital Tower is renovated.
• The Parlow Library is demolished and relocated

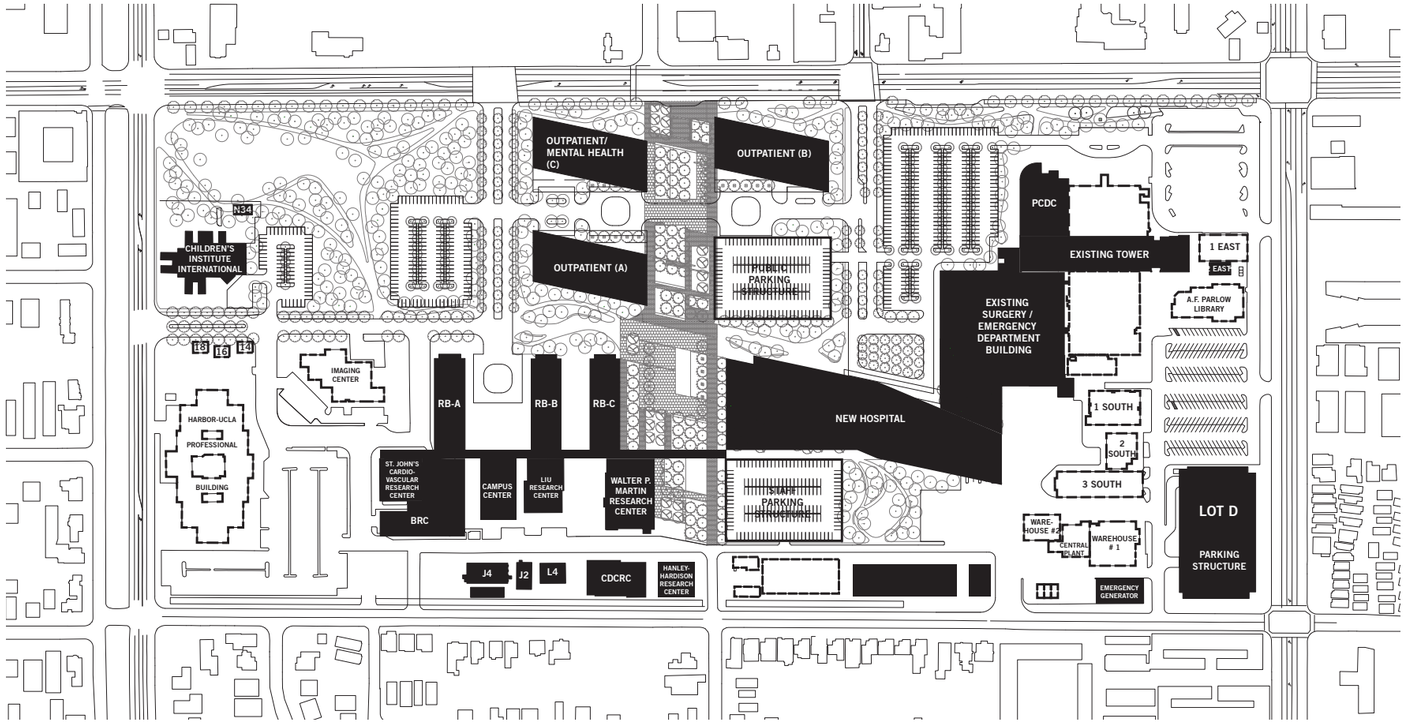
BUILD

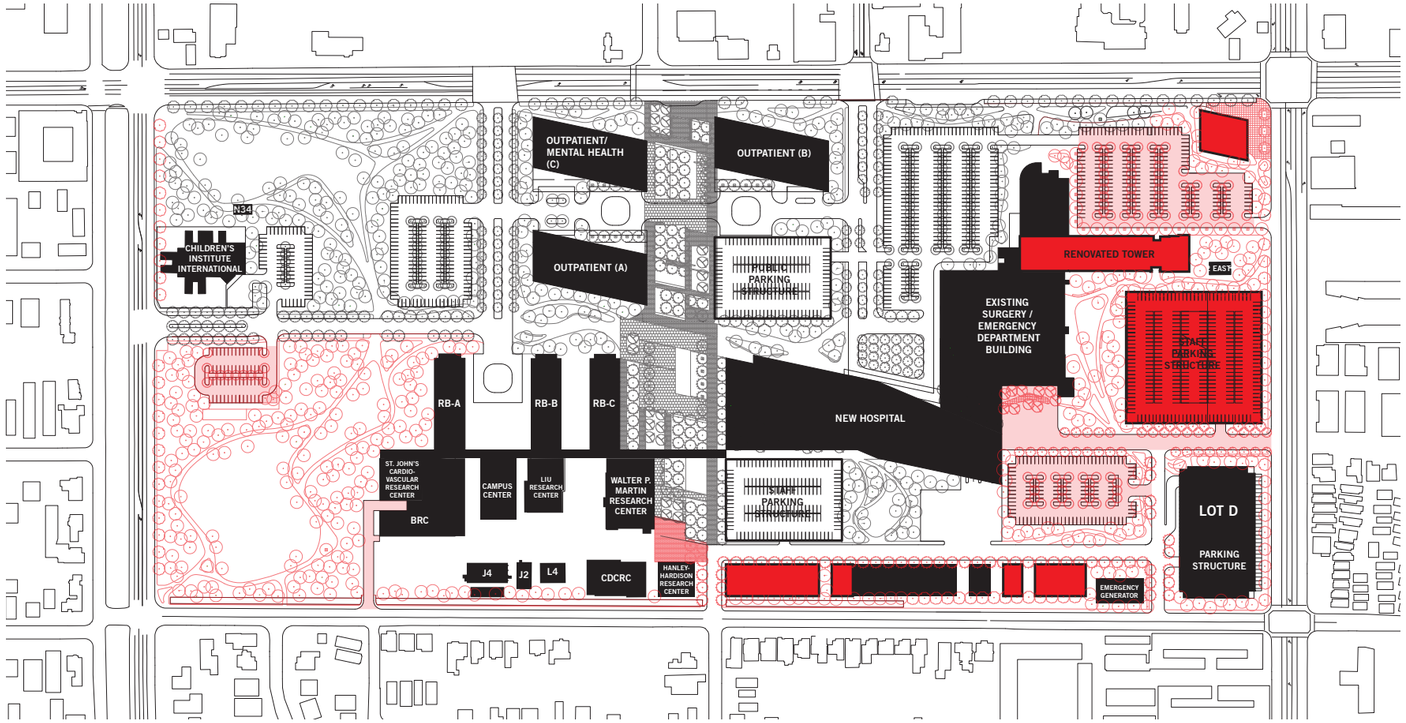
• The final Staff Parking Structure on the east end of the site is constructed along with a staff surface parking lot. Roads in this area of the campus are re-configured
• The Existing Hospital Tower is remodeled floor-by-floor.
• The public parking lot at the north end of the site is re-configured to accommodate a new retail anchor at the corner of Vermont Avenue and Carson Street.
• The final Campus Support buildings are completed at the south-east edge of the site.
• New infrastructure off Vermont Avenue to support the east campus development

LEGEND

Building
Building Under Construction
LA BioMed Building under construction
Building to be demolished

N





BUDGET

The concept budget for the master plan includes the following narrative and an itemized cost estimate with supporting documents. The budget is based on the accompanying program and master plan drawings. Future development includes substantive site work improvements, three new Outpatient Buildings, a new Hospital, various new Campus Support Facilities, three new Parking Structures and major remodeling of the existing Tower. All costs included in this budget are based on 2012 construction cost valuation. The master plan cost model is intended to aid with future planning by establishing an order-of-magnitude budget, with both Construction (or "hard") cost and project "soft" cost, based on the phasing/ implementation plans. The budget study identifies both hard and soft project costs separately, defined as follows:

CONSTRUCTION COST

- New Building Construction
- Renovation of Existing Buildings
- Demolition of Existing Buildings
- Site Hardscape, Site Irrigation, Site Lighting and Landscape Work
- Site Infrastructure Work
- Contractor's Fee
- Contractor's General Conditions
- Bonding
- Contractor Insurance

SOFT COST

EQUIPMENT

- Group 1 - Fixed Medical Equipment
- Group 2 - Major Moveable Medical Equipment (Requiring Building Services)
- Group 3 - Minor Moveable Med Equipment (Not Requiring Building Services)
- Group 4 - Instruments
- Food Service Equipment
- Furniture, Fixtures and Equipment
- Graphic / Interior and Exterior Signage; Artwork; and Plants
- Nurse Call; and Code Blue Systems
- Intercom/Public Address; Fixed Audio/Visual Systems
- Radio Systems; Dictation Systems; Security/Video Surveillance; and Access Control
- Structured Cabling; Telephone System and Equipment; and Television Monitors
- Desktop and Handheld Devices (Tablets, PC's, Printers, Copiers, etc)
- Network Electronics including Wireless; Time & Attendance System; Software Applications/Installation/ Licenses; File Servers and Host Computers

DESIGN AND CONSULTANT FEES

- Preconstruction Services by Program Manager, Construction Manager or Contractor
- Architect and Engineer's, including Structural, Mechanical, Electrical, Civil and Landscape Architect
- Equipment Planning, Procurement Consultant and Move Management
- Specialty Consultants, including Food Service, Materials Management, Helicopter, Vertical Transportation, Traffic, Parking, Acoustical, Art, Lighting Designer, etc.

ADMINISTRATIVE COST

- Entitlement Processing Fees
- OSHPD Plan Check and Permit Fee
- Site Survey, Testing, Boring and Geotechnical Reports
- Inspector of Record
- Special Testing and Inspection Services
- Move-In and Start-up Cost
- Commissioning

Cost for capital projects on areas of the campus assigned to LA BioMed is not included in the master plan budget estimates.

The master plan identifies (5) separate phases of work as detailed in the phasing plans. For planning and budgeting purposes, it was assumed the each phase would start upon completion of the preceding phase. Actual phasing, budgeting and implementation would be subject to the County of Los Angeles Board of Supervisors typical capital allocation and project approval process.

Cost escalation is included to the assumed construction midpoints at an annual rate of 5% per year. This is an historical average rate of escalation that would be anticipated over long periods of time (+10 years). However, it should be noted that significant changes in annual rates of escalation may be likely from year-to-year based on many factors that are difficult to predict, and that 5% per year has been selected as a placeholder for long term planning purposes.

PHASE	PHASE TITLE	CONSTRUCTION (HARD COST)					CONSTRUCTION SUB-TOTAL	ESCALATION	SOFT COST (Includes Escalation)	TOTAL $x1,000
		Building Demolition	New Buildings	Renovated Buildings	Parking	Sitework				
Phase 1	Make Ready	$ 4,836	$ -	$ -	$ 11,600	$ 750	$ 17,186	$ 1,289	$ 6,466	$ 24,941
Phase 2	Outpatient Building B	$ 6,559	$ 51,523	$ -	$ -	$ 2,500	$ 60,582	$ 9,087	$ 31,351	$ 101,020
Phase 3	Outpatient Buildings A & C	$ 4,421	$ 111,536	$ -	$ 9,580	$ 19,907	$ 145,444	$ 37,816	$ 82,467	$ 265,727
Phase 4	Replacement Hospital	$ 2,431	$ 692,317	$ -	$ -	$ 17,636	$ 712,384	$ 334,820	$ 523,602	$ 1,570,806
Phase 5	Existing Tower Renovation	$ 8,604	$ 14,576	$ 105,129	$ 24,400	$ 11,650	$ 164,359	$ 164,359	$ 147,923	$ 476,641
Total Building & Sitework Project Cost		$ 26,851	$ 869,952	$ 105,129	$ 45,580	$ 52,443	$ 1,099,955	$ 547,371	$ 791,809	$ 2,439,135

INDEX

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