CULTURAL RESOURCES TECHNICAL REPORT, LA PLAZA CULTURA VILLAGE PROJECT, CITY AND COUNTY OF LOS ANGELES, CALIFORNIA

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USGS 7.5-minute topographic quadrangle
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MANAGEMENT SUMMARY

Purpose and Scope: In support of the LA Plaza Cultura Village Project, SWCA Environmental Consultants (SWCA) conducted this cultural resources survey, which included a records search, a Native American contact program, intensive-level survey of the project site as well as area of potential indirect impacts, and preparation of this survey report. The project is located in the City and County of Los Angeles, California, immediately north of the 101 Freeway and bisected by North Broadway. The assessment was prepared pursuant to the California Environmental Quality Act (CEQA), Public Resources Code (PRC) Section 5024.1, Section 15064.5 of the Guidelines; Sections 21083.2 and 21084.1 of the Statutes of CEQA (Governor's Office of Planning and Research 1998); and in accordance with regulations set forth in the City of Los Angeles Municipal Code, Chapter 9, Article 1, Cultural Heritage Ordinance.

Dates of Investigation: The California Historical Resources Information System records search was conducted by the South Central Coastal Information Center (SCCIC) at California State University, Fullerton and received on March 3, 2014. A cultural resources specialist conducted an intensive-level cultural resources survey on March 19, 2014. In addition, in early April 2014, SWCA architectural historian Debi Howell-Ardila conducted a follow-up survey to assess the potential for indirect impacts to historic resources in the proposed project area and surrounding neighborhood. In May and June 2014, Ms. Howell-Ardila conducted additional reconnaissance surveys of comparable areas with recent in-fill projects of similar massing and character, adjacent to historic districts and known historic resources.

Summary of Findings: The SCCIC records search identified six cultural resources studies that have been conducted within the project area. Eighty cultural resources have been previously recorded within 0.25 mile of the project area, including 23 archaeological resources and 57 built environment resources. Native American representatives who were contacted regarding their knowledge of the project area recommended archaeological testing and Native American monitoring of project ground disturbance.

Within the proposed project footprint is one permanent building, slated for demolition under the project. This building, 400-408 West Cesar E. Chavez Avenue, is a one-story, vernacular commercial building. The property was evaluated under all applicable and found not eligible either individually or as a contributor to a larger historic district. Within the area of potential indirect impacts, which extends from the proposed project site to the opposite sides of adjacent streets, two historic resources were identified: the El Pueblo de Los Angeles Historic District/Los Angeles Plaza Historic District (listed on the National Register) and the Fort Moore Pioneer Memorial (eligible under Criteria C/3 for the National Register of Historic Places and the California Register of Historical Resources). The potential for significant indirect impacts to a historic resource were identified (through an adverse change to the setting of historic resources), and mitigation measures were recommended.

No archaeological resources were observed in the project area, but survey visibility was extremely poor due to the presence of pavement across the majority of the project area. The intensive use of the project area for more than two centuries and its proximity to known, significant resources, including two historic cemeteries, indicate a high potential for the project area to contain previously undocumented buried archaeological resources.

Management Recommendations: Because the project area has a high potential to contain buried archaeological resources, SWCA recommends archaeological presence/absence testing, the creation of a Cultural Resources Mitigation and Monitoring Plan, the implementation of construction worker training, archaeological and Native American monitoring, and provisions for the unanticipated discovery of human remains.

Disposition of Data: This report and any subsequent related reports will be filed with ELP Advisors; the SCCIC at California State University, Fullerton; and SWCA's Pasadena office. All field notes, photographs, and records related to the current study are on file at the SWCA Pasadena office.

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I. INTRODUCTION

Purpose and Scope

Under contract to ELP Advisors, SWCA Environmental Consultants (SWCA) was retained to conduct technical studies to analyze the potential impacts on cultural resources of the proposed LA Plaza Cultura Village Project (proposed project). The proposed project is an undertaking of the County of Los Angeles and the LA Plaza Cultura Foundation, the 501(c)(3) nonprofit organization responsible for developing and operating the LA Plaza de Cultura y Artes, a Mexican-American heritage museum located at 501 N. Main Street in the El Pueblo de Los Angeles Historic District.

The purpose of the Cultural Resources Technical Report is to facilitate compliance with California Environmental Quality Act (CEQA) requirements regarding cultural resources. The proposed project includes the removal of two large surface parking lots, owned by the County of Los Angeles, the demolition of one building, and the construction of two mixed-use projects (described in Section II).

The specific objectives of the cultural resource analysis are to: (1) identify and evaluate the significance of any cultural resources falling within the project area and area of potential impacts; (2) determine if implementation of the proposed project would have any adverse impacts on those resources; and (3) propose mitigation for any significant adverse direct or indirect impacts (pursuant to CEQA Guidelines Section 15126.2, requiring the consideration of direct and indirect impacts).

All cultural resources work carried out for this study was completed in accordance with the provisions and practices described in CEQA, Public Resources Code (PRC) Section 5024.1, Section 15064.5 of the Guidelines; Sections 21083.2 and 21084.1 of the Statutes of CEQA (Governor's Office of Planning and Research 1998); and in accordance with regulations set forth in the City of Los Angeles Municipal Code, Chapter 9, Article 1, Cultural Heritage Ordinance.

Project Team

The project team was led by SWCA Cultural and Paleontological Resources Program Director John Dietler, PhD, Registered Professional Archaeologist (RPA), who also reviewed this report for quality assurance/quality control (QA/QC). SWCA Cultural Resources Specialists Chris Millington, MA, and Debi Howell-Ardila, MHP, conducted the project's intensive-level cultural resources field survey and took the photographs for this report. Research assistance was provided by Steven Treffers, MHP. Ms. Howell-Ardila and Mr. Treffers coauthored the report; figures and maps were prepared by Geographic Information System (GIS) Manager William Hayden, M.A. All project personnel meet the Secretary of the Interior's Professional Qualifications Standards in their respective fields.

II. PROJECT DESCRIPTION

Project Location

The La Plaza Cultura Village Project (proposed project) is located in the Central City Community Plan Area (CPA) of the City and County of Los Angeles, California (Figures 1 and 2). The site is bounded by Cesar E. Chavez Avenue on the north, Spring Street on the east, the Interstate 101 Freeway on the south, and North Hill Street on the west. Located just south of Chinatown and spanning North Broadway, the project site includes two adjacent lots to the east and west of North Broadway. The total area of the proposed project site is 3.72 acres. Currently occupying these lots are surface parking lots, temporary parking kiosks, and one building (La Colima Restaurant, 400–408 Cesar E. Chavez Avenue). The building currently occupied by La Colima Restaurant would be demolished as a result of the proposed project.

Because the project site has remained only sparsely developed through the last 60 years, the extant setting is characterized by openness and a lack of visual interruptions from the El Pueblo de Los Angeles Historic District to the Fort Moore Pioneer Memorial. Located near the location where Los Angeles was founded in 1781, LA Plaza's 2.2-acre campus, located immediately east of the project site across North Spring Street, includes two historic and newly renovated buildings (the Vickrey-Brunswig Building and Plaza House), and is surrounded by 30,000 square feet of public gardens and gathering spaces.

The project site is adjacent to the Broadway entrance to Chinatown (to the north), the National Register of Historic Places-listed El Pueblo de Los Angeles Historic District and Monument (to the east), Interstate 101 (to the south), and the Fort Moore Pioneer Memorial and Hill Street overpass (to the west). In addition, the project site is located within the boundaries of the El Pueblo de Los Angeles State Historic Park. The area of potential indirect impacts used in this study falls within the Central City and Central City North CPAs.

The project site is located in close proximity to civic, cultural, and transportation resources available in downtown Los Angeles. The project vicinity has experienced strong recent investment and development, including the $56 million, 12-acre Grand Park (located approximately 1,200 feet southwest of the project site), which opened in 2012 and has already achieved recognition as one of the top public open spaces in the country; the LA Plaza de Cultura y Artes, located immediately southeast of the project site across North Spring Street; and the Jia Apartments, a new 280-unit market-rate mixed-use development, located immediately north of the project site, which demonstrates the strong market demand for housing in the area. In addition, Union Station, a major transportation hub for the region, is located approximately 1,000 feet east of the project site. Union Station is currently undergoing a Master Plan process, which includes enhanced pedestrian linkages to the El Pueblo de Los Angeles Historic District and the surrounding areas. The El Pueblo de Los Angeles Historic District, located immediately east of the project site, has also enjoyed a resurgence of investment and improvements, including $20 million for the conservation of the David Alfaro Siqueiros' América Tropical mural, and the construction of an interpretive center in El Pueblo, restoration of Italian Hall, and expansion of the Chinese American Museum.

North of the project site are multi-family residential buildings (including the new Jia Apartments) that are on the southern edge of the Chinatown neighborhood. Located on the northeastern corner of the block west of North Broadway, but not a part of the project site, are commercial and restaurant uses, including Colima Restaurant, a bail bonds service, and a medicinal dispensary.

West of the project site are the Fort Moore Pioneer Memorial and the Ramón C. Cortines School of Visual and Performing Arts.

As identified above, east of the project site is the El Pueblo de Los Angeles Historic District, which contains a number of historic structures and resources, including Our Lady Queen of Angels (La Placita) Church, Vickrey-Brunswig Building and Plaza House (now the LA Plaza de Cultura y Artes), LA Plaza Park, Avila Adobe, Pico House, Merced Theater, Masonic Hall, Sepulveda House, Garnier Building (now the Chinese American Museum), Plaza Methodist Church, Pelanconi House (now occupied by La Golondrina Restaurant), and Olvera Street. Union Station and multi-family residential uses are located two blocks to the east.

South of the project site are the US-101, the Hall of Justice Building, U.S. Courthouse, Clara Shortridge Foltz Criminal Justice Center, Los Angeles County facilities (e.g., Hall of Records, Central Heating and Refrigeration Plant), the Cathedral of Our Lady of the Angels, and the downtown Civic Center area.

Project Elements

The proposed LA Plaza Cultura Village project would include a mix of transit-oriented uses to be developed as infill on two blocks that comprise the project site, which is divided by North Broadway (Figure 3). Block A, located east of North Broadway, consists of four contiguous parcels, and Block B, located west of North Broadway, consists of six contiguous parcels. The final design of the proposed project is currently being refined, and, therefore, this EIR evaluates a development envelope that represents the maximum density proposed for the site along with the approximate mix of uses.

The proposed project would provide for a mixed-use, transit-oriented, and infill development totaling up to 425,000 square feet, including up to 345 residential units (for lease) with 20 percent of those reserved as affordable low- or middle-income units and up to 55,000 square feet of visitor-serving retail, including, but not limited to, a restaurant, a cafe, other food services, and a “commissary” or shared commercial kitchen space for use by small businesses. These visitor-serving retail uses are intended to complement Olvera Street retail and restaurant offerings.

The proposed project would create outdoor spaces programmed to encourage pedestrian activity. Programming for these outdoor spaces may include fixed and flexible seating, an open plaza area for events, small courtyard spaces for small gatherings, semi-private spaces, outdoor dining areas, and water features. Designed for small or medium groups of people, the spaces would come in a variety of sizes and configuration, depending on location and relationship to architecture and the street. Landscaping (e.g., trees and shrubs) would strengthen the identity and scale of these spaces, while providing shade and color. The grade differential between North Hill Street and North Spring Street provides further opportunity to create outdoor destinations within the project. A distinctive feature of the open space design would incorporate a “historic paseo” path that would connect Union Station and the Fort Moore Pioneer Memorial. The specifics of this historic paseo will consider special paving treatments, pedestrian scaled lighting, seating, water features, interpretative elements and unique wayfinding signage.

The project would also provide up to 786 parking spaces (with up to 150 spaces allocated for replacement of the existing parking used by County employees, federal jurors, and area visitors), and an extension of the existing Historic Paseo or pedestrian trail from Union Station to Olvera Street and the already planned extension from Olvera Street to LA Plaza Park, the El Pueblo de Los Angeles Historic Monument, and the LA Plaza de Cultura y Artes (proposed as part of the LA Plaza de Cultura y Artes project). This proposed Historic Paseo or pedestrian trail on the project site would be the centerpiece of the development.

The preliminary plan envisions developing the project site with the following uses, as broken down by project element:

- **Block A (east of North Broadway, ranging from one story to five stories).** Block A spans approximately 1.52 acres and would include a low- to medium-rise development. Block A would include one building with a common subterranean parking garage with a walkway (paseo) dividing the above grade structure into two components. The building would step up from the North Spring Street frontage, which consists of an 18-foot-high segment at the center, a 40-foot-high segment (roughly four stories) at the southeastern corner, and a 29-foot-high segment (roughly three stories) at the northeastern corner. From the North Spring Street elevation, the building climbs to approximately 60 feet in setbacks measuring approximately 15 feet a piece. The stepped design is intended to maintain compatibility with nearby low-rise buildings within the El Pueblo de Los Angeles Historic District, which contains a number of historic structures and resources, including Our Lady Queen of Angels (La Placita) Church, and the LA Plaza de Cultura y Artes. The building would range in height from approximately 17 feet (at the colonnade in front of the palm courtyard located mid-block along the North Spring Street frontage) to approximately 60 feet in the center of the site.

  Block A would include approximately 35,000 sq. ft. of visitor- and tourist-serving uses, which would be developed on the ground floor to promote the area's cultural and historic attractions. Tenants are anticipated to include visitor-aid, tourism, and travel services. A commissary kitchen is envisioned on the southern portion of the block. Some of the ground-floor retail, which may include a restaurant and other food services (e.g., yogurt shop and other casual dining establishments), would be located in a pedestrian-oriented arcade facing North Spring Street that would provide access to the proposed Historic Paseo/pedestrian trail that would pass through the southern portion of the project site, connecting the site to the LA Plaza de Cultura y Artes and Union Station (on the east) and to Fort Moore (on the west).

- **Block B (west of North Broadway, up to eight stories).** Block B would span approximately 2.2 acres and would include a mid-rise development of up to eight stories. North Hill Street is approximately 40 feet above the elevation of North Broadway. Accordingly, because of this difference in grade, building heights would range from approximately 96 feet when viewed from North Broadway to 54 feet when viewed from North Hill Street. As on Block A, the building on Block B would be one structure with a common subterranean parking with the paseo dividing the above grade structure into two components.

  Block B would include up to 226 residential rental units on Floors 2 through 8, with a minimum of 20 percent of the units reserved for affordable low- or middle-income housing. Block B would include approximately 20,000 sq. ft. of ground floor retail, which would be developed along North Broadway to encourage and facilitate pedestrian activity in the area.

- **Urban Design Considerations.** There are a number of components considered for the urban design of the proposed project. The primary and most important component is the inclusion of a segment of the Historic Paseo, which would complete the extension of this pedestrian facility/walkway from Union Station and Olvera Street to the Fort Moore Pioneer Memorial. This landscaped paseo would traverse the site and incorporate water features, interpretive signage, and shaded seating areas into a pedestrian promenade traversing Blocks A and B, providing a large visual break through the project site and views of the El Pueblo de Los Angeles Historic District to the east and southeast (LA Plaza) and Fort Moore Pioneer Memorial to the west. This Historic Paseo, as a whole (including the segment within the project site), would connect the shops and restaurants along Olvera Street, to the museums and cultural offerings of the El Pueblo de Los Angeles Historic District, to the interactive historic exhibits and festivals at LA Plaza Park and the LA Plaza de Cultura y Artes, to the proposed uses at the project site, and up to the monument at Fort Moore. The Historic Paseo would serve area visitors, as well as local residents, and provide information related to the history of Los Angeles. The segment of the

Historic Paseo within the project site, as well as the already planned extension from Olvera Street to LA Plaza (proposed as part of the LA Plaza Museum project) and the El Pueblo de Los Angeles Historic Monument, would be designed to increase pedestrian traffic and promote tourism and economic activity in the area.

Figure 1. Project vicinity map. Source: SWCA Environmental Consultants, 2014.

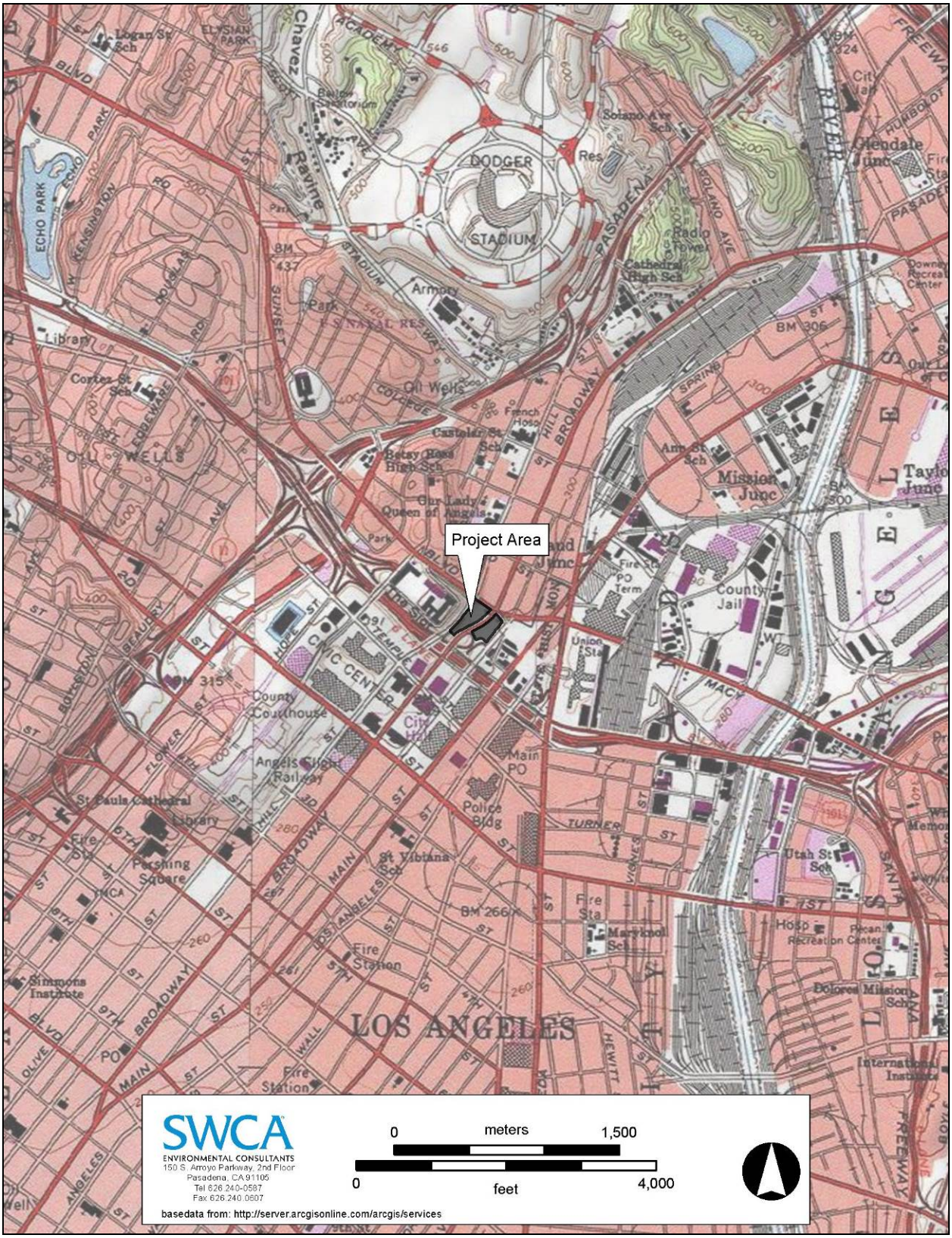

Figure 2. Project location map. Source: SWCA Environmental Consultants, 2014.

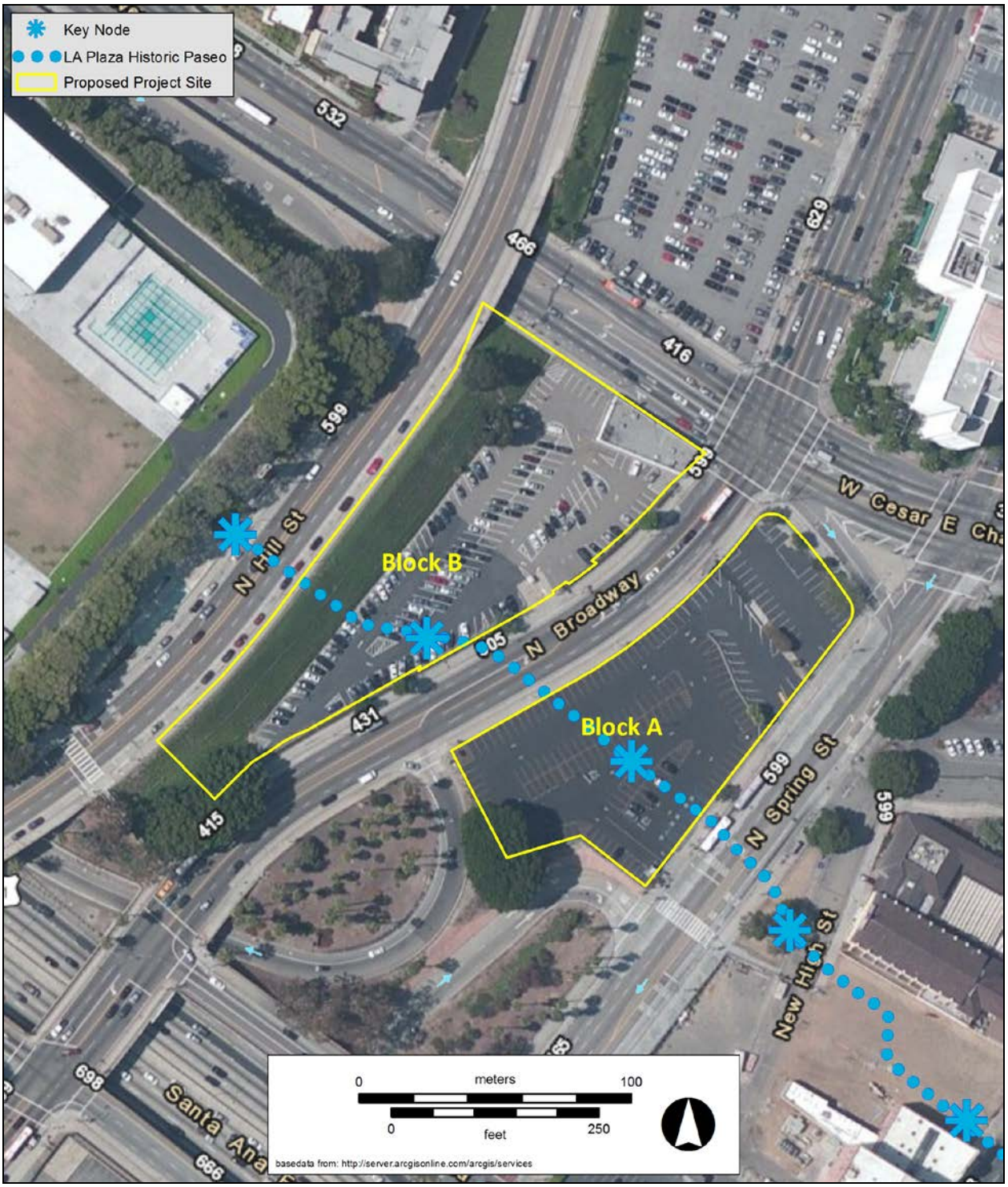

Figure 3. Proposed Project Area. Source: SWCA Environmental Consultants, Pasadena, California, 2014.

III. REGULATORY SETTING

This regulatory framework section identifies the federal, state, and local laws, statutes, guidelines, and regulations that govern the identification and treatment of cultural resources as well as the analysis of potential impacts to cultural resources. The lead agency must consider the provisions and requirements of this regulatory framework when rendering decisions on projects that have the potential to affect cultural resources.

Federal Regulations

National Historic Preservation Act of 1966. Enacted in 1966 and amended in 2000, the National Historic Preservation Act (NHPA) instituted a multifaceted program, administered by the Secretary of the Interior, to encourage sound preservation policies of the nation's cultural resources at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the NRHP, established the position of State Historic Preservation Officer and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the goals of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP).

Section 106. Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in or eligible for inclusion in the NRHP, and that the ACHP must be afforded an opportunity to comment, through a process outlined in the ACHP regulations, in Title 36 of the Code of Federal Regulations (CFR) Part 800, on such undertakings. The Section 106 process involves identification of significant historic resources within an "area of potential effect;" determination if the undertaking will cause an adverse effect on historic resources; and resolution of those adverse effects through execution of a Memorandum of Agreement. In addition to the ACHP, interested members of the public, including individuals, organizations, and agencies (such as the California Office of Historic Preservation) are provided with opportunities to participate in the process.

National Register of Historic Places (NRHP). The NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36 CFR 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion B: It is associated with the lives of persons who are significant in our past;
- Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; and/or
- Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history. Ordinarily cemeteries, birthplaces, or graves of historic figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, and properties that are primarily commemorative in nature,

are not considered eligible for the NRHP, unless they satisfy certain conditions. In general, a resource must be 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

In addition to meeting these criteria, a property must retain historic integrity, which is defined in National Register Bulletin 15 as the "ability of a property to convey its significance" (National Park Service 1990). In order to assess integrity, the National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, which are defined in the following manner in National Register Bulletin 15:

1. Location – the place where the historic property was constructed or the place where the historic event occurred;
2. Design – the combination of elements that create the form, plan, space, structure, and style of a property;
3. Setting – the physical environment of a historic property;
4. Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. Workmanship – the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;
6. Feeling – a property's expression of the aesthetic or historic sense of a particular period of time;
7. Association – the direct link between an important historic event or person and a historic property.

For the purposes of this study's indirect impact analysis, the aspects of setting and feeling are most germane for the discussion; areas of particular relevance are highlighted below. The National Park Service defines the quality of setting in the following way:

> *Setting is the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role.* ***It involves how, not just where, the property is situated and its relationship to surrounding features and open space.***
>
> *Setting often reflects the* ***basic physical conditions under which a property was built and the functions it was intended to serve****. In addition,* ***the way in which a property is positioned in its environment can reflect the designer's concept of nature and aesthetic preferences****.*
>
> *The physical features that constitute the setting of a historic property can be either natural or manmade, including such elements as: Topographic features (a gorge or the crest of a hill); vegetation; simple manmade features (paths or fences); and* ***relationships between buildings and other features or open space****.*
>
> ***These features are their relationships should be examined not only within the exact boundaries of the property, but also between the property and its surroundings. This is particularly important for districts****.*[1]

The National Park Service defines the quality of feeling in the following way:

> Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.[2]

[1]National Park Service, Department of the Interior. 1990. *National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation.* Washington, DC: US Department of the Interior.

State Regulations

The policies of the NHPA are implemented at the state level by the California Office of Historic Preservation, a division of the California Department of Parks and Recreation. The Office of Historic Preservation is also tasked with carrying out the duties described in the Public Resources Code and maintaining the California Historic Resources Inventory and CRHR. The state-level regulatory framework also includes CEQA, which requires the identification and mitigation of substantial adverse impacts that may affect the significance of eligible historical and archeological resources.

California Environmental Quality Act (CEQA). CEQA requires a lead agency to analyze whether historic and/or archaeological resources may be adversely impacted by a proposed project. Under CEQA, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment" (PRC Section 21084.1). Answering this question is a two-part process: first, the determination must be made as to whether the proposed project involves cultural resources. Second, if cultural resources are present, the proposed project must be analyzed for a potential "substantial adverse change in the significance" of the resource.

Historic Resources. According to CEQA Guidelines Section 15064.5, for the purposes of CEQA, historic resources are:

1. A resource listed in, or formally determined eligible for listing in, the California Register of Historical Resources (PRC 5024.1, Title 14 CCR, Section 4850 et seq);
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significance in a historic resources survey meeting the requirements of Section 5024.1(g) of the PRC;
3. Any building, structure, object, site, or district that the lead agency determines eligible for national, state, or local landmark listing; generally, a resource shall be considered by the lead agency to be historically significant (and therefore a historic resource under CEQA) if the resource meets the criteria for listing on the California Register (as defined in PRC Section 5024.1, Title 14 CCR, Section 4852).

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity (as defined in previous section) does not meet NRHP criteria may still be eligible for listing in the CRHR.

According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the California Register or is not included in a local register or survey shall not preclude the lead agency from determining that the resource may be an historical resource (PRC Section 5024.1). Pursuant to CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (CEQA Guidelines, Section 15064.5(b).

Substantial Adverse Change and Indirect Impacts to Historical Resources. CEQA Guidelines specify that "substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines, Section 15064.5). Material impairment occurs when a project alters in an adverse manner or demolishes "those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion" or eligibility for inclusion in the NRHR, CRHR, or local register. In addition, pursuant to

[2] Ibid.

CEQA Guidelines Section 15126.2, the "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

Of particular relevance to this study's analysis of indirect impacts to historic resources are the following guides and requirements. Pursuant to CEQA Guidelines, Section 15378, study of a project under CEQA requires consideration of "the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." CEQA Guidelines, Section15064d further define direct and indirect impacts:

1. A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project.
2. An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment.
3. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project.

Archeological Resources. In terms of archaeological resources, PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type;
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If it can be demonstrated that a proposed project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2[a], [b], and [c]). CEQA notes that, if an archaeological resource is neither a unique archaeological resource nor an historical resource, the effects of the project on those resources shall not be considered to be a significant effect on the environment (CEQA Guidelines, Section 15064.5(c)(4).

Human Remains. CEQA Guidelines also describe the procedures to be followed in the event of the unforeseen discovery of human remains. If human remains are discovered during the construction of the proposed project, no further disturbance to the site shall occur and the Los Angeles County Coroner must be notified (PRC Sections 15064.5 and 5097.98). If the Coroner determines the remains to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC) within 48 hours. The NAHC shall identify the person or persons it believes to be the Most Likely Descendant (MLD) of the deceased, and the MLD may then make recommendations as to the disposition of the remains. Native American burials in California are also addressed in PRC Sections 5097.9 through 5097.991 and in Section 7050.5 of the California Health and Safety Code.

Paleontological Resources. Paleontological resources are also included in CEQA's regulations regarding cultural resources. CEQA Guidelines, Appendix G, describes significant impacts to paleontological resources in the following way: "a project will normally result in significant impact on the environment if it will…disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study."

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under CEQA, as defined in 13 PRC 2100 et seq.) and PRC Section 5097.5 (Stats 1965, c. 1136, p. 2792). Other state requirements for paleontological resource management are included in the PRC (Division 5: Chapter 1.7) Section 5097.5 and (Division 20: Chapter 3) Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands.

California Register of Historical Resources (CRHR). Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Sections 21083.2 and 21084.1). Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR. According to PRC Section 5024.1(c), a resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Criterion 2: It is associated with the lives of persons important in our past.

Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity does not meet NRHP criteria may still be eligible for listing in the CRHR.

Secretary of the Interior's Standards for the Treatment of Historic Properties. In accordance with CEQA, a project that has been determined to conform with the Secretary of the Interior's Standards for the Treatment of Historic Properties can generally be considered to be a project that will not cause a significant adverse impact (14 CCR Section 15126.4(b)(1)). If a project meets the Secretary of Interior's Standards, the project can, in most cases, be considered categorically exempt from CEQA (14 CCR Section 15331).

The goal of the Secretary of the Interior's Standards is to outline treatment approaches that allow for the retention of and/or sensitive changes to the distinctive materials and features that lend a historical resource its

significance. When changes are carried out according to the Secretary of the Interior's Standards, the historical resource retains its historic integrity and thereby continues to convey the reasons for its significance. The Secretary of the Interior's Standards and associated Guidelines (36 CFR 67) are "neither technical nor prescriptive, but are intended to promote responsible preservation practices that help protect" cultural resources.[3] The Secretary of the Interior's Standards and Guidelines offer general recommendations for preserving, maintaining, repairing, and replacing historical materials and features, as well as designing new additions or making alterations. The Secretary of the Interior's Standards also provide guidance on new construction adjacent to historic districts and properties, in order to ensure that there are no adverse impacts to integrity as a result of a change in setting.

Local

County of Los Angeles General Plan. The County's General Plan includes goals and policies related to the conservation of cultural resources. These include: (1) encouraging the "cultural and social diversity and the preservation of the cultural heritage of the County of Los Angeles"; (2) protecting "cultural heritage resources"; and (3) encouraging "the preservation and sensitive reuse of historic buildings that need strengthening for protection from seismic hazards in a manner that does not endanger public safety."[4]

City of Los Angeles. While the project site is located within the City of Los Angeles, it is owned by the County of Los Angeles and is proposed for uses that benefit the public. Accordingly, the proposed project is subject to the regulatory controls of the County of Los Angeles and not the City of Los Angeles. Nonetheless, consideration of the city-level regulatory framework in this study fulfills the intended purpose of CEQA as disclosing all relevant information associated with the proposed project.

Los Angeles Historic-Cultural Monuments. Local landmarks in the City of Los Angeles are known as Historic Cultural Monuments and are managed under the aegis of the City of Los Angeles Planning Department, Office of Historic Resources. A monument or local landmark is defined in the Cultural Heritage Ordinance as follows:

> Historic-Cultural Monument (Monument) is any site (including significant trees or other plant life located on the site), building or structure of particular historic or cultural significance to the City of Los Angeles, including historic structures or sites in which the broad cultural, economic or social history of the nation, State or community is reflected or exemplified; or which is identified with historic personages or with important events in the main currents of national, State or local history; or which embodies the distinguishing characteristics of an architectural type specimen, inherently valuable for a study of a period, style or method of construction; or a notable work of a master builder, designer, or architect whose individual genius influenced his or her age (Los Angeles Municipal Code Section 22.171.7 Added by Ordinance No. 178,402, Effective 4-2-07).

Historic Preservation Overlay Zones. As described by the City of Los Angeles OHR, the Historic Preservation Overlay Zone (HPOZ) Ordinance was adopted in 1979 and amended in 2004:

> To identify and protect neighborhoods with distinct architectural and cultural resources, the City … developed an expansive program of Historic Preservation Overlay Zones …

[3] Weeks, Kay D. and Anne E. Grimmer . 2001. *Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. Washington, DC: US Department of the Interior. Available at: http://www.nps.gov/tps/standards/rehabilitation/rehabilitation-guidelines.pdf. Accessed 2 April 2014.

[4] County of Los Angeles, Department of Regional Planning. 1980. *County of Los Angeles General Plan*.

> HPOZs, commonly known as historic districts, provide for review of proposed exterior alterations and additions to historic properties within designated districts.

Community Plan Area: Central City and Central City North. The project site is located within the Central City Community Plan Area (CPA); the area of potential indirect impacts stretches across Cesar E. Chavez Avenue to include the Central City North CPA. (Cesar E. Chavez Avenue marks the boundary between these two CPAs.) The City of Los Angeles has 35 community plans, which define goals and policies tailored to each CPA. The project site also falls within the Chinatown Project Area, which was created by the City of Los Angeles City Council in 1980 to "address the need for affordable housing for the area's senior citizens and to develop public parking to assist the ailing retail businesses" of the area.[5]

According to the Community Plan for the Central City CPA, one of the central issues for development in the historic core is the need to "preserve and rehabilitate historic areas with sensitivity to their architectural integrity."[6] In addition to offering a section on "Urban Design," the Central City Community Plan includes the requirements and recommendations described in "Downtown Design Guide, City of Los Angeles: Urban Design Standards and Guidelines" (Downtown Design Guide).[7] The purpose of the Downtown Design Guide is to help integrate "urban design standards and guidelines with new street and sidewalk standards for Downtown."[8] The Downtown Design Guide focuses

> on the relationship of buildings to the street, including sidewalk treatment, character of the building as it adjoins the sidewalk, and connections to transit… The successful treatment of these key features, coupled with particular attention to the details of a project in the first 30-40 vertical feet, forms the basis for providing high quality development at a human scale.[9]

Additionally, in 2002 the Los Angeles Conservancy, with funding provided by the Getty Grant Program, prepared the "Historic Downtown Los Angeles Design Guidelines."[10] While the Central City Community Plan describes these guidelines as voluntary, they provide further guidance for projects located within the historic core of Los Angeles. This guidance expands upon and includes a neighborhood-specific interpretation of the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

The project area also falls within the Historic Cultural Neighborhood Council, which consists of six historic communities in the core of Los Angeles, and the Downtown Los Angeles Neighborhood Council, whose Planning and Land Use Committee developed principles and guidelines for proposed projects to help ensure the retention of the neighborhood character.

In terms of the Central City North CPA, the area is unique for being adjacent to the home of El Pueblo de los Angeles and Olvera Street. Considered together, this neighborhood "encompasses Chinatown, parts of Little Tokyo and El Pueblo (beginning just east of Olvera Street), symbolic cultural centers of three prominent ethnic groups in the city, and the birthplace of Los Angeles."[11]

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[5] City of Los Angeles, Department of Planning. 2000. *Central City North Community Plan*.

[6] City of Los Angeles, Department of Planning. 2009. *Central City Community Plan*, p. I-16.

[7] City of Los Angeles, Department of Planning. 2009. *Central City Community Plan, Downtown Design Guide, City of Los Angeles: Urban Design Standards and Guidelines*.

[8] City of Los Angeles, Department of Planning. 2009. *Central City Community Plan*, Section 5, "Urban Design," p. V-1.

[9] City of Los Angeles, Department of Planning. 2009. *Central City Community Plan, Downtown Design Guide, City of Los Angeles: Urban Design Standards and Guidelines*, p. 4.

[10] Architectural Resources Group, Los Angeles Conservancy. July 2002. *Historic Downtown Los Angeles Design Guidelines*, July 2002. On file at SWCA Environmental Consultants, Pasadena, California.

[11] City of Los Angeles, Department of Planning. 2000. *Central City North Community Plan*, p. III-3.

The Community Plans for Central City and Central City North define the city's objectives and policies, including design guidelines, for the area. Several of goals and policies relate to historic resources insofar as their purpose is to "ensure that a project…is designed in harmony with the surrounding neighborhood," thereby helping maintain the character of existing neighborhoods, including adjacent historically significant properties and districts, and minimizing or mitigating indirect impacts.

In the case of both the Central City and Central City North Community Plans, relevant policies are largely in keeping with recommendations for new construction made in *the Secretary of the Interior's Standards for the Treatment of Historic Properties*, with an eye toward compatibility and retaining neighborhood character while also providing for new development.

IV. METHODS

Overview

The following presents an overview of the multi-phased methodology used to identify cultural resources within the proposed project site and to analyze any potential significant adverse impacts. Records searches were conducted in order to identify previously documented cultural resources. Site inspections and intensive-level surveys were also performed. Additional background and site-specific research were conducted in order to evaluate cultural resources within their historic context. The NRHP, CRHR, and City and County of Los Angeles criteria were used.

The analysis and discussion of potential impacts to cultural resources were made pursuant to CEQA Guidelines, Section 15126.2, which states that "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

Figure 25 shows the Area of Potential Indirect Impacts considered for potential indirect adverse impacts to historic resources. In addition to the project site itself, this study also considered built environment resources on adjacent lots.

Literature Search

On March 3, 2014, staff at the South Central Coastal Information Center (SCCIC) conducted a California Historical Resources Information System (CHRIS) records search in support of the project. The search included any previously recorded cultural resources and investigations within the project area and surrounding area. Because the project is located in the downtown area of Los Angeles, which contains a high density of cultural resources and has been studied extensively, a selective search radius was determined necessary to identify information that was both focused and relevant to the current project. As such, the search area was limited to the project area and a 0.4-km (0.25-mile) radius for cultural resources. In addition to official maps and records, the following sources of information were consulted as part of the record search:

- NRHP
- California State Historic Property Data Files
- California State Historic Resources Inventory
- CRHR
- California State Historical Landmarks
- California Points of Historical Interest
- Office of Historic Preservation Archaeological Determinations of Eligibility
- City of Los Angeles Historic-Cultural Monuments List

Cultural Resources Survey

SWCA Cultural Resources Specialist Chris Millington conducted a cultural resources survey of the project area on March 19, 2014. The intensive-level survey was accomplished by walking the entire project area with the exception of the hillside immediately south of North Hill Street, which at the time of the survey was covered with thick ivy. Mr. Millington examined the ground surface for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock [FAR]), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes,

foundations) or historic artifacts (e.g., metal, glass, ceramics). Ground disturbances such as burrows, cut banks, and drainages were visually inspected. On April 16, 2014, SWCA Cultural Resources Specialist Debi Howell-Ardila conducted a follow-up survey to assess the potential for indirect impacts to historic resources in the proposed project area and surrounding neighborhood; in May and June 2014, Ms. Howell-Ardila also conducted additional reconnaissance surveys of comparable areas with recent in-fill projects of similar massing and character, adjacent to historic districts.

The intensive-level survey of the built environment included an examination of any buildings, structures, and objects in the project area. Historic research was conducted to confirm the dates of construction and any exterior alterations. All information obtained was incorporated/considered during the process of evaluating the property for NRHP, CRHR, and local-level eligibility. Areas that may be identified as historic districts or historic landscapes were also taken into consideration.

Mr. Millington and Ms. Howell-Ardila documented their fieldwork using field notes, digital photography, close-scale field maps, and aerial photographs. All field notes, photographs, and records related to the current study are on file at SWCA's Pasadena office.

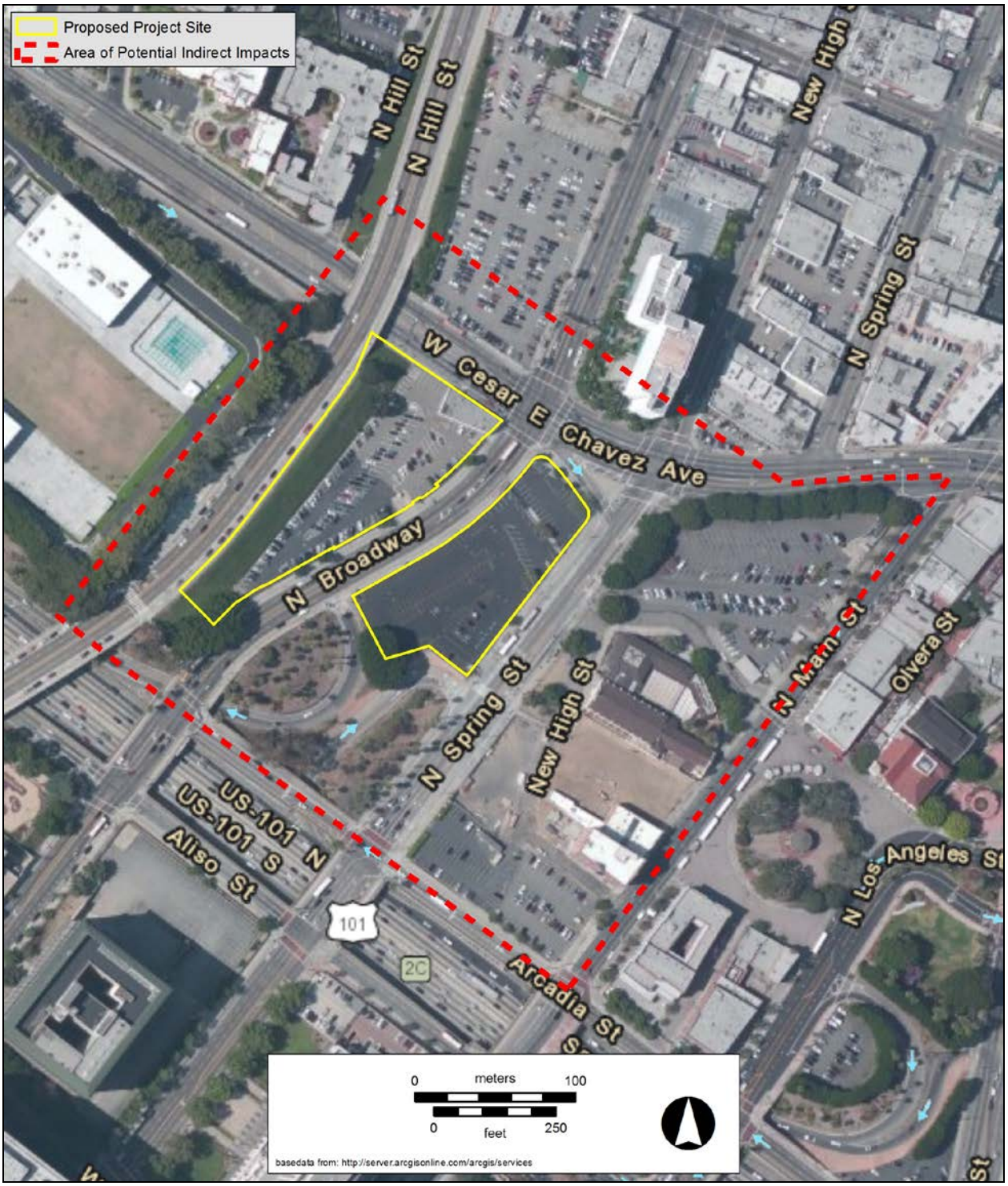

Figure 4. Project Area and Area of Potential Indirect Impacts. Source: SWCA Environmental Consultants, Pasadena, California, 2014.

V. SETTING

Prehistoric Overview

The project area is in the Los Angeles Basin, a broad, level plain defined by the Pacific Ocean to the west, the Santa Monica Mountains and Puente Hills to the north, and the Santa Ana Mountains and San Joaquin Hills to the south. This extensive alluvial wash basin is filled with Quaternary alluvial sediments.[12] It is drained by several major watercourses, including the Los Angeles, Rio Hondo, San Gabriel, and Santa Ana Rivers. The project site is located at an elevation ranging from approximately 301 to 362 feet above mean sea level.

The project area is located just south of the confluence of the Los Angeles River (LA River) and the Arroyo Seco. Largely due to the reliable flow of water from these sources, the location has been ideal for human habitation, both before and after the arrival of European settlers. Historically, the LA River shifted course with frequency across the basin, flooding the project area through the 19th century. The now-channelized course of the LA River is located approximately 0.75 mile east of the project site.

Prehistoric Overview. Numerous chronological sequences have been devised to aid in understanding cultural changes in Southern California. Building on early studies and focusing on data synthesis, a prehistoric chronology was developed for the Southern California coastal region that is still widely used today and is applicable to near-coastal and many inland areas.[13,14] Four periods are presented in the prehistoric sequence: Early Man, Milling Stone, Intermediate, and Late Prehistoric. Although the synthesis initially lacked chronological precision due to a paucity of absolute dates[15,] this situation has been alleviated by the availability of thousands of radiocarbon dates that have been obtained by southern California researchers in the last three decades.[16] Several revisions have been made to the synthesis using radiocarbon dates and projectile point assemblages.[17, 18, 19] The following provides a summary of prehistoric chronological sequences for Southern California coastal and near-coastal areas:

Horizon I – Early Man (ca. 10,000–6,000 B.C.). The earliest accepted dates for archaeological sites on the southern California coast are from two of the northern Channel Islands, located off the coast of Santa Barbara. On San Miguel Island, Daisy Cave clearly establishes the presence of people in this area about

[12] State of California, Resources Agency. 1991. *Geologic Map of California, Los Angeles Sheet*. Sacramento, CA: Department of Conservation, Division of Mines and Geology.

[13]Wallace, W.J. 1955. "A Suggested Chronology for Southern California Coastal Archaeology," *Southwestern Journal of Anthropology* 11(3):214–230.

[14]Wallace, W.J. 1978. "Post-Pleistocene Archaeology, 9000 to 2000 B.C., in California," in *Handbook of North American Indians*, vol. 8, Heizer, Robert F., volume editor, Sturtevant ,William G., general editor, pp. 25–36. Washington, D.C. Smithsonian Institution.

[15]Moratto, M.J. 1984. *California Archaeology*. New York, NY: Academic Press.

[16]Byrd, Brian F., and L. Mark Raab. 2007. "Prehistory of the Southern Bight: Models for a New Millennium," *California Prehistory*, Terry L. Jones and Kathryn A. Klar, ed., p. 217. New York: AltaMira Press.

[17]Koerper, Henry C., and Christopher E. Drover. 1983. "Chronology Building for Coastal Orange County: The Case from CA-ORA-119-A," *Pacific Coast Archaeological Society Quarterly* 19(2):1–34.

[18]Koerper, Henry C., Roger D. Mason, and Mark L. Peterson. 2002. "Complexity, Demography, and Change in Late Holocene Orange County," *Catalysts to Complexity, Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp. 63–81. *Perspectives in California Archaeology* Vol. 6. Costen Institute of Archaeology, University of California, Los Angeles.

[19]Mason, Roger D., and Mark L. Peterson. 1994. *Newport Coast Archaeological Project: Newport Coast Settlement Systems–Analysis and Discussion*, Vol. 1, part 1 of 2. Prepared by the Keith Companies. Copies on file at the South Central Coastal Information Center, California State University, Fullerton.

10,000 years ago.[20] On Santa Rosa Island, human remains have been dated from the Arlington Springs site to approximately 13,000 years ago.[21] Present-day Orange and San Diego Counties contain several sites dating to 9,000 to 10,000 years ago.[22, 23, 24, 25] Although the dating of these finds remains controversial, several sets of human remains from the Los Angeles Basin (e.g., "Los Angeles Man," "La Brea Woman," and the Haverty skeletons) apparently date to the middle Holocene, if not earlier.[26]

Recent data from Horizon I sites indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas, and a greater emphasis on large-game hunting inland.[27]

Horizon II – Milling Stone (6,000 B.C.–3,000 B.C.). Set during a drier climatic regime than the previous horizon, the Milling Stone Horizon is characterized by subsistence strategies centered on collecting plant foods and small animals. The importance of the seed processing is apparent in the dominance of stone grinding implements in contemporary archaeological assemblages; namely, milling stones (metates) and handstones (manos). Recent research indicates that Milling Stone Horizon food procurement strategies varied in both time and space, reflecting divergent responses to variable coastal and inland environmental conditions.[28]

Horizon III – Intermediate (3,000 B.C.–A.D. 500). The Intermediate Horizon is characterized by a shift toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. An increasing variety and abundance of fish, land mammal, and sea mammal remains are found in sites from this period along the California coast. Related chipped stone tools suitable for hunting are more abundant and diversified, and shell fishhooks became part of the toolkit during this period. Mortars and pestles became more common during this period, gradually replacing manos and metates as the dominant milling equipment, signaling a shift away from the processing and consuming of hard seed resources to the increasing importance of the acorn.[29, 30]

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[20] Erlandson, Jon M. 1991. "Early Maritime Adaptations on the Northern Channel Islands," *Hunter-Gatherers of Early Holocene Coastal California*, J. M. Erlandson and R. Colten, ed., p. 105. Perspectives in California Archaeology, Vol. 1. Los Angeles, CA: Institute of Archaeology, University of California, Los Angeles.

[21] Johnson, J. R., T. W. Stafford, Jr., H. O. Ajie, and D. P. Morris. 2002. "Arlington Springs Revisited," *Proceedings of the Fifth California Islands Symposium*, D. R. Brown, K. C. Mitchell, and H. W. Chaney, ed., pp. 541–545. Santa Barbara, CA: Santa Barbara Museum of Natural History.

[22] Byrd and Raab (2007).

[23] Macko, Michael E. 1998. *The Muddy Canyon Archaeological Project: Results of Phase II Test Excavations and Phase III Data Recovery Excavations at Archaeological Sites within the Crystal Cove Planned Community, Phase IV, Tentative Tract 15447, San Joaquin Hills, Orange County, California*. Report on file, South Central Coastal Information Center, California State University, Fullerton.

[24] Mason, Roger D., and Mark L. Peterson. 1994. *Newport Coast Archaeological Project: Newport Coast Settlement Systems–Analysis and Discussion*, Vol. 1, part 1 of 2. Prepared by the Keith Companies. Copies on file at the South Central Coastal Information Center, California State University, Fullerton.

[25] Sawyer, William A., and Henry C. Koerper. 2006. "The San Joaquin Hills Venus: A Ceramic Figurine from CA-ORA-1405-B," *Contributions from Orange County, Presented in Remembrance of John Peabody Harrington*, Henry C. Koerper, ed., pp. 13–34. *Coyote Press Archives of California Prehistory*, No. 53. Salinas, CA: Coyote Press.

[26] Brooks, Sheilagh, Richard A. Brooks, G. E. Kennedy, J. Austin, James R. Firby, Louis A. Payen, Peter J. Slota, Jr., Christine A. Prior, and R. E. Taylor. 1990. "The Haverty Human Skeletons: Morphological, Depositional, and Geochronological Characteristics," *Journal of California and Great Basin Anthropology* 12(1): pp. 60-83.

[27] Jones, Terry L., Richard T. Fitzgerald, Douglas J. Kennett, Charles H. Miksicek, John L. Fagan, John Sharp, and Jon M. Erlandson. 2002. "The Cross Creek Site and Its Implications for New World Colonization," *American Antiquity* 67:213–230.

[28] Byrd and Raab (2007), p. 220.

[29] Glassow, Michael A., L. Wilcoxon, and J. M. Erlandson. 1988. "Cultural and Environmental Change during the Early Period of Santa Barbara Channel Prehistory," *The Archaeology of Prehistoric Coastlines*, G. Bailey and J. Parkington, ed., pp. 64–77. Cambridge, England: Cambridge University Press.

Horizon IV – Late Prehistoric (A.D. 500–Historic Contact). In the Late Prehistoric Horizon, there was an increase in the use of plant food resources in addition to an increase in land and sea mammal hunting. There was a concomitant increase in the diversity and complexity of material culture during the Late Prehistoric, demonstrated by more classes of artifacts. The recovery of a greater number of small, finely chipped projectile points suggests increased use of the bow and arrow rather than the atlatl (spear thrower) and dart for hunting. Steatite cooking vessels and containers are also present in sites from this time, and there is an increased presence of smaller bone and shell circular fishhooks; perforated stones; arrow shaft straighteners made of steatite; a variety of bone tools; and personal ornaments such as beads made from shell, bone, and stone. There was also an increased use of asphalt for waterproofing and as an adhesive. Late Prehistoric burial practices are discussed in the Ethnographic Overview section below.

By A.D. 1,000, fired clay smoking pipes and ceramic vessels were being used at some sites.[31, 323334] The scarcity of pottery in coastal and near-coastal sites implies that ceramic technology was not well developed in that area, or that ceramics were obtained by trade with neighboring groups to the south and east. The lack of widespread pottery manufacture is usually attributed to the high quality of tightly woven and watertight basketry that functioned in the same capacity as ceramic vessels.

During this period, there was an increase in population size accompanied by the advent of larger, more permanent villages.[35] Large populations and, in places, high population densities are characteristic, with some coastal and near-coastal settlements containing as many as 1,500 people. Many of the larger settlements were permanent villages in which people resided year-round. The populations of these villages may have also increased seasonally.

The period between A.D. 500 and European contact is divided into three regional patterns: Chumash (Santa Barbara and Ventura counties), Takic/Numic (Los Angeles, Orange, and western Riverside counties), and Yuman (San Diego County). The seemingly abrupt introduction of cremation, pottery, and small triangular arrow points in parts of modern-day Los Angeles, Orange, and western Riverside Counties at the beginning of the Late Prehistoric period is thought to be the result of a Takic migration to the coast from inland desert regions. Modern Gabrielino/Tongva, Juaneño, and Luiseño people in this region are considered to be the descendants of the Uto-Aztecan, Takic-speaking populations that settled along the California coast during this period.

Ethnographic Overview

The project area is located in the heart of Gabrielino/Tongva territory.[36,37] Surrounding native groups included the Chumash and Tatataviam/Alliklik to the north, the Serrano to the East, and the

[30]True, Delbert L. 1993. "Bedrock Milling Elements as Indicators of Subsistence and Settlement Patterns in Northern San Diego County, California," *Pacific Coast Archaeological Society Quarterly* 29(2):1–26.

[31]Drover, Christopher E. 1971. "Three Fired-Clay Figurines from 4-Ora-64, Orange County, California," *Pacific Coast Archaeological Society Quarterly* 7(4):73–86.

[32]Drover, Christopher E., 1971, "Early Ceramics from Coastal Southern California," *Journal of California Anthropology* 2:101–107.

[33]Meighan, Clement W. 1954. "A Late Complex in Southern California Prehistory," *Southwestern Journal of Anthropology* 10(2):215–227.

[34]Warren, Claude N., and D. L. True. 1961. "The San Dieguito Complex and its Place in California Prehistory," *Archaeological Survey Annual Report* for 1960-1961, pp. 246–337. Los Angeles, CA: University of California, Los Angeles.

[35]Wallace, W.J. 1955. *A Suggested Chronology for Southern California Coastal Archaeology. Southwestern Journal of Anthropology* 11(3):223.

[36]Bean, Lowell J., and Charles R. Smith. 1978. "Gabrielino," *California*, Robert F. Heizer, ed., pp. 538–549. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor. Washington, DC: Smithsonian Institution Press.

Luiseño/Juaneño to the south. There is well-documented interaction between the Gabrielino and many of their neighbors in the form of intermarriage and trade.

The name Gabrielino (sometimes spelled Gabrieleno or Gabrieleño) denotes those people who were administered by the Spanish from Mission San Gabriel. By the same token, Native Americans in the sphere of influence of Mission San Fernando were historically referred to as Fernandeño.[38] This group is now considered to be a regional dialect of the Gabrielino language, along with the Santa Catalina Island and San Nicolas Island dialects.[39] In the post-Contact period, Mission San Gabriel included natives of the greater Los Angeles area, as well as members of surrounding groups such as Kitanemuk, Serrano, and Cahuilla. There is little evidence that the people we call Gabrielino had a broad term for their group; rather, they identified themselves as an inhabitant of a specific community through the use of locational suffixes (e.g., a resident of Yaanga was called a Yabit, much the same way that a resident of New York is called a New Yorker).[40]

Native words that have been suggested as labels for the broader group of Native Americans in the Los Angeles region include Tongva (or Tong-v) and Kizh (Kij or Kichereno); although there is evidence that these terms originally referred to local places or smaller groups of people within the larger group that we now call Gabrielino.[41] Many present-day descendants of these people have taken on Tongva as a preferred group name because it has a native rather than Spanish origin and one group of descendants prefers the term Kizh.[42] The term Gabrielino/Tongva, which combines the most commonly used group names, is used in the remainder of this study to designate native people of the Los Angeles Basin and their descendants.

Gabrielino/Tongva lands encompassed the greater Los Angeles Basin and three Channel Islands: San Clemente, San Nicolas, and Santa Catalina. Their mainland territory was bounded on the north by the Chumash at Topanga Creek, the Serrano at the San Gabriel Mountains in the east, and the Juaneño on the south at Aliso Creek.[43,44]

The Gabrielino/Tongva language, as well as that of the neighboring Juaneño/Luiseño, Tatataviam/Alliklik, and Serrano, belongs to Takic branch of the Uto-Aztecan language family, which can be traced to the Great Basin area.[45] This language family's origin differs substantially from that of the Chumash to the north and the Ipai, Tipai, and Kumeyaay farther south. The language of the Ipai, Tipai, and Kumeyaay is derived from the California-Delta branch of the Yuman-Cochimi language family, which originated in the American Southwest.[46] The Chumash language is unlike both the Yuman-

[37]Kroeber, Alfred J. 1976 [1925]. *Handbook of the Indians of California*. Bulletin 78, Bureau of American Ethnology, Smithsonian Institution. Government Printing Office, Washington, D.C. Reprinted 1976 by Dover Publications, Inc., New York.

[38]Ibid.

[39]Bean and Smith (1978).

[40]Dakin, Susanna Bryant. 1978 [1939]. *A Scotch Paisano in Old Los Angeles. Hugo Reid's Life in California, 1832-1852 Derived from His Correspondence*, p. 222. University of California Press, Berkeley, Los Angeles, and London.

[41]Heizer, Robert F. 1968. "Village Names in Twelve California Mission Records," Reports of the University of California, *Archaeological Survey*, no. 74.

[42]King, Chester D. 1994. *Native American Placenames in the Santa Monica Mountains National Recreation Area, Agoura Hills*. Topanga Anthropological Consultants, California.

[43]Bean and Smith (1978).

[44]Kroeber (1976 [1925]), p. 636.

[45]Mithun, Marianne. 2004 [1999]. *Languages of Native North America*, pp. 533-544. New York, NY: Cambridge University Press.

[46]Ibid, p. 577.

Cochimi and Uto-Aztecan families, and may represent a separate lineage.[47] Linguistic analysis suggests that Takic-speaking immigrants from the Great Basin area began moving into southern California around 500 B.C.[48] This migration may have displaced both Chumashan- and Yuman-speaking peoples, but the timing and extent of the migrations and their impact on indigenous peoples is not well understood. The Gabrielino/Tongva language consisted of two main dialects, Eastern and Western; the Western included much of the coast and the Channel Island population.[49] Lands of the Western group encompassed much of the western Los Angeles Basin and San Fernando Valley, northward along the coast to the Palos Verdes Peninsula.[50]

Gabrielino/Tongva society was organized along patrilineal non-localized clans, a characteristic Takic pattern. Clans consisted of several lineages, each with their own ceremonial leader. The chief, or tómyaar, always came from the primary lineage of the clan/village. One or two clans generally made up the population of a village. Even though the Gabrielino/Tongva did not have a distinctly stratified society, there were two general classes of individuals: elites and commoners. The elites consisted of primary lineage members, other lineage leaders (who maintained a separate ceremonial language), the wealthy, and the elite families of the various villages who commonly married among themselves. The commoner class contained those from "fairly well-to-do and long-established lineages."[51] A third, lower class consisted of slaves taken in war and individuals, unrelated to the inhabitants, who drifted into the village.

The Gabrielino/Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000,[52] but recent ethnohistoric work suggests that a number approaching 10,000 seems more likely.[53] Several Gabrielino/Tongva villages appear to have served as trade centers, due in large part to their centralized geographic position in relation to the southern Channel Islands and to other tribes. These villages maintained particularly large populations and hosted annual trade fairs that would bring their population to 1,000 or more for the duration of the event.[54]

Houses constructed by the Gabrielino/Tongva were large, circular, domed structures made of willow poles thatched with tule that could hold up to 50 people.[55] Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probably communal granaries. Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to Gabrielino/Tongva villages.[56]

The Gabrielino/Tongva subsistence economy was centered on gathering and hunting. The surrounding environment was rich and varied, and the tribe exploited mountains, foothills, valleys, and deserts as well as riparian, estuarine, and open and rocky coastal eco-niches. As with most native Californians, acorns were the staple food (an established industry by the time of the early Intermediate period). Acorns were

[47]Ibid, p. 390.

[48]Kroeber (1976 [1925]), p. 579.

[49]King, Chester D. 2004. *Japchibit Ethnohistory*. Angeles National Forest, Topanga Anthropological Consultants, California.

[50]McCawley, William. 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles*, p. 47. Banning, CA: Malki-Ballena Press.

[51]Bean and Smith (1978), p. 543.

[52]*Ibid*, 540.

[53]O'Neil (2002).

[54]McCawley (1996), pp. 113-114.

[55]Bean and Smith (1978).

[56]McCawley (1996), p. 27.

supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Fresh- and saltwater fish, shellfish, birds, reptiles, and insects as well as large and small mammals were also consumed.[57,58,59]

A wide variety of tools and implements was employed by the Gabrielino/Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Many plant foods were collected with woven seed beaters, several forms of burden baskets, carrying nets, and sharpened digging sticks, sometimes with stone weights fitted onto them. Groups residing near the ocean used ocean-going plank canoes (known as a ti'at) and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands. The ocean-going canoes were capable of holding six to 14 people and were also used for travel and trade between the mainland and the Channel Islands. The tule balsa canoes were used for near-shore fishing.[60,61]

Gabrielino/Tongva people processed food with a variety of tools, including portable and bedrock mortars, pestles, basket hopper mortars, manos and metates, hammerstones and anvils, woven strainers and winnowers, leaching baskets and bowls, woven parching trays, knives, bone saws, and wooden drying racks. Food was consumed from a number of woven and carved wood vessels. The ground meal and unprocessed hard seeds were stored in large, finely woven baskets, and the unprocessed acorns were stored in large granaries woven of willow branches and raised off the ground on platforms. Santa Catalina Island steatite was used to make comals, ollas, and cooking vessels that would not crack after repeated firings. In addition to cooking vessels, steatite was used to make effigies, ornaments, and arrow straighteners.[62,63,64]

The Gabrielino/Tongva participated in an extensive exchange network, trading coastal goods for inland resources. They exported Santa Catalina Island steatite products, roots, seal and otter skins, fish and shellfish, red ochre, and lead ore to neighboring tribes, as well as people as far away as the Colorado River. In exchange they received ceramic goods, deer skin shirts, obsidian, acorns, and other items. This burgeoning trade was facilitated by the use of craft specialists, a standard medium of exchange (Olivella bead currency), and the regular destruction of valuables in ceremonies that maintained a high demand for these goods.[65]

At the time of Spanish contact, the basis of Gabrielino/Tongva religious life was the Chinigchinich cult, which centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions, and also taught the people how to dance, the primary religious act for this society. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws.[66] The Chinigchinich religion seems to have been relatively new when the Spanish arrived. It was

[57]Bean and Smith (1978), p. 546.

[58]Kroeber (1976 [1925]), pp. 631-632.

[59]McCawley (1996), pp. 128-131.

[60]Blackburn, Thomas. 1963. *Ethnohistoric Descriptions of Gabrielino Material Culture.* Annual Report, Archaeological Survey. Los Angeles, CA: University of California, Los Angeles.

[61]McCawley (1996), pp. 117-127.

[62]*Ibid*, 129-138

[63]Blackburn (1963).

[64]Kroeber (1976 [1925]), pp. 631-639.

[65]McCawley (1996), pp. 112-115.

[66]Kroeber (1976 [1925]), pp. 631-638.

spreading south into the Southern Takic groups even as Christian missions were being built, and may represent a mixture of native and Christian belief and practices.[67]

Deceased Gabrielino/Tongva were either buried or cremated, with inhumation reportedly being more common on the Channel Islands and the neighboring mainland coast, and cremation predominating on the remainder of the coast and in the interior.[68, 69] Remains were buried in distinct burial areas, either associated with villages[70] or without apparent village association.[71, 72] Cremation ashes have been found in archaeological contexts buried within stone bowls and in shell dishes,[73] as well as scattered among broken ground stone implements.[74,75] Archaeological data such as these correspond with ethnographic descriptions of an elaborate mourning ceremony that included a wide variety of offerings, including seeds, stone grinding tools, otter skins, baskets, wood tools, shell beads, bone and shell ornaments, and projectile points and knives.[76] Offerings varied with the sex and status of the deceased.[77, 78, 79] At the behest of the Spanish missionaries, cremation essentially ceased during the post-Contact period.[80] For inhumations, the deceased was wrapped in a covering, bound head to foot, with hands crooked upon their breast.[81] Archaeological examples of human remains in the Gabrielino/Tongva region dating to the Late Prehistoric and protohistoric periods are dominated by flexed or extended inhumations, with a smaller number of cremations. Grave goods associated with burials/cremations varied in quantity and content and included projectile points, beads, steatite objects, and asphaltum.[82] Well-preserved burial features have evidence of wrappings of net, hide blanket or cape, or a mat of tule reeds or sea grass.[83] At least one

[67]McCawley (1996), pp. 143-144.

[68]Harrington, John P. 1942. "Culture Element Distributions: XIX, Central California Coast," *Anthropological Records* 7:1. Berkeley, CA: University of California Press, Berkeley.

[69]McCawley (1996), p. 157.

[70]Altschul, Jeffrey H., and John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, et al. 2007. "Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles." In *Proceedings of the Society for California Archaeology*, Vol. 20, pp. 34–42.

[71]Applied Earthworks, Inc. 1999. "The Metropolitan Water District of Southern California Headquarters Facility Project," *The People of Yaanga?: Archaeological Investigations at CA-LAN-1575/H*. Report on file, South Central Coastal Information Center, California State University, Fullerton.

[72]Frazier, Sara. 2000. "Protohistoric Burial Practices of the Gabrielino as Evidenced by the Comparison of Funerary Objects from Three Southern California Sites." In *Proceedings of the Society for California Archaeology*, Vol. 13, Judyth Reed, Greg Greenway, and Kevin McCormick, ed., pp. 169–176. Fresno, CA: Society for California Archaeology.

[73]Ashby, G.E., and J. W. Winterbourne. 1966. "A Study of Primitive Man in Orange County and Some of Its Coastal Areas," *Pacific Coast Archaeological Society Quarterly* 2(1):5–52.

[74]Altschul, et al. (2007).

[75]Cleland, James H., Andrew L. York, and Lorraine M. Willey. 2007. *Piecing Together the Prehistory of Landing Hill: A Place Remembered.* EDAW Cultural Publications No. 3. San Diego, CA: EDAW, Inc.

[76]Boscana, Gerónimo. 1846. *Chinigchinich: A Historical Account of the Origin, Customs, and Traditions of the Indians at the Missionary Establishment of St. Juan Capistrano, Alta-California; Called the Acagcahemem Nation*, p. 314. New York, NY: Wiley & Putnam.

[77]Dakin (1978 [1939]), pp. 234-235.

[78]Johnston, Bernice E., 1962, *California's Gabrielino Indians.* Frederick Webb Hodge Anniversary Publication Fund 8, Southwest Museum, Los Angeles 52-54.

[79]McCawley (1996), pp. 155-165.

[80]Ibid, p. 157.

[81]Dakin (1978 [1939]), p. 234.

[82]Frazier (2000), p. 175.

[83]McCawley (1996), p. 157.

formal grave marker, an elaborately etched sandstone slab, was reported at a site between Los Angeles and the coast, near San Pedro, in 1885.[84]

Yaanga and Other Native American Communities in Los Angeles. Ethnohistoric data indicate that the Gabrielino ethnographic village of *Yaanga* (also spelled *Yang-na*) was originally located in or near the Pueblo of Los Angeles, on the west bank of the LA River. In 1852, Hugo Reid indicated that Yang-na and Los Angeles were one and the same.[85] Gabrielino informant José Zalvidea told ethnographer J.P. Harrington that Yaanga "is the old name of the site of the Los Angeles plaza" and the name means "it is alkali, like the earth is salty."[86] Alternate names associated with the community include *Iyakha* (meaning "poison oak" in Luiseño) and *Wenot* (meaning "river" in Gabrielino).[87, 88]

The village and its inhabitants were described as follows by Juan Crespi, a member of the 1769 Portolá expedition[89]:

> *This plain where the [Los Angeles] river runs is very extensive. It has good land for planting all kinds of grain and seeds, and is the most suitable site of all that we have seen for a mission, for it has all the requisites for a large settlement. As soon as we arrived about eight heathen from a good village came to visit us; they live in this delightful place among the trees on the river. They presented us with some baskets of pinole made from seeds of sage and other grasses. Their chief brought some strings of beads made of shells, and they threw us three handfuls of them. Some of the old men were smoking pipes well made of baked clay and they puffed at us three mouthfuls of smoke. We gave them a little tobacco and glass beads, and they went away well pleased.*

This initial mutual good will disappeared with the founding of the Pueblo of Los Angeles on the site, and the community of Yaanga was forcibly relocated at least twice during the early historic period, occupying several locations on the edge of town during the early 1800s. It was reportedly moved to the corner of Commercial and Alameda Streets in 1836 and given the name *Rancheria de los Poblanos*, accepting ex-neophytes from recently shuttered missions. The village was moved a second time in 1845 to the east side of the river, taking the name *Pueblito*, and it was finally razed in 1847.[90, 91] The community of *Geveronga*, which contributed 31 neophytes to the San Gabriel Mission between 1788 and 1809, may have been located nearby.[92]

The precise location of Contact era (late 17th century) Native American communities within downtown Los Angeles, including Yaanga, Geveronga, and related settlements, is unclear. Historical records place Yaanga in the vicinity of the pueblo plaza, although historians and archaeologists have presented multiple possible village locations in this general area. Like the plaza itself, it is likely that the village was

[84]Blackburn (1963), p. 35.

[85]Dakin (1978 [1939]), p., 220.

[86]McCawley (1996), p. 57.

[87]*Ibid.*

[88]Johnston (1962).

[89]Bolton, H. Eugene. 1927. *Fray Juan Crespi: Missionary Explorer on the Pacific Coast, 1769-1774.* University of California Press, Berkeley.

[90]McCawley (1996), p. 202.

[91]Singer, Clay A. 1981. *Preliminary Historic Archaeological Investigations at the Los Angeles Plaza Church*, p. 89. California State University Northridge Archaeological Research Center, Department of Anthropology.

[92]McCawley (1996), p. 57.

relocated from time to time due to major shifts of the LA River during wet years. An exhaustive review of the potential locations identified them to be mostly within several blocks of the current plaza. It was concluded that "in all probability *Yangna* lay scattered in a fairly wide zone along the whole arc [from the base of Fort Moore Hill to Union Station], and its bailiwick included as well seed-gathering grounds and oak groves where seasonal camps were set up." This arc includes all of the current plaza area.

Little direct, indisputable archaeological evidence for this village has been produced to date. Archaeological materials reportedly were unearthed during the construction of Union Station in 1939 and "considerably more" during the rebuilding of the Bella Union Hotel in 1970 (on the 300 block of N. Main Street, two blocks of the project's Area of Potential Effect [APE]).[93, 94] Contact period Native American burials identified immediately south of Union Station (CA-LAN-1595/H; see Nearby Archaeological Sites below) are contemporary with Yaanga, but excavation of these did not reveal archaeological deposits that were indicative of a village, and it is unclear whether this cemetery was adjacent to or affiliated with Yaanga.[95] The preponderance of the available evidence indicates that one or more early historic Native American communities were situated west of the LA River in the vicinity of the current plaza site; the precise location of these communities remains unknown, however, and it is likely that at least some of the archaeological deposits associated with these communities have been removed by floods and construction activities in the years since their occupation.

Historic Overview

The post-Contact history of California is divided into three periods that are defined by the ruling national government: the Spanish period (1769–1822), the Mexican period (1822–1848), and the American period (1848–present). Each period is briefly described below. Some chronologies include the Mission period (1769–1834), defined by the active span of those Spanish, and later Mexican, Catholic institutions. The Protohistoric or Contact period are alternate names for the era of initial interaction between Native Americans and European explorers and settlers, ranging from 1542 through the early 1800s in outlying areas, where a mixture of native and non-native cultural traits can be observed archaeologically.

Spanish Period (1769–1822)

The first Europeans to observe what became southern California were members of the 1542–1543 expedition of Juan Rodriguez Cabrillo. When sailing past Santa Monica Bay, Cabrillo noted the numerous campfires of the Gabrielino/Tongva and thus named the area the Bay of Smokes. Cabrillo and other early explorers sailed along the coast and made limited expeditions into Alta (upper) California between 1529 and 1769. Although Spanish, Russian, and British explorers briefly visited Alta California during this nearly 250-year span, they did not establish permanent settlements.

Gaspar de Portolá and Franciscan Father Junipero Serra established the first Spanish settlement in Alta California at San Diego in 1769. Mission San Diego de Alcalá was the first of 21 missions built by the Spanish between 1769 and 1823. Portolá continued north, passing through the project area on August 2, 1769, and reaching San Francisco Bay on October 31. The process of converting the local Native American population to Christianity through baptism and relocation to mission grounds was begun in this region by the Franciscan padres at the San Gabriel Mission, which was established in 1771.[96] The San

[93]Johnston (1962), p. 121.

[94]Robinson, W. W. 1979. *Land in California: The Story of Mission Lands, Ranchos, Squatters, Mining Claims, Railroad Grants, Land Scrip, Homesteads*, p. 12. Berkeley, CA: University of California Press, Berkeley.

[95]Applied Earthworks, Inc. (1999), pp. 154-159.

[96]Engelhardt, Zephyrin. 1927a. *San Gabriel Mission and the Beginning of Los Angeles*. Mission San Gabriel, San Gabriel, California.

Fernando Mission was founded 26 years later, its location chosen as a stopping point between the San Gabriel and San Buenaventura missions.[97] Most Native Americans from the Los Angeles Basin were persuaded to settle in the vicinity of the two missions. These included the Eastern Gabrielino of the plains as far south as the Santa Ana River and west to the Los Angeles River (LA River). The padres also proselytized the Serrano of the San Gabriel and San Bernardino Mountains, as well as the Vanyume Serrano of the Mojave Desert; many of the western Cahuilla in the Coachella and San Jacinto Valley; some Luiseño of the San Jacinto Valley; and Western Gabrielino of the plains west of the LA River, San Fernando Valley, and the southern Channel Islands. The missions were charged with administering to the Native Americans within their areas. Although mission life gave the Native Americans the skills needed to survive in their rapidly changing world, the close quarters and regular contact with Europeans transmitted diseases for which they had no immunity, decimating their populations.[98]

Mexican Period (1822–1848)

After the end of the Mexican Revolution against the Spanish crown (1810–1821), all Spanish holdings in North America (including both Alta and Baja California) became part of the newly formed Mexican Empire, and shortly thereafter, a constitutionally based United Mexican States. Under Mexican rule, the authority of the California missions gradually declined, culminating with their secularization. Events leading up to the secularization of the California missions spanned many years and much political upheaval, after which the Mexican Congress passed the Secularization Act in August 1833. Not only did the action divest the Franciscans of property, it also opened both of the Californias to colonization. The first 10 of the missions were secularized in 1834, San Gabriel among them.

Historic documents suggest that what followed was a period of intrigue, revolution, and lawlessness. With a disruption in trade came an increase in the number of American interlopers. Political resistance erupted on every front as Mexican citizens in California (Californios) vied for control of their ranchos against American intruders and Mexican authority. Although the Mexican government directed that each mission's lands, livestock, and equipment be divided among its neophytes, the majority of these holdings quickly fell into non-Indian hands. As mission landholdings passed into private hands, neophyte workers, who had become dependent on the missions, were left to fend for themselves.

If mission life was difficult for Native Americans, secularization was worse. After two generations of dependence upon the missions, they were suddenly disenfranchised. After secularization, "nearly all of the Gabrielinos went north while those of San Diego, San Luis and San Juan overran this county, filling the Angeles and surrounding ranchos with more servants than were required."[99]

Former mission lands were quickly divided and granted to private citizens for use as agricultural and pastoral land. Most of the land grants to Californios were located inland, a policy intended to increase the population away from the coastal areas where the Spanish settlements were concentrated.[100] John Russell Bartlett, visiting Los Angeles in 1852, reported the following:[101]

> *I saw more Indians about this place (Los Angeles) than in any part of California I had yet visited. They were chiefly mission Indians, i.e., those who had been connected*

[97]Engelhardt, Zephyrin. 1927b. *San Fernando Rey, the Mission of the Valley*. Chicago, IL: Franciscan Herald Press.

[98]McCawley (1996).

[99] Dakin (1978 [1939]), p. 282.

[100]*Ibid*.

[101] Sugranes, Reverend Eugene. 1909. *The Old San Gabriel Mission: Historical Notes Taken from Old Manuscripts and Records Accurately Compiled after Diligent Research by Reverend Eugene Sugranes, C.M.F*. Self-published book, Los Angeles, CA, p. 76.

> *with the mission and had derived their support from them until the suppression of those establishments. They are a miserable, squalid-looking set, squatting or lying about the corners of the streets, with no occupation.*

With no work at the mission, there was a far greater labor force in the region than could be employed.

After years of surreptitious commerce, the first party of American immigrants arrived in Los Angeles in 1841, including William Workman and John Rowland, who soon became influential landowners. As the possibility of a takeover of California by the United States loomed large in the 1840s, the Mexican government increased the number of land grants in an effort to keep the land in Mexican hands.[102] Governor Pío Pico and his predecessors made more than 600 rancho grants between 1833 and 1846, putting most of the state's lands into private ownership for the first time.[103] Trade in the region changed as well. British and American trade displaced supply ships from Mexico and, in 1841, the first party of American immigrants arrived at the Pueblo de Los Angeles.

American Period (1848–Present)

The United States took control of California in 1846, seizing Monterey, San Francisco, San Diego, and Los Angeles with little resistance. Los Angeles soon slipped from American control, however, and needed to be retaken in 1847. Approximately 600 U.S. sailors, marines, Army dragoons, and mountain men converged under the leadership of Colonel Stephen W. Kearney and Commodore Robert F. Stockton in early January of that year to challenge the California resistance, which was led by General Jose Maria Flores. The American party scored a decisive victory over the Californios in the Battle of the Rio San Gabriel and at the Battle of La Mesa the following day, effectively ending the war and opening the door for increased American immigration.[104]

Hostilities officially ended with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for the conquered territory, including California, Nevada, Utah, parts of Colorado, Arizona, New Mexico, and Wyoming. This represented nearly half of Mexico's pre-1846 holdings. California joined the Union in 1850 as the 31st state.[105]

Los Angeles: From Pueblo to City

On September 4, 1781, 44 settlers from Sonora, Mexico, accompanied by the governor, soldiers, mission priests, and several Native Americans, arrived at a site alongside the *Rio de Porciúncula* (later renamed the LA River.[106] They founded a pueblo called *La Reyna de los Angeles*, or the town of the Queen of the Angels (contrary to Weber 1980).[107] The site chosen for the new pueblo was elevated on a broad terrace

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[102] Wilkman, Jon and Nancy Wilkman. 2006. *Picturing Los Angeles*. Salt Lake City, UT: Gibbs Smith.

[103] Gumprecht, Blake. 1999. *The Los Angeles River: Its Life, Death, and Possible Rebirth*. Baltimore, MD: Johns Hopkins University Press.

[104] Harlow, Neal. 1992. *California Conquered: The Annexation of a Mexican Province 1846-1850*. Berkeley, CA: University of California Press, Berkeley.

[105] Wilkman and Wilkman (2006).

[106] Ríos-Bustamante, Antonio. 1992. *Mexican Los Angeles: A Narrative and Pictorial History*. Mountain View, CA: Floricanto Press.

[107] Treutlein, Theodore E. 2004. *Los Angeles, California: The Question of the City's Original Spanish Name. In The Founding Documents of Los Angeles*: A Bilingual Edition, Doyce B. Nunis Jr., ed. Los Angeles, CA: Historical Society of Southern California.

0.5 mile west of the river.[108] By 1786, the area's abundant resources allowed the pueblo to attain self-sufficiency, and funding by the Spanish government ceased.

Less than one month after the pueblo's founding, Los Angeles residents began constructing an extensive water management system. They diverted water from the river (near the present North Broadway bridge) into a ditch named the *Zanja Madre* (mother ditch), which in turn fed numerous smaller zanjas. The city's residents used this water for ranching and agriculture, as well as domestic purposes such as drinking, bathing, and clothes washing.[109] The Los Angeles zanja system was expanded and improved in subsequent decades and remained in use until the early 1900s, as many zanja segments were converted into masonry-lined canals, iron or cement pipes, or brick-lined, subsurface conduits.[110111112]

Efforts to develop ecclesiastical property in the pueblo began as early as 1784 with the construction of a small chapel northwest of the plaza. While little is known about this building, it was located at the pueblo's original central square near the corner of present-day Cesar E. Chavez Avenue and North Broadway.[113, 114] Following continued flooding, however, the pueblo was relocated to its current location on higher ground and the new town plaza soon emerged. *La Iglesia de Nuestra Señora de Los Angeles* (the Church of Our Lady of the Angels, or Plaza Church), along with an affiliated cemetery, was dedicated in 1822.[115]

Alta California became a state in 1821, and the town slowly grew in size as the removal of economic restrictions attracted settlers to Los Angeles. The population continued to expand throughout the Mexican period, and, on April 4, 1850, only two years after the Mexican American War and five months prior to California's earning statehood, the City of Los Angeles was formally incorporated. Los Angeles maintained its role as a regional business center in the early American period and the transition of many former rancho lands to agriculture, as well as the development of citriculture in the late 1800s, further strengthened this status.[116] These factors, combined with the expansion of port facilities and railroads throughout the region, contributed to the real estate boom of the 1880s in Los Angeles.[117, 118]

Los Angeles continued to grow outward from the city core in the 20th century in part due to the discovery of oil and its strategic location as a wartime port. The military presence led to the aviation and eventually aerospace industries having a large presence in the city and region. Hollywood became the entertainment capital of the world through the presence of the film and television industries, and continues to tenuously

[108]Gumprecht (1999).

[109]Newmark, Harris.1977. *Reminiscences of the Fifties. Los Angeles: Biography of a City*, John Caughey and LaRee Caughey, ed., pp. 132–140. Berkeley, CA: University of California Press, Berkeley.

[110]Costello, Julia G., and Larry Wilcoxon. 1978. *An Archaeological Assessment of Cultural Resources in Urban Los Angeles*. Prepared for the City of Los Angeles in connection with construction project La Placita de Dolores, LAN-887. On file at the South Central Coastal Information Center, California State University, Fullerton.

[111]Gumprecht (1999).

[112]Slawson, Dana N. 2006. *Mitigation of Impacts on the Zanja Madre Archaeological Feature, La Placita*. Report prepared by Greenwood and Associates for the Los Angeles Bureau of Engineering. On file at the South Central Coastal Information Center, California State University, Fullerton.

[113]Newcomb, Rexford. 1980. Architectural *Observations (1822)*. In The Old Plaza Church, compiled and edited by Francis J. Weber, pp. 66–70. Leicestershire, England: Libra Press Limited.

[114]Owen, Thomas J. 1960. "The Church by the Plaza: A History of the Pueblo Church of Los Angeles," *The Historical Society of Southern California Quarterly* (March): pp. 5–28.

[115]*Ibid*.

[116]Caughey and Caughey (1977).

[117]*Ibid*.

[118]Dumke, Glenn S. 1944. *The Boom of the Eighties in Southern California*. San Marino, CA: Huntington Library Publications.

maintain that position. With nearly four million residents, Los Angeles is the second largest city in the United States (by population), and it remains a city with worldwide influence, while continuing to struggle with its population's growth and needs.

Historical Development of the Project Area

Located along the southeastern base of Fort Moore Hill, the physical appearance and topography of the project area have changed greatly since Los Angeles was founded in 1781. Early development of the area was dictated by the landform, which historically featured a bluff and steep slopes that extended much further to the south and east. The foot of the hill formed the periphery of the original Pueblo of Los Angeles.[119] The hill is named after Fort Moore, a U.S. Military fortification that was constructed in 1847 during the Mexican-American War.[120] A survey map from 1849 indicates that the fort was situated at the edge of the bluff and most likely located within the western portion of the current project area (Figure 5). During this period, the city expanded primarily to the north and southwest, and little development appears to have occurred within southeastern portion of the project area.

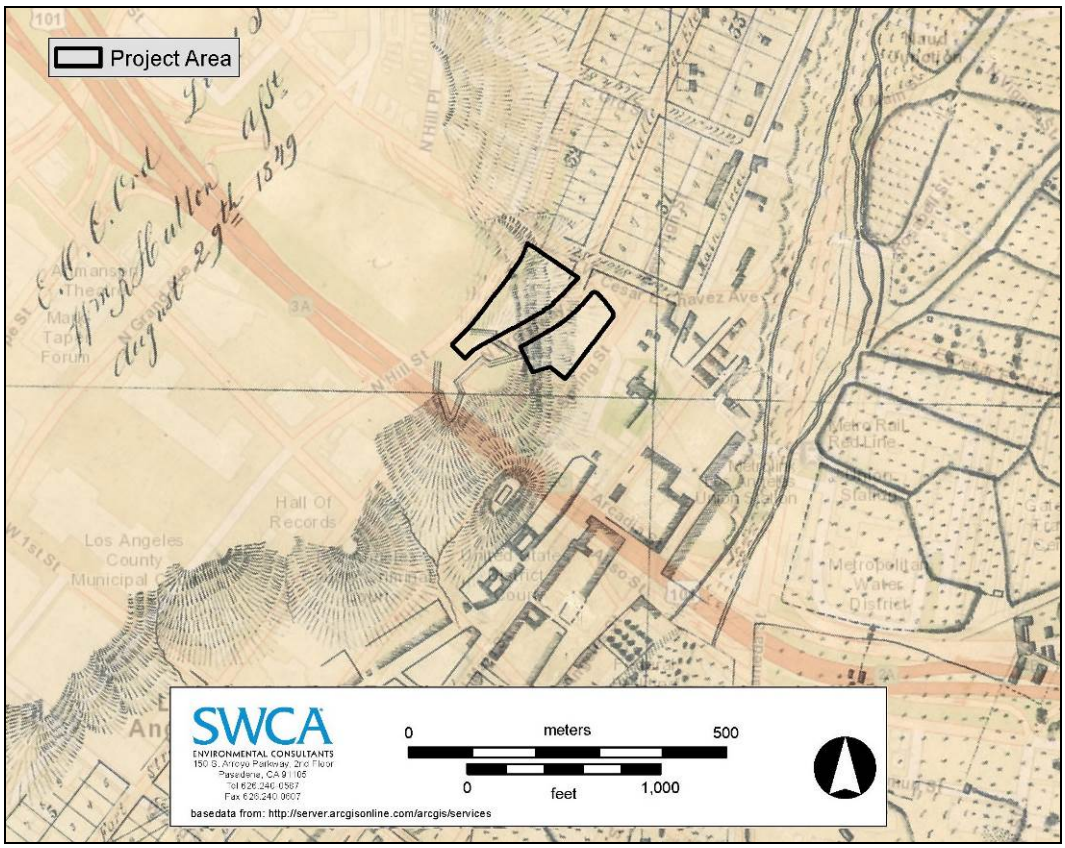


Figure 5. 1849 overlay map identifying Fort Moore in relationship to the current project area (source: Creason 2010:32).

[119]Dietler, John and Steven Treffers. 2012. *Site Context for the LA Plaza de Cultura y Artes Project*, Los Angeles, California. Prepared by SWCA Environmental Consultants, Pasadena, CA, for the County of Los Angeles.

[120]Cortelyou, Spencery V. 1949. *Fort Moore Hill: Part of Historic Site Will Be Razed for Hollywood Freeway*. California Highways and Public Works. May/June:17–21.

The fort was abandoned following the signing of the Treaty of Guadalupe Hidalgo in 1848, and eventually decommissioned in 1853. That same year, Los Angeles' non-Catholic settlers established an unofficial cemetery in the area immediately northwest of the project site. The cemetery was known by a number of names, including City Cemetery, Fort Hill Cemetery, and the cemetery on the hill, and functioned in an informal manner over the subsequent decade.[121] By the early 1860s, however, the public became concerned over its overcrowding, prompting the city to take control of the land and eventually ban future burials in 1879.[122]

Los Angeles underwent a population boom in the 1880s with the arrival of the transcontinental railroad, resulting in an increased demand for housing and the development of new residential neighborhoods away from the city center. In response to the subsequent land boom, the city parceled out residential lots around the cemetery as early as 1884, with no initial effort to remove the burials. The hill soon became one of the premier residential neighborhoods due to its views and location above the city center.[123, 124] A Sanborn Fire Insurance map from 1894 depicts two early Fort Moore Hill residences that were at least partially located within the project boundary, that of eventual *Los Angeles Times* publisher Harry Chandler, and that of Mary Banning, widow of the Port of Los Angeles' founder Phinneas Banning (Figure 6).

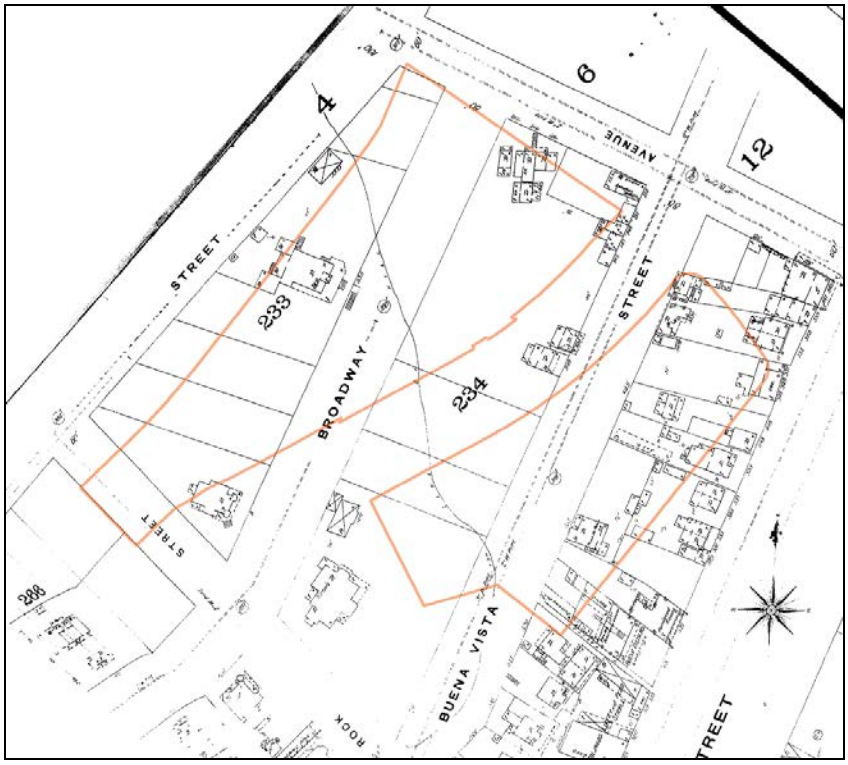


Figure 6. 1894 Sanborn map showing residential development within the project area (source: Los Angeles Public Library).

[121]Gibson, Heather, and Sara Dietler , ed. 2012. *Not Dead but Gone Before: The Archaeology of Los Angeles City Cemetery*. AECOM Cultural Heritage Publication No. 4. Prepared by AECOM for Los Angeles Unified School District, Los Angeles.

[122]Carpenter, Edwin. 1973. *Early Cemeteries of the City of Los Angeles*. Los Angeles, CA: Dawson's Book Shop.

[123]Cortelyou (1949), pp. 17–21.

[124]Gibson and Dietler (2012).

Figure 7. An undated photo of the Harry Chandler Residence, facing north (source: Los Angeles Public Library).

However, while newer development expanded outward during this period, the area along the flat lands to the east of the hill remained characterized by the city's earlier roots. Located within the project site along what was then 412 Sunset Boulevard in 1894, was the Jesus Manzo residence, an adobe home built ca. 1850 by the one of the city's most prominent builders from the mid-19th century.[125] East of the Manzo residence, an 1886 photograph shows a number of other small adobe buildings along the western side of Buena Vista Street, which is no longer extant in the depicted alignment (Figure 8). These would have most likely dated to the Mexican period and were located across Buena Vista Street from a number similar small homes that sat within the north and eastern portions of the project site (Figure 6).

[125] *Los Angeles Times*, 5 August 1934, "Here's What Is Left of Historic Fort Moore Hill."

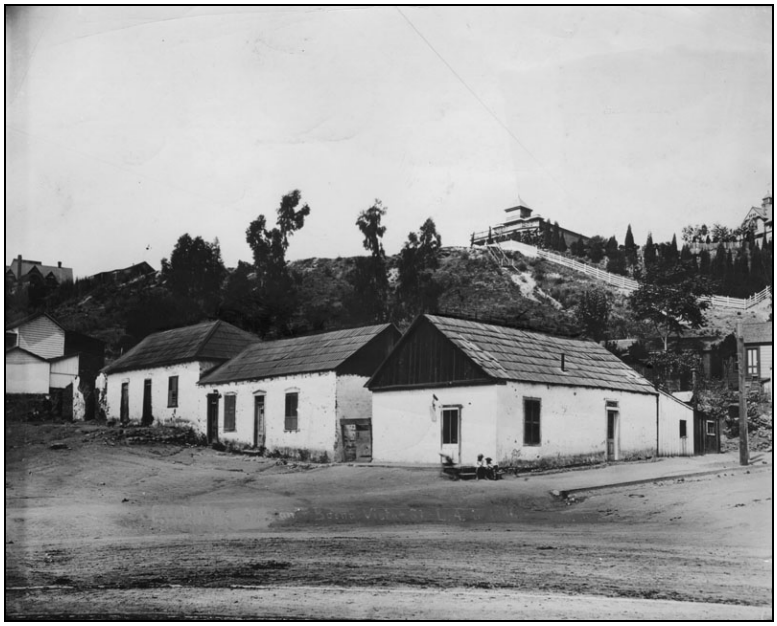


Figure 8. An 1886 image of the southwest intersection of Bellevue Avenue and Buena Vista Street (present day West Cesar E. Chavez Avenue and North Broadway), facing west. Note the Banning Residence in the background (source: Los Angeles Public Library).

As Los Angeles continued its rapid growth into the 20th century, the natural topography of Fort Moore Hill became an increasing hindrance to the city's progress. In response, the 762-foot Broadway Tunnel was bored through the hill in 1901, connecting Temple Street to what was then renamed Sunset Boulevard to the east, accommodating both automobile and light rail traffic.[126] The adobes illustrated above were demolished as part of the project, and the intersection at Sunset Boulevard and Buena Vista Street was redeveloped to accommodate the new traffic flow (Figure 9). Development increased slightly in other portions of the project area as well. By 1906, a new High School Annex Building and an adjacent residence had been constructed atop Fort Moore Hill, and new lodging houses and a stable were built in the flats along the southeastern portion of Buena Vista Street. Sunset Boulevard was widened in 1913, creating the current northwestern boundary of the project area.[127] Two years later, the roadway within the Broadway Tunnel was lowered and a false roof was built, decreasing the grade from 6 percent to 3.8 percent.[128]

In spite of these changes, and as the city continued to expand, Fort Moore retained its symbolic importance, both for the strategic role it played during the Mexican-American War and for being the site of the first raising of an American flag following California's entry into the United States. Through the opening decades of the 20th century, calls to build a memorial on Fort Mill commemorating its history were reported in local newspapers, such as the Los Angeles Times. One such appeal, launched in 1911 by the Native Sons and Native Daughters of the Golden West, called upon the Los Angeles City Council "again" to build a monument atop Fort Hill to commemorate "the stirring scenes enacted in this vicinity". These efforts continued and, by the mid-1950s, came to fruition with the commissioning and inauguration of the Fort Moore Pioneer Memorial (described below).

[126] *Los Angeles Times*, 22 September 1949, "Old Broadway Tunnel Goes Out With Roar."

[127] *Los Angeles Times*, 20 August 1913, "Sunset Boulevard: End of Troubles Cometh."

[128] *Los Angeles Times* (22 September 1949).

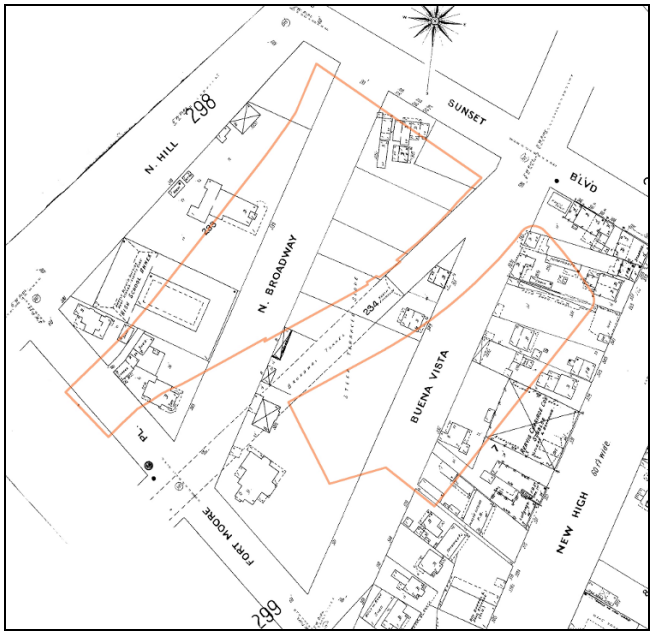


Figure 9. 1906 Sanborn map showing residential development within the project area, as well as the Broadway Tunnel (source: Los Angeles Public Library).

Los Angeles experienced another population boom in the 1920s, bringing with it significant changes to the project area. Signaling the start of the area's redevelopment was the construction of a small commercial building at the western corner of Buena Vista Street and Sunset Boulevard in 1922 (Figure 10). Efforts by city council members began shortly after to include the land surrounding the project area as part of a proposed Civic Center for Los Angeles, which would extend north from the soon-to-be built City Hall. The plan called for the overall redevelopment of the area and required the acquisition of land bounded by Sunset Boulevard and Main, Hill, and Temple Streets.[129] By 1930, the city's elite had all but left residential neighborhood on Fort Moore Hill, and the city had little difficulty purchasing and/or condemning the most of the land east of Hill Street. The elements of the Civic Center project in the project area were never completed, however, perhaps due to the amount of time that elapsed in the land acquisition process, as well as the onset of the Great Depression.

[129]*Los Angeles Times*, 13 August 1926, "Spring Street 'Saving' Urged."

Figure 10. 1929 view of Broadway Tunnel and commercial building on right, facing southwest. Source: Los Angeles Public Library Photographic Collection.

A major component of the plan was to extend Spring Street north from Temple Street to Sunset Boulevard, creating a major thoroughfare that would connect the Civic Center to the surrounding city. Work began in 1930 and involved the demolition of all the buildings bound by Buena Vista and New High Street (including all of those located within the project area), and the removal of the southeastern slope of the Fort Moore Hill. The project was completed two years later in 1932, resulting in the current alignment of Spring Street and the creation of the southeastern boundary of the project area (Figure 11).[130] In 1934, Fort Moore Hill was further altered with approximately 50,000 cubic yards of earth excavated from the eastern slope and used as fill in the development of the nearby Los Angeles Union Passenger Terminal.[131]

Subsequent development within the project site was sparse over the next 15 years. Principal construction projects included the addition of a gas station and automotive garage in the northeastern portion of Block A, located at the eastern corner of Sunset Boulevard (W. Cesar E. Chavez Avenue) and Spring Street (at 300-330 South Sunset Boulevard), and a surface parking lot to the southwest (Figure 12). The gas station and automotive garage appeared to have occupied this corner of the project site between at least 1924 and 1972. One other improvement that has since been removed in the project site and area of potential indirect impacts includes the construction of a building by circa 1975 at the northwestern portion of Block A. Corresponding to the address 300 Cesar Chavez Avenue, the building was occupied by a branch of the Far East Bank. According to County of Los Angeles building records, the building was demolished in 2009.

[130] *Los Angeles Times*, 9 July 1932, "Civic Center Link Opened."

[131] *Los Angeles Times* (5 August 1934).

Figure 11.1934 Works Progress Administration map depicting recently realigned Spring Street (source: University of Southern California Digital Library).

Figure 12. 1938 aerial image depicting the project area, facing south (source: University of California Los Angeles Air Photo Archives).

Another significant change to project area began in 1949 with the construction of the adjacent Hollywood Freeway (U.S. Highway 101). Running parallel and north of Temple Street, development of the freeway involved the removal of approximately 900,000 cubic yards of the southern and eastern portions Fort Moore Hill, at depths of nearly 100 feet.[132] The Broadway Tunnel was also demolished as part of the project, which required the removal of approximately 200,000 cubic yards east of the tunnel (Figure 13).[133] Following excavations, Fort Moore Hill had little resemblance to the landform it had been (Figure

[132]Cortelyou (1949), pp. 17–21.

[133]*Ibid*.

14 and Figure 15). The project area was redeveloped to its current appearance by 1952 and has changed little since this time.

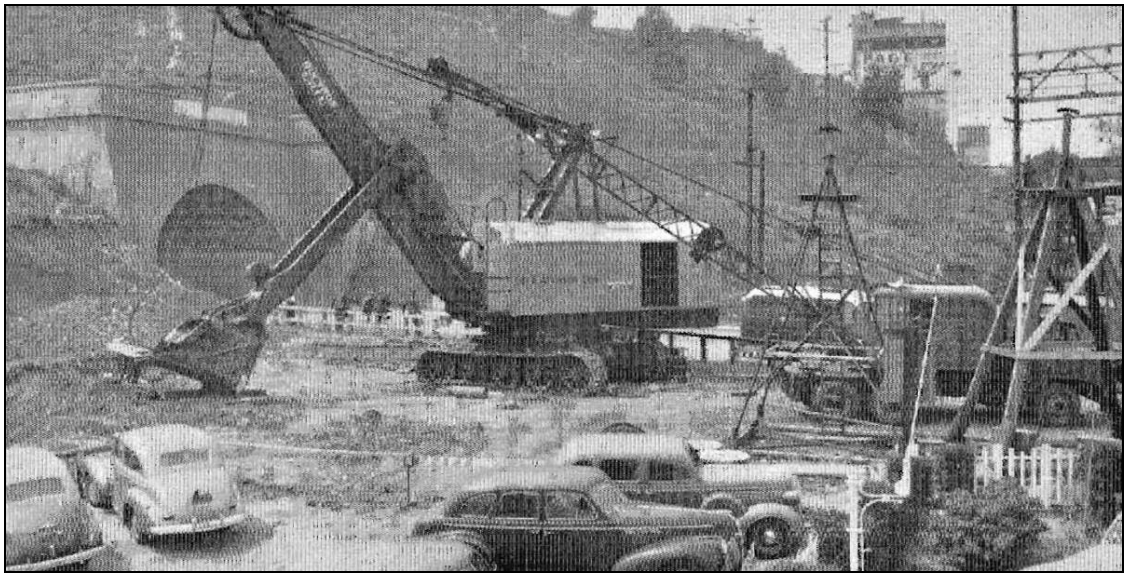


Figure 13. 1949 view of excavations at the north portal of the Broadway Tunnel, facing west (source: Cortelyou 1949:20).

Figure 14. 1947 view of the project area, facing west (source: University of California Los Angeles Air Photo Archives).

Figure 15. Circa 2009 view of the project area, facing west Fort Moore appears in upper right. Source: Google Earth.

The 1950s brought the establishment of the El Pueblo de Los Angeles State Historic Park District, as well as the construction of the Fort Moore Pioneer Memorial (Figure 16 and Figure 17). A joint project of the County and City of Los Angeles, Los Angeles Board of Education, and Department of Water and Power, the expansive monument was designed by Kazumi Adachi, a renowned Japanese-American architect in Los Angeles and a 1939 USC School of Architecture graduate. For the project, Adachi partnered with Dike Nagano. One of the most significant portions of the memorial is the 78-foot by 45-foot bas-relief sculpture designed by noted artist Henry Kreis, clad in over 600 ceramic tiles fabricated by the firm of Gladding, McBean.

The monument commemorated the fort's military significance, as well as the area's reflection of "pioneer life in Southern California."[134] In the City of Los Angeles Draft Survey Citywide Historic Context Statement on public art in Los Angeles, the City of Los Angeles Office of Historic Resources described the memorial as follows:

> The most prominent of the panel's four sections is the only public art in Los Angeles portraying an historic event that occurred at the actual site of the work. Measuring 45' x 35', it depicts the ceremonial flag being raised on July 4, 1847 over Fort Moore, which was located at the top of the hill behind the memorial. To the right of the bas reliefs is an 80 foot long waterfall that has been out of service since the 1977 drought. A 237 foot long brick facade, serving as a backdrop for a 68 foot high pylon, is the largest part of the Memorial. Albert Stewart designed the 16' x 11' American eagle on the pylon as well as the incised relief on the low wall along the sidewalk depicting in narrative form the 1100 mile march of the Mormon Battalion from Council Bluffs, Iowa to Los Angeles.[135]

[134] *Los Angeles Times*, 30 May 1911, "Fort Moore Monument Project."

[135] Several, Mike. 2011 "*SurveyLA Draft Historic Context Statement, Public Art*." Prepared for the City of Los Angeles Office of Historic Resources, Los Angeles, CA. On file at SWCA Environmental Consultants, Pasadena, California.

Figure 16. Fort Moore Pioneer Memorial dedication, 1958. Source: USC Digital Archives, Los Angeles Examiner Collection.

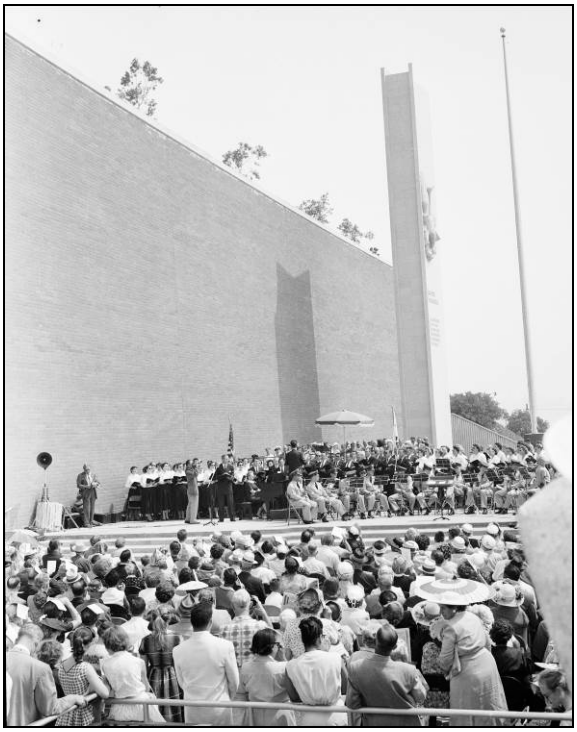
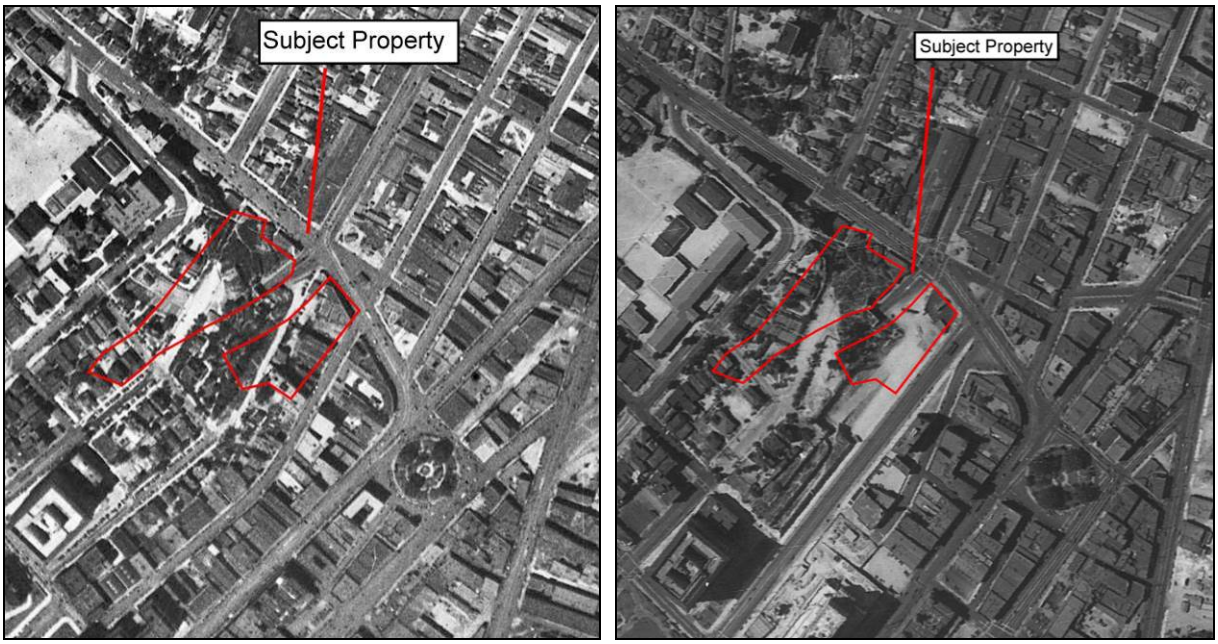
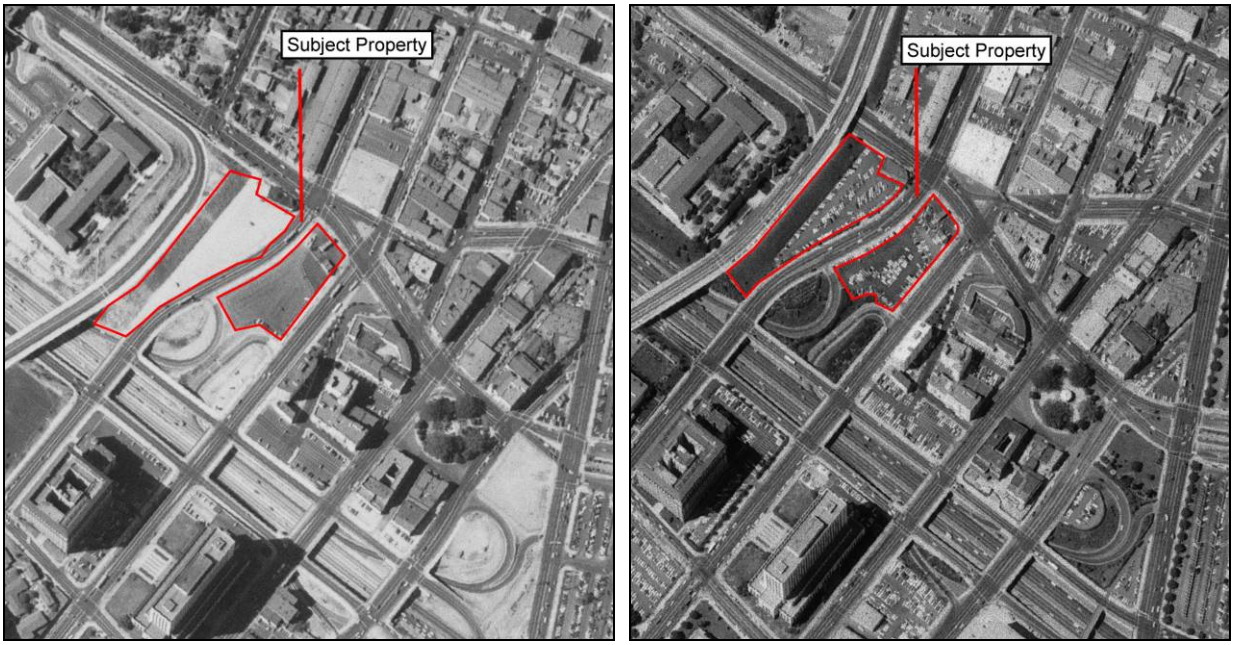


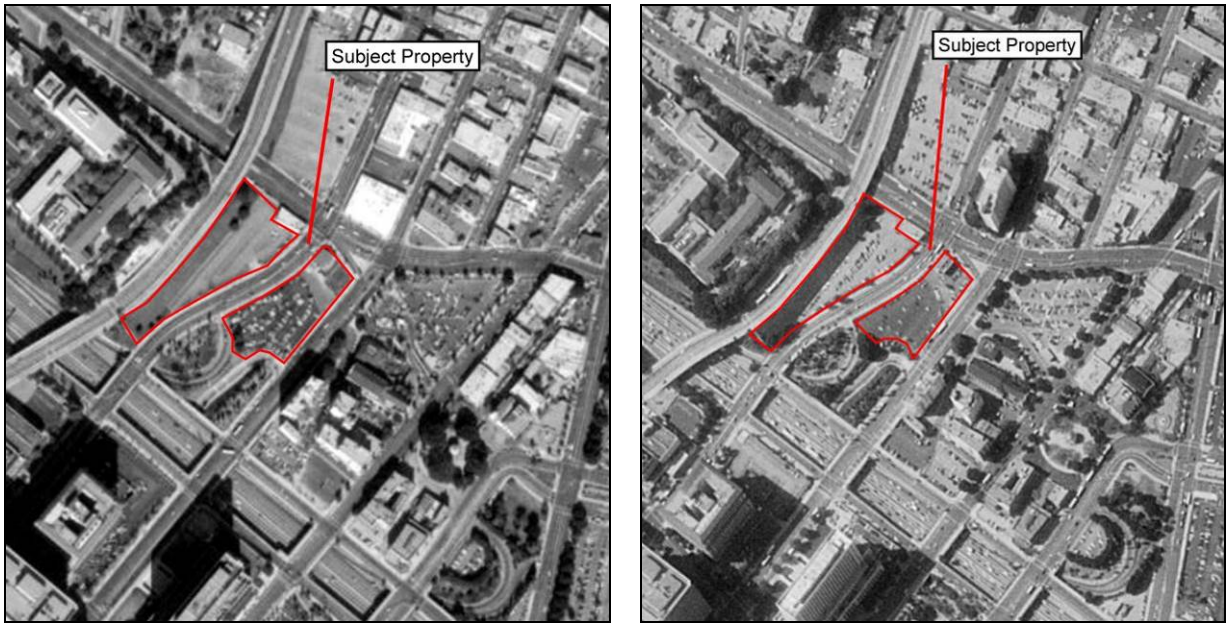
Figure 17. Fort Moore Pioneer Memorial dedication, 1958. Source: USC Digital Archives, Los Angeles Examiner Collection.



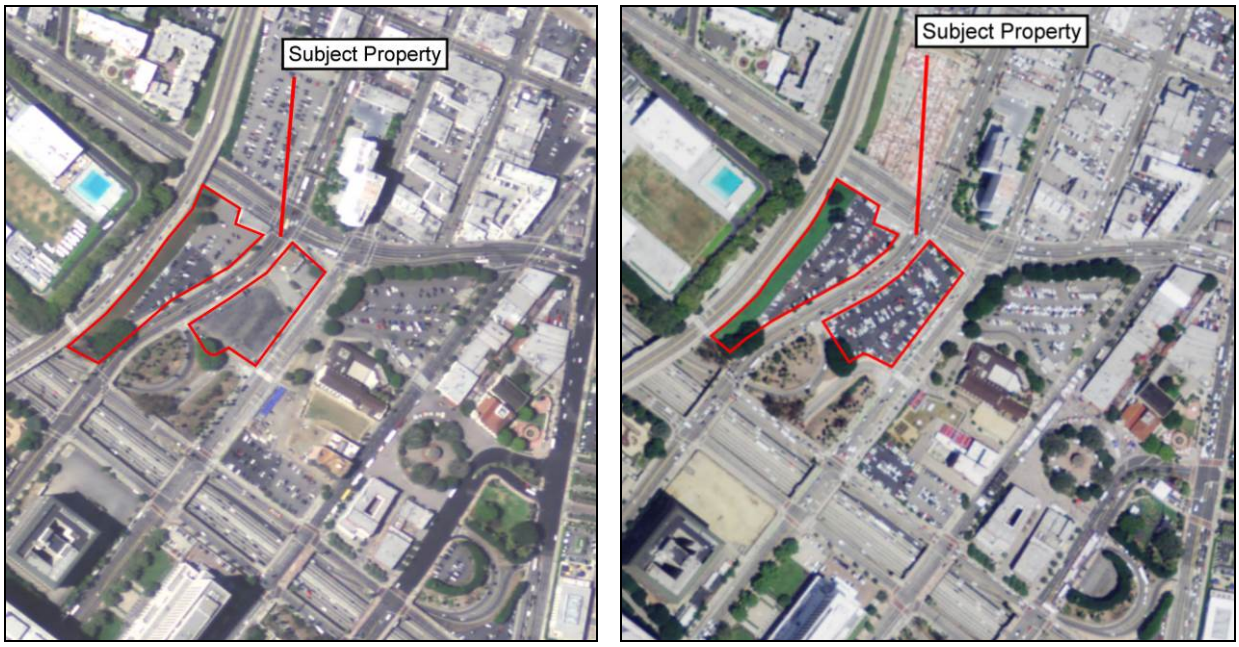
Figures 18. and 19. The project area's chronological development, as seen in 1928 and 1938 aerial photographs. The Los Angeles Plaza Historic District and Olvera Street appear in lower right. Source: Terrax Environmental Engineering and Consulting, 2014.



Figures 20. and 21. 1952 and 1964 aerial photographs. By 1952, the former dense urban fabric was replaced by Interstate 101 (diagonal swath, lower left). By 1964, the Fort Moore Pioneer Memorial was in place, just left of the project area. Source: Terrax Environmental Engineering and Consulting, 2014.



Figures 22. and 23. 1981 and 1994 aerial photographs showing project area and surrounding neighborhood. Source: Terrax Environmental Engineering and Consulting, 2014.



Figures 24. and 25. 2009 and 2012 aerial photographs showing project area and surrounding neighborhood. Source: Terrax Environmental Engineering and Consulting, 2014.

VI. BACKGROUND RESEARCH

Previously Conducted Cultural Resources Studies within the Project Area

Six cultural resources studies have been previously conducted within the project area (Table 1). The records search indicates that the entirety of the project area and surrounding areas have been surveyed extensively from the late 1970s through the present day. These studies did not record cultural resources within the project area. A letter summarizing the results of the records search and a bibliography of all previously conducted studies within the project area are provided in Appendix A.

Table 1. Previously Conducted Cultural Resources Studies within the Project Area

SCCIC Report Number	Title of Study	Author	Year
LA-00850	An Archaeological Assessment of Cultural Resources in Urban Los Angeles, California – La Placita De Dolores – LAN-887	Costello, J.G. and L.R. Wilcoxon	1977
LA-01578	Technical Report Archaeological Resources Los Angeles Rapid Rail Transit Project Draft Environmental Impact Statement and Environmental Impact Report	Anonymous	1983
LA-03103	Cultural Resources Impact Mitigation Program: Angeles Metro Red Line Segment 1	Greenwood, R.S.	1993
LA-03496	Draft Environmental Impact Report: Transit Corridor Specific Plan Park Mile Specific Plan Amendments	Anonymous	Unknown
LA-06841	Plaza De Cultura Y Arte Environmental Impact Report Volume I, Draft EIR Sch No. 2001 101 167	Anonymous	2003
LA-11165	Draft – Environmental Impact Statement, United States General Services Administration, GSA Document Number ZCA81642/1999 Los Angeles U.S. Courthouse, Los Angeles, California	Carnevale, M.	2001

Previously Recorded Cultural Resources within 0.4 km (0.25 mile) of the Project Area

The SCCIC records search indicates that a total of 80 cultural resources have been previously recorded within 0.4 km (0.25 mile) of the project area (Table 2). Twenty-three archaeological resources were identified, consisting of 20 historic archaeological sites, one multicomponent site containing historic and prehistoric elements (P-19-001575), and two isolates (P-19-100446 and P-19-100515). Fifty-seven historic built environment resources were also identified as a result of the records search. None of previously recorded cultural resources are located within the boundaries of the current project area. Immediately adjacent to the southern portion of the project area is the Los Angeles Plaza Historic District (P-19-167020), which is listed in the NRHP and contains numerous buildings within proximity of the project area that are contributing elements to the historical significance of the district. Additional historic built environment resources that are located within 0.4 km (0.25 mile) of the project area and listed in the NRHP include the Plaza Substation (P-19-167182), Post Office Terminal Annex (P-19-170973), Union Station (P-19-171159), and U.S. Court House and Post Office (P-19-173225). Five of the archaeological sites (CA-LAN-887H, CA-LAN-2929H, CA-LAN-4218H, CA-LAN-4200H, and CA-LAN-4201H) have been recommended as eligible for listing in the NRHP and/or CRHR, and a sixth (CA-LAN-1112H) is listed as a State Historical Landmark.

Table 2. Previously Recorded Cultural Resources within 0.4 km (0.25 mile) of the Project Area

Primary Number	Trinomial	Resource Description	Eligibility Status	Recorded By and Year	Proximity to Project Area
P-19-000007	CA-LAN-7/H	Historic site: trash scatter associated with Los Angeles Chinatown	No recommendations made (site badly disturbed from earlier freeway on-ramp construction)	Meighan 1981; Huey and Romani,1980	Outside
P-42-000887	CA-LAN-887H	Historic site: portion of Zanja Madre; wall and building foundations and associated artifacts	Recommended eligible as contributor to NRHP-listed Los Angeles Plaza Historic District	Padon 1999; Costello and Wilcoxon 1978	Outside
P-19-001112	CA-LAN-1112H	Historic site: associated with Plaza Church containing, foundations and floors, assorted artifacts, and human remains	Listed as State Historical Landmark and Point of Historical Interest (much of site likely destroyed during construction)	NARC 1981	Adjacent
P-19-001575	CA-LAN-1575/H	Multicomponent site: prehistoric human remains and associated artifacts; also noted structural remains and other cultural features associated with Los Angeles Chinatown	No recommendations made	Warren 2005; Warren 2004; Horne 2000; Foster 1989	Outside
P-19-002791	CA-LAN-2791H	Historic site: brick feature and associated artifacts associated with the Pico-Garnier Block	No recommendations made	Foster 1999	Outside
P-19-002928	CA-LAN-2928H	Historic: structural remains associated with Los Angeles Gas Works	No recommendations made	Hale 2001	Outside
P-19-002929	CA-LAN-2929H	Historic site: structural remains and assorted artifacts associated with the Pelanconi House	Recommended eligible as a an element to the Pelaconi House (a contributor to the NRHP-listed Los Angeles Plaza Historic District)	Foster 2000	Adjacent
P-19-002959	CA-LAN-2959H	Historic site: trash scatter associated with Los Angeles Chinatown	No recommendations made	Hale 2002	Outside
P-19-003103	CA-LAN-3103H	Historic site: portions of the Zanja Madre	No recommendations made	Gibson and Amaral 2007; Wesson 2002	Outside

Table 2. Previously Recorded Cultural Resources within 0.4 km (0.25 mile) of the Project Area

Primary Number	Trinomial	Resource Description	Eligibility Status	Recorded By and Year	Proximity to Project Area
P-19-003129	CA-LAN-3129H	Historic site: four loci associated with historic hotels and residences dating to late-1800s to early 1900s	No recommendations made	Gust 2004; Turner 2003	Outside
P-19-003181	CA-LAN-3181H	Historic site: structural remains and domestic refuse dating from 1840–1900	No recommendations made	Hale 2004	Outside
P-19-003549	CA-LAN-3549H	Historic site: adobe structural remains and brick and mortar cistern	No recommendations made	Cordner 2006	Outside
P-19-003566	CA-LAN-3566	Historic site: former location of Fort Moore, the first cemetery for City of Los Angeles, the Hill Street Tunnel Number 2, and Central High School #9	No recommendations made	Dietler 2012; Dietler 2006; Starzak 2000	Adjacent
P-19-004196	CA-LAN-4196H	Historic site: artifacts associated with the Hammel Building	Unknown	Foster 2011	Outside
P-19-004200	CA-LAN-4200H	Historic site: three sections of brick pavement associated with historic Alameda Street	Recommended eligible for the CRHR	Gibson 2011; Amaral 2007	Outside
P-19-004201	CA-LAN-4201H	Historic site: structural remains and artifacts associated with Naud's Junction	Recommended potentially eligible	Gibson and Dietler 2011; Amaral 2007	Outside
P-19-004202	CA-LAN-4202H	Historic site: four railroad segments of the Southern Pacific Railroad	Unknown	Gibson and Amaral 2011; Amaral 2007	Outside
P-19-004218	CA-LAN-4218H	Historic site: site of Los Angeles Plaza Cemetery with human remains	Recommended eligible as contributor to NRHP-listed Los Angeles Plaza Historic District	Dietler and Murray 2011; Sitton 1974	Outside
P-19-004320		Historic site: artifacts dating from 1798 through 1958	Not eligible	Cordner 2006	Outside
P-19-100446		Isolate: historic-era brick wall, fragment of crockery, and a nail	Not eligible	Jones and Stokes 2002	Outside
P-19-100515		Historic site: artifacts dating from 1813 through 1947	Unknown	Hale 2005	Outside
P-19-120014		Historic site: pit feature containing bricks, stoneware bottles, boulders, and barrel hoops	Unknown	Esentraut 1996	Outside
P-19-120015		Isolate: human skull (age not determined)	Unknown	SCCIC staff 1996	Outside

Table 2. Previously Recorded Cultural Resources within 0.4 km (0.25 mile) of the Project Area

Primary Number	Trinomial	Resource Description	Eligibility Status	Recorded By and Year	Proximity to Project Area
P-19-120028		Historic site: background information on Pacific Electric railway tunnel	Unknown	Unknown	Outside
P-19-167016		Historic building: Old Plaza Fire House; California Historic Landmark 730	Contributor to the NRHP-listed Los Angeles Plaza Historic District	Arbuckle 1979; Davis 1959; Guthrie 1936	Outside
P-19-167019		Historic building: Avila Adobe	Contributor to the NRHP-listed Los Angeles Plaza Historic District	Arbuckle 1979; Davis 1959; Guthrie 1936	Outside
P-19-167020		Historic district: Los Angeles Plaza Historic District; California Historic Landmark 156	Listed in the NRHP	Charleton 1990; Miller et al. 1981; Hunt 1972	Adjacent
P-19-167099		Historic building: Los Angles Star; California Historic Landmark 789	Listed in the NRHP	Steely et al. 2009; Arbuckle 1971	Outside
P-19-167104		Historic building: Bella Union Hotel Site	Unknown	Steely et al. 2009; Conkling 1958	Outside
P-19-167106		Historic site: First Cemetery Site of Los Angeles	Unknown	Sitton 1974	Adjacent
P-19-167182		Historic building: Plaza Substation	Listed in the NRHP	Miller 1978; Nunis 1971	Outside
P-19-170955		Historic building: Spirito Bordrero Residence	Not eligible (no longer extant)	Hatheway 1982	Outside
P-19-170973		Historic building: Post Office Terminal Annex	Listed in the NRHP	Robertson 1984; Jacques et al. 1982	Outside
P-19-170974		Historic site: Court of Historic American Flags	Contributor to the NRHP-eligible Los Angeles Civic Center Historic District	Steely et al. 2009; Jacques 1982	Outside
P-19-171159		Historic building: Union Station	Listed in the NRHP	Starzak 1994; Hatheway and Chase 1978; Lovret 1978; Smith and Sitton 1976	Outside
P-19-171556		Historic building: Hammel Building	Contributor to the NRHP-listed Los Angeles Plaza Historic District	Foster 2011	Outside
P-19-171566		Historic building: Merced Theater; California Historic Landmark 171	Contributor to the NRHP-listed Los Angeles Plaza Historic District	Arbuckle 1979	Outside

Table 2. Previously Recorded Cultural Resources within 0.4 km (0.25 mile) of the Project Area

Primary Number	Trinomial	Resource Description	Eligibility Status	Recorded By and Year	Proximity to Project Area
P-19-171572		Historic building: Pico House; California Historic Landmark 159	Contributor to the NRHP-listed Los Angeles Plaza Historic District	Arbuckle 1979	Adjacent
P-19-171574		Historic building: Chevron Station (901 North Alameda)	Unknown (most likely ineligible)	Hatheway 1981	Outside
P-19-171578		Historic building: Flora's	Unknown	Hatheway 1981	Outside
P-19-171579		Historic building: Yee Mee Loo	Unknown	Hatheway 1981	Outside
P-19-171580		Historic building: Shanghai Pastry	Unknown	Hatheway 1981	Outside
P-19-171581		Historic building: Kwong On Lung Importers (680 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171582		Historic building: Kim Kee Restaurant (674–676 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171583		Historic building: G.W. Market (672 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171584		Historic building: Sam Sing Co. (670 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171585		Historic building: Solaris Restaurant (658 North Spring Street)	Not eligible (no longer extant)	Hatheway 1981	Outside
P-19-171586		Historic building: China Commercial Co. (652½–656 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171587		Historic building: New Spring Grocery (646–652 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171588		Historic BSO: Macy Liquor/El Ya Qui Restaurant (640–642 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171589		Historic building: 638 North Spring Street	Unknown	Hatheway 1981	Outside
P-19-171590		Historic building: Moctezuma Inn (631–633 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171591		Historic building: Chinatown Teen Post (635–637 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171592		Historic building: King San Co. (639–641 North Spring Street)	Not eligible (no longer extant)	Hatheway 1981	Outside

Table 2. Previously Recorded Cultural Resources within 0.4 km (0.25 mile) of the Project Area

Primary Number	Trinomial	Resource Description	Eligibility Status	Recorded By and Year	Proximity to Project Area
P-19-171593		Historic building: Y. Sing Seafood/Sing Lee Hotel (643–647 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171594		Historic building: Sing Lee Theater (649 North Spring Street)	Unknown	Hatheway 1981	Outside
P-19-171595		Historic building: Magic Dragon Gift Shop (653 North Spring Street)	Not eligible (no longer extant)	Hatheway 1981	Outside
P-19-171596		Historic building: International Grocery Company	Unknown	Hatheway 1981	Outside
P-19-171597		Historic building: LA Trade Company Market	Unknown	Hatheway 1981	Outside
P-19-171598		Historic building: Sunshine Company/Mon Kee Restaurant	Unknown	Hatheway 1981	Outside
P-19-171599		Historic building: 656 New High Street	Unknown	Hatheway 1981	Outside
P-19-171600		Historic building: 648 New High Street	Unknown	Hatheway 1981	Outside
P-19-171601		Historic building: 638–644 New High Street	Unknown	Hatheway 1981	Outside
P-19-171602		Historic building: 618 New High Street	Unknown	Hatheway 1981	Outside
P-19-171603		Historic building: Cathay Realty (618 New High Street)	Unknown	Hatheway 1981	Outside
P-19-171605		Historic building: Public Defenders Office/Brunswick Drug Company Laboratory	Unknown	Hatheway 1981	Adjacent
P-19-171606		Historic building: LA County Service Building	Unknown	Hatheway 1981	Outside
P-19-171611		Historic building: LA County Superior Court/Brunswig Drug Company Packing & Warehouse	Unknown	Hatheway 1981	Outside
P-19-171613		Historic building: Brunswig Annex/LA Gas Company	Contributor to the NRHP-listed Los Angeles Plaza Historic District	Hatheway 1981	Outside
P-19-173078		Historic building: Los Angeles City Hall	Contributor to the NRHP-eligible Los Angeles Civic Center Historic District	Steely et al. 2009; Hatheway and Chase 1978; Smith and Sitton 1976	Outside

Table 2. Previously Recorded Cultural Resources within 0.4 km (0.25 mile) of the Project Area

Primary Number	Trinomial	Resource Description	Eligibility Status	Recorded By and Year	Proximity to Project Area
P-19-173140		Historic building: Nuestra Senora La Reina De Los Angeles; CHL 144	Contributor to the NRHP-listed Los Angeles Plaza Historic District	Arbuckle 1979; Davis 1959; Woodward 1936; Anonymous 1934	Adjacent
P-19-173174		Historic building: Hall of Justice, Los Angeles County Jail	Contributor to the NRHP-eligible Los Angeles Civic Center Historic District	Steely and Covert 2009; Starzak and Heumann 1983	Outside
P-19-173225		Historic building: U.S. Post Office and Courthouse	Listed in the NRHP	Steely 2009; VerPlanck 2006; VerPlanck and Sucre 2005; Anonymous 2005; Anonymous 1983; Blalock 1980	Outside
P-19-175558		Historic building: 720 North Spring Street	Not eligible	McAvoy 1994	Outside
P-19-186620		Historic building: LA County Hall of Records	Contributor to the NRHP-listed Los Angeles Civic Center Historic District	Steely et al. 2009; Dolan 2000	Outside
P-19-186621		Historic building: Clara Shortridge Foltz Criminal Justice Center	Contributor to the NRHP-eligible Los Angeles Civic Center Historic District	Steely et al. 2009; Dolan 2000	Outside
P-19-190545		Historic district: Los Angeles Civic Center Historic District	Eligible	Steely et al. 2009	Outside
P-19-190557		Historic building: Kenneth Hahn Hall of Administration, County of Los Angeles	Contributor to the NRHP-eligible Los Angeles Civic Center Historic District	Steely et al. 2009	Outside
P-19-19559		Historic building: County of Los Angeles Central Heating and Refrigeration	Contributor to the NRHP-eligible Los Angeles Civic Center Historic District	Steely et al. 2009	Outside
P-19-190561		Historic building: City Health Building/City Hall South	Contributor to the NRHP-eligible Los Angeles Civic Center Historic District	Steely et al. 2009	Outside
P-19-190562		Historic building: Federal Building, North Los Angeles Field Office	Contributor to the NRHP-eligible Los Angeles Civic Center Historic District	Covert et al. 2009	Outside

Native American Contact Program

SWCA initiated a Native American contact program for this project on March 3, 2014. As part of the process of identifying cultural resources in or near the study area, SWCA Cultural Resources Program Director John Dietler, Ph.D., contacted the California Native American Heritage Commission (NAHC) to request a review of its Sacred Land File. The NAHC faxed a response (Appendix B) later that day and stated that Native American cultural resources were not identified within the project area, but noted there are Native American sacred places/sites in proximity to the project area and that it is always possible for cultural resources to be unearthed during construction activities. The NAHC also provided a contact list of 10 Native American individuals or tribal organizations that may have knowledge of cultural resources in or near the study area. SWCA prepared and mailed letters to each of the NAHC-listed contacts on March 7, 2014 (see Appendix B) and followed up with two telephone calls to demonstrate good-faith outreach.

Two of the contacts recommended that Native American monitoring occur on-site during all ground-disturbing activities, and one contact recommended archaeological testing. The remaining contacts did not provide comments. A complete summary of coordination with local Native American groups is provided in Table 3.

Table 3. Record of Native American Contact Efforts

NAHC-Provided Contact	Coordination Efforts	Results of Coordination Efforts
Gabrielino Tongva Tribe P.O. Box 180 Bonsall, California 92003 Contact: Bernie Acuna, Co-Chairperson	**03/07/14:** Letter sent via U.S. Mail. **03/26/14:** Follow-up call placed, Mr. Acuna requested a PDF copy of letter and attachments sent via e-mail. **04/02/14:** Follow-up call placed; Mr. Acuna was unable to comment, but indicated that he would comment in the near future.	No further action required
Gabrielino Tongva Indians of California Tribal Council P.O. Box 490 Bellflower, California 90707 Contact: Robert F. Dorame, Tribal Chair/ Cultural Resources	**03/07/14:** Letter sent via U.S. Mail. **03/13/13:** Mr. Dorame contacted Dr. Dietler by phone and indicated that the project site was very sensitive due to the nearby cemetery and numerous other resources. He feels a connection to the location, as his great great grandfather owned a homestead 0.5 mile away. He recommends Native American monitoring for ground-disturbing activities related to project construction and requested that his group participate in the monitoring.	Recommendation of Native American monitoring
Tongva Ancestral Territorial Tribal Nation Private Address Contact: John Tommy Rosas, Tribal Admin	**03/07/14:** Letter sent via e-Mail. **03/07/14:** E-Mail response from Mr. Rosas received requesting a telephone call from the project manager. **03/14/14:** Dr. Dietler called Mr. Rosas, who expressed great interest in seeing a thorough environmental process, integrating CEQA, Section 106, and SB18, as applicable. He recommended formal archaeological testing prior to construction, including remote sensing (e.g., ground-penetrating radar or magnetometry) to identify buried archaeological features.	Recommendation of archaeological testing

Table 3. Record of Native American Contact Efforts

NAHC-Provided Contact	Coordination Efforts	Results of Coordination Efforts
Gabrieleno/Tongva San Gabriel Band of Mission Indians P.O. Box 693 San Gabriel, California 91778 Contact: Anthony Morales, Chairperson	**03/07/14:** Letter sent via U.S. Mail. **03/26/14:** Follow-up call placed, voicemail left. **04/02/14:** Follow-up call placed, Mr. Morales indicated that the area is highly sensitive and holds a very high potential for yielding Native American resources. He strongly recommends Native American monitoring and volunteered his services and stressed his ancestral connections to the people who once lived and worked in that area.	Recommendation of Native American monitoring
Gabrielino-Tongva Nation P.O. Box 86908 Los Angeles, California 90086 Contact: Sandonne Goad, Chairperson	**03/07/14:** Letter sent via U.S. Mail. **03/26/14:** Follow-up call placed, no voicemail option, message not left. **04/02/14:** Follow-up call placed, no voicemail option, message not left.	No further action required
Gabrielino-Tongva Tribe P.O. Box 180 Bonsall, California 92003 Contact: Linda Candelaria, Co-Chairperson	**03/07/14:** Letter sent via U.S. Mail. **03/26/14:** Follow-up call placed, voicemail left. **12/30/13:** Follow-up call placed, voicemail left.	No further action required
Gabrieleño Band of Mission Indians P.O. Box 393 Covina, California 91723 Contact: Andrew Salas, Chairperson	**03/07/14:** Letter sent via U.S. Mail. **03/26/14:** Follow-up call placed. Mr. Salas indicated that he had not received the letter, and requested a PDF copy of letter and attachments sent via E-mail. **04/02/14:** Follow-up call placed. Mr. Salas indicated that he would review the materials.	No further action required
Gabrielino Tongva Tribe P.O. Box 180 Bonsall, California 92003 Contact: Conrad Acuna	**03/07/14:** Letter sent via U.S. Mail. **04/02/14:** No phone number or email address provided by NAHC. Sent follow-up fax.	No further action required
Gabrielino/Tongva Nation P.O. Box 86908 Los Angeles, California 90086 Contact: Sam Dunlap, Cultural Resources Director	**03/07/14:** Letter sent via U.S. Mail. **03/26/14:** Follow-up call placed, voicemail left. **04/02/14:** Follow-up call placed, voicemail left.	No further action required
Ti'At Society/Inter-Tribal Council of Pimu 3094 Mace Avenue, Apt. B Costa Mesa, California 92626 Contact: Cindy Alvitre, Chairwoman-Manisar	**03/07/14:** Letter sent via U.S. Mail. **03/26/14:** Follow-up call placed, voicemail left. **04/02/14:** Follow-up call placed, voicemail left.	No further action required

VII. CULTURAL RESOURCES SURVEY RESULTS

Archaeological Resources

No archaeological resources were observed during the intensive-level cultural resources survey of the project area. All areas within the 3.72-acre project area were subject to intensive-level survey for cultural resources, with the exception of the ivy-covered hill south of North Hill Street (Figure 26 and Figure 27). Because the proposed project area is located in a dense urban area that has been extensively developed, close attention was paid to any areas of exposed sediment. Ground visibility was approximately 0 percent through most of the project area due to an extremely urbanized setting consisting of paved, surface parking lots and extensive landscaping (Figure 27). Only small patches of exposed sediment were visible in tree wells and other areas containing ornamental landscaping, which were heavily disturbed. Only modern trash was observed throughout the APE.

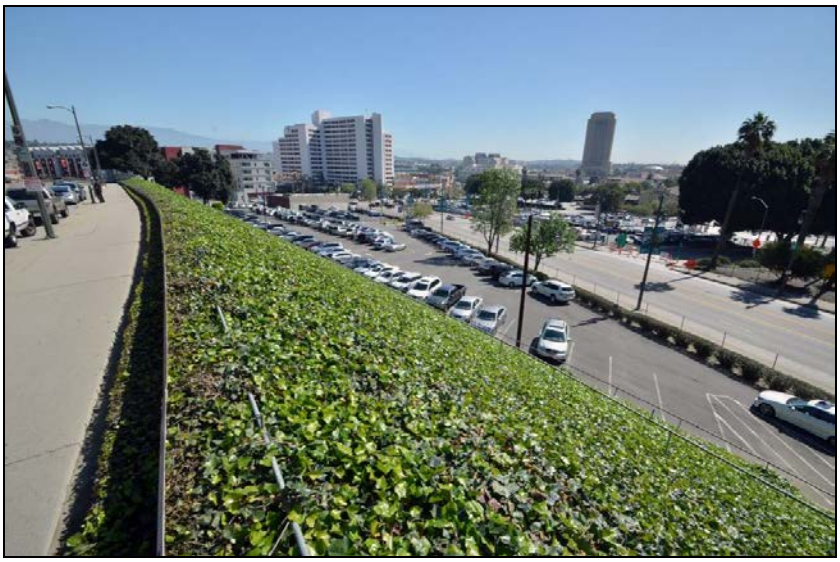


Figure 26. Overview of the project area, looking northeast. Source: SWCA Environmental Consultants, Pasadena, California, 2014.

Figure 27. Overview of the project area (Block B), looking west. Source: SWCA Environmental Consultants, Pasadena, California, 2014.

Historic Resources

One permanent building and at least two temporary structures are located within the footprint of the proposed project site (Figure 3). The western portion of the development, Block B, includes a small kiosk for the parking attendant, located at the parking lot entrance/exit on the lot's southeastern side. Similarly, Block A, on the eastern portion of the development includes a parking kiosk near the southern portion of the lot. The permanent building on the site, slated for demolition, is located at 400-408 West Cesar E. Chavez Avenue; the building description and an evaluation follow. The building is also documented on California Department of Parks and Recreation DPR 523 Series forms following this report as Appendix C.

Within the Area of Potential Indirect Impacts (Figure 4), which extends from the proposed project site to the opposite sides of adjacent streets, two historic resources were identified; these are described below.

Buildings within the Proposed Project Site: 400–408 West Cesar E. Chavez Avenue

Located on a sloped corner lot at West Cesar Chavez Avenue and North Broadway in north-central Los Angeles, the property located at 400–408 West Cesar E. Chavez Avenue contains a one-story, vernacular commercial building (Figure 28 and Figure 29). The building is rectangular in plan, clad in patterned brick and stucco, and capped with a flat roof with no eaves. The roof is framed in places by a stepped parapet, with an uninterrupted belt course spanning the north, east, and west elevations below the roof line. The north (primary) elevation displays a series of six storefronts. The storefronts are generally characterized by grouped, metal-frame, display windows, sheltered beneath cloth awnings with metal frames. Along the north elevation, shops are accessed via metal-frame glass and wooden doors. The east elevation displays metal-framed display windows, sheltered beneath a cloth awning, and a metal security gate topped with a fan-vent transom. Clad in concrete, the south elevation of the building is unadorned and displays no openings or architectural detailing. Signage on the north elevation consists of affixed lightbox signs above entryways; on the east elevation, a combination lightbox and neon sign is located along the roofline of the building. Metal address signs are located beside each entry along the façade. In terms of setting, the building occupies the northeastern portion of a triangular corner lot, located at the base of hill. Adjacent to the building is a large, paved public parking lot.

Figure 28. 400–408 West E. Cesar Chavez Avenue, facing west.
Source: SWCA Environmental Consultants, Pasadena, California, 2014.

When constructed in 1922, the subject property occupied the corner of Sunset Boulevard and Buena Vista Street (since renamed West Cesar E. Chavez Avenue and North Broadway). The building was originally located at the base of Fort Moore Hill, adjacent to the eastside entrance of the Broadway Tunnel. According to the 1923 Los Angeles City Directory, a Union Oil Gasoline Station occupied the lot prior to construction of the subject property.[136] The building, which has been a restaurant for much of its history, has undergone numerous changes of ownership and exterior modifications since its construction, such as the infill of storefronts and the replacement of windows. As of 1926, city directories indicate the building was occupied by William J. Leary and functioned was a bowling alley; later directories identify the building's use as billiards room.[137] By 1932, at least a portion of the commercial block was occupied by a restaurant owned by John Pucci.[138] As of 1938 through at least 1942, the restaurant was owned by Louis Pensotti,[139] with later photographs revealing the space was occupied by the Mexico City Café (by 1951). At least one of the current tenants, Colima Restaurant, has occupied the property since 1969. Other current tenants include Downtown Care and Emergency Rescue Bail Bonds.

While the property reflects the rapid commercial expansion of downtown Los Angeles in the 1920s, it does not retain sufficient integrity to convey its period of significance, due to extensive alterations and significant changes to the setting. Therefore, the property is not eligible under Criteria A/1/1 as an exemplification of early commercial development in downtown Los Angeles. Additionally, in terms of eligibility under Criteria A/1/1 and B/2/2, research did not reveal that the building reflects other significant patterns of development or events, or that it possesses an associative link with a person significant in the history of the city, region, state or nation. In terms of eligibility under Criteria C/3, the subject property is vernacular in architectural style and a typical example of an early twentieth-century commercial building. Because the building is a highly altered example of a common type, it is not eligible for listing in the NRHP or CRHR or as a Historic-Cultural Monument in the City of Los Angeles under Criteria C/3/3. In summary, the building does not warrant further evaluation under Criteria A/1/1, B/2/2, or C/3/3. No evidence was discovered to warrant consideration under Criteria D/4/4. The property is also not eligible under any of these criteria as a contributor to a larger historic district.

This property is documented on California Department of Parks and Recreation (DPR) 523 Series forms included in Appendix C.

[136] Los Angeles City Directory Company. 1923. "Los Angeles City Directory." Available at the Los Angeles City Public Library, www.lapl.org.

[137] Los Angeles City Directory Company. 1926. "Los Angeles City Directory." Available at the Los Angeles City Public Library, www.lapl.org.

[138] Los Angeles City Directory Company. 1932. "Los Angeles City Directory." Available at the Los Angeles City Public Library, www.lapl.org.

[139] Los Angeles City Directory Company. 1938 and 1942. "Los Angeles City Directory." Available at the Los Angeles City Public Library, www.lapl.org.

Figure 29. Southwest corner of North Broadway and present-day West Cesar E. Chavez Avenue, clockwise from top left: 1929, 1951, 2014, and 1971. Source: Los Angeles Public Library Photographic Collection.

Historic Resources within the Area of Potential Indirect Impacts

Surrounding the project site are surface parking lots with no permanent buildings; Interstate 101 and an exit ramp; and relatively recent low- to mid-rise construction, in particular north of the project site on the north side of Cesar Chavez Street. Applicable federal, state, and local criteria were applied to all built resources within the area of potential indirect impacts. As a result of this survey, two properties (one historic district and one monument) were determined to be historic resources under CEQA. Additionally, one feature was found to warrant consideration in local planning, due to the provisions of the Central City North CPA Community Plan (however, descriptions of this feature and its role in the analysis are presented for informational purposes only, given that the feature is not a historic resource under CEQA). These buildings and features are described below:

1. *El Pueblo de los Angeles Historic District/Los Angeles Plaza Historic District*

   Listed on the National Register of Historic Places in 1972, the El Pueblo de los Angeles Historic District (also known as Los Angeles Plaza Historic District) encompasses approximately 9.5 acres in downtown Los Angeles, California. The district includes nearly two dozen contributing and 9 noncontributing resources, which date from the early 19th century through the early 20th

century. Centered on the circular Plaza just south of the entrance to Olvera Street, the district is roughly bounded by W. Cesar E. Chavez Avenue (north), N. Los Angeles and N. Alameda Streets (east), W. Arcadia Street (south), and N. Spring Street (west). Located in the historic core of Los Angeles, the district represents a rare, intact, and diverse group of resources that exemplify the founding and early growth of the City of Los Angeles. These resources include buildings and sites from the city's Spanish, Mexican, and early American periods, and range from 18th century adobe buildings and large Victorian commercial blocks, to Spanish Revival buildings from the early 20th century.

2. *Fort Moore Pioneer Memorial*

Designed in 1956/1957 by a team including renowned Los Angeles architect Kazumi Adachi, Dike Nagano, and artists Henry Kreis and Albert Stewart, the Fort Moore Pioneer Memorial appears eligible for listing on the National Register of Historic Resources and California Register of Historical Resources under Criteria A/3. The memorial embodies the distinctive characteristics of a Mid-Century Modern monument, it represents the work of known master architect and artists Adachi, Kreis, and Stewart, and it possesses high artistic value.

A joint project of the County of Los Angeles, City of Los Angeles, Los Angeles Board of Education, and the Department of Water and Power, the expansive monument was designed by Kazumi Adachi, a renowned Japanese-American architect in Los Angeles and USC School of Architecture graduate (USC 1939). For the project, Adachi partnered with Dike Nagano. The most significant portion of the memorial is the 78 by 45 foot bas-relief sculpture designed by noted artist Henry Kreis, clad in over 600 ceramic tiles fabricated by the prominent firm of Gladding, McBean.

The monument commemorated the site's military significance as well as the area's reflection of "pioneer life in Southern California."[140] In the section of the "SurveyLA Draft Historic Context Statement" analyzing public art in Los Angeles, the Fort Moore Pioneer Memorial was thus described:

> The most prominent of the panel's four sections is the only public art in Los Angeles portraying an historic event that occurred at the actual site of the work. Measuring 45' x 35', it depicts the ceremonial flag being raised on July 4, 1847 over Fort Moore, which was located at the top of the hill behind the memorial. To the right of the bas reliefs is an 80 foot long waterfall that has been out of service since the 1977 drought. A 237 foot long brick facade, serving as a backdrop for a 68 foot high pylon, is the largest part of the Memorial. Albert Stewart designed the 16' x 11' American eagle on the pylon as well as the incised relief on the low wall along the sidewalk depicting in narrative form the 1100 mile march of the Mormon Battalion from Council Bluffs, Iowa to Los Angeles (Several, Mike, 2011, "SurveyLA Draft Historic Context Statement, Public Art," prepared for City of Los Angeles, Department of Planning, Office of Historic Resources).

3. *Chinatown Entrance Gates*

While the entrance gates to Chinatown are not eligible for historic designation under any applicable criteria, they warrant consideration in local planning, given the importance of maintaining a unique, clear approach to Chinatown in the Central City North Community Plan. The analysis of indirect impacts including this feature is for informational purposes.

[140] *Los Angeles Times*, 30 September 1956.

VIII. PROJECT IMPACTS ASSESSMENT

CEQA (Section 21084.1) requires that a lead agency determine whether a project may have a significant effect on cultural resources. Impacts to significant cultural resources that affect the characteristics of the resource that qualify it for the NRHP or adversely alter the significance of a resource listed on or eligible for the CRHR are considered a significant effect on the environment.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2[a], [b], and [c]).

In terms of historical resources, these impacts could result from "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines, Section 15064.5 [b][1], 2000). ***Material impairment*** is defined as demolition or alteration "in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register." (CEQA Guidelines Section 15064.5[b][2][A]).

Thresholds of Significance: Appendix G

The potential for the proposed project to result in impacts associated with cultural resources is based on the CEQA thresholds of significance outlined in Appendix G of the State CEQA Guidelines. They are as follows:

> Threshold G-1: Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines § 15064.5?
>
> Threshold G-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § 15064.5?
>
> Threshold G-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?

Project Design Elements

The proposed project is conceptual in nature; as the project moves into its final phase, the project features would be designed to complement and remain consistent with the adjacent neighborhood and resources. Mitigation measures include some of the features and elements considered most important for avoiding indirect impacts to adjacent historic resources due to a change in setting. These project design features are centered on the massing of both buildings as well as their architectural style/design.

Impact Analysis

Threshold G-1: Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines § 15064.5?

The proposed project would not result in significant **direct** impacts to a cultural resource related to the substantial adverse change in the significance of a historical resource. New construction carried out for

the project, Block A and Block B, would replace one building that is not a historic resource for the purposes of CEQA, as well as surface parking lots and two temporary kiosks.

The proposed project would have the potential to result in significant **indirect** impacts to historical resources as described below. Flanking both sides of the project are two identified historic resources: the El Pueblo de los Angeles Historic District/Los Angeles Plaza Historic District, located east/southeast of the proposed one- to five-story Block A, and the Fort Moore Pioneer Memorial, located west of the eight-story building proposed for Block B.

Potential Indirect Impacts to El Pueblo de Los Angeles Historic District

In examining potential indirect impacts, the *Secretary of the Interior's Standards for the Treatment of Historic Properties* provide guidance recognized by CEQA as mitigating potential adverse impacts caused by a project to below the level of significance. According to the *Secretary of the Interior's Standards*, new construction in or near historic properties, including districts, should be differentiated but compatible; attention should be devoted to ensuring that the new construction is complementary to the historic property but does not create a false sense of history by imitating or replicating a historic building or property. The *Secretary of the Interior's Standards* include setting, in terms of the character of the surrounding environment, as a character-defining feature that weighs in the analysis of a resource's retention of historic integrity.

Conceptual plans for Block A (the portion of the project adjacent to the El Pueblo de Los Angeles Historic District, across North Spring Street) call for a one- to five-story building. The elevation facing the El Pueblo de Los Angeles Historic District, on North Spring Street, would range from approximately 18 feet at the central, open arcade, to approximately 29 feet at the northeastern portion and approximately 40 feet at the southwestern corner. At the sidewalk along North Spring Street, the central arcade would open onto a courtyard; subsequent stories would step back from North Spring Street in increments of 15 feet, reaching a height of just over 60 feet (roughly 5 stories) facing North Broadway. The westernmost edge of the Los Angeles Plaza Historic District is located across a small triangular lot and street from Block A (Figure 30).

Given that the project site has remained undeveloped and/or sparsely developed for over 60 years, any new construction would be expected to result in a change in setting and feeling. The massing of the El Pueblo de Los Angeles Historic District varies, generally ranging from one to three stories; in this way, the project would result in a change in the setting and feeling of the historic district, as unimproved surface parking lots are replaced with adjacent construction that in some areas will exceed the height of the historic district. Setting and feeling are two of seven aspects of historic integrity; historic integrity must be intact in order for a historic resource to continue conveying the reasons for its significance.

Pursuant to CEQA, a substantial adverse change to a historic resource is a change through which the resource's integrity is so impaired that it no longer has the ability to convey the reasons for its significance. Based on the conceptual project as currently planned, construction of Block A would alter the setting and feeling of the El Pueblo de Los Angeles Historic District, but it would not impair them to the point that the historic district would no longer convey the reasons for its significance. In this way, Block A as currently planned would result in a less than significant indirect impact to the adjacent historic district.

The elements of the proposed conceptual design that would be appropriate for new construction adjacent to a historic district include (1) the lower massing along North Spring Street; (2) the breaking up of the wall plane to avoid extensive, uninterrupted expanses of wall; (3) the stepped vertical massing of the levels; (4) the incorporation of an open, one-story arcade along North Spring Street; and (5) the

passageway through the project site, which would serve to open the new construction to the historic district rather than walling it off. (The incorporation of the paseo would also help partially compensate for the loss of much of the view of the Fort Moore Pioneer Memorial, by improving physical access to the monument as well as providing interpretive signage about its history and significance; this is explored in more detail below.)

Plans are thus far merely conceptual. Should the massing and general composition of Block A change, however, it could result in substantial adverse indirect impacts to the El Pueblo de Los Angeles Historic District. With implementation of Mitigation Measure CR-1, potential impacts would be reduced to less than significant levels.

In addition to considering the massing of the project, design features and details must be reviewed for compatibility and compliance with the *Secretary of the Interior's Standards* (as noted above). In terms of style, ornamental detail, and other aesthetic issues relevant for compliance with the *Secretary of the Interior's Standards*, sufficient detail is not yet available to analyze the project to the degree needed to make a finding regarding potential indirect impacts. Examining details such as the ornamental program and decorative features of the building, its palette of exterior materials and treatments (including for windows, doors, balconies) will inform project review for compliance with the *Secretary of the Interior's Standards*.

At this stage, the conceptual design idea behind Block A is a streamlined Spanish Colonial Revival style, in the spirit of Irving Gill, a pioneering, early twentieth-century modern architect in Southern California. The criteria under which the El Pueblo de Los Angeles Historic District was listed on the NRHP relate to its embodiment of Los Angeles' founding years, including the Spanish and Mexican Colonial eras (Criterion A) and to its intact collection of late 19th century and early 20th century architectural styles and building types (Criterion C). The period of significance for the historic district is 1818 through 1930, which marks the opening of Olvera Street. The principal character-defining features of the El Pueblo de Los Angeles Historic District include, but are not limited to, low massing; high density; urban setting; late Victorian, Italianate, and Colonial era styles; and character. These issues should provide the point-of-departure for the eventual study of Block A's style and ornamental program for compliance with the *Secretary of the Interior's Standards*.

In summary, as currently planned, Block A of the proposed project would not result in significant adverse impacts to historic resources. However, as project plans proceed from conceptual to final designs, implementation of Mitigation Measure **MM CR-1** will ensure that any potential impacts generated as a result of an updated or changed project design would be reduced to less-than-significant levels.

Block B would result in indirect impacts to El Pueblo de Los Angeles Historic District in terms of a change in the setting of the historic resource. The current site, consisting of one permanent building, a surface parking lot, and a temporary kiosk, has remained sparsely developed for over 60 years; therefore, new construction would change the setting of the historic district. However, given the distance of Block B from the El Pueblo de Los Angeles Historic District, indirect impacts resulting from the Block B development would be less than significant.

In addition, Block B has the potential to obscure nearly all views from the Fort Moore Pioneer Memorial to the historic district, which would constitute an indirect impact to the setting of the historic district. This, however, is a less than significant adverse indirect impact, given the distance of Block B from the historic district. The El Pueblo de Los Angeles Historic District will continue to convey the reasons for its significance should it no longer be fully visible from Fort Moore. A portion of the historic district will

remain visible through the incorporation of the Historic Paseo, which will provide a view corridor as well as physical access to the monument.

In addition, the project vicinity displays a number of other higher-massed, relatively recent buildings that, while altering the views and setting of the historic district, have not compromised its historic integrity and ability to convey its historic significance. Therefore, based on the conceptual plans, the proposed project would not cause a substantial adverse change in the significance of the El Pueblo de Los Angeles Historic District. However, as project plans proceed from conceptual to final designs, implementation of Mitigation Measure **MM CR-1**, will ensure that any potential impacts generated as a result of an updated or changed project design would be reduced to less-than-significant levels.

Potential Indirect Impacts to Fort Moore Pioneer Memorial

Eligible for the NRHP and CRHR under Criteria C/3, the Fort Moore Pioneer Memorial was designed to be viewed from close up and from a distance; therefore, potential indirect impacts to both vantage points need to be weighed. By definition, a character-defining feature of public art is its visual accessibility from the public right-of-way. Obstructing visual access could constitute an adverse change in the memorial's setting and feeling, which are two of the seven aspects of historic integrity outlined in and recognized by the federal and state-level regulatory framework as allowing a resource to convey the reasons for its significance.

The City of Los Angeles "SurveyLA Draft Historic Context Statement" includes a context statement for Public Art in Los Angeles.[141] This Draft Historic Context Statement describes the property types, significance and integrity thresholds for public art such as the Fort Moore Pioneer Memorial. The statement of significance for public art in Los Angeles affirms that:

> Regardless of the content and type, art becomes public art when it is accessible to the general public by being outdoors and visible from a publicly accessible space, such as a street, a park, or a public or private plaza. Art also becomes public art when it has a public purpose, such as embellishing open spaces and buildings, honoring and memorializing people or events that the community feels are important, transmitting society's values, traditions, and beliefs from generation to generation, describing or representing the goals and functions of building occupants, and displaying the power of the institutions that funded the art, framed its message, selected the artist, and determined its location.[142]

Accordingly, one eligibility standard for public art is that it should be visually accessible to the public without financial cost. In terms of property types, public art in Los Angeles can include sculpture, bas reliefs, and murals; the Fort Moore Pioneer Memorial includes sculpture and bas reliefs, set against an expansive wall, which serves as a retaining wall for the hill behind it.

The *SurveyLA Public Art Draft Historic Context Statement* characterizes changes in the setting of public art in the following way:

> Setting: Public art is an embellishment to the physical environment. It is dependent on the physical environment rather than a shaper of it. …Perhaps the most visible example of how public art can be impacted by changing the setting is seen with Kent Twitchell's monumental mural, "Bride and Groom" on South Broadway. The construction of the Los Angeles Times

[141] Several (2011).

[142] *Ibid.*

> garage in the late 1980s has obscured the view of the mural. However, the mural remains an important property because it was executed by a master artist and has high artistic quality.[143]

With the tallest point of Block A rising to approximately 60 feet, and the base of the monument elevated approximately 40 feet on the North Hill Street overpass, the potential exists for reduced or partially impeded visibility of the memorial and therefore a change to its setting and feeling. However, Block A's incorporation of a connecting path to the Fort Moore Pioneer Memorial through the Historic Paseo incorporates a view corridor from the Plaza church to the most prominent element of the memorial, the pylon and flag mast. The Historic Paseo, which will traverse both Block A and Block B, will enhance physical access to monument, thereby partially mitigating the loss of the view. As currently planned, Block A would not result in substantial adverse indirect impacts to the Fort Moore Pioneer Memorial such that the resource would loss its ability to convey the reasons for its significance, and no mitigation measures are required.

Similarly, development of the 8-story Block B would produce a significant obstruction of the views of the Fort Moore Pioneer Memorial and therefore result in an impact to the resource's setting and feeling. For the purposes of analyzing Block B, the two most impacted and critical aspects of the setting are: (1) the memorial's immediate setting on North Hill Street, overlooking the El Pueblo de Los Angeles Historic District; and (2) the view of the memorial from below (i.e., from the project site and areas to the east of the memorial).

Since the early 20th century, Fort Moore has been the focus of efforts to build a monument commemorating the history and symbolic importance of the site. The site's role in the Mexican-American War and as the first place an American flag was raised following California's admission to the United States were among arguments made in favor of constructing a permanent monument on Fort Moore. The character-defining features of the Fort Moore Pioneer Memorial include, but are not limited to, modernist, abstract design; monumental scale; progression of large-scale panels, with alternating colors/materials; the ceramic-tile clad bas-relief sculpture; waterfall feature; and pylon and flag mast.

From the vantage point of the project area below, development on Block B would rise approximately 96 feet high. From the vantage point of the North Hill Street overpass, level with the monument, development on Block B would climb an additional 54 feet, or approximately five stories. Although project plans remain conceptual, Block B appears to extend far enough south that it would block most views of the Fort Moore Pioneer Memorial, with the exception of the view corridor of the pylon and flag mast visible from the Historic Paseo. While this constitutes an indirect impact to the setting of the Fort Moore Pioneer Memorial, it does not rise to the level of being a substantial adverse impact that would deprive the resource of its ability to convey the reasons for its significance. As noted above, the City of Los Angeles Office of Historic Resources, in its *Draft Historic Context Statement, Public Art in LA*, cites the case of Kent Twitchell's historically significant mural, "Bride and Groom," located on South Broadway in Los Angeles. In the late 1980s, a large parking garage obscured views of the mural. "However," the document states, "the mural remains an important property because it was executed by a master artist and has high artistic quality."[144] Similarly, the Fort Moore Pioneer Memorial is a work of art by recognized master architects and artists with a high artistic quality that remains intact.

The proposed Historic Paseo would offer a continuous path from Union Station to the Fort Moore Pioneer Memorial, thus reinforcing the connections between the historic resources located in the project vicinity. In addition, by providing a more accessible route to the memorial, the proposed project would improve access to the monument, physically linking the two related historic resources -- one resource that

[143] *Ibid.*

[144] *Ibid.*

embodies and the other resource that memorializes the story of early settlers in Los Angeles. Historical information along the route would enhance the experience of visitors and allow for the Fort Moore Pioneer Memorial to be more readily visited. By providing improved pedestrian access, the Historic Paseo would enhance use and appreciation of both historic resources. In addition, establishing such east-west corridors is a stated objective of the Central City Design Guidelines. In this way, the Historic Paseo will partially compensate for the obstruction of views of both historic resources. However, the Historic Paseo will traverse a mixed-use development, and final project plans should ensure that the Paseo is readily recognizable by visitors as a public space, with an open and inviting atmosphere and scale.

In summary, development of Block A and Block B would result in an indirect impact to the setting and feeling of the Fort Moore Pioneer Memorial, but this impact does not rise to the level of constituting a substantial adverse change insofar as it deprives the historic resource of the ability to convey its significance. Therefore, development of Block A and Block B as currently planned would not result in substantial adverse impacts to the Fort Moore Pioneer Memorial.

Potential Indirect Impacts to Chinatown gateway/entrance

The sensitive treatment of the massing, with setbacks and open spaces, at the corner of Cesar E. Chavez and North Broadway suggests that the approach to the extant Chinatown entrance gates would not be impacted or impaired (in keeping with the guidelines of the Central City North Community Plan). The conceptual design calls stepped massing along Broadway, with open spaces in the northern areas closest to the Chinatown gateway. While the lead agency is exempt under the California Government Code from local zoning provisions, the proposed project would comply with the city-level Community Plan for the Central City North in this respect.

Figure 30. Block A and the Fort Moore Pioneer Memorial, as seen from North Spring Street and Cesar E. Chavez Avenue. Parking lot across the street marks the location for the one- to five-story building of Block A. Source: SWCA Environmental Consultants, 2014.

Figure 31. View of Fort Moore Pioneer Memorial, as seen from the Plaza Church and Historic Paseo Pedestrian Trail. Based on conceptual plans, the memorial pylon would remain visible from this vantage point and throughout the historic paseo. Source: SWCA Environmental Consultants, 2014.

Figure 32. Block B project site, from above, and the view of the Los Angeles Plaza Historic District from Hill Street overpass. Source: SWCA Environmental Consultants, 2014.

Figure 33. View of Fort Moore Pioneer Memorial, from North Broadway, across from the proposed eight-story Block B. Source: SWCA Environmental Consultants, 2014.

Figure 34. View of Fort Moore Pioneer Memorial, from North Spring Street and W. Cesar E. Chavez Avenue. Parking lot marks the location of Block A of the proposed project site. Source: SWCA Environmental Consultants, 2014.

Archaeological Resources

> Threshold G-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § 15064.5?
>
> Threshold G-4: Would the project disturb any human remains, including those interred outside of formal cemeteries?

The proposed project would have the potential to result in significant impacts to cultural resources related to a substantial adverse change in the significance of an archaeological resource. This potential is derived from the possibility of project related ground disturbance encountering and damaging previously undocumented archaeological resources.

Several lines of evidence indicate that it is highly sensitive for the presence of buried archaeological resources. Specifically, portions of the project area that have not been subject to heavy grading in the past have a high potential to contain buried archaeological materials. These include parcels immediately adjacent to West Cesar E. Chavez Avenue and North Spring Street.

The project site is near an area containing known archaeological resources, which indicates potential archaeological sensitivity. Research carried out for this study indicates that the project area occupies what was once the northeast edge, slope, and base of Fort Moore Hill. The project vicinity has been intensively occupied since the late 1700s, and perhaps earlier. Physical evidence for historic uses of the top and slope of the hill, including Fort Moore, a school building, several large residences, and the Broadway Tunnel, was removed during the 1930s and 1940s, when massive earthmoving projects entirely removed the elements of the hill within the project area. The archaeological survey of the project area was negative, which is a predictable outcome given the fact that the property is currently covered in pavement and landscaping.

However, the historical research, records search, and Native American consultation indicate that the project area is potentially very sensitive for the presence of buried cultural resources. The removal of the hill that once stood upon most of the project site and vicinity, rising approximately 30.5 meters (100 feet) above current grade at its highest point (the southwestern edge of the project), would have removed most of the archaeological deposits that may have existed onsite. Portions of the project area that have not experienced massive grade changes—the parcels adjacent to West Cesar E. Chavez Avenue and North Spring Street—may contain buried archaeological resources related to the residential development that took place prior to the early 1900s. Therefore, the proposed project could result in significant impacts to cultural resources through a potential adverse change to an archaeological resource. With implementation of Mitigation Measures CR-2 through CR-6, potential impacts would be reduced to less than significant levels.

The proposed project has the potential to disturb human remains, including those interred outside of formal cemeteries. At least two formal cemeteries once existed in the immediate vicinity of the project area. Plaza Church Cemetery, operated ca. 1822–1844, was located approximately one city block to the southeast (Dietler and Treffers 2012). City Cemetery, operated from 1853 to 1890, was located less than one block to the northwest, but as it was situated atop Fort Moore Hill, it was more than 100 feet above current grade (Gibson and Dietler 2012). Based on the extensive archaeological work that has been conducted in recent years, it is unlikely that human remains associated with either of those cemeteries exist within the project area. However, as there is precedent in Los Angeles and elsewhere for encountering human remains outside delineated historic cemeteries, and as earlier Native American communities existed in the project vicinity prior to the development of Los Angeles, the possibility exists

that human remains would be found on the project site during ground disturbance. In addition, because the proposed project involves excavation activities, it is likely that previously unrecorded archaeological resources would be encountered.

Therefore, the proposed project could result in significant impacts to cultural resources, and mitigation measures are recommended. With implementation of Mitigation Measures CR-2 through CR-6, potential impacts would be reduced to less than significant levels.

Cumulative Impacts

In terms of historic resources, the analysis of cumulative impacts relates to whether impacts of the proposed project and future related projects, considered together, might substantially impact/diminish the number of similar historic resources, in terms of context or property type. Because the project, as proposed, would not result in significant direct impacts to historic resources, the project would not be expected to result in cumulative adverse impacts to historic resources. As the project evolves, Mitigation Measure MM CR-1 will ensure continuing compliance with the *Secretary of the Interior's Standards* vis-à-vis new construction adjacent to a historic district and therefore less than significant impacts to historic resources.

Any future related projects would need to be analyzed on a case-by-case basis, with a determination made for each related project on the significance of indirect impacts to historic resources (in particular, to the Fort Moore Pioneer Memorial and El Pueblo de Los Angeles Historic District), as well as any future historic resources that are identified in the vicinity (in the adjacent area of Chinatown, for example). If necessary, the applicants of future related projects would be required to implement the appropriate mitigation measures. Any potential adverse impacts would be reduced to less than significant through the implementation of mitigation measures. Therefore, the proposed project is not expected to result in any potential cumulative impacts on historic resources.

In terms of archaeological and paleontological resources, the proposed project and any future projects could result in the adverse change to or loss of archaeological and/or paleontological resources. For the purposes of the paleontological analysis, it is assumed that sensitive deposits are present at the surface to an unspecified depth due to the extensive development in the project area, as well as previous discoveries in similar deposits in the region. The destruction of fossils as a result of human-caused ground disturbance has a significant cumulative impact, as it makes biological records of ancient life permanently unavailable for study by scientists. Implementation of proper mitigation measures can, however, reduce the impacts to the paleontological resources to below the level of significance.

Future related projects would need to be analyzed on a case-by-case basis, with a determination made for each related project on the significance of impacts on archaeological or paleontological resources. If necessary, the applicants of any future related projects would be required to implement the appropriate mitigation measures. Any potential adverse impacts would be reduced to less than significant through the implementation of mitigation measures. Therefore, the proposed project is not expected to result in any potential cumulative impacts on archaeological or paleontological resources.

IX. MITIGATION MEASURES

Project Design Features

The proposed project is conceptual in nature; as the project enters its final phases, the project design features would be designed to complement and remain consistent with the adjacent neighborhood and resources. As they relate to historic resources, the following mitigation measures have been designed to ensure this outcome and continuing compliance with the *Secretary of the Interior's Standards*. Mitigation measures include the project features and elements considered most important for avoiding indirect impacts to historic resources due to a change in setting and feeling. The Project Design Features that relate to potentially significant indirect impacts to historic resources are as follows:

Block A: One- to five-story massing, with setbacks;

Block A: Contemporary, streamlined interpretation of the Spanish Colonial Revival style (should be compatible but differentiated from the adjacent historic district, in keeping with CEQA's provision for mitigating impacts through conformance with the Secretary of the Interior's Standards);

Block B: Eight-story massing (depending on the final design of the project, the building could block all views of the Fort Moore Pioneer Memorial; as currently planned, Block B includes a paseo that offers a view corridor of the Fort Moore Pioneer Memorial from the Plaza).

Mitigation Measures

MM CR-1 A qualified architectural historian shall be retained by the applicant to assist the design team throughout the design process, as the proposed project moves from conceptual plans to a final project. The qualified architectural historian shall carry out project-level review to ensure that all changes to the project continue to result in a project that conforms with the *Secretary of the Interior's Standards* vis-à-vis new construction adjacent to a historic district.

The qualified architectural historian shall review any changes in the plans relating to vertical massing and setbacks, horizontal building composition, design elements and detailing, and materials of new construction at Blocks A and B of the proposed project.

The qualified architectural historian would be responsible for ensuring that, as the project progresses, the project massing/scale do not change such that the proposed project would cause a substantial adverse change to the setting of the El Pueblo de Los Historic District.

In addition, in accordance with the *Secretary of the Interior's Standards*, the qualified architectural historian shall ensure that new construction at Block A remains stylistically compatible but differentiated from the adjacent historic district per the *Secretary of the Interiors Standards*; the final project should avoid creating a false sense of history but should blend in with the general character of the adjacent historic district.

The design team shall also include a qualified historic architect; the historic architect shall participate on the design team to review proposed materials, finishes, window treatments/configuration, and ornamental details for the final project, to ensure compliance with the *Secretary of the Interior's Standards*.

By establishing the Historic Paseo trail as an east-west corridor through the project, the project would enhance physical access and connectivity between the El Pueblo de Los

Angeles Historic District, Chinatown, and Fort Moore. However, the Historic Paseo will traverse a mixed-use development, and final project plans should ensure that the Paseo is readily recognizable by visitors as a public space, with an open and inviting atmosphere and scale. A qualified architectural historian shall assist the design team for the Historic Paseo to ensure that the walkway is sufficiently open and pedestrian-scaled.

In order to further enhance connectivity and compensate for the partial loss of view of the Fort Moore Pioneer Memorial and the loss of the view of the El Pueblo de Los Angeles Historic District from Fort Moore, interpretive and wayfinding signage shall be incorporated into the Historic Paseo trail to the maximum extent practicable, to help guide visitors in both directions along the paseo and to raise awareness of the location and significance of historic resources and amenities both west and east of the project site.

The qualified architectural historian shall prepare a Memoranda for the Record documenting each element of the project design—Block A, Block B, and the Historic Paseo—and analyze project conformance with the *Secretary of the Interior's Standards*, with a focus on the aforementioned issues. A finding of compliance with the *Secretary of the Interior's Standards* in each of these Memoranda shall signal that the potential impacts of the project have been mitigated to below the level of significance, per CEQA.

The qualified architectural historian and historic architect shall satisfy the *Secretary of the Interior's Standards* for Architectural History or Architecture in accordance with 36 CFR 61, and have a minimum of 5 years of experience in CEQA review of historic resources and reviewing architectural plans for conformance to the *Secretary of the Interior's Standards and Guidelines*.

Archaeological Presence/Absence Testing. Prior to the commencement of project ground disturbance, a qualified archaeologist shall devise and execute a plan to test the portions of the project area immediately adjacent to West Cesar E. Chavez Avenue and North Spring Street for the presence or absence of buried archaeological resources. Testing methods shall be established in consultation with the landowner, appropriate agencies, and project engineers/architects. These methods may include remote sensing, manual excavation, and/or mechanical excavation. In the event that archaeological resources are present, the resources shall be documented and their significance shall be evaluated through appropriate archaeological and historical means, as determined by a qualified archaeologist. If the discovery proves significant under CEQA and resource avoidance is not possible, data recovery or other means of mitigation shall be conducted to reduce potential impacts to less than significant. The results of this evaluation and data recovery shall be documented in a technical report that shall be submitted to the County of Los Angeles within 90 days of the last day of archaeological fieldwork.

All recommended measures shall be undertaken under the direction of a qualified archaeologist. A qualified archaeologist is defined as an archaeologist meeting the SOI Professional Qualifications Standards for archaeology.

MM CR-3 **Cultural Resources Mitigation and Monitoring Plan.** Prior to the commencement of project ground disturbance, a qualified archaeologist shall review the project's construction plans and available geotechnical information and prepare a Cultural Resources Monitoring and Mitigation Plan (CRMMP) for any ground-disturbing construction activities. The CRMMP shall be prepared in compliance with applicable state and local regulations for cultural resources and shall be submitted to the County of Los Angeles for review and approval no fewer than 15 days before ground disturbing project activities commence. It shall include a Worker Training Protocol and Program

(described in Mitigation Measure MM CR-4), methods for monitoring of ground-disturbing activities, methods for treatment of cultural resources should they be discovered, a communications protocol, methods for reporting, and identification of a curation facility should artifacts be collected.

All recommended measures shall be undertaken under the direction of a qualified archaeologist. A qualified archaeologist is defined as an archaeologist meeting the SOI Professional Qualifications Standards for archaeology.

MM CR-4 **Worker Training.** Prior to the commencement of project ground disturbance, a qualified archaeologist shall present a Cultural Resources Worker Training Protocol and Program to project construction personnel. The training may be presented at the pre-grade meeting, and it shall include detailed procedures for the identification and recovery of significant cultural resources. The archaeologist shall inform project personnel about the types of resources that could be encountered and procedures to follow in the event of an archaeological discovery, as well as the potential penalties for failing to adhere to applicable laws and regulations.

All recommended measures shall be undertaken under the direction of a qualified archaeologist. A qualified archaeologist is defined as an archaeologist meeting the SOI Professional Qualifications Standards for archaeology.

MM CR-5 **Monitoring.** An archaeological monitor, working under the supervision of a qualified archaeologist, shall be present to monitor all ground-disturbing construction activities for the presence of potentially significant cultural resources. The monitor shall have the authority to temporarily halt or redirect construction activities if potentially significant cultural resources are identified. The monitor shall complete a daily log documenting construction activities and observations.

A Native American monitor, selected from the contact list provided by the NAHC, shall be present to monitor all ground-disturbing construction activities for the presence of potentially significant Native American resources. The monitor shall complete a daily log documenting construction activities and observations.

The qualified archaeologist, with the consent of the County of Los Angeles, shall have the authority to reduce the level of archaeological and Native American monitoring based upon field observations. If ground disturbance is to occur in soils that are unlikely to contain potentially significant archaeological or Native American resources due to previous disturbance or great depth below original ground surface, for example, full-time monitoring may not be warranted.

In the event that potentially significant cultural resources are exposed during construction, work in the immediate vicinity of the find (within 8 meters [m] [25 feet]) shall stop until a qualified archaeologist can evaluate the significance of the find, in accordance with the CRMMP. Construction activities may continue in other areas. If the discovery proves significant under CEQA and resource avoidance is not possible, data recovery shall be conducted to reduce potential impacts to less than significant.

The results of the monitoring, including any archaeological evaluation and data recovery that has been undertaken, shall be documented in a monitoring report that shall submitted to the County of Los Angeles within 90 days of the last day of archaeological fieldwork. Recovered cultural materials that are considered to be significant by the qualified archaeologist shall be curated at an appropriate facility that will ensure their long-term

preservation and will allow access to interested scholars. All recommended measures shall be undertaken under the direction of a qualified archaeologist. A qualified archaeologist is defined as an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology.

MM CR-6 **Unanticipated Discovery of Human Remains.** In the event of the unanticipated discovery of human remains, work in the immediate vicinity of the find (within 8 m [25 feet]) shall stop and no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to State of California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. The County Coroner shall be notified of the find immediately. If the human remains are determined to be Native American or "ancient," the Coroner shall notify the NAHC, which will designate and notify a Native American most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and make recommendations regarding the treatment and disposition of human remains and items associated with Native American burials.

Level of Significance after Mitigation

With implementation of the mitigation measures described above, potential impacts on cultural resources would be less than significant. Specifically, Mitigation Measure **MM CR-1** would reduce any potential indirect impacts to the El Pueblo de Los Angeles Historic District and the Fort Moore Pioneer Memorial to less-than-significant levels; Mitigation Measure **MM CR-2** through **MM CR-6** would reduce any potential impacts to the unanticipated discoveries of archaeological resources and human remains to less-than-significant levels.

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1980 Nuestra Señora de Los Angeles (1966). In *The Old Plaza Church, A Documentary History*, compiled and edited by Francis J. Weber, pp. 203–211. Libra Press Limited, Hong Kong.

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1986 *Preservation Brief 14: New Exterior Additions to Historic Buildings: Preservation Concerns*. Technical Preservation Services, National Park Service, Department of the Interior, Washington, DC.

1995 *The Secretary of the Interior's Standards for Rehabilitation, with Guidelines for Rehabilitating, Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. National Park Service, Department of the Interior, Washington, DC. Available at: http://www.nps.gov/tps/standards/rehabilitation/rehabilitation-guidelines.pdf. Accessed 2 April 2014.

2001 *The Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. National Park Service, Department of the Interior, Washington, DC. Available at: http://www.nps.gov/tps/standards/rehabilitation/rehabilitation-guidelines.pdf. Accessed 2 April 2014.

Appendix A

Records Search Results

South Central Coastal Information Center
California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395 / FAX 657.278.5542
anthro.fullerton.edu/sccic.html - sccic@fullerton.edu
California Historical Resources Information System
Orange, Los Angeles, and Ventura Counties

March 3, 2014 SCCIC #13758.0442

Ms. Sara Dietler
SWCA Environmental Consultants
150 S Arroyo Pkwy, 2nd Floor
Pasadena, CA 91105
(626) 240-0587

RE: LA Plaza Cultural Village Project at 527 N Spring Street and 555 N Broadway

Dear Ms. Dietler,

As per your request received on February 27, 2014, an expedited records search was conducted for the above referenced project. The search includes a review of all recorded archaeological sites within a ¼-mile radius of the project site as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest (SPHI), the California Historical Landmarks (SHL), the California Register of Historical Resources (CAL REG), the National Register of Historic Places (NRHP), the California State Historic Resources Inventory (HRI), and the City of Los Angeles Historic-Cultural Monuments (LAHCM) listings were reviewed for the above referenced project. The following is a summary of the findings.

Los Angeles, CA USGS 7.5' Quadrangle

MAPPED ARCHAEOLOGICAL RESOURCES:

Twenty-one archaeological sites (19-000007, 19-000887, 19-001112, 19-001575, 19-002791, 19-002928, 19-002929, 19-002959, 19-003103, 19-003181, 19-003549, 19-003566, 19-004196, 19-004200, 19-004201, 19-004202, 19-004218, 19-004320, 19-120014, 19-120015, 19-120028) have been recorded on our maps within a ¼-mile radius of the project site. No archaeological sites are recorded within the project site. No sites are listed on the Archaeological Determination of Eligibility (DOE) list. Two isolates (19-100446, 19-100515) have been recorded within a ¼-mile radius of the project site. No isolates are recorded within the project site.

MAPPED HISTORIC BUILT-ENVIRONMENT RESOURCES:

Fifty-seven above-ground historic resources (19-167016, 19-167019, 19-167020, 19-167099, 19-167104, 19-167106, 19-167182, 19-170955, 19-170973, 19-170974, 19-171159, 19-171556, 19-171566, 19-171572, 19-171574, 19-171578, 19-171579, 19-171580, 19-171581, 19-171582, 19-171583, 19-171584, 19-171585, 19-171586, 19-171587, 19-171588, 19-171589, 19-171590, 19-171591, 19-171592, 19-171593, 19-171594, 19-171595, 19-171596, 19-171597, 19-171598, 19-171599, 19-171600, 19-171601, 19-171602, 19-171603, 19-171605, 19-171606,

19-171611, 19-171613, 19-173078, 19-173140, 19-173174, 19-173225, 19-175558, 19-186620, 19-186621, 19-190545, 19-190557, 19-190559, 19-190561, 19-190562) have been recorded on our maps within a ¼-mile radius of the project site. No above-ground historic resources are recorded within the project site.

ADDITIONAL CULTURAL RESOURCES (all other listings)

The **California Historic Resources Inventory (HRI)** lists eighty-one properties that have been evaluated for historical significance within a ¼-mile radius of the project site **(see enclosed list of highlighted properties)**. These are additional resources that are listed in the Historic Property Data File and are located either within the project site or within the search radius.

The **California Point of Historical Interest (SPHI)** of the Office of Historic Preservation, Department of Parks and Recreation, lists no properties within a ¼-mile radius of the project site.

The **California Historical Landmarks (SHL)** of the Office of Historic Preservation, Department of Parks and Recreation, lists no properties within a ¼-mile radius of the project site **(see below)**.

SHL-0789 Site of *The Los Angeles Star* 19-167099
Southern California's first newspaper, *The Los Angeles Star*, was founded in this block on May 17, 1851 and for many years exerted a major influence upon this part of the state. Suspended temporarily from 1864 to 1868, it continued later as an effective voice of the people until its final termination date in 1879. Located in Fletcher Bowron Square, 300 block of North Main Street, between Temple and Aliso Streets, Los Angeles.

The **California Register of Historical Resources (CAL REG)** lists twenty-one properties within a ¼-mile radius of the project site **(+see enclosed list)**. These are properties determined to have a National Register of Historic Places Status of 1 or 2, a California Historical Landmark numbering 770 and higher, or a Point of Historical Interest listed after 1/1/1998.

The **National Register of Historic Places (NRHP)** lists sixteen properties within a ¼-mile radius of the project site **(*see enclosed list and see below)**.

Los Angeles 19-173225 U.S. Court House and Post Office, 312 N. Spring St., Los Angeles, 06000001, LISTED, 2/09/06

Los Angeles-19-170973 US PO--LA Terminal Annex 900 Alameda St. LA 19850111 US PO in California 1900-1941 TR 85000131

Los Angeles 19-167182 Plaza Substation 10 Olvera St. LA 19780913 78000689

Los Angeles 19-167020 Plaza Historic District Roughly bounded by Spring, Macy, Alameda and Arcadia Sts., and Old sunset Blvd. LA 1972110372000231

The **City of Los Angeles Historic-Cultural Monuments (LAHCM)** lists no properties within the project site.

HISTORIC MAPS:

Copies of our historic maps – Pasadena, CA (1896 & 1900) 15′ USGS - are enclosed for your review.

PREVIOUS CULTURAL RESOURCES INVESTIGATIONS:

One hundred studies (LA850*, LA982, LA1071, LA1424, LA1577, LA1578*, LA1642, LA1643, LA2519, LA2521, LA2567, LA2692, LA2712, LA2713, LA3103*, LA3151, LA3197, LA3377, LA3496*, LA3501, LA3587,LA3786, LA3812, LA3813, LA3908, LA3910, LA3986, LA4263, LA4383, LA4447, LA4448, LA4452, LA4623, LA4764, LA4834, LA4835, LA5129, LA5203, LA5410, LA5437, LA5448, LA5450, LA6085,L A6317, LA6332, LA6340, LA6343, LA6358, LA6359, LA6362, LA6381, LA6841*, LA7544,L A7545, LA7545, LA7546, LA7547, LA7550, LA7551, LA7552, LA7556, LA7557, LA7558, LA7564, LA8026, LA8252, LA8525, LA8532, LA8533, LA8537, LA8995, LA9609, LA9661, LA9844, LA10149, LA10421, LA10507, LA10543, LA10772, LA10805, LA10806, LA10856, LA10936, LA11048, LA11141, LA11142, LA11165*, LA11242, LA11270, LA11487, LA11651, LA11709, LA11710, LA11782, LA11783, LA11817, LA11914, LA11992, LA12061, LA12244, LA12421) have been recorded within a ¼-mile radius of the project site. Of these, six studies have been recorded that subsume or intersect the project site. There are ten additional investigations located on the Los Angeles, CA 7.5′ USGS Quadrangle that are potentially within a ¼-mile radius of the project site. These reports are not mapped due to insufficient locational information.
(= Located within the project site)*

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you **do not include** resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at 657.278.5395 Monday through Thursday 9:00 am to 3:30 pm.

Should you require any additional information for the above referenced project, reference the SCCIC number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,
SCCIC

Lindsey Noyes
Lead Staff Researcher

Enclosures:

(X) Maps – Los Angeles, CA 7.5′ USGS Quadrangle, Pasadena, CA (1896 & 1900) 15′ USGS Quadrangle – 18 pages
(X) Bibliography – 222 pages
(X) Excel spreadsheets
(X) HRI – 17 pages
(X) National Register Status Codes – 1 page
(X) Site Records – (all resources mentioned above) – 1,329 pdf pages
(X) Survey Reports – (LA3103) – 419 pdf pages

(X) Invoice #13758.0442

LA-00850

Author(s): Costello, Julia G. and Larry R. Wilcoxon
Year: 1977
Title: An Archaeological Assessment of Cultural Resources in Urban Los Angeles, California -- La Placita De Dolores -- LAN-887
Affiliation:
Resources: 19-000887
Quads: LOS ANGELES
Pages:
Notes:

LA-00982

Author(s): Bove, Frederick J.
Year: 1977
Title: Archaeological Resource Survey and Impact Assessment of a Proposed Parking Lot, Los Angeles, California
Affiliation: University of California, Los Angeles Archaeological Survey
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-01071

Author(s): Singer, Clay A.
Year: 1981
Title: Preliminary Historic Archaeological Investigations at the Los Angeles Plaza Church
Affiliation: Northridge Archaeological Research Center, CSUN
Resources: 19-001112
Quads: LOS ANGELES
Pages: 45
Notes:

LA-01424

Author(s): Padon, Beth, Rod Raschke, and Roger Hatheway
Year: 1984
Title: Cultural Resource Assessment of the Proposed Los Angeles Federal Center, Los Angeles, California
Affiliation:
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-01577

Author(s): Anonymous
Year: 1985
Title: Identification Study for Cultural Resources Within Proposed Metro Rail Subway Station Locations in Metropolitan Los Angeles, Ca
Affiliation: Westec Services, Inc.
Resources: 19-000007
Quads: HOLLYWOOD, LOS ANGELES
Pages: 101
Notes:

LA-01578

Author(s): Anonymous
Year: 1983
Title: Technical Report Archaeological Resources Los Angeles Rapid Rail Transit Project Draft Environmental Impact Statement and Environmental Impact Report
Affiliation: Westec Services, Inc.
Resources:
Quads: BURBANK, LOS ANGELES
Pages:
Notes:

LA-01642

Author(s): Costello, Julia G.
Year: 1980
Title: Los Angeles Downtown People Mover Program Archaeological Resources Survey: Phase II Evaluation of Significance and Recommendations for Future Actions
Affiliation: Science Applications Inc.
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-01643

Author(s): Costello, Julia G.
Year: 1981
Title: Los Angeles Downtown People Mover Program Archaeological Resources Survey Phase 3
Affiliation:
Resources:
Quads: HOLLYWOOD, LOS ANGELES
Pages:
Notes:

LA-02519

Author(s): Owen, J. Thomas
Year: 1960
Title: The Church by the Plaza: a History of the Pueblo Church of Los Angeles
Affiliation: Historical Society of Southern California
Resources: 19-001112
Quads: LOS ANGELES
Pages:
Notes:

LA-02521

Author(s): Chace, Paul G.
Year: 1980
Title: An Archaeological Research Design for the Sepulveda Block Restoration-rehabilitation Project
Affiliation: Paul G. Chace & Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-02567

Author(s): Chace, Paul G.
Year: 1979
Title: Assessment of an Archaeological Feature Beneath the Merced Theatre Building, El Pueblo De Los Angeles State Historic Park
Affiliation: Paul G. Chace and Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-02692

Author(s): Padon, Beth, Rod Raschke, and Roger Hatheway
Year: 1985
Title: Final Environmental Impact Statement Los Angeles Federal Center Master Plan
Affiliation:
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-02712

Author(s): Huey, Gene
Year: 1978
Title: Archaeological Survey Report for the El Monte Busway Extension in the City of Los Angeles, Los Angeles County, California
Affiliation: Caltrans
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-02713

Author(s): Weitze, Karen J.
Year: 1980
Title: Aliso Street Historical Report El Monte Busway Extension in the City of Los Angeles 07-la-101 P.m.0. to .5 07202-417801
Affiliation: Caltrans
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-03103

Author(s): Greenwood, Roberta S.
Year: 1993
Title: Cultural Resources Impact Mitigation Program Angeles Metro Red Line Segment 1
Affiliation:
Resources: 19-000007, 19-000887, 19-001575
Quads: LOS ANGELES
Pages:
Notes:

LA-03151

Author(s): Dillon, Brian D.
Year: 1994
Title: Alameda District Plan, Los Angeles California: Prehistoric and Early Historic Archaeological Research
Affiliation:
Resources: 19-000007, 19-000887, 19-001112, 19-001575
Quads: LOS ANGELES
Pages:
Notes:

LA-03197

Author(s): Gierke, Fredrick James
Year: 1976
Title: Avila Adobe 1971 Excavation Potsherds
Affiliation: Archaeology Laboratory, Spring Quarterly
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-03377

Author(s): Foster, John M.
Year: 1996
Title:
Affiliation: Greenwood and Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-03496

Author(s): Anonymous
Year:
Title: Draft Environmental Impact Report Transit Corridor Specific Plan Park Mile Specific Plan Amendments
Affiliation: Unknown
Resources: 19-000159, 19-001945
Quads: BURBANK, HOLLYWOOD, LOS ANGELES, VAN NUYS
Pages: 65
Notes:

LA-03501

Author(s): Dillon, Brian D.
Year: 1990
Title: Archaeological Record Search and Impact Evaluation for the Los Angeles Wastewater Program Management (nos-ncos) Project Los Angeles, California
Affiliation:
Resources: 19-000007, 19-000053, 19-000055, 19-000056, 19-000057, 19-000067, 19-000068, 19-000069, 19-000070, 19-000071, 19-000072, 19-000073, 19-000074, 19-000080, 19-000097, 19-000132, 19-000159, 19-000171, 19-000172, 19-000181, 19-000887, 19-001112, 19-001261, 19-001336, 19-001399, 19-001595
Quads: BEVERLY HILLS, BURBANK, HOLLYWOOD, INGLEWOOD, LOS ANGELES, PASADENA, VENICE
Pages:
Notes:

LA-03587

Author(s): King, Chester
Year: 1994
Title: Prehistoric Native American Cultural Sites in the Santa Monica Mountains
Affiliation: Topanga Anthropological Consultants
Resources: 19-000002, 19-000007, 19-000043, 19-000052, 19-000059, 19-000060, 19-000069, 19-000070, 19-000071, 19-000072, 19-000073, 19-000074, 19-000080, 19-000111, 19-000114, 19-000186, 19-000193, 19-000194, 19-000207, 19-000227, 19-000229, 19-000242, 19-000243, 19-000264, 19-000267, 19-000324, 19-000373, 19-000384, 19-000413, 19-000466, 19-000629, 19-000669, 19-000690, 19-000776, 19-000807, 19-001117, 19-001248, 19-001326, 19-001327, 19-001341, 19-001352, 19-002153, 19-002154, 19-002157, 19-002158, 19-002159, 19-002160, 19-002161, 19-002162, 19-002163, 19-002164, 19-002165, 19-002167, 19-002168, 19-002200, 19-002201, 19-002202, 56-000001, 56-000003, 56-000010, 56-000024, 56-000039, 56-000044, 56-000045, 56-000065, 56-000070, 56-000071, 56-000089, 56-000095, 56-000096, 56-000100, 56-000110, 56-000115, 56-000123, 56-000124, 56-000145, 56-000146, 56-000174, 56-000179, 56-000195, 56-000204, 56-000221, 56-000222, 56-000261, 56-000271, 56-000294, 56-000341, 56-000342, 56-000535, 56-000536, 56-000538, 56-000606, 56-000639, 56-000640, 56-000705, 56-000706, 56-000707, 56-000721, 56-000737, 56-000853, 56-000865, 56-000869, 56-000870, 56-000871, 56-000872, 56-000873, 56-000874, 56-000875, 56-000876, 56-000877, 56-000878, 56-000879, 56-000880, 56-000881, 56-000882, 56-000883, 56-000884, 56-000885, 56-000886, 56-001020, 56-001154, 56-001156, 56-001157
Quads: BEVERLY HILLS, BURBANK, CALABASAS, CAMARILLO, CANOGA PARK, HOLLYWOOD, MALIBU BEACH, NEWBURY PARK, POINT DUME, POINT MUGU, THOUSAND OAKS, TOPANGA, TRIUNFO PASS, VAN NUYS
Pages: 254
Notes: Same as VN1462. Space did not permit the entry of all sites referenced within this report. Please see report for full listing of sites and isolates.

LA-03786

Author(s): Dillon, Brian D.
Year: 1997
Title: Cathedral of Our Lady of the Angles Los Angeles, California Cultural Resources Evaluation
Affiliation:
Resources: 19-000007, 19-000112, 19-000887, 19-001575
Quads: LOS ANGELES
Pages:
Notes:

LA-03812

Author(s): Chace, Paul G.
Year: 1982
Title: Archaeological Monitoring of the W-7 Ramp Project, Olvera St, El Pueblo De Los Angeles State Historic Park
Affiliation: Paul G. Chace & Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-03813

Author(s): Anonymous
Year: 1992
Title: An Archival Study of a Segment of the Proposed Pacific Pipeline, City of Los Angeles, California
Affiliation: Peak & Associates, Inc.
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-03908

Author(s): Frierman, Jay D.
Year: 1983
Title: Monitoring the Repaving of an Area in Front of the Trash Compactor Located on Parking Lost No. 2, El Pueblo De Los Angeles State Historic Park (at the Corner of Macy Street and North Main
Affiliation: S.O.P.A.
Resources: 19-000887
Quads: LOS ANGELES
Pages:
Notes: Missing Report Updated: 11/6/02

LA-03910

Author(s): Frierman, Jay D.
Year: 1983
Title: Monitoring the Restoration and Rehabilitation of the Sepulveda Block 622-624 North Main Street El Pueblo De Los Angeles State Historic Park
Affiliation: Jay D. Frierman, Consulting Archaeologist
Resources: 19-000887
Quads: LOS ANGELES
Pages:
Notes:

LA-03986

Author(s): Chace, Paul G.
Year: 1981
Title: A Cultural Resources Assessment of the Plaza El Pueblo De Los Angeles State Historic Park
Affiliation: Paul G. Chace & Associates
Resources: 19-000007
Quads: LOS ANGELES
Pages:
Notes:

LA-04263

Author(s): Padon, Beth
Year: 1986
Title: General Services Administration Federal Center: Archaeological Assessment Report Phase 2
Affiliation: LSA Associates, Inc.
Resources: 19-000887
Quads: LOS ANGELES
Pages:
Notes:

LA-04383

Author(s): Frierman, Jay D.
Year: 1980
Title: Cultural Resources Study, Chinatown Senior Citizens Housing Site
Affiliation: Greenwood and Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-04447

Author(s): Anonymous
Year: 1999
Title: Los Angeles County Demolition of Buildings Between Spring Street and New High Street
Affiliation: Myra L. Frank & Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-04448

Author(s): Richard Starzak
Year: 1994
Title: Section 106 Documentation for the Metro Rail Red Line East Extension in the City and County of Los Angeles, California
Affiliation: Myra L. Frank & Associates
Resources: 19-150193, 19-150194, 19-150195, 19-167081, 19-171159, 19-172755, 19-174235, 19-174939, 19-174940, 19-174941, 19-174942, 19-174943, 19-174944, 19-174946, 19-174947, 19-174948, 19-174949, 19-174950, 19-174951, 19-174952, 19-174953, 19-174954, 19-174955, 19-174956, 19-174957, 19-174958, 19-174959, 19-174960, 19-174963, 19-174964, 19-174965, 19-174967, 19-174968, 19-174969, 19-174970, 19-174971, 19-174972, 19-174973, 19-174974, 19-174975, 19-174976, 19-174977, 19-174978, 19-174979, 19-176524, 19-176589
Quads: LOS ANGELES
Pages:
Notes:

LA-04452

Author(s): Hatheway, Roger G.
Year: 1982
Title: Determination of Eligibility Report Chinatown
Affiliation: Roger G. Hatheway & Associates
Resources: 19-170957
Quads: LOS ANGELES
Pages:
Notes:

LA-04623

Author(s): Unknown
Year: 1986
Title: Los Angeles Federal Center Project: Determination of Effect on National Register Properties
Affiliation: General Services Administration
Resources: 19-166858, 19-166891, 19-166939, 19-167020, 19-167499, 19-170973, 19-171159, 19-173078, 19-173174, 19-173225
Quads: LOS ANGELES
Pages:
Notes:

LA-04764

Author(s): Duke, Curt
Year: 1999
Title: Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 666-01, County of Los Angeles, California
Affiliation: LSA Associates, Inc.
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-04834

Author(s): Ashkar, Shahira
Year: 1999
Title: Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Anaheim, Los Angeles and Orange Counties
Affiliation: Jones & Stokes Associates, Inc.
Resources: 19-186110, 19-186111, 30-176630
Quads: ANAHEIM, HOLLYWOOD, LA HABRA, LONG BEACH, LOS ALAMITOS, LOS ANGELES, SOUTH GATE, WHITTIER
Pages:
Notes: Same as OR2094

LA-04835

Author(s): Ashkar, Shahira
Year: 1999
Title: Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties
Affiliation: Jones & Stokes Associates, Inc.
Resources: 19-186109, 19-186112, 19-187090
Quads: BALDWIN PARK, EL MONTE, HOLLYWOOD, LA HABRA, LOS ANGELES, ONTARIO, SAN DIMAS, SOUTH GATE, WHITTIER, YORBA LINDA
Pages:
Notes:

LA-05129

Author(s): Greenwood, Roberta S.
Year: 2000
Title: Archaeological Monitoring at La Golondrina Café, Olvera Street, Pueblo De Los Angeles State Historic Park
Affiliation: Greenwood and Associates
Resources: 19-167020
Quads: LOS ANGELES
Pages:
Notes:

LA-05203

Author(s): Foster, John M.
Year: 2001
Title: Archaeological Monitoring Report: Soil Test Pit Excavation for the Siqueiros Mural Project, El Pueblo De Los Angeles
Affiliation: Greenwood and Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-05410

Author(s): Reinoenl, Gary
Year: 1978
Title: El Pueblo De Los Angeles State Historic Park Resource Management Plan
Affiliation: Department of Parks and Recreation
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-05437

Author(s): Chace, Paul G.
Year: 1980
Title: An Archaeological Review and Tests for the Tree Planting Program, El Pueblo De Los Angeles State Historic Park
Affiliation: Paul G. Chace & Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-05448

Author(s): Duke, Curt
Year: 2000
Title: Cultural Resource Assessment for At&t Wireless Services Facility Number R299.1, County of Los Angeles, Ca
Affiliation: LSA Associates, Inc.
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-05450

Author(s): Savastio, Scott A.
Year: 2001
Title: Archaeological Monitoring Report: Los Angeles Web Host 900 South Alameda Street, Los Angeles, California
Affiliation: Greenwood and Associates
Resources: 19-000007
Quads: LOS ANGELES
Pages:
Notes: Isolated Rail Road TracksL

LA-06085

Author(s): Wlodarski, Robert J.
Year: 2003
Title: A Phase I Archaeological Study for the Proposed Eugene Obregon Congressional Medal of Honor Memorial Within Father Serra Park and El Pueblo De Los Angeles State Historic Park, City of Los Angeles, Los Angeles County, California
Affiliation: Historical, Environmental, Archaeological, Research, Team
Resources:
Quads: LOS ANGELES
Pages:
Notes: 19-000007

LA-06317

Author(s): Duke, Curt
Year: 2002
Title: Cultural Resource Assessment Cingular Wireless Facility No. Vy 118-01 Los Angeles County, California
Affiliation: LSA Associates, Inc.
Resources:
Quads: EL MONTE
Pages:
Notes:

LA-06332

Author(s): McKenna, Jeanette A.
Year: 2003
Title: Historic Resources-building Evaluation of the Residential Structures Located at 700 and 704 North Hill Place, Los Angeles, California
Affiliation: McKenna et al.
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-06340

Author(s): Wlodarski, Robert J.
Year: 2001
Title: A Phase I Archaeological Study for 625 North Hill Street (castellar Apartments) City of Los Angeles, Los Angeles County, California
Affiliation: Historical,Environmental,Archaeological,Research,Team
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-06343

Author(s): Foster, John M.
Year: 2001
Title: Archaeological Monitor Report: Sewer Line Trenching for the Avila Adobe Interpretive Center, El Pueble De Los Angeles
Affiliation: Greenwood and Associates
Resources: 19-000887
Quads: LOS ANGELES
Pages:
Notes:

LA-06358

Author(s): Hale, Alice E. and Savastio, Scott
Year: 2002
Title: Archaeological Monitor Report Chinatown Branch Library 639 North Hill Street Los Angeles, California
Affiliation: Greenwood and Associates
Resources: 19-002959
Quads: LOS ANGELES
Pages:
Notes:

LA-06359

Author(s): Hale, Alice E.
Year: 2001
Title: Archaeological Monitor Report the Los Angeles Gas Works 513 North Main Street
Affiliation: Greenwood and Associates
Resources: 19-002891
Quads: LOS ANGELES
Pages:
Notes: NPS72000231

LA-06362

Author(s): Borg, Roger
Year: 1994
Title: Finding of Effect on Historic Properties Arroyo Seco Parkway and Four Level Interchange
Affiliation: Caltrans District 7
Resources:
Quads: HOLLYWOOD, LOS ANGELES
Pages:
Notes:

LA-06381

Author(s): Byrens, Joan
Year: 1993
Title: General Services Administration Design and Installation of Security Measures for the United States Courthouse Located at 312 North Spring Street, Los Angeles, California
Affiliation: General Services Administration, Region 9
Resources: 19-173225
Quads: LOS ANGELES
Pages: 33
Notes: No map provided, mapped by reference to courthouse and address.

LA-06841

Author(s): Unknown
Year: 2003
Title: Plaze De Cltura Y Arte Invironmental Impact Report Volume I, Draft Eir Sch No. 2001 101 167
Affiliation: Sapphos Environmental, Inc.
Resources:
Quads: LOS ANGELES
Pages:
Notes: Map location hand drawn, 19-000007H, 19-002741,19-100301,19-120028,19-00887H,19-001575H in vacinity and within .5 mile radius, El Pueblo de Los Angeles Historic District

LA-07544

Author(s): Foster, John M.
Year: 2006
Title: Archaeological Monitoring Program, Alameda Street/north Spring Street Arterial Redesign-phase 1, California
Affiliation: Greenwood and Associates
Resources: 19-000007, 19-000887, 19-004320, 19-100542
Quads: LOS ANGELES
Pages:
Notes: 30 sites within 1/2 mile radius of project area

LA-07545

Author(s): Slawson, Dana N.
Year: 2006
Title: Mitigation of Impacts on the Zanja Madre Archaeological Feature, La Placita
Affiliation: Greenwood and Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes: Excavation of segment of Zanja Madre

LA-07546

Author(s): Foster, John M.
Year: 2006
Title: Archaeological Monitoring Program Final Report, La Placita Renovation and Winery Restroom Project, Los Angeles, California
Affiliation: Greenwood and Associates
Resources: 19-000882
Quads: LOS ANGELES
Pages:
Notes:

LA-07547

Author(s): Whitley, David S.
Year: 2003
Title: Phase I Archaeological Survey/class Iii Inventory for the Hall of Justice Study Area, Los Angeles, Los Angeles County, California
Affiliation: W & S Consultants
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-07550

Author(s): Mirro, Vanessa A. and Sherri Gust
Year: 2004
Title: Archaeological and Paleontological Monitoring Report for the Grand Avenue Realignment Project, Los Angeles, California
Affiliation: Cogstone Resource Management, Inc.
Resources: 19-003129
Quads: HOLLYWOOD, LOS ANGELES
Pages:
Notes:

LA-07551

Author(s): Foster, John M. and Kronzek, Lynn C.
Year: 2006
Title: Mitigation of Impacts on an Archaeological Feature in the Winery El Pueblo De Los Angeles Historical Monument
Affiliation: Greenwood and Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes: Mentions Features 1 and 2 as being sites, but no primary number, or DPR forms

LA-07552

Author(s): Hale, Alice E.
Year: 2000
Title: Archaeological Monitor Report: Waste Line Trenching for the Cielito Lindo Restaurant Olvera Street, El Pueble De Los Angeles
Affiliation: Greenwood and Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes: Nat. Reg. Hist. Dist.

LA-07556

Author(s): Slawson, Dana N.
Year: 2006
Title: Archaeological Monitoring Report Earthquakerepair and Replacement Sewer Unit 338 (w.o. E2003260) El Pueblo De Los Angeles and Environs Los Angeles, California
Affiliation: Greenwood and Associates
Resources: 19-100515
Quads: LOS ANGELES
Pages:
Notes:

LA-07557

Author(s): Slawson, Dana N.
Year: 2006
Title: Archaeological Monitoring Report Sewer Line Repair Project El Pueble De Los Angeles and Environs Los Angeles, California
Affiliation: Greenwood and Associates
Resources: 19-100515
Quads: LOS ANGELES
Pages:
Notes:

LA-07558

Author(s): Hale, Alice E. and Scott Savastion
Year: 2004
Title: Archaeological Monitor Report Alameda Street Improvements
Affiliation: Greenwood and Associates
Resources: 19-000007
Quads: LOS ANGELES
Pages:
Notes:

LA-07564

Author(s): Greenwood, Roberta S.
Year: 1998
Title: Archaeological Status Report: Collections and Reports
Affiliation: Greenwood and Associates
Resources: 19-001575, 19-001945, 19-002393, 19-002394, 19-002563
Quads: HOLLYWOOD, LOS ANGELES
Pages: 7
Notes: Mapped to resources, removed from unmappables folder.

LA-08026

Author(s): Carrico, Richard L.
Year: 1985
Title: Treatment Plan for Potential Cultural Resources Within Proposed Metro Rail Subway Station Locations in Metropolitan Los Angeles, California
Affiliation: Westec Services, Inc.
Resources:
Quads: HOLLYWOOD, LOS ANGELES
Pages:
Notes:

LA-08252

Author(s): Snyder, John W., Mikesell, Stephen, and Pierzinski
Year: 1986
Title: Request for Determination of Eligibility for Inclusion in the National Register of Historic Places/Historic Bridges in California: Concrete Arch, Suspension, Steel Girder and Steel Arch
Affiliation: Caltrans
Resources:
Quads: HOLLYWOOD, LOS ANGELES, PASADENA
Pages:
Notes:

LA-08525

Author(s): Rehberger, Linda H. and Peter Messick
Year: 2004
Title: Archaeological Monitoring Report, Veteran Memorial, El Pueblo De Los Angeles, Los Angeles Street and Alameda Street, Los Angeles, California
Affiliation: Greenwood and Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-08532

Author(s): Hale, Alice E. and Scott Savastio
Year: 2004
Title: Archaeological Monitor Report: the Plaza House, 507-511 North Main Street, Los Angeles, California
Affiliation: Greenwood and Associates
Resources: 19-002891
Quads: LOS ANGELES
Pages:
Notes:

LA-08533

Author(s): Hale, Alice E. and Scott Savastio
Year: 2004
Title: Archaeological Monitor Report: the California Endowment, Downtown Headquarters and Conference Center Project, Los Angeles, California
Affiliation: Greenwood and Associates
Resources: 19-003181
Quads: POINT DUME
Pages:
Notes: Project area mapped in report appears to be smaller than the project area discussed in report; actual excavation may have been smaller; site record update filed with report

LA-08537

Author(s): Bonner, Wayne H.
Year: 2006
Title: Cultural Resource Records Search Results and Site Visit for T-mobile Candidate La03612a (alameda and Macy), 701 North Main Street, Los Angeles, Los Angeles County, California
Affiliation: Michael Brandman Associates
Resources:
Quads: LOS ANGELES
Pages:
Notes:

LA-08995

Author(s): Howell-Ardila, Deborah and Carmack, Shannon
Year: 2007
Title: Historic American Building Survey (habs)
Affiliation: Sapphos Environmental
Resources: 19-002793
Quads: LOS ANGELES
Pages:
Notes: Oversized shelf

LA-09609

Author(s): Strauss, Monica
Year: 2006
Title: Proposed Bunker Hill Mixed-Use Project - Phase I Archaeological Resources Assessment
Affiliation: EDAW, Inc.
Resources:
Quads: LOS ANGELES
Pages: 7
Notes:

LA-09661

Author(s): Greenwood, Roberta S., Dana N. Slawson, and Alice Hale
Year: 2009
Title: Puestos Utility Upgrade Project, Olvera St., El Pueblo De Los Angeles
Affiliation: Greenwood and Associates
Resources: 19-000007
Quads: LOS ANGELES
Pages: 122
Notes:

LA-09844

Author(s): Anonymous
Year: 2001
Title: Draft: Los Angeles Eastside Corridor, Revised Cultural Resources Technical Report, Final Supplemental Environmental Impact Statement/Final Subsequent Environmental Impact Report
Affiliation: Greenwood & Associates, and Eastside Corridor Transit Consultants
Resources: 19-000007, 19-000887, 19-001575, 19-002563, 19-150194, 19-150195, 19-150196, 19-150197, 19-150198, 19-150199, 19-150200, 19-150201, 19-150202, 19-150203, 19-150204, 19-150205, 19-150206, 19-150207, 19-150208, 19-150210, 19-150211, 19-150213, 19-150214, 19-150215, 19-150216, 19-150217, 19-150218, 19-150219, 19-150220, 19-150221, 19-150222, 19-150223, 19-150224, 19-150225, 19-150226, 19-150227, 19-150228, 19-150229, 19-150230, 19-150231, 19-150232, 19-150233, 19-150235, 19-150236, 19-150237, 19-150238, 19-150239, 19-167030, 19-167081, 19-171159, 19-172755, 19-174939, 19-174940, 19-174943, 19-174945, 19-174950, 19-174957, 19-174968, 19-174971, 19-174974, 19-174975, 19-174976, 19-175328, 19-176600, 19-187722
Quads: LOS ANGELES
Pages: 70
Notes:

LA-10149

Author(s): Stewart, Noah M.
Year: 2009
Title: Finding of no adverse effect: US 101 from Alameda Street Underpass to Barham Boulevard Overcrossing
Affiliation: Caltrans District 7
Resources: 19-188479
Quads: BURBANK, HOLLYWOOD, LOS ANGELES
Pages: 47
Notes:

LA-10421

Author(s): Ayvazian, Ani
Year: 2010
Title: Historic American Building Survey (HABS) for the Plaza House and Vickrey-Brunswig Building in Support of LA Plaza de Cultura y Artes Project
Affiliation: Sapphos
Resources:
Quads: LOS ANGELES
Pages: 65
Notes:

LA-10507

Author(s): Anonymous
Year: 1983
Title: Technical Report - Historical/Architectural Resources - Los Angeles Rail Rapid Transit Project "Metro Rail" Draft Environmental Impact Statement and Environmental Impact Report
Affiliation: Westec Services, Inc.
Resources:
Quads: BURBANK, HOLLYWOOD, LOS ANGELES, VAN NUYS
Pages: 230
Notes:

LA-10543

Author(s): Gust, Sherri
Year: 2003
Title: Archaeological Initial Study Report and mitigation plan for the San Fernando Valley MRT Fiber Optic Line Project, Cities of Canoga Park, Burbank and Los Angeles, California
Affiliation: Cogstone Resource Management Inc.
Resources: 19-000007, 19-000887, 19-001575, 19-002563, 19-002741, 19-002828, 19-002924, 19-002928, 19-002959, 19-003100, 19-003101, 19-003103
Quads: BURBANK, CANOGA PARK, LOS ANGELES
Pages: 23
Notes:

LA-10772

Author(s): Hatheway, Roger
Year: 1979
Title: Historic Building Survey - Los Angeles Downtown People Mover Program Report for Determination of Eligibility
Affiliation: Myra L. Franck
Resources: 19-166859, 19-166929, 19-166934, 19-166939, 19-166940, 19-166958, 19-167276, 19-170976, 19-173078, 19-173080, 19-173081, 19-173104
Quads: HOLLYWOOD, LOS ANGELES
Pages: 20
Notes:

LA-10805

Author(s): Gust, Sherry and Amy Glover
Year: 2009
Title: Cultural Resources Mitigation Compliance Report for the Metro Gold Line Eastside Extension, City of Los Angeles, California. For the Period 2004 to 2006
Affiliation: Cogstone Resource Management, Inc.
Resources:
Quads: LOS ANGELES
Pages: 87
Notes:

LA-10806

Author(s): Loftus, Shannon L.
Year: 2010
Title: Addendum-Paleontological and Cultural Resource Compliance Monitoring Report, Los Angeles County, Metropolitan Transit Authority, Eastside Gold Line Transit Corridor Project
Affiliation: ArchaeoPaleo Resource Management, Inc.
Resources: 19-004171, 19-004172, 19-004173, 19-004174, 19-004175, 19-004176, 19-004177, 19-004178, 19-100881, 19-100882, 19-100883, 19-100884, 19-100885, 19-100886, 19-100887
Quads: LOS ANGELES
Pages: 148
Notes:

LA-10856

Author(s): Glenn, Brian K. and Sherri Gust
Year: 2004
Title: Cultural Resource Monitoring and Mitigation Plan for the Los Angeles County Metropolitan Transportation Authority Eastside Gold Line Transit Corridor, Los Angeles, Los Angeles County, California
Affiliation: Cogstone Resource Management Inc.
Resources:
Quads: HOLLYWOOD, LOS ANGELES
Pages: 88
Notes:

LA-10936

Author(s): Stewart, Noah
Year: 2008
Title: Historic Property Survey Report: 07, LA, 101, 07-LA-101, 07-21870, 07-4776, 4S3000 - Union Station, Los Angeles Plaza Historic District
Affiliation: Caltrans
Resources:
Quads: LOS ANGELES
Pages: 29
Notes:

LA-11048

Author(s): Speed, Lawrence
Year: 2009
Title: American Recovery and Reinvestment Act (ARRA) Funded Security Enhancement Project (PRJ29112359) - Improved Access Controls, Station Hardening, CCTV Surveillance System, and Airborne Particle Detection at Los Angeles Station and Maintenance Yard, LA, CA
Affiliation: URS
Resources: 19-001575, 19-171159, 19-186110, 19-186112
Quads: LOS ANGELES
Pages: 57
Notes:

LA-11141

Author(s): Foster, John M.
Year: 2003
Title: Positive Archaeological Survey Report Plaza Substation Transportation Museum El Pueblo de Los Angeles, California
Affiliation: Greenwood and Associates
Resources: 19-000007, 19-000887, 19-001575, 19-002889, 19-002891, 19-002959, 19-003120, 19-100434
Quads: LOS ANGELES
Pages: 142
Notes:

LA-11142

Author(s): Unknown
Year: 1992
Title: Historic Structures Report - Plaza Substation, Olvera Street El Pueblo de Los Angeles Historic Monument
Affiliation: John Ash Group, Architects Historic Resources Group
Resources:
Quads: LOS ANGELES
Pages: 111
Notes:

LA-11165

Author(s): Carnevale, Mike
Year: 2001
Title: Draft - Environmental Impact Statement, United States General Services Administration, GSA Document Number: ZCA81642/1999 Los Angeles U.S. Courthouse, Los Angeles, California
Affiliation: Burns & McDonnell
Resources:
Quads: LOS ANGELES
Pages: 197
Notes:

LA-11242

Author(s): Johnson McAvoy, Christy
Year: 2001
Title: Los Angeles Union Station, TEA-21 Improvements Section 106 Review, FTA Proejct Number CA-03-0504-01
Affiliation: Historic Resources Group
Resources: 19-171159
Quads: LOS ANGELES
Pages: 151
Notes:

LA-11270

Author(s): Lehman, Jane
Year: 2011
Title: Installation of Carbon dioxide monitors in historic courtrooms at the United States Courthouse, 312 North Spring Street, Los Angeles, CA
Affiliation: U.S. General Services Administration
Resources:
Quads: LOS ANGELES
Pages: 50
Notes:

LA-11487

Author(s): Meyer, Donna
Year: 2011
Title: City of Los Angeles, City Hall East Window Safety Film Replacement, LPDM-PJ-09-CA2008-010
Affiliation: U.S. Department of Homeland Security
Resources:
Quads: LOS ANGELES
Pages: 29
Notes:

LA-11651

Author(s): Hackel, Steven
Year: 2011
Title: Digging up the Remains of Early Los Angeles: The Plaza Church Cemetery
Affiliation: unknown
Resources: 19-004218, 19-167106
Quads: LOS ANGELES
Pages: 20
Notes:

LA-11709

Author(s): Stewart, Noah
Year: 2011
Title: Finding of No Adverse Effect, Source Control Project(s) on State Route 110 and United States Highway 101 at the Four-Level Interchange
Affiliation: California Department of Transportation
Resources:
Quads: HOLLYWOOD, LOS ANGELES
Pages: 38
Notes:

LA-11710

Author(s): Unknown
Year: 2011
Title: Regional Connector Transit Corridor Draft Environmental Impact Statement/ Draft Environmental Impact Report, Appendix Y Cultural Resources-Archaeology
Affiliation: CDM and SWCA
Resources: 19-000887, 19-003097, 19-003103, 19-003338, 19-003339, 19-003352, 19-003588, 19-150195, 19-150196, 19-166842, 19-166934, 19-167489, 19-170974, 19-170984, 19-172123, 19-173078, 19-173080, 19-173174, 19-173344, 19-174925, 19-186619, 19-186620, 19-186621, 19-186622, 19-186882, 19-186883, 19-186888, 19-188406, 19-190513, 19-190521, 19-190545, 19-190548, 19-190551, 19-190553, 19-190554, 19-190555, 19-190556, 19-190557, 19-190558, 19-190559, 19-190561, 19-190562
Quads: HOLLYWOOD, LOS ANGELES
Pages: 62
Notes:

LA-11782

Author(s): Lehman, Jane
Year: 2012
Title: Judge's Chambers, 16th Floor, U.S. Courthouse, 312 N. Spring St., Los Angeles, CA
Affiliation: United States General Services Administration (GSA)
Resources:
Quads: LOS ANGELES
Pages: 17
Notes:

LA-11783

Author(s): Stewart, Noah and Allison, Noah
Year: 2012
Title: Supplemental Finding of No Adverse Effect, Upgrade Bridge Rails in L.A. County on Highway 101
Affiliation: California Department of Transportation
Resources:
Quads: BURBANK, HOLLYWOOD, LOS ANGELES
Pages: 46
Notes:

LA-11817

Author(s): Amaral, Adela, Dietler, John, Dietler, Sara, Ehringer, Candace, Gibson, Heather, Gross, Charlane, Murray, Samantha, Melmed, Anamay, Ramirez, Robert, Strauss, Monica, and Wallace, James
Year: 2012
Title: Not Dead But Gone Before: The Archaeology of Los Angeles City Cemetery (CA-LAN-3566)
Affiliation: AECOM
Resources: 19-003566
Quads: LOS ANGELES
Pages: 522
Notes:

LA-11914

Author(s): Unknown
Year: 2011
Title: U.S. Federal Courthouse, 312 North Spring Street Los Angeles, California. Update of 1986 Historic Structure Report, Final
Affiliation: Page & Turnbull
Resources: 19-173225
Quads: LOS ANGELES
Pages: 170
Notes:

LA-11992

Author(s): Stewart, Noah
Year: 2009
Title: Findings of No Adverse Effect, Upgrade Bridge Rails in L.A. County om Highway 101
Affiliation: CalTrans
Resources:
Quads: BURBANK, HOLLYWOOD, LOS ANGELES
Pages: 46
Notes:

LA-12061

Author(s): Slauson, Dana and Kay, Michael
Year: 2012
Title: Cultural Resources Monitoring Report for the Siqueiros Mural Shelter, Viewing Platform, and Interpretive Center Project
Affiliation: Greenwood & Associates
Resources: 19-000007, 19-000043, 19-000047, 19-004196, 19-167020, 19-171556
Quads: LOS ANGELES
Pages: 63
Notes:

SCCIC Bibliography: LA Plaza Cultural Village Project

LA-12244

Author(s): Carey, Alice and Sugaya, Hisashi
Year: 2003
Title: Draft Cultural Resources Technical Report Antique Block El Pueblo de Los Angeles Historic Monument Los Angeles, California
Affiliation: Carey & Co
Resources: 19-171613
Quads: LOS ANGELES
Pages: 68
Notes:

LA-12421

Author(s): Sorenson, John
Year: 2000
Title: Terminal Annex, Los Angeles California
Affiliation: U.S Postal Service
Resources:
Quads: LOS ANGELES
Pages: 82
Notes:

SCCIC Bibliography: Los Angeles, CA Quad Unmappables

LA-02815

Author(s): King, Chester
Year: 1993
Title: Native American Placenames in the Vicinity of the Pacific Pipeline Part 1: the Los Angeles Basin
Affiliation: Topanga Anthropological Consultants
Resources:
Quads: LONG BEACH, LOS ANGELES, OAT MOUNTAIN, SAN FERNANDO, SOUTH GATE
Pages: 48
Notes: Mapped to quads in Other Reports.

LA-03511

Author(s): Romani, John F.
Year: 1977
Title: Assessment of the Archaeological Impact by the Development of the Waste Water Facilities Plan W.o. 31389
Affiliation: Northridge Archaeological Research Center, CSUN
Resources: 19-000009, 19-000043, 19-000053, 19-000055, 19-000056, 19-000057, 19-000058, 19-000061, 19-000062, 19-000064, 19-000065, 19-000068, 19-000203, 19-000204, 19-000206, 19-000211, 19-000212, 19-000343
Quads: ACTON, ADOBE MTN, AGUA DULCE, ALPINE BUTTE, AZUSA, BALDWIN PARK, BEVERLY HILLS, BLACK MTN, BURBANK, BURNT PEAK, CALABASAS, CANOGA PARK, CHILAO FLAT, COBBLESTONE MTN, CONDOR PEAK, CRYSTAL LAKE, DEL SUR, EL MIRAGE, EL MONTE, FAIRMONT BUTTE, FRAZIER MOUNTAIN, GLENDORA, GREEN VALLEY, HI VISTA, HOLLYWOOD, INGLEWOOD, JACKRABBIT HILL, JUNIPER HILLS, LA HABRA, LA LIEBRE RANCH, LAKE HUGHES, LANCASTER EAST, LANCASTER WEST, LEBEC, LIEBRE MTN, LITTLE BUTTES, LITTLEROCK, LONG BEACH, LOS ALAMITOS, LOS ANGELES, LOVEJOY BUTTES, MALIBU BEACH, MESCAL CREEK, MINT CANYON, MOUNT SAN ANTONIO, MT BALDY, MT WILSON, NEENACH SCHOOL, NEWHALL, OAT MOUNTAIN, ONTARIO, PACIFICO MOUNTAIN, PALMDALE, PASADENA, POINT DUME, REDMAN, REDONDO BEACH, RITTER RIDGE, ROGERS LAKE SOUTH, ROSAMOND, ROSAMOND LAKE, SAN DIMAS, SAN FERNANDO, SAN PEDRO, SANTA SUSANA, SLEEPY VALLEY, SOUTH GATE, SUNLAND, THOUSAND OAKS, TOPANGA, TORRANCE, TRIUNFO PASS, VAL VERDE, VALYERMO, VAN NUYS, VENICE, WARM SPRINGS MOUNTAIN, WATERMAN MTN, WHITAKER PEAK, WHITTIER, YORBA LINDA
Pages: 18
Notes: Mapped to entire LA County in Other Reports layer, GIS

LA-03584

Author(s): MacDonald, Lenora Johnson
Year: 1931
Title: Our Pioneer Mother
Affiliation: None
Resources:
Quads: LOS ANGELES, SAN FERNANDO
Pages:
Notes: Unmappable. Mentions areas in downtown Los Angeles, the San Fernando Valley, and Chatsworth.

LA-03773

Author(s): Singer, Clay A.
Year: 1978
Title: Preliminary Assessment of Potential Impacts and Evaluation of Cultural Resources Along Proposed Transit System Alignment Alternatives in the City of Los Angeles, Los Angeles County, California
Affiliation: Archaeological Resource Management Corp.
Resources: 19-000007, 19-000159
Quads: BEVERLY HILLS, BURBANK, HOLLYWOOD
Pages: 18
Notes: Mapped to Van Nuys, Hollywood, and Los Angeles quads in Other Reports.

LA-04323

Author(s): Hill, James N.
Year: 1985
Title: Cultural Evolution in the Archaic/mesolithic: a Research Design for the Los Angeles Basin
Affiliation: Archaeological Resource Management Corp.
Resources:
Quads: ACTON, ADOBE MTN, AGUA DULCE, ALPINE BUTTE, AZUSA, BALDWIN PARK, BEVERLY HILLS, BLACK MTN, BURBANK, BURNT PEAK, CALABASAS, CANOGA PARK, CHILAO FLAT, COBBLESTONE MTN, CONDOR PEAK, CRYSTAL LAKE, DEL SUR, EL MIRAGE, EL MONTE, FAIRMONT BUTTE, FRAZIER MOUNTAIN, GLENDORA, GREEN VALLEY, HI VISTA, HOLLYWOOD, INGLEWOOD, JACKRABBIT HILL, JUNIPER HILLS, LA HABRA, LA LIEBRE RANCH, LAKE HUGHES, LANCASTER EAST, LANCASTER WEST, LEBEC, LIEBRE MTN, LITTLE BUTTES, LITTLEROCK, LONG BEACH, LOS ALAMITOS, LOS ANGELES, LOVEJOY BUTTES, MALIBU BEACH, MESCAL CREEK, MINT CANYON, MOUNT SAN ANTONIO, MT BALDY, MT WILSON, NEENACH SCHOOL, NEWHALL, OAT MOUNTAIN, ONTARIO, PACIFICO MOUNTAIN, PALMDALE, PASADENA, POINT DUME, REDMAN, REDONDO BEACH, RITTER RIDGE, ROGERS LAKE SOUTH, ROSAMOND, ROSAMOND LAKE, SAN DIMAS, SAN FERNANDO, SAN PEDRO, SANTA SUSANA, SLEEPY VALLEY, SOUTH GATE, SUNLAND, THOUSAND OAKS, TOPANGA, TORRANCE, TRIUNFO PASS, VAL VERDE, VALYERMO, VAN NUYS, VENICE, WARM SPRINGS MOUNTAIN, WATERMAN MTN, WHITAKER PEAK, WHITTIER, YORBA LINDA
Pages: 124
Notes: Mapped to entire LA County (except islands) in Other Reports.

LA-07568

Author(s): Bernor, Raymond L.
Year: 1978
Title: Palaeontological Resource Survey and Impact Evaluation for a Proposed Rapid Transit System in the City of Los Angeles, Los Angeles County, California
Affiliation: Archaeological Resource Management Corp.
Resources: 19-000009, 19-000159
Quads: BURBANK, HOLLYWOOD, LOS ANGELES
Pages: 11
Notes: Mapped to Van Nuys, Hollywood, and Los Angeles quads in Other Reports.

LA-07826

Author(s): Shepard, Richard S. and Roger D. Mason
Year: 2001
Title: Cultural Resources Records Search and Constraints Analysis Report: LAX/South (Orange County) High Speed Ground Access Study, Los Angeles and Orange Counties, California
Affiliation: Chambers Group, Inc.
Resources: 19-000088, 19-000831, 19-001575, 30-000062, 30-000113, 30-000195, 30-000373, 30-001352, 30-001538
Quads: ANAHEIM, BEVERLY HILLS, EL TORO, HOLLYWOOD, INGLEWOOD, LONG BEACH, LOS ALAMITOS, LOS ANGELES, NEWPORT BEACH, ORANGE, SEAL BEACH, SOUTH GATE, TORRANCE, TUSTIN, VENICE, WHITTIER
Pages: 21
Notes: Also OR-3267 - Mapped to description and vague map provided in Other Reports layer.

LA-11484

Author(s): Walker, E.F. and Robinson, Eugene
Year:
Title: Partial List of Indian Village Sites in Lost [sic] Angeles County, with a few in Orange County. (Information from Eugene Robinson, Handwritten, in "Reconnaissance Sites 15F" looseleaf notbook of Mr. E.F. Walker, Southwest Museum, Los Angeles, California
Affiliation: Southwest Museum
Resources:
Quads: AZUSA, BALDWIN PARK, BEVERLY HILLS, CALABASAS, CHILAO FLAT, CONDOR PEAK, INGLEWOOD, LONG BEACH, LOS ALAMITOS, LOS ANGELES, MT WILSON, REDONDO BEACH, SAN PEDRO, SANTA CATALINA EAST, SUNLAND, TOPANGA, TORRANCE, VENICE
Pages: 6
Notes: Mapped to quads in GIS as Other Report. Also recorded as OR4157

LA-11747

Author(s): Sakai, Rodney
Year: 2006
Title: Programmatic Agreement Compliance Report, twenty-first Reporting Period, July 1, 2005-- March 31, 2006
Affiliation: Historic Resources Group
Resources:
Quads: ACTON, ADOBE MTN, AGUA DULCE, ALPINE BUTTE, AZUSA, BALDWIN PARK, BEVERLY HILLS, BLACK MTN, BURBANK, BURNT PEAK, CALABASAS, CANOGA PARK, CHILAO FLAT, COBBLESTONE MTN, CONDOR PEAK, CRYSTAL LAKE, DEL SUR, EL MIRAGE, EL MONTE, FAIRMONT BUTTE, FRAZIER MOUNTAIN, GLENDORA, GREEN VALLEY, HI VISTA, HOLLYWOOD, INGLEWOOD, JACKRABBIT HILL, JUNIPER HILLS, LA HABRA, LA LIEBRE RANCH, LAKE HUGHES, LANCASTER EAST, LANCASTER WEST, LEBEC, LIEBRE MTN, LITTLE BUTTES, LITTLEROCK, LONG BEACH, LOS ALAMITOS, LOS ANGELES, LOVEJOY BUTTES, MALIBU BEACH, MESCAL CREEK, MINT CANYON, MOUNT SAN ANTONIO, MT BALDY, MT WILSON, NEENACH SCHOOL, NEWHALL, OAT MOUNTAIN, ONTARIO, PACIFICO MOUNTAIN, PALMDALE, PASADENA, POINT DUME, REDMAN, REDONDO BEACH, RITTER RIDGE, ROGERS LAKE SOUTH, ROSAMOND, ROSAMOND LAKE, SAN DIMAS, SAN FERNANDO, SAN PEDRO, SANTA SUSANA, SLEEPY VALLEY, SOUTH GATE, SUNLAND, THOUSAND OAKS, TOPANGA, TORRANCE, TRIUNFO PASS, VAL VERDE, VALYERMO, VAN NUYS, VENICE, WARM SPRINGS MOUNTAIN, WATERMAN MTN, WHITAKER PEAK, WHITTIER, YORBA LINDA
Pages: 80
Notes: Mapped to entire LA County in Other Reports layer

LA-11748

Author(s): Sakai, Rodney
Year: 2003
Title: Programmatic Agreement Compliance Report Fifteenth Reporting Period July 1-- December 31, 2002
Affiliation: SHPO & Advisory Council on Hitsoric Preservation
Resources:
Quads: ACTON, ADOBE MTN, AGUA DULCE, ALPINE BUTTE, AZUSA, BALDWIN PARK, BEVERLY HILLS, BLACK MTN, BURBANK, BURNT PEAK, CALABASAS, CANOGA PARK, CHILAO FLAT, COBBLESTONE MTN, CONDOR PEAK, CRYSTAL LAKE, DEL SUR, EL MIRAGE, EL MONTE, FAIRMONT BUTTE, FRAZIER MOUNTAIN, GLENDORA, GREEN VALLEY, HI VISTA, HOLLYWOOD, INGLEWOOD, JACKRABBIT HILL, JUNIPER HILLS, LA HABRA, LA LIEBRE RANCH, LAKE HUGHES, LANCASTER EAST, LANCASTER WEST, LEBEC, LIEBRE MTN, LITTLE BUTTES, LITTLEROCK, LONG BEACH, LOS ALAMITOS, LOS ANGELES, LOVEJOY BUTTES, MALIBU BEACH, MESCAL CREEK, MINT CANYON, MOUNT SAN ANTONIO, MT BALDY, MT WILSON, NEENACH SCHOOL, NEWHALL, OAT MOUNTAIN, ONTARIO, PACIFICO MOUNTAIN, PALMDALE, PASADENA, POINT DUME, REDMAN, REDONDO BEACH, RITTER RIDGE, ROGERS LAKE SOUTH, ROSAMOND, ROSAMOND LAKE, SAN DIMAS, SAN FERNANDO, SAN PEDRO, SANTA SUSANA, SLEEPY VALLEY, SOUTH GATE, SUNLAND, THOUSAND OAKS, TOPANGA, TORRANCE, TRIUNFO PASS, VAL VERDE, VALYERMO, VAN NUYS, VENICE, WARM SPRINGS MOUNTAIN, WATERMAN MTN, WHITAKER PEAK, WHITTIER, YORBA LINDA
Pages: 55
Notes: Mapped to entire LA County in Other Reports layer

Appendix B

NAHC Sacred Lands File Results and Native American Contact Program

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

March 3, 2014 (CORRECTED)

Dr. John Dietler, Ph.D., Director of Cultural Resources
SWCA Environmental Consultants
150 South Arroyo Parkway, 2nd Floor
Pasadena, CA 91108

Sent by FAX to: 626-240-0607
No. of Pages: 4

RE: Sacred Lands File Search and Native American Contacts list for the **"LA Plaza de Culturas y Artes Foundation Project Project;"** located on two separate parcels in the Historic District of Downtown Los Angeles; Los Angeles County, California

Dear Dr. Dietler:

A record search of the NAHC Sacred Lands Inventory **failed to indicate** the presence of Native American traditional cultural places in the Project site(s) or 'areas of Potential effect' (APE), submitted to this office.. However, there are Native American sacred places/sites in close proximity to the APE. Note also that the absence of archaeological and/or Native American cultural resources does not preclude their existence at the subsurface level.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the Court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

Attached is a list of Native American tribes, Native American individuals or organizations that may have knowledge of cultural resources in or near the proposed project area (APE). As part of the consultation process, the NAHC recommends that local government and project developers contact the tribal governments and native American individuals on the list in order to determine if the proposed action might impact any cultural places or sacred sites. If a response from those listed on the attachment is not received in two weeks of notification, the NAHC request that a follow-up telephone call be made to ensure the project information has been received.

California Government Code Sections 65040.12(e) defines 'environmental justice' to provide "fair treatment of people...with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies." Also, Executive Order B-10-11 requires that state agencies "consult with Native American

tribes, their elected officials and other representatives of tribal governments in order to provide meaningful input into...the development of legislation, regulations, rules and policies on matter that may affect tribal communities."

If you have any questions or need additional information, please contact me at (916) 373-3715.

Sincerely,

Dave Singleton
Program Analyst

Attachments

Native American Contacts
Los Angeles County California
March 3, 2014

Ti'At Society/Inter-Tribal Council of Pimu
Cindi M. Alvitre, Chairwoman-Manisar
3094 Mace Avenue, Apt. B Gabrielino
Costa Mesa, , CA 92626
calvitre@yahoo.com
(714) 504-2468 Cell

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-761-6417- fax

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Private Address Gabrielino Tongva
,
tattnlaw@gmail.com
310-570-6567

Gabrielino-Tongva Tribe
Bernie Acuna, Co-Chairperson
P.O. Box 180 Gabrielino
Bonsall , CA 92003
(619) 294-6660-work
(310) 428-5690 - cell
(760) 636-0854- FAX
bacuna1@gabrielinotribe.org

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1232 - FAX
(626) 286-1758 - Home
(626) 286-1262 -FAX

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson
P.O. Box 180 Gabrielino
Bonsall , CA 92003
palmsprings9@yahoo.com
626-676-1184- cell
(760) 636-0854 - FAX

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
sgoad@gabrielino-tongva.com
951-845-0443

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
gabrielenoindians@yahoo.
(626) 926-4131

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed TLa Plaza de Culturas y Artes Foundation Project on two parcels within the Historic District of Downtown Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
Los Angeles County California
March 3, 2014

Gabrielino-Tongva Tribe
Conrad Acuna,
P.O. Box 180 Gabrielino
Bonsall , CA 92003

760-636-0854 - FAX

Gabrielino /Tongva Nation
Sam Dunlap, Cultural Resorces Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net
909-262-9351

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list s only applicable for contacting locative Americans with regard to cultural resources for the proposed
TLa Plaza de Culturas y Artes Foundation Project on two parcels within the Historic District of Downtown Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

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150 S. Arroyo Parkway, 2nd Floor
Pasadena, CA 91105
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

March 7, 2014

Andrew Salas, Chairperson
Gabrieleno Band of Mission Indians
P.O. Box 393
Covina, CA 91723

Sent Via U.S. Mail

RE: Cultural Resources Survey of Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation, City of Los Angeles, Los Angeles County, California

Dear Mr. Salas:

The LA Plaza de Cultura y Artes Foundation and the County of Los Angeles has retained SWCA Environmental Consultants (SWCA) to conduct cultural resources compliance services for the Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation in the City of Los Angeles, California. SWCA is conducting this compliance in conformance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and under the provisions of 36 (CFR) Section 800.4(a)(3).

As part of the process of identifying cultural resources issues for this project, SWCA contacted the Native American Heritage Commission (NAHC) and requested a Sacred Lands File (SLF) search and a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The NAHC SLF failed to indicate the presence of Native American cultural resources within the project area, but the NAHC recommended that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

The LA Plaza de Cultura y Artes Foundation (the Foundation) and the County of Los Angeles propose a 3.68 acre infill redevelopment known as the LA Plaza Cultural Village Project (the Project), consisting of two adjacent, non-contiguous sites currently improved as parking lots bordering the El Pueblo Historic District, immediately north of the 101 Freeway and bisected by North Broadway. The proposed development consists of an approximately 425,000 square foot mixed-use Project located on two parcels at 527 N. Spring Street and 555 N. Broadway (collectively, the Plaza Lots). The Plaza Lots are owned by the County of Los Angeles (County) and are used for surface parking for County employees, federal jurors and visitors. **This proposed development is west of and on entirely separate parcels from the existing LA Plaza de Cultura y Artes campus, and does not include or abut the known cultural resources on that site, including the historic Plaza Church Cemetery**. The proposed project site is completely urbanized with paved areas, and is surrounded by commercial, residential, and industrial properties.

If you have knowledge of any cultural resources that may exist within or near the project area, please contact me via telephone at (626) 240-0587 Ext. 6611; or via email at jdietler@swca.com; or in writing at the above address at your earliest convenience. Thank you for your assistance.

Sincerely,

John Dietler, Ph.D.
Cultural Resources Program Director

Enclosures: Project Location Map

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Pasadena Office
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Pasadena, CA 91105
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

March 7, 2014

John Tommy Rosas, Tribal Admin.
Tongva Ancestral Territorial Tribal Nation
tattnlaw@gmail.com

Sent Via E-Mail

RE: Cultural Resources Survey of Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation, City of Los Angeles, Los Angeles County, California

Dear Mr. Rosas:

The LA Plaza de Cultura y Artes Foundation and the County of Los Angeles has retained SWCA Environmental Consultants (SWCA) to conduct cultural resources compliance services for the Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation in the City of Los Angeles, California. SWCA is conducting this compliance in conformance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and under the provisions of 36 (CFR) Section 800.4(a)(3).

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Sincerely,

John Dietler, Ph.D.
Cultural Resources Program Director

Enclosures: Project Location Map

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www.swca.com

March 7, 2014

Anthony Morales, Chairperson
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

Sent Via U.S. Mail

RE: Cultural Resources Survey of Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation, City of Los Angeles, Los Angeles County, California

Dear Mr. Morales:

The LA Plaza de Cultura y Artes Foundation and the County of Los Angeles has retained SWCA Environmental Consultants (SWCA) to conduct cultural resources compliance services for the Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation in the City of Los Angeles, California. SWCA is conducting this compliance in conformance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and under the provisions of 36 (CFR) Section 800.4(a)(3).

As part of the process of identifying cultural resources issues for this project, SWCA contacted the Native American Heritage Commission (NAHC) and requested a Sacred Lands File (SLF) search and a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The NAHC SLF failed to indicate the presence of Native American cultural resources within the project area, but the NAHC recommended that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

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Sincerely,

John Dietler, Ph.D.
Cultural Resources Program Director

Enclosures: Project Location Map

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www.swca.com

March 7, 2014

Sandonne Goad, Chairperson
Gabrieleno/Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

Sent Via U.S. Mail

RE: Cultural Resources Survey of Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation, City of Los Angeles, Los Angeles County, California

Dear Ms. Goad:

The LA Plaza de Cultura y Artes Foundation and the County of Los Angeles has retained SWCA Environmental Consultants (SWCA) to conduct cultural resources compliance services for the Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation in the City of Los Angeles, California. SWCA is conducting this compliance in conformance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and under the provisions of 36 (CFR) Section 800.4(a)(3).

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Sincerely,

John Dietler, Ph.D.
Cultural Resources Program Director

Enclosures: Project Location Map

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Tel 626.240.0587 Fax 626.240.0607
www.swca.com

March 7, 2014

Sam Dunlap, Cultural Resources Director
Gabrieleno/Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

Sent Via U.S. Mail

RE: Cultural Resources Survey of Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation, City of Los Angeles, Los Angeles County, California

Dear Mr. Dunlap:

The LA Plaza de Cultura y Artes Foundation and the County of Los Angeles has retained SWCA Environmental Consultants (SWCA) to conduct cultural resources compliance services for the Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation in the City of Los Angeles, California. SWCA is conducting this compliance in conformance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and under the provisions of 36 (CFR) Section 800.4(a)(3).

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Sincerely,

John Dietler, Ph.D.
Cultural Resources Program Director

Enclosures: Project Location Map

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www.swca.com

March 7, 2014

Linda Candelaria, Co-Chairperson
Gabrieleno/Tongva Tribe
P.O. Box 180
Bonsall, CA 92003

Sent Via U.S. Mail

RE: Cultural Resources Survey of Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation, City of Los Angeles, Los Angeles County, California

Dear Ms. Candelaria:

The LA Plaza de Cultura y Artes Foundation and the County of Los Angeles has retained SWCA Environmental Consultants (SWCA) to conduct cultural resources compliance services for the Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation in the City of Los Angeles, California. SWCA is conducting this compliance in conformance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and under the provisions of 36 (CFR) Section 800.4(a)(3).

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If you have knowledge of any cultural resources that may exist within or near the project area, please contact me via telephone at (626) 240-0587 Ext. 6611; or via email at jdietler@swca.com; or in writing at the above address at your earliest convenience. Thank you for your assistance.

Sincerely,

John Dietler, Ph.D.
Cultural Resources Program Director

Enclosures: Project Location Map

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Pasadena Office
150 S. Arroyo Parkway, 2nd Floor
Pasadena, CA 91105
Tel 626.240.0587 Fax 626.240.0607
www.swca.com

March 7, 2014

Cindi M. Alvitre, Chairwoman-Manisar
Ti'At Society/Inter-Tribal Council of Pimu
3094 Mace Avenue, Apt. B
Costa Mesa, CA 92626

Sent Via U.S. Mail

RE: Cultural Resources Survey of Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation, City of Los Angeles, Los Angeles County, California

Dear Ms. Alvitre:

The LA Plaza de Cultura y Artes Foundation and the County of Los Angeles has retained SWCA Environmental Consultants (SWCA) to conduct cultural resources compliance services for the Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation in the City of Los Angeles, California. SWCA is conducting this compliance in conformance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and under the provisions of 36 (CFR) Section 800.4(a)(3).

As part of the process of identifying cultural resources issues for this project, SWCA contacted the Native American Heritage Commission (NAHC) and requested a Sacred Lands File (SLF) search and a list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the project area. The NAHC SLF failed to indicate the presence of Native American cultural resources within the project area, but the NAHC recommended that we consult with you directly regarding your knowledge of the presence of cultural resources that may be impacted by this project.

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www.swca.com

March 7, 2014

Conrad Acuna
Gabrielino/Tongva Nation
P.O. Box 180
Bonsall, CA 92003

Sent Via U.S. Mail

RE: Cultural Resources Survey of Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation, City of Los Angeles, Los Angeles County, California

Dear Mr. Acuna:

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Sincerely,

John Dietler, Ph.D.
Cultural Resources Program Director

Enclosures: Project Location Map

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March 7, 2014

Bernie Acuna, Co-Chairperson
Gabrieleno/Tongva Tribe
P.O. Box 180
Bonsall, CA 92003

Sent Via U.S. Mail

RE: Cultural Resources Survey of Proposed Cultura Village Development for the LA Plaza de Cultura y Artes Foundation, City of Los Angeles, Los Angeles County, California

Dear Mr. Acuna:

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Sincerely,

John Dietler, Ph.D.
Cultural Resources Program Director

Enclosures: Project Location Map

Appendix C

State of California Department of Parks and Recreation
Series 523 Forms

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**	Primary # HRI # Trinomial NRHP Status Code	
Other Listings Review Code	Reviewer	Date

 ***Resource Name or #:** 400-408 West Cesar E. Chavez Avenue

P1. Other Identifier: Colima Restaurant

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Los Angeles, CA **Date:** 1966 (PR 1981) **T** 1S ; **R** 13W; **¼ of ¼ of Sec** Unsectioned ; M.D. **B.M.**

c. Address: 400-408 West Cesar E Chavez Avenue City: Los Angeles Zip: 90012

d. UTM: Zone: 10 ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: APN: 5408-004-001

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) Located on a sloped corner lot, at West Cesar Chavez Avenue and North Broadway in north-central Los Angeles, the subject property is a one-story, vernacular commercial building. The building is rectangular in plan, clad in patterned brick, and capped with a flat roof with no eaves. The roof is framed in places by a stepped parapet, with an uninterrupted belt course spanning the north, east, and west elevations below the roof line. The north (primary) elevation displays a series of six storefronts. The storefronts are generally characterized by grouped, metal-frame, display windows, sheltered beneath cloth awnings with metal frames. Along the north elevation, shops are accessed via metal-frame glass and wooden doors. The east elevation displays metal-framed display windows, sheltered beneath a cloth awning, and a metal security gate topped with a fan-vent transom. Clad in concrete, the south elevation of the building is unadorned and displays no openings or architectural detailing.

Signage on the north elevation consists of affixed lightbox signs above entryways; on the east elevation, a combination lightbox and neon sign is located along the roofline of the building. Metal address signs are located beside each entry along the façade. In terms of setting, the building occupies the northeastern portion of a triangular corner lot, located at the base of hill. Adjacent to the building is a large, paved public parking lot. (See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes) HP6. 1-3 story commercial building

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) View west, March 19, 2014, DSC_0340

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1922, Los Angeles County Office of the Assessor.

***P7. Owner and Address:**
Unknown

***P8. Recorded by:** (Name, affiliation, and address)
Brandi Shawn and Debi Howell-Ardila
SWCA Environmental Consultants
150 S. Arroyo Parkway, Second Floor
Pasadena, CA 91105

***P9. Date Recorded:**
March 25, 2014

***P10. Survey Type:** (Describe) Intensive

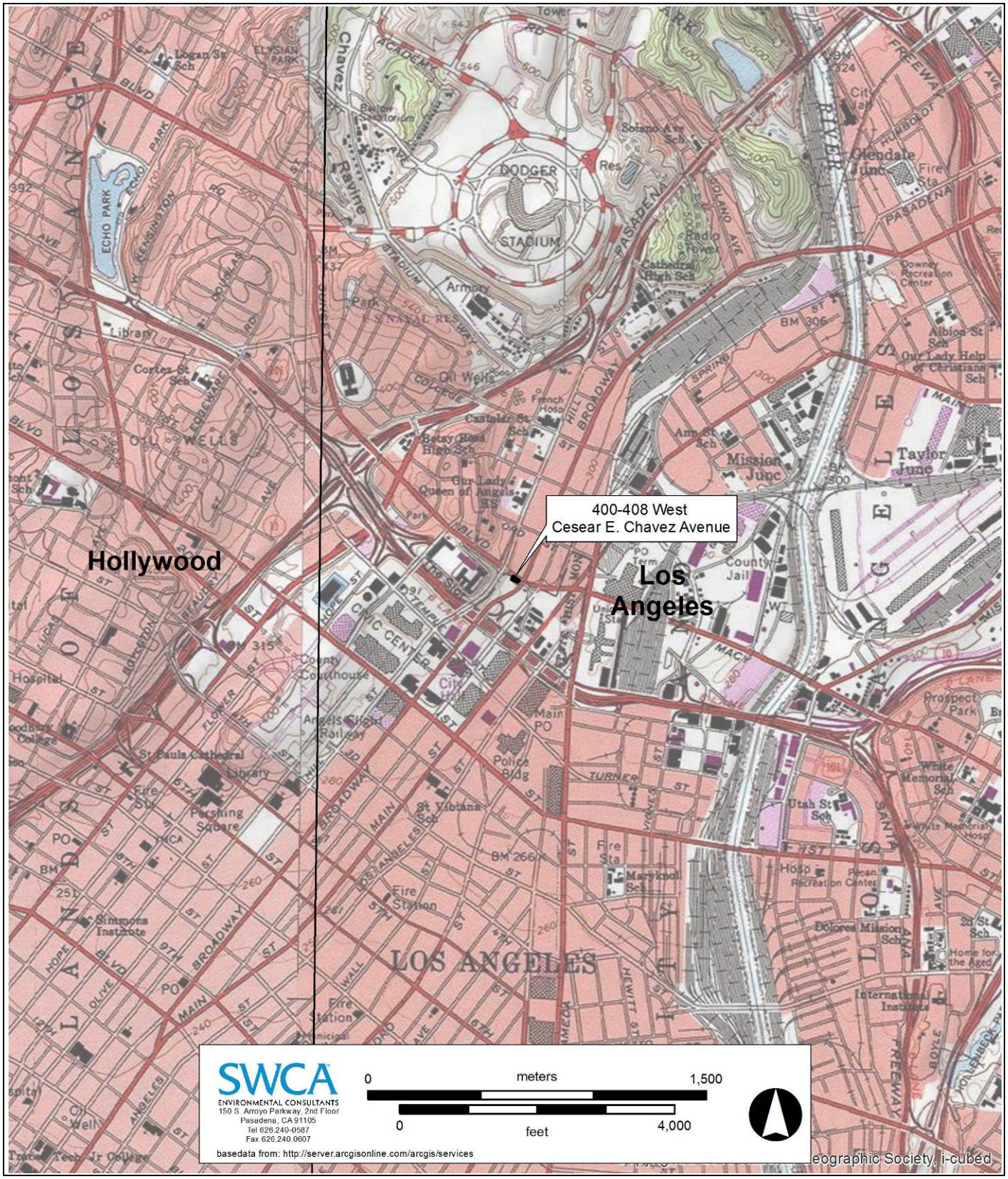
***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Cultural Resources Survey Report for the LA Plaza Cultura Village Project, City and County of Los Angeles, California (SWCA Environmental Consultants 2014).

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **LOCATION MAP**	Primary # HRI# Trinomial

Page 1 **of** 4 ***Resource Name or #:** 400-408 West Cesar E. Chavez Avenue

***Map Name:** Hollywood and Los Angeles, California ***Scale:** 1:24,000 ***Date of Map:** 1966 (Photorevised 1981)



BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) 400-408 West Cesar E. Chavez Avenue

B1. Historic Name: None
B2. Common Name: Colima Restaurant
B3. Original Use: Commercial
B4. Present Use: Commercial

***B5. Architectural Style:** Commercial vernacular

***B6. Construction History:** (Construction date, alterations, and date of alterations) According to records on file with the County of Los Angeles Assessor, the subject property was constructed in 1922. The building displays a number of alterations; these include the removal of original storefront windows and doors (date unknown), exterior wall apertures in-filled (date unknown), and replacement of awnings (date unknown).

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**

***B8. Related Features: None**

B9a. Architect: Unknown
b. Builder: Unknown

***B10. Significance: Theme:** Commerical Development **Area:** Downtown Los Angeles

Period of Significance: 1850-1980 **Property Type:** Commercial **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

When constructed in 1922, the subject property occupied the corner of Bellevue Avenue and Sunset Boulevard (now West Cesar E. Chavez and North Broadway Avenues). Located at the eastern base of a Fort Moore Hill, the building was originally adjacent to the eastside entrance of the Broadway Tunnel. According to City of Los Angeles Directories, a Union Oil Gasoline Station occupied the lot prior to construction of the subject property (Los Angeles Directory Company 1923). In 1949, the Broadway Tunnel and the portion of Fort Moore Hill it cut through were removed (Masters 2012). Early photographs of the Broadway Tunnel show the original appearance of the building (see figures on Continuation Sheet). The building, a restaurant for much of its history, has undergone numerous changes of ownership and exterior modification in the decades since its construction in the 1920s.

Sanborn Fire Insurance maps indicate that the corner of the subject property lot remained largely undeveloped until the early 1920s (Sanborn 1888-1951). As of 1926, according to city directories, the building tenant was William J. Leary, and the building was a bowling alley; later directories indicate a change of use to a billiards room (Los Angeles Directory Company 1926). By 1932, at least a portion of the commercial block was occupied by a restaurant owned by John Pucci (Los Angeles Directory Company 1932). As of 1938 through at least 1942, the restaurant was owned by Louis Pensotti (Los Angeles Directory Company 1938, 1942). Photographs reveal that other tenants included Mexico City Café (1951). At least one of the current tenants, Colima Restaurant has occupied the property since 1969 (Colima Restaurant 2014). Other current tenants include Downtown Care and Emergency Rescue Bail Bonds. (See Continuation Sheet)

B11. Additional Resource Attributes: (List attributes and codes) None

***B12. References:**

Los Angeles Directory Company, Los Angeles Street City Directory. Los Angeles, 1922, 1926, 1927, 1929, 1932, 1938, and 1942. Available at the Los Angeles Public Library.

Los Angeles County Office of the Assessor. Available at www.assessor.lacounty.gov, Accessed March 27, 2014.

Masters, Nathan, "Lost Tunnels of Downtown L.A." Available at http:/ / www.kcet.org/ updaily/ socal_focus/ history/ la-as-subject/ lost-tunnels-of-downtown-la.html. Accessed March 27, 2014.

Sanborn Fire Insurance Companay Maps, Los Angeles, CA 1888-1951 (various sheets). Available at the Los Angeles Public Library.

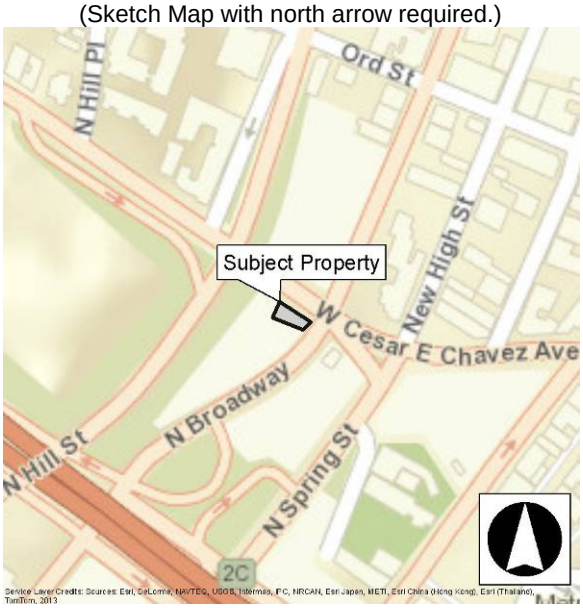
B13. Remarks:

***B14. Evaluators:** Brandi Shawn and Steven Treffers, SWCA

***Date of Evaluation:** March 9, 2014

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



***P3a. Description (continued):**

The building is in fair repair. Alterations include the removal and replacement of most of the features of the original storefronts, including doors and windows, as well as ornamentation accenting the roofline and façade. Other alterations include the removal of original transom windows (extant recessed panels above storefronts appear to mark the location of the original transom lights).

***B10. Significance (continued):**

While the property reflects the rapid commercial expansion of downtown Los Angeles in the 1920s, it does not retain sufficient integrity to convey its period of significance, due to extensive alterations. Therefore, the property is not eligible under Criteria A/ 1/ 1 as an exemplification of early commercial development in downtown Los Angeles. Additionally, in terms of eligibility under Criteria A/ 1/ 1 and B/ 2/ 2, research did not reveal that the building reflects other significant patterns of development or events, or that it possesses an associative link with a person significant in the history of the city, region, state or nation. In terms of eligibility under Criteria C/ 3, the subject property is vernacular in architectural style and a highly typical example of an early twentieth-century commercial building. Because the building is a highly altered example of a common type, it is not eligible for listing in the NRHP or CRHR or as a Historic-Cultural Monument in the City of Los Angeles under Criteria C / 3/ 3. In summary, the building does not warrant further evaluation under Criteria A/ 1/ 1, B/ 2/ 2, or C/ 3/ 3. No evidence was discovered to warrant consideration under Criteria D/ 4/ 4. The property is also not eligible under any of these criteria as a contributor to a larger historic district.

P5b. Description of Photo (continued):

Figure 1: View of Broadway Tunnel, as of 1929. Subject property appears at the center-right of the photo (facing southwest); the photo illustrates a number of the original features, including transoms, parapets, and ornamental detailing, that were extant as of 1929 (source: Los Angeles Public Library).

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Paleontological Resources Impact Assessment Report for the LA Plaza Cultura Village Project, Los Angeles, Los Angeles County, California

Prepared for:

ELP Advisors

Prepared by:

SWCA Environmental Consultants

June 2014

PALEONTOLOGICAL RESOURCES IMPACT ASSESSMENT REPORT FOR THE LA PLAZA CULTURA VILLAGE PROJECT, LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA

Prepared for

ELP Advisors
510 West 6th Street, Suite 100
Los Angeles, California 90014

Prepared by

Lee Hall, B.S.
Sara Dietler, B.A.

SWCA Environmental Consultants
150 South Arroyo Parkway, 2nd Floor
Pasadena, California 91105
(626) 240-0587
www.swca.com

Contact:
John Dietler – Project Manager
jdietler@swca.com

SWCA Project No. 028122.00

Draft
June 2014

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PROJECT SUMMARY

Purpose and Scope

Under contract to ELP Advisors, SWCA Environmental Consultants (SWCA) was retained to conduct a paleontological resources study in support of the proposed LA Plaza Cultura Village Project. The assessment was conducted by SWCA at the request of ELP Advisors to provide paleontological surface clearance through a comprehensive museum records and literature review of the project area. The scope of paleontological services included a comprehensive literature review and museum records search and preparation of this technical report of findings that includes project-specific recommended mitigation measures.

Dates of Investigation

The museum records search was performed on March 7, 2014. This technical report was completed in March 2014.

Results of Investigation

According to geologic mapping by Dibblee and Ehrenspeck (1989), Yerkes (1997), Yerkes et al. (2005), and Bedrossian et al. (2012), the project is immediately underlain by Quaternary older alluvium and the marine Puente Formation. Museum collections records maintained by the Natural History Museum of Los Angeles County (LACM) indicate that no vertebrate fossil localities yielding scientifically significant vertebrate specimens have been documented within the project area, but five have been found from identical sediments near the project area (McLeod 2014). In addition, several localities from the surrounding area have been reported in the literature (see Section 8.1.3). The combined results of the literature review and museum records search indicate that the geologic sediments underlying the project area contain scientifically significant vertebrate and invertebrate fossils, and are determined to have a high paleontological sensitivity at depth.

Recommendations

SWCA recommends that a qualified paleontologist be retained to design and implement a paleontological monitoring and mitigation program during any project-related ground-disturbing activities within previously undisturbed paleontologically sensitive Quaternary older alluvium and Puente Formation deposits. All fossils recovered during the paleontological monitoring and mitigation program should be prepared, stabilized, identified, and permanently curated in an approved repository or museum (such as the LACM).

Distribution of Data

Copies of this report will be submitted to ELP Advisors, the La Plaza Foundation, and the County of Los Angeles. A copy will be retained at SWCA Environmental Consultants, Pasadena, California, along with all other records relating to the project.

INTRODUCTION

This report presents the results of the paleontological resource impact assessment completed for the LA Plaza Cultura Village Project. This study was performed to evaluate the paleontological sensitivity of the project area and vicinity, assess potential project-related impacts on paleontological resources, and provide recommendations for project specific mitigation measures. This study was conducted in accordance with the professional guidelines established by the Society of Vertebrate Paleontology (SVP) (1995) and guidelines set forth by the California Environmental Quality Act (CEQA).

DEFINITION AND SIGNIFICANCE OF PALEONTOLOGICAL RESOURCES

Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. These include mineralized, partially mineralized, or un-mineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains. Paleontological resources include not only fossils themselves, but also the associated rocks or organic matter and the physical characteristics of the fossils' associated sedimentary matrix.

The fossil record is the only evidence that life on earth has existed for more than 3.6 billion years. Fossils are considered non-renewable resources because the organisms they represent no longer exist. Thus, once destroyed, a fossil can never be replaced (Murphey and Daitch 2007). Fossils are important scientific and educational resources and can be used to:

- study the phylogenetic relationships amongst extinct organisms, as well as their relationships to modern groups;
- elucidate the taphonomic, behavioral, temporal, and diagenetic pathways responsible for fossil preservation, including the biases inherent in the fossil record;
- reconstruct ancient environments, climate change, and paleoecological relationships;
- provide a measure of relative geologic dating, which forms the basis for biochronology and biostratigraphy, and is an independent and corroborating line of evidence for isotopic dating;
- study the geographic distribution of organisms and tectonic movements of land masses and ocean basins through time;
- study patterns and processes of evolution, extinction, and speciation; and
- identify past and potential future human-caused effects to global environments and climates (Murphey and Daitch 2007).

REGULATORY FRAMEWORK

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state (CEQA) laws and regulations. This study satisfies project requirements in accordance with CEQA (13 Public Resources Code [PRC] 2100 et seq.) and PRC Section 5097.5 (Stats 1965, c. 1136, p. 2792). This analysis also complies with guidelines and significance criteria specified by the SVP (1995).

State of California Local Authorities

Guidelines for the Implementation of CEQA, as amended March 29, 1999 (Title 14, Chapter 3, California Code of Regulations: 15000 *et seq*.) define procedures, types of activities, persons, and public agencies

required to comply with CEQA, and include as one of the questions to be answered in the Environmental Checklist (Section 15023, Appendix G, Section XIV, Part a) the following: "*Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*"

Other state requirements for paleontological resource management are included in the PRC (Division 5: Chapter 1.7) Section 5097.5 and (Division 20: Chapter 3) Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands.

RESOURCE ASSESSMENT GUIDELINES

The loss of any identifiable fossil that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact. Direct impacts on paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information (significant impact). At the project-specific level, direct impacts can be mitigated to below a significant level through the implementation of paleontological mitigation.

The CEQA threshold of significance for a significant impact to paleontological resources is reached when a project is determined to "directly or indirectly destroy a significant paleontological resource or unique geologic feature." In general, for project areas that are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources. For project areas that are directly underlain by geologic units with no paleontological sensitivity, there is no potential for impacts on paleontological resources unless sensitive geologic units that underlie the non-sensitive unit are also affected.

Professional Standards

The SVP has established standard guidelines that outline professional protocols and practices for the conducting of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation (SVP 1995). Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most state regulatory agencies with paleontological laws, ordinances, regulations, and standards accept and use the professional standards set forth by the SVP.

As defined by the SVP (1995:26), significant nonrenewable paleontological resources are defined as:

> …Fossils and fossiliferous deposits here restricted to vertebrate fossils and their taphonomic and associated environmental indicators. This definition excludes invertebrate or paleobotanical fossils except when present within a given vertebrate assemblage. Certain invertebrate and plant fossils may be defined as significant by a project paleontologist, local paleontologist, specialists, or special interest groups, or by lead agencies or local governments.

As defined by the SVP (1995:26), significant fossiliferous deposits are defined as:

> A rock unit or formation which contains significant nonrenewable paleontologic resources, here defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate animals, e.g., trackways, or nests and middens which provide datable material and climatic information). Paleontologic resources are considered to be older than recorded history and/or older than 5,000 years BP [before present].

Based on the significance definitions of the SVP (1995), all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely will a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

A geologic unit known to contain significant fossils is considered to be “sensitive” to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either disturb or destroy fossil remains directly or indirectly. This definition of sensitivity differs fundamentally from the definition for archaeological resources as follows:

It is extremely important to distinguish between archaeological and paleontological (fossil) resource sites when defining the sensitivity of rock units. The boundaries of archaeological sites define the areal extent of the resource. Paleontological sites, however, indicate that the containing sedimentary rock unit or formation is fossiliferous. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case (SVP 1995).

Many archaeological sites contain features that are visually detectable on the surface. In contrast, fossils are contained within surficial sediments or bedrock, and are therefore not observable or detectable unless exposed by erosion or human activity. In summary, paleontologists cannot know either the quality or quantity of fossils prior to natural erosion or human-caused exposure. As a result, even in the absence of surface fossils, it is necessary to assess the sensitivity of rock units based on their known potential to produce significant fossils elsewhere within the same geologic unit (both within and outside the study area), a similar geologic unit, or based on whether the unit in question was deposited in a type of environment that is known to be favorable for fossil preservation. Monitoring by experienced paleontologists greatly increases the probability that fossils will be discovered during ground-disturbing activities and that, if these remains are significant, successful mitigation and salvage efforts may be undertaken in order to prevent adverse impacts to these resources.

Paleontological Sensitivity

Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its “Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources,” the SVP (1995:23) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential:

- **High Potential.** Rock units from which vertebrate or significant invertebrate fossils or suites of plant fossils have been recovered and are considered to have a high potential for containing significant nonrenewable fossiliferous resources are included in this category. These units include, but are not limited to, sedimentary formations and some volcanic formations that contain significant nonrenewable paleontologic resources anywhere within their geographical extent and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical, and b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas that contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas that may contain new vertebrate deposits, traces, or trackways are also classified as significant.
- **Low Potential.** Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils. Such units will be poorly represented by specimens in institutional collections.
- **Undetermined Potential.** Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials.
- **No Potential.** Metamorphic and granitic rock units generally do not yield fossils and therefore have no potential to yield significant non-renewable fossiliferous resources.

For geologic units with high potential, full-time monitoring is generally recommended during any project-related ground disturbance. For geologic units with low potential, protection or salvage efforts will not generally be required. For geologic units with undetermined potential, field surveys by a qualified vertebrate paleontologist should be conducted to specifically determine the paleontologic potential of the rock units present within the study area.

PROJECT LOCATION AND DESCRIPTION

The project is situated on city land in the city of Los Angeles in the western portion of an unsectioned portion of Township 1 South, Range 13 West in Los Angeles County, California, as depicted on the U.S. Geological Survey 7.5 minute Los Angeles (1994) quadrangle (Figure 1). The LA Plaza de Cultura y Artes Foundation (the Foundation) and the County of Los Angeles propose a 3.72-acre infill redevelopment known as the LA Plaza Cultura Village Project.

The project site consists of two surface parking lots located on both sides of North Broadway; these parking lots are currently used by County employees, federal jurors, and area visitors. In addition, a small one-story commercial building, which houses a restaurant, a bail bonds service, and a medicinal dispensary, is located on the northeastern corner of the block on the west side of North Broadway.1 The project site is bounded on the north by Cesar E. Chavez Avenue, on the west by North Hill Street, on the east by North Spring Street, and on the south by open space and US-101 northbound on- and off-ramps. The project site is completely urbanized with paved areas and is surrounded by commercial, residential, and industrial properties.

The development entity will be a sub-tenant of the Foundation, on a long-term ground lease with the County. The Foundation holds an option to exercise a ground lease with a remaining 56-year base term with a 33-year extension upon the exercise of its option. The project is aimed at providing revenue to support programming of LA Plaza de Cultura y Artes Museum and to advance public education about Los Angeles' history through the creation of an historic trail, or "paseo" that will highlight the key events in

1 Since the release of the Notice of Preparation in March 2014, this commercial property has been added to the project site.

the city's history that have occurred in the area while promoting economic opportunity and linking the district to other downtown cultural amenities.

The proposed LA Plaza Cultura Village project would include a mix of transit-oriented uses to be developed as infill on two blocks that comprise the project site, which is divided by North Broadway. Block A, located east of North Broadway, consists of four contiguous parcels, and Block B, located west of North Broadway, consists of six contiguous parcels. The final design of the proposed project is currently being refined, and, therefore, this EIR evaluates a development envelope that represents the maximum density proposed for the site along with the approximate mix of uses.

The proposed project would provide for a mixed-use, transit-oriented, and infill development totaling up to425,000 square feet (sq. ft.), including up 345 residential units (for lease) with 20 percent of those reserved as affordable low- or middle-income units and up to 55,000 sq. ft. of visitor-serving retail, including, but not limited to, a restaurant, a cafe, other food services, and a "commissary" or shared commercial kitchen space for use by small businesses. These visitor-serving uses are intended to complement Olvera Street retail and restaurant. The proposed project would create outdoor spaces programmed to encourage pedestrian activity. Programming for these outdoor spaces may include fixed and flexible seating, an open plaza area for events, small courtyard spaces for small gatherings, semi-private spaces, outdoor dining areas, and water features. Designed for small or medium groups of people, the spaces would come in a variety of sizes and configuration, depending on location and relationship to architecture and the street. Landscaping (e.g., trees and shrubs) would strengthen the identity and scale of these spaces, while providing shade and color. The grade differential between North Hill Street and North Spring Street provides further opportunity to create outdoor destinations within the project. A distinctive feature of the open space design would incorporate a "historic paseo" path that would connect Union Station and the Fort Moore Pioneer Memorial. The specifics of this historic paseo will consider special paving treatments, pedestrian scaled lighting, seating, water features, interpretative elements and unique wayfinding signage.

The project would also provide up to 786 parking spaces (with up to 150 spaces allocated for replacement of the existing parking used by County employees, federal jurors, and area visitors), and an extension of the existing Historic Paseo or pedestrian trail from Union Station to Olvera Street and the already planned extension from Olvera Street to LA Plaza Park, the El Pueblo de Los Angeles Historic Monument, and the LA Plaza de Cultura y Artes (proposed as part of the LA Plaza de Cultura y Artes project). This proposed Historic Paseo or pedestrian trail on the project site would be the centerpiece of the development, as further described below.

The preliminary plan envisions developing the project site as follows:

Block A, East of North Broadway (Up to Five Stories). Block A is approximately 1.52 acres and would include a low- to medium-rise development. Block A would include one building with a common subterranean parking garage with a walkway (paseo) dividing the above grade structure into two components. The building would step up from one story along the center of the North Spring Street frontage and rising to five stories (as viewed from North Spring Street) in the center of the block. The stepped back design is intended to maintain compatibility with nearby low-rise buildings within the El Pueblo de Los Angeles Historic District, which contains a number of historic structures and resources, including Our Lady Queen of Angels (La Placita) Church, and the LA Plaza de Cultura y Artes. The building would range in height from approximately 17 feet (at the colonnade in front of the palm courtyard located mid-block along the North Spring Street frontage) to approximately 60 feet in the center of the site.

Block A would include approximately 35,000 square feet of visitor- and tourist-serving uses, which would be developed on the ground floor to promote the area's cultural and historic attractions. Tenants

are anticipated to include visitor-aid, tourism, and travel services. A commissary kitchen (approximately 8,000 square feet) is envisioned on the southern portion of the block; this commissary kitchen would serve as incubator space, providing an opportunity for a shared-use commercial kitchen for use by culinary start-ups/small businesses in the local community. Some of the ground-floor retail, which may include a restaurant and other food services (e.g., yogurt shop and other casual dining establishments), would be located in a pedestrian-oriented arcade facing North Spring Street that would provide access to the proposed Historic Paseo/pedestrian trail that would pass through the southern portion of the project site, connecting the site to the LA Plaza de Cultura y Artes and Union Station (on the east) and to Fort Moore (on the west). This block would be developed with up to 119 residential units on the second through fifth floors.

Block B, West of North Broadway (Up to Eight Stories). Block B is approximately 2.2 acres and would include a mid-rise development of up to eight stories. North Hill Street is approximately 40 feet above the elevation of North Broadway. Accordingly, because of this difference in grade, building heights would range from approximately 96 feet when viewed from North Broadway to 54 feet when viewed from North Hill Street. As on Block A, the building on Block B would be one structure with a common subterranean parking with the paseo dividing the above grade structure into two components.

Block B would include up to 226 residential rental units on Floors 2 through 8, with a minimum of 20 percent of the units reserved for affordable low- or middle-income housing. Block B would include approximately 20,000 sq. ft. of ground floor retail, which would be developed along North Broadway to encourage and facilitate pedestrian activity in the area.

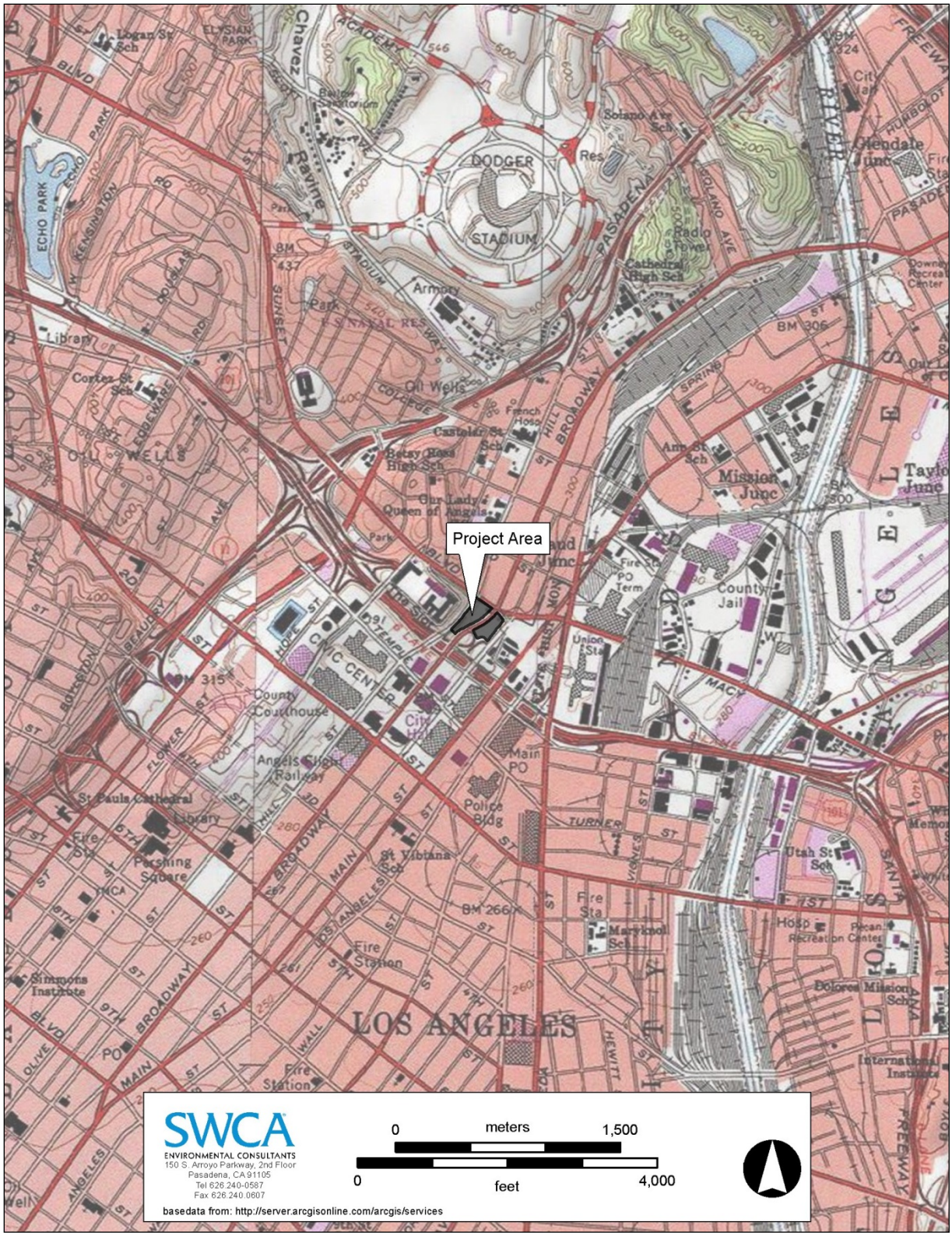

Figure 1. Location map for the LA Plaza Cultura Village Project.

Project Personnel

SWCA Paleontology Team Lead Sara Dietler requested the museum records search and provided project oversight. SWCA Paleontologist Lee Hall reviewed published literature and authored this technical report. Geographic Information Systems (GIS) Specialist William Hayden produced graphics, and Technical Editor Justin Elza edited and formatted this report. Cara Corsetti, Qualified Paleontologist provided quality assurance and quality control (QA/QC) review of this report.

METHODS

Analysis of Existing Data Methods

The project area was the subject of thorough background research and analysis. The research included geologic map and literature reviews, as well as previous locality data searches. The purpose of the review was to evaluate the paleontological sensitivity of the project area in order to identify known fossil resources within it and nearby in the same geologic formations. In addition, SWCA conducted a paleontological records search with the Los Angeles County Museum of Natural History (LACM). The purpose of the museum records search was to 1) determine whether any previously recorded fossil localities occur in the project area, 2) assess the potential for disturbance of these localities during construction, and 3) evaluate the paleontological sensitivity in the project area.

RESULTS

Literature Search Results

Geologic Setting

California is naturally divided into the following 12 geomorphic provinces, each distinguished from one another by having unique topographic features and geologic formations: 1) the Sierra Nevada, 2) the Klamath Mountains, 3) the Cascade Range, 4) the Modoc Plateau, 5) the Basin and Range, 6) the Mojave Desert, 7) the Colorado Desert, 8) the Peninsular Ranges, 9) the Transverse Ranges, 10) the Coast Ranges, 11) the Great Valley, and 12) the Offshore area. The project site is located in the northern portion of the Peninsular Ranges geomorphic province. This region is bounded on the east by the Colorado Desert and the north by the Transverse Ranges (Harden 2004; Norris and Webb 1976). The terrestrial portion of this province is 129 km (80 miles) wide at its maximum and has a complex structural history due to deformation from actions of the San Andreas Fault system. The tectonic activity here has given the Peninsular Province a characteristic structural fabric composed of mostly northwest-trending faults and fault blocks (Yerkes et al. 1965)

Locally, the project is situated within the central portion of the Los Angeles basin. At its surface, the basin is a gently sloping plain nearly 80 km (50 miles) long, 32 km (20 miles) wide, and trends northwest along the coast. The basin is bordered by the Santa Monica range to the north, the Santa Ana range to the east, and the San Joaquin Hills to the south (Yerkes et al. 1965). Subsurface, the basin is a massive, complex structural depression that formed during episodes of crustal extension and faulting during the Miocene (23–5 million years ago [Ma]); this stretching exposed the Mesozoic Catalina Schist on the basin floor, upon which 5,500 m (16,400 feet) of sediment was unconformably stacked (Norris and Webb 1976; Harden 2004). Most of the basin-filling material was deposited during the last 4 million years and is largely composed of marine sediments topped off by a relatively thin terrestrial sequence (Norris and Webb 1976; Harden 2004). During the Pliocene (5.3–3.6 Ma) the basin sat at its deepest: over 1,219 m

(4,000) feet below sea level (Natland 1957). By the Holocene, with sea level dropping globally and continued uplift of the region, the Los Angeles Basin had assumed its modern elevation and appearance (Woodring et al. 1946).

Project Geology

The geology in the vicinity of the project site has been mapped by Jennings and Strand (1969) at a scale of 1:250,000, by Yerkes et al. (2005) and Bedrossian, et al. (2012) at a scale of 1:100,000, and by Dibblee and Ehrenspeck (1989) and Yerkes (1997) at a scale of 1:24,000. Additionally, detailed geologic reporting of the project region has been published by Yerkes et al. (1965) and Lamar (1970). Examination of the available literature has revealed that the project area is underlain by multiple deposits. The southwestern portion of the project site is underlain by late to middle Pleistocene (78,000–10,000 BP) Quaternary Older Alluvium. These sediments make up the top of Fort Moore Hill directly west of the project area. Underlying these sediments and the central portion of the project is the Yorba Member of the late Miocene to early Pliocene (~11.62 to ~3.6 Ma) Puente Formation (McLeod 2014). The northeastern portion of the project is underlain by Younger Quaternary Alluvium (10,000 BP to Recent).

The marine Puente Formation of Miocene to Pliocene age (11.62–3.6 Ma) occurs subsurface in the central portion of the project area (Figure 2) (Jordan and Gilbert 1919; Dibblee and Ehrenspeck 1989; Yerkes 1997; Yerkes et al. 2005; Bedrossian et al. 2012). Initially described from the Puente Hills (Eldridge 1907), this unit has a maximum thickness of 3,900 m (12,795 feet) and was deposited as two megasequences of prograding submarine turbidite fans at bathyal depths in a localized subsection of the Los Angeles Basin (Critelli et al. 1995). The Puente Formation is approximately equivalent in age with the Modello Formation and Monterey Formation, but during deposition was separated from the western portion of the Los Angeles Basin by an intrabasinal bathymetric ridge (Critelli et al. 1995). The Puente Formation is subdivided into four members: the La Vida, Soquel, Yorba and Sycamore Canyon (oldest to youngest, respectively). Within the project area, the Yorba member is exposed (McLeod 2014) and consists of light gray, well-bedded siltstone and very fine, poorly cemented, quartzofeldspathic sandstone (Lamar 1970; Critelli et al. 1995; Yerkes 1997; Yerkes et al. 2005).

The second geologic unit within the project area is Older Quaternary Alluvium of late to middle Pleistocene age (780,000–10,000 BP) (Figure 2) (Dibblee and Ehrenspeck 1989; Yerkes 1997; Yerkes et al. 2005; Bedrossian et al. 2012). These sediments are derived from erosion of the San Gabriel Mountains and compose prominent alluvial remnants in the form of terraces in the area; continued uplift along the Elysian Park Anticline has caused most of the Older Quaternary Alluvium to erode, leaving localized exposures in areas of topographic prominence (Oskin et al. 2000). This includes the upper portion of Fort Moore Hill situated just west of the project, and composes the southwestern portion of project. Quaternary Older Alluvium consists mainly of red-brown, well to poorly indurated clays, silts, sands, and gravels and rubble conglomerates.

The third and youngest geologic unit within the project area is Quaternary Younger Alluvium of Holocene age (10,000 BP–Recent) (Jordan and Gilbert 1919; Dibblee and Ehrenspeck 1989; Yerkes 1997; Yerkes et al. 2005; Bedrossian et al. 2012). The northeastern portion of the project is underlain by this unit, which consists mainly of fluvial deposits laid down by the pre-urbanization Los Angeles River (McLeod 2014). These deposits fill the expansive drainages from the Elysian-Repetto Hills to the north, and consist of sandy to gravelly, unconsolidated terrace treads, stream beds, and floodplain deposits (Oskin et al. 2000).

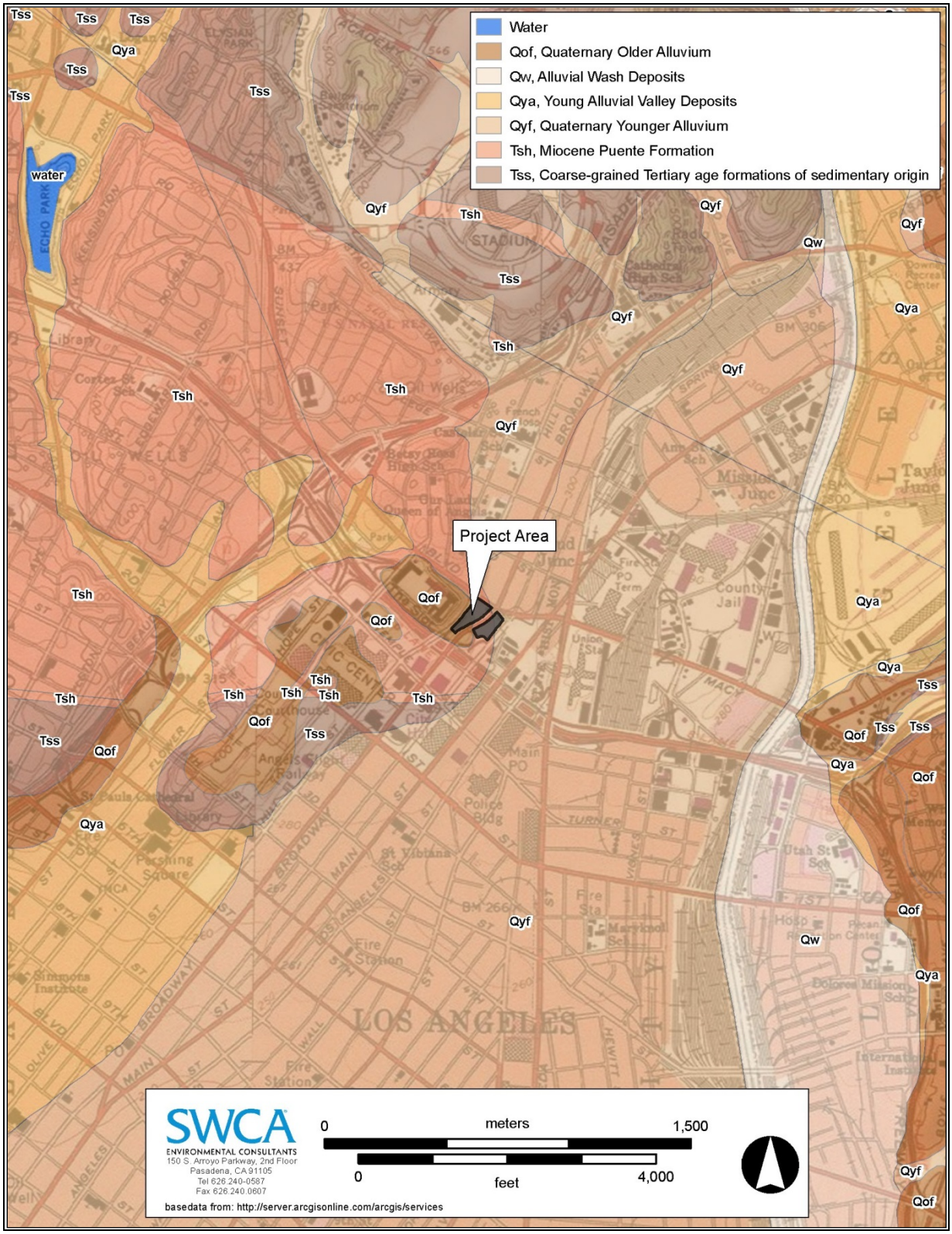

Figure 2. Geologic map for the LA Plaza Cultura Village Project showing exposed geologic units within the project area.

Paleontology

Fossils have been known from this area since the early twentieth century. Excavation of the 3rd Street tunnel just southwest of the project area yielded a diverse faunal assemblage from the younger Pliocene Fernando Formation (Stearns 1900; Arnold 1906; Arnold 1907; Moody 1918; Woodring 1938). Jordan and Gilbert (1919) and Jordan (1921) described two new species of fossil fish from "Sunset Bluff" near the Broadway Tunnel (*Arnoldina iniistia*; *Eritima evides*). The Broadway Tunnel was situated along what is now North Broadway as it passes between the east and west project parcels, and cut through a major portion of the Puente Formation exposed there. The "Sunset Bluff" locality was likely situated along the northern slope of Fort Moore Hill, which is today truncated by West Cesar E. Chavez Avenue just northwest of the project. Lamar (1970) reported sites in the Puente Formation, which produced fossils of several species of open water and coastal fishes in the order Clupeiformes—fishes related to herrings and anchovies—as well as a member of Perciformes, the largest vertebrate order. Comparison with the extant counterparts of these fossil fish assisted in identifying the Puente Formation's depositional environment as bathyal, or deeper open waters below the reach of sunlight (Lamar 1970). Several other localities from the Puente Formation have produced scientifically significant fossil material, including Lepadomorph barnacles (Zullo 1973), crustacean death assemblages (Feldmann 2003), "paper nautilus" egg cases (Saul and Stadum 2005), "queenfish" with in-situ ootoliths (Huddleston and Takeuchi 2006), and very rare anglerfish (Carnevale et al. 2008; Carnevale and Pietsch 2009).

Both Older Quaternary Alluvium and the Puente Formation have previously been impacted due to several phases of urban development over the past century (Cortelyou 1949). Fort Moore Hill has been excavated back significantly along the project's northwestern boundary and along Sunset Boulevard. Construction of the Broadway Tunnel through the center of the project area removed a significant portion of the hill, and the tunnel's subsequent removal for the construction of the 101 Freeway further removed and shrank what remained of Fort Moore Hill. Along with any surficial soils, up to 8 m (27 feet) of underlying Quaternary Older Alluvium and up to 18 m (60 feet) of the Puente Formation were removed for freeway construction (Cortelyou 1949). Therefore, excavations within the much of proposed project boundaries are likely to see no soils and very little fill before encountering bedrock.

The Quaternary Younger Alluvium in the northeastern project area is not likely to contain significant vertebrate fossils in the uppermost layers due to its recent age. However, these deposits are relatively thin in the project area and therefore considered to have a low sensitivity for paleontological resources at the surface, increasing with depth (McLeod 2014). Sediments identical to the Older Quaternary Alluvium exposed in the southwestern portion of the project area have yielded significant vertebrate fossils in the past (McLeod 2014), and scientifically significant fossil localities occur in Puente Formation throughout the Los Angeles Basin. Many of the fossils within the Puente Formation are miniscule in size and require sediment sampling and screening to determine their presence (McLeod 2014); due to this it is possible that many of these types of fossils were not detected during previous developments in the project area. Further, the Fort Moore Hill outcrops of Older Quaternary Alluvium and the Puente Formation represent the southwestern most occurrences of these units within this region of the Los Angeles Basin and thus provide a unique opportunity to examine rarely exposed and historically poorly sampled fossiliferous sediments within the Los Angeles metropolitan area. Therefore, the Quaternary Older Alluvium and the Puente Formation are determined to have a high sensitivity for paleontological resources (Figure 3) (McLeod 2014).

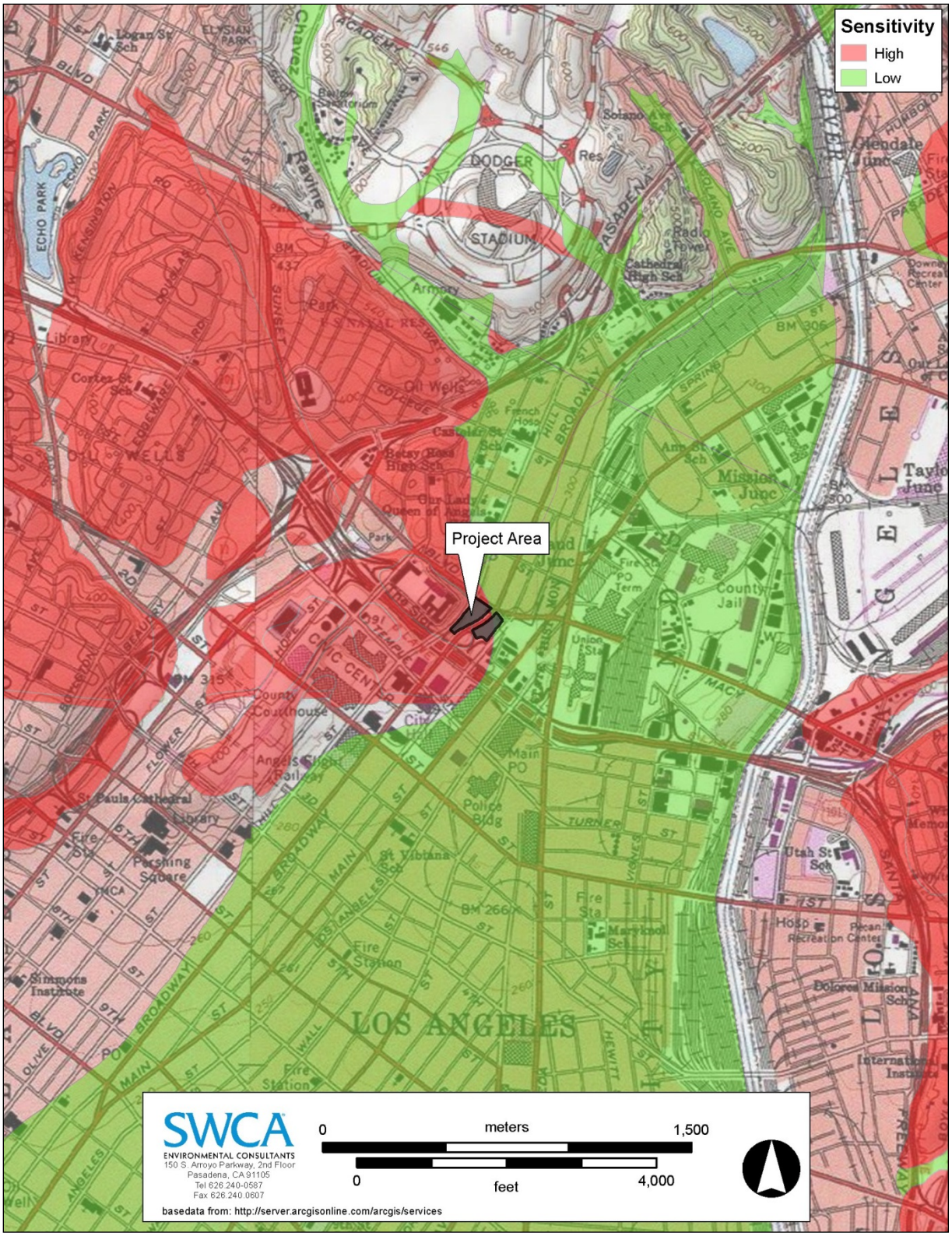

Figure 3. Paleontological sensitivity map for the LA Plaza Cultura Village Project area.

Records Search Results

A summary of the data provided by the LACM (McLeod 2014) indicates that no localities occur within the project boundary, but several nearby sites have been recovered from sedimentary deposits identical to those within the project area. These localities (LACM 1755, LACM 3250, LACM 5854, LACM 5961, LACM 6198–6203, and LACM 6254) have yielded a diverse taxonomic assemblage from both older Quaternary Alluvium and the Puente Formation. LACM 1755 is the closest site from older Quaternary Alluvium to the project, situated to the southwest near the intersection of Hill Street and 12th Street, and produced a fossil of a horse (*Equus* sp.*)* from a depth of 13 m (43 feet). LACM 3250, also from older Quaternary Alluvium, is located west-northwest near the intersection of Madison Avenue and Biddlebury Street, and produced a fossil mammoth (*Mammuthus* sp.) at a depth of 2.4 m (8 feet). LACM 5845, situated on the west side of Western Avenue and south of Beverly Boulevard, produced a fossil of a mastodon (Mammutidae) from older Quaternary Alluvium at a depth of 1.5 to 1.8 m (5–6 feet) (McLeod 2014).

LACM 5961 is the closest fossil locality from the Puente Formation, located just north of the intersection between Hill Street and 1st Street, discovered during excavation for the Metrorail station at an unknown depth. It produced a fossil specimen of the Bristlemouth fish (*Cyclothone* sp.). Several more Puente Formation localities, LACM 6198–6203 and LACM 6254, are documented from MacArthur Park along Wilshire Boulevard, extending from Alvarado Street west to Vermont Avenue. These were discovered at an unknown depth during excavations for the Metro Red Line and include a highly diverse vertebrate faunal assemblage of fossil fishes, including eels (Anguilliformes), needlefish (Belonidae), fangtooths (*Anoplagaster* sp.), bigscales (*Scopelogadus* sp.), herring (*Ganolytes cameo, Xyne grex)*, cods (*Physiculus* sp.), grenadiers (Macrouridae), hakes (*Merluccius* sp.), moras (Moridae), left vents (Linophrynidae), dreamers (*Oneirodes* sp.), lanternfish (*Diaphus* sp., *Lampanyctus* sp.), jacks (*Pseudoseriola* sp.), snake mackerel (*Thyrsocles* sp.), croakers (*Lampoquia* sp.), mackerel (*Sarda* sp., *Scomber* sp.), sea bass (Serranidae), cutlassfish (Trichiuridae), sandabs (*Citharichthys* sp.), flounders (*Hippoglossus* sp., *Pleuronichthys* sp.), slickheads (Alepocephalidae), argentinas (Argentinidae), deep sea smelt (*Bathylagus* sp.), spookfish (Opisthoproctidae), tubeshoulders (Searsiidae), rockfish (*Sebastes* sp.), viperfish (*Chauliodus eximius*), bristlemouths (*Cyclothone* sp., *Vinciguerria* sp.), hatchetfish (*Argyropelecus* sp.), dragonfish (*Stomias* sp.), and a specimen of whale (Cetacea) (McLeod 2014).

CONCLUSIONS

Construction activities including surficial and/or very shallow excavations within Younger Quaternary Alluvium and areas of previous disturbance within the project area are unlikely to result in adverse impacts to significant paleontological resources. Construction activities requiring excavations into Quaternary Older Alluvium and Puente Formation deposits may have an adverse impact to paleontological resources unless proper mitigation measures are implemented. For the purposes of this analysis, it is assumed that sensitive deposits are present at the surface to an unspecified depth due to the extensive development in the project area, as well as previous discoveries in similar deposits in the region. The destruction of fossils as a result of human-caused ground disturbance has a significant cumulative impact, as it makes biological records of ancient life permanently unavailable for study by scientists. Implementation of proper mitigation measures can, however, reduce the impacts to the paleontological resources to below the level of significance.

RECOMMENDED MITIGATION MEASURES

In order to demonstrate CEQA compliance, a response to the following question in the Environmental Checklist based on the results of the paleontological analysis is required. "*Will the proposed project*

directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" With the implementation of the recommendations listed in Section 10, the LA Plaza Cultura Village Project will not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. The intent of the recommendations is to ensure that potential adverse impacts to paleontological resources as a result of project implementation are reduced to a less than significant level.

The following mitigation measures have been developed in accordance with the SVP (1995) standards and meet the paleontological requirements of CEQA. These mitigation measures have been used throughout California and have been demonstrated to be successful in protecting paleontological resources while allowing timely completion of construction.

A. All project-related ground disturbances that could potentially affect previously undisturbed Quaternary Older Alluvium and Puente Formation deposits at the surface will be monitored by a qualified paleontological monitor on a full-time basis, as these geologic units have previously been impacted by excavation and are determined to have a high paleontological sensitivity. Project-related excavations that occur in undisturbed Quaternary Younger Alluvium (estimated to be present at ground surface to an unknown depth) will also be monitored by the project paleontologist to ensure that underlying sensitive sediments are not being impacted.

B. A qualified paleontologist will be retained to supervise monitoring of construction excavations. Paleontological resource monitoring will include inspection of exposed rock units during active excavations within sensitive geologic sediments. The monitor will have authority to temporarily divert activity away from exposed fossils to professionally and efficiently recover the fossil specimens and collect associated data. The qualified paleontologist will prepare monthly progress reports to be filed with the client and the lead agency (if requested).

C. Field data forms will be used to record pertinent geologic data, stratigraphic sections will be measured, and appropriate sediment samples will be collected and submitted for analysis from each locality.

D. Recovered fossils will be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and reposited in a designated paleontological curation facility. The most likely repository is the LACM.

E. The qualified paleontologist will prepare a final monitoring and mitigation report to be filed with ELP Advisors, the lead agency, and the repository.

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APPENDIX D

Phase I and Phase II
Environmental Site Assessments

June 2, 2014
Project 11224

Madonna Marcelo
Terry A. Hayes Associates Inc. (TAHA)
8522 National Boulevard, Suite 102
Culver City, CA 90232

Re: Phase I Environmental Site Assessment Parking Lots 527 North Spring Street, Los Angeles, CA 90012.

Dear Ms. Marcelo,

Following a conference call with Trammell Crow and their environmental consultant on May 2, 2014 and correspondence received from Jenny Gant of Estolana LeSar Perez LLC. Terrax Environmental, Inc. (Terrax) reviewed the above Phase I ESA report.

Following a review of the Phase I ESA report, we confirm that there are no changes to our findings.

A number of items were discussed in the May 2, 2014 conference call, the items were addressed in full by Terrax, specifically the relevance of the off-site cleaners. In addressing this item we provide the following details:

- The off-site cleaners identified by The Trammell Crow consultant was not confirmed as a dry cleaner. This cleaners was not identified by the EDR report as a 'dry' cleaners but rather as a EDR US Hist Cleaners, which includes any cleaning process (dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.). The suggestion that this use was confirmed as a dry cleaner is incorrect; specifically *the type of cleaner was classified as: clothes pressers, cleaners and repairers.*
- The prime concern with a "dry" cleaners is the use of chlorinated solvents and the associated vapor intrusion (VI) potential – The key question is could this cleaners in 1928 have used the common dry cleaning solvent tetrachloroethylene (PCE). During the call the other consultants stated that PCE could have been used in 1928 by this cleaners. This concern is unsubstantiated given the historic use of chlorinated solvents as a dry cleaning chemical in the USA. The cleaner's age was identified in the EDR report as 1928. The **first documented use** of PCE as a dry cleaning solvent in the United States was in 1934 (Martin, Albert R., G. P. Fulton. 1958. Dry cleaning Technology and Theory. New York: Textile Book Publishers, Inc.). *The cleaners when it operated in 1928, if it was using dry cleaning solvents, could NOT have used PCE.*
- Given the focus by the Trammell Crow environmental consultant on the adjacent off-site cleaners, Terrax proactively contacted Environmental Data Resources, Inc., (EDR) the provider of the historical data to see if additional data was available for the cleaners. EDR noted a

discrepancy between the site address and the plot of the site on the radius map. EDR updated its files and issued an updated EDR on report May 29, 2014, plotting the cleaners at its correct address at 404 S Sunset Boulevard, which is not adjacent to the site.

As stated there are no changes to the text or findings of the Phase I. The enclosed re-issued Phase I ESA includes the updated May 29, 2014 EDR report.

Sincerely,

Eric Patschull
Project Manager

TERRAX

Environmental Engineering and Consulting

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Parking Lots
527 North Spring Street and
555 North Broadway
Los Angeles, California 90012

April 2, 2014

PREPARED FOR:

Terry A. Hayes Associates Inc.
8522 National Boulevard, Suite 102
Culver City, California 90232

PREPARED BY:

Terrax Environmental, Inc.
4952 Warner Avenue, Suite 242
Huntington Beach, California 92649
(714) 717-1037

April 2, 2014
Project No. 11224

Ms. Madonna Marcelo
Terry A. Hayes Associates Inc. (TAHA)
8522 National Boulevard, Suite 102
Culver City, California 90232

Re: Phase I Environmental Site Assessment for Parking Lots, 527 North Spring Street and 555 North Broadway, Los Angeles, CA 90012

Dear Ms. Marcelo,

Terrax Environmental, Inc. (Terrax), has conducted this Phase I Environmental Site Assessment (ESA) of the existing Parking Lots located at 527 North Spring Street and 555 North Broadway in Los Angeles, California (subject site). During the course of this assessment, Terrax identified the following evidence of a REC in connection with the subject property as defined by ASTM E1527-13:

- According to historical Sanborn Fire Insurance Maps (SFIMs), historical aerial photographs, and information obtained from the Environmental Data Resources (EDR) database report, the subject site was historically occupied by a gasoline service station at the historical addresses of 300-330 South Sunset Boulevard from at least 1924 until at least 1972. The subject site was not identified in the EDR-provided Radius Map Report on any government databases of known and reported unauthorized releases of hazardous materials to the subsurface. No information pertaining to the removal of the former underground storage tanks (USTs) was identified during the course of this investigation. Based on the historical use of the subject site as a gasoline service station, it is Terrax's opinion that there is a moderate potential that past on-site operations which potentially utilized USTs, former sub-grade hydraulic lifts and oil/water separators to have environmentally impacted the subject site. Terrax's review of regulatory agency files for the subject site did not identify UST records for the subject site. However, it is Terrax's experience that during the era that the former gasoline service station operated, it is possible for USTs to have been installed/removed without any historical, regulatory, municipal, or interview data indicating their presence or location. Therefore, the presence or absence of USTs and the condition of the subsurface associated with the locations of the potential USTs, sub-grade hydraulic lifts and oil/water separators (if any) is unknown. Consequently, Terrax recommends conducting a geophysical survey of the subject site to confirm the presence or absence of subsurface features of environmental concern including unregistered USTs, previously unidentified sub-grade hydraulic lift locations and oil/water separators. If the geophysical survey reveals potential subsurface features of environmental concern, Terrax recommends conducting a subsurface investigation to

assess on-site shallow soils for potential petroleum hydrocarbon impacts. Additionally, based upon the results of the Tier 1 Vapor Encroachment Screen (VES) a Vapor Encroachment Condition (VEC) cannot be ruled out at the subject property. Vapor intrusion is a way by which chemicals in soil and groundwater can migrate into indoor air. Chemical vapors moving up through soil and into a building are a potential source of indoor air contamination and may pose a risk to human health. If it is determined that contamination has been identified on the subject site due to the former gasoline service station, Terrax recommends conducting a soil vapor gas survey (Tier 2 VES) in the vicinity of the former gasoline service station for the purpose of establishing baseline indoor vapor concentrations.

Terrax Environmental, Inc.

Eric Patschull
Project Manager

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On March 26, 2014, the Los Angeles County Building and Safety Department (LACBSD) was contacted regarding permit records for the subject site. No original building permit records were observed for the subject site. The oldest reviewed permit was a demolition permit to "Demo Existing Bank" at 300 Cesar Chavez Avenue, dated December 29, 2009. No building permits for

items of environmental significance such as previous structures, USTs, ASTs or septic systems were on file with the LACBSD for the subject site. 14
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1.0 Executive Summary

Terrax Environmental, Inc. (Terrax), on behalf of Terry A. Hayes Associates Inc. (TAHA), has performed a Phase I Environmental Site Assessment (ESA) of the existing Parking Lots located at 527 North Spring Street and 555 North Broadway in Los Angeles, California (subject site). Terrax conducted the Phase I ESA of the subject site in conformance with the American Society for Testing and Materials (ASTM) E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. This Phase I ESA constitutes all appropriate inquiry (AAI) designed to identify recognized environmental conditions (RECs) in connection with the previous ownership and uses of the subject site as defined by ASTM E1527-13. Terrax's findings of this Phase I ESA revealed the following evidence of RECs in connection with the subject site as defined by ASTM E1527-13:

- According to historical Sanborn Fire Insurance Maps (SFIMs), historical aerial photographs, and information obtained from the Environmental Data Resources (EDR) database report, the subject site was historically occupied by a gasoline service station at the historical addresses of 300-330 South Sunset Boulevard from at least 1924 until at least 1972. The subject site was not identified in the EDR-provided Radius Map Report on any government databases of known and reported unauthorized releases of hazardous materials to the subsurface. No information pertaining to the removal of the former underground storage tanks (USTs) was identified during the course of this investigation. Based on the historical use of the subject site as a gasoline service station, it is Terrax's opinion that there is a moderate potential that past on-site operations which potentially utilized USTs, former sub-grade hydraulic lifts and oil/water separators to have environmentally impacted the subject site. Terrax's review of regulatory agency files for the subject site did not identify UST records for the subject site. However, it is Terrax's experience that during the era that the former gasoline service station operated, it is possible for USTs to have been installed/removed without any historical, regulatory, municipal, or interview data indicating their presence or location. Therefore, the presence or absence of USTs and the condition of the subsurface associated with the locations of the potential USTs, sub-grade hydraulic lifts and oil/water separators (if any) is unknown. Consequently, Terrax recommends conducting a geophysical survey of the subject site to confirm the presence or absence of subsurface features of environmental concern including unregistered USTs, previously unidentified sub-grade hydraulic lift locations

and oil/water separators. If the geophysical survey reveals potential subsurface features of environmental concern, Terrax recommends conducting a subsurface investigation to assess on-site shallow soils for potential petroleum hydrocarbon impacts. Additionally, based upon the results of the Tier 1 Vapor Encroachment Screen (VES) a Vapor Encroachment Condition (VEC) cannot be ruled out at the subject property. Vapor intrusion is a way by which chemicals in soil and groundwater can migrate into indoor air. Chemical vapors moving up through soil and into a building are a potential source of indoor air contamination and may pose a risk to human health. If it is determined that contamination has been identified on the subject site due to the former gasoline service station, Terrax recommends conducting a soil vapor gas survey (Tier 2 VES) in the vicinity of the former gasoline service station for the purpose of establishing baseline indoor vapor concentrations.

2.0 Purpose and Scope of Assessment

Purpose

According to ASTM E1527-13, the purpose of this practice is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitation on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35) (B).

The Phase I ESA was conducted to identify 'Recognized Environmental Conditions' (RECs), 'Controlled Recognized Environmental Conditions' (CRECs) and 'Historical RECs' (HRECs) as defined by the American Society for Testing and Materials (ASTM) *Designation E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Section 1.1.1 of the ASTM Designation E1527-13 defines an REC as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the

environment." The term as further defined by ASTM "is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies." Section 3.2.18 defines a CREC as a "recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)." Section 3.2.42 defines HREC as a "past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and land use limitations, institutional controls, or engineering controls)."

Scope of Work

The Phase I ESA includes the following scope of work:

- Acquire readily available information regarding land-use history and property development by reviewing historical aerial photographs, pertinent building permit records, historic city directories, as well as reviewing recent and historic topographic land-use maps of the subject site and surrounding area.

- Reviewing readily available local, state and federal regulatory agency databases listed in ASTM E1527-13 and compiled by Environmental Data Resources, Inc. (EDR), including but not limited to CERCLA and NPL lists for sites within one mile of the subject property. State databases, including but not limited to CALSITES, Hazardous Substance Account Act, Cortese, SWIS, SWAT, Well Investigation Program (AB1803), and LUFT, were reviewed for sites within one mile of the subject site.

- Performing a reconnaissance of the subject property and surrounding areas (up to one-half mile beyond site boundary), with regard to potential off-site sources of degradation to the subject property, which included photograph documentation of

subject property conditions, and identification of potential environmental concerns. Interviews with persons knowledgeable of the previous and current ownership and uses of the subject site.

- Identifying aboveground storage tanks and/or indications of underground storage tanks on-site.

- In addition to ASTM E1527-13, Terrax recognizes ASTM Standard Guide for Vapor Encroachment Screening (VES) on Property Involved in Real Estate Transactions (ASTM E2600-10) as an industry-accepted guideline to determine if a Vapor Encroachment Condition (VEC) exists at the target property. A VES consists of reviewing the Phase I ESA data combined with the application of professional judgment. Terrax evaluates the regulatory agency databases to determine if there are known or suspect contaminated sites within a minimum search distance of the target property. In addition, Terrax attempted to determine whether soil and/or groundwater have been impacted within the critical distances outlined in ASTM E2600-10.

- Preparing this report of Terrax's findings and recommendations if warranted.

3.0 Physical Setting

General property information and property use are summarized in Table I. Refer to Figure Nos. 1 and 3, respectively for the Site Vicinity Map and Topographic Map of the subject site.

TABLE I
Summary of Property Information

Topographic Map:	U.S. Geological Survey, 7.5 minute Los Angeles, California topographic quadrangle map 1994.
Topography:	East-southeast; the elevation is approximately 312 feet above mean sea level.
General Location:	Southeast and southwest corners of North Broadway and West Cesar Chavez Avenue in Los Angeles, California.

TABLE I (cont.)
Summary of Property Information

Assessor's Parcel Numbers:	5408-004-909, 5408-004-910, 5408-004-911, 5408-004-912, 5408-004-913, 5408-004-914 (Broadway Parcels) and 5408-005-903, 5408-005-904, 5408-005-906, 5408-005-907 (Spring Street Parcels)
Approximate Depth to Groundwater:	38.46 to 40.92 feet below ground surface (bgs) (SWRCB)
Regional Groundwater Flow Direction:	East-southeast (based on topographic contour map)
Existing Use:	Parking Lots

Geology and Hydrogeology

The subject property is located in the Central Basin Pressure Area of the Central Groundwater Basin. The water-bearing deposits include the unconsolidated and semi-consolidated marine and alluvial sediments of Holocene, Pleistocene and Pliocene ages. Sediments in this area exceed 6,000 feet in thickness and consist mainly of non-marine and marine clastic sediments. Fresh water-bearing sediments are predominantly Holocene and Pleistocene non-marine clays, silts, sands and gravels about 1,000 feet thick in this area. These sediments are underlain by late Tertiary marine clastic sedimentary rocks of the Pico, Repetto and Puente Formations. Discharge of groundwater from the sub-basin occurs primarily by pumping extractions.

The subject property is situated within the Los Angeles Central Groundwater Basin. The Los Angeles Central Groundwater Basin is divided into three areas: the Los Angeles Forebay and Montebello Forebay Areas and the Pressure Area. The Forebay refers to the areas of intake or recharge, where the major basin aquifers are replenished; the Pressure Area is generally defined as the area in the basin where surface water and shallow groundwater are prevented from percolating in large quantities into the major producible aquifers by clays and silt layers at shallow depths. The subject property is located in the pressure area, where the aquifers are generally confined by many aquicludes. The Central Groundwater Basin is bounded on the west and south by the Newport/Inglewood Uplift and on the north by the Hollywood Basin. The low lying Elysian Hills border to the northwest; the Coyote Hills to the northeast; to the southeast are the Puente Hills.

According to the State Water Resources Control Board (SWRCB) GeoTracker Website, a nearby Leaking Underground Storage Tank (LUST) site is the City of Los Angeles Federal Building Annex located at 255 Temple Street in the City of Los Angeles, which is approximately 979 feet south of the subject property. The most recent monitoring data available on the GeoTracker Website was for April 17, 1989, with depth to first observed groundwater at approximately between 38.46 and 40.92 feet bgs. The flow direction of groundwater at the LUST site has been variable and has ranged from east to southeast.

4.0 Site Reconnaissance

A site reconnaissance, which included a visual observation of the subject site and surrounding properties, was conducted by Terrax's environmental assessor on March 23, 2014. The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying RECs including, hazardous substances and petroleum products in connection with the subject site (including soils, surface waters and groundwater).

Observations

Table II summarizes conditions encountered during our site reconnaissance. A discussion of physical observations follows Table II. Refer to the Site Map and Topographic Map (Figures 1 and 3, respectively) and color photographs following the text for the locations of items discussed in this section of the report.

TABLE II
Summary of Site Reconnaissance

Feature	Observed	Not Observed
Structures (existing)	X	
Evidence of past uses		X
Hazardous substances and/or petroleum products (including containers)		X
Aboveground storage tanks (ASTs)		X
Underground storage tanks (USTs) or evidence of USTs		X
Strong, pungent, or noxious odors		X
Pools of liquid likely to be hazardous materials or petroleum products		X

TABLE II (cont.)
Summary of Site Reconnaissance

Feature	Observed	Not Observed
Drums		X
Unidentified substance containers		X
Pole-mounted/Pad-mounted transformer		X
Hydraulic equipment		X
Heating and cooling systems		X
Stains or corrosion on floors, walls, or ceilings		X
Floor drains and sumps		X
Pits, ponds, or lagoons		X
Stained soil and/or pavement		X
Stressed vegetation		X
Waste or wastewater discharges to surface or surface waters on subject site (including stormwater)		X
Wells (irrigation, domestic, dry, injection, abandoned, monitoring wells)		X
Septic Systems		X
Other		X

The subject site consists of ten irregular-shaped parcels of land totaling approximately 2.48 acres located at 527 North Spring Street and 555 North Broadway in Los Angeles, California. Broadway intersects the subject site dividing the property into two separate properties. At the time of Terrax's site reconnaissance, the subject site was observed to be occupied by two asphalt-paved parking lots with associated parking attendant buildings. The parking attendant structures were of steel frame construction with metal walls and roofs on concrete slab foundations. The interior finishes are comprised of sealed concrete floors. According to the signage at the subject site, these parking lots are operated by Classic Parking, Inc.

Waste Generation, Storage and Disposal

At the time of the site visit, the subject site appeared to comply with local and state waste disposal regulations.

Hazardous Materials Handling and Storage

At the time of the site reconnaissance, no hazardous materials or signs of hazardous material usage was observed at the subject site. Therefore, hazardous materials are not considered an on-site environmental concern at this time.

Waste Water and Storm Water Discharges

No evidence of interior wastewater was observed at the time of the site visit. However, one exterior surface drain was observed in the parking lot area. The area where the drain is located was designed to direct surface water run-off into the drains. The drain was inspected and appeared to be in good visible condition, with no significant staining observed around the perimeter or visible interior.

Bulk Petroleum Storage Tanks

No evidence of any past or present bulk petroleum storage tanks was identified on the subject site, at the time of the site reconnaissance. However, historical SFIMs, historical aerial photographs, and information obtained from the EDR database report, the subject site was historically occupied by a gasoline service station at the historical addresses of 300-330 South Sunset Boulevard from at least 1924 until at least 1972. The lack of information pertaining to the historical gasoline service station and the disposition of the former USTs constitutes a REC in connection with the subject site.

Indications of Polychlorinated Biphenyls (PCBs)

At the time of the site reconnaissance, no electrical transformers were observed on the subject site. Therefore, PCBs are not considered an on-site environmental concern at this time.

Asbestos-Containing Materials

During on-site observations no suspect asbestos-containing materials (ACMs) were identified in the on-site structures. However, it is unknown if the on-site buildings contain ACMs. An ACM survey was not included within the scope of this assessment.

Lead-Based Paint

During Terrax's site reconnaissance, a visual observation of the painted surfaces within the subject buildings was conducted. The paint appeared in good condition with no evidence of significant peeling or damage. Because the existing improvements were constructed after 1978, LBP is not suspected to be present. However, it is unknown if the on-site buildings contain LBP. A LBP survey was not included within the scope of this assessment.

Radon

The US EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, Zone 1 being those areas with the average predicted indoor radon concentration in residential dwellings exceeding the EPA Action limit of 4.0 picoCuries per Liter (pCi/L). It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures. Review of the EPA Map of Radon Zones places the subject site in Zone 2, where average predicted radon levels are between 2.0 pCi/L and 4 pCi/L. Based on the radon zone classification, or non-residential use of the subject site radon is not considered to be a concern.

Potable Water Source

The water purveyor for the subject site is the Los Angeles County Department of Water and Power (LADWP). The LADWP water quality monitoring is an on-going program with water samples obtained on a regular basis. It is the responsibility of the LADWP to provide customers with potable water in compliance with the California State Maximum Contaminant Levels (MCLs) for primary drinking water constituents in water supplied to the public. According to the 2012 Annual Drinking Water Quality Report, the LADWP maintains and operates a variety of facilities including groundwater wells, water treatment plants, booster stations, reservoirs, and distribution system pipes, in addition to also purchasing imported drinking water. Based on the city's testing results, the city's drinking water meets the State criteria.

Mold Evaluation

As part of this assessment, Terrax performed a limited visual inspection for the conspicuous presence of mold. Interior areas of buildings characterized by poor ventilation and high humidity are the most common locations of mold growth. Building materials including drywall, wallpaper, baseboards, wood framing, insulation and carpeting often play host to such growth. Moisture control is the key to mold control. Terrax observed the accessible interior areas of the subject site structures, including interior walls and ceilings for the presence of conspicuous mold or observed water intrusion or accumulation. Terrax did not observe the presence of mold in any of the on-site structures.

Heating and Cooling Source

No heating and cooling systems or domestic hot water equipment are currently located at the subject site. Electricity and natural gas in the vicinity of the subject site are provided by LADWP and Southern California Gas Company, respectively.

Adjacent Streets and Property Usage

Table III summarizes the current adjacent roads and site uses observed during the site reconnaissance.

TABLE III
Adjacent Streets and Property Use

Direction	Adjacent Street	Adjacent Property Use
North	East Cesar Chavez Avenue and West Sunset Boulevard	Apartment Building, Multi-tenant Commercial Building, and Chinatown Senior Center
East	Spring Street	Our Lady Queen of Angels Church and Parking Lot
South	None	Undeveloped Land and Highway 101
West	Hill Street	Fort Moore Pioneer Memorial

Based on the observed uses of the properties located immediately adjacent to the subject site, it is unlikely that significant quantities of hazardous materials are stored or handled at the adjacent properties.

5.0 User-Provided Information

A review of user-provided title reports and a completed Phase I ESA User Questionnaire was conducted in order to help identify pertinent information regarding potential environmental impacts associated with the subject site.

Title Report

On March 26, 2014, several Preliminary Title Reports for the subject site by Stewart Title of California, Inc., were provided to Terrax by Ms. Jenny Gant Pham, agent for the Phase I ESA user. The Preliminary Title Reports, dated August 25 through March 5, 2004, were reviewed to identify potential deed restrictions, environmental liens or activity and use limitations (AULs) which may have occurred on or exist in connection with the subject property as indicated by the

Preliminary Title Reports. Terrax's review of the Preliminary Title Reports indicated no deed restrictions, environmental liens or AULs for the subject site. However, as quoted from the Preliminary Title Reports, "it is important to note that this Preliminary Title Report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land." Therefore, Terrax recommends that at the close of the real estate transaction and upon the issuance of the final Title Report, the final Title Report should be reviewed and any information deviating from that presented in the Preliminary Title Report revealing evidence of RECs be evaluated and documented in conjunction with this report. Please refer to Appendix B for a copy of the Preliminary Title Reports.

Phase I Environmental Site Assessment User Questionnaire

On March 26, 2014 a completed Phase I ESA User Questionnaire was received from Mr. David Garner of Classic Parking, Inc. Please refer to Appendix C for a copy of the User Questionnaire.

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete. The user is asked to provide information or knowledge of the following:

1. Environmental cleanup liens that are filed or recorded against the site.
2. Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry.
3. Specialized knowledge or experience of the person seeking to quality for the LLPs.
4. Relationship of the purchase price to the fair market value of the *property* if it were not contaminated.
5. Commonly known or *reasonably ascertainable* information about the *property*.
6. The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation.

According to Mr. Garner, to the best of his knowledge as the User of this Phase I ESA, no environmental cleanup liens and no activity or land use limitations have been filed or recorded against the subject site. According to Mr. Garner, the subject site is currently utilized as a parking lot. Mr. Garner indicated that he did not have knowledge of the past or current presence

of specific chemicals, or hazardous materials, unauthorized spills or chemical releases in connection with the subject site. Additionally, Mr. Garner stated that he is unsure if the purchase price of the subject site reasonably reflects fair market value.

Property Value Reduction due to Environmental Conditions

No information was provided by the Client to Terrax regarding a reduction of the subject site value due to environmental problems or conditions.

Reason for Performing Phase I ESA

It is Terrax's understanding that the Phase I ESA was being performed in consideration of a pending real estate transaction involving the subject site.

6.0 Historical Site Usage Survey

Site History

A review of historical aerial photographs, Sanborn Fire Insurance Maps (SFIMs), historical city directories, building department records and a Phase I ESA Questionnaire were used to assess the history of the subject site.

Aerial Photograph Interpretation

Historical aerial photographs dated 1928, 1938, 1948, 1952, 1964, 1972, 1981, 1989, 1994, 2005, 2009, 2010 and 2012 were reviewed to assess property history. These photographs were obtained from EDR. The aerial photograph summary is provided below in Table IV.

TABLE IV
Summary of Aerial Photograph Review

Year/Scale	Site Use	Site and Adjacent Property Observation
1928 1" = 500'	Commercial/ Residential	The subject property appears to be developed with several commercial and residential structures. A two-lane paved road is observed transecting the subject site. A commercial building and a four-lane paved road (Cesar Chavez Avenue) is observed adjoining the north of the subject site, followed by commercial development. Residential development and a two-lane paved road (New High Street) are observed to the east of the subject site. Residential and commercial development is observed to the south and west of the subject site.

TABLE IV (cont.)
Summary of Aerial Photograph Review

Year/Scale	Site Use	Site and Adjacent Property Observation
1938 1” = 500’	Commercial	The western (Broadway) portion of the subject site appears as it did in the 1928 aerial photograph. The eastern (Spring Street) portion of the subject site appears to be a graded lot, with the exception of what appears to be a gas station structure and canopies located on the northern portion of the site. Cesar Chavez Avenue is located to the north, followed by an increase in commercial development. A four-lane paved road (Spring Street) is observed adjoining to the east of the subject site, followed by commercial development. Commercial and residential development is observed on the adjoining properties to the south and west.
1948 1” = 500’	Commercial	The subject site and all adjoining properties appear as they did in the 1938 aerial photograph.
1952 1” = 500’	Commercial	The western (Broadway) portion of the subject site appears to be a vacant graded lot. The eastern (Spring Street) portion of the subject site appears to be occupied by a parking lot on the southern portion and the gas station structure on the northern portion. The subject site is divided by a four-lane paved road (Broadway). Commercial development is observed to the north, east and west of the subject site. Undeveloped land followed by the Hollywood Freeway (Highway 101) is observed adjoining the south of the subject site.
1964 1” = 500’	Commercial	The subject site appears to be occupied by the two parking lots observed during the site reconnaissance. Additionally, the gas station is still observed on the northern portion of the subject site. All the adjoining properties appear as they did in the 1952 aerial photograph.

TABLE IV (cont.)
Summary of Aerial Photograph Review

Year/Scale	Site Use	Site and Adjacent Property Observation
1972 1" = 500'	Commercial	The subject site and all adjoining properties appear as they did in the 1964 aerial photograph, with the exception of the development of a parking lot adjoining to the north of the subject site.
1981 1" = 500'	Commercial	The subject site and all adjoining properties appear as they did in the 1972 aerial photograph, with the exception of the gas station structure has been replaced with a commercial structure located on the northern portion of the subject site.
1989 1" = 500'	Commercial	The subject site and all adjoining properties appear as they did in the 1981 aerial photograph.
1994 1" = 500'	Commercial	The subject site and all adjoining properties appear as they did in the 1989 aerial photograph.
2005 1" = 500'	Commercial	The subject site and all adjoining properties appear as they did in the 1994 aerial photograph, with the exception of the redevelopment of the commercial property to the west of the subject site.
2009 1" = 500'	Commercial	The subject site and all adjoining properties appear as they did in the 2005 aerial photograph.
2010 1" = 500'	Commercial	The subject site and all adjoining properties appear as they did in the 2009 aerial photograph.
2012 1" = 500'	Commercial	The subject site and all adjoining properties appear as they did in the 2010 aerial photograph.

Los Angeles County Building and Safety Department

On March 26, 2014, the Los Angeles County Building and Safety Department (LACBSD) was contacted regarding permit records for the subject site. No original building permit records were observed for the subject site. The oldest reviewed permit was a demolition permit to "Demo Existing Bank" at 300 Cesar Chavez Avenue, dated December 29, 2009. No building permits for items of environmental significance such as previous structures, USTs, ASTs or septic systems were on file with the LACBSD for the subject site.

Sanborn Fire Insurance Maps

Terrax reviews Sanborn Fire Insurance Maps (SFIMs) to evaluate prior land use at the subject site and adjacent properties. SFIMs typically exist for cities with populations of 2,000 or more, the coverage dependent on the location of the property. On March 18, 2014, Terrax contracted with EDR to provide a Fire Insurance Map Abstract indicating the availability of historic SFIMs for the subject site and adjacent properties as far back as 1867. EDR's search of collections at the Library of Congress, University Publications of America, and various public and local sources revealed the following map coverage for the subject site and adjacent properties as described below in Table V.

TABLE V
Summary of Sanborn Fire Insurance Map Review

Year	Site Use	Site and Adjacent Property Observation
1888	Residential/ Commercial	The subject site is developed several residential structures. Broadway Street transects the western portion (Broadway) of the subject site. A commercial structure is observed on the northeast corner of the eastern portion (Spring Street) subject site, the remaining portions of the eastern portion are occupied by residential structures. A commercial structure and Bellevue Avenue (currently Cesar Chavez Avenue) followed by commercial development is observed to the north of the subject site. New High Street is located to the east, followed by commercial development further. Residential development is observed to the south of the subject site. To the west of the subject site is Hill Street and residential development, followed by a cemetery. Buena Vista Street (currently Broadway) separates the eastern and western portions of the subject property.
1894	Residential/ Commercial	The subject site appears as it did on the 1888 SFIM.

TABLE V (cont.)
Summary of Sanborn Fire Insurance Map Review

Year	Site Use	Site and Adjacent Property Observation
1906	Commercial	The subject site appears as it did on the 1894 SFIM, with the exception of the entrance to the Broadway Tunnel is observed adjoining the east of the western portion (Broadway) subject site. The eastern portion (Spring Street) subject site is occupied by several structures associated with the "Reavis Carriage Company Stables". Sunset Boulevard (currently Cesar Chavez Avenue) is located adjoining to the north, followed by the "Los Angeles Pacific Railroad Company Freight Yard" and the "Cornice Works" facility. New High Street is located to the east, followed by commercial development further. Residential development is observed to the south of the subject site. To the west of the subject site is Hill Street and residential development, followed by a cemetery. Buena Vista Street (currently Broadway) separates the eastern and western portions of the subject property.
1920	Commercial	The conditions on the subject site and adjoining properties appear as they did in the 1906 SFIM.
1950	Commercial	The western portion (Broadway) subject property is occupied by a three-tenant commercial structure located on the northwest corner of the site. A "gas station" and "Auto Garage" are observed on the eastern portion (Spring Street) subject site along the northern boundary. The remaining portions of the subject site is undeveloped. Sunset Boulevard (currently Cesar Chavez Avenue) and a multi-tenant commercial structure are located to the north, followed by commercial development. North Spring Street is located to the east of the subject site, followed by commercial development. Undeveloped land followed by the Hollywood Freeway is observed to the south of the subject site. Undeveloped land followed by commercial development is observed to the west of the subject site.

TABLE V (cont.)
Summary of Sanborn Fire Insurance Map Review

Year	Site Use	Site and Adjacent Property Observation
1953	Commercial	The subject site and adjoining properties appear as they did on the 1950 SFIM, with the exception of the absence of the three-tenant commercial structure on the western portion (Broadway). North Broadway separates the eastern and western portions of the subject property.
1954	Commercial	The subject site and adjoining properties appear as they did on the 1953 SFIM.
1957	Commercial	The subject site and adjoining properties appear as they did on the 1954 SFIM.
1960	Commercial	The subject site and adjoining properties appear as they did on the 1957 SFIM.
1964	Commercial	The subject site and adjoining properties appear as they did on the 1960 SFIM.
1965	Commercial	The subject site and adjoining properties appear as they did on the 1964 SFIM.
1968	Commercial	The subject site and adjoining properties appear as they did on the 1965 SFIM.
1970	Commercial	The subject site and adjoining properties appear as they did on the 1968 SFIM.

City Directory Research

Reasonably ascertainable Haines Criss-Cross Directories (HCCDs) and Polk Guide Directories (PGDs) dated 1920 through 2013 were provided by EDR for the current subject site addresses of 527 North Spring Street and 555 North Broadway, as well as the subject site historical addresses. None of the subject site address were listed in the city directories from 1920 through 2013. No significant historic up-gradient conditions of environmental concern were identified. Surrounding properties are listed as residential and commercial listings throughout the research period.

Phase I Environmental Site Assessment Owner Questionnaire

On March 26, 2014, a Phase I ESA Owner Questionnaire was received from Ms. Dawn McDivitt the Property Manager of the subject site. The Owner Questionnaire is designed to provide

pertinent information regarding environmental and historical impacts associated with the subject site. Ms. McDivitt has been familiar with the subject site since 2004. According to Ms. McDivitt, the subject site has been utilized as a parking lot, with the exception of a bank building that was demolished on the corner of Broadway and Cesar Chavez in 2010. Ms. McDivitt stated, to the best of her knowledge, no on-site treatment and/or discharge of waste; on-site leach fields, dry wells, sumps, or disposal ponds; no known on-site hazardous materials spills; buried materials; on-site monitoring, domestic, or irrigation wells; or any other items of environmental concern are associated with the subject site. A copy of the Phase I ESA Owner Questionnaire is included in Appendix C.

Previous Environmental Reports

Sapphos Environmental, Inc. (SEI) conducted a previous Phase I ESA entitled, *Phase I Environmental Site Assessment of Land Located in the Antique Block of El Pueblo De Los Angeles, State Historic District, Los Angeles, California* dated April 2003. SEI's investigation included the southern portion of the eastern (Spring Street) subject site and the south adjoining property. At the time of SEI's site inspection, the subject site consisted of an approximately 1.14-acre asphalt-paved parking lot owned by the County of Los Angeles. SEI indicated that the subject site portion of their investigation was historically residentially developed as far back as 1928. By 1947, the subject site was vacant land. By 1952 the subject site was utilized as a parking lot. SEI concluded that no RECs were identified with regard to the subject site or the adjoining property and that no additional investigation was warranted.

Agricultural Chemicals

Review of historical aerial photographs indicates the subject property has not been utilized for agricultural purposes. Consequently, the use, storage, and application of agricultural chemicals at the subject property are not considered an environmental concern.

7.0 Regulatory Agency Records

A review of the most current local regulatory agency records was conducted to help determine if hazardous materials have been handled, stored, or generated on the subject site and/or the adjacent properties and businesses.

California Environmental Protection Agency, Department of Toxic Substances Control

Terrax's March 27, 2014 review of the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) Envirostor California cleanup sites database available via the DTSC Internet Website which tracks federal superfund sites, state response sites, voluntary cleanup sites, and school cleanup sites, indicated that no records of cleanup sites are on file with the DTSC for the subject property or the adjoining properties.

California Regional Water Quality Control Board

Terrax's March 27, 2014 review of the California Regional Water Quality Control Board (RWQCB) Geotracker leaking underground fuel tank (LUFT) database available via the RWQCB Internet Website indicated that no records of active LUFTs are on file with the RWQCB for the subject site or the adjoining properties.

California Division of Oil, Gas, and Geothermal Resources

Terrax reviewed the California Division of Oil, Gas, and Geothermal Resources (DOGGR) website (http://maps.conservation.ca.gov/doms/index.html) to evaluate the potential for existing/former oil, gas, or geothermal wells on the subject property or adjoining properties. The subject property is located within DOGGR District 1. The subject property vicinity is not located within an oil, gas, or geothermal field. The review of DOGGR information does not indicate that an oil, gas, or geothermal well has been drilled on the subject or adjacent properties.

Los County Angeles Department of Public Health – Public Health Investigation

On March 13, 2014, the Los Angeles County Department of Public Health – Public Health Investigation (LACDPH-PHI) was contacted regarding records of historical hazardous/flammable permits, hazardous materials handling, and unauthorized releases of hazardous materials for the subject site. Unfortunately, a response was not received prior to the issuance of this report. Any pertinent information will be forwarded upon receipt.

Los Angeles County Department of Public Works – UST Local Oversight Program

On March 13, 2014, the Los Angeles County Department of Public Works – UST Local Oversight Program (LACDPW) was contacted regarding records of USTs, ASTs, releases of hazardous materials and/or petroleum products for the subject property. Unfortunately, a response was not received prior to the issuance of this report. Any pertinent information will be forwarded upon receipt.

Los Angeles Fire Department

On March 13, 2014, Terrax submitted a request regarding records of historical hazardous/flammable permits, hazardous materials handling, hazardous/flammable incidents, and/or USTs that are on file for the subject site address to the City of Los Angeles Fire Department (LAFD). Unfortunately, a response was not received prior to the issuance of this report. Any pertinent information will be forwarded upon receipt.

Local Area Tribal Records

According to the EDR Radius Map Report, no tribal records are listed for the subject site or the adjacent properties.

Regulatory Agency Lists Review

Several agencies have published documents that list businesses or properties, which have handled hazardous materials or waste or may have experienced site contamination. The lists consulted in the course of our assessment were compiled by Environmental Data Resources, Inc. (EDR) and Terrax on March 18, 2014, and represent reasonably ascertainable current listings. Terrax did not verify the locations and distances of every property listed by EDR. Terrax verified locations and distances of the properties Terrax deemed as having the potential to pose an environmental impact to the subject site. The actual location of the listed properties may differ from the EDR listings. Table VI summarizes the listed properties located within the ASTM Search Radii. The actual distances of the listed properties (which are summarized in Table VI) are based on observations during Terrax's site reconnaissance. No unmapped properties were determined to be located within the search radii specified for each of the following lists. General information for the Regulatory Agency Lists reviewed, the Regional Map, and the EDR report are included in Appendix E.

TABLE VI
EDR Listed Properties

Regulatory Database	Search Distance	On-site listings	Adj. Property Listings	Total Within Search Distance
Fed. NPL	1-mile	0	0	0
Fed. Proposed NPL	1-mile	0	0	0
Fed. Delisted NPL	½-mile	0	0	0

TABLE VI (cont.)
EDR Listed Properties

Regulatory Database	Search Distance	On-site listings	Adj. Property Listings	Total Within Search Distance
Fed. CERCLIS	½-mile	0	0	0
Fed. CERCLIS-NFRAP	½-mile	0	0	3
Fed. RCRA CORRACTS	1-mile	0	0	1
Fed. RCRA TSD	½-mile	0	0	0
Fed. RCRA Gen.	¼ -mile	0	0	4
US Eng. Controls	½-mile	0	0	0
US Inst. Controls	½-mile	0	0	0
Fed. ERNS	SP	0	--	--
State RESPONSE	1-mile	0	0	2
State ENVIROSTOR	1-mile	0	0	53
State & Tribal equiv. NPL and CERCLIS	1-mile	0	0	0
State & Tribal SWF/LF	½-mile	0	0	0
State & Tribal LUST	½-mile	0	0	26
State SLIC	½-mile	0	0	17
State & Tribal UST	¼ -mile	0	1	6
State & Tribal AST	¼ -mile	0	0	0
State & Tribal VCP	½-mile	0	0	2

TABLE VI (cont.)
EDR Listed Properties

Regulatory Database	Search Distance	On-site listings	Adj. Property Listings	Total Within Search Distance
US Brownfields	½-mile	0	0	1
State & Tribal Open Dump Landfill	½-mile	0	0	0
WMUDS/SWAT	½-mile	0	0	2
SWRCY	½-mile	0	0	1
HAULERS	Site	0	--	--
US CDL	Site	0	--	--
HIST Cal-Sites	1-mile	0	0	2
SCH	¼ -mile	0	0	1
Toxic Pits	1-mile	0	0	0
CA FID UST	¼ -mile	0	4	13
HIST UST	¼ -mile	0	0	9
SWEEPS UST	¼ -mile	0	4	12
CERCLA LIEN Info	Site	0	--	--
LUCIS	1-mile	0	0	0
Env. LIENS	Site	0	--	--
Land Disposal Sites	Site	0	--	--
Military Cleanup Sites	Site	0	--	--
DOD	1-mile	0	0	0
FUDS	1-mile	0	0	0
CONSENT	1-mile	0	0	0
ROD	1-mile	0	0	0
UMTRA	½-mile	0	0	0
MINES	¼ -mile	0	0	0
TRIS	Site	0	--	--

TABLE VI (cont.)
EDR Listed Properties

Regulatory Database	Search Distance	On-site listings	Adj. Property Listings	Total Within Search Distance
TSCA	Site	0	--	--
PADS	Site	0	--	--
FINDS	Site	0	--	--
CA BOND EXP PLAN	1-mile	0	0	0
CA WDS	Site	0	--	--
Cortese	½-mile	0	0	1
Hist. Cortese	½-mile	0	1	17
Notify 65	1-mile	0	0	1
CA CUPA	¼ -mile	0	0	0
LA Co. Site Mitigation	Site	0	--	--
Drycleaners	½-mile	0	0	0
WIP	1-mile	0	0	0
Los Angeles Co. HMS	Site	0	--	--
HAZNET	Site	0	--	--
EMI	Site	0	--	--
INDIAN RESERV	1-mile	0	0	0
PWS	Site		--	--
HWP	1-mile	0	0	1
Manufactured Gas Plants	1-mile	0	0	6
EDR Historical Auto Stations	¼ -mile	**X**	6	13
EDR Historical Cleaners	¼ -mile	0	5	14

0 = No sites in radius identified
--- = Not Searched

The historical subject site address 330 South Sunset Boulevard was listed as an EDR Historical Auto Station site in the EDR-provided government database report. Nash La Marca was listed as a historical automobile service station in 1924. No other subject property listings were observed in the EDR database. The subject property was not identified on any government databases of known and reported unauthorized releases of hazardous materials or petroleum products to the subsurface. However, the lack of information pertaining to the historical gasoline service station constitutes a REC in connection with the subject site.

No sites with reported releases of hazardous materials to the subsurface were reported within a one-eighth mile radius of the subject site. In general, only potentially hazardous materials released from facilities located approximately up-gradient and within a few hundred feet of the subject site or in a cross-gradient direction close to the subject property are judged to have a reasonable potential of migrating to the subject site. This opinion is based on the assumption that materials generally do not migrate large distances laterally within the soil, but tend to migrate with groundwater in the general direction of groundwater flow. The general direction of groundwater flow in the vicinity of the subject site is anticipated to be towards the east-southeast.

Twenty orphan sites were identified in the EDR-provided government database report. Based upon Terrax's visual observations made during our site reconnaissance, as well as various influencing factors including approximate distance from the subject site, the orphan sites are deemed to have a low potential to impact the subject site.

No engineering control sites, sites with institutional controls, or sites with deed restrictions were listed for the subject site, adjoining sites or vicinity properties in the EDR-provided government database report. No Indian reservations or LUSTs on Indian land were reported on the subject property, adjoining sites or vicinity properties in the EDR-provided government database report. No Indian reservations or LUSTs on Indian land were reported on the subject site, adjacent sites or vicinity properties in the EDR-provided government database report.

The remaining properties identified by EDR within the specified search radius of the subject site, which appeared on local, state, or federally published lists of sites that use of have had releases of hazardous materials, were determined through Terrax's field observations to be of sufficient distance and/or situated hydraulically cross/down-gradient of the subject site, such that impacts to the subject site are not likely.

8.0 Vapor Encroachment Condition Screening

Vapor intrusion is a way by which chemicals in soil and groundwater can migrate into indoor air. Chemical vapors moving up through soil and into a building are a potential source of indoor air contamination and may pose a risk to human health. In evaluating the potential for a VEC on the subject property, Terrax attempted to determine if there was information indicating that chemicals of concern were located within the "critical distance," defined as the lineal distance between the nearest edge of a contaminated plume and the nearest target property boundary. Based on ASTM E 2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions, the "critical distance" is equal to 100 feet, with the exception of dissolved petroleum hydrocarbons, which have a "critical distance" of 30 feet. If non-aqueous phase petroleum hydrocarbons are present, the 100-foot "critical distance" is utilized.

Terrax has performed a Vapor Encroachment Screening (Tier 1) in general accordance with the scope and limitations of ASTM Standard Practice E2600-10 for the subject property. Terrax utilized site and site vicinity specific criteria including groundwater gradient, distance of area properties of environmental concern from the subject property, and the types of constituents of concern which were released to evaluate potential vapor encroachment issues. The purpose of this Vapor Encroachment Screening (Tier 1) is to identify the existing or potential VEC, (as defined by ASTM E2600-10) affecting the subject property.

Terrax's review of historical aerial photographs, SFIMs and information obtained from the EDR database indicates that the subject site has historically been developed with an automobile service station since at least 1924 through at least 1972. No information pertaining to the removal of the former USTs was identified during the course of this investigation. The presence or absence of USTs and the condition of the subsurface associated with the locations of the potential USTs, sub-grade hydraulic lifts and oil/water separators (if any) is unknown. Based upon the results of the Tier 1 Vapor Encroachment Screen (VES) a VEC cannot be ruled out at the subject property.

9.0 Discussion of Findings

Historical Uses

The subject site consists of ten irregular-shaped parcels of land totaling approximately 2.48 acres located at 527 North Spring Street and 555 North Broadway in Los Angeles, California. Terrax's review of historical aerial photographs records, SFIMs, and information obtained from the EDR database report indicate that the subject site was historically occupied by a gasoline service station at the historical addresses of 300-330 South Sunset Boulevard from at least 1924 until at least 1972. Based on the historical use of the subject site as a gasoline service station, it is Terrax's opinion that there is a moderate potential that past on-site operations which potentially utilized underground storage tanks (USTs), former sub-grade hydraulic lifts and oil/water separators to have environmentally impacted the subject site. The lack of information pertaining to the historical gasoline service station and the disposition of the former USTs constitutes a REC in connection with the subject site.

Current Uses

At the time of Terrax's site reconnaissance, the subject site was observed to be occupied by two asphalt-paved parking lots with associated parking attendant buildings. The parking attendant structures were of steel frame construction with metal walls and roofs on concrete slab foundations. The interior finishes are comprised of sealed concrete floors. According to the signage at the subject site, these parking lots are operated by Classic Parking, Inc. No standing water or major depressions were observed on the subject site. No indications of former structures, such as foundations, were observed on the subject site. Based on Terrax's site reconnaissance, contacts with local regulatory agencies and an interview with the owner of the subject site, the potential for RECs to exist in connection with the current use of the subject site appears to be low.

Adjacent Properties

At the time of Terrax's site reconnaissance, the adjacent properties were occupied by various commercial and residential properties. Based on Terrax's field observations, review of the EDR Radius Map report and consultation with local regulatory agencies, the potential for RECs to exist in connection with the subject site from adjacent property uses appears to be low.

Evaluation of Data Gaps/Data Failure

In accordance with ASTM E 1527-13 guidance, data gaps represent a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental

professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice. Data failure represents the failure to achieve the historical research objects of this practice even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap.

The following is a summary of data gaps encountered in the process of preparing this report including an observation as the presumed significance of that data gap to the conclusions of this assessment.

- Absence of a Final Title Reports.
- Failure to identify land use back to first developed use or 1940, whichever is earlier.
- Terrax attempted to contact the fire, health, and environmental departments, but has not received a response as of the date of this report.

However, taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no evidence to suggest that these data gaps might alter the conclusions of this assessment.

10.0 Conclusions/Opinions

We have conducted a Phase I ESA of the subject site in conformance with the scope and limitations of the ASTM E1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Any deviations from this practice were previously described in this report.

Terrax's findings of this Phase I ESA revealed the following evidence of RECs in connection with the subject site as defined by ASTM E1527-13:

- According to historical Sanborn Fire Insurance Maps (SFIMs), historical aerial photographs, and information obtained from the Environmental Data Resources (EDR) database report, the subject site was historically occupied by a gasoline service station at the historical addresses of 300-330 South Sunset Boulevard from at least 1924 until at least 1972. The subject site was not identified in the EDR-provided Radius Map Report on any government databases of known and reported unauthorized releases of hazardous materials to the subsurface. No information pertaining to the removal of the former underground storage tanks (USTs) was identified during the course of this investigation.

Based on the historical use of the subject site as a gasoline service station, it is Terrax's opinion that there is a moderate potential that past on-site operations which potentially utilized USTs, former sub-grade hydraulic lifts and oil/water separators to have environmentally impacted the subject site. Terrax's review of regulatory agency files for the subject site did not identify UST records for the subject site. However, it is Terrax's experience that during the era that the former gasoline service station operated, it is possible for USTs to have been installed/removed without any historical, regulatory, municipal, or interview data indicating their presence or location. Therefore, the presence or absence of USTs and the condition of the subsurface associated with the locations of the potential USTs, sub-grade hydraulic lifts and oil/water separators (if any) is unknown. Consequently, Terrax recommends conducting a geophysical survey of the subject site to confirm the presence or absence of subsurface features of environmental concern including unregistered USTs, previously unidentified sub-grade hydraulic lift locations and oil/water separators. If the geophysical survey reveals potential subsurface features of environmental concern, Terrax recommends conducting a subsurface investigation to assess on-site shallow soils for potential petroleum hydrocarbon impacts. Additionally, based upon the results of the Tier 1 Vapor Encroachment Screen (VES) a Vapor Encroachment Condition (VEC) cannot be ruled out at the subject property. Vapor intrusion is a way by which chemicals in soil and groundwater can migrate into indoor air. Chemical vapors moving up through soil and into a building are a potential source of indoor air contamination and may pose a risk to human health. If it is determined that contamination has been identified on the subject site due to the former gasoline service station, Terrax recommends conducting a soil vapor gas survey (Tier 2 VES) in the vicinity of the former gasoline service station for the purpose of establishing baseline indoor vapor concentrations.

11.0 Limitations

The site reconnaissance and research of the subject site has been limited in scope. This type of assessment is undertaken with the calculated risk that the presence, full nature, and extent of contamination would not be revealed by visual observation alone. Although a thorough site reconnaissance was conducted in accordance with ASTM Guidelines and employing a professional standard of care, no warranty is given, either expressed or implied, that hazardous material contamination or buried structures, which would not have been disclosed through this

investigation, do not exist at the subject site. Therefore, the data obtained are clear and accurate only to the degree implied by the sources and methods used.

The findings presented in this report were based upon field observations during a single property visit, review of available data, and discussions with local regulatory and advisory agencies. Observations describe only the conditions present at the time of this investigation. The data reviewed and observations made are limited to accessible areas and currently available records searched. Terrax cannot guarantee the completeness or accuracy of the regulatory agency records reviewed. Additionally, in evaluating the property, Terrax, has relied in good faith upon representations and information provided by individuals noted in the report with respect to present operations and existing property conditions, and the historical uses of the property. It must also be understood that changing circumstances in the property usage, proposed property usage, subject site zoning, and changes in the environmental status of the other nearby properties can alter the validity of conclusions and information contained in this report. Therefore, the data obtained are clear and accurate only to the degree implied by the sources and methods used.

This report is provided for the exclusive use of the client noted on the cover page and shall be subject to the terms and conditions in the applicable contract between the client and Terrax. Any third party use of this report, including use by Client's lender, shall also be subject to the terms and conditions governing the work in the contract between the client and Terrax. The unauthorized use of, reliance on, or release of the information contained in this report without the express written consent of Terrax, is strictly prohibited and will be without risk or liability to Terrax.

Conclusions and recommendations contained in this report are based on the evaluation of information made available during the course of this assessment. It is not warranted that such data cannot be superseded by future environmental, legal, geotechnical or technical developments. Consequently, given the possibility for unanticipated hazardous conditions to exist on a subject site which may not have been discovered, this Phase I ESA is not intended as the basis for a buyer or developer of real property to waive their rights of recovery based upon environmental unknowns. Parties that choose to waive rights of recovery prior to site development do so at their own risk.

12.0 Qualifications

This Phase I ESA was conducted under the supervision or responsible charge of Terrax's undersigned environmental professional. The work was conducted in accordance with ASTM E1527-13, generally accepted industry standards for environmental due diligence in place at the time of the preparation of this report, and Terrax's quality-control policies.

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in §312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject site. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

If you have any questions or need additional information, please contact the undersigned at (951) 966-6830.

Respectfully Submitted,
Terrax Environmental, Inc.

Terry F. Rees, Ph.D.
Senior Environmental Professional

Eric Patschull
Project Manager

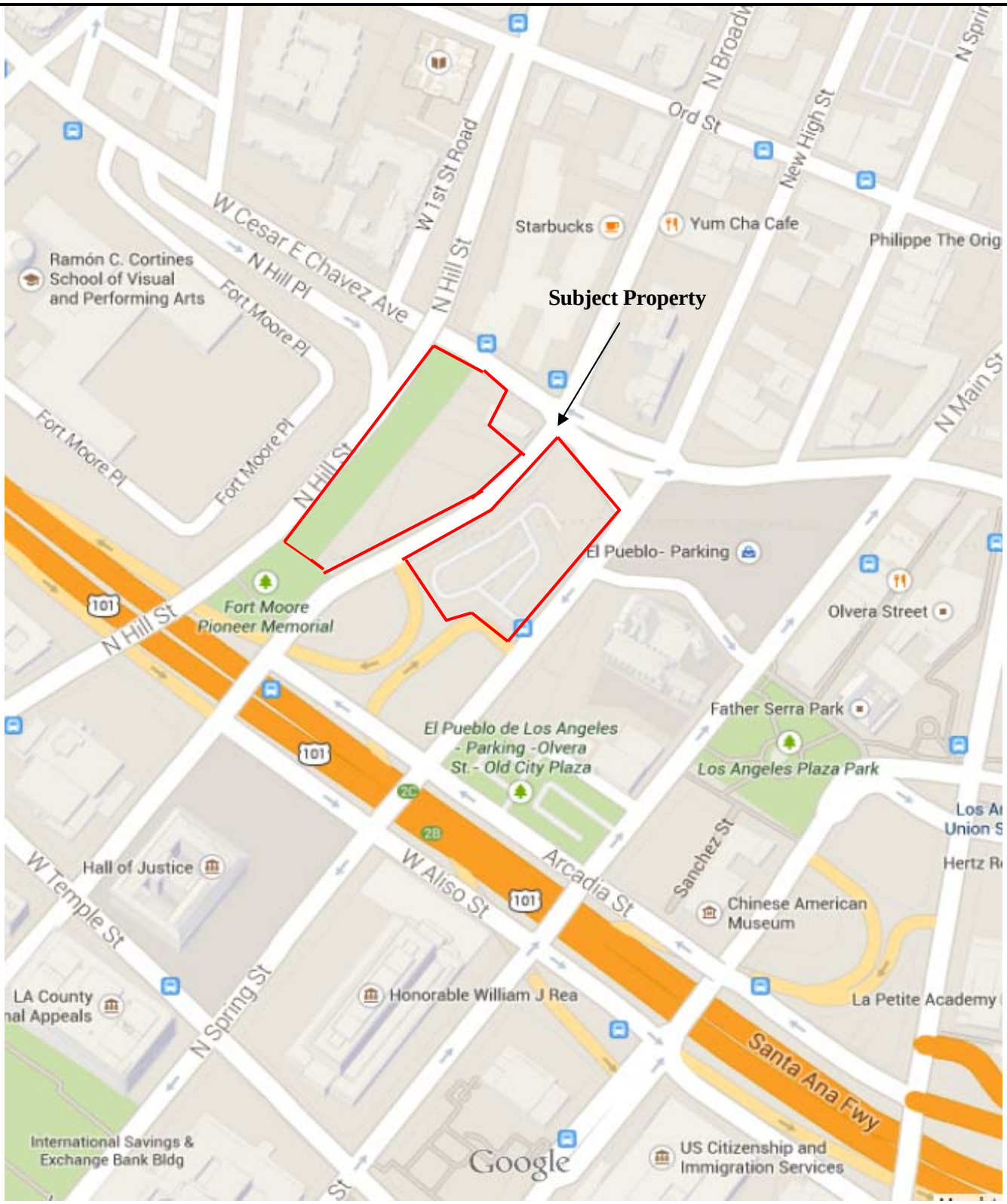


FIGURE 1: SITE VICINITY MAP

Site Address:

Parking Lots
527 North Spring Street & 555 Broadway
Los Angeles, California 90012

N

Drawing Not To Scale

TERRAX

4952 Warner Avenue, Suite 242
Huntington Beach, California 92649
Project Number: 11224

FIGURE 2: SITE PLAN

Prepared By: TKM

Date: March 27, 2014

Parking Lots
527 North Spring Street & 555 Broadway
Los Angeles, California 90012

N

KEY:
Subject Site

GROUNDWATER FLOW

TERRAX

4952 Warner Avenue, Suite 242
Huntington Beach, California 92649
Project Number: 11224

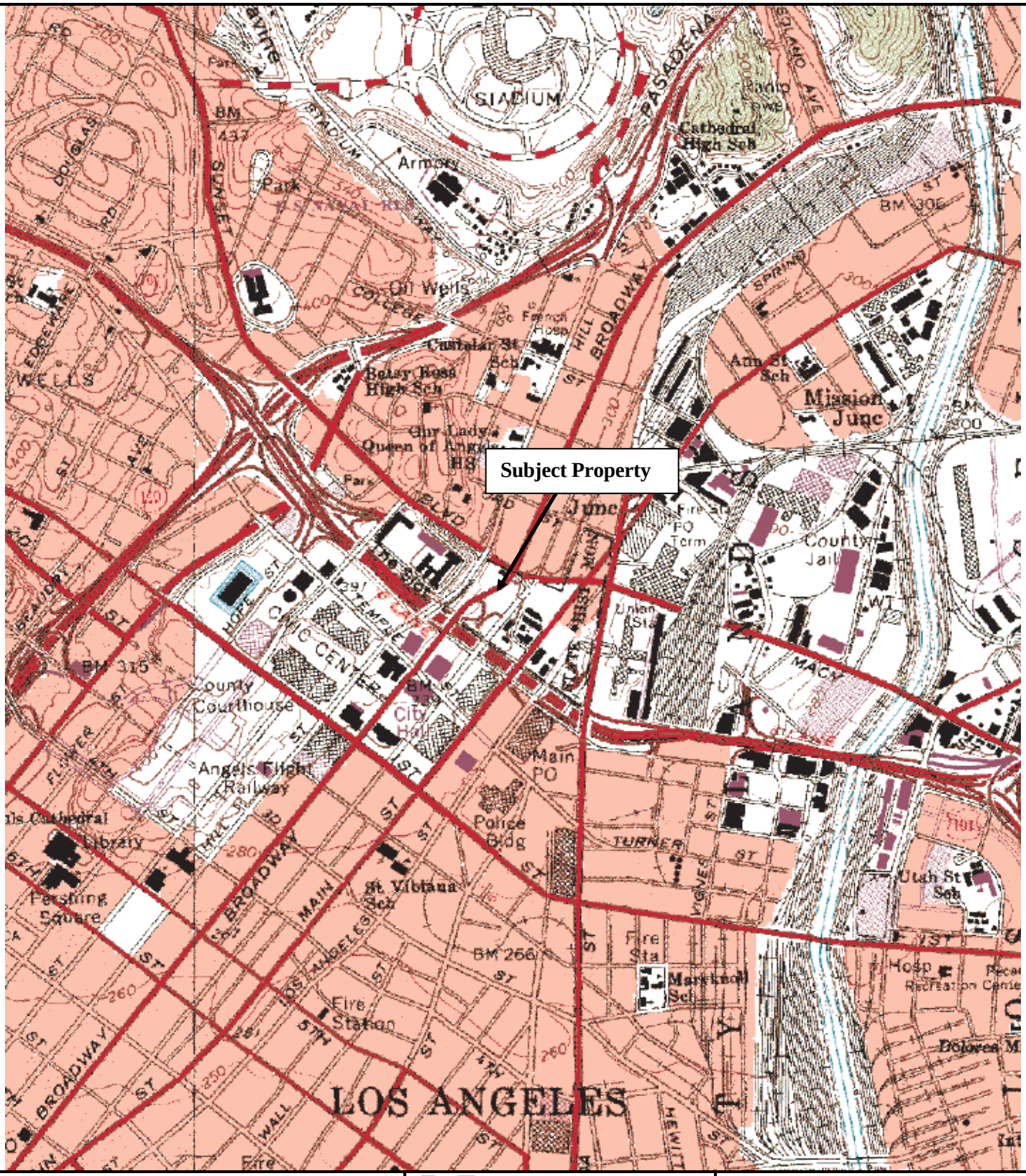


FIGURE 3: TOPOGRAPHIC MAP

Site Address:

Parking Lots
527 North Spring Street & 555 Broadway
Los Angeles, California 90012

N

USGS 7.5 Minute
Los Angeles, CA
Quadrangle
Revised: 1994

TERRAX

4952 Warner Avenue, Suite 242
Huntington Beach, California 92649
Project Number: 11224

PHASE I ENVIRONMENTAL SITE ASSESSMENT

APPENDICES ON CD

June 11, 2014

Ms. Christina Lee
Trammell Crow Company
2221 Rosecrans Avenue, Suite 200
El Segundo, California 90245

Subject: Results of a Subsurface Investigation
La Plaza Cultura Village
300 West Sunset Boulevard
Los Angeles, California

Dear Ms. Lee:

This report presents the results of a subsurface investigation conducted at the La Plaza Cultura Village property located at 300 West Sunset Boulevard in the city of Los Angeles, California (Site; Figure 1). The Site is currently used as a parking lot. Trammell Crow Company is considering acquiring the property for use as a multi-tenant residential development with subterranean parking.

Historical land use at the Site has included a former gasoline station and an automobile service station. There has been no indication that underground storage tanks (USTs) have been removed or investigated. A former cleaner was also reported to have occupied the building located immediately north of the Site. It is unknown whether this former cleaner (referred to herein as the "former potential cleaners") may have used chlorinated solvents in its cleaning activities. To further assess whether underground features still exist or whether impacted soil or soil gas might be present, Hazard Management Consulting, Inc. (HMC) completed a geophysical survey and soil and soil gas sampling.

BACKGROUND

HMC completed a Phase I Environmental Site Assessment (ESA) for the Site in May 2014. The Site comprises two parking lots that are divided by North Broadway (Figure 2). These parking lots are referred to herein as the "Western Parking Lot" and the "Eastern Parking Lot" (Figure 2). Based on the results of the Phase I ESA, the Site was historically used for residential and light commercial/industrial purposes during the early-1900s. The address associated with a building located immediately north of the Western Park-

ing Lot was reported in City Directories as "Clothes Pressers, Cleaners and Repairers" in 1929. Based on this listing, this former facility may have been used for dry cleaning activities. Dry cleaners typically use chlorinated solvents, such as tetrachloroethylene (PCE), as cleaning agents. The building associated with this former listing is currently occupied by a small restaurant and retail outlet.

Based on historical Sanborn Fire Insurance Maps (Sanborn Maps), a gasoline station and automobile service station occupied the northern portion of the Eastern Parking Lot during the 1920s through the 1970s. There was no indication in regulatory files that USTs or other features possibly associated with these former businesses (e.g. hydraulic lifts, clarifiers, sumps, etc.) were removed from the Site. Over the past 100 years, the surrounding properties have also been used for retail purposes, including gasoline stations and dry cleaners. In addition, the surrounding streets have been realigned and renamed over the years. Groundwater has been reported in the Site vicinity at a depth of approximately 30 feet below the ground surface (bgs) and flows in a southeasterly direction.

OBJECTIVES

The objectives of the investigation described herein were to assess whether subsurface features associated with the former gasoline station and/or automobile service station were still present, and to assess whether elevated concentrations of volatile organic compounds (VOCs) and/or petroleum hydrocarbons were present in soil and/or soil gas in areas of concern outlined in the Phase I ESA.

SUBSURFACE INVSTIGATION

The subsurface investigation was completed on May 31 and June 1, 2014, and included a geophysical survey, soil gas survey and soil sampling. Work was completed under the direction and oversight of Mr. Paul Roberts, a California Professional Geologist from Ardent Environmental Group, Inc., an affiliate of HMC. The soil borings and installation of the soil vapor monitoring points were completed by a State-licensed drilling contractor. The soil gas samples were collected and analyzed by Jones Environmental Inc., a State-certified mobile laboratory. Soil vapor monitoring point installation and sampling were completed in general accordance with the Department of Toxic Substances Control (DTSC) guidelines. Lithology at the Site consisted of clayey sands to fine sands with trace fine gravels. Laboratory results of

soil gas and soil samples are presented on Tables 1 and 2. Laboratory reports are presented in Attachment A and boring logs are presented in Attachment B.

Geophysical Survey

The geophysical survey was conducted on May 31, 2014 by Southwest Geophysics of San Diego, California, a State-licensed geophysical company. The geophysical survey included the use of ground penetrating radar, line tracing, and electromagnetic induction equipment to locate underground utilities, possible subsurface features, and/or former excavations associated with USTs. The geophysical survey was also conducted to clear the proposed boring locations of utilities. Subsurface features associated with gasoline stations and automobile service stations might include USTs, clarifiers, sumps, and hydraulic lifts. Based on the results of the geophysical survey, no geophysical anomalies indicative of these subsurface features were noted. In addition, there was no indication of possible excavations. The lack of anomalies indicative of former excavations is not uncommon if the excavations were backfilled with similar lithological materials as the native soils.

Soil Gas Sampling

A total of 17 soil gas points were drilled throughout the Site on May 31, 2014 for the installation of soil vapor monitoring points. Five soil gas points (SG1 through SG5) were drilled around the former potential cleaners, north of the Western Parking Lot (Figure 2). The remaining twelve soil gas points (SG6 though SG17) were drilled in a grid-like pattern throughout the Eastern Parking Lot as a screening technique to assess whether impacted soil was present at the Site (Figure 2). Although the geophysical survey did not show footprints of possible UST excavations, fuel USTs were most likely used by the former gasoline station. The soil gas survey was also completed to further assess whether impacted soil might be present associated with these former features, the location of which were unknown.

The soil borings were drilled to a depth of approximately 5 feet bgs using direct push equipment. A soil vapor monitoring point was installed in the borehole using 0.25-inch Nylaflow tubing. The sample point was placed midway between a minimum of 1-foot of No. 2/12 sand, followed by 1-foot of dry granular bentonite. The remaining portion of the soil gas point was backfilled with hydrated granular bentonite.

The soil vapor monitoring points were allowed to equilibrate for approximately 24 hours before sampling.

On June 1, 2014, one soil gas sample from each soil vapor monitoring point was collected and analyzed for VOCs in general accordance with EPA Method No. 8260B. The soil gas samples collected on the Eastern Parking Lot were also analyzed for total petroleum hydrocarbons as gasoline (TPHg) in general accordance with EPA Method No. 8015. The results of the VOCs were compared to the California Human Health Screening Levels for industrial/commercial land use (CHHSLi). Prior to sampling, a purge test was conducted and determined that 1 purge volume would provide the most representative data for the Site.

Laboratory results indicated no detectable to low concentrations of VOCs, well below the CHHSLi values (Table 1). No chlorinated solvents, namely PCE, were detected in the soil vapor monitoring points collected adjacent to the former potential cleaners. Based on this information, this off-Site former feature would not be considered an environmental concern to the Site.

Laboratory results of soil gas samples collected throughout the Western and Eastern Parking Lots indicated sporadic VOC concentrations well below the CHHSLi values (Table 1). With the exception of two samples showing low concentrations of PCE (up to 0.452 micrograms per liter [ug/l]) in the Eastern Parking Lot, the remaining 18 samples indicated no detectable to low concentrations of petroleum hydrocarbon-based constituents, such as toluene up to 6.22 ug/l, ethylbenzene up to 1.43 ug/l, and xylenes up to 8.3 ug/l. Although sporadic concentrations were noted, there was no isolated area indicative of a release. Laboratory results of TPHg were also reported in soil gas samples at no detectable to low concentrations throughout the Eastern Parking Lot. One sample, SG15 located in the western portion of the Site, indicated slightly higher concentrations of TPHg (41.3 ug/l) when compared to other detected concentrations, but again, these concentrations were low and would not be indicative of a release.

Soil Sampling

Soil borings were drilled and sampled on June 1, 2014. Prior to completing field activities, a Sanborn map dated 1970 was used to generally locate the former gasoline station and former automobile service station building on the Eastern Parking Lot property. These features were superimposed onto a current

Site plan (Figure 2). The superimposed images were further adjusted based on field observations. Two old driveways entrances were noted on the curb which were no longer in use. It has been our experience that driveway entrances were typically placed on either side of the gasoline station canopy for easy entrance and exit from the facility (Figure 2). Based on these Site features, the location of the former building was slightly adjusted in the field. As shown on Figure 2, a newer driver entrance, used by the parking lot, was also noted during our Site visit.

Based on this Site plan, four soil borings (designated B1 through B4) were drilled to a depth of approximately 15 to 20 feet bgs. Two borings were drilled in the location of the former gasoline station building. Boring B1 was drilled in the southwestern portion of the building and boring B2 was drilled in the area of the former canopy (i.e. former location of the possible fuel dispenser islands). The remaining two borings (B3 and B4) were drilled in the location of the former automobile service station. Possible features associated with these borings might have included hydraulic lifts, clarifiers, sumps, etc.

Soil samples were collected at 5-foot depth intervals, beginning at approximately 5 feet bgs and continuing to the bottom of the boring. Due to hard drilling conditions, refusal was encountered before reaching the target depth of 20 feet bgs in borings B2, B3 and B4. Collected soil samples were screened in the field for stains, odors, and elevated photoionization detector (PID) readings. No stained or odorous soil or elevated PID readings were noted.

Soil samples collected at 5 and 15 feet in each boring were analyzed for VOCs and total petroleum hydrocarbon range C_6-C_{32} (TPHcc) by a stationary laboratory in general accordance with EPA Method 8260B and 8015 (modified). Laboratory results indicated no detectable concentrations of VOCs or TPHcc in the soil samples analyzed (Table 2).

CONCLUSIONS AND RECOMMENDATIONS

Historical data indicated that the Eastern Parking Lot was formerly occupied by a gasoline station and an automobile service station. A geophysical survey completed in the vicinity of the former gasoline station and automobile service station indicated no evidence of USTs or possible UST excavations. In addition, soil gas samples collected throughout the Site indicated no detectable to low concentrations of VOCs

and TPHg. The soil gas survey, completed as a screening technique in the Eastern Parking Lot, did not show evidence of a possible release. Laboratory results of soil samples collected in the vicinity of the former gasoline station and automobile service station indicated no detectable concentrations of petroleum hydrocarbons and VOCs. Based on this information, there is a low likelihood that USTs or other subsurface features associated with the former gasoline station and automobile service station are present at the Site or that elevated concentrations of petroleum hydrocarbons or VOCs are present in the vicinity of these former features. Based on these data, these former features would no longer be considered an environmental concern to the Site.

An existing off-Site building located immediately north of the former Western Parking Lot contained a former possible cleaners. Laboratory results of soil gas samples collected in the vicinity of this former feature indicated no detectable concentrations of PCE, a common cleaning solvent. Based on this information, there is a low likelihood that elevated concentrations of VOCs are present in soil gas in the vicinity of the former cleaners. Based on these data, the former potential cleaners would no longer be considered an environmental concern to the Site.

It should be noted that low concentrations of a number of petroleum hydrocarbon constituents were noted throughout the Eastern and Western Parking Lots in soil gas. As documented in the previous Phase I ESA, a number of retail facilities such as gasoline stations and dry cleaners were located in the Site vicinity. Based on the low and sporadic concentrations detected, these residual concentrations would be considered common in soil gas based on the former on- and off-Site land use. These residual concentrations were not indicative of a significant release or environmental impairment and would not be considered an environmental concern to the Site. Based on the results of this investigation, HMC recommends no additional investigations at this time.

If you have any questions or comments regarding this report, please call the undersigned at your convenience.

Sincerely,
Hazard Management Consulting, Inc.

Mark S. Cousineau
Principal

Paul A. Roberts, P.G.
Principal Geologist

PAR/MSC/KT/paw

Attachment: Table 1 – Laboratory Results of Soil Gas Samples
Table 2 – Laboratory Results of Soil Samples
Figure 1 – Site Location Map
Figure 2 – Sample Location Map
Attachment A – Laboratory Reports
Attachment B – Boring Logs

Distribution: (1) Addressee – electronic copy

References

Hazard Management Consulting Inc. (HMC), 2014, Phase I Environmental Site Assessment, La Plaza Cultura Village, Los Angeles, California: Report prepared for Trammell Crow Company, El Segundo, California, dated May 6.

TABLE 1 - LABORATORY RESULTS OF SOIL GAS SAMPLES

Rationale/Location	Sample No.	Date Sampled	Depth (feet bgs)	TPH Gasoline (ug/l)	VOCs (ug/l)											
					n-Butylbenzene	sec-butylbenzene	Toluene	Xylenes	Napthalene	1,2,4-Trichlorobenzene	1,2,5-Trichlorobenzene	Ethyl benzene	Isopropylbenzene	n-Propylbenzene	PCE	All Others
Former Potential Cleaners / Western Parking Lot	SG1	6/1/2014	5	NA	ND<0.020	ND<0.020	**0.673**	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG2	6/1/2014	5	NA	ND<0.020	**0.422**	**0.864**	**1.63**	**0.134**	**0.268**	**0.225**	**0.499**	**0.194**	**0.186**	ND<0.020	ND<0.020-1.00
	SG3	6/1/2014	5	NA	ND<0.020	ND<0.020	**0.928**	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG4	6/1/2014	5	NA	**0.422**	ND<0.020	**1.37**	**1.86**	**0.134**	**0.26**	**0.222**	**0.55**	**0.196**	**0.19**	ND<0.020	ND<0.020-1.00
	SG5	6/1/2014	5	NA	ND<0.020	ND<0.020	**1.22**	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
Former Gasoline Station / Eastern Parking Lot	SG6	6/1/2014	5	ND<0.2	ND<0.020	ND<0.020	ND<0.020	**0.361**	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG7	6/1/2014	5	ND<0.2	**0.422**	**0.215**	**0.605**	**1.33**	**0.132**	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG8	6/1/2014	5	ND<0.2	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG9	6/1/2014	5	**8.25**	**0.428**	ND<0.020	**0.828**	**1.75**	**0.138**	**0.31**	**0.236**	**0.513**	**0.196**	**0.196**	ND<0.020	ND<0.020-1.00
	SG10	6/1/2014	5 (1 PV)	ND<0.2	ND<0.020	ND<0.020	**0.451**	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
			5 (3 PV)	ND<0.2	ND<0.020	ND<0.020	**0.312**	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
			5 (10 PV)	ND<0.2	ND<0.020	ND<0.020	**0.212**	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG11	6/1/2014	5	**7.03**	**0.421**	**0.216**	**0.675**	**1.45**	**0.137**	**0.244**	**0.215**	**0.466**	ND<0.020	**0.178**	**0.452**	ND<0.020-1.00
	SG12	6/1/2014	5	ND<0.2	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG13	6/1/2014	5	ND<0.2	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG14	6/1/2014	5	**2.76**	**0.42**	**0.226**	**0.56**	**1.37**	**0.136**	**0.226**	**0.21**	**0.449**	ND<0.020	ND<0.020	**0.442**	ND<0.020-1.00
	SG15	6/1/2014	5	**41.3**	ND<0.020	ND<0.020	**6.22**	**8.3**	ND<0.020	ND<0.020	ND<0.020	**1.43**	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
			5 Dupe.	**40.5**	ND<0.020	ND<0.020	**5.94**	**7.65**	ND<0.020	ND<0.020	ND<0.020	**1.36**	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG16	6/1/2014	5	**3.67**	**0.421**	**0.216**	**0.622**	**1.38**	**0.135**	**0.228**	**0.209**	**0.456**	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
	SG17	6/1/2014	5	ND<0.2	ND<0.020	ND<0.020	**0.286**	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020-1.00
CHHSLi				**NA**	**NA**	**NA**	**890**	**2,400**	**0.31**	**NA**	**NA**	**36,000**	**NA**	**NA**	**1.6**	**Various**

Notes:
Sample No. - sample number
feet bgs - feet below the ground surface
VOCs - volatile organic compounds analyzed in general accordance with EPA Method No. 8260B
TPH - total petroleum hydrocarbons
ug/l - micrograms per liter
PV - purge volume
PCE - tetrachloroethylene
ND - analyte not detected at or above the laboratory reporting limit
Dupe. - duplicate
CHHSLi - California Human Health Screening Levels for industrial/commercial land uses, Table 2 - Soil-Gas Screening Numbers for Volatile Chemicals below Buildings Constructed with Engineered Fill below Sub-slab Gravel dated September 23, 2010.

TABLE 2 - LABORATORY RESULTS OF SOIL SAMPLES

Rationale/Location	Sample No.	Date Sampled	Depth (feet bgs)	TPHcc (mg/kg)			All VOCs (ug/kg)
				TPHg C_6-C_{12}	TPHd C_{13}-C_{22}	TPHo C_{23}-C_{32}	
Former Automobile Service Station	B1	6/1/2014	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0
			15	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	B2	6/1/2014	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0
			15	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Former Gasoline Station Building Office	B3	6/1/2014	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0
			15	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Former Gasoline Station Building	B4	6/1/2014	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0
			15	ND<1.0	ND<1.0	ND<1.0	ND<1.0
RWQCB Guidelines				**500**	**1,000**	**10,000**	**Various**
RSLi				**NA**			**Various**

Notes:

Sample No. - sample number

feet bgs - feet below the ground surface

VOCs - volatile organic compounds analyzed in general accordance with EPA Method No. 8260B

TPHg - total petroleum hydrocarbons as gasoline carbon range

TPHd - total petroleum hydrocarbons as diesel carbon range

TPHo - total petroleum hydrocarbons as oil carbon range

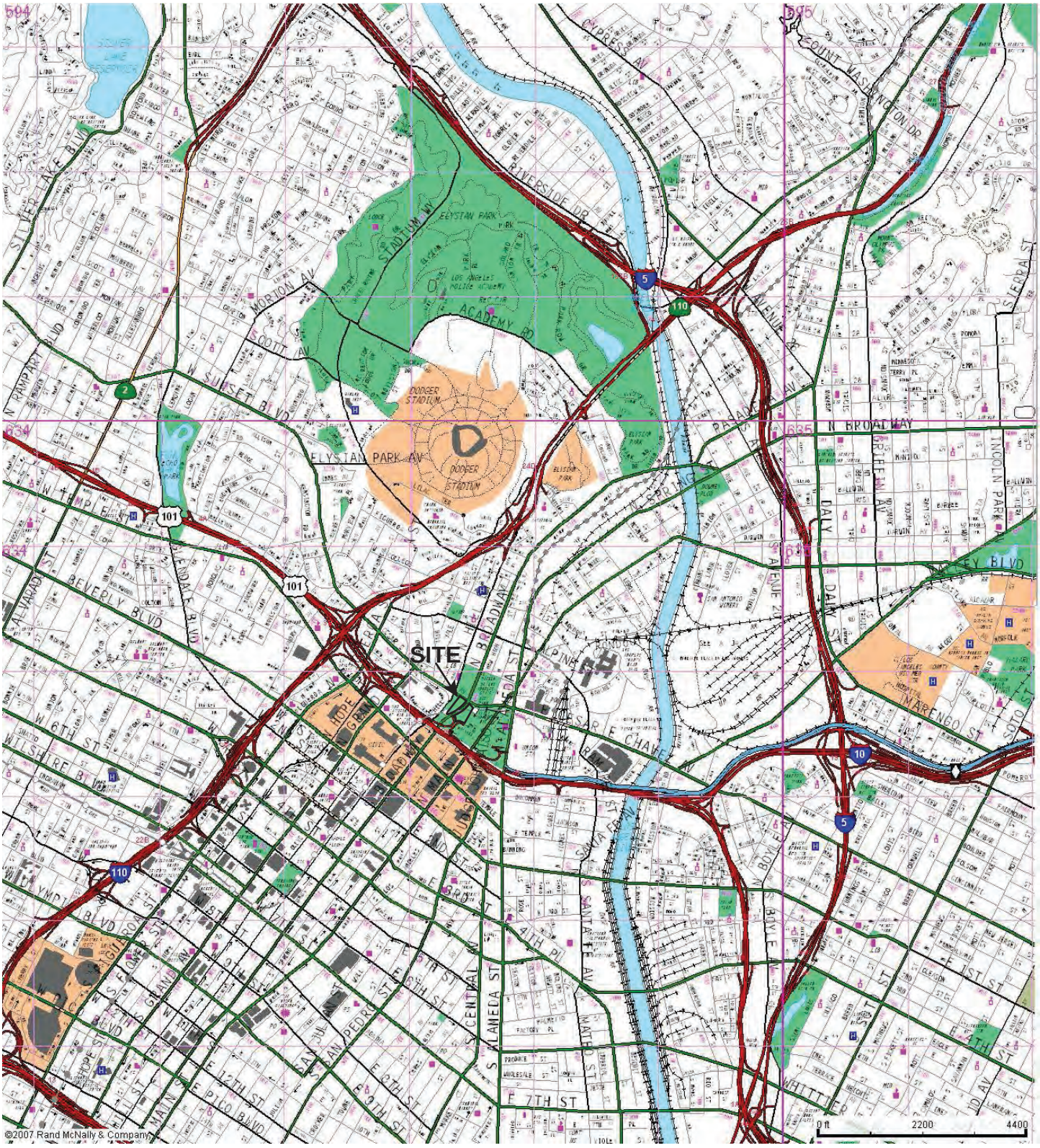
mg/kg - milligrams per kilogram

ug/kg - microgram per kilogram

ND - analyte not detected at or above the laboratory reporting limit

RSLi - US Environmental Protection Agency Region 9, Regional Screening Levels for industrial soil, dated April 2012

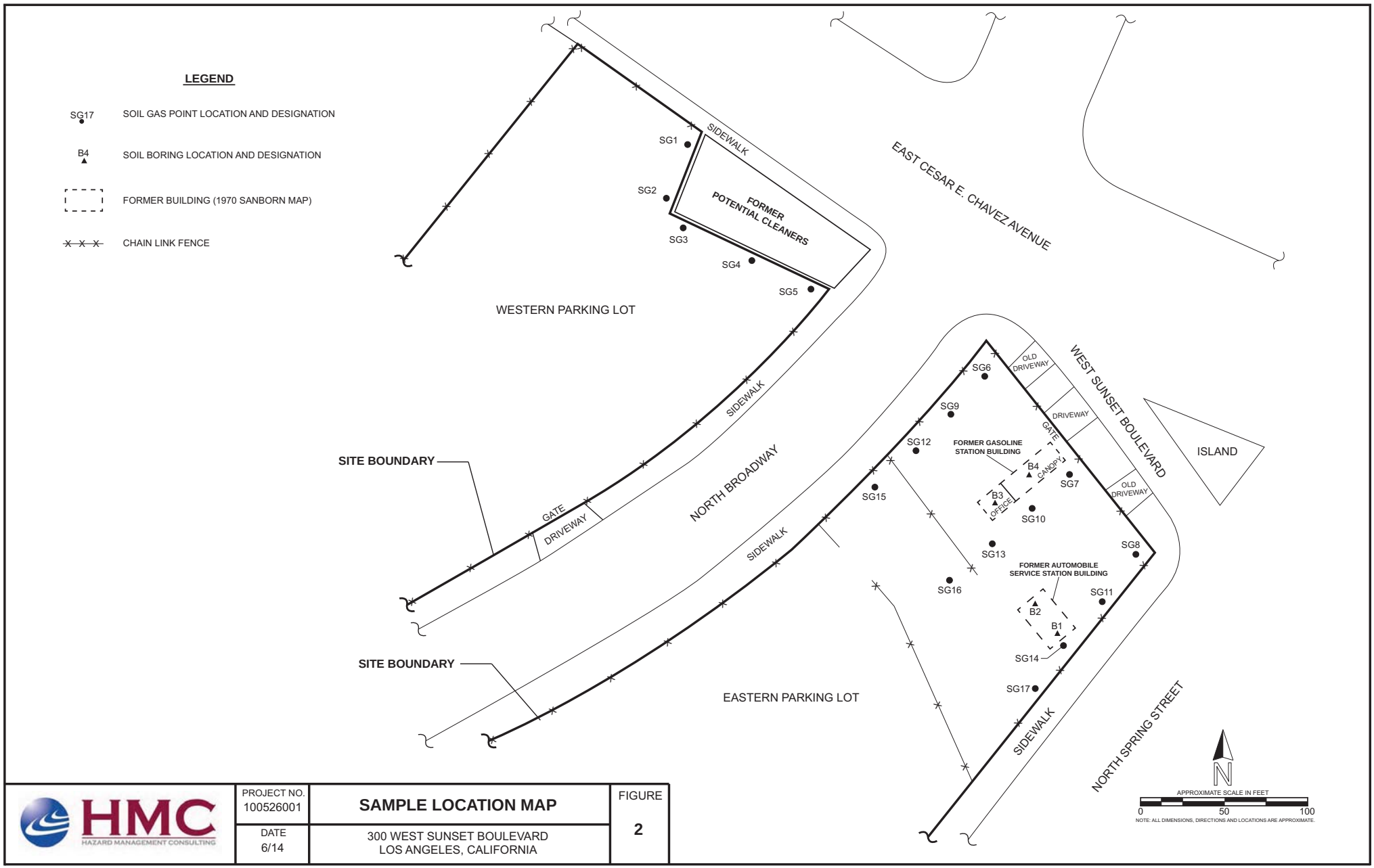
RWQCB Guidelines - Regional Water Quality Control Board, Los Angeles Region Interim Site Assessment & Cleanup Guidebook, dated May 1996. Table 4-1: Maximum Soil Screening Levels (mg/kg) for TPH and BTEX above Drinking Water Aquifers, assuming depth to groundwater at approximately 30 feet bgs



APPROXIMATE SCALE IN FEET

N

HMC HAZARD MANAGEMENT CONSULTING	PROJECT NO. 100526001	**SITE LOCATION MAP**	FIGURE **1**
	DATE 5/14	300 WEST SUSNET BOULEVARD LOS ANGELES, CALIFORNIA	



HMC HAZARD MANAGEMENT CONSULTING

PROJECT NO. 100526001	SAMPLE LOCATION MAP	FIGURE 2
DATE 6/14	300 WEST SUNSET BOULEVARD LOS ANGELES, CALIFORNIA	

ATTACHMENT A

LABORATORY REPORTS

JONES ENVIRONMENTAL, INC.

P.O. Box 5387 | FULLERTON, CA 92838
(714) 449-9937 | FAX (714) 449-9685

JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/1/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	D-0737 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project Name:	Parking Lot	**Date Analyzed:**	6/1/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil Gas

ANALYSES REQUESTED

1. EPA 8260B - Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sampling – Soil Gas samples were collected in glass gas-tight syringes equipped with Teflon plungers. Tubing placed in the ground for soil gas sampling was purged three different times as recommended by DTSC/RWQCB guidance documents. This purge test determined how many purges of the soil gas tubing were needed throughout the project. One, three and ten purge volumes were analyzed to make this determination.

A tracer gas mixture of n-propanol and n-pentane was placed at the tubing-surface interface before sampling. These compounds were analyzed during the 8260B analytical run to determine if there were surface leaks into the subsurface due to improper installation of the probe. No n-propanol or n-pentane was found in any of the samples reported herein.

The sampling rate was approximately 200 cc/min except when noted differently on the chain of custody record using a gas tight syringe. 1 purge volume was used since this purging level gave the highest results for the compound(s) of greatest interest.

Prior to purging and sampling of soil gas at each point, a shut-in test was conducted to check for leaks in the above ground fittings. The shut-in test was performed on the above ground apparatus by evacuating the line to a vacuum of 100 inches of water, sealing the entire system and watching the vacuum for at least one minute. A vacuum gauge attached in parallel to the apparatus measured the vacuum. If there was any observable loss of vacuum, the fittings were adjusted as needed until the vacuum did not change noticeably. The soil gas sample was then taken.

No flow conditions occur when a sampling rate greater than 10 mL/min cannot be maintained without applying a vacuum greater than 100 inches of water to the sampling train. The sampling train is left at a vacuum for no less than three minutes. If the vacuum does not subside appreciably after three minutes, the sample location is determined to be a no flow sample.

Analytical – Soil Gas samples were analyzed using EPA Method 8260 that includes extra compounds required by DTSC/RWQCB (such as Freon 113). Instrument Continuing Calibration Verification, QC Reference Standards, Instrument Blanks and Sampling Blanks were analyzed every 12 hours as prescribed by the method. In addition, Matrix Spike (MS) and Matrix Spike Duplicates (MSD) were analyzed with each batch of Soil Gas samples. A duplicate/replicate sample was analyzed each day of the sampling activity. All samples were injected into the GC/MS system within 30 minutes of sampling.

Approval: _____

Steve Jones, Ph.D.
Laboratory Manager

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/1/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	D-0737 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/1/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**SG10 1PV**	**SG10 3PV**	**SG10 10PV**	**SG6**	**SG7**		
JEL ID:	**D-0737-01**	**D-0737-02**	**D-0737-03**	**D-0737-04**	**D-0737-05**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.020	µg/L
Bromoform	ND	ND	ND	ND	ND	0.020	µg/L
n-Butylbenzene	ND	ND	ND	ND	**0.422**	0.020	µg/L
sec-Butylbenzene	ND	ND	ND	ND	**0.215**	0.020	µg/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.020	µg/L
Chlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Chloroform	ND	ND	ND	ND	ND	0.020	µg/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.020	µg/L
Dibromomethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**SG10 1PV**	**SG10 3PV**	**SG10 10PV**	**SG6**	**SG7**		
JEL ID:	**D-0737-01**	**D-0737-02**	**D-0737-03**	**D-0737-04**	**D-0737-05**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
Ethylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Freon 113	ND	ND	ND	ND	ND	0.100	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.020	µg/L
Isopropylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
4-Isopropyltoluene	ND	ND	ND	**1.36**	ND	0.020	µg/L
Methylene chloride	ND	ND	ND	ND	ND	0.020	µg/L
Naphthalene	ND	ND	ND	ND	**0.132**	0.020	µg/L
n-Propylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Styrene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Tetrachloroethylene	ND	ND	ND	ND	ND	0.020	µg/L
Toluene	**0.451**	**0.312**	**0.212**	ND	**0.605**	0.020	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Trichloroethylene	ND	ND	ND	ND	ND	0.020	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	**0.206**	0.020	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	**0.206**	0.020	µg/L
Vinyl chloride	ND	ND	ND	ND	ND	0.020	µg/L
Xylenes	ND	ND	ND	**0.361**	**1.33**	0.020	µg/L
MTBE	ND	ND	ND	ND	ND	0.100	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.100	µg/L
Di-isopropylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-amylmethylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-Butylalcohol	ND	ND	ND	ND	ND	1.000	µg/L
TPH Gasoline Range	**0.451**	**0.312**	**0.212**	**1.72**	**3.12**	0.200	µg/L
TIC:							
n-propanol	ND	ND	ND	ND	ND	0.200	µg/L
n-pentane	ND	ND	ND	ND	ND	0.020	µg/L
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	100%	101%	102%	102%	94%	75 - 125	
Toluene-d_8	100%	99%	99%	101%	101%	75 - 125	
4-Bromofluorobenzene	95%	95%	98%	97%	91%	75 - 125	
	D2-060114-D-0737	D2-060114-D-0737	D2-060114-D-0737	D2-060114-D-0737	D1-060114-D-0737		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/1/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	D-0737 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/1/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**SG8**	**SG9**	**SG11**	**SG12**	**SG13**		
JEL ID:	**D-0737-06**	**D-0737-07**	**D-0737-08**	**D-0737-09**	**D-0737-10**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.020	µg/L
Bromoform	ND	ND	ND	ND	ND	0.020	µg/L
n-Butylbenzene	ND	**0.428**	**0.421**	ND	ND	0.020	µg/L
sec-Butylbenzene	ND	ND	**0.216**	ND	ND	0.020	µg/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.020	µg/L
Chlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Chloroform	ND	ND	ND	ND	ND	0.020	µg/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.020	µg/L
Dibromomethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**SG8**	**SG9**	**SG11**	**SG12**	**SG13**		
JEL ID:	**D-0737-06**	**D-0737-07**	**D-0737-08**	**D-0737-09**	**D-0737-10**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
Ethylbenzene	ND	**0.513**	**0.466**	ND	ND	0.020	µg/L
Freon 113	ND	ND	ND	ND	ND	0.100	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.020	µg/L
Isopropylbenzene	ND	**0.196**	ND	ND	ND	0.020	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	ND	0.020	µg/L
Methylene chloride	ND	ND	ND	ND	ND	0.020	µg/L
Naphthalene	ND	**0.138**	**0.137**	ND	ND	0.020	µg/L
n-Propylbenzene	ND	**0.196**	**0.178**	ND	ND	0.020	µg/L
Styrene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Tetrachloroethylene	ND	ND	**0.452**	ND	ND	0.020	µg/L
Toluene	ND	**0.828**	**0.675**	**0.632**	**0.488**	0.020	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Trichloroethylene	ND	ND	ND	ND	ND	0.020	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trimethylbenzene	ND	**0.310**	**0.244**	ND	ND	0.020	µg/L
1,3,5-Trimethylbenzene	ND	**0.236**	**0.215**	ND	ND	0.020	µg/L
Vinyl chloride	ND	ND	ND	ND	ND	0.020	µg/L
Xylenes	ND	**1.75**	**1.45**	ND	ND	0.020	µg/L
MTBE	ND	ND	ND	ND	ND	0.100	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.100	µg/L
Di-isopropylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-amylmethylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-Butylalcohol	ND	ND	ND	ND	ND	1.000	µg/L
TPH Gasoline Range	ND	**8.25**	**7.03**	**0.632**	**0.488**	0.200	µg/L
TIC:							
n-propanol	ND	ND	ND	ND	ND	0.200	µg/L
n-pentane	ND	ND	ND	ND	ND	0.020	µg/L
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	101%	94%	98%	104%	104%	75 - 125	
Toluene-d_8	99%	99%	97%	97%	96%	75 - 125	
4-Bromofluorobenzene	94%	93%	96%	96%	93%	75 - 125	
	D2-060114-D-0737	D1-060114-D-0737	D1-060114-D-0737	D2-060114-D-0737	D2-060114-D-0737		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/1/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	D-0737 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/1/2014
Project Address:	300 West Sunset Blvd Los Angeles, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**SG14**	**SG15**	**SG15 DUP**	**SG16**	**SG17**		
JEL ID:	**D-0737-11**	**D-0737-12**	**D-0737-13**	**D-0737-14**	**D-0737-15**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.020	µg/L
Bromoform	ND	ND	ND	ND	ND	0.020	µg/L
n-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
sec-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.020	µg/L
Chlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Chloroform	ND	ND	ND	ND	ND	0.020	µg/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.020	µg/L
Dibromomethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**SG14**	**SG15**	**SG15 DUP**	**SG16**	**SG17**		
JEL ID:	**D-0737-11**	**D-0737-12**	**D-0737-13**	**D-0737-14**	**D-0737-15**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
Ethylbenzene	ND	**1.43**	**1.36**	**0.456**	ND	0.020	µg/L
Freon 113	ND	ND	ND	ND	ND	0.100	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.020	µg/L
Isopropylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	ND	0.020	µg/L
Methylene chloride	ND	ND	ND	ND	ND	0.020	µg/L
Naphthalene	ND	ND	ND	ND	ND	0.020	µg/L
n-Propylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Styrene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Tetrachloroethylene	ND	ND	ND	ND	ND	0.020	µg/L
Toluene	**0.560**	**6.22**	**5.94**	**0.622**	**0.286**	0.020	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Trichloroethylene	ND	ND	ND	ND	ND	0.020	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	**0.228**	ND	0.020	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	**0.209**	ND	0.020	µg/L
Vinyl chloride	ND	ND	ND	ND	ND	0.020	µg/L
Xylenes	ND	**8.30**	**7.65**	**1.38**	ND	0.020	µg/L
MTBE	ND	ND	ND	ND	ND	0.100	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.100	µg/L
Di-isopropylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-amylmethylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-Butylalcohol	ND	ND	ND	ND	ND	1.000	µg/L
TPH Gasoline Range	**0.560**	**41.3**	**40.5**	**2.90**	**0.286**	0.200	µg/L
TIC:							
n-propanol	ND	ND	ND	ND	ND	0.200	µg/L
n-pentane	ND	ND	ND	ND	ND	0.020	µg/L
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	97%	101%	102%	95%	103%	75 - 125	
Toluene-d_8	96%	99%	99%	99%	98%	75 - 125	
4-Bromofluorobenzene	97%	94%	96%	100%	98%	75 - 125	
	D1-060114-D-0737	D2-060114-D-0737	D2-060114-D-0737	D1-060114-D-0737	D2-060114-D-0737		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/1/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	D-0737 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/1/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**SG1**	**SG2**	**SG3**	**SG4**	**SG5**		
JEL ID:	**D-0737-16**	**D-0737-17**	**D-0737-18**	**D-0737-19**	**D-0737-20**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.020	µg/L
Bromoform	ND	ND	ND	ND	ND	0.020	µg/L
n-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
sec-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.020	µg/L
Chlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Chloroform	ND	ND	ND	ND	ND	0.020	µg/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.020	µg/L
Dibromomethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**SG1**	**SG2**	**SG3**	**SG4**	**SG5**		
JEL ID:	**D-0737-16**	**D-0737-17**	**D-0737-18**	**D-0737-19**	**D-0737-20**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
Ethylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Freon 113	ND	ND	ND	ND	ND	0.100	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.020	µg/L
Isopropylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	ND	0.020	µg/L
Methylene chloride	ND	ND	ND	ND	ND	0.020	µg/L
Naphthalene	ND	ND	ND	ND	ND	0.020	µg/L
n-Propylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Styrene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Tetrachloroethylene	ND	ND	ND	ND	ND	0.020	µg/L
Toluene	**0.673**	**0.864**	**0.928**	**1.37**	**1.22**	0.020	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Trichloroethylene	ND	ND	ND	ND	ND	0.020	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Vinyl chloride	ND	ND	ND	ND	ND	0.020	µg/L
Xylenes	ND	ND	ND	ND	ND	0.020	µg/L
MTBE	ND	ND	ND	ND	ND	0.100	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.100	µg/L
Di-isopropylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-amylmethylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-Butylalcohol	ND	ND	ND	ND	ND	1.000	µg/L
TPH Gasoline Range						0.200	µg/L
TIC:							
n-propanol	ND	ND	ND	ND	ND	0.200	µg/L
n-pentane	ND	ND	ND	ND	ND	0.020	µg/L
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	107%	92%	103%	98%	101%	75 - 125	
Toluene-d_8	100%	102%	98%	100%	99%	75 - 125	
4-Bromofluorobenzene	96%	97%	99%	96%	94%	75 - 125	
	D2-060114-D-0737	D1-060114-D-0737	D2-060114-D-0737	D1-060114-D-0737	D2-060114-D-0737		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/1/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	D-0737 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/1/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**METHOD BLANK**	**METHOD BLANK**	**SAMPLING BLANK**		
JEL ID:	**D-0737-21**	**D-0737-25**	**D-0737-26**	**Practical Quantitation Limit**	**Units**
Analytes:					
Benzene	ND	ND	ND	0.020	µg/L
Bromobenzene	ND	ND	ND	0.020	µg/L
Bromodichloromethane	ND	ND	ND	0.020	µg/L
Bromoform	ND	ND	ND	0.020	µg/L
n-Butylbenzene	ND	ND	ND	0.020	µg/L
sec-Butylbenzene	ND	ND	ND	0.020	µg/L
tert-Butylbenzene	ND	ND	ND	0.020	µg/L
Carbon tetrachloride	ND	ND	ND	0.020	µg/L
Chlorobenzene	ND	ND	ND	0.020	µg/L
Chloroform	ND	ND	ND	0.020	µg/L
2-Chlorotoluene	ND	ND	ND	0.020	µg/L
4-Chlorotoluene	ND	ND	ND	0.020	µg/L
Dibromochloromethane	ND	ND	ND	0.020	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	0.020	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	0.020	µg/L
Dibromomethane	ND	ND	ND	0.020	µg/L
1,2- Dichlorobenzene	ND	ND	ND	0.020	µg/L
1,3-Dichlorobenzene	ND	ND	ND	0.020	µg/L
1,4-Dichlorobenzene	ND	ND	ND	0.020	µg/L
Dichlorodifluoromethane	ND	ND	ND	0.020	µg/L
1,1-Dichloroethane	ND	ND	ND	0.020	µg/L
1,2-Dichloroethane	ND	ND	ND	0.020	µg/L
1,1-Dichloroethene	ND	ND	ND	0.020	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	0.020	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	0.020	µg/L
1,2-Dichloropropane	ND	ND	ND	0.020	µg/L
1,3-Dichloropropane	ND	ND	ND	0.020	µg/L
2,2-Dichloropropane	ND	ND	ND	0.020	µg/L
1,1-Dichloropropene	ND	ND	ND	0.020	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample ID:	**METHOD BLANK**	**METHOD BLANK**	**SAMPLING BLANK**		
JEL ID:	**D-0737-21**	**D-0737-25**	**D-0737-26**	**Practical Quantitation Limit**	**Units**
Analytes:					
cis-1,3-Dichloropropene	ND	ND	ND	0.020	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	0.020	µg/L
Ethylbenzene	ND	ND	ND	0.020	µg/L
Freon 113	ND	ND	ND	0.100	µg/L
Hexachlorobutadiene	ND	ND	ND	0.020	µg/L
Isopropylbenzene	ND	ND	ND	0.020	µg/L
4-Isopropyltoluene	ND	ND	ND	0.020	µg/L
Methylene chloride	ND	ND	ND	0.020	µg/L
Naphthalene	ND	ND	ND	0.020	µg/L
n-Propylbenzene	ND	ND	ND	0.020	µg/L
Styrene	ND	ND	ND	0.020	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	0.020	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	0.020	µg/L
Tetrachloroethylene	ND	ND	ND	0.020	µg/L
Toluene	ND	ND	ND	0.020	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	0.020	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	0.020	µg/L
1,1,1-Trichloroethane	ND	ND	ND	0.020	µg/L
1,1,2-Trichloroethane	ND	ND	ND	0.020	µg/L
Trichloroethylene	ND	ND	ND	0.020	µg/L
Trichlorofluoromethane	ND	ND	ND	0.020	µg/L
1,2,3-Trichloropropane	ND	ND	ND	0.020	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	0.020	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	0.020	µg/L
Vinyl chloride	ND	ND	ND	0.020	µg/L
Xylenes	ND	ND	ND	0.020	µg/L
MTBE	ND	ND	ND	0.100	µg/L
Ethyl-tert-butylether	ND	ND	ND	0.100	µg/L
Di-isopropylether	ND	ND	ND	0.100	µg/L
tert-amylmethylether	ND	ND	ND	0.100	µg/L
tert-Butylalcohol	ND	ND	ND	1.000	µg/L
TPH Gasoline Range	ND	ND	ND	0.200	µg/L
TIC:					
n-propanol	ND	ND	ND	0.200	µg/L
n-pentane	ND	ND	ND	0.020	µg/L
Dilution Factor	1	1	1		
Surrogate Recoveries:				**QC Limits**	
Dibromofluoromethane	100%	100%	99%	75 - 125	
Toluene-d_8	98%	100%	97%	75 - 125	
4-Bromofluorobenzene	99%	97%	94%	75 - 125	
	D1-060114-D-0737	D1-060114-D-0737	D1-060114-D-0737		

ND= Not Detected

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JONES ENVIRONMENTAL
QUALITY CONTROL INFORMATION

Client:	Hazard Management	**Report date:**	6/1/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	D-0737 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/1/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample Spiked: Ambient Air **GC#:** D1-060114-D-0737

JEL ID:	**D-0737-23**	**D-0737-24**			**D-0737-22**	
Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)	LCS	Acceptability Range (%)
Vinyl Chloride	110%	112%	2.1%	60-140	106%	60-140
1,1-Dichloroethylene	140%	135%	3.3%	60-140	96%	60-140
Cis-1,2-Dichloroethene	113%	113%	0.9%	70-130	111%	70-130
1,1,1-Trichloroethane	113%	115%	2.0%	70-130	114%	70-130
Benzene	120%	120%	0.3%	70-130	123%	70-130
Trichloroethylene	113%	110%	2.8%	70-130	111%	70-130
Toluene	103%	104%	0.3%	70-130	116%	70-130
Tetrachloroethene	109%	111%	1.3%	70-130	123%	70-130
Chlorobenzene	99%	97%	1.3%	70-130	92%	70-130
Ethylbenzene	102%	100%	1.7%	70-130	112%	70-130
1,2,4 Trimethylbenzene	97%	95%	1.4%	70-130	115%	70-130
TPH Gasoline Range	114%	113%	0.5%	70-130		
Surrogate Recovery:						
Dibromofluoromethane	103%	106%		75-125	92%	75-125
Toluene-d_8	101%	99%		75-125	127%	75-125
4-Bromofluorobenzene	92%	92%		75-125	72%	75-125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

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JONES ENVIRONMENTAL
QUALITY CONTROL INFORMATION

Client:	Hazard Management	**Report date:**	6/1/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	D-0737 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/1/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates/Total Petroleum Hydrocarbons

Sample Spiked: Ambient Air **GC#:** D2-060114-D-0737

JEL ID:	**D-0737-28**	**D-0737-29**			**D-0737-27**	
Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)	LCS	Acceptability Range (%)
Vinyl Chloride	98%	79%	21%	60-140	105%	60-140
1,1-Dichloroethylene	111%	112%	1.0%	60-140	123%	60-140
Cis-1,2-Dichloroethene	98%	98%	0.2%	70-130	112%	70-130
1,1,1-Trichloroethane	99%	99%	0.6%	70-130	110%	70-130
Benzene	95%	96%	1.2%	70-130	107%	70-130
Trichloroethylene	92%	95%	3.9%	70-130	109%	70-130
Toluene	98%	99%	0.7%	70-130	104%	70-130
Tetrachloroethene	95%	99%	4.4%	70-130	105%	70-130
Chlorobenzene	99%	103%	4.0%	70-130	110%	70-130
Ethylbenzene	93%	94%	0.8%	70-130	103%	70-130
1,2,4 Trimethylbenzene	89%	93%	4.1%	70-130	101%	70-130
TPH Gasoline Range	98%	100%	1.9%	70-130		
Surrogate Recovery:						
Dibromofluoromethane	100%	101%		75-125	101%	75-125
Toluene-d_8	98%	100%		75-125	101%	75-125
4-Bromofluorobenzene	108%	108%		75-125	99%	75-125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

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Chain-of-Custody Record

Client: Hazmand Management

Date: 6/1/14

Project Name:

Client Project #: 100538001

Project Address: 300 W. ~~5th St.~~ Sunset Blvd.
Los Angeles, CA

Project Contact: Mark Cousineau

Turn Around Requested:
- ☐ Immediate Attention
- ☐ Rush 24-48 Hours
- ☐ Rush 72-96 Hours
- ☐ Normal
- ☒ Mobile Lab

SOIL GAS
Purge Number: ☐ 1P ☐ 3P ☐ 7P ☐ 10P
Purge Rate: 200 cc/min
Shut in Test Y / N
Tracer:
- ☑ n-propanol
- ☑ n-pentane
- ☐ 1,1-DFA
- ☐ Helium
- ☐ _____

JEL Project #: D-0737

Page 1 of 2

Lab Use Only
Sample Condition as Received:
Chilled ☐ yes ☑ no
Sealed ☑ yes ☐ no

Analysis Requested

Sample ID	Purge Number	Purge Volume	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Soil Gas (SG)	TPH 8260	TPH as Gasoline			Magnehelic Vacuum (in H_2O)	Number of Containers	Remarks/Special Instructions
SG10 1PV	1	259	6/1/14	07:29		D-0737-01	SG	X	X			<2	1	Glass Gas Tight Syringe
SG10 3PV	3	778	6/1/14	07:46		D-0737-02	SG	X	X			<2	1	
SG10 10PV	10	2595	6/1/14	08:01		D-0737-03	SG	X	X			<2	1	
SG6	1	259	6/1/14	08:21		D-0737-04	SG	X	X			<2	1	
SG7	1	259	6/1/14	08:27		D-0737-05	SG	X	X			<2	1	
SG8	1	259	6/1/14	08:38		D-0737-06	SG	X	X			<2	1	
SG9	1	259	6/1/14	08:47		D-0737-07	SG	X	X			<2	1	
SG11	1	259	6/1/14	08:58		D-0737-08	SG	X	X			<2	1	
SG12	1	259	6/1/14	08:53		D-0737-09	SG	X	X			<2	1	
SG13	1	259	6/1/14	09:15		D-0737-10	SG	X	X			<2	1	

❶ Relinquished by (signature)	Date 6/1/14	❷ Received by (signature)	Date 6/1/14	Total Number of Containers
Company Ardent	Time 11:50	Company JEL	Time 11:30	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature)	Date	
Company	Time	Company	Time	

The delivery of samples and the signature on this Chain of Custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

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Chain-of-Custody Record

Client: Hazard Management
Date: 6/1/14
Project Name:
Client Project #: 100520001
Project Address: 300 W. ~~Spring St.~~ Sunset Blvd
Los Angeles, CA
Project Contact: Mark Cousineau

Turn Around Requested:
- ☐ Immediate Attention
- ☐ Rush 24-48 Hours
- ☐ Rush 72-96 Hours
- ☐ Normal
- ☒ Mobile Lab

SOIL GAS
Purge Number: ☐ 1P ☐ 3P ☐ 7P ☐ 10P
Purge Rate: 200 cc/min
Shut in Test (Y) / N
Tracer:
- ☑ n-propanol
- ☑ n-pentane
- ☐ 1,1-DFA
- ☐ Helium
- ☐ _____

JEL Project #: D-0737
Page 2 of 2
Lab Use Only
Sample Condition as Received:
Chilled ☐ yes ☑ no
Sealed ~~☑ yes~~ ☐ no

Analysis Requested

Sample ID	Purge Number	Purge Volume	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Soil Gas (SG)	EPA 8260	TPH as Gas Olive			Magnehelic Vacuum (in/H_2O)	Number of Containers	Remarks/Special Instructions
SG14	1	259	6/1/14	09:27		D-0737-11	SG	X	X			<2	2	Glass Gas Tight Syringe
SG15	1	259	6/1/14	09:35		D-0737-12	SG	X	X			<2	2	
SG15 DUP	1	259	6/1/14	09:35		D-0737-13	SG	X	X			<2	2	
SG16	1	259	6/1/14	09:46		D-0737-14	SG	X	X			<2	2	
SG17	1	259	6/1/14	10:09		D-0737-15	SG	X	X			<2	2	
SG1	1	259	6/1/14	10:22		D-0737-16	SG	X	X			<2	2	
SG2	1	259	6/1/14	10:18		D-0737-17	SG	X	X			<2	2	
SG3	1	259	6/1/14	10:40		D-0737-18	SG	X	X			<2	2	
SG4	1	259	6/1/14	10:42		D-0737-19	SG	X	X			<2	2	
SG5	1	259	6/1/14	10:59		D-0737-20	SG	X				<2	2	

❶ Relinquished by (signature) [signature]	Date 6/1/14	❷ Received by (signature) [signature]	Date 6/1/14
Company Ardent	Time 11:30	Company JEL	Time 11:30
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature)	Date
Company	Time	Company	Time

Total Number of Containers

The delivery of samples and the signature on this Chain of Custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

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JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/3/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No:**	ST-7515 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/2/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8015 - Extended Range Hydrocarbons (ASTM 2887)
2. EPA 8260B by 5035- Volatile Organics by GC/MS + Oxygenates

Approval: _____

Steve Jones, Ph.D.
Laboratory Manager

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JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/3/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:**	ST-7515
		Client Ref. No.:	100526001
Attn:	Mark Cousineau	**Date Sampled:**	6/1/2014
		Date Received:	6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/2/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil

EPA 8015 - Extended Range Hydrocarbons (ASTM 2887)

Sample ID:	**B1-5**	**B1-15**	**B2-5**	**B2-15**	**B3-5**		
JEL ID:	**ST-7515-01**	**ST-7515-03**	**ST-7515-05**	**ST-7515-07**	**ST-7515-09**	**Practical Quantitation Limit**	**Units**
Carbon Chain Range							
C6 - C7	ND	ND	ND	ND	ND	1.0	mg/kg
C8 - C9	ND	ND	ND	ND	ND	1.0	mg/kg
C10 - C11	ND	ND	ND	ND	ND	1.0	mg/kg
C12 - C13	ND	ND	ND	ND	ND	1.0	mg/kg
C14 - C15	ND	ND	ND	ND	ND	1.0	mg/kg
C16 - C17	ND	ND	ND	ND	ND	1.0	mg/kg
C18 - C19	ND	ND	ND	ND	ND	1.0	mg/kg
C20 - C23	ND	ND	ND	ND	ND	1.0	mg/kg
C24 - C27	ND	ND	ND	ND	ND	1.0	mg/kg
C28 - C31	ND	ND	ND	ND	ND	1.0	mg/kg
C32	ND	ND	ND	ND	ND	1.0	mg/kg
Total	ND	ND	ND	ND	ND		mg/kg
Dilution Factor	1	1	1	1	1		
Surrogate Recovery:						**QC Limits**	
Hexacosane	92%	96%	109%	98%	100%	65 - 125	
	C-060214-CHECKS	C-060214-CHECKS	C-060214-CHECKS	C-060214-CHECKS	C-060214-CHECKS		
ND = Not Detected							
C6 - C12	ND	ND	ND	ND	ND	5.0	mg/kg
C13 - C22	ND	ND	ND	ND	ND	5.0	mg/kg
C23 - C32	ND	ND	ND	ND	ND	5.0	mg/kg

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JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/3/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	ST-7515 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/2/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil

EPA 8015 - Extended Range Hydrocarbons (ASTM 2887)

Sample ID:	**B3-15**	**B4-5**	**B4-15**		
JEL ID:	**ST-7515-11**	**ST-7515-12**	**ST-7515-14**	**Practical Quantitation Limit**	**Units**
Carbon Chain Range					
C6 - C7	ND	ND	ND	1.0	mg/kg
C8 - C9	ND	ND	ND	1.0	mg/kg
C10 - C11	ND	ND	ND	1.0	mg/kg
C12 - C13	ND	ND	ND	1.0	mg/kg
C14 - C15	ND	ND	ND	1.0	mg/kg
C16 - C17	ND	ND	ND	1.0	mg/kg
C18 - C19	ND	ND	ND	1.0	mg/kg
C20 - C23	ND	ND	ND	1.0	mg/kg
C24 - C27	ND	ND	ND	1.0	mg/kg
C28 - C31	ND	ND	ND	1.0	mg/kg
C32	ND	ND	ND	1.0	mg/kg
Total	ND	ND	ND		mg/kg
Dilution Factor	1	1	1		
Surrogate Recovery:				**QC Limits**	
Hexacosane	101%	103%	100%	65 - 125	
	C-060214-CHECKS	C-060214-CHECKS	C-060214-CHECKS		

ND = Not Detected

C6 - C12	ND	ND	ND	5.0	mg/kg
C13 - C22	ND	ND	ND	5.0	mg/kg
C23 - C32	ND	ND	ND	5.0	mg/kg

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JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/3/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	ST-7515 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/2/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil

EPA 8015 - Extended Range Hydrocarbons (ASTM 2887)

Sample ID:	**METHOD BLANK**		
JEL ID:	**ST-7515-16**	**Practical Quantitation Limit**	**Units**
Carbon Chain Range			
C6 - C7	ND	1.0	mg/kg
C8 - C9	ND	1.0	mg/kg
C10 - C11	ND	1.0	mg/kg
C12 - C13	ND	1.0	mg/kg
C14 - C15	ND	1.0	mg/kg
C16 - C17	ND	1.0	mg/kg
C18 - C19	ND	1.0	mg/kg
C20 - C23	ND	1.0	mg/kg
C24 - C27	ND	1.0	mg/kg
C28 - C31	ND	1.0	mg/kg
C32	ND	1.0	mg/kg
Total	ND		mg/kg
Dilution Factor	1		
Surrogate Recovery:		**QC Limits**	
Hexacosane	64%	65 - 125	
	C-060214-CHECKS #REF!		

ND = Not Detected

C6 - C12	ND	5.0	mg/kg
C13 - C22	ND	5.0	mg/kg
C23 - C32	ND	5.0	mg/kg

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JONES ENVIRONMENTAL
QUALITY CONTROL INFORMATION

Client:	Hazard Management	**Report date:**	6/3/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	ST-7515 100526001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/2/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil

EPA 8015 - Extended Range Hydrocarbons (ASTM 2887)

Sample Spiked: CLEAN SOIL **GC#:** C-060214-CHECKS

JEL ID:	**ST-7515-18**	**ST-7515-19**			**ST-7515-17**	
Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)	CCV	Acceptability Range (%)
Diesel	101%	103%	1.1%	70-130	101%	85-115

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/3/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	ST-7515 100596001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/2/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil

EPA 8260B by 5035-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B1-5**	**B1-15**	**B2-5**	**B2-15**	**B3-5**		
JEL ID:	**ST-7515-01**	**ST-7515-03**	**ST-7515-05**	**ST-7515-07**	**ST-7515-09**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	1.0	µg/kg
Bromobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Bromodichloromethane	ND	ND	ND	ND	ND	1.0	µg/kg
Bromoform	ND	ND	ND	ND	ND	1.0	µg/kg
n-Butylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
sec-Butylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
tert-Butylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Carbon tetrachloride	ND	ND	ND	ND	ND	1.0	µg/kg
Chlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Chloroform	ND	ND	ND	ND	ND	1.0	µg/kg
2-Chlorotoluene	ND	ND	ND	ND	ND	1.0	µg/kg
4-Chlorotoluene	ND	ND	ND	ND	ND	1.0	µg/kg
Dibromochloromethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	1.0	µg/kg
Dibromomethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Dichlorodifluoromethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1-Dichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1-Dichloroethene	ND	ND	ND	ND	ND	1.0	µg/kg
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	1.0	µg/kg
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	1.0	µg/kg
1,2-Dichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,3-Dichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
2,2-Dichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1-Dichloropropene	ND	ND	ND	ND	ND	1.0	µg/kg

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B by 5035-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B1-5**	**B1-15**	**B2-5**	**B2-15**	**B3-5**		
JEL ID:	**ST-7515-01**	**ST-7515-03**	**ST-7515-05**	**ST-7515-07**	**ST-7515-09**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	1.0	µg/kg
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	1.0	µg/kg
Ethylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Freon 113	ND	ND	ND	ND	ND	5.0	µg/kg
Hexachlorobutadiene	ND	ND	ND	ND	ND	1.0	µg/kg
Isopropylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
4-Isopropyltoluene	ND	ND	ND	ND	ND	1.0	µg/kg
Methylene chloride	ND	ND	ND	ND	ND	1.0	µg/kg
Naphthalene	ND	ND	ND	ND	ND	1.0	µg/kg
n-Propylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Styrene	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
Tetrachloroethylene	ND	ND	ND	ND	ND	1.0	µg/kg
Toluene	ND	ND	ND	ND	ND	1.0	µg/kg
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	1.0	µg/kg
Trichloroethylene	ND	ND	ND	ND	ND	1.0	µg/kg
Trichlorofluoromethane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	1.0	µg/kg
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	1.0	µg/kg
Vinyl chloride	ND	ND	ND	ND	ND	1.0	µg/kg
Xylenes	ND	ND	ND	ND	ND	1.0	µg/kg
MTBE	ND	ND	ND	ND	ND	5.0	µg/kg
Ethyl-tert-butylether	ND	ND	ND	ND	ND	5.0	µg/kg
Di-isopropylether	ND	ND	ND	ND	ND	5.0	µg/kg
tert-amylmethylether	ND	ND	ND	ND	ND	5.0	µg/kg
tert-Butylalcohol	ND	ND	ND	ND	ND	50.0	µg/kg
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	103%	101%	105%	101%	104%	60 - 140	
Toluene-d_8	102%	98%	99%	100%	103%	60 - 140	
4-Bromofluorobenzene	94%	95%	93%	96%	101%	60 - 140	
	D2-060214-D-0736	D2-060214-D-0736	D2-060214-D-0736	D2-060214-D-0736	D2-060214-D-0736		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/3/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	ST-7515 100596001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/2/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil

EPA 8260B by 5035-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B3-15**	**B4-5**	**B4-15**		
JEL ID:	**ST-7515-11**	**ST-7515-12**	**ST-7515-14**	**Practical Quantitation Limit**	**Units**
Analytes:					
Benzene	ND	ND	ND	1.0	µg/kg
Bromobenzene	ND	ND	ND	1.0	µg/kg
Bromodichloromethane	ND	ND	ND	1.0	µg/kg
Bromoform	ND	ND	ND	1.0	µg/kg
n-Butylbenzene	ND	ND	ND	1.0	µg/kg
sec-Butylbenzene	ND	ND	ND	1.0	µg/kg
tert-Butylbenzene	ND	ND	ND	1.0	µg/kg
Carbon tetrachloride	ND	ND	ND	1.0	µg/kg
Chlorobenzene	ND	ND	ND	1.0	µg/kg
Chloroform	ND	ND	ND	1.0	µg/kg
2-Chlorotoluene	ND	ND	ND	1.0	µg/kg
4-Chlorotoluene	ND	ND	ND	1.0	µg/kg
Dibromochloromethane	ND	ND	ND	1.0	µg/kg
1,2-Dibromo-3-chloropropane	ND	ND	ND	1.0	µg/kg
1,2-Dibromoethane (EDB)	ND	ND	ND	1.0	µg/kg
Dibromomethane	ND	ND	ND	1.0	µg/kg
1,2- Dichlorobenzene	ND	ND	ND	1.0	µg/kg
1,3-Dichlorobenzene	ND	ND	ND	1.0	µg/kg
1,4-Dichlorobenzene	ND	ND	ND	1.0	µg/kg
Dichlorodifluoromethane	ND	ND	ND	1.0	µg/kg
1,1-Dichloroethane	ND	ND	ND	1.0	µg/kg
1,2-Dichloroethane	ND	ND	ND	1.0	µg/kg
1,1-Dichloroethene	ND	ND	ND	1.0	µg/kg
cis-1,2-Dichloroethene	ND	ND	ND	1.0	µg/kg
trans-1,2-Dichloroethene	ND	ND	ND	1.0	µg/kg
1,2-Dichloropropane	ND	ND	ND	1.0	µg/kg
1,3-Dichloropropane	ND	ND	ND	1.0	µg/kg
2,2-Dichloropropane	ND	ND	ND	1.0	µg/kg
1,1-Dichloropropene	ND	ND	ND	1.0	µg/kg

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B by 5035-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B3-15**	**B4-5**	**B4-15**		
JEL ID:	**ST-7515-11**	**ST-7515-12**	**ST-7515-14**	**Practical Quantitation Limit**	**Units**
Analytes:					
cis-1,3-Dichloropropene	ND	ND	ND	1.0	µg/kg
trans-1,3-Dichloropropene	ND	ND	ND	1.0	µg/kg
Ethylbenzene	ND	ND	ND	1.0	µg/kg
Freon 113	ND	ND	ND	5.0	µg/kg
Hexachlorobutadiene	ND	ND	ND	1.0	µg/kg
Isopropylbenzene	ND	ND	ND	1.0	µg/kg
4-Isopropyltoluene	ND	ND	ND	1.0	µg/kg
Methylene chloride	ND	ND	ND	1.0	µg/kg
Naphthalene	ND	ND	ND	1.0	µg/kg
n-Propylbenzene	ND	ND	ND	1.0	µg/kg
Styrene	ND	ND	ND	1.0	µg/kg
1,1,1,2-Tetrachloroethane	ND	ND	ND	1.0	µg/kg
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0	µg/kg
Tetrachloroethylene	ND	ND	ND	1.0	µg/kg
Toluene	ND	ND	ND	1.0	µg/kg
1,2,3-Trichlorobenzene	ND	ND	ND	1.0	µg/kg
1,2,4-Trichlorobenzene	ND	ND	ND	1.0	µg/kg
1,1,1-Trichloroethane	ND	ND	ND	1.0	µg/kg
1,1,2-Trichloroethane	ND	ND	ND	1.0	µg/kg
Trichloroethylene	ND	ND	ND	1.0	µg/kg
Trichlorofluoromethane	ND	ND	ND	1.0	µg/kg
1,2,3-Trichloropropane	ND	ND	ND	1.0	µg/kg
1,2,4-Trimethylbenzene	ND	ND	ND	1.0	µg/kg
1,3,5-Trimethylbenzene	ND	ND	ND	1.0	µg/kg
Vinyl chloride	ND	ND	ND	1.0	µg/kg
Xylenes	ND	ND	ND	1.0	µg/kg
MTBE	ND	ND	ND	5.0	µg/kg
Ethyl-tert-butylether	ND	ND	ND	5.0	µg/kg
Di-isopropylether	ND	ND	ND	5.0	µg/kg
tert-amylmethylether	ND	ND	ND	5.0	µg/kg
tert-Butylalcohol	ND	ND	ND	50.0	µg/kg
Dilution Factor	1	1	1		
Surrogate Recoveries:				**QC Limits**	
Dibromofluoromethane	103%	105%	112%	60 - 140	
Toluene-d_8	98%	104%	98%	60 - 140	
4-Bromofluorobenzene	96%	106%	95%	60 - 140	
	D2-060214-D-0736	D2-060214-D-0736	D2-060214-D-0736		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Hazard Management	**Report date:**	6/3/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	ST-7515 100596001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/2/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil

EPA 8260B by 5035-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**METHOD BLANK**		
JEL ID:	**ST-7515-20**	**Practical Quantitation Limit**	**Units**
Analytes:			
Benzene	ND	1.0	µg/kg
Bromobenzene	ND	1.0	µg/kg
Bromodichloromethane	ND	1.0	µg/kg
Bromoform	ND	1.0	µg/kg
n-Butylbenzene	ND	1.0	µg/kg
sec-Butylbenzene	ND	1.0	µg/kg
tert-Butylbenzene	ND	1.0	µg/kg
Carbon tetrachloride	ND	1.0	µg/kg
Chlorobenzene	ND	1.0	µg/kg
Chloroform	ND	1.0	µg/kg
2-Chlorotoluene	ND	1.0	µg/kg
4-Chlorotoluene	ND	1.0	µg/kg
Dibromochloromethane	ND	1.0	µg/kg
1,2-Dibromo-3-chloropropane	ND	1.0	µg/kg
1,2-Dibromoethane (EDB)	ND	1.0	µg/kg
Dibromomethane	ND	1.0	µg/kg
1,2- Dichlorobenzene	ND	1.0	µg/kg
1,3-Dichlorobenzene	ND	1.0	µg/kg
1,4-Dichlorobenzene	ND	1.0	µg/kg
Dichlorodifluoromethane	ND	1.0	µg/kg
1,1-Dichloroethane	ND	1.0	µg/kg
1,2-Dichloroethane	ND	1.0	µg/kg
1,1-Dichloroethene	ND	1.0	µg/kg
cis-1,2-Dichloroethene	ND	1.0	µg/kg
trans-1,2-Dichloroethene	ND	1.0	µg/kg
1,2-Dichloropropane	ND	1.0	µg/kg
1,3-Dichloropropane	ND	1.0	µg/kg
2,2-Dichloropropane	ND	1.0	µg/kg
1,1-Dichloropropene	ND	1.0	µg/kg

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B by 5035-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**METHOD BLANK**		
JEL ID:	**ST-7515-20**	**Practical Quantitation Limit**	**Units**
Analytes:			
cis-1,3-Dichloropropene	ND	1.0	µg/kg
trans-1,3-Dichloropropene	ND	1.0	µg/kg
Ethylbenzene	ND	1.0	µg/kg
Freon 113	ND	5.0	µg/kg
Hexachlorobutadiene	ND	1.0	µg/kg
Isopropylbenzene	ND	1.0	µg/kg
4-Isopropyltoluene	ND	1.0	µg/kg
Methylene chloride	ND	1.0	µg/kg
Naphthalene	ND	1.0	µg/kg
n-Propylbenzene	ND	1.0	µg/kg
Styrene	ND	1.0	µg/kg
1,1,1,2-Tetrachloroethane	ND	1.0	µg/kg
1,1,2,2-Tetrachloroethane	ND	1.0	µg/kg
Tetrachloroethylene	ND	1.0	µg/kg
Toluene	ND	1.0	µg/kg
1,2,3-Trichlorobenzene	ND	1.0	µg/kg
1,2,4-Trichlorobenzene	ND	1.0	µg/kg
1,1,1-Trichloroethane	ND	1.0	µg/kg
1,1,2-Trichloroethane	ND	1.0	µg/kg
Trichloroethylene	ND	1.0	µg/kg
Trichlorofluoromethane	ND	1.0	µg/kg
1,2,3-Trichloropropane	ND	1.0	µg/kg
1,2,4-Trimethylbenzene	ND	1.0	µg/kg
1,3,5-Trimethylbenzene	ND	1.0	µg/kg
Vinyl chloride	ND	1.0	µg/kg
Xylenes	ND	1.0	µg/kg
MTBE	ND	5.0	µg/kg
Ethyl-tert-butylether	ND	5.0	µg/kg
Di-isopropylether	ND	5.0	µg/kg
tert-amylmethylether	ND	5.0	µg/kg
tert-Butylalcohol	ND	50.0	µg/kg

Dilution Factor	1	
Surrogate Recoveries:		**QC Limits**
Dibromofluoromethane	104%	60 - 140
Toluene-d_8	97%	60 - 140
4-Bromofluorobenzene	95%	60 - 140
	D2-060214-D-0736	

ND= Not Detected

JONES ENVIRONMENTAL, INC.
P.O. Box 5387 | FULLERTON, CA 92838
(714) 449-9937 | FAX (714) 449-9685

JONES ENVIRONMENTAL
QUALITY CONTROL INFORMATION

Client:	Hazard Management	**Report date:**	6/3/2014
Client Address:	211 W. Avenida Cordoba, Suite 200 San Clemente, CA 92672	**JEL Ref. No.:** **Client Ref. No.:**	ST-7515 100596001
Attn:	Mark Cousineau	**Date Sampled:** **Date Received:**	6/1/2014 6/1/2014
Project:	Parking Lot	**Date Analyzed:**	6/2/2014
Project Address:	300 West Sunset Blvd. Los Angeles, CA	**Physical State:**	Soil

EPA 8260B by 5035-Volatile Organics by GC/MS + Oxygenates

Sample Spiked: Ambient Air **GC#:** D2-060214-D-0736

JEL ID:	**ST-7515-22**	**ST-7515-23**			**ST-7515-21**	
Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)	LCS	Acceptability Range (%)
Vinyl Chloride	125%	131%	4.3%	60-140	130%	60-140
1,1-Dichloroethylene	123%	124%	0.3%	60-140	110%	60-140
Cis-1,2-Dichloroethene	106%	107%	0.4%	70-130	107%	70-130
1,1,1-Trichloroethane	106%	107%	1.0%	70-130	93%	70-130
Benzene	99%	105%	6.1%	70-130	115%	70-130
Trichloroethylene	100%	103%	3.7%	70-130	108%	70-130
Toluene	101%	105%	4.1%	70-130	95%	70-130
Tetrachloroethene	104%	99%	4.6%	70-130	105%	70-130
Chlorobenzene	104%	110%	5.8%	70-130	110%	70-130
Ethylbenzene	97%	101%	3.6%	70-130	103%	70-130
1,2,4 Trimethylbenzene	96%	101%	4.7%	70-130	89%	70-130
Surrogate Recovery:						
Dibromofluoromethane	105%	105%		75-125	87%	75-125
Toluene-d_8	99%	100%		75-125	89%	75-125
4-Bromofluorobenzene	105%	107%		75-125	99%	75-125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

ST-7515

Calscience Environmental Laboratories, Inc.

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
Other locations: Concord, San Luis Obispo, Houston, and Corpus Christi
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contact sales@calscience.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY

Date

Page 1 of 2

LABORATORY CLIENT: Ardent Environmental Group

ADDRESS: 1827 Capital St., Suite 103 CA

CITY: Corona STATE: ZIP:

TEL: 951-7365334 E-MAIL:

CLIENT PROJECT NAME / NUMBER: 100526001 - HMC 30th W. Sunset

P.O. NO.: 100526001

PROJECT CONTACT: Kevin Tomita

SAMPLER(S): (PRINT) KT

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:
- invoice Hazard Management Consulting (HMC)
- email results to ktomita@ardentenv.com.
- call if you have questions about analysis to run.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH C6 - C32	BTEX / MTBE ☐ 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Hold			
01	B1-5	6/1/14		Soil	1							X		X												
02	B1-10				1																		X			
03	B1-15				1							X		X												
04	B1-20				1																		X			
05	B2-5				1							X		X												
06	B2-10				1																		X			
07	B2-15				1							X		X												
08	B2-20				1																		X			
09	B3-5				1							X		X												
10	B3-10				1																		X			

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date: 6/1/14	Time: 11:15
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies, respectively.

01/01/14 Revision

ST-7515

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contact sales@calscience.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY

Date

Page 2 of 2

LABORATORY CLIENT:

ADDRESS:

CITY: STATE: ZIP:

TEL: E-MAIL:

CLIENT PROJECT NAME / NUMBER:

P.O. NO.:

PROJECT CONTACT:

SAMPLER(S): (PRINT)

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH C6 - C32	BTEX / MTBE ☐ 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Hold			
11	B3-15	6/1/14		Soil	1							X		X												
12	B4-5	↓		↓	1							X		X												
13	B4-10				1																		X			
14	B4-15				1							X		X												
15	B4-20	↓		↓	1																		X			

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date: 6/6/14	Time: 11:15
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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01/01/14 Revision

ATTACHMENT B

BORING LOGS

BORING LOG EXPLANATION SHEET

DEPTH (feet)	SAMPLES: Bulk	SAMPLES: Driven	BLOWS/ FOOT	SAMPLE ID	ORGANIC VAPORS (ppm)	SYMBOL	CLASSIFICATION U.S.C.C.	
0	■							Bulk sample.
		■						Modified split-barrel drive sampler.
		☒						No recovery with modified split-barrel drive sampler.
		▮						Continuous push 2.25-inch O.D. (1.5-inch I.D.) sampler.
		⧸						No recovery with a continuous push sampler.
5		▯	XX/XX					Continuous push 1.5-inch O.D. (1.0-inch I.D.) sampler.
10								
							SM	ALLUVIUM: Solid line denotes formation change.
								Dashed line denotes unit change.
15								Seepage.
								Groundwater encountered during drilling.
								Groundwater measured after drilling.
20								The total depth line is a solid line that is drawn at the bottom of the boring

ARDENT ENVIRONMENTAL GROUP, INC.

BORING LOG

EXPLANATION OF BORING LOG SYMBOLS

PROJECT NO.	DATE	FIGURE

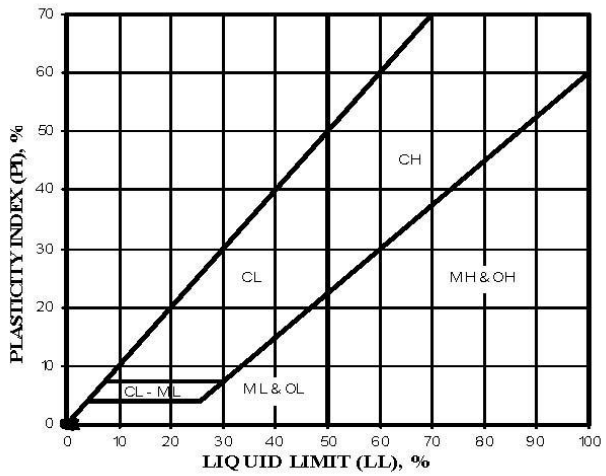
U.S.C.S. METHOD OF SOIL CLASSIFICATION

MAJOR DIVISIONS		SYMBOL	TYPICAL NAMES
COARSE-GRAINED SOILS (More than 1/2 of soil > No. 200 sieve size)	**GRAVELS (More than 1/2 of coarse fraction > No. 4 sieve size)**	GW	Well graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS (More than 1/2 of coarse fraction < No. 4 sieve size)	SW	Well graded sands or gravelly sands, little or no fines
		SP	Poorly graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (More than 1/2 of soil < No. 200 sieve size)	**SILTS & CLAYS Liquid limit < 50**	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fined sands or clayey silts
		CL	Inorganic clays of low to medium plasticity gravelly clays, sandy clays, silty clays, lean
		OL	Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS Liquid limit > 50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silty clays, organic silts
HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils

GRAIN SIZE CHART

CLASSIFICATION	RANGE OF GRAIN SIZE	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL Coarse Fine	3" to No. 4 3" to 3/4" 3/4" to No. 4	76.2 to 4.76 73.2 to 19.1 19.1 to 4.76
SAND Coarse Medium Fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.76 to 0.075 4.76 to 2.00 2.00 to 0.420 0.420 to 0.075
Silt & Clay	Below No. 200	Below 0.075

PLASTICITY



Ardent Environmental Group, Inc.
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Corona, California 92880
Telephone: 951-736-5334
Fax: 951-736-7560

BORING NUMBER B1

CLIENT Hazard Management Consulting, Inc.
PROJECT NAME Sunset Boulevard
PROJECT NUMBER 100526001
PROJECT LOCATION 300 W. Sunset Boulevard, Los Angeles
DATE STARTED 6/1/14 **COMPLETED** 6/1/14
GROUND ELEVATION **HOLE SIZE** 2.5 inches
DRILLING CONTRACTOR Core Probe International
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Kevin Tomita **CHECKED BY** Paul Roberts
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						0.17 Asphalt Approximately 2 inches thick. (SC) Dark yellowish orange (10YR 6/6), damp, clayey SAND.
						Trace fragments of red brick at 3 feet.
5	B1-5		0	SC		
						Trace fine gravel at 8 feet.
10	B1-10		0			13.00
						(SP) Moderate yellowish brown (10YR 5/4), damp, fine SAND with trace fine GRAVEL.
15	B1-15		0	SP		
						Drilling becomes difficult at 17 feet. Little to no recovery.
						Decomposed granite at 18 feet.
20	B1-20		0			20.00

(Continued Next Page)

TESTER (BLANKS) BORING LOGS - GINT STD US.GDT - 6/11/14 16:12 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\100526001 BL.GPJ

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BORING NUMBER B1

CLIENT Hazard Management Consulting, Inc.
PROJECT NAME Sunset Boulevard
PROJECT NUMBER 100526001
PROJECT LOCATION 300 W. Sunset Boulevard, Los Angeles
DATE STARTED 6/1/14 **COMPLETED** 6/1/14
GROUND ELEVATION **HOLE SIZE** 2.5 inches
DRILLING CONTRACTOR Core Probe International
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Kevin Tomita **CHECKED BY** Paul Roberts
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
						No groundwater encountered. No stained or odorous soil observed. Continous sampling. Bottom of borehole at 20.0 feet.

TESTER (BLANKS) BORING LOGS - GINT STD US.GDT - 6/11/14 16:12 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\100526001 BL.GPJ

Ardent Environmental Group, Inc.
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Corona, California 92880
Telephone: 951-736-5334
Fax: 951-736-7560

BORING NUMBER B2

CLIENT Hazard Management Consulting, Inc.
PROJECT NAME Sunset Boulevard
PROJECT NUMBER 100526001
PROJECT LOCATION 300 W. Sunset Boulevard, Los Angeles
DATE STARTED 6/1/14 **COMPLETED** 6/1/14
GROUND ELEVATION **HOLE SIZE** 2.5 inches
DRILLING CONTRACTOR Core Probe International
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Kevin Tomita **CHECKED BY** Paul Roberts
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						0.25 Asphalt Approximately 2-3 inches.
						(SC) Dark yellowish orange (10YR 6/6), damp, clayey SAND.
						Becomes moderate yellowish brown (10YR 5/4) at 4 feet.
5	B2-5		0			
				SC		
						Trace fine GRAVEl at 8 feet.
10	B2-10		0			
						13.00
						(SM) Moderate yellowish brown (10YR 5/4), damp, silty fine SAND with trace fine GRAVEL.
15	B2-15		0			
				SM		
	B2-18		0			18.00

No groundwater encountered.
No stained or odorous soil observed.
Continuous sampling.
Bottom of borehole at 18.0 feet.

TESTER (BLANKS) BORING LOGS - GINT STD US.GDT - 6/11/14 16:12 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\100526001 BL.GPJ

Ardent Environmental Group, Inc.
1827 Capital Street, Suite 103
Corona, California 92880
Telephone: 951-736-5334
Fax: 951-736-7560

BORING NUMBER B3

CLIENT Hazard Management Consulting, Inc.
PROJECT NAME Sunset Boulevard
PROJECT NUMBER 100526001
PROJECT LOCATION 300 W. Sunset Boulevard, Los Angeles
DATE STARTED 6/1/14 **COMPLETED** 6/1/14
GROUND ELEVATION **HOLE SIZE** 2.5 inches
DRILLING CONTRACTOR Core Probe International
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Kevin Tomita **CHECKED BY** Paul Roberts
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						0.25 Asphalt Approximately 2-3 inches. (SC) Dark yellowish orange (10YR 6/6), damp, clayey SAND.
5	B3-5		0	SC		
						Trace fine GRAVEL at 8 feet.
10	B3-10		0			12.50
				SM		(SM) Moderate yellowish brown (10YR 5/4), damp, silty fine SAND with trace medium GRAVEL.
15	B3-15		0			Hard drilling at 15-16 feet. Decomposed granite at 16 feet. 16.00

No groundwater encountered.
No stained or odorous soil observed.
Continuous sampling.
Bottom of borehole at 16.0 feet.

TESTER (BLANKS) BORING LOGS - GINT STD US.GDT - 6/11/14 16:12 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\100526001 BL.GPJ

Ardent Environmental Group, Inc.
1827 Capital Street, Suite 103
Corona, California 92880
Telephone: 951-736-5334
Fax: 951-736-7560

BORING NUMBER B4

CLIENT Hazard Management Consulting, Inc.
PROJECT NAME Sunset Boulevard
PROJECT NUMBER 100526001
PROJECT LOCATION 300 W. Sunset Boulevard, Los Angeles
DATE STARTED 6/1/14 **COMPLETED** 6/1/14
GROUND ELEVATION **HOLE SIZE** 2.5 inches
DRILLING CONTRACTOR Core Probe International
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Kevin Tomita **CHECKED BY** Paul Roberts
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						0.25 Asphalt Approximately 2-3 inches. (SC) Dark yellowish orange (10YR 6/6), damp, clayey SAND.
5	B4-5		0	SC		
						Trace fine GRAVEL at 8 feet.
10	B4-10		0			12.50
						(SM) Moderate yellowish brown (10YR 5/4), damp, silty fine SAND with trace medium GRAVEL.
15	B4-15		0	SM		17.00 Hard drilling conditions and decomposed granite at 17 feet bgs.

No groundwater encountered.
No stained or odorous soil observed.
Continuous sampling.
Bottom of borehole at 17.0 feet.

TESTER (BLANKS) BORING LOGS - GINT STD US.GDT - 6/11/14 16:12 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\100526001 BL.GPJ

APPENDIX E

Hydrology Calculations

Modified Rational Method

Drainaige Area ID	Acreage A	Grade (ft/ft) S	min T_C	ft L	rainfall intensity (Tc) I_t	50-year Q	25-year Q	10-year Q
Pre-development								
A1	1.28	0.06	2.81	210	4.69	5.40	4.7	3.9
A2	0.26	0.08	2.10	140	5.38	1.26	1.1	0.9
A3	1.38	0.07	2.42	170	5.03	6.25	5.5	4.5
A4G	0.72	0.44	1.12	56	7.23	3.20	2.8	2.3
A5	0.12	0.03	0.44	8.7	11.21	1.15	1.0	0.8
A6	0.06	0.09	0.36	8.3	12.41	0.61	0.5	0.4
A7	0.07	0.06	0.41	9.2	11.60	0.64	0.6	0.5
A8	0.05	0.06	0.35	7.1	12.56	0.55	0.5	0.4
A9	0.06	0.06	0.58	16	9.87	0.49	0.4	0.4
A10	0.11	0.02	0.63	14	9.48	0.89	0.8	0.6
A11	0.16	0.44	0.78	45	8.55	1.15	1.0	0.8
A12	0.10	0.06	0.38	8.3	11.96	1.04	0.9	0.7
	0.00				**Total flow (cfs):**	**22.6**	**19.9**	**16.2**
Post-development								
B1	0.24	0.01	2.60	110	4.87	1.04	0.9	0.7
B2	0.30	0.01	3.02	140	4.54	1.24	1.1	0.9
B3	0.29	0.01	2.74	120	4.75	1.25	1.1	0.9
B4	0.09	0.01	1.98	71	5.54	0.47	0.4	0.3
B5	0.08	0.01	2.16	82	5.31	0.37	0.3	0.3
B6	0.07	0.01	1.98	71	5.54	0.35	0.3	0.2
B7	0.07	0.01	2.04	75	5.46	0.32	0.3	0.2
B8	0.04	0.01	0.36	4.7	12.27	0.44	0.4	0.3
B9	0.03	0.01	0.56	9.1	10.07	0.28	0.2	0.2
B10	0.03	0.01	0.70	13	9.04	0.22	0.2	0.2
B11	0.02	0.01	0.63	11	9.51	0.15	0.1	0.1
B12	0.00	0.01	0.96	22	7.77	0.03	0.0	0.0
B13G	0.04	0.01	0.87	12	8.15	0.17	0.2	0.1
B14G	0.04	0.01	1.55	40	6.21	0.16	0.1	0.1
B15	0.07	0.01	0.56	9.2	10.03	0.62	0.5	0.4
B16	0.24	0.01	1.04	25	7.50	1.57	1.4	1.1
B17	0.01	0.01	0.76	15	8.66	0.07	0.1	0.1
B18	0.02	0.01	0.93	21	7.88	0.11	0.1	0.1
B19	0.02	0.01	0.88	19	8.12	0.12	0.1	0.1
B20	0.04	0.01	0.47	7	10.89	0.33	0.3	0.2
B21	0.21	0.01	1.64	53	6.04	1.10	1.0	0.8
B22	0.09	0.01	2.06	76	5.43	0.46	0.4	0.3
B23	0.07	0.01	1.62	52	6.07	0.38	0.3	0.3
B24	0.03	0.01	1.23	33	6.92	0.16	0.1	0.1
B25G	0.18	0.01	1.57	41	6.17	0.82	0.7	0.6
B26	0.04	0.01	1.23	33	6.92	0.25	0.2	0.2
B27G	0.03	0.01	0.72	6.8	8.90	0.10	0.1	0.1
B28	0.01	0.01	0.36	4.7	12.27	0.06	0.1	0.0
B29	0.01	0.01	0.93	21	7.88	0.07	0.1	0.0
B30	0.01	0.01	1.04	25	7.50	0.04	0.0	0.0
B31	0.18	0.01	2.36	94	5.10	0.80	0.7	0.6
B32	0.20	0.01	2.11	79	5.37	0.95	0.8	0.7
B33	0.04	0.01	0.93	21	7.88	0.28	0.2	0.2
B34	0.06	0.01	1.12	28	7.25	0.35	0.3	0.2
B35	0.02	0.01	0.59	10	9.78	0.16	0.1	0.1
B36	0.02	0.01	0.63	11	9.51	0.16	0.1	0.1
B37	0.02	0.01	0.52	8.1	10.42	0.16	0.1	0.1

Drainaige Area ID	A	S	T_C	L	I_t	Q	Q	Q
B38	0.01	0.01	0.40	5.5	11.71	0.08	0.1	0.1
B39	0.01	0.01	0.70	13	9.04	0.08	0.1	0.1
B40	0.10	0.01	1.23	33	6.92	0.59	0.5	0.4
B41	0.04	0.01	1.09	27	7.33	0.24	0.2	0.2
B42	0.05	0.01	0.45	6.5	11.14	0.47	0.4	0.3
B43	0.16	0.01	1.62	52	6.07	0.86	0.8	0.6
B44	0.01	0.01	0.37	4.8	12.20	0.12	0.1	0.1
B45G	0.07	0.01	0.80	9.9	8.08	0.30	0.3	0.2
B46G	0.03	0.01	0.59	5	9.77	0.11	0.1	0.1
B47G	0.03	0.01	0.72	6.8	8.90	0.11	0.1	0.1
B48G	0.04	0.01	0.82	11	8.36	0.18	0.2	0.1
B49	0.02	0.01	1.01	24	7.59	0.12	0.1	0.1
B50	0.01	0.01	0.70	13	9.04	0.07	0.1	0.0
B51	0.26	0.01	3.79	200	4.08	0.96	0.8	0.7
B52	0.01	0.01	0.53	8.4	10.31	0.10	0.1	0.1
B53	0.02	0.01	0.73	14	8.84	0.16	0.1	0.1
B54	0.08	0.01	2.32	92	5.14	0.35	0.3	0.3
B55	0.06	0.01	1.19	31	7.03	0.38	0.3	0.3
B56	0.04	0.01	1.28	35	6.80	0.23	0.2	0.2
B57	0.06	0.01	1.12	28	7.25	0.38	0.3	0.3
B58	0.00	0.01	0.32	3.9	12.98	0.03	0.0	0.0
B59	0.15	0.01	2.11	79	5.37	0.70	0.6	0.5
B60G	0.20	0.01	1.90	62	5.64	0.95	0.8	0.7
					Total flow (cfs):	**23.2**	**20.4**	**16.6**

APPENDIX F

Noise Model Worksheets

La Plaza Noise Analysis Project

Construction Noise - Unmitigated

Reference Noise Distance	**50**					
Reference Noise Level	**89**					
Sensitive Receptor	**Distance (feet)**	**Attenuation Factors**	**Maximum Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Jia Apartments	105	0	**82.6**	**68.2**	**82.7**	**14.5**
Our Lady Queen of the Angels Chuch	160	0	**78.9**	**66.2**	**79.1**	**12.9**
Cortines School	380	0	**71.4**	**67.8**	**73.0**	**5.2**
La Plaza Cultura y Artes	330	0	**72.6**	**66.2**	**73.5**	**7.3**
Los Angeles Plaza Park	745	0	**65.5**	**66.2**	**68.9**	**2.7**

Construction Noise - Mitigated

Reference Noise Distance	**50**					
Reference Noise Level	**89**					
Sensitive Receptor	**Distance (feet)**	**Attenuation Factors**	**Maximum Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Jia Apartments	105	3	**79.6**	**68.2**	**79.9**	**11.7**
Our Lady Queen of the Angels Chuch	160	3	**75.9**	**66.2**	**76.3**	**10.1**
Cortines School	380	3	**68.4**	**67.8**	**71.1**	**3.3**
La Plaza Cultura y Artes	330	3	**69.6**	**66.2**	**71.2**	**5.0**
La Plaza Park	475	3	**66.4**	**66.2**	**69.3**	**3.1**

A 3 dBA reduction was given for mufflers.

Construction Noise - Pile Driving

Reference Noise Distance	**50**					
Reference Noise Level	**101**					
Sensitive Receptor	**Distance (feet)**	**Attenuation Factors**	**Maximum Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Jia Apartments	105	0	**94.6**	**68.2**	**94.6**	**26.4**
Our Lady Queen of the Angels Chuch	160	0	**90.9**	**66.2**	**90.9**	**24.7**
Cortines School	380	0	**83.4**	**67.8**	**83.5**	**15.7**
La Plaza Cultura y Artes	330	0	**84.6**	**66.2**	**84.7**	**18.5**
La Plaza Park	475	0	**81.4**	**66.2**	**81.6**	**15.4**

Construction Noise - Drilling

Reference Noise Distance	**50**					
Reference Noise Level	**77**					
Sensitive Receptor	**Distance (feet)**	**Attenuation Factors**	**Maximum Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Jia Apartments	105	0	**70.6**	**68.2**	**72.5**	**4.3**
Our Lady Queen of the Angels Chuch	160	0	**75.2**	**66.2**	**75.7**	**9.5**
Cortines School	380	0	**59.4**	**67.8**	**68.4**	**0.6**
La Plaza Cultura y Artes	330	0	**60.6**	**66.2**	**67.3**	**1.1**
La Plaza Park	475	0	**57.4**	**66.2**	**66.7**	**0.5**

Operational Noise - Mechanical Equipment

Reference Noise Distance	**50**					
Reference Noise Level	**60**					
Sensitive Receptor	**Distance (feet)**	**Attenuation Factors**	**Maximum Construction Noise Level (dBA)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**Increase**
Jia Apartments	105	0	**53.6**	**68.2**	**68.3**	**0.1**
Our Lady Queen of the Angels Chuch	160	0	**49.9**	**66.2**	**66.3**	**0.1**
Cortines School	380	0	**42.4**	**67.8**	**67.8**	**0.0**
La Plaza Cultura y Artes	330	0	**43.6**	**66.2**	**66.2**	**0.0**
Los Angeles Plaza Park	745	0	**36.5**	**66.2**	**66.2**	**0.0**

Mobile Noise Analysis - Construction Activity

Existing

ROAD SEGMENT	from:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto %	Auto	MT %	MT	HT %	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW Leq (dBA)
Cesar Chavez	West of Broadway	2683	6	75	21	85	2281	7.5	201	7.5	201	30	48	30	48	30	48	66.0	66.0	71.7	72.0
Broadway	South of Cesar Chavez	1671	6	45	16	85	1420	7.5	125	7.5	125	30	48	30	48	30	48	63.9	64.0	69.6	70.3
Spring	South of Cesar Chavez	791	25	60	39	85	672	7.5	59.3	7.5	59.3	30	48	30	48	30	48	60.7	60.7	66.4	65.7

Project

ROAD SEGMENT	from:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto	Auto	MT	MT	HT	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW Leq (dBA)
Cesar Chavez	West of Broadway	2712	6	75	21		2331		201		213	30	48	30	48	30	48	66.1	66.0	71.9	72.2
Broadway	South of Cesar Chavez	1830	6	45	16		1470		125		137	30	48	30	48	30	48	64.1	64.0	70.0	70.5
Spring	South of Cesar Chavez	830	25	60	39		722		59.3		71.3	30	48	30	48	30	48	61.0	60.7	67.2	66.3

Mobile Noise Analysis - Operational Activity

Existing

ROAD SEGMENT		TOT. # VEH.	EQUIVALENT LANE DISTANCE			VEHICLE TYPE %						VEHICLE SPEED						NOISE LEVEL (dBA)			50 ft ROW CNEL (dBA)
						Auto		MT		HT		Auto	k/h	MT	k/h	HT	k/h	Auto	MT	HT	
	from:		D1	D2	Eq. Dis.	%	Auto	%	MT	%	HT										
Cesar Chavez	West of Broadway	2683	6	75	21	85	2281	7.5	201	7.5	201	30	48	30	48	30	48	66.0	66.0	71.7	72.0
Cesar Chavez	West of Main	2510	6	75	21	85	2134	7.5	188	7.5	188	30	48	30	48	30	48	65.7	65.7	71.4	71.7
Broadway	South of Cesar Chavez	1671	6	45	16	85	1420	7.5	125	7.5	125	30	48	30	48	30	48	63.9	64.0	69.6	70.2
Broadway	North of Cesar Chavez	2124	6	45	16	85	1805	7.5	159	7.5	159	30	48	30	48	30	48	64.9	65.0	70.7	71.3
Spring	South of Cesar Chavez	791	25	60	39	85	672.4	7.5	59.3	7.5	59.3	30	48	30	48	30	48	60.7	60.7	66.4	65.7
Grand	South of Temple	2461	10	60	24	85	2092	7.5	185	7.5	185	30	48	30	48	30	48	65.6	65.7	71.3	71.4

Existing With Project

ROAD SEGMENT		TOT. # VEH.	EQUIVALENT LANE DISTANCE			VEHICLE TYPE %						VEHICLE SPEED						NOISE LEVEL (dBA)			50 ft ROW CNEL (dBA)
						Auto		MT		HT		Auto	k/h	MT	k/h	HT	k/h	Auto	MT	HT	
	from:		D1	D2	Eq. Dis.	%	Auto	%	MT	%	HT										
Cesar Chavez	West of Broadway	2712	6	75	21	85	2305	7.5	203	7.5	203	30	48	30	48	30	48	66.0	66.1	71.7	72.0
Cesar Chavez	West of Main	2536	6	75	21	85	2156	7.5	190	7.5	190	30	48	30	48	30	48	65.7	65.8	71.4	71.8
Broadway	South of Cesar Chavez	1830	6	45	16	85	1556	7.5	137	7.5	137	30	48	30	48	30	48	64.3	64.4	70.0	70.6
Broadway	North of Cesar Chavez	2255	6	45	16	85	1917	7.5	169	7.5	169	30	48	30	48	30	48	65.2	65.3	70.9	71.5
Spring	South of Cesar Chavez	830	25	60	39	85	705.5	7.5	62.3	7.5	62.3	30	48	30	48	30	48	60.9	60.9	66.6	66.0
Grand	South of Temple	2478	10	60	24	85	2106	7.5	186	7.5	186	30	48	30	48	30	48	65.6	65.7	71.3	71.5

Future Without Project

ROAD SEGMENT		TOT. # VEH.	EQUIVALENT LANE DISTANCE			VEHICLE TYPE %						VEHICLE SPEED						NOISE LEVEL (dBA)			50 ft ROW CNEL (dBA)
						Auto		MT		HT		Auto	k/h	MT	k/h	HT	k/h	Auto	MT	HT	
	from:		D1	D2	Eq. Dis.	%	Auto	%	MT	%	HT										
Cesar Chavez	West of Broadway	3260	6	75	21	85	2771	7.5	245	7.5	245	30	48	30	48	30	48	66.8	66.9	72.5	72.8
Cesar Chavez	West of Main	3041	6	75	21	85	2585	7.5	228	7.5	228	30	48	30	48	30	48	66.5	66.6	72.2	72.5
Broadway	South of Cesar Chavez	2263	6	45	16	85	1924	7.5	170	7.5	170	30	48	30	48	30	48	65.2	65.3	70.9	71.6
Broadway	North of Cesar Chavez	2774	6	45	16	85	2358	7.5	208	7.5	208	30	48	30	48	30	48	66.1	66.2	71.8	72.4
Spring	South of Cesar Chavez	882	25	60	39	85	749.7	7.5	66.2	7.5	66.2	30	48	30	48	30	48	61.1	61.2	66.8	66.2
Grand	South of Temple	2880	10	60	24	85	2448	7.5	216	7.5	216	30	48	30	48	30	48	66.3	66.3	72.0	72.1

Future With Project

ROAD SEGMENT		TOT. # VEH.	EQUIVALENT LANE DISTANCE			VEHICLE TYPE %						VEHICLE SPEED						NOISE LEVEL (dBA)			50 ft ROW CNEL (dBA)
						Auto		MT		HT		Auto	k/h	MT	k/h	HT	k/h	Auto	MT	HT	
	from:		D1	D2	Eq. Dis.	%	Auto	%	MT	%	HT										
Cesar Chavez	West of Broadway	3309	6	75	21	85	2813	7.5	248	7.5	248	30	48	30	48	30	48	66.9	66.9	72.6	72.9
Cesar Chavez	West of Main	3067	6	75	21	85	2607	7.5	230	7.5	230	30	48	30	48	30	48	66.5	66.6	72.2	72.6
Broadway	South of Cesar Chavez	2422	6	45	16	85	2059	7.5	182	7.5	182	30	48	30	48	30	48	65.5	65.6	71.2	71.9
Broadway	North of Cesar Chavez	2905	6	45	16	85	2469	7.5	218	7.5	218	30	48	30	48	30	48	66.3	66.4	72.0	72.6
Spring	South of Cesar Chavez	921	25	60	39	85	782.9	7.5	69.1	7.5	69.1	30	48	30	48	30	48	61.3	61.4	67.0	66.4
Grand	South of Temple	2897	10	60	24	85	2462	7.5	217	7.5	217	30	48	30	48	30	48	66.3	66.4	72.0	72.1

APPENDIX G

Traffic Impact Study

TRAFFIC STUDY
FOR THE
LA PLAZA DE CULTURA VILLAGE MIXED-USE PROJECT

ENVIRONMENTAL IMPACT REPORT

JUNE 2014

Prepared for :

COUNTY OF LOS ANGELES
CALIFORNIA

Submitted by :

RAJU Associates, Inc.

TRAFFIC STUDY
FOR THE
LA PLAZA DE CULTURA VILLAGE MIXED-USE PROJECT
ENVIRONMENTAL IMPACT REPORT

JUNE 2014

Prepared for:

THE COUNTY OF LOS ANGELES

Prepared by:

RAJU ASSOCIATES, INC.
505 E. Colorado Boulevard, Suite 202
Pasadena, California 91101
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Ref: RA 440

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EXECUTIVE SUMMARY

A detailed traffic study has been performed by Raju Associates, Inc. to assess the traffic impacts of the proposed La Plaza Cultura Village Mixed-Use project located on two parcels at 527 N. Spring Street and 555 N. Broadway in the Central City community of the City of Los Angeles, California.

The Proposed Project consists of development on two blocks, Block A located at 527 N. Spring Street and Block B located at 555 N. Broadway. These blocks (parcels) are known as the Plaza Lots and are owned by the County of Los Angeles. Currently, these parking lots are used for surface parking for County employees, federal jurors and visitors.

Block A is bounded by Cesar Chavez Avenue on the north, Broadway on the west, Spring Street on the east, and the US-101 Freeway northbound ramps on the south. Development of Block A consists of 119 residential dwelling units, 15,000 square feet of retail use, 11,000 square feet of specialty retail use and 9,000 square feet of restaurant use. A total of 297 structured subterranean parking spaces will be provided with 150 spaces allotted to the County for replacement parking. One driveway located along Broadway would provide access to Block A. This driveway would be limited to right-turns in and right-turns out only.

Block B is located west of Block A and is bounded by Cesar Chavez Avenue on the north, Hill Street on the west, Broadway on the east and the US-101 Freeway on the south. As proposed, Block B would consist of 226 residential dwelling units, 8,000 square feet of retail use, 10,000 square feet of specialty retail use and 2,000 square feet of restaurant use replacing an existing surface parking lot, 2,000 square feet of specialty retail use and 1,000 square feet of restaurant use. A total of 382 structured subterranean parking spaces are being proposed to serve Block B. Three driveways, one each along Cesar Chavez Avenue, Hill Street and Broadway would provide access to Block B. These driveways also would be limited to right-turns in and right-turns out only.

Current and future traffic analyses at 22 intersections within the City of Los Angeles were conducted in this study. At these locations, traffic operations were studied prior to and after

implementation of the Proposed Project, deficiencies and impacts identified, improvements and mitigation measures developed, their effectiveness determined and residual traffic impacts, if any, ascertained as part of this study. The following executive summary highlighting the key findings of this study is presented below.

- A total of 22 intersections were analyzed within the study area for this project. These locations are within the area bounded by Ord Street on the north, Temple Street on the south, Grand Avenue on the west and Alameda Street on the east.

- Currently, all 22 of the analyzed intersection locations are operating at acceptable levels of service (LOS D or better) during both the morning and evening peak hours.

- In the Cumulative (Future Year 2018) Base conditions, i.e., future conditions without the implementation of the Proposed Project, the 22 analyzed intersection locations are projected to continue to operate at acceptable levels of service (LOS D or better) during the morning peak hour. During the evening peak hour, 20 of the 22 analyzed intersection locations are projected to operate at LOS D or better. The remaining two locations, the intersections of Grand Avenue/Cesar Chavez Avenue and Alameda Street/Arcadia Street-US-101 Northbound Off-Ramp, are projected to operate at LOS E during the evening peak hour.

- The Proposed Project consists of development on two blocks, Block A located at 527 N. Spring Street and Block B located at 555 N. Broadway. Block A would consist of 119 residential dwelling units, 15,000 square feet of retail use, 11,000 square feet of specialty retail use and 9,000 square feet of restaurant use. Block B would consist of 226 residential dwelling units, 8,000 square feet of retail use, 10,000 square feet of specialty retail use and 2,000 square feet of restaurant use. The Project is estimated to generate a net total of 167 trips during the morning peak hour and 320 trips during the evening peak hour.

- In the Existing (2014) plus Project conditions, the traffic operating conditions would be similar to those for the Existing conditions (without the project) during the both the morning and evening peak hours. All 22 of the analyzed intersection locations are projected to continue to operate at acceptable levels of service (LOS D or better) during both the morning and evening peak hours.

- The Existing (2014) plus Project traffic conditions indicate that the Proposed Project would not cause significant traffic impacts at any of the analysis locations during the weekday morning and evening peak hours.

- In the Cumulative (Future Year 2018) plus Project conditions, 21 of the 22 of the study intersections are projected to operate at LOS D or better during the morning peak hour. The remaining location, the intersection of Alameda Street/ Arcadia Street-US-101 Northbound Off-Ramp, is projected to operate at LOS E during the morning peak hour. During the evening peak hour, 20 of the 22 study intersections are projected to operate at LOS D or better. The remaining two locations, the intersections of Grand Avenue/Cesar Chavez Avenue and Alameda Street/ Arcadia Street-US-101 Northbound Off-Ramp, are projected to operate at LOS E and LOS F, respectively, during the evening peak hour.

- The Cumulative (Future Year 2018) plus Project traffic conditions indicate that the Proposed Project would cause a significant traffic impact at the intersection of Broadway/Cesar Chavez Avenue during the weekday evening peak hour. The Proposed Project would not result in significant traffic impacts at any of the remaining analyzed intersections during either the morning or evening peak hours.

- Intersection mitigation measures are required to alleviate the significant impacts of the Proposed Project. The mitigation program includes Adaptive Traffic Control System infrastructure enhancements in the vicinity of the intersection of Broadway/Cesar Chavez Avenue, and development and implementation of a site-wide Transportation Demand Management (TDM) Program for the Project Site to promote non-auto travel such as transit, bicycle and pedestrian system usage.

- With implementation of the above improvement measures, the Proposed Project would not result in significant impacts at any of the analyzed intersections. No residual significant impacts would remain due to the Proposed Project and its mitigations.

- The Proposed Project would add less than 50 trips to the nearest Congestion Management Program (CMP) arterial monitoring locations and would add less than 150 trips in either direction to the nearest CMP mainline freeway monitoring locations during the weekday evening peak hour. Per CMP guidelines, no further CMP analysis is required.

- Two project alternatives were evaluated in this study. They include the “No-Project” alternative and “40% Reduced Project” alternative. The Reduced Project alternative would not cause any residual significant traffic impacts with implementation of the same mitigation measures as those recommended for the Proposed Project.

Summarizing, the Proposed Project with the recommended improvements would not cause any significant impacts at any of the analyzed intersections.

I. INTRODUCTION

This report documents the assumptions, methodologies and findings of a study conducted by Raju Associates, Inc., to evaluate the potential traffic impacts of the proposed La Plaza Cultura Village Mixed-Use project located on two parcels at 527 N. Spring Street and 555 N. Broadway in the Central City community of the City of Los Angeles, California.

PROJECT DESCRIPTION

The Proposed Project consists of development on two blocks, Block A located at 527 N. Spring Street and Block B located at 555 N. Broadway. These blocks (parcels) are known as the Plaza Lots and are owned by the County of Los Angeles. Currently, these parking lots are used for surface parking for County employees, federal jurors and visitors. Figure 1 illustrates the location of the Proposed Project in relation to the surrounding street system.

Block A is bounded by Cesar Chavez Avenue on the north, Broadway on the west, Spring Street on the east, and the US-101 Freeway northbound ramps on the south. Development of Block A consists of 119 residential dwelling units, 15,000 square feet of retail use, 11,000 square feet of specialty retail use and 9,000 square feet of restaurant use. A total of 297 structured subterranean parking spaces will be provided with 150 spaces allotted to the County for replacement parking. One driveway located along Broadway would provide access to Block A. This driveway would be limited to right-turns in and right-turns out only.

Block B is located west of Block A and is bounded by Cesar Chavez Avenue on the north, Hill Street on the west, Broadway on the east and the US-101 Freeway on the south. As proposed, Block B would consists of 226 residential dwelling units, 8,000 square feet of retail use, 10,000 square feet of specialty retail use and 2,000 square feet of restaurant use replacing an existing surface parking lot, 2,000 square feet of specialty retail use and 1,000 square feet of restaurant use. A total of 382 structured subterranean parking spaces are being proposed to serve Block B.

FIGURE 1
LOCATION OF PROJECT AND ANALYZED INTERSECTIONS

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Three driveways, one each along Cesar Chavez Avenue, Hill Street and Broadway would provide access to Block B. These driveways also would be limited to right-turns in and right-turns out only.

STUDY SCOPE

The scope of work for this study was developed in conjunction with the County of Los Angeles Department of Public Works and City of Los Angeles Department of Transportation staff. The base assumptions, technical methodologies and geographic coverage of the study were all identified as part of the study approach. The study is directed at the analysis of potential traffic impacts on the street system produced by the Proposed Project and includes an analysis of the following scenarios:

- Existing (Current) 2014 Conditions - The analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The existing conditions analysis includes an assessment of streets, traffic volumes, and operating conditions.

- Existing (2014) Plus Project Conditions – The net traffic expected to be generated by the Proposed Project is estimated and added to the Existing (2014) traffic volumes. The impacts of the Proposed Project on existing traffic operating conditions are then identified.

- Cumulative (2018) Base Conditions - Future traffic conditions in the year 2018 without the Proposed Project has been developed. The objective of this analysis is to project future traffic growth and operating conditions, which could be expected to result from regional growth and related projects in the vicinity of the study area by the year 2018.

- Cumulative (2018) Plus Project Conditions – The net traffic expected to be generated by the Proposed Project is estimated and added to the Cumulative (2018) Base traffic forecasts. The impacts of the Proposed Project on future traffic operating conditions are then identified.

For this traffic study, 22 locations were defined as study intersections. All 22 study intersections are controlled by traffic signals (see Figure 1 for their location) and include the following:

1. Grand Avenue and Cesar Chavez Avenue
2. Grand Avenue and Temple Street
3. Hill Street and Ord Street
4. Hill Street and Temple Street
5. Broadway and Ord Street
6. Broadway and Cesar Chavez Avenue
7. Broadway and Arcadia Street

8. Broadway and US-101 Southbound Off-Ramp/Aliso Street
9. Broadway and Temple Street
10. New High Street/Spring Street and Cesar Chavez Avenue
11. Spring Street and Arcadia Street
12. Spring Street and Aliso Street
13. Spring Street and Temple Street
14. Main Street and Cesar Chavez Avenue
15. Main Street and Arcadia Street
16. Main Street and Aliso Street
17. Main Street and Temple Street
18. Los Angeles Street and Arcadia Street
19. Los Angeles Street and Aliso Street/US-101 Southbound On-Ramp
20. Alameda Street and Cesar Chavez Avenue
21. Alameda Street and Arcadia Street/US-101 Northbound Off-Ramp
22. Alameda Street and Aliso Street/Commercial Street

Since all the analysis intersections are located within the City of Los Angeles, this traffic study has been prepared in accordance with the latest City of Los Angeles traffic study guidelines titled *Traffic Study Policies and Procedures, June 2013*.

ORGANIZATION OF REPORT

An executive summary presenting key details of the study is provided at the beginning of this report. The rest of the report is divided into nine chapters. Chapter I presents an introduction and provides details of the various elements of the study. Chapter II describes the existing circulation system, traffic volumes, and traffic conditions within the study area. Chapter III describes the development of the Proposed Project's traffic projections. The Project's access and circulation evaluation is also presented in Chapter III. The methodology to develop Future Year 2018 traffic volume forecasts without and with the Proposed Project is described and applied in Chapter IV. Chapter V presents assessment of traffic conditions with and without the project and the potential traffic impacts due to the Proposed Project. The Project's transportation improvement and mitigation program is presented in Chapter VI. The results of the analysis of the Proposed Project's impacts on the CMP regional transportation system are provided in Chapter VII. Alternatives analyses are presented in Chapter VIII. A summary of the analysis and study conclusions is included in Chapter IX. Appendices to this report include details of the technical analyses including the Caltrans' freeway screening analysis.

II. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions within the study area. The assessment of conditions relevant to this study includes an inventory of the street system, traffic volumes on these facilities, and operating conditions at key intersections. A detailed description of these elements is presented in this chapter. The existing transit system serving the study area is also described in this chapter.

STUDY AREA

The Proposed Project consists of development on two blocks. Block A is located at 527 N. Spring Street and Block B at 555 N. Broadway in the City of Los Angeles, California, as shown in Figure 1.

Block A is bounded by Cesar Chavez Avenue on the north, Broadway on the west, Spring Street on the east, and the US-101 Freeway northbound ramps on the south. Block B is located west of Block A and is bounded by Cesar Chavez Avenue on the north, Hill Street on the west, Broadway on the east and the US-101 Freeway on the south.

Several freeways that provide regional access to the Project site are located within a few miles of the Project site. The Hollywood (US-101) Freeway is located just south of the Project site, the Pasadena (I-110) Freeway is located approximately 1 mile west of the Project site, the Golden State (I-5) Freeway is located approximately 2 miles east of the Project site and the Santa Monica (I-10) Freeway is located approximately 2 miles south and east of the Project site.

The study area is bounded by Ord Street on the north, Temple Street on the south, Grand Avenue on the west and Alameda Street on the east.

EXISTING STREET SYSTEM

The existing street system within the study area consists of a regional highway system including major and secondary arterials and a local street system including collectors and local streets. A description of the regional and local access and circulation offered by the various roadways follows.

The US-101, SR-110, I-5 and I-10 provide regional access, connectivity and circulation opportunities. The major and other arterial streets used to access the study area include Cesar Chavez Avenue, Alameda Street, Temple Street, Grand Avenue, Broadway, Hill Street, Spring Street, Los Angeles Street, Main Street, Arcadia Street, Aliso Street and Ord Street. Brief descriptions of these facilities serving the study area follows. The existing lane configurations of the analyzed intersections are included in Appendix A.

- Cesar Chavez Avenue – Cesar Chavez Avenue is classified as a major arterial roadway and defines the northern frontage of the Project site. It runs in an east-west direction across several jurisdictions. West of Figueroa Street, the street name changes to Sunset Boulevard. Within the study area, the roadway generally offers five travel lanes, three lanes in the westbound direction and two lanes in the eastbound direction. The posted speed limit is 35 miles per hour. Restricted metered parking is available during the off-peak hours along many stretches of this roadway.

- Alameda Street – Alameda Street is classified as a major arterial roadway that runs in a north-south direction. The roadway generally offers six travel lanes, three lanes in each direction. The posted speed limit is 35 miles per hour. Within the study area, parking is generally not allowed on both sides of the street.

- Temple Street – Temple Street is classified as a major arterial roadway and it runs in an east-west direction. However, west of Fremont Avenue and east of Alameda Street, it is classified as a secondary arterial roadway. This roadway provides four travel lanes, two lanes in each direction. Restricted parking is available along many stretches of the roadway. The posted speed limit along this facility is 35 miles per hour.

- Grand Avenue – Grand Avenue is classified as a major arterial roadway that traverses in a north-south direction. This roadway generally provides four travel lanes, two lanes in each direction within the study area. Within the study area, parking is generally not allowed on both sides of the street. The posted speed limit is 35 miles per hour.

- Broadway – Broadway is a classified as a secondary arterial roadway that runs in a north-south direction. North of Alpine Street, Broadway is classified as a major arterial roadway. It defines the western frontage of the Project's Block A site and the eastern frontage of the Project's Block B site. Within the study area, this roadway generally offers four travel lanes, two lanes in each direction. Restricted parking is available along many stretches of the roadway. The posted speed limit is 35 miles per hour along this roadway.

- Hill Street – Hill Street is classified as a secondary arterial roadway that runs in a north-south direction and defines the western frontage of Block B. This roadway provides four travel lanes, two lanes in each direction. Within the study area, restricted parking is generally available on either side of the street. The posted speed limit is 35 miles per hour along this roadway.

- Spring Street – Spring Street is north-south roadway and defines the eastern frontage of Block A. Spring Street is classified as a major arterial roadway between Cesar Chavez Avenue and 2nd Street. It is discontinuous at Cesar Chavez Avenue and is classified as a secondary arterial between Alpine Street and Cesar Chavez Avenue. South of Cesar Chavez Avenue, this roadway provides two to three travel lanes in the southbound direction with a bike lane and two 'bus only' travel lanes in the northbound direction. Within the study area, parking is not allowed on either side of the street. The posted speed limit is 35 miles per hour along this roadway.

- Los Angeles Street – Los Angeles Street is classified as a secondary arterial roadway and runs in a north-south direction. This roadway provides four travel lanes, two lanes in each direction. Bike lanes are provided on both sides of the street between Alameda Street and 1st Street. Within the study area, parking is generally not allowed on either side of the street. The posted speed limit is 35 miles per hour along this roadway.

- Main Street – Main Street is classified as a secondary arterial roadway and operates as a northbound one-way street. This roadway generally provides three to four travel lanes with a bike lane on the east side of the street. Parking is generally available along many stretches of this roadway. The posted speed limit is 35 miles per hour along this roadway.

- Ord Street – Ord Street is classified as a collector roadway and runs in an east-west direction. This roadway provides two travel lanes, one lane in each direction Restricted parking is available along many stretches of the roadway. The prima facie speed limit is 25 miles per hour along this roadway.

- Arcadia Street – Arcadia Street is part of a one-way couplet providing a one-way westbound local roadway with three travel lanes. This roadway extends westerly from the US-101 northbound off-ramp at Alameda Street and provides connectivity to Broadway. Parking is not allowed along this street. The posted speed limit is 25 miles per hour along this roadway.

- Aliso Street – Aliso Street forms the other part of the one-way couplet with Arcadia Street and operates one-way in the eastbound direction providing three travel lanes. This roadway extends easterly from the US-101 southbound off-ramp at Broadway. East of Alameda Street, the roadway becomes Commercial Street, a two-way collector street with two to four travel lanes. Parking is not allowed on along this street. The posted speed limit is 25 miles per hour along this roadway.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

The following sections present the existing intersection peak hour traffic volumes, a description of the methodology utilized to analyze the intersection traffic conditions, and the resulting level of service conditions at each of the study intersections.

Existing Traffic Volumes

Weekday morning and evening peak hour traffic counts were compiled from data collected at 20 of the 22 analyzed intersections in March and May 2014. Traffic count data for the remaining two intersections were collected in June 2012 (the intersections of Los Angeles Street/Arcadia Street and Los Angeles Street/Aliso Street). The counts collected in year 2012 were adjusted upwards by 1% per year to represent Existing 2014 conditions. These traffic volumes reflect typical weekday operations during current year 2014 conditions. The traffic volumes in Figure 2 represent, for the purposes of this analysis, the Existing 2014 AM and PM peak hour conditions. The data showing the raw traffic counts are attached in Appendix B.

Level of Service Methodology

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum acceptable level of service in urban areas. The Level of service definitions for signalized intersections is provided in Table 1. All 22 analyzed intersections are controlled by traffic signals.

The "Critical Movement Analysis-Planning", (Transportation Research Board, 1980) method of intersection capacity analysis was used to determine the intersection volume to capacity (V/C) ratio and corresponding level of service at the signalized intersections. Level of service spreadsheets developed by LADOT was used to implement the CMA (Circular 212 Method) methodology. Table 1 defines the ranges of V/C ratios and corresponding levels of service for signalized intersections.

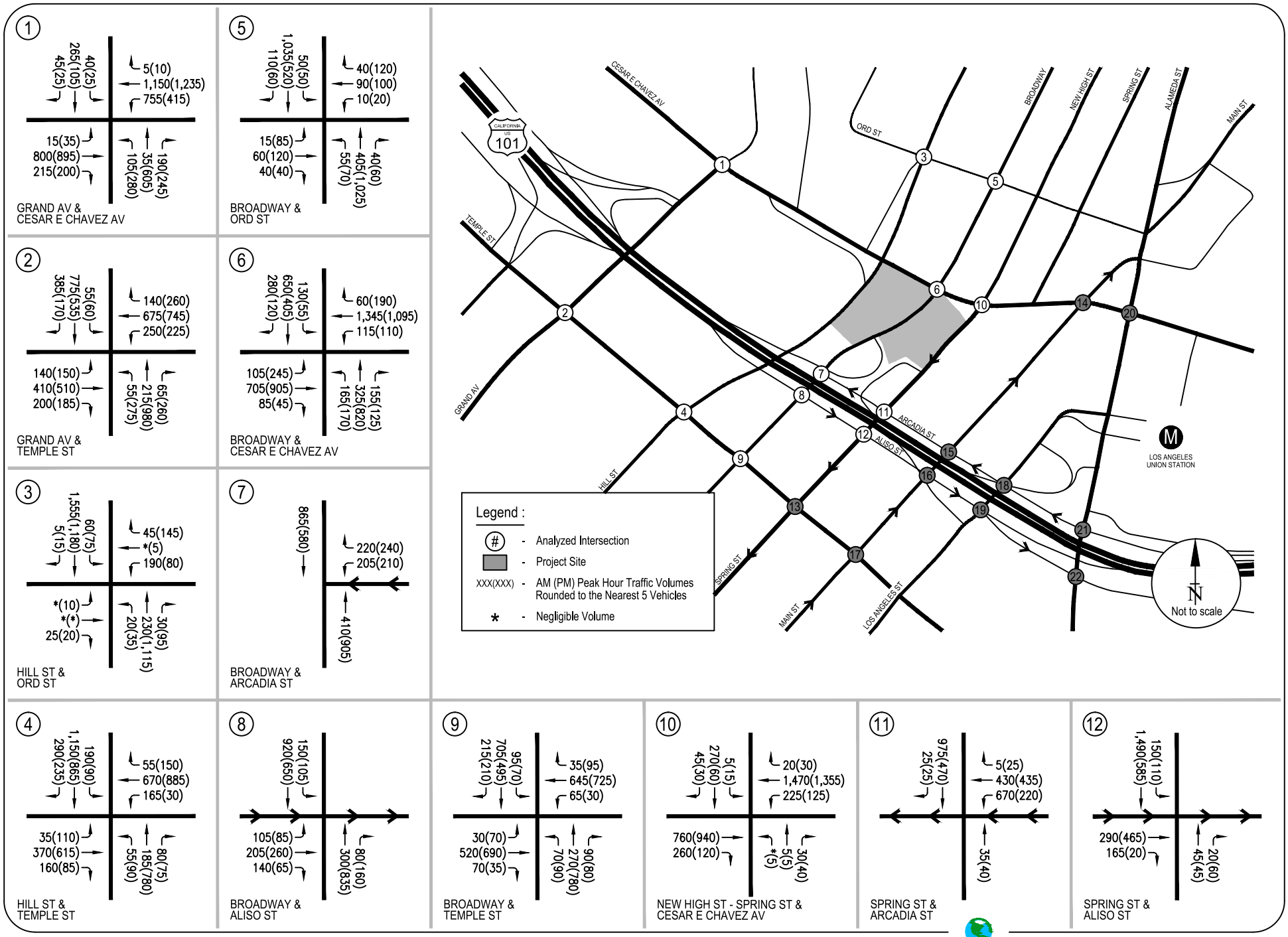

FIGURE 2A
EXISTING (2014) CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

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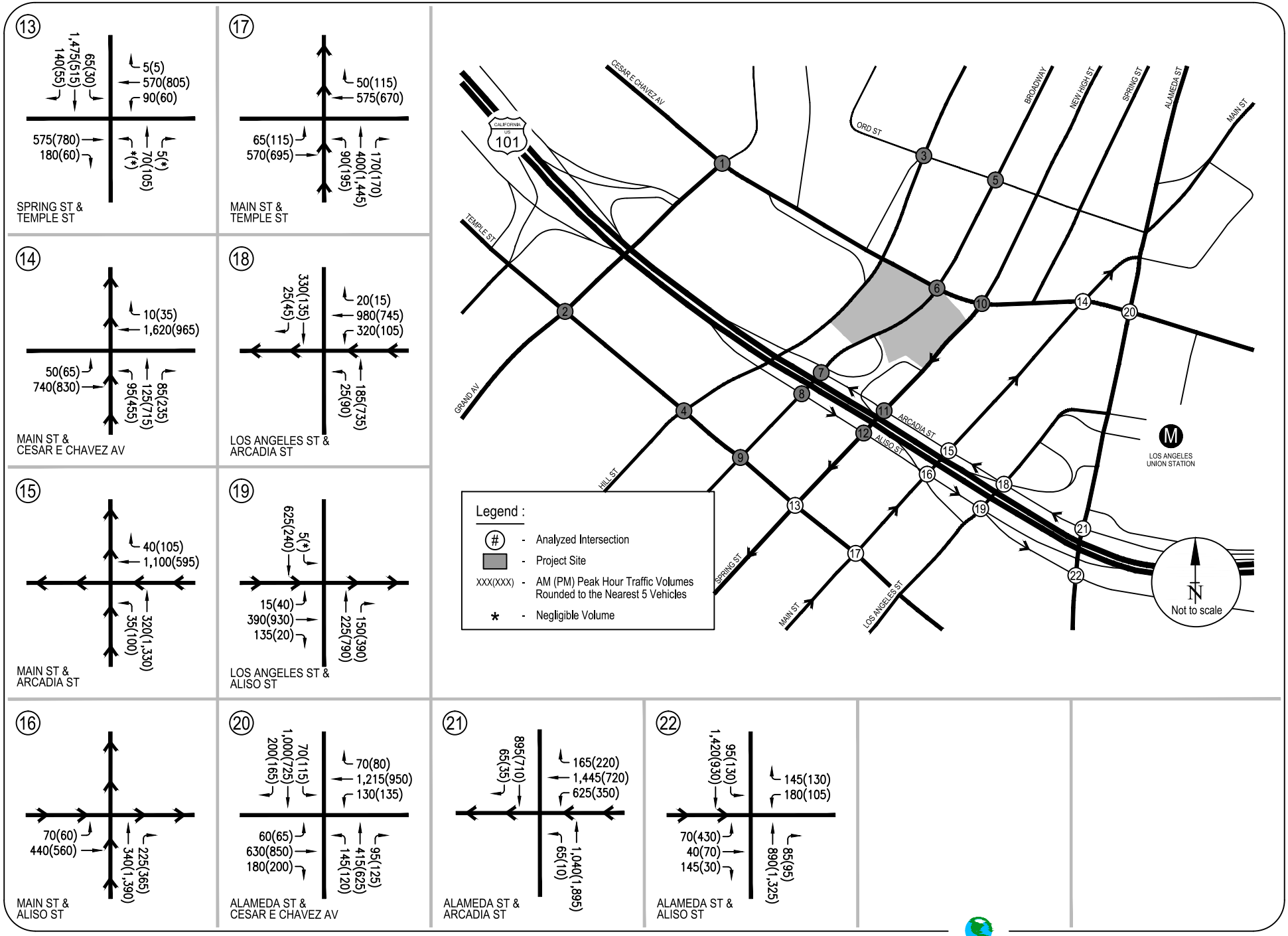

FIGURE 2B
EXISTING (2014) CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

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TABLE 1
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/Capacity Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	>0.600 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	>0.700 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	>0.800 - 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	>0.900 - 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.

Source: Transportation Research Board, *Transportation Research Circular No. 212, Interim Materials on Highway Capacity* , 1980.

All of the study intersections are currently controlled by the City of Los Angeles' Downtown Automated Traffic Surveillance and Control (ATSAC) System and Adaptive Traffic Control System (ATCS). In accordance with LADOT procedures, a capacity increase of 10% (0.07 V/C adjustment for ATSAC and 0.03 V/C adjustment for ATCS) was applied to reflect the benefits of ATSAC/ATCS control at these intersections.

Existing Levels of Service

The existing traffic volumes presented in Figure 2 for AM and PM peak hours were used in conjunction with the level of service methodologies described above, and the current intersection characteristics illustrated in Appendix A, to determine the existing operating conditions at the analyzed intersections.

Table 2 summarizes the results of the intersection capacity analysis for existing conditions at each of the 22 intersections in the study area. The table indicates the existing V/C ratio during the morning and evening peak hours and the corresponding LOS at the study intersections. As illustrated in the table, all 22 of the study intersections are currently operating at LOS D or better during both the morning and evening peak hours.

Capacity calculation worksheets for Existing (2014) conditions are provided in Appendix C of the report.

EXISTING TRANSIT CONDITIONS

Forty-eight bus lines as well as the Metro Rail Purple Line and Red Line currently serve the study area. Thirty-four bus lines, including six Rapid Bus lines, as well as two heavy rail lines (Metro Red Line and Metro Purple Line) operated by the Los Angeles County Metropolitan Transportation Authority (LACMTA) or METRO; one bus line (DASH) operated by the City of Los Angeles Department of Transportation (LADOT); seven bus lines operated by Foothill Transit (FT); one bus line operated by the City of Santa Monica Big Blue Bus (BBB); two bus lines operated by City of Santa Clarita Transit; one bus line operated by Torrance Transit; one bus line operated by Orange County Transit Authority; and one bus line operated by Commerce Transit provide service to and from a wide area within the Southern California region within walking distance of the Project site. In addition to these bus lines, Los Angeles Union Station is located three blocks from the Project site. These transit lines are described below (following Table 2).

TABLE 2
EXISTING (2014) INTERSECTION LEVEL OF SERVICE ANALYSIS

No.	Intersection	Existing (2014) Conditions			
		AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
1.	Grand Avenue & Cesar Chavez Avenue	0.656	B	0.814	D
2.	Grand Avenue & Temple Street	0.627	B	0.717	C
3.	Hill Street & Ord Street	0.578	A	0.431	A
4.	Hill Street & Temple Street	0.645	B	0.709	C
5.	Broadway & Ord Street	0.450	A	0.544	A
6.	Broadway & Cesar Chavez Avenue	0.623	B	0.645	B
7.	Broadway & Arcadia Street	0.186	A	0.301	A
8.	Broadway & US-101 Southbound Off-Ramp/Aliso Street	0.311	A	0.365	A
9.	Broadway & Temple Street	0.531	A	0.546	A
10.	New High Street/Spring Street & Cesar Chavez Avenue	0.480	A	0.358	A
11.	Spring Street & Arcadia Street	0.307	A	0.124	A
12.	Spring Street & Aliso Street	0.340	A	0.138	A
13.	Spring Street & Temple Street	0.746	C	0.421	A
14.	Main Street & Cesar Chavez Avenue	0.355	A	0.437	A
15.	Main Street & Arcadia Street	0.233	A	0.373	A
16.	Main Street & Aliso Street	0.163	A	0.347	A
17.	Main Street & Temple Street	0.282	A	0.543	A
18.	Los Angeles Street & Arcadia Street	0.329	A	0.337	A
19.	Los Angeles Street & Aliso Street/US-101 Southbound On-Ramp	0.200	A	0.380	A
20.	Alameda Street & Cesar Chavez Avenue	0.650	B	0.612	B
21.	Alameda Street & Arcadia Street/US-101 Northbound Off-Ramp	0.745	C	0.793	C
22.	Alameda Street & Aliso Street/Commercial Street	0.504	A	0.714	C

V/C - Volume to Capacity Ratio
LOS - Level of Service

- LACMTA 2 - Line 2 is a local east/west line that provides service from Pacific Palisades to Downtown Los Angeles and travels primarily in a counter clockwise loop along Grand Avenue, Temple Street, Broadway, and Cesar Chavez Avenue within the study area. This line runs every day, including holidays, at a peak frequency of approximately 11-13 minutes. The eastern terminus is at the intersection of Pacific Coast Highway and Sunset Boulevard in Pacific Palisades. The western terminus is at the corner of Broadway and Venice Boulevard in Downtown Los Angeles.

- LACMTA 4 – Line 4 is a local east/west line that provides service from Santa Monica to Downtown Los Angeles and travels primarily along Temple Street within the study area. This line runs every day, including holidays, at a frequency of approximately 12-14 minutes during peak commute hours. The western terminus is at the intersection of 2nd Street and Santa Monica Boulevard in Santa Monica. The eastern terminus is at the intersection of Broadway and Venice Boulevard in Downtown Los Angeles.

- LACMTA 10 - Line 10 is a local east/west line that provides service from West Hollywood to Los Angeles and travels along Temple Street and Hill Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 8-10 minutes during peak commute hours. The western terminus is at the intersection of San Vicente Boulevard and Melrose Avenue in West Hollywood. The eastern terminus is at the corner of Main Street and Venice Boulevard in Los Angeles.

- LACMTA 30/330 – Line 30/330 is local east/west line that provides service from West Hollywood to East Los Angeles and travels along Los Angeles Street and Temple Street within the study area. This line runs every day, including holidays, at a peak frequency of 6-9 minutes. The western terminus is at the intersection of San Vicente Boulevard and Sunset Boulevard in West Hollywood. The eastern terminus is at the Metro Gold Line Indiana Station in East Los Angeles.

- LACMTA 33 - Line 33 is a local east/west line that provides service from Santa Monica to Downtown Los Angeles and travels primarily in a counter clockwise loop along Main Street, Cesar Chavez Boulevard, and Spring Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 20-25 minutes during peak commute hours. The western terminus is at the intersection of Ocean Boulevard and Santa Monica Boulevard in Santa Monica. The eastern terminus is at Union Station in Downtown Los Angeles.

- LACMTA 40 - Line 40 is a local north/south line that provides service from Redondo Beach to Downtown Los Angeles and travels primarily along Alameda Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 7-10 minutes during peak commute hours. The northern terminus is at Union Station in Downtown Los Angeles. The southern terminus is at the South Bay Galleria in Redondo Beach.

- LACMTA 45 - Line 45 is a local north/south line that provides service from Rosewood to Lincoln Heights and travels along Broadway within the study area. This line runs every day, including holidays, at a peak frequency of 6-9 minutes during peak commute hours. The northern terminus is at the intersection of Broadway and Thomas Street in Lincoln Heights. The southern terminus is at the intersection of San Pedro Street and Rosecrans Avenue in Rosewood.

- LACMTA 48 - Line 48 is a local north/south line that provides service from Los Angeles to Downtown Los Angeles and travels along Hill Street and Temple Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 6-10 minutes during peak commute hours. The northern terminus is at the intersection of Temple Street and Figueroa Street. The southern terminus is at the Metro Green Line Avalon Station in Los Angeles.

- LACMTA 68 - Line 68 is a local east/west line that provides service from Los Angeles to Montebello and travels primarily in a counter clockwise loop along Main Street, Cesar Chavez Boulevard, and Spring Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 12-15 minutes during peak commute hours. The western terminus is at the intersection of Broadway and Temple Street in Los Angeles. The eastern terminus is at the Shoppes in Montebello.

- LACMTA 70 - Line 70 is a local east/west line that provides service from Los Angeles to El Monte and travels along Spring Street and Cesar Chavez Boulevard within the study area. This line runs every day, including holidays, at a peak frequency of approximately 7-9 minutes during peak commute hours. The western terminus is at the intersection of 17th Street and Hill Street in Los Angeles. The eastern terminus is at the El Monte Transit Center in El Monte.

- LACMTA 71 - Line 71 is a local east/west line that provides service within Los Angeles. It travels along Main Street and Cesar Chavez Boulevard within the study area. This line runs every day, including holidays, at a peak frequency of approximately 13-15 minutes during peak commute hours. The western terminus is at the intersection of 17th Street and Hill Street in Los Angeles. The eastern terminus is at the Cal State Los Angeles Station in Los Angeles.

- LACMTA 76 - Line 76 is a local east/west line that provides service from Downtown Los Angeles to El Monte and travels primarily along Spring Street, Cesar Chavez Boulevard, and Alameda Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 11-13 minutes during peak commute hours. The western terminus is at the intersection of Olive Street and Venice Boulevard in Downtown Los Angeles. The eastern terminus is at the El Monte Transit Center in El Monte.

- LACMTA 78 - Line 78 is a local east/west line that provides service from Downtown Los Angeles to Arcadia and travels along Spring Street and Cesar Chavez Boulevard within the study area. This line runs every day, including holidays, at a peak frequency of approximately 10-12 minutes during peak commute hours. The western terminus is at the intersection of 18th Street and Venice Boulevard in Downtown Los Angeles. The eastern terminus is at the intersection of Myrtle Avenue and Longden Avenue in Arcadia.

- LACMTA 79 - Line 79 is a local east/west line that provides service from Downtown Los Angeles to Arcadia and travels along Spring Street and Cesar Chavez Boulevard within the study area. This line runs every day, including holidays, at a peak frequency of approximately 18-20 minutes during peak commute hours. The western terminus is at the intersection of Olive Street and Venice Boulevard in Downtown Los Angeles. The eastern terminus is at the intersection of St.John Street and 2nd Avenue in Arcadia.

- LACMTA 81 - Line 81 is a local north/south line that provides service from South Los Angeles to Eagle Rock and travels along Hill Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 6-10 minutes during peak commute hours. The northern terminus is at the intersection of Eagledale Avenue and Colorado Boulevard in Eagle Rock. The southern terminus is at the Harbor Freeway Green Line Station in South Los Angeles.

- LACMTA 83 - Line 83 is a local north/south line that provides service from Downtown Los Angeles to Eagle Rock and travels primarily in a clockwise loop along Broadway, Cesar Chavez Boulevard, and Main Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 19-22 minutes during peak commute hours. The northern terminus is at the intersection of Eagle Rock Boulevard and York Boulevard in Eagle Rock. The southern terminus is at the intersection of Main Street and Venice Boulevard in Downtown Los Angeles.

- LACMTA 84 - Line 84 is a local north/south line that provides service from Downtown Los Angeles to Eagle Rock and travels along Broadway within the study area. This line runs every day, including holidays, at a peak frequency of approximately 13-15 minutes during peak commute hours. The northern terminus is at the intersection of Colorado Boulevard and Eagledale Avenue in Eagle Rock. The southern terminus is at the intersection of Broadway and Temple Street in Downtown Los Angeles.

- LACMTA 90 - Line 90 is a local north/south line that provides service from Downtown Los Angeles to Sylmar and travels along Hill Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 24-30 minutes during peak commute hours. The northern terminus is at Olive View Medical Center in Sylmar. The southern terminus is at the intersection of Hill Street and Venice Boulevard in Downtown Los Angeles.

- LACMTA 91 - Line 91 is a local north/south line that provides service from Downtown Los Angeles to Sunland and travels along Hill Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 24-30 minutes during peak commute hours. The northern terminus is at the intersection of Foothill Boulevard and Sunland Boulevard in Sunland. The southern terminus is at the intersection of Hill Street and Venice Boulevard in Downtown Los Angeles.

- LACMTA 92 - Line 92 is a local north/south line that provides service from Downtown Los Angeles to Burbank and travels primarily in a counter clockwise loop along Main Street, Spring Street, and Temple Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 16-18 minutes during peak commute hours. The northern terminus is at the Burbank Station in Burbank. The southern terminus is at the intersection of Main Street and 11th Street in Downtown Los Angeles.

- LACMTA 94 - Line 94 is a local north/south line that provides service from Downtown Los Angeles to San Fernando and travels along Hill Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 14-18 minutes during peak commute hours. The northern terminus is at the intersection of Truman Street and Hubbard Street in San Fernando. The southern terminus is at the intersection of Hill Street and Venice Boulevard in Downtown Los Angeles.

- LACMTA 96 - Line 96 is a local north/south line that provides service from Downtown Los Angeles to Burbank and travels along Spring Street and Ord Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 28-30 minutes during peak commute hours. The northern terminus is at Burbank Station in Burbank. The southern terminus is at the intersection of Olive Street and Venice Boulevard in Downtown Los Angeles.

- LACMTA 378 - Line 378 is a local east/west line that provides service from Downtown Los Angeles to Arcadia and travels along Spring Street and Cesar Chavez Boulevard within the study area. This line runs Monday through Friday at a frequency of approximately 17-19 minutes during peak commute hours. The western terminus is at the intersection of 18th Street and Venice Boulevard in Downtown Los Angeles. The eastern terminus is at the intersection of Myrtle Avenue and Longden Avenue in Arcadia.

- LACMTA 442 - Line 442 is a north/south express line that provides service from Downtown Los Angeles to Hawthorne and travels along Los Angeles Street, Alameda Street, and Cesar Chavez Avenue within the study area. This line runs Monday through Friday at a peak frequency of approximately 24-30 minutes during peak commute hours. The northern terminus is at Union Station in Downtown Los Angeles. The southern terminus is at the Hawthorne/Lennox Station in Hawthorne.

- LACMTA 487 - Line 487 is an east/west express line that provides service from Los Angeles to El Monte and travels primarily along Aliso Street, Alameda Street, Arcadia Street, and Spring Street within the study area. This line runs every day, including holidays, at a peak frequency of approximately 20-22 minutes. The western terminus is at the intersection of Westlake Avenue and Wilshire Boulevard in Los Angeles. The eastern terminus is at the El Monte Transit Center in El Monte.

- LACMTA 489 - Line 489 is an east/west express line that provides service from Los Angeles to El Monte and travels primarily along Aliso Street, Alameda Street, Arcadia Street, and Spring Street within the study area. This line runs Monday through Friday at a peak frequency of approximately 20-22 minutes during peak commute hours. The western terminus is at the intersection of Westlake Avenue and Wilshire Boulevard in Los Angeles. The eastern terminus is at the intersection of Rosemead Boulevard and Huntington Boulevard in Temple City.

- LACMTA 704 - Line 704 is an east/west rapid bus line that provides service from Los Angeles to Santa Monica and travels along Cesar Chavez Avenue within the study area. This line runs every day, including holidays, at a peak frequency of approximately 8-12 minutes during peak commute hours. The western terminus is at the intersection of 2nd Street and Santa Monica Boulevard in Santa Monica. The eastern terminus is at Union Station in Downtown Los Angeles.

- LACMTA 728 - Line 728 is an east/west rapid bus line that provides service from Century City to Los Angeles and travels along Spring Street and Cesar Chavez Avenue within the study area. This line runs Monday through Friday at a peak frequency of approximately 10-12 minutes during peak commute hours. The western terminus is at the intersection of Constellation Boulevard and Century Park West in Century City. The eastern terminus is at Union Station in Downtown Los Angeles.

- LACMTA 733 - Line 733 is an east/west rapid bus line that provides service from Century City to Los Angeles and travels along Spring Street and Cesar Chavez Avenue within the study area. This line runs every day, including holidays, at a peak frequency of approximately 9-12 minutes during peak commute hours. The western terminus is at the intersection of Ocean Avenue and Santa Monica Boulevard in Santa Monica. The eastern terminus is at Union Station in Downtown Los Angeles.

- LACMTA 745 - Line 745 is a north/south rapid bus line that provides service from Downtown Los Angeles to South Los Angeles and travels along Broadway and Cesar Chavez Avenue within the study area. This line runs Monday through Friday at a peak frequency of approximately 6-10 minutes during peak commute hours. The northern terminus is at Union Station in Downtown Los Angeles. The southern terminus is at the Metro Green Line Harbor Freeway Station in Los Angeles.

- LACMTA 770 - Line 770 is an east/west rapid bus line that provides service from Los Angeles to El Monte and travels along Spring Street and Cesar Chavez Avenue within the study area. This line runs Monday through Saturday at a peak frequency of approximately 14-15 minutes during peak commute hours. The western terminus is at the intersection of 17th Street and Hill Street in Los Angeles. The eastern terminus is at the El Monte Transit Center in El Monte.

- LACMTA 794 - Line 794 is a north/south rapid bus line that provides service from Downtown Los Angeles to Sylmar and travels along Hill Street within the study area. This line runs Monday through Friday at a peak frequency of approximately 12-17 minutes during peak commute hours. The northern terminus is at Sylmar Station in Sylmar. The southern terminus is at the intersection of Hill Street and Venice Boulevard in Downtown Los Angeles.

- FT 481 - Line 481 is an east/west express service line that travels from El Monte to Koreatown in Los Angeles and travels primarily along Wilshire Boulevard within the study area. This line runs Monday through Friday during peak commute hours and has a peak frequency of approximately 10 minutes. No service is provided on mid-days during the week, during the weekends, or on holidays.

- FT 493 - Line 493 is an east/west express service line that travels from Diamond Bar to Downtown Los Angeles and travels along US-101 Freeway, Arcadia Street, Spring Street, Aliso Street, and Alameda Street within the study area. This line runs Monday through Friday during peak commute hours and has a peak frequency of approximately 10 minutes. No service is provided on mid-days during the week, during the weekends, or on holidays.

- FT 495 - Line 495 is an east/west express service line that travels from Industry to Downtown Los Angeles and travels along US-101 Freeway, Arcadia Street, Spring Street, Aliso Street, and Alameda Street within the study area. This line runs Monday through Friday during peak commute hours and has a peak frequency of approximately 30 minutes. No service is provided on mid-days during the week, during the weekends, or on holidays.

- FT 497 - Line 497 is an east/west express service line that travels from Chino to Downtown Los Angeles and travels along US-101 Freeway, Arcadia Street, Spring Street, Aliso Street, and Alameda Street within the study area. This line runs Monday through Friday during peak commute hours at a peak frequency of approximately 10-12 minutes. No service is provided on mid-days during the week, during the weekends, or on holidays.

- FT 498 - Line 498 is an east/west express service line that travels from Azusa to Downtown Los Angeles and travels along US-101 Freeway, Arcadia Street, Spring Street, Aliso Street, and Alameda Street within the study area. This line runs Monday through Friday during peak commute hours at a peak frequency of approximately 10-11 minutes. No service is provided on mid-days during the week, during the weekends, or on holidays.

- FT 499 - Line 499 is an east/west express service line that travels from San Dimas to Downtown Los Angeles and travels along US-101 Freeway, Arcadia Street, Spring Street, Aliso Street, and Alameda Street within the study area. This line runs Monday through Friday during peak commute hours at a peak frequency of approximately 10-12 minutes. No service is provided on mid-days during the week, during the weekends, or on holidays.

- FT 699 - Line 699 is an east/west express service line that travels from Montclair to Downtown Los Angeles and travels along US-101 Freeway, Arcadia Street, Spring Street, Aliso Street, and Alameda Street within the study area. This line runs Monday through Friday during peak commute hours at a peak frequency of approximately 7-10 minutes. No service is provided on mid-days during the week, during the weekends, or on holidays.

- BBB R10 – Line R10 is an east/west 'Rapid Bus' line that provides service from Chinatown to Santa Monica and travels primarily along Temple Street, Los Angeles Street, and Cesar Chaves Avenue within the study area. This line runs every day, including holidays, at a peak frequency of approximately 9-13 minutes during peak commute hours. The eastern terminus is at the intersection of Main Street and Alameda Street in Downtown Los Angeles. The western terminus is at the intersection of 2nd Street and Broadway in Santa Monica.

- OCTA Route 701 – Route 701 is a local north/south express line that provides service from Los Angeles to Huntington Beach and travels primarily along Temple Street and Alameda Street within the study area. This line runs Monday through Friday at a frequency of 20-22 minutes during peak commute hours. The northern terminus is at Union Station in Downtown Los Angeles. The southern terminus is at the Goldenwest Transportation Center in Huntington Beach. No service is provided on mid-days during the week, during the weekends, or on holidays.

- TT 4 – Route 4 is a north/south express route that provides service from Downtown Los Angeles to Torrance and travels primarily along Spring Street, Aliso Street, Alameda Street, and Arcadia Street within the study area. This line runs Monday through Friday at a frequency of 30 minutes during peak commute hours. The northern terminus is at Union Station in Downtown Los Angeles. The southern terminus is at the intersection of

Hawthorne Boulevard and Pacific Coast Highway. No service is provided on mid-days during the week, during the weekends, or on holidays.

- LADOT DASH B – Route B is a north/south dash route that provides service from Chinatown to Exposition Park and travels primarily along Broadway, Ord Street, Alameda Street, Temple Street, and Grand Avenue within the study area. This line runs Monday through Friday at a frequency of 8 minutes during peak commute hours. The northern terminus is at intersection of Broadway and Bernard Street in Chinatown. The southern terminus is at the intersection of Exposition Boulevard and Vermont Avenue in Exposition Park. No service is provided during the weekends or on holidays.

- LADOT CE 409 – Route 409 is a north/south express route that provides service from Sylmar to Downtown Los Angeles and travels along Broadway and Temple Street within the study area. This line runs Monday through Friday at a frequency of 9-13 minutes during peak commute hours. The northern terminus is at the intersection of Foothill Boulevard and Glenoaks Boulevard in Sylmar. The southern terminus is at the intersection of Hill Street and 12th Street in Downtown Los Angeles. No service is provided on mid-days during the week, during the weekends, or on holidays.

- SC 794 – Route 794 is a north/south dual route that provides service from Burbank and Downtown Los Angeles to Santa Clarita. The route travels along Spring Street and Alameda Street within the study area. Both lines run Monday through Friday at a frequency of 25 minutes during peak commute hours. The northern termini are at the intersection of Avenue Stanford and Technology Drive. The southern termini are at Burbank Metrolink Station and Burbank Union Station in Downtown Los Angeles. No service is provided on mid-days during the week, during the weekends, or on holidays.

- SC 799 – Route 799 is a north/south route that provides service from Santa Clarita to Downtown Los Angeles and travels along Spring Street, Main Street, and Cesar Chavez Boulevard within the study area. This line runs Monday through Friday at a frequency of 10 minutes during peak commute hours. The northern terminus is at the Santa Clarita Metrolink Station in Santa Clarita. The southern terminus is at the intersection of 7th Street and Spring Street in Downtown Los Angeles. No service is provided on mid-days during the week, during the weekends, or on holidays.

- CO Citadel Outlets Express – This is an express route that provides service within Los Angeles and travels primarily along Los Angeles Street within the study area. This line runs Monday through Sunday at a peak frequency of 50 minutes. The northern terminus is at Union Station in Downtown Los Angeles. The southern terminus is at the intersection of Telegraph Road and Citadel Drive at the Citadel Outlets in Los Angeles.

- Metro Purple Line – The Metro Purple Line is a heavy-rail subway line that provides service between Downtown Los Angeles and Koreatown. The western terminus is at the Metro Wilshire/Western Station in Koreatown. The eastern terminus is at Union Station in Downtown Los Angeles. Union Station is two blocks east of the project site. The Metro Purple Line is planned to be extended nine miles westward to Westwood in the future. Per MTA, the first section of this extension would provide service to the City of Beverly Hills and is expected to be open for service by 2023.

- Metro Red Line – The Metro Red Line is a heavy-rail subway line that provides service between North Hollywood and Downtown Los Angeles. The western terminus is at the North Hollywood Station in Hollywood. The eastern terminus is at Union Station in Downtown Los Angeles. Union Station is two blocks east of the project site.

These transit lines within the study area are illustrated in Figure 3. It can be observed from Figure 3 that there is a robust transit network serving the study area.

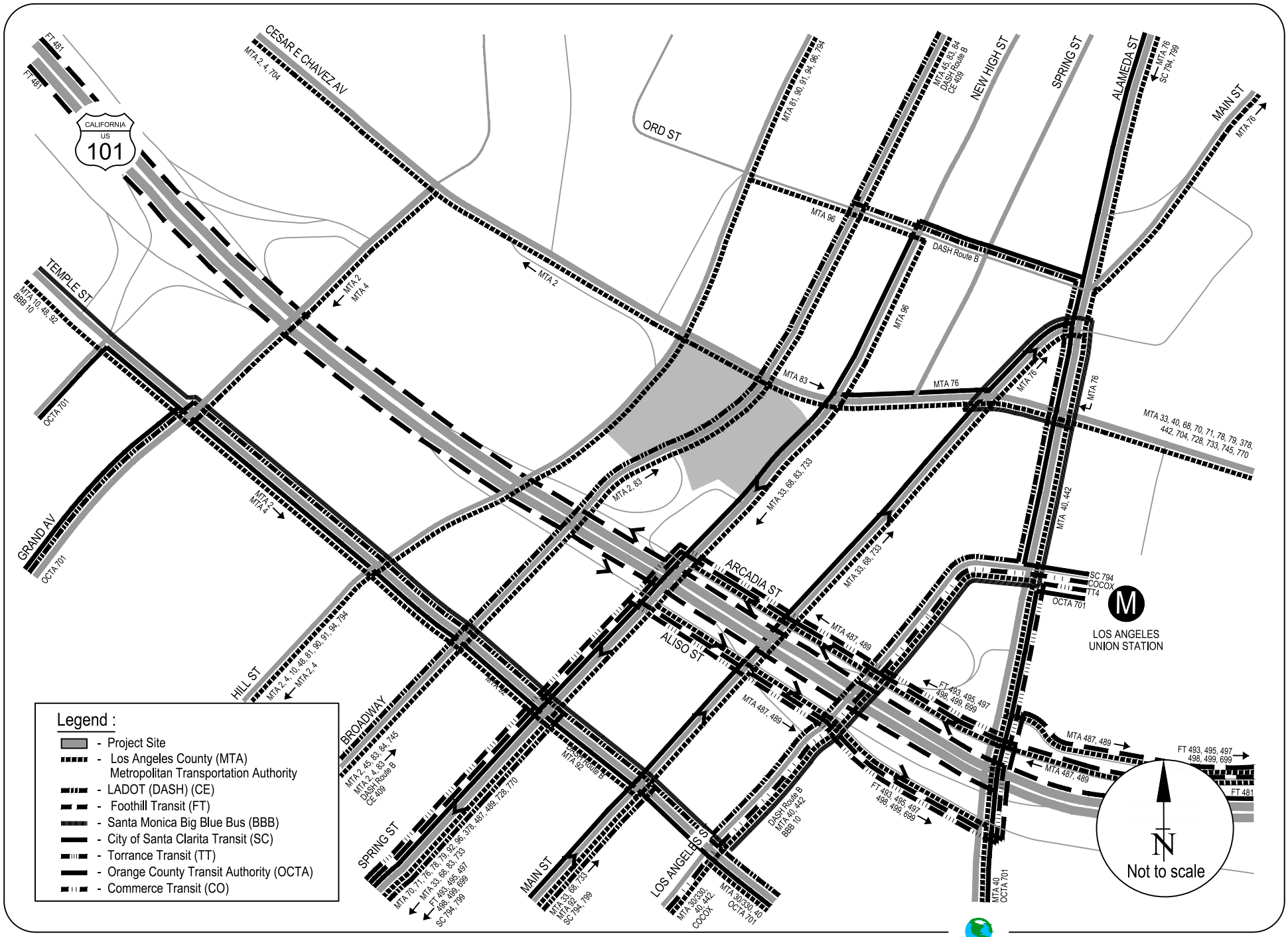

FIGURE 3
EXISTING TRANSIT LINES

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III. PROJECT TRAFFIC PROJECTIONS

In order to properly evaluate the potential impact of the Proposed Project on the local street system, estimates of the Project traffic volumes were developed. The traffic generated by the Proposed Project was estimated and assigned separately to the street system. The addition of Project traffic and existing traffic volumes represents the Existing (2014) plus Project scenario. Traffic projections for scenarios are described in the next chapter. This section also includes vehicular and pedestrian access and circulation evaluation.

PROJECT TRAFFIC VOLUMES

The development of traffic generation estimates for the Proposed Project involves the use of a three-step process: trip generation, trip distribution and traffic assignment.

Project Trip Generation

The Proposed Project consists of development on two blocks, Block A located at 527 N. Spring Street and Block B located at 555 N. Broadway. Block A would consist of 119 residential dwelling units, 15,000 square feet of retail use, 11,000 square feet of specialty retail use and 9,000 square feet of restaurant use. Block B would consist of 226 residential dwelling units, 8,000 square feet of retail use, 10,000 square feet of specialty retail use and 2,000 square feet of restaurant use replacing 2,000 square feet of specialty retail use and 1,000 square feet of restaurant use.

Utilizing the ITE's *Trip Generation Manual*, 9th Edition trip rates, the Proposed Project's trip generation was determined. Table 3 presents details of the Proposed Project's trip generation including type of use, size, applicable rate and trip generation estimates. Other calculations within the tables also provide for trip generation associated with from transit trip credit, internal capture trips and pass-by trips per the City of Los Angeles' traffic study guidelines.

TABLE 3
ESTIMATED WEEKDAY PROJECT TRIP GENERATION

	Size	Daily	AM Peak Hour			PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project - Block A								
Apartment [1]	119 d.u.	764	12	48	60	47	25	72
Retail [2]	15,000 s.f.	1,704	26	16	42	70	76	146
Specialty Retail	11,000 s.f.	440	8	5	13	20	20	40
Restaurant	9,000 s.f.	810	4	3	7	45	22	67
Project Trip Generation Total - Less (20%) Transit Trips		2,974	40	58	98	146	114	260
*Internal Capture/Walk (10%) Trips		(297)	(5)	(5)	(10)	(13)	(13)	(26)
**Retail - Pass-By (50%) Trips		(613)	(8)	(7)	(15)	(27)	(26)	(53)
**Specialty Retail - Pass-By (10%) Trips		(32)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(58)	0	0	0	(3)	(2)	(5)
Block A - Project Trip Generation Total (Net)		**1,974**	**26**	**46**	**72**	**101**	**72**	**173**
Proposed Project - Block B								
Apartment [1]	226 d.u.	1,450	23	90	113	88	47	135
Retail [2]	8,000 s.f.	909	14	8	22	38	40	78
Specialty Retail	10,000 s.f.	400	7	5	12	18	18	36
Restaurant	2,000 s.f.	180	1	1	2	10	5	15
Project Trip Generation Total - Less (20%) Transit Trips		2,351	36	83	119	123	88	211
*Internal Capture/Walk (10%) Trips		(235)	(6)	(6)	(12)	(11)	(10)	(21)
**Retail - Pass-By (50%) Trips		(327)	(4)	(4)	(8)	(14)	(14)	(28)
**Specialty Retail - Pass-By (10%) Trips		(29)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(13)	0	0	0	(1)	0	(1)
Existing Use (to be removed)								
Specialty Retail	(2,000) s.f.	(80)	(1)	(1)	(2)	(4)	(3)	(7)
Quality Restaurant	(1,000) s.f.	(90)	(1)	0	(1)	(5)	(2)	(7)
Existing Uses Trip Generation Total - Less (20%) Transit Trips		(136)	(2)	(1)	(3)	(7)	(4)	(11)
Block B - Project Trip Generation Total (Net)		**1,611**	**23**	**72**	**95**	**88**	**59**	**147**
Overall Project Trip Generation Total (Net)		**3,585**	**49**	**118**	**167**	**189**	**131**	**320**
Trip Rates [3]								
Apartment (ITE Land Use 220)	Trips per d.u.	[4]	20%	80%	[4]	65%	35%	[4]
Retail/Shopping Center (ITE Land Use 820)	Trips per 1,000 s.f.	[5]	62%	38%	[5]	48%	52%	[5]
Quality Restaurant (ITE Land Use 931)	Trips per 1,000 s.f.	89.95	50%	50%	0.81	67%	33%	7.49
Specialty Retail (SANDAG Land Use) [6]	Trips per 1,000 s.f.	40.00	60%	40%	[7]	50%	50%	[7]

* Internal capture/walk trips determined after reduction of transit trips.
** Pass-by trips determined after reduction of transit and internal capture trips.

[1] Trip generation estimates for residential use calculated using effective trip generation rate of the overall dwelling units (345 d.u.).
[2] Trip generation estimates for retail use calculated using effective trip generation rate of the overall retail (23,000 s.f.).
[3] Trip Generation Manual, 9th Edition, ITE 2012, unless otherwise noted.
[4] Trip generation rates for apartment was calculated using the following equations:

Daily:	T = 6.06 (X) + 123.56	Where:
AM Peak Hour:	T = 0.49 (X) + 3.73	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	T = 0.55 (X) + 17.65	X = Number of dwelling units

[5] Trip generation for retail/shopping center was calculated using the following formulas:

		Where:
Daily:	Ln(T) = 0.65 Ln(X) + 5.83	Ln = Natural logarithm
AM Peak Hour:	Ln(T) = 0.61 Ln(X) + 2.24	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	Ln(T) = 0.67 Ln(X) + 3.31	X = Area in 1,000 square feet of gross leasable area

[6] *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* , SANDAG, April 2002
[7] AM peak hour is 3% of Daily Trips. PM peak hour is 9% of Daily Trips.

From Table 3, it can be observed that the development in Block A would result in a net total of approximately 1,974 daily trips of which 72 trips would occur during the morning peak hour and 173 trips during the evening peak hour. The development is Block B would result in a net total of approximately 1,611 daily trips of which 95 trips would occur during the morning peak hour and 147 trips during the evening peak hour.

The overall Proposed Project's trip generation would result in a net total of approximately 3,585 daily trips of which 167 trips would occur during the morning peak hour and 320 trips during the evening peak hour.

Project Trip Distribution

The generalized regional trip distribution for Project trips was determined using the methodology described in *Appendix D of the 2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority and based on existing travel patterns in the vicinity of the study area.

The resulting geographic distribution for Project trips is provided below:

	Residential	Commercial
• To and From the North:	26%	26%
• To and From the South:	24%	23%
• To and From the East:	26%	25%
• To and From the West:	24%	26%

Block A is accessed by a right-turn in and out driveway along Broadway, while Block B obtains access from right-turn in and out driveways located on Broadway, Cesar Chavez Avenue and Hill Street.

The general trip distribution percentages for residential use and commercial use are shown in Figures 4 and 5, respectively. Based on these distribution assumptions, location and points of access of the project driveways, and trip generation estimates from the Proposed Project, traffic estimates of project-only trips were developed. These project-only trips are presented in Figures 6A and 6B. Intersection level trip distribution percentages for Block A and Block B as well as Project-only trips for each component of the project are included in Appendix D of this report.

FIGURE 4
PROJECT TRIP DISTRIBUTION - RESIDENTIAL USE

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FIGURE 5
PROJECT TRIP DISTRIBUTION - COMMERCIAL USE

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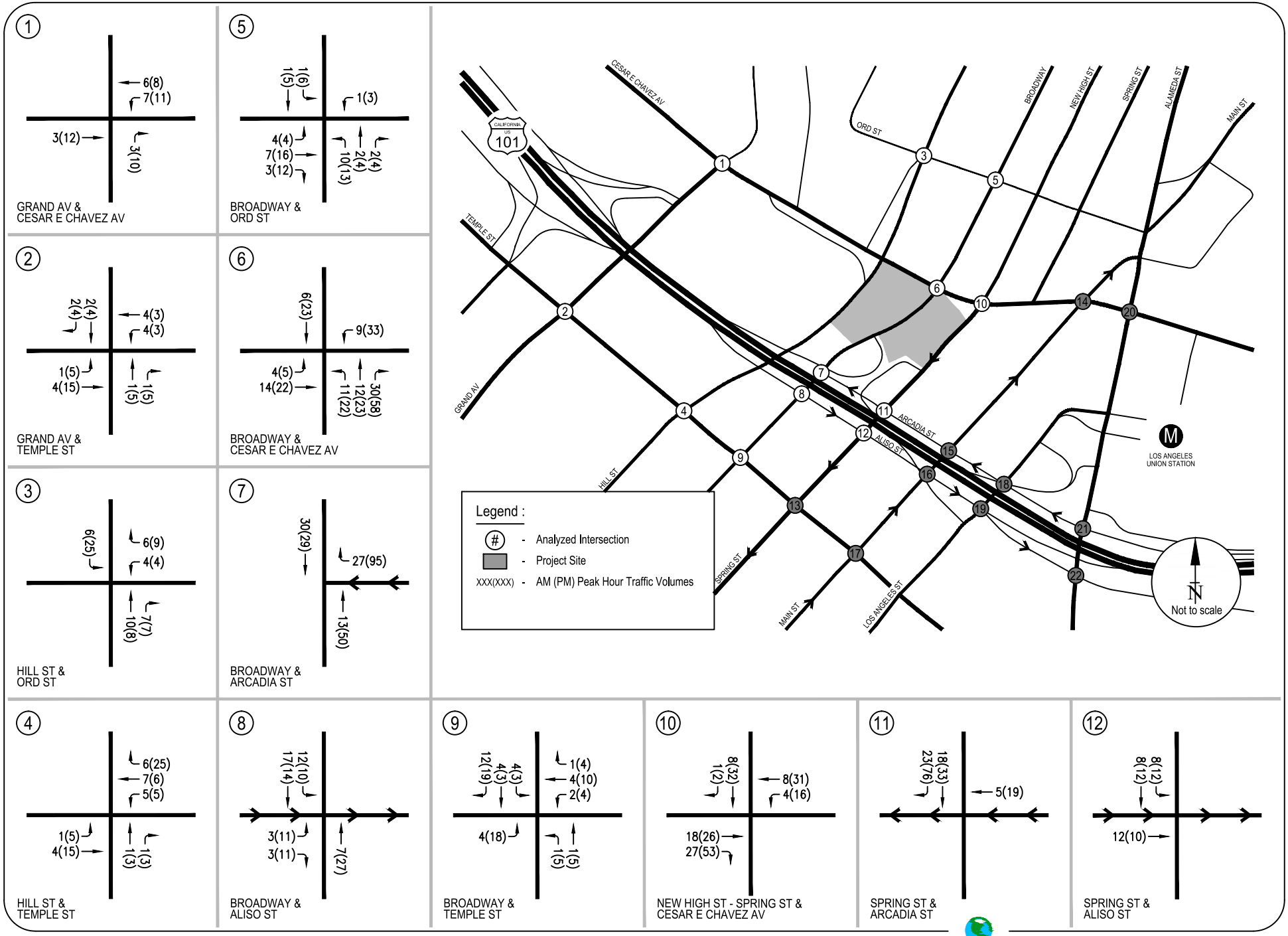

FIGURE 6A
PROJECT ONLY - PEAK HOUR TRAFFIC VOLUMES

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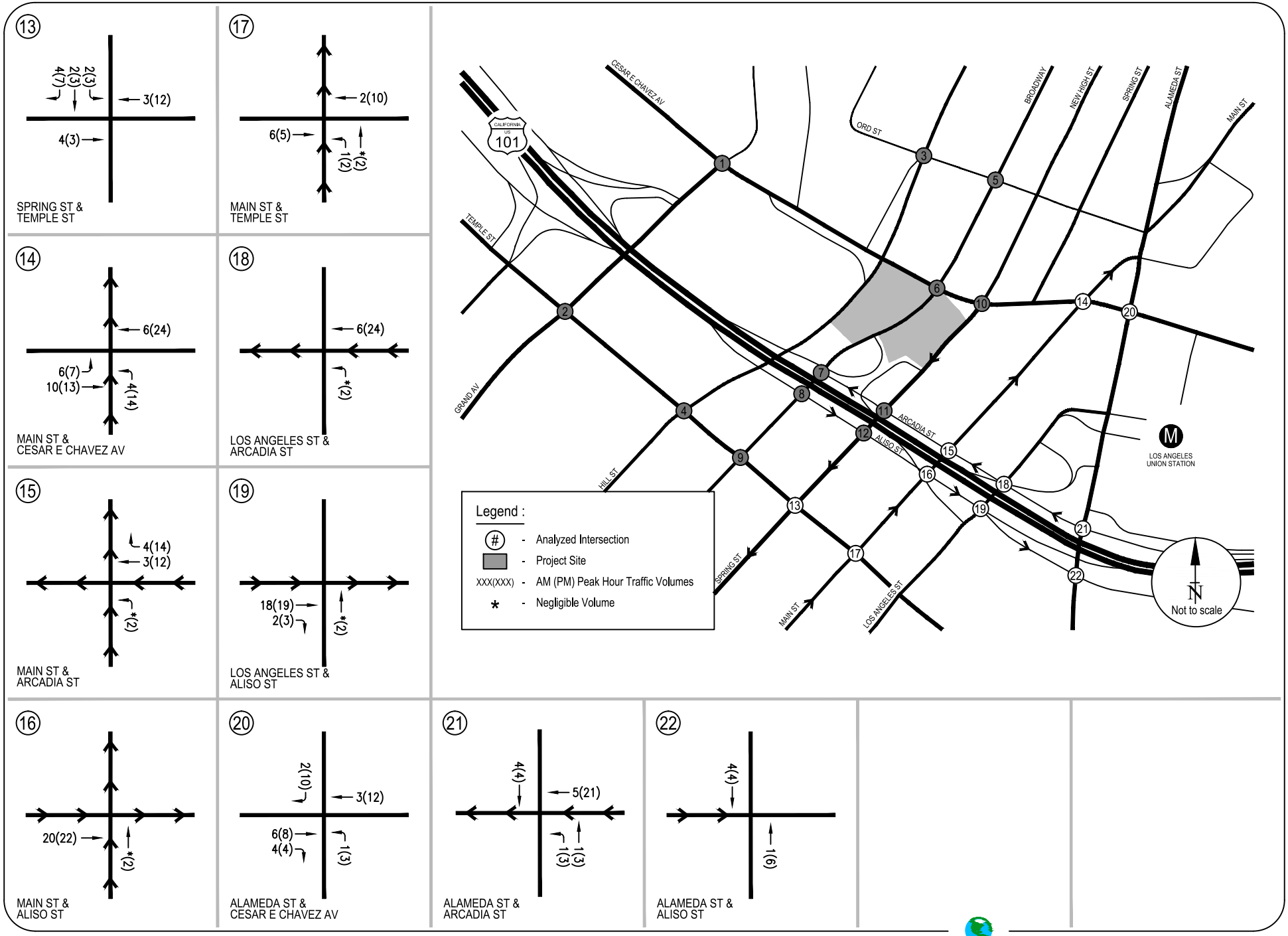

FIGURE 6B
PROJECT ONLY - PEAK HOUR TRAFFIC VOLUMES

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EXISTING (2014) PLUS PROJECT TRAFFIC VOLUMES

Utilizing the project-only traffic estimates developed for both AM and PM peak hours, traffic forecasts for the Existing (2014) plus Project conditions were developed. The existing (2014) traffic volumes were combined with the project-only traffic volumes to obtain the Existing plus Project traffic volume forecasts. The Existing (2014) plus Project traffic volumes during both AM and PM peak hours are presented in Figures 7A and 7B.

VEHICULAR ACCESS AND CIRCULATION

Block A is located at 527 N. Spring Street and is bounded by Cesar Chavez Avenue on the north, Broadway on the west, Spring Street on the east, and the US-101 Freeway northbound ramps on the south. The Project site plan is illustrated in Figure 8. As shown in Figure 8, a driveway located along Broadway would provide access to Block A. This driveway would be limited to right-turns in and right-turns out only.

Block B is located at 555 N. Broadway, west of Block A, and is bounded by Cesar Chavez Avenue on the north, Hill Street on the west, Broadway on the east and the US-101 Freeway on the south. As shown in Figure 8, three driveways, one each along Cesar Chavez Avenue, Hill Street and Broadway would provide access to Block B. These driveways also would be limited to right-turns in and out only.

Broadway provides directs access to both Block A and Block B. This section of Broadway is classified as a secondary arterial roadway and generally provides four travel lanes, two lanes in each direction.

Cesar Chavez Avenue and Hill Street provide direct access to Block B. Cesar Chavez Avenue is a major arterial roadway and offers three lanes in the westbound direction and two lanes in the eastbound directions. Hill Street is classified as a secondary arterial roadway and provides four travel lanes, two lanes in each direction.

An evaluation of the location of the driveways in relation to adjacent intersections as well as other roadway infrastructure elements such as presence of parking and geometric constraints was conducted. It was determined that these driveways would function adequately.

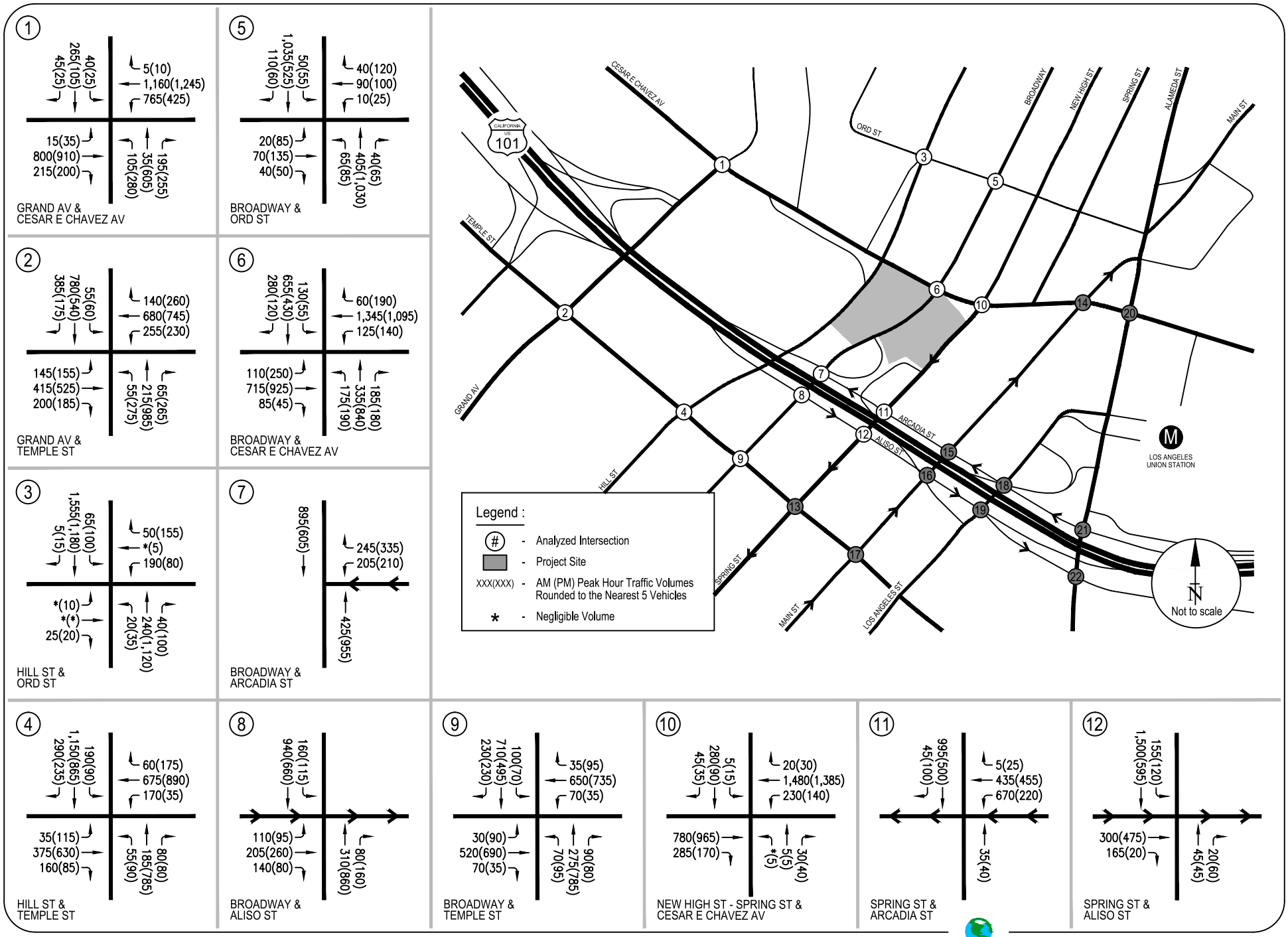

FIGURE 7A
EXISTING (2014) PLUS PROJECT CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

RAJU Associates, Inc.

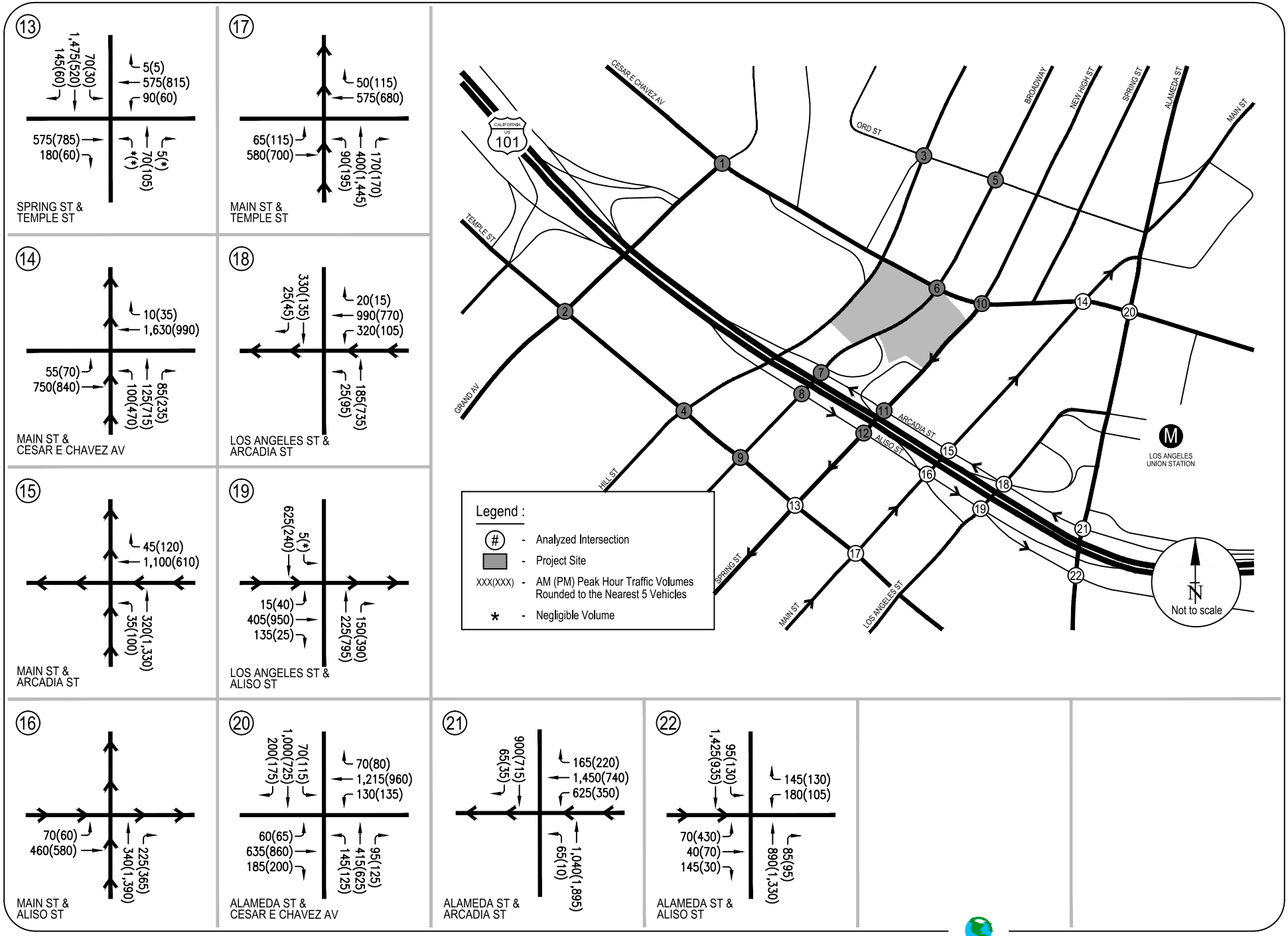

FIGURE 7B
EXISTING (2014) PLUS PROJECT CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

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SOURCE: TRAMMELL CROW COMPANY

FIGURE 8
PROJECT CONCEPTUAL SITE PLAN

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PEDESTRIAN ACCESS AND CIRCULATION

Currently, pedestrian infrastructure elements including sidewalks and cross-walks at signalized intersections along all of the adjacent streets serving the site are available for pedestrians. Pedestrian crosswalks are available at these signalized intersections within the vicinity of the Project site:

- Broadway & Cesar Chavez Avenue – Crosswalks are provided on all four approaches this intersection.
- Broadway & Arcadia Street – Crosswalks are provided on the north and east legs of this 'T'-intersection.
- Broadway & Aliso Street – Crosswalks are provided on the south, west and east legs of this intersection.
- New High Street-Spring Street & Cesar Chavez Avenue – Crosswalks are provided on all four approaches this intersection.
- Spring Street mid-block pedestrian crossing – A signalized pedestrian crossing is located on Spring Street between Cesar Chavez Avenue and Arcadia Street with a high visibility crosswalk.
- Spring Street & Arcadia Street – High visibility crosswalks are provided on the north and west legs of the intersection. A crosswalk is provided on the east leg of the intersection.
- Spring Street & Aliso Street – High visibility crosswalks are provided on the south and west legs of the intersection. A crosswalk is provided on the east leg of the intersection.

The existing site offers pedestrian access and circulation possibilities from Broadway, Spring Street, Cesar Chavez Avenue, and Arcadia Street. Sidewalks are available on both sides of these streets in the vicinity of the Project site. Broadway provides 9-foot wide sidewalks on both sides of the street adjacent to the Project site, while Spring Street provides a 15-foot wide sidewalk on both sides of the street. The existing sidewalk on south side of Cesar Chavez Avenue adjacent to Block A of the Project site is approximately 15 feet wide and 8 feet wide adjacent to Block B. The sidewalk on the north side of Cesar Chavez Avenue is approximately 8 feet wide. Arcadia Street provides a 10-foot wide sidewalk on both sides of the street adjacent to the Project site. As part of the Project, a pedestrian trail (or paseo) is being proposed that would connect Union Station to La Plaza Museum, through the Project site, to Fort Moore.

Adequate pedestrian infrastructure would be available in the vicinity of the Project. Numerous pedestrian access and circulation possibilities to and from the Proposed Project site will be available to access Union Station. A linkage study jointly sponsored by Metro and City of Los Angeles is currently underway. The Project will coordinate with the City of Los Angeles to facilitate safety and other enhancements associated with the pedestrian and bicycle infrastructure system adjacent to the site.

In summary, on-site vehicular and pedestrian access and circulation associated with the site was assessed and deemed adequate. The on-site truck loading/unloading area as well as its access/egress were assessed and found to be adequate.

IV. FUTURE YEAR 2018 TRAFFIC PROJECTIONS

In order to properly evaluate the potential impact of the Proposed Project on the local street system, estimates of the Future Year 2018 traffic volumes both with and without the Project were developed. The Future Year 2018 without the Project was first developed including estimates for background growth in area-wide trip making and trips generated by future development (related projects) in the vicinity of the study area. The Future (2018) without Project traffic represents the cumulative base conditions. Next, the traffic generated by the Proposed Project was estimated and assigned separately to the street system. The addition of Project traffic and the cumulative base traffic volumes provides traffic volume estimates for the Future Cumulative (2018) plus Project scenario. Each of these future traffic scenarios is described further in this chapter.

CUMULATIVE (2018) BASE TRAFFIC PROJECTIONS

The Cumulative (2018) Base traffic projections reflect growth in traffic from two primary sources: Firstly, the background or ambient growth to reflect the effects of overall area-wide regional growth both within and outside the study area; and secondly, from traffic generated by specific related (cumulative) projects located within, or in the vicinity of, the study area. Each of these components is described below.

Area-wide Ambient Traffic Growth

The traffic in the vicinity of the study area was estimated to increase at a rate of about 1% per year. Future increases in background traffic volumes due to regional growth and development are expected to continue at this rate. With the assumed completion date of 2018, the Existing 2014 traffic volumes were adjusted upward by a factor of 4% to reflect this area-wide regional growth. The resulting Existing plus Ambient Growth (2018) traffic volumes are illustrated in Figures 9A and 9B.

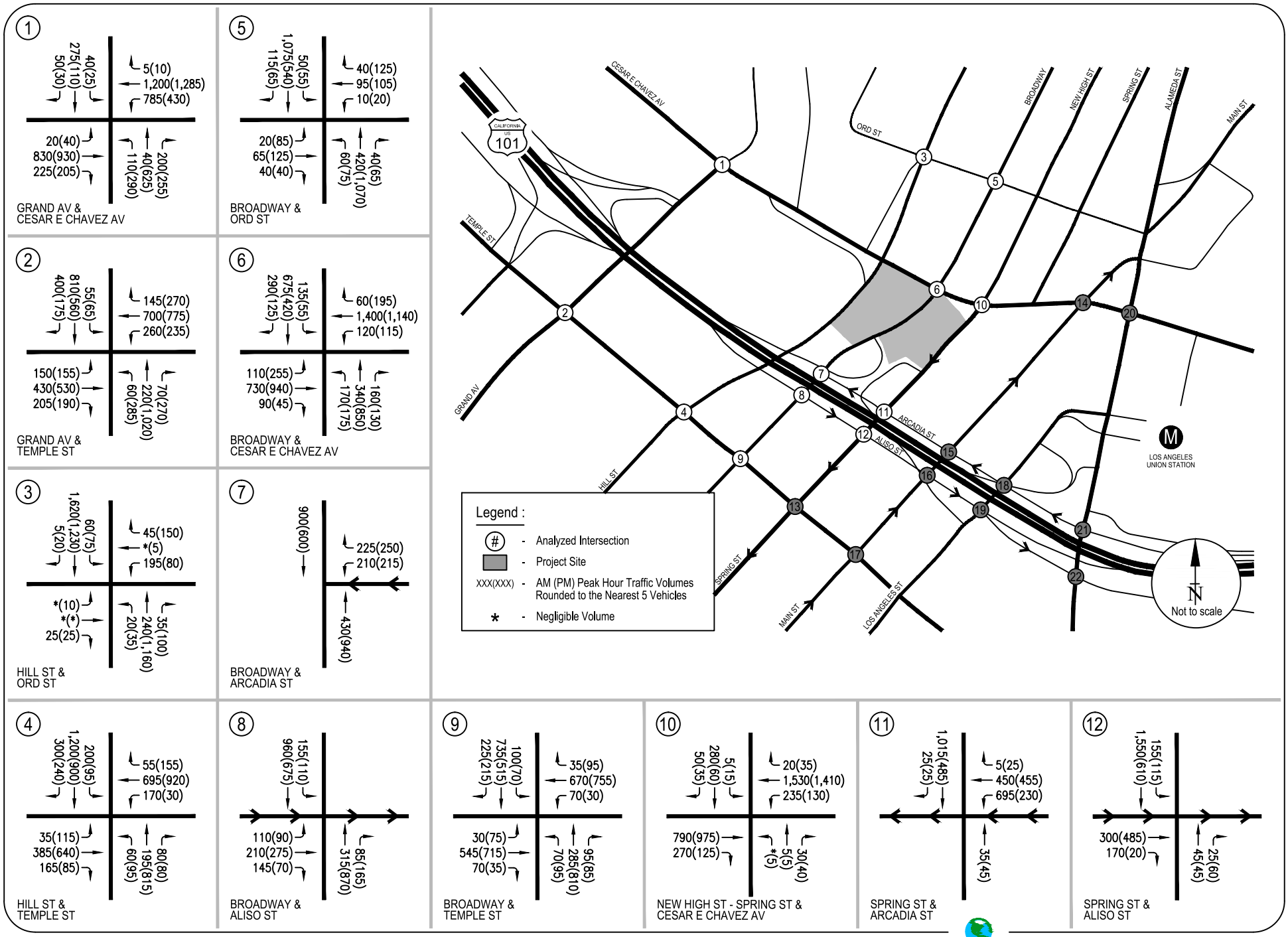

FIGURE 9A
EXISTING WITH AMBIENT GROWTH (2018) CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

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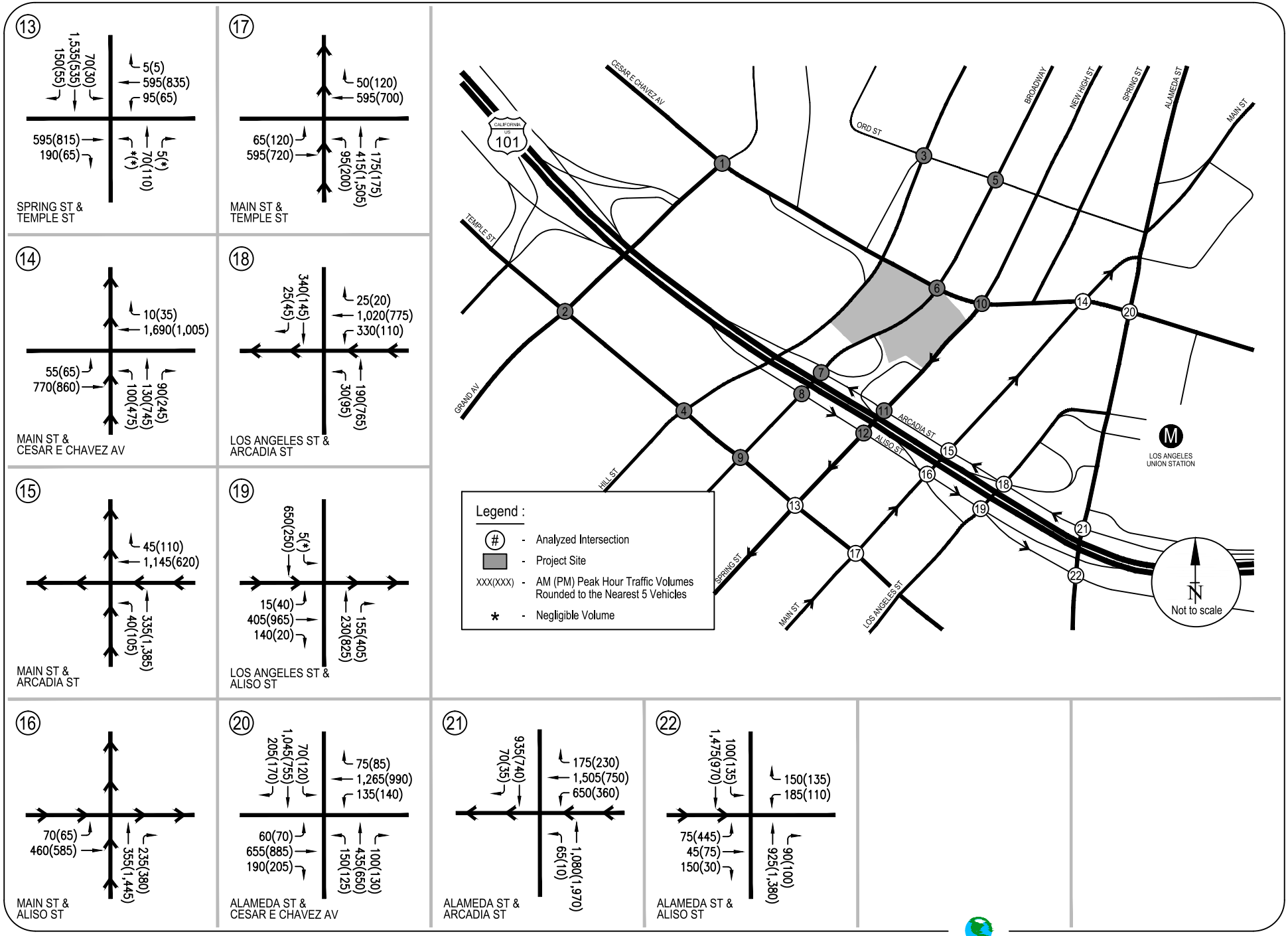

FIGURE 9B
EXISTING WITH AMBIENT GROWTH (2018) CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

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Related Projects Traffic Generation and Assignment

As indicated, the second potential source of traffic growth in the study area is that expected from other future development projects in the vicinity. These related or "cumulative" projects are those developments that are planned and expected to be in place within the same timeframe as the Proposed Project. Data describing related projects in the area was solicited from the City of Los Angeles. Forty-nine related projects were identified within the study area and are listed in Table 4. The locations of these projects are shown in Figure 10.

The trip generation estimates for the related projects within the City of Los Angeles were provided by the City of Los Angeles Department of Transportation and is included in Table 4. As summarized in Table 4, the related projects are expected to generate approximately 11,013 trips during the morning peak hour and 14,209 trips during the evening peak hour. The traffic assignment of the related projects was conducted, and the resulting volumes are shown in Figures 11A and 11B.

Cumulative (2018) Base Traffic Volumes

The related projects' traffic estimates were added to the Existing plus Ambient Growth traffic to obtain the Cumulative (2018) Base traffic volumes. Figures 12A and 12B provide the Cumulative (2018) Base traffic volumes at each of the analysis intersections during both AM and PM peak hours. These volumes represent Future (2018) Cumulative Base (without project) conditions.

CUMULATIVE (2018) PLUS PROJECT TRAFFIC VOLUMES

Utilizing the project-only traffic estimates developed for both AM and PM peak hours, traffic forecasts for the Future Year 2018 plus Project conditions were developed. The Cumulative (2018) Base traffic forecasts were combined with the project-only traffic volumes to obtain the Future with Project traffic volume forecasts. The Future Year 2018 Cumulative plus Project traffic volumes during both AM and PM peak hours are presented in Figures 13A and 13B.

FIGURE 10
LOCATION OF RELATED PROJECTS

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TABLE 4
ESTIMATED WEEKDAY TRIP GENERATION OF RELATED PROJECTS

Map No.	Project Name	Location	Description	Daily	AM Peak Hour			PM Peak Hour		
					IN	OUT	TOTAL	IN	OUT	TOTAL
1	Blossom Plaza	900 N. Broadway	Construct 223 d.u. condominiums, 25,000 s.f. retail, 15,000 s.f. restaurant, 7,000 s.f. cultural center	2,767	66	89	155	105	79	184
2	Hall of Justice Reuse Project	211 W. Temple Street	Retrofit Hall of Justice building, 456,900 s.f. other, 1,000 space parking structure	1,052	122	30	152	25	121	146
3	Ava Little Tokyo	200 S. Los Angeles Street	Construct 570 d.u. condominiums, 280 d.u. apartments, 50,000 s.f. retail	4,331	59	189	248	187	147	334
4	Chninatown Gateway Mixed-Use Projec	639 N. Broadway	Construct 280 d.u. apartments, 22,000 s.f. retail	2,665	40	112	152	154	102	247
5	2005-CEN-2537	1254 W. 3rd Street	Construct 363 d.u. apartments, 7,740 s.f. retail	1,690	30	83	113	84	57	141
6	Bus Maintenance and Inspection Facility	454 E. Commercial Street	Bus maintenance and inspection facility	300	22	8	30	9	1	10
7	Tenten Wilshire Expansion	1027 W. Wilshire Boulevard	Tenten Wilshire expansion 402 d.u. condominiums, 7,428 s.f. retai	1,498	21	92	113	83	53	136
8	Da Vinci Apartments	327 N. Fremont Avenue	Construct 600 apartments, 30,000 s.f. retail	5,457	113	248	361	286	217	503
9	Vibiana Lofts (Mixed Use)	225 S. Los Angeles Street	Construct 300 d.u. condominiums, 3,400 s.f. retai	1,910	88	136	224	75	52	127
10	Northeast Tower (Mixed Use)	215 W. 9th Street	Construct 210 d.u. condominiums, 9,000 s.f. retai	1,140	14	56	70	64	38	102
11	Condominum Project	1101 N. Main Street	Construct 300 d.u. condominiums	1,102	-9	80	71	75	12	87
12	One Santa Fe Project - Mixed Use	300 S. Santa Fe Avenue	Construct 420 apartments, 45,000 s.f. retail, 7,500 s.f. fast food, 7,500 s.f. quality restaurant	2,443	58	150	208	139	90	229
13	Mixed Use	745 S. Spring Street	Construct 247 d.u. condominiums, 10,675 s.f. retai	1,543	23	67	90	80	60	140
14	Mixed Use Project	905 E. 2nd Street	Construct 320 d.u. condominiums, 18,716 s.f. retai	1,207	-6	70	64	69	23	92
15	5th & Olive (formerly Park Fifth) Project	427 W. 5th Street	Construct 615 apartments and 16,309 s.f. restaurant	3,134	42	115	157	164	97	261
16	Apartments	715 N. Yale Street	Construct 65 d.u. apartments	437	7	27	34	26	14	40
17	Bixel & Lucas Project	1102 W. 6th Street	Construct 649 d.u. apartments, 39,996 s.f. retail	4,200	61	195	256	232	155	387
18	8th/ Hope/ Grand Project	609 W. 8th Street	Construct 225 d.u. condominiums, 200 d.u. hotel rooms, 30,000 s.f. retail, and 32,000 s.f. restaurant	4,908	90	104	194	242	159	401
19	Office Building	1130 W. Wilshire Boulevard	Construct 20 student day care, 248 s.f. fast food, 5,375 s.f. high quality restaurant	964	92	12	104	28	61	89
20	MTA Bus Facility	920 N. Vignes Street	Metro Bus Maintenance & Operations	2,277	33	52	85	57	31	88
21	Embassy Tower	848 S. Grand Avenue	Construct 420 hi-rise d.u. condominiums & 38,500 s.f. supermarke	3,882	66	144	210	212	165	377
22	Beverly + Lucas Project	1430 W. Beverly Boulevard	Construct 144 d.u. apartments	780	13	49	62	47	25	72
23	Zen Mixed-Use Project (Kawada Tower)	250 S. Hill Street	Construct 330 d.u. condominiums, 12,000 s.f. retail/restauran	1,217	21	73	94	66	42	108
24	Wilshire Grand Project	900 W. Wilshire Boulevard	Wilshire Grand Redevelopment Project	3,624	725	75	800	94	764	858
25	LAUSD 9th Street Span K-8 Redevelopment Project	820 S. Towne Avenue	Construct 100 student elementary & 405 student middle schools	1,840	100	84	184	0	0	0
26	Barlow Hospital Replacement & Master Plar	2000 Stadium Way	Construct 888 d.u. condominiums, 56 bed hospital, 15,000 s.f. retai	4,486	61	238	299	242	137	379
27	LAUSD CLAHS #12	1211 W. Miramar Street	Central Los Angeles High School #12 expansion - 500 students	855	143	67	210	0	0	0
28	Mixed-Use	1435 W. 3rd Street	Construct 122 d.u. apartments, 5,000 s.f. retail	711	11	42	53	41	25	66
29	Grand Avenue (Parcel M-2 Rev)	237 S. Grand Avenue	Construct 1,648 d.u. condominium, 412 d.u. apartments, 449,000 s.f. retail and 681,000 s.f. office	n/a	310	1,241	1,551	1,725	739	2,464
30	LA Civic Center Office	150 N. Los Angeles Street	Construct 237,500-712,500 s.f. office, 10,000-35,000 s.f. retail, 2,500 s.f. child care	13,534	930	118	1,048	432	942	1,374
31	Mixed-Use	928 S. Broadway	Construct 662 d.u. apartments, 47,000 s.f. retail, 11,000 s.f. live/work, 34,824 s.f. office	4,715	21	229	250	272	109	381
32	Mixed-Use	534 S. Main Street	Construct 160 d.u. apartments, 18,000 s.f. retail, 3,500 s.f. restaurant, 3,500 s.f. fast food	2,213	52	75	127	87	58	145
33	Mixed-Use	840 S. Olive Street	Construct 303 d.u. condominiums, 9,680 s.f. restaurant, 1,500 retai	3,071	81	166	247	174	96	270
34	Charter High School	1552 W. Rockwood Street	600 student high school expansion	715	122	58	180	26	29	55
35	Mixed-Use	710 S. Grand Avenue	Construct 700 d.u. apartments, 27,000 s.f. retail, 5,000 s.f. restaurant	5,245	88	185	273	275	202	477
36	Santa Fe Freight Yard Redevelopment	950 E. 3rd Street	Santa Fe Freight Yard Redevelopment, 635 d.u. apartments, 532-student school, 30,062 s.f. retail	6,372	162	177	339	245	213	458
37	Retail/Restaurant	201 S. Broadway	Construct 27,765 s.f. retail/restaurant	700	-40	-41	-81	53	17	70
38	Mixed-Use	400 S. Broadway	Construct 430 d.u. apartment, 10,000 s.f. retail, 5,000 s.f. Bar	2,266	36	147	183	139	73	212
39	Camden Arts Mixed-Use	1525 E. Industrial Street	Construct 240 d.u. apartments, 7,165 s.f. retail, 4,110 s.f. restaurant	1,729	37	59	96	69	44	113
40	Hill Street Mixed-Use	920 S. Hill Street	Construct 117-216 d.u. residential units & 3,900 s.f. retai	1,311	21	76	97	78	44	122
41	Broadway Mixed-Use	955 S. Broadway	Construct 201 d.u. apartments & 7,000 s.f. retail	1,275	21	72	93	74	43	117
42	Mixed-Use	801 S. Olive Street	Construct 331 d.u. apartments, 10,000 s.f. restaurant	2,257	33	129	162	140	83	223
43	Olympic & Olive Mixed-Use Project	960 S. Olive Street	Construct 263 d.u. apartments, 14,500 s.f. restaurant	2,266	25	91	116	48	23	71
44	Mixed-Use	820 S. Olive Street	Construct 589 d.u. apartments, 4,500 s.f. retail	3,309	63	202	265	195	106	301
45	Mixed-Use	350 S. Alameda Street	Construct 60 d.u. apartments, 3,000 s.f. restaurant	689	20	35	55	38	21	59
46	Apartments	1185 W. Sunset Boulevard	Construct 210 d.u. apartment units	2,216	57	123	180	90	54	144
47	Mixed-Use	601 S. Main Street	Construct 444 d.u. apartments, 32,000 s.f. retail	2,957	45	154	199	170	104	274
48	Mixed-Use	700 W. Cesar E Chavez Avenue	Construct 247 d.u. apartments, 8,000 s.f. retail	1,159	2	67	69	78	42	120
49	Mangrove Estates Mixed-Use Project	n/e corner of Alameda St/1st St	Construct 445 d.u. apartments, 500,000 s.f. office, 84 d.u. live/work, 25,000 s.f. community use, and 200,000 s.f. retail.	10,806	533	238	771	444	702	1,146
			RELATED PROJECTS TRIP GENERATION TOTAL	131,225	4,725	6,288	11,013	7,738	6,471	14,209

[1] List of related projects and their trip generation estimates provided by LADOT, March 2014.

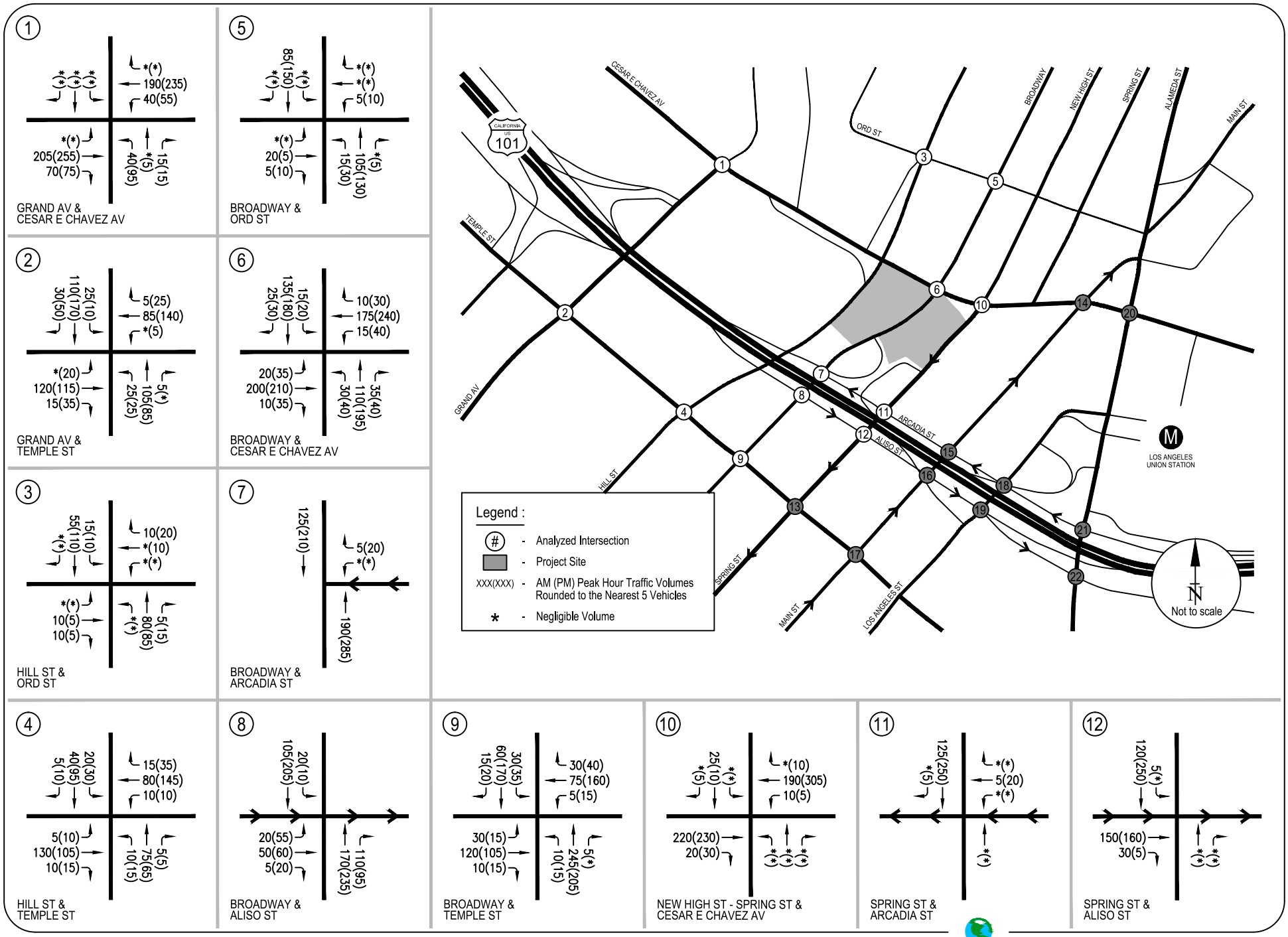


FIGURE 11A
RELATED PROJECTS ONLY - PEAK HOUR TRAFFIC VOLUMES

RAJU Associates, Inc.

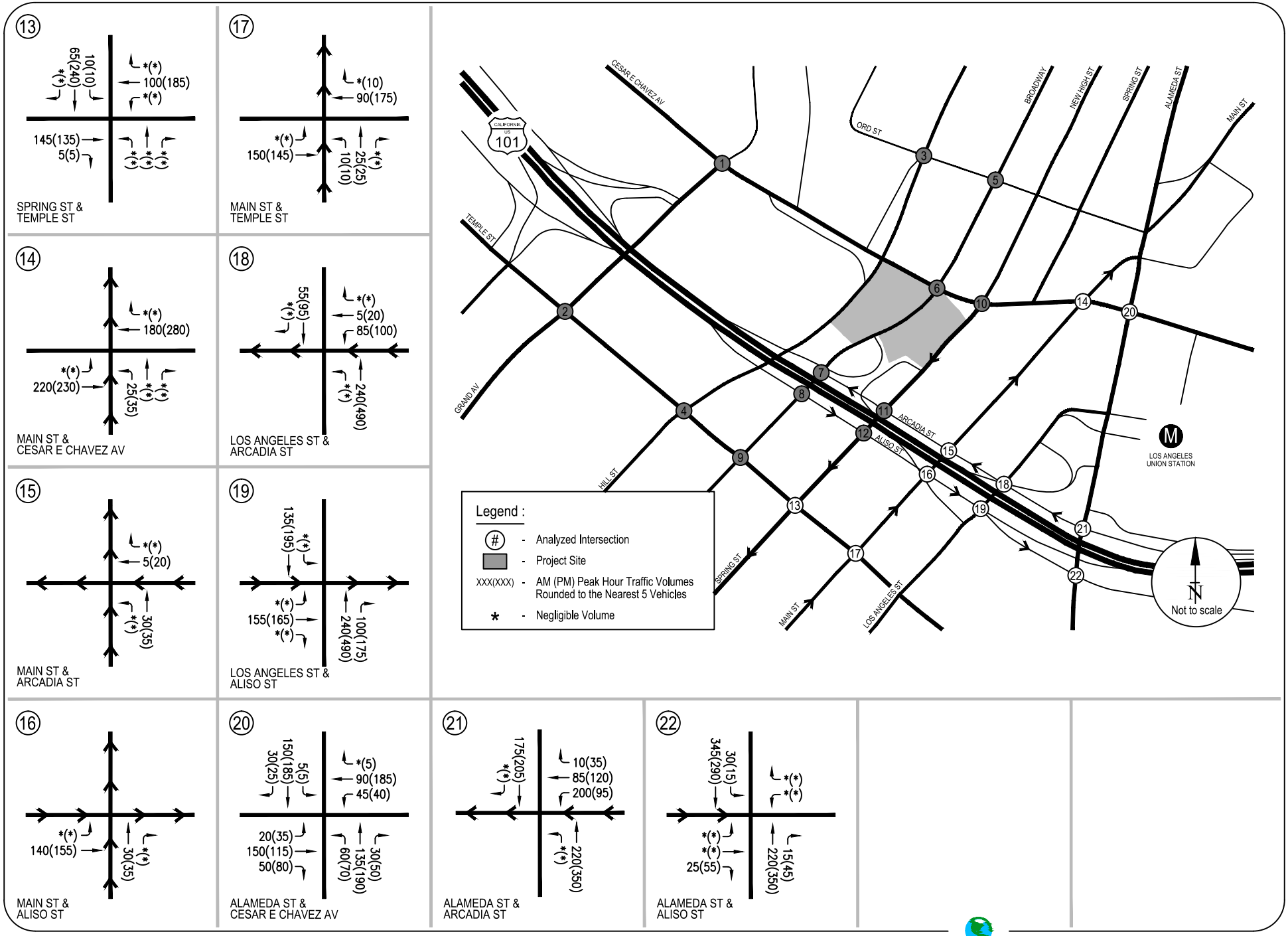


FIGURE 11B
RELATED PROJECTS ONLY - PEAK HOUR TRAFFIC VOLUMES

RAJU Associates, Inc.

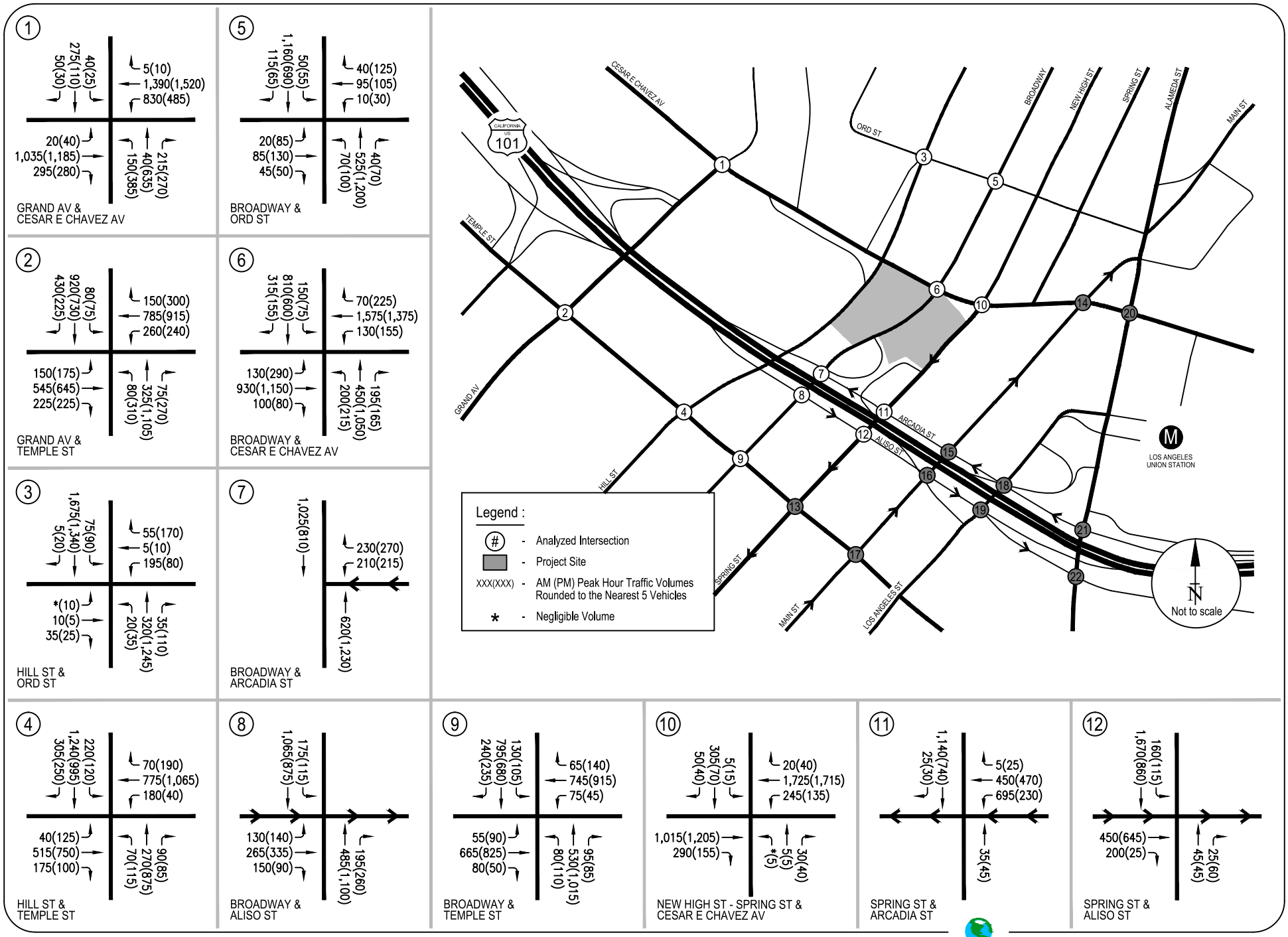


FIGURE 12A
CUMULATIVE (2018) BASE CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

RAJU Associates, Inc.

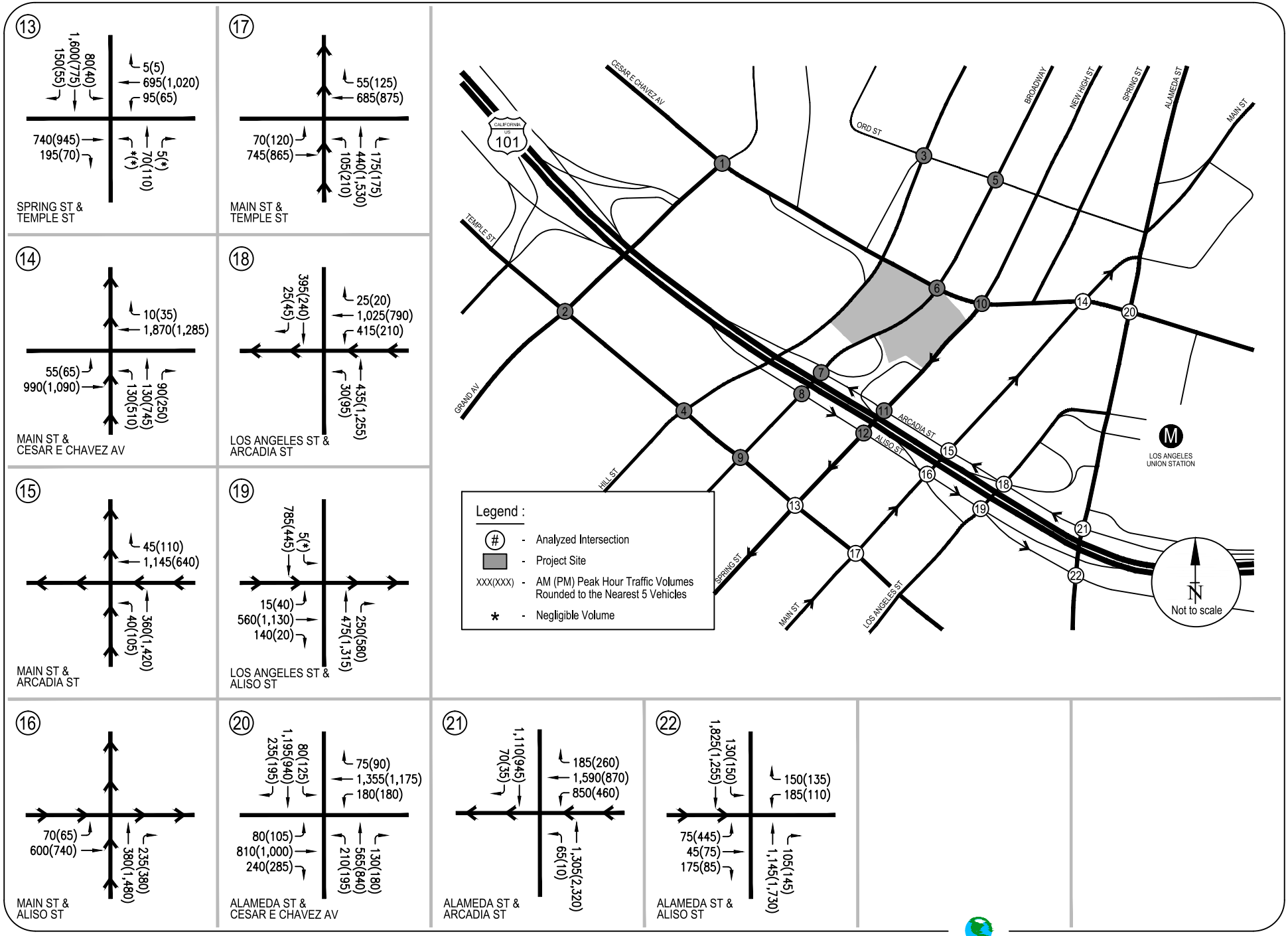


FIGURE 12B
CUMULATIVE (2018) BASE CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

RAJU Associates, Inc.

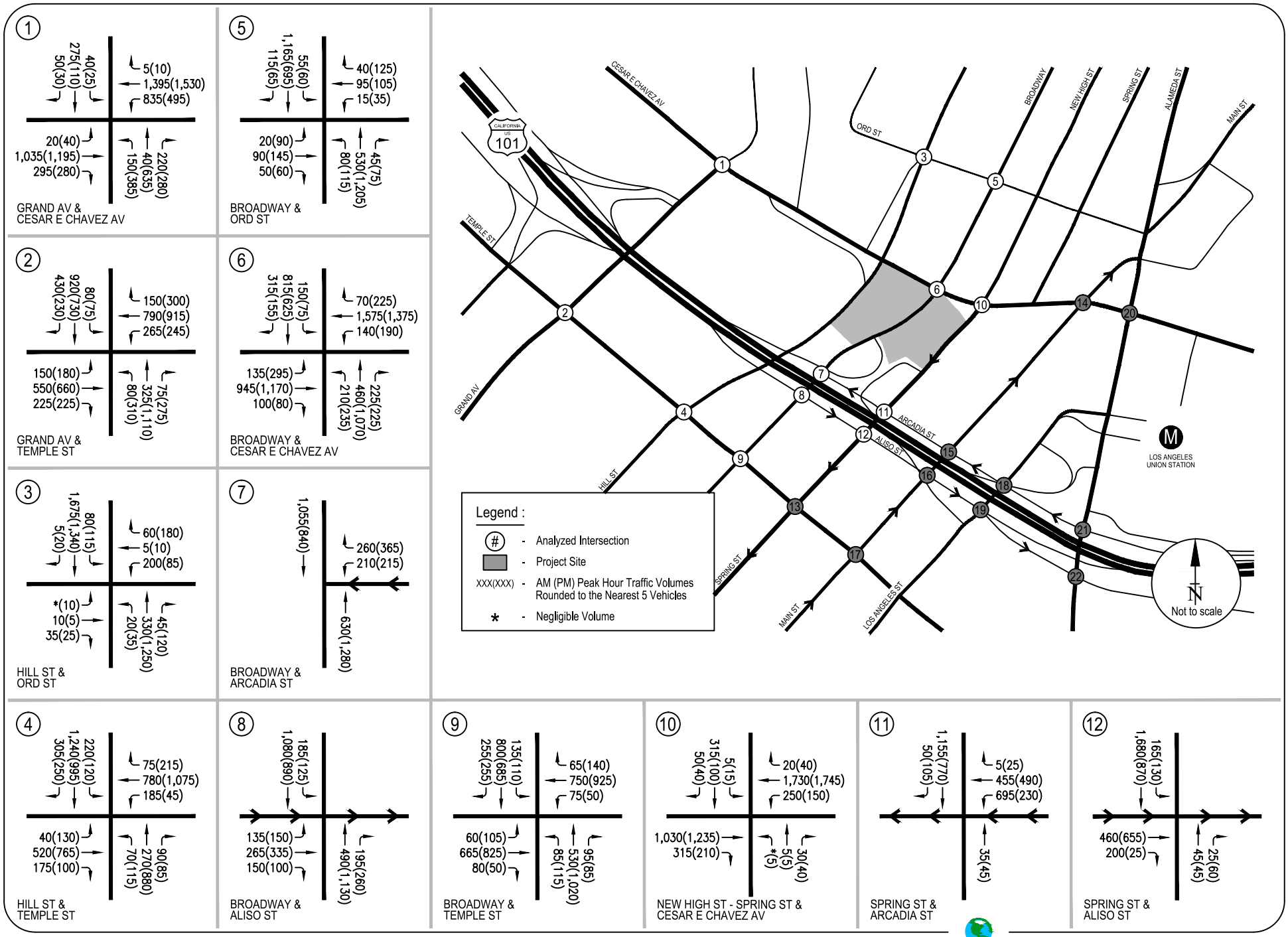


FIGURE 13A
CUMULATIVE (2018) PLUS PROJECT CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

RAJU Associates, Inc.

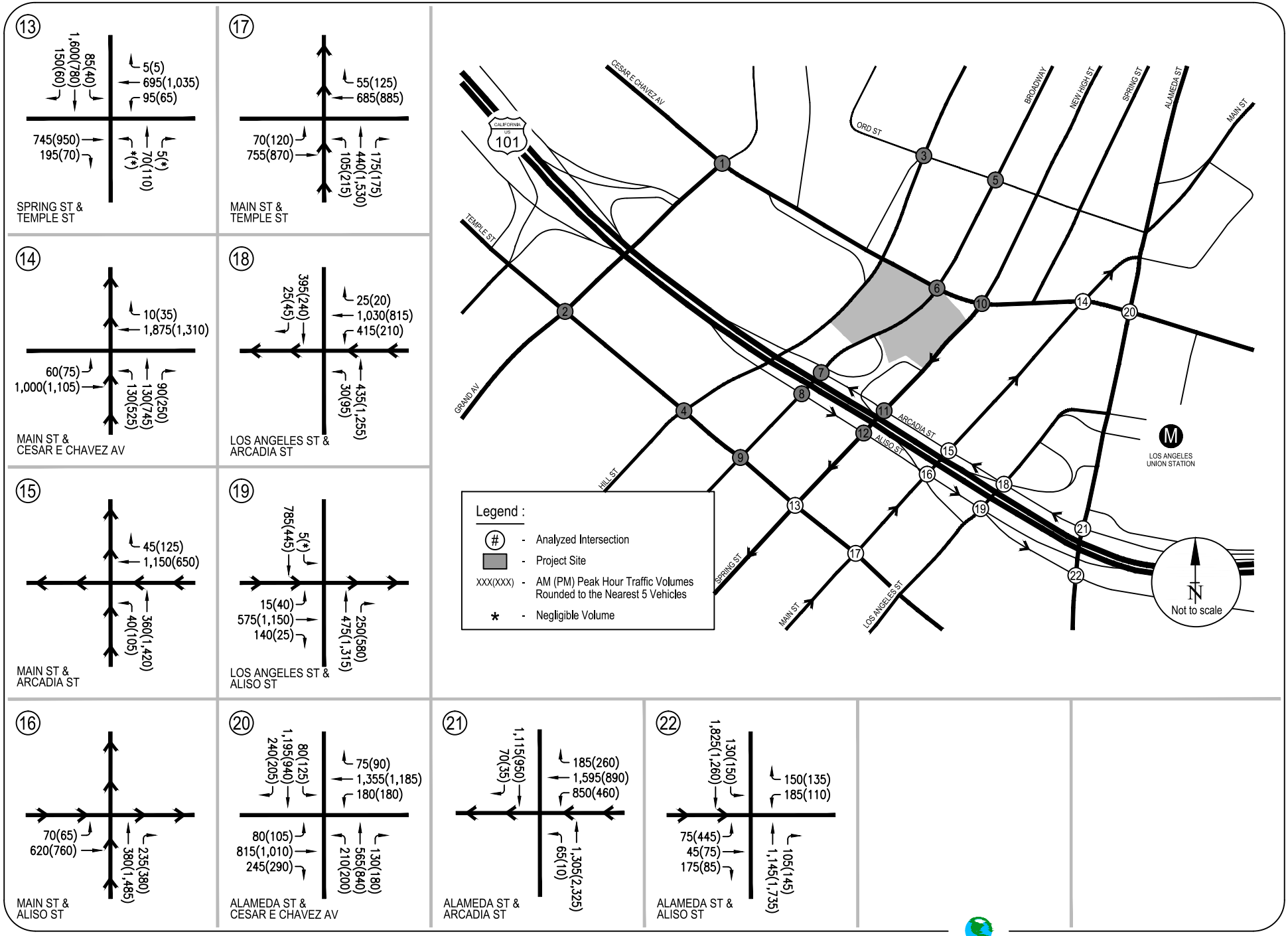


FIGURE 13B
CUMULATIVE (2018) PLUS PROJECT CONDITIONS - PEAK HOUR TRAFFIC VOLUMES

RAJU Associates, Inc.

V. TRAFFIC CONDITIONS & IMPACT ANALYSIS

The Existing plus Project, Future Year 2018 Cumulative Base and Cumulative plus Project conditions were analyzed utilizing the methodologies and assumptions per the City of Los Angeles traffic study guidelines. The results were then used to assess the potential impact of the proposed project on the local street system.

The traffic impact analysis compares the volume to capacity (V/C) ratios at each study location under the existing and existing plus project; and cumulative base and cumulative plus project conditions to determine the incremental difference in V/C ratios caused by the proposed project. These values provide the information needed to assess the potential impact of the project using significance criteria established by the City of Los Angeles.

SIGNIFICANT TRAFFIC IMPACT CRITERIA

The City of Los Angeles Department of Transportation has established threshold criteria that determine if a project has a significant traffic impact at a specific signalized intersection. According to the criteria provided by the City of Los Angeles, a project impact is considered significant if the following conditions are met:

Intersection Condition With Project Traffic		Project-Related Increase in V/C Ratio
LOS	V/C Ratio	
C	0.701 – 0.800	equal to or greater than 0.040
D	0.801 – 0.900	equal to or greater than 0.020
E, F	> 0.900	equal to or greater than 0.010

Using these criteria, for example, a project would not have a significant impact at a signalized intersection if it is operating at LOS C after the addition of project traffic and the incremental change in the V/C ratio is less than 0.040. However, if the intersection is operating at a LOS F after the addition of project traffic and the incremental change in V/C ratio is 0.010 or greater, the project would be considered to have a significant impact.

EXISTING (2014) PLUS PROJECT TRAFFIC CONDITIONS

The Existing (2014) plus Project peak hour traffic volumes were analyzed at each of the study intersections to determine the V/C ratio and corresponding level of service. Table 5 presents the results of the Existing (2014) plus Project traffic analysis. As indicated in the table, all 22 of the study intersections are projected to continue to operate at LOS D or better during both the morning and evening peak hours.

Capacity calculation worksheets for Existing (2014) plus Project conditions are attached in Appendix C of the report.

CUMULATIVE (2018) BASE TRAFFIC CONDITIONS

The Cumulative (2018) Base without proposed project peak hour traffic volumes were analyzed at each of the study intersections to determine the V/C ratio and corresponding level of service. Table 5 presents the results of the Year 2018 Cumulative Base (without project) traffic analysis. As indicated in the table, all 22 of the study intersections are projected to operate at LOS D or better during the morning peak hour. During the evening peak hour, 20 of the 22 study intersections are projected to operate at LOS D or better. The remaining two locations are projected to operate at LOS E and include:

- Grand Avenue/Cesar Chavez Avenue: PM peak hour – LOS E
- Alameda Street/Arcadia Street-US-101 Northbound Off-Ramp: PM peak hour – LOS E

Capacity calculation worksheets for Cumulative (2018) Base conditions are attached in Appendix C of the report.

TABLE 5
SUMMARY OF INTERSECTION LEVEL OF SERVICE ANALYSIS

No.	Intersection	Peak Hour	Existing (2014) Conditions		Existing (2014) Plus Project Conditions		Project Increase in V/C	Significant Project Impact	Cumulative (2018) Base Conditions		Cumulative (2018) Plus Project Conditions		Project Increase in V/C	Significant Project Impact
			V/C	LOS	V/C	LOS			V/C	LOS	V/C	LOS		
1.	Grand Avenue & Cesar Chavez Avenue	AM	0.656	B	0.660	B	0.004	No	0.802	D	0.805	D	0.003	No
		PM	0.814	D	0.822	D	0.008	No	0.965	E	0.974	E	0.009	No
2.	Grand Avenue & Temple Street	AM	0.627	B	0.632	B	0.005	No	0.763	C	0.768	C	0.005	No
		PM	0.717	C	0.728	C	0.011	No	0.883	D	0.891	D	0.008	No
3.	Hill Street & Ord Street	AM	0.578	A	0.581	A	0.003	No	0.635	B	0.637	B	0.002	No
		PM	0.431	A	0.451	A	0.020	No	0.503	A	0.522	A	0.019	No
4.	Hill Street & Temple Street	AM	0.645	B	0.650	B	0.005	No	0.751	C	0.756	C	0.005	No
		PM	0.709	C	0.723	C	0.014	No	0.856	D	0.871	D	0.015	No
5.	Broadway & Ord Street	AM	0.450	A	0.461	A	0.011	No	0.514	A	0.528	A	0.014	No
		PM	0.544	A	0.555	A	0.011	No	0.624	B	0.636	B	0.012	No
6.	Broadway & Cesar Chavez Avenue	AM	0.623	B	0.635	B	0.012	No	0.772	C	0.784	C	0.012	No
		PM	0.645	B	0.676	B	0.031	No	0.848	D	0.879	D	0.031	**Yes**
7.	Broadway & Arcadia Street	AM	0.186	A	0.199	A	0.013	No	0.226	A	0.239	A	0.013	No
		PM	0.301	A	0.339	A	0.038	No	0.417	A	0.455	A	0.038	No
8.	Broadway & US-101 Southbound Off-Ramp/Aliso Street	AM	0.311	A	0.317	A	0.006	No	0.386	A	0.393	A	0.007	No
		PM	0.365	A	0.383	A	0.018	No	0.504	A	0.523	A	0.019	No
9.	Broadway & Temple Street	AM	0.531	A	0.541	A	0.010	No	0.647	B	0.657	B	0.010	No
		PM	0.546	A	0.574	A	0.028	No	0.730	C	0.759	C	0.029	No
10.	New High Street/Spring Street & Cesar Chavez Avenue	AM	0.480	A	0.495	A	0.015	No	0.606	B	0.620	B	0.014	No
		PM	0.358	A	0.397	A	0.039	No	0.468	A	0.508	A	0.040	No
11.	Spring Street & Arcadia Street	AM	0.307	A	0.311	A	0.004	No	0.345	A	0.349	A	0.004	No
		PM	0.124	A	0.135	A	0.011	No	0.181	A	0.192	A	0.011	No
12.	Spring Street & Aliso Street	AM	0.340	A	0.342	A	0.002	No	0.416	A	0.421	A	0.005	No
		PM	0.138	A	0.143	A	0.005	No	0.240	A	0.245	A	0.005	No
13.	Spring Street & Temple Street	AM	0.746	C	0.748	C	0.002	No	0.855	D	0.857	D	0.002	No
		PM	0.421	A	0.422	A	0.001	No	0.576	A	0.577	A	0.001	No
14.	Main Street & Cesar Chavez Avenue	AM	0.355	A	0.360	A	0.005	No	0.415	A	0.421	A	0.006	No
		PM	0.437	A	0.444	A	0.007	No	0.543	A	0.550	A	0.007	No
15.	Main Street & Arcadia Street	AM	0.233	A	0.234	A	0.001	No	0.253	A	0.255	A	0.002	No
		PM	0.373	A	0.379	A	0.006	No	0.405	A	0.411	A	0.006	No
16.	Main Street & Aliso Street	AM	0.163	A	0.167	A	0.004	No	0.205	A	0.209	A	0.004	No
		PM	0.347	A	0.353	A	0.006	No	0.408	A	0.413	A	0.005	No
17.	Main Street & Temple Street	AM	0.282	A	0.282	A	0.000	No	0.329	A	0.330	A	0.001	No
		PM	0.543	A	0.547	A	0.004	No	0.641	B	0.645	B	0.004	No
18.	Los Angeles Street & Arcadia Street	AM	0.329	A	0.331	A	0.002	No	0.384	A	0.385	A	0.001	No
		PM	0.337	A	0.343	A	0.006	No	0.545	A	0.550	A	0.005	No
19.	Los Angeles Street & Aliso Street/US-101 Southbound On-Ramp	AM	0.200	A	0.203	A	0.003	No	0.286	A	0.289	A	0.003	No
		PM	0.330	A	0.334	A	0.004	No	0.538	A	0.542	A	0.004	No
20.	Alameda Street & Cesar Chavez Avenue	AM	0.650	B	0.652	B	0.002	No	0.825	D	0.828	D	0.003	No
		PM	0.612	B	0.619	B	0.007	No	0.814	D	0.822	D	0.008	No
21.	Alameda Street & Arcadia Street/US-101 Northbound Off-Ramp	AM	0.745	C	0.747	C	0.002	No	0.900	D	0.901	E	0.001	No
		PM	0.793	C	0.800	C	0.007	No	0.998	E	1.004	F	0.006	No
22.	Alameda Street & Aliso Street/Commercial Street	AM	0.504	A	0.504	A	0.000	No	0.645	B	0.646	B	0.001	No
		PM	0.714	C	0.716	C	0.002	No	0.880	D	0.882	D	0.002	No

V/C - Volume to Capacity Ratio
LOS - Level of Service

CUMULATIVE (2018) PLUS PROJECT TRAFFIC CONDITIONS

The Cumulative (2018) Plus Project peak hour traffic volumes were analyzed to determine the V/C ratio and corresponding level of service at each of the analyzed intersections. The results of this analysis are also summarized on Table 5. As indicated in the table, 21 of the 22 of the study intersections are projected to operate at LOS D or better during the morning peak hour. During the evening peak hour, 20 of the 22 study intersections are projected to operate at LOS D or better. The remaining locations are projected to operate at LOS E or F and include:

- Grand Avenue/Cesar Chavez Avenue: PM peak hour – LOS E
- Alameda Street/Arcadia Street-US-101 Northbound Off-Ramp: AM peak hour – LOS E, PM peak hour – LOS F

Capacity calculation worksheets for Cumulative (2018) plus Project conditions are attached in Appendix C of the report.

PROJECT IMPACTS

Table 5 provides a summary of the impacted intersections, before mitigations, based on the significant impact criteria established by the City of Los Angeles. A discussion of these impacts follows.

Significant Impacts - Existing (2014) Plus Project Conditions

Using the specified significant impact criteria, the traffic impacts at the analysis locations were determined. Table 5 identifies the individual impacts during both AM and PM peak hours at each of the analysis locations. It can be observed that the Proposed Project does not cause significant impacts at any of the analyzed intersections under existing conditions

Significant Impacts - Cumulative (2018) Plus Project Conditions

As indicated in Table 5, the Proposed Project is estimated to cause significant traffic impacts at one of the analyzed intersections, the intersection of Broadway/Cesar Chavez Avenue, during the evening peak hour under Cumulative (2018) Plus Project conditions. Intersection level mitigation measures at this location would be required for the Proposed Project.

The Proposed Project would not result in significant traffic impacts at any of the remaining analyzed intersections during either the morning or evening peak hours.

VI. TRANSPORTATION IMPROVEMENT AND MITIGATION PROGRAM

The mitigation analysis presented in this Chapter has been prepared as part of the TIA for the Project. The Proposed Project has been forecast to cause a significant impact on the transportation system within the study area. This mitigation analysis has been prepared to address the traffic impact. The various guidelines, methods and assumptions mandated by the City of Los Angeles, wherever applicable, have been used in the preparation of this analysis.

In order to address the impact at the intersection of Broadway/Cesar Chavez Avenue, the following mitigation program is recommended for implementation by the Project. The mitigation program includes Adaptive Traffic Control System infrastructure signal/phasing enhancements and implementation of a site-wide Transportation Demand Management (TDM) Program for the Project Site to promote non-auto travel. Widening and/or other physical improvements to the intersection were deemed inconsistent with the current policies of the City of Los Angeles and the objectives of the Proposed Project to develop a sustainable, transit-oriented and pedestrian-friendly product.

INTERSECTION SIGNAL SYSTEM UPGRADE

Signal system enhancements include provision of additional upgraded equipment and provision of connections to the existing Adaptive Traffic Control System (ATCS). ATCS is a personal computer based program that provides a fully-responsive method to accommodate real-time (actual) traffic conditions. ATCS implements the appropriate timing plan for each signal based on real-time and prevailing conditions determined by sensors on the streets. Under ATCS, continuous alterations are made to the signal timing (unless conditions remain constant) to adapt to changes in traffic conditions. ATCS can adapt and rapidly respond to virtually any prevailing traffic condition and thereby reduce congestion and delay to improve traffic flow.

As ATCS is a fully responsive, real-time system, it must be provided with sufficient data to be effective and to make appropriate decisions regarding signal timing. Therefore, ATCS would require additional vehicle sensors; additional closed-circuit television cameras for better video coverage' computers, hardware and networking; and an upgrade in the communication links to fiber optic cable. The ideal system design would have vehicle sensors on all approaches to all intersections in the system. With the pertinent traffic data (number of cars) obtained from these sensors placed in advance of the intersection, the signal timing is adjusted to accommodate the prevailing conditions.

It is recommended that the Project provide contribution or funding to implement ATCS infrastructure upgrades in the vicinity of the intersection of Broadway/Cesar Chavez Avenue. The upgrades may include the strategic placement of CCTV cameras (which would provide LADOT with the ability to monitor traffic operations and respond instantly to incidents that delay vehicles and transit service), new signal controllers, cabinets and roadway loop detectors along various approaches at specific intersections for advanced vehicle detection. The City of Los Angeles has determined that the upgrade of the signal controllers and installation of the CCTV cameras would increase intersection capacity by 1% (a 0.01 improvement in V/C ratio).

TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAM

Transit-Oriented Developments (TODs) are moderate to high density mixed-use developments located a convenient distance from a major transit corridor or transfer stop. TODs promote non-auto travel through design and orientation that is pedestrian and bicycle-friendly, and facilitates transit use. The success of TODs is emphasized by the "five Ds" – density, design, diversity, destination, and distance to transit.

Mixed land use, as proposed by the Project, has the potential to reduce auto travel by lessening an individual's dependency on one's car to access land uses and services. Mixed-use effectively reduces the total number of trips made by automobiles by minimizing the travel distances to access various uses, potentially increasing the opportunity to use alternative modes of transportation.

The TDM Program components listed below is a set of strategies that would encourage employees, residents and patrons to reduce vehicular traffic on the street and freeway system during the most congested time periods of the day by promoting non-auto travel through

pedestrian/bicycle-friendly design and orientation that facilitates transit use. The Project should develop and implement a TDM Program that includes consideration of the following strategies:

- Design of the project to ensure a bicycle, transit, and pedestrian friendly environment;
- Improvement of the condition and/or aesthetics of existing sidewalks leading to transit station(s) with adequate lighting to provide for a safer pedestrian environment;
- Provision of continuous paved sidewalks / walkways with adequate lighting from all buildings in the Project to nearby transit services and stops. This may include mid-block paseos;
- Implementation of transit shelter improvements/beautification;
- Contribution to implement “next bus” technologies at key bus stops;
- Administrative support for the formation of carpools/vanpools;
- Provision of on-site car share amenities;
- Provision of a self-service bicycle repair area and shared tools for residents and employees;
- Distribution of information to all residents and employees of the onsite pedestrian, bicycle and transit rider services, including shared car and shared bicycle services;
- Coordination with DOT to provide space for services that can integrate into the City’s future Mobility Hubs program;
- Provision of fully or partially subsidized transit passes;
- Provision of transit routing and schedule information;
- Transit pass sales on site;
- Enhancement of the pedestrian environment through the installation of strategic mid-block crossing signals, curb extensions, etc.
- Rideshare matching services;
- Bike and walk to work promotions;
- Preferential rideshare loading/unloading or parking location;
- Financial contribution to the City’s Bicycle Plan Trust Fund;
- Provision of bicycle parking beyond the requirements of the Bicycle Parking Ordinance No. 182,386;
- Implement a Bicycle Friendly Street improvement as identified in the Bicycle Plan; such improvements can include curb extensions, wayfinding signage, diverters, bicycle loop detection, shared lane markings, etc.;
- Conduct educational workshops for Project employees and/or tenants related to the usage of bicycles on streets including how to integrate bicycle use with transit use and how to ride next to vehicles;
- Provision of secure bicycle parking facilities

The resulting trip generation after implementation of the TDM program is included in Table 6. As indicated in the table, the TDM program is estimated to result in an additional 5% reduction in Project trips. The overall Proposed Project's trip generation including the TDM Program is estimated to result in a net total of approximately 3,286 daily trips of which 156 trips would occur during the morning peak hour and 294 trips during the evening peak hour.

EFFECTIVENESS OF MITIGATION MEASURES

The results of the analysis of traffic conditions with the recommended improvements are summarized in Table 7. As indicated in the table, the recommended improvements would fully mitigate the project-related impacts.

Capacity calculation worksheets for Cumulative (2018) Plus Project with Mitigation conditions are attached in Appendix C.

TABLE 6
ESTIMATED WEEKDAY PROJECT TRIP GENERATION WITH MITIGATION

	Size	Daily	AM Peak Hour			PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project - Block A								
Apartment [1]	119 d.u.	764	12	48	60	47	25	72
Retail [2]	15,000 s.f.	1,704	26	16	42	70	76	146
Specialty Retail	11,000 s.f.	440	8	5	13	20	20	40
Restaurant	9,000 s.f.	810	4	3	7	45	22	67
Project Trip Generation Total - Less (25%) Transit Trips		2,789	38	54	92	137	107	244
*Internal Capture/Walk (10%) Trips		(279)	(5)	(4)	(9)	(12)	(12)	(24)
**Retail - Pass-By (50%) Trips		(613)	(8)	(7)	(15)	(27)	(26)	(53)
**Specialty Retail - Pass-By (10%) Trips		(32)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(58)	0	0	0	(3)	(2)	(5)
Block A - Project Trip Generation Total (Net)		**1,807**	**24**	**43**	**67**	**93**	**66**	**159**
Proposed Project - Block B								
Apartment [1]	226 d.u.	1,450	23	90	113	88	47	135
Retail [2]	8,000 s.f.	909	14	8	22	38	40	78
Specialty Retail	10,000 s.f.	400	7	5	12	18	18	36
Restaurant	2,000 s.f.	180	1	1	2	10	5	15
Project Trip Generation Total - Less (25%) Transit Trips		2,204	34	78	112	115	83	198
*Internal Capture/Walk (10%) Trips		(220)	(6)	(5)	(11)	(10)	(10)	(20)
**Retail - Pass-By (50%) Trips		(327)	(4)	(4)	(8)	(14)	(14)	(28)
**Specialty Retail - Pass-By (10%) Trips		(29)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(13)	0	0	0	(1)	0	(1)
Existing Use (to be removed)								
Specialty Retail	(2,000) s.f.	(80)	(1)	(1)	(2)	(4)	(3)	(7)
Quality Restaurant	(1,000) s.f.	(90)	(1)	0	(1)	(5)	(2)	(7)
Existing Uses Trip Generation Total - Less (20%) Transit Trips		(136)	(2)	(1)	(3)	(7)	(4)	(11)
Block B - Project Trip Generation Total (Net)		**1,479**	**21**	**68**	**89**	**81**	**54**	**135**
Overall Project Trip Generation Total (Net)		**3,286**	**45**	**111**	**156**	**174**	**120**	**294**
Trip Rates [3]								
Apartment (ITE Land Use 220)	Trips per d.u.	[4]	20%	80%	[4]	65%	35%	[4]
Retail/Shopping Center (ITE Land Use 820)	Trips per 1,000 s.f.	[5]	62%	38%	[5]	48%	52%	[5]
Quality Restaurant (ITE Land Use 931)	Trips per 1,000 s.f.	89.95	50%	50%	0.81	67%	33%	7.49
Specialty Retail (SANDAG Land Use) [6]	Trips per 1,000 s.f.	40.00	60%	40%	[7]	50%	50%	[7]

* Internal capture/walk trips determined after reduction of transit trips.
** Pass-by trips determined after reduction of transit and internal capture trips.

[1] Trip generation estimates for residential use calculated using effective trip generation rate of the overall dwelling units (345 d.u.).
[2] Trip generation estimates for retail use calculated using effective trip generation rate of the overall retail (23,000 s.f.).
[3] Trip Generation Manual, 9th Edition, ITE 2012, unless otherwise noted.
[4] Trip generation rates for apartment was calculated using the following equations:

Daily:	T = 6.06 (X) + 123.56	Where:
AM Peak Hour:	T = 0.49 (X) + 3.73	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	T = 0.55 (X) + 17.65	X = Number of dwelling units

[5] Trip generation for retail/shopping center was calculated using the following formulas:

		Where:
Daily:	Ln(T) = 0.65 Ln(X) + 5.83	Ln = Natural logarithm
AM Peak Hour:	Ln(T) = 0.61 Ln(X) + 2.24	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	Ln(T) = 0.67 Ln(X) + 3.31	X = Area in 1,000 square feet of gross leasable area

[6] *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* , SANDAG, April 2002
[7] AM peak hour is 3% of Daily Trips. PM peak hour is 9% of Daily Trips.

TABLE 7
SUMMARY OF INTERSECTION LEVEL OF SERVICE ANALYSIS - WITH MITIGATION MEASURES

No.	Intersection	Peak Hour	Cumulative (2018) Base Conditions V/C	Cumulative (2018) Base Conditions LOS	Cumulative (2018) Plus Project Conditions V/C	Cumulative (2018) Plus Project Conditions LOS	Project Increase in V/C	Significant Project Impact	Cumulative (2018) Plus Project with Mitigation V/C	Cumulative (2018) Plus Project with Mitigation LOS	Project Increase in V/C	Significant Project Impact
1.	Grand Avenue & Cesar Chavez Avenue	AM	0.802	D	0.805	D	0.003	No	0.805	D	0.003	No
		PM	0.965	E	0.974	E	0.009	No	0.974	E	0.009	No
2.	Grand Avenue & Temple Street	AM	0.763	C	0.768	C	0.005	No	0.768	C	0.005	No
		PM	0.883	D	0.891	D	0.008	No	0.891	D	0.008	No
3.	Hill Street & Ord Street	AM	0.635	B	0.637	B	0.002	No	0.637	B	0.002	No
		PM	0.503	A	0.522	A	0.019	No	0.522	A	0.019	No
4.	Hill Street & Temple Street	AM	0.751	C	0.756	C	0.005	No	0.756	C	0.005	No
		PM	0.856	D	0.871	D	0.015	No	0.871	D	0.015	No
5.	Broadway & Ord Street	AM	0.514	A	0.528	A	0.014	No	0.528	A	0.014	No
		PM	0.624	B	0.636	B	0.012	No	0.636	B	0.012	No
6.	Broadway & Cesar Chavez Avenue	AM	0.772	C	0.784	C	0.012	No	0.774	C	0.002	No
		PM	0.848	D	0.879	D	0.031	**Yes**	0.867	D	0.019	No
7.	Broadway & Arcadia Street	AM	0.226	A	0.239	A	0.013	No	0.239	A	0.013	No
		PM	0.417	A	0.455	A	0.038	No	0.455	A	0.038	No
8.	Broadway & US-101 Southbound Off-Ramp/Aliso Street	AM	0.386	A	0.393	A	0.007	No	0.393	A	0.007	No
		PM	0.504	A	0.523	A	0.019	No	0.523	A	0.019	No
9.	Broadway & Temple Street	AM	0.647	B	0.657	B	0.010	No	0.657	B	0.010	No
		PM	0.730	C	0.759	C	0.029	No	0.759	C	0.029	No
10.	New High Street/Spring Street & Cesar Chavez Avenue	AM	0.606	B	0.620	B	0.014	No	0.620	B	0.014	No
		PM	0.468	A	0.508	A	0.040	No	0.508	A	0.040	No
11.	Spring Street & Arcadia Street	AM	0.345	A	0.349	A	0.004	No	0.349	A	0.004	No
		PM	0.181	A	0.192	A	0.011	No	0.192	A	0.011	No
12.	Spring Street & Aliso Street	AM	0.416	A	0.421	A	0.005	No	0.421	A	0.005	No
		PM	0.240	A	0.245	A	0.005	No	0.245	A	0.005	No
13.	Spring Street & Temple Street	AM	0.855	D	0.857	D	0.002	No	0.857	D	0.002	No
		PM	0.576	A	0.577	A	0.001	No	0.577	A	0.001	No
14.	Main Street & Cesar Chavez Avenue	AM	0.415	A	0.421	A	0.006	No	0.421	A	0.006	No
		PM	0.543	A	0.550	A	0.007	No	0.550	A	0.007	No
15.	Main Street & Arcadia Street	AM	0.253	A	0.255	A	0.002	No	0.255	A	0.002	No
		PM	0.405	A	0.411	A	0.006	No	0.411	A	0.006	No
16.	Main Street & Aliso Street	AM	0.205	A	0.209	A	0.004	No	0.209	A	0.004	No
		PM	0.408	A	0.413	A	0.005	No	0.413	A	0.005	No
17.	Main Street & Temple Street	AM	0.329	A	0.330	A	0.001	No	0.330	A	0.001	No
		PM	0.641	B	0.645	B	0.004	No	0.645	B	0.004	No
18.	Los Angeles Street & Arcadia Street	AM	0.384	A	0.385	A	0.001	No	0.385	A	0.001	No
		PM	0.545	A	0.550	A	0.005	No	0.550	A	0.005	No
19.	Los Angeles Street & Aliso Street/US-101 Southbound On-Ramp	AM	0.286	A	0.289	A	0.003	No	0.289	A	0.003	No
		PM	0.538	A	0.542	A	0.004	No	0.542	A	0.004	No
20.	Alameda Street & Cesar Chavez Avenue	AM	0.825	D	0.828	D	0.003	No	0.828	D	0.003	No
		PM	0.814	D	0.822	D	0.008	No	0.822	D	0.008	No
21.	Alameda Street & Arcadia Street/US-101 Northbound Off-Ramp	AM	0.900	D	0.901	E	0.001	No	0.901	E	0.001	No
		PM	0.998	E	1.004	F	0.006	No	1.004	F	0.006	No
22.	Alameda Street & Aliso Street/Commercial Street	AM	0.645	B	0.646	B	0.001	No	0.646	B	0.001	No
		PM	0.880	D	0.882	D	0.002	No	0.882	D	0.002	No

V/C - Volume to Capacity Ratio
LOS - Level of Service

VII. REGIONAL/CMP ANALYSIS

This section presents the Congestion Management Program (CMP) transportation impact analysis. This analysis was conducted in accordance with the procedures outlined in the *2010 Congestion Management Program for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority, 2010). The CMP requires that when a traffic impact report is prepared for a project, traffic impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use these facilities.

CMP TRAFFIC IMPACT ANALYSIS

The CMP guidelines for determining the study area for analysis of CMP arterial monitoring intersections and for freeway monitoring locations are as follows:

- All CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic.
- All CMP mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

The nearest CMP arterial monitoring location to the Project site is the intersection of Alvarado Street and Wilshire Boulevard. Based on the incremental Project trip generation estimates presented in Chapter III, the Proposed Project will not add 50 or more new trips per hour to this location. Therefore, no further analysis of CMP arterial monitoring locations is required.

The nearest mainline freeway monitoring locations to the Project site include the Hollywood Freeway (US-101) north of Vignes Street and the Pasadena Freeway (I-110) south of the US-101 Freeway. Based on the incremental Project trip generation estimates, the Proposed Project will not add 150 or more new trips per hour to these locations in either direction. Therefore, no further analysis of CMP freeway monitoring stations is required.

It is worth noting that a freeway screening procedure was conducted in accordance with the screening criteria described in Section 3 of the "Agreement Between City of Los Angeles and Caltrans District 7 On Freeway Impact Analysis Procedures", dated October 2013. Based on the results of this analysis, it was determined that a freeway impact analysis would not be required for the Project. The freeway screening procedure is included in Appendix E.

REGIONAL TRANSIT IMPACT ANALYSIS

This subsection provides a description of the transit analysis performed in accordance with the Los Angeles County Congestion Management Program guidelines. The following components are involved in the CMP transit analysis:

- Evidence that affected transit operators received the Notice of Preparation (NOP)
- Summary of existing transit service in the study area
- Project trip generation estimates
- Project transit trip estimates
- Project components including facilities and programs to encourage public transit use
- Analysis of transit impacts and mitigations, if any.

A brief discussion of each of the above components follows.

Evidence that affected transit operators received the NOP

The list of recipients of the NOP is included in the DEIR.

Summary of Existing Transit Services in the Project Area

It is required that all local fixed route services within a ¼ mile radius of the project, express bus routes within a two-miles radius of the project, and rail service within a two-mile radius of the project be included as part of this CMP transit analysis. Chapter II, Existing Transit Conditions section includes a detailed description of all key transit routes within the Project Area as defined above. Figure 4 in Chapter II includes all transit lines within the study area.

Table 8 includes all transit lines and rail service serving the study area. Information on the service provider line number, service area, service type, hours of operations and AM and PM peak hour

TABLE 8
EXISTING TRANSIT LINES SERVING THE PROJECT SITE [1]

Provider	Line Number	Service Area	Service Type	Hours of Operations	Frequency - Number of Buses (or Trains) per Hour (AM Peak Hour/PM Peak Hour)	
					Northbound or Eastbound	Southbound or Westbound
Los Angeles Metropolitan Transportation Authority						
MTA	2	Pacific Palisades - Westwood - Beverly Hills - Hollywood - Los Angeles - Echo Park - Downtown Los Angeles	LOCAL AND LIMITED	4:46 AM - 2:20 AM	4/6	5/6
MTA	4	Santa Monica - West Los Angeles - West Hollywood - Los Angeles - Echo Park - Los Angeles	LOCAL	24 Hours	6/7	4/5
MTA	10	West Hollywood - Los Angeles - Downtown Los Angeles - Los Angeles	LOCAL	4:00 AM - 1:08 AM	7/6	7/5
MTA	30	West Hollywood - Beverly Hills - Los Angeles - Downtown Los Angeles - East Los Angeles	LOCAL AND LIMITED	24 Hours	10/7	6/9
MTA	33	Santa Monica - Venice - Culver City - Los Angeles - Downtown Los Angeles	LOCAL	24 Hours	4/8	6/5
MTA	40	Downtown Los Angeles - Los Angeles - Leimert Park - Hyde Park - Hawthorne - Redondo Beach	LOCAL	4:29 AM - 12:56 AM	8/6	7/8
MTA	45	Lincoln Heights - Downtown Los Angeles - South Los Angeles - Rosewood	LOCAL	24 Hours	15/8	9/12
MTA	48	Downtown Los Angeles - Los Angeles	LOCAL	4:30 AM - 11:40 PM	7/6	3/6
MTA	68	Los Angeles - East Los Angeles - Monterey Park - East Los Angeles - Montebello	LOCAL	4:13 AM - 12:40 PM	5/4	4/4
MTA	70	Los Angeles - Boyle Heights - Monterey Park - El Monte	LOCAL	24 Hours	5/7	8/4
MTA	71	Los Angeles	LOCAL	5:53 AM - 8:47 PM	4/2	4/2
MTA	76	Downtown Los Angeles - Lincoln Heights - Alhambra - Rosemead - El Monte	LOCAL	24 Hours	2/6	5/4
MTA	78	Downtown Los Angeles - El Sereno - Alhambra - South Arcadia - Arcadia	LOCAL AND LIMITED	4:00 AM - 2:12 PM	3/4	6/5
MTA	79	Downtown Los Angeles - El Sereno - Alhambra - South Arcadia - Arcadia	LOCAL AND LIMITED	4:38 AM - 1:09 AM	3/4	4/3
MTA	81	Eagle Rock - Highland Park - Cypress Park - Downtown Los Angeles - Exposition Park - South Los Angeles	LOCAL	4:32 AM - 1:48 AM	9/7	8/7
MTA	83	Eagle Rock - Highland Park - Cypress Park - Downtown Los Angeles	LOCAL	24 Hours	2/4	3/3
MTA	84	Eagle Rock - Glassell Park - Cypress Park - Downtown Los Angeles	LOCAL	24 Hours	5/5	5/5
MTA	90	Sylmar - Lakeview Terrace - Sunland - Glendale - Glassell Park - Cypress Park - Downtown Los Angeles	LOCAL	4:47 AM - 11:35 PM	2/2	2/1
MTA	91	Sylmar - Lakeview Terrace - Sunland - Glendale - Glassell Park - Cypress Park - Downtown Los Angeles	LOCAL	4:52 AM - 12:22 AM	2/2	1/1
MTA	92	Burbank - Glendale - Echo Park - Downtown Los Angeles	LOCAL	24 Hours	4/3	3/3
MTA	94	San Fernando - Pacoima - Sun Valley - Burbank - Glendale - Cypress Park - Downtown Los Angeles	LOCAL	4:19 AM - 2:05 AM	3/3	3/4
MTA	96	Burbank - Griffith Park - Silver Lake - Downtown Los Angeles	LOCAL	4:22 AM - 9:20 AM	2/2	3/3
MTA	330	West Hollywood - Beverly Hills - Los Angeles - Downtown Los Angeles - East Los Angeles	LOCAL AND LIMITED	5:27 AM - 7:13 PM	2/2	2/2
MTA	378	Downtown Los Angeles - El Sereno - Alhambra - South Arcadia - Arcadia	LOCAL AND LIMITED	5:50 AM - 7:14 PM	0/4	1/0
MTA	442	Downtown Los Angeles - Los Angeles - Inglewood - Hawthorne	LOCAL	5:47 AM - 7:13 PM	2/0	0/2
MTA	487	Los Angeles - San Gabriel - Temple City - San Marino - Pasadena - Arcadia - El Monte	LOCAL	5:20 AM - 10:44 PM	2/3	3/2
MTA	489	Los Angeles - San Gabriel - Temple City - San Marino - Pasadena - Arcadia - El Monte	LOCAL	5:20 AM - 10:44 PM	0/3	3/0
MTA	704	Santa Monica - West Los Angeles - West Hollywood - Echo Park - Downtown Los Angeles	RAPID	5:25 AM - 9:18 PM	4/6	6/3
MTA	728	Century City - Los Angeles	RAPID	5:00 AM - 9:09 PM	5/5	5/5
MTA	733	Santa Monica - Culver City - Downtown Los Angeles	RAPID	4:49 AM - 12:25 AM	4/5	5/4
MTA	745	Downtown Los Angeles - Los Angeles	RAPID	4:44 AM - 9:09 PM	14/6	5/7
MTA	770	Los Angeles - East Los Angeles - Monterey Park - South El Monte - El Monte	RAPID	4:59 AM - 9:09 PM	4/5	5/4
MTA	794	Sylmar - Sun Valley - Burbank - Glendale - Downtown Los Angeles	RAPID	4:36 AM - 9:29 PM	3/3	3/3
MTA	Red Line (802)	North Hollywood - Hollywood - Los Angeles - Downtown Los Angeles	LIGHT RAIL	4:32 AM - 1:23 AM	12/12	12/12
MTA	Purple Line (805)	Los Angeles - Downtown Los Angeles	LIGHT RAIL	4:41 AM - 1:23 AM	12/12	12/12
Foothill Transit						
FT	481	Downtown Los Angeles - El Monte	EXPRESS	5:30 AM - 6:30 PM	0/4	4/0
FT	493	Downtown Los Angeles - Los Angeles - Industry - Diamond Bar	EXPRESS	4:35 AM - 8:12 PM	0/7	6/0
FT	495	Downtown Los Angeles - Los Angeles - Industry	EXPRESS	5:10 AM - 7:37 PM	0/2	2/0
FT	497	Downtown Los Angeles - Los Angeles - Industry - Chino	EXPRESS	4:55 AM - 8:12 PM	0/4	4/0
FT	498	Downtown Los Angeles - Los Angeles - West Covina - Azusa	EXPRESS	4:44 AM - 7:59 PM	0/8	10/0
FT	499	Downtown Los Angeles - Los Angeles - San Dimas	EXPRESS	5:24 AM - 7:51 PM	0/5	5/0
FT	699	Downtown Los Angeles - Los Angeles - Pomona - Montclair	EXPRESS	4:00 AM - 7:48 PM	0/9	7/0
Los Angeles Department of Transportation						
LADOT	DASH B	Downtown Los Angeles - Los Angeles	DASH	5:50 AM - 6:30 PM	8/8	8/8
LADOT	409	Sylmar - Lakeview Terrace - Sunland - Glendale - Montrose - Glendale - Downtown Los Angeles	EXPRESS	5:30 AM - 7:15 PM	4/0	0/4
Santa Monica Big Blue Bus						
BBB	R10	Santa Monica - Downtown Los Angeles	EXPRESS	5:27 AM - 9:22 PM	4/4	4/5
City of Santa Clarita Transit						
SC	794	Valencia - Burbank - Downtown Los Angeles	LOCAL	6:50 AM - 6:19 PM	0/2	1/0
SC	799	Valencia - Newhall - Downtown Los Angeles	LOCAL	5:00 AM - 8:04 PM	0/3	3/0
Torrance Transit						
TT	4	Downtown Los Angeles - Los Angeles - Torrance	EXPRESS	5:11 AM - 8:00 PM	1/0	0/1
Orange County Transit Authority						
OCTA	701	Downtown Los Angeles - Los Angeles - Los Alamitos - Garden Grove - Huntington Beach	EXPRESS	5:30 AM - 6:36 AM	2/0	0/1
Commerce Transit						
CO	COX	Downtown Los Angeles - Los Angeles	EXPRESS	7:01 AM - 9:08 PM	1/1	0/1

[1] Per Los Angeles County Congestion Management Program (CMP) 2010, includes local transit routes within 1/4 mile of the project site and express transit routes and rail service within two-miles of the project site

Source:
Los Angeles County Metropolitan Transit Authority (MTA) website.
Los Angeles Department of Transportation (LADOT) website.
Foothill Transit website.
Santa Monica Big Blue Bus website.
City of Santa Clarita website.
City of Torrance website.
Orange County Transit Authority (OCTA) website.
Commerce Transit website.

frequencies of service have been compiled in Table 8. Within the study area, it can be observed that 370 buses and 48 trains serve the community in the morning peak hour while 368 buses and 48 trains serve the community in the evening peak hour within the study area.

Project Trip Generation Estimates

Table 3 in Chapter III summarizes the raw trip generation estimates for the Project. It can be observed from Table 3 that the Project generates a total of approximately 6,657 daily trips of which 271 trip ends occur during the AM peak hour and 589 trip ends occur during the PM peak hour, prior to any consideration due to TDM/transit, internal capture, and pass-by trips.

Project Transit Trip Estimates

The transit trips expected to be generated by the Project was estimated based on the number of vehicle trips, per the guidelines outlined in the CMP document, Section D.8.4. The transit trip estimates are summarized in Table 9. Per CMP Section D.8.4, these estimates assume an Average Vehicle Occupancy (AVO) of 1.40. It was assumed that a 25% reduction in auto trips from the project, resulting in 25% of the total person trips using transit. From Table 9, it can be observed that the Proposed Project would generate approximately 2,330 daily transit trips including 95 morning peak hour transit trips and 206 evening peak hour transit trips.

Project Components to Encourage Transit Use

The Project is proposed as a Transit-Oriented Development that will be designed to promote non-auto travel through design and orientation that is pedestrian- and bicycle-friendly and facilitates transit use. The proposed TDM plan includes set of strategies suggested for the Project that would encourage employees, residents and patrons to reduce vehicular traffic on the street and freeway system during the most congested time periods of the day by promoting non-auto travel through pedestrian/bicycle-friendly design and orientation that facilitates transit use. The Proposed Project would develop a TDM program that would encourage transit use by the patrons/residents of the Project as described in Chapter VI. The TDM program would involve consideration of the following sets of strategies:

- Design of the project to ensure a bicycle, transit, and pedestrian friendly environment;
- Improvement of the condition and/or aesthetics of existing sidewalks leading to transit station(s) with adequate lighting to provide for a safer pedestrian environment;

TABLE 9
CONGESTION MANAGEMENT PROGRAM TRANSIT TRIP ESTIMATES [1]

	Daily	AM Peak Hour	PM Peak Hour
PROJECT TRIPS			
# of Trips	6,657	271	589
AVO factor	1.4	1.4	1.4
# of people trips	9,320	379	825
% Transit factor [2]	25%	25%	25%
Transit Trips	2,330	95	206
TOTAL TRANSIT TRIPS	2,330	95	206

[1] Based on Los Angeles County 2010 Congestion Management Program (CMP), Appendix D - Guidelines for CMP Transportation Impact Analysis.
[2] After implementation of the Project's TDM program.

- Provision of continuous paved sidewalks / walkways with adequate lighting from all buildings in the Project to nearby transit services and stops. This may include mid-block paseos;
- Implementation of transit shelter improvements/beautification;
- Contribution to implement "next bus" technologies at key bus stops;
- Administrative support for the formation of carpools/vanpools;
- Provision of on-site car share amenities;
- Provision of a self-service bicycle repair area and shared tools for residents and employees;
- Distribution of information to all residents and employees of the onsite pedestrian, bicycle and transit rider services, including shared car and shared bicycle services;
- Coordination with DOT to provide space for services that can integrate into the City's future Mobility Hubs program;
- Provision of fully or partially subsidized transit passes;
- Provision of transit routing and schedule information;
- Transit pass sales on site;
- Enhancement of the pedestrian environment through the installation of strategic mid-block crossing signals, curb extensions, etc.
- Rideshare matching services;
- Bike and walk to work promotions;
- Preferential rideshare loading/unloading or parking location;
- Financial contribution to the City's Bicycle Plan Trust Fund;
- Provision of bicycle parking beyond the requirements of the Bicycle Parking Ordinance No. 182,386;
- Implement a Bicycle Friendly Street improvement as identified in the Bicycle Plan; such improvements can include curb extensions, wayfinding signage, diverters, bicycle loop detection, shared lane markings, etc.;
- Conduct educational workshops for Project employees and/or tenants related to the usage of bicycles on streets including how to integrate bicycle use with transit use and how to ride next to vehicles;
- Provision of secure bicycle parking facilities

Transit Impact Analysis

Transit impact analysis was performed based on the methodology laid out in the Los Angeles County CMP document. The number of project-generated transit trips is estimated and the existing and proposed transit capacity serving the study area is determined. Table 10 summarizes the transit impact analysis. As indicated in Table 10, there are a total of approximately 368 to 370 buses during the peak hours that serve the study area, as well as 48 trains (Metro Red Line and Purple Line) that operate during the peak hours. With the Proposed Project in place, there would continue to be adequate capacity available on a daily basis and no significant transit impacts would occur.

TABLE 10
CONGESTION MANAGEMENT PROGRAM TRANSIT IMPACT ANALYSIS

	AM Peak Hour	PM Peak Hour
Project Transit Trips	95	206
Existing Capacity - Bus		
Number of Peak Hour Buses	370	368
Average Load Factor	0.89	0.91
Seated Capacity/Bus [1]	42	42
Surplus Capacity	1,709	1,391
Bus - Surplus/(deficit)	1,615	1,185
Existing Capacity - Red Line		
Number of Peak Hour Trains	24	24
Average Load Factor	0.55	0.74
Seated Capacity/Train [2]	762	762
Surplus Capacity	8,230	4,755
Existing Capacity - Purple Line		
Number of Peak Hour Trains	24	24
Average Load Factor	0.58	0.59
Seated Capacity/Train [3]	508	508
Surplus Capacity	5,121	4,999
Train - Surplus/(deficit)	13,255	9,548

[1] Average seating capacity.

[2] Metro Red Line - 55 seats/car, 6 cars/run during peak periods. Metro assumes a maximum capacity of 230% of seated capacity, or 127/car.

[3] Metro Purple Line - 55 seats/car, 4 cars/run during peak periods. Metro assumes a maximum capacity of 230% of seated capacity, or 127/car.

VIII. ALTERNATIVES ANALYSIS

This chapter presents the results of the traffic impact analysis of project alternatives for the La Plaza de Cultura Village Mixed-Use Project. These alternatives are required per CEQA as part of the Draft Environmental Impact Report (EIR) for the Project. A brief description of the alternatives including their proposed land uses and corresponding trip generation estimates, and comparison to the Proposed Project's trip generation is provided in the following sections. Future Cumulative 2018 conditions with and without the alternatives, as well as traffic impacts of the alternatives in relation to those of the Proposed Project are presented in this chapter.

Two alternatives to the Proposed Project have been analyzed in this study. They include the following:

- Alternative 1 – No Project Alternative
- Alternative 2 – Reduced Density Alternative (40% Reduction in Block A)

Descriptions of the land uses proposed for each of the alternatives, corresponding trip generation estimates, and comparison to the Proposed Project's land uses and trip generation estimates have been provided in the following sections. The same trip generation, distribution, traffic assignment, and traffic impact analysis parameters and assumptions as those used for the Proposed Project have been utilized in the analysis and evaluation of these alternatives. A comparative discussion of traffic impacts of each of the alternatives in relation to those of the Proposed Project is also provided in the subsequent sections of this Chapter.

Table 11 summarizes the trip generation estimates of the project alternatives including a comparison to that of the Proposed Project. The differences in trip generation estimates of the various alternatives in relation to those of the Proposed Project expressed in net AM, PM and Daily total trip ends as well as in percentages are also shown in Table 11.

TABLE 11
ALTERNATIVES ANALYSIS - SUMMARY AND COMPARISON OF TRIP GENERATION ESTIMATES

Scenario	DAILY TOTAL	AM PEAK HOUR			PM PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project	3,585	49	118	167	189	131	320
Alternative 1: No Project	0	0	0	0	0	0	0
Difference from Proposed Project	(3,585)	(49)	(118)	(167)	(189)	(131)	(320)
% Difference	*-100%*	*-100%*	*-100%*	*-100%*	*-100%*	*-100%*	*-100%*
Alternative 2: Reduced Density (40% Reduction in Block A)	2,856	40	102	142	153	106	259
Difference from Proposed Project	(729)	(9)	(16)	(25)	(36)	(25)	(61)
% Difference	*-20%*	*-18%*	*-14%*	*-15%*	*-19%*	*-19%*	*-19%*

ALTERNATIVE 1 – NO PROJECT

The no project alternative assumes there would be no change to the existing conditions and use of the Project site. The volumes and traffic conditions for this alternative are equivalent to the Future Cumulative 2018 Base (without Project) conditions scenario. Roadway network assumptions would also be similar to those in Future Cumulative (2018) Base conditions. Therefore, this alternative will result in traffic conditions similar to Cumulative (2018) Base conditions as detailed in Chapter IV. This alternative will result in no significant traffic impacts.

ALTERNATIVE 2 – REDUCED DENSITY (40% REDUCTION IN BLOCK A)

In this alternative, the various project components (namely residential, retail, specialty retail and restaurant) in Block A would each be reduced in size by 40%. Under this alternative, Block A would consist of a total of 71 residential dwelling units, 9,000 square feet of retail use, 7,400 square feet of specialty retail use and 4,600 square feet of restaurant use. There would be no reduction of density in Block B. Block B would consist of 226 residential dwelling units, 8,000 square feet of retail use, 10,000 square feet of specialty retail use and 2,000 square feet of restaurant use. The access and circulation would not change under this alternative compared to the Proposed Project.

Utilizing the reduced land-uses for this alternative, trip generation estimates were determined and compared to that of the Proposed Project, as shown in Table 11. From this table, it can be observed that this alternative generates a net total of 2,856 daily trip ends, representing 20% less trips than the Proposed Project. During the morning and evening peak hours, this alternative is projected to generate 142 and 259 trips, respectively, resulting in 15% less trips in the morning peak hour and 19% less trips in the evening peak hour than those for the Proposed Project. Table 12 presents details of the weekday trip generation for Alternative 2 – Reduced Density.

Table 13 summarizes the intersection AM and PM peak hour traffic conditions analysis associated with this alternative. It can be observed from this table that this alternative will result in one significant impact during the evening peak hour at the intersection of Broadway/Cesar Chavez Avenue similar to the Proposed Project during the same respective peak hour.

TABLE 12
ESTIMATED WEEKDAY PROJECT TRIP GENERATION - ALTERNATIVE 2: REDUCED DENISTY (40% REDUCTION IN BLOCK A)

	Size	Daily	AM Peak Hour			PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project - Block A								
Apartment [1]	71 d.u.	460	7	28	35	28	15	43
Retail [2]	9,000 s.f.	1,136	17	11	28	47	50	97
Specialty Retail	7,400 s.f.	296	5	4	9	14	13	27
Restaurant	4,600 s.f.	414	2	2	4	23	11	34
Project Trip Generation Total - Less (20%) Transit Trips		1,845	25	36	61	90	71	161
*Internal Capture/Walk (10%) Trips		(185)	(3)	(3)	(6)	(8)	(8)	(16)
**Retail - Pass-By (50%) Trips		(409)	(5)	(5)	(10)	(18)	(17)	(35)
**Specialty Retail - Pass-By (10%) Trips		(21)	(1)	0	(1)	(1)	(1)	(2)
**Restaurant - Pass-By (10%) Trips		(30)	0	0	0	(1)	(1)	(2)
Block A - Project Trip Generation Total (Net)		**1,200**	**16**	**28**	**44**	**62**	**44**	**106**
Proposed Project - Block B								
Apartment [1]	226 d.u.	1,463	23	91	114	90	48	138
Retail [2]	8,000 s.f.	1,010	16	9	25	41	45	86
Specialty Retail	10,000 s.f.	400	7	5	12	18	18	36
Restaurant	2,000 s.f.	180	1	1	2	10	5	15
Project Trip Generation Total - Less (20%) Transit Trips		2,442	38	85	123	127	93	220
*Internal Capture/Walk (10%) Trips		(244)	(6)	(6)	(12)	(11)	(11)	(22)
**Retail - Pass-By (50%) Trips		(364)	(5)	(4)	(9)	(15)	(15)	(31)
**Specialty Retail - Pass-By (10%) Trips		(29)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(13)	0	0	0	(1)	0	(1)
Existing Use (to be removed)								
Specialty Retail	(2,000) s.f.	(80)	(1)	(1)	(2)	(4)	(3)	(7)
Quality Restaurant	(1,000) s.f.	(90)	(1)	0	(1)	(5)	(2)	(7)
Existing Uses Trip Generation Total - Less (20%) Transit Trips		(136)	(2)	(1)	(3)	(7)	(4)	(11)
Block B - Project Trip Generation Total (Net)		**1,656**	**24**	**74**	**98**	**91**	**62**	**153**
Overall Project Trip Generation Total (Net)		**2,856**	**40**	**102**	**142**	**153**	**106**	**259**
Trip Rates [3]								
Apartment (ITE Land Use 220)	Trips per d.u.	[4]	20%	80%	[4]	65%	35%	[4]
Retail/Shopping Center (ITE Land Use 820)	Trips per 1,000 s.f.	[5]	62%	38%	[5]	48%	52%	[5]
Quality Restaurant (ITE Land Use 931)	Trips per 1,000 s.f.	89.95	50%	50%	0.81	67%	33%	7.49
Specialty Retail (SANDAG Land Use) [6]	Trips per 1,000 s.f.	40.00	60%	40%	[7]	50%	50%	[7]

* Internal capture/walk trips determined after reduction of transit trips.
** Pass-by trips determined after reduction of transit and internal capture trips.

[1] Trip generation estimates for residential use calculated using effective trip generation rate of the overall dwelling units (297 d.u.).
[2] Trip generation estimates for retail use calculated using effective trip generation rate of the overall retail (17,000 s.f.).
[3] Trip Generation Manual, 9th Edition, ITE 2012, unless otherwise noted.
[4] Trip generation rates for apartment was calculated using the following equations:

Daily:	T = 6.06 (X) + 123.56	Where:
AM Peak Hour:	T = 0.49 (X) + 3.73	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	T = 0.55 (X) + 17.65	X = Number of dwelling units

[5] Trip generation for retail/shopping center was calculated using the following formulas:

		Where:
Daily:	Ln(T) = 0.65 Ln(X) + 5.83	Ln = Natural logarithm
AM Peak Hour:	Ln(T) = 0.61 Ln(X) + 2.24	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	Ln(T) = 0.67 Ln(X) + 3.31	X = Area in 1,000 square feet of gross leasable area

[6] *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* , SANDAG, April 2002
[7] AM peak hour is 3% of Daily Trips. PM peak hour is 9% of Daily Trips.

TABLE 13
SUMMARY OF INTERSECTION LEVEL OF SERVICE ANALYSIS - ALTERNATIVE 2: REDUCED DENSITY (40% REDUCTION IN BLOCK A)

No.	Intersection	Peak Hour	Cumulative (2018) Base Conditions V/C	Cumulative (2018) Base Conditions LOS	Cumulative (2018) Plus Project - Alternative 2 V/C	Cumulative (2018) Plus Project - Alternative 2 LOS	Project Increase in V/C	Significant Project Impact	Cumulative (2018) Plus Project - Alt. 2 with Mitigation V/C	Cumulative (2018) Plus Project - Alt. 2 with Mitigation LOS	Project Increase in V/C	Significant Project Impact
1.	Grand Avenue & Cesar Chavez Avenue	AM	0.802	D	0.805	D	0.003	No	0.805	D	0.003	No
		PM	0.965	E	0.971	E	0.006	No	0.971	E	0.006	No
2.	Grand Avenue & Temple Street	AM	0.763	C	0.768	C	0.005	No	0.768	C	0.005	No
		PM	0.883	D	0.889	D	0.006	No	0.889	D	0.006	No
3.	Hill Street & Ord Street	AM	0.635	B	0.637	B	0.002	No	0.637	B	0.002	No
		PM	0.503	A	0.518	A	0.015	No	0.518	A	0.015	No
4.	Hill Street & Temple Street	AM	0.751	C	0.755	C	0.004	No	0.755	C	0.004	No
		PM	0.856	D	0.871	D	0.015	No	0.871	D	0.015	No
5.	Broadway & Ord Street	AM	0.514	A	0.526	A	0.012	No	0.526	A	0.012	No
		PM	0.624	B	0.634	B	0.010	No	0.634	B	0.010	No
6.	Broadway & Cesar Chavez Avenue	AM	0.772	C	0.781	C	0.009	No	0.771	C	-0.001	No
		PM	0.848	D	0.868	D	0.020	**Yes**	0.857	D	0.009	No
7.	Broadway & Arcadia Street	AM	0.226	A	0.237	A	0.011	No	0.237	A	0.011	No
		PM	0.417	A	0.441	A	0.024	No	0.441	A	0.024	No
8.	Broadway & US-101 Southbound Off-Ramp/Aliso Street	AM	0.386	A	0.393	A	0.007	No	0.393	A	0.007	No
		PM	0.504	A	0.519	A	0.015	No	0.519	A	0.015	No
9.	Broadway & Temple Street	AM	0.647	B	0.656	B	0.009	No	0.656	B	0.009	No
		PM	0.730	C	0.753	C	0.023	No	0.753	C	0.023	No
10.	New High Street/Spring Street & Cesar Chavez Avenue	AM	0.606	B	0.617	B	0.011	No	0.617	B	0.011	No
		PM	0.468	A	0.494	A	0.026	No	0.494	A	0.026	No
11.	Spring Street & Arcadia Street	AM	0.345	A	0.397	A	0.052	No	0.397	A	0.052	No
		PM	0.181	A	0.188	A	0.007	No	0.188	A	0.007	No
12.	Spring Street & Aliso Street	AM	0.416	A	0.420	A	0.004	No	0.420	A	0.004	No
		PM	0.240	A	0.244	A	0.004	No	0.244	A	0.004	No
13.	Spring Street & Temple Street	AM	0.855	D	0.857	D	0.002	No	0.857	D	0.002	No
		PM	0.576	A	0.577	A	0.001	No	0.577	A	0.001	No
14.	Main Street & Cesar Chavez Avenue	AM	0.415	A	0.420	A	0.005	No	0.420	A	0.005	No
		PM	0.543	A	0.549	A	0.006	No	0.549	A	0.006	No
15.	Main Street & Arcadia Street	AM	0.253	A	0.255	A	0.002	No	0.255	A	0.002	No
		PM	0.405	A	0.409	A	0.004	No	0.409	A	0.004	No
16.	Main Street & Aliso Street	AM	0.205	A	0.209	A	0.004	No	0.209	A	0.004	No
		PM	0.408	A	0.412	A	0.004	No	0.412	A	0.004	No
17.	Main Street & Temple Street	AM	0.329	A	0.330	A	0.001	No	0.330	A	0.001	No
		PM	0.641	B	0.645	B	0.004	No	0.645	B	0.004	No
18.	Los Angeles Street & Arcadia Street	AM	0.384	A	0.385	A	0.001	No	0.385	A	0.001	No
		PM	0.545	A	0.549	A	0.004	No	0.549	A	0.004	No
19.	Los Angeles Street & Aliso Street/US-101 Southbound On-Ramp	AM	0.286	A	0.289	A	0.003	No	0.289	A	0.003	No
		PM	0.538	A	0.541	A	0.003	No	0.541	A	0.003	No
20.	Alameda Street & Cesar Chavez Avenue	AM	0.825	D	0.828	D	0.003	No	0.828	D	0.003	No
		PM	0.814	D	0.821	D	0.007	No	0.821	D	0.007	No
21.	Alameda Street & Arcadia Street/US-101 Northbound Off-Ramp	AM	0.900	D	0.901	E	0.001	No	0.901	E	0.001	No
		PM	0.998	E	1.004	F	0.006	No	1.004	F	0.006	No
22.	Alameda Street & Aliso Street/Commercial Street	AM	0.645	B	0.646	B	0.001	No	0.646	B	0.001	No
		PM	0.880	D	0.881	D	0.001	No	0.881	D	0.001	No

V/C - Volume to Capacity Ratio
LOS - Level of Service

The same mitigation measures identified for the Proposed Project consisting of Adaptive Traffic Control System infrastructure upgrade and implementation of a TDM program would also mitigate the significant impact of Alternative 2. The resulting Alternative 2 trip generation after implementation of the TDM program is summarized in Table 14. As indicated in the table, the TDM program is estimated to result in an additional 5% reduction in Project trips. The overall Alternative 2 Project's trip generation including the TDM Program is estimated to result in a net total of approximately 2,616 daily trips of which 130 trips would occur during the morning peak hour and 238 trips during the evening peak hour. Table 15 summarizes the trip generation estimates with mitigation of the project alternatives including a comparison to that of the Proposed Project. As indicated in Table 15, this represents 20% less trips on a daily basis, 17% less trips in the morning peak hour and 19% less trips in the evening peak hour compared to those of the Proposed Project.

Capacity calculation worksheets for Alternative 2 conditions are attached in Appendix F.

On an overall basis, this alternative would adversely impact traffic to a lesser degree than the Proposed Project. However, it would result in the same number of impacts prior to mitigation and would be mitigated by the same mitigation measures recommended for the Proposed Project. No significant differences in travel patterns outside the project area would be expected between this alternative and the Proposed Project.

TABLE 14
ESTIMATED WEEKDAY PROJECT TRIP GENERATION WITH MITIGATION
ALTERNATIVE 2: REDUCED DENISTY (40% REDUCTION IN BLOCK A)

	Size	Daily	AM Peak Hour			PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project - Block A								
Apartment [1]	71 d.u.	460	7	28	35	28	15	43
Retail [2]	9,000 s.f.	1,136	17	11	28	47	50	97
Specialty Retail	7,400 s.f.	296	5	4	9	14	13	27
Restaurant	4,600 s.f.	414	2	2	4	23	11	34
Project Trip Generation Total - Less (25%) Transit Trips		1,730	23	34	57	84	67	151
*Internal Capture/Walk (10%) Trips		(173)	(3)	(3)	(6)	(8)	(7)	(15)
**Retail - Pass-By (50%) Trips		(409)	(5)	(5)	(10)	(18)	(17)	(35)
**Specialty Retail - Pass-By (10%) Trips		(21)	(1)	0	(1)	(1)	(1)	(2)
**Restaurant - Pass-By (10%) Trips		(30)	0	0	0	(1)	(1)	(2)
Block A - Project Trip Generation Total (Net)		**1,097**	**14**	**26**	**40**	**56**	**41**	**97**
Proposed Project - Block B								
Apartment [1]	226 d.u.	1,463	23	91	114	90	48	138
Retail [2]	8,000 s.f.	1,010	16	9	25	41	45	86
Specialty Retail	10,000 s.f.	400	7	5	12	18	18	36
Restaurant	2,000 s.f.	180	1	1	2	10	5	15
Project Trip Generation Total - Less (25%) Transit Trips		2,290	35	80	115	120	87	207
*Internal Capture/Walk (10%) Trips		(229)	(6)	(6)	(12)	(11)	(10)	(21)
**Retail - Pass-By (50%) Trips		(364)	(5)	(4)	(9)	(15)	(15)	(31)
**Specialty Retail - Pass-By (10%) Trips		(29)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(13)	0	0	0	(1)	0	(1)
Existing Use (to be removed)								
Specialty Retail	(2,000) s.f.	(80)	(1)	(1)	(2)	(4)	(3)	(7)
Quality Restaurant	(1,000) s.f.	(90)	(1)	0	(1)	(5)	(2)	(7)
Existing Uses Trip Generation Total - Less (20%) Transit Trips		(136)	(2)	(1)	(3)	(7)	(4)	(11)
Block B - Project Trip Generation Total (Net)		**1,519**	**21**	**69**	**90**	**84**	**57**	**141**
Overall Project Trip Generation Total (Net)		**2,616**	**35**	**95**	**130**	**140**	**98**	**238**
Trip Rates [3]								
Apartment (ITE Land Use 220)	Trips per d.u.	[4]	20%	80%	[4]	65%	35%	[4]
Retail/Shopping Center (ITE Land Use 820)	Trips per 1,000 s.f.	[5]	62%	38%	[5]	48%	52%	[5]
Quality Restaurant (ITE Land Use 931)	Trips per 1,000 s.f.	89.95	50%	50%	0.81	67%	33%	7.49
Specialty Retail (SANDAG Land Use) [6]	Trips per 1,000 s.f.	40.00	60%	40%	[7]	50%	50%	[7]

* Internal capture/walk trips determined after reduction of transit trips.
** Pass-by trips determined after reduction of transit and internal capture trips.

[1] Trip generation estimates for residential use calculated using effective trip generation rate of the overall dwelling units (297 d.u.).
[2] Trip generation estimates for retail use calculated using effective trip generation rate of the overall retail (17,000 s.f.).
[3] Trip Generation Manual, 9th Edition, ITE 2012, unless otherwise noted.
[4] Trip generation rates for apartment was calculated using the following equations:

Daily:	T = 6.06 (X) + 123.56	Where:
AM Peak Hour:	T = 0.49 (X) + 3.73	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	T = 0.55 (X) + 17.65	X = Number of dwelling units

[5] Trip generation for retail/shopping center was calculated using the following formulas:

		Where:
Daily:	Ln(T) = 0.65 Ln(X) + 5.83	Ln = Natural logarithm
AM Peak Hour:	Ln(T) = 0.61 Ln(X) + 2.24	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	Ln(T) = 0.67 Ln(X) + 3.31	X = Area in 1,000 square feet of gross leasable area

[6] *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* , SANDAG, April 2002
[7] AM peak hour is 3% of Daily Trips. PM peak hour is 9% of Daily Trips.

TABLE 15
ALTERNATIVES ANALYSIS - SUMMARY AND COMPARISON OF TRIP GENERATION ESTIMATES WITH MITIGATION

Scenario	DAILY TOTAL	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
Proposed Project	3,286	45	111	156	174	120	294
Alternative 1: No Project	0	0	0	0	0	0	0
Difference from Proposed Project	(3,286)	(45)	(111)	(156)	(174)	(120)	(294)
% Difference	*-100%*	*-100%*	*-100%*	*-100%*	*-100%*	*-100%*	*-100%*
Alternative 2: Reduced Density (40% Reduction in Block A)	2,616	35	95	130	140	98	238
Difference from Proposed Project	(670)	(10)	(16)	(26)	(34)	(22)	(56)
% Difference	*-20%*	*-22%*	*-14%*	*-17%*	*-20%*	*-18%*	*-19%*

IX. SUMMARY OF CONCLUSIONS

This study was undertaken to assess existing traffic conditions with and without the Proposed Project, estimate future conditions with and without the Proposed Project, analyze potential traffic impacts of the Proposed Project, assess required improvements and identify/recommend project mitigation to alleviate the significant traffic impacts on the transportation system, if needed. Raju Associates, Inc. performed this detailed study and the following summarizes the results of the analysis:

- A total of 22 intersections were analyzed within the study area for this project. These locations are within the area bounded by Ord Street on the north, Temple Street on the south, Grand Avenue on the west and Alameda Street on the east.

- Currently, all 22 of the analyzed intersection locations are operating at acceptable levels of service (LOS D or better) during both the morning and evening peak hours.

- In the Cumulative (Future Year 2018) Base conditions, i.e., future conditions without the implementation of the Proposed Project, the 22 analyzed intersection locations are projected to continue to operate at acceptable levels of service (LOS D or better) during the morning peak hour. During the evening peak hour, 20 of the 22 analyzed intersection locations are projected to operate at LOS D or better. The remaining two locations, the intersections of Grand Avenue/Cesar Chavez Avenue and Alameda Street/Arcadia Street-US-101 Northbound Off-Ramp, are projected to operate at LOS E during the evening peak hour.

- The Proposed Project consists of development on two blocks, Block A located at 527 N. Spring Street and Block B located at 555 N. Broadway. Block A would consist of 119 residential dwelling units, 15,000 square feet of retail use, 11,000 square feet of specialty retail use and 9,000 square feet of restaurant use. Block B would consist of 226 residential dwelling units, 8,000 square feet of retail use, 10,000 square feet of specialty retail use and 2,000 square feet of restaurant use. The Project is estimated to generate a net total of 167 trips during the morning peak hour and 320 trips during the evening peak hour.

- In the Existing (2014) plus Project conditions, the traffic operating conditions would be similar to those for the Existing conditions (without the project) during the both the morning and evening peak hours. All 22 of the analyzed intersection locations are projected to continue to operate at acceptable levels of service (LOS D or better) during both the morning and evening peak hours.

- The Existing (2014) plus Project traffic conditions indicate that the Proposed Project would not cause significant traffic impacts at any of the analysis locations during the weekday morning and evening peak hours.

- In the Cumulative (Future Year 2018) plus Project conditions, 21 of the 22 of the study intersections are projected to operate at LOS D or better during the morning peak hour. The remaining location, the intersection of Alameda Street/Arcadia Street-US-101 Northbound Off-Ramp, is projected to operate at LOS E during the morning peak hour. During the evening peak hour, 20 of the 22 study intersections are projected to operate at LOS D or better. The remaining two locations, the intersections of Grand Avenue/Cesar Chavez Avenue and Alameda Street/Arcadia Street-US-101 Northbound Off-Ramp, are projected to operate at LOS E and LOS F, respectively, during the evening peak hour.

- The Cumulative (Future Year 2018) plus Project traffic conditions indicate that the Proposed Project would cause a significant traffic impact at the intersection of Broadway/Cesar Chavez Avenue during the weekday evening peak hour. The Proposed Project would not result in significant traffic impacts at any of the remaining analyzed intersections during either the morning or evening peak hours.

- Intersection mitigation measures are required to alleviate the significant impacts of the Proposed Project. The mitigation program includes Adaptive Traffic Control System infrastructure enhancements in the vicinity of the intersection of Broadway/Cesar Chavez Avenue, and development and implementation of a site-wide Transportation Demand Management (TDM) Program for the Project Site to promote non-auto travel such as transit, bicycle and pedestrian system usage.

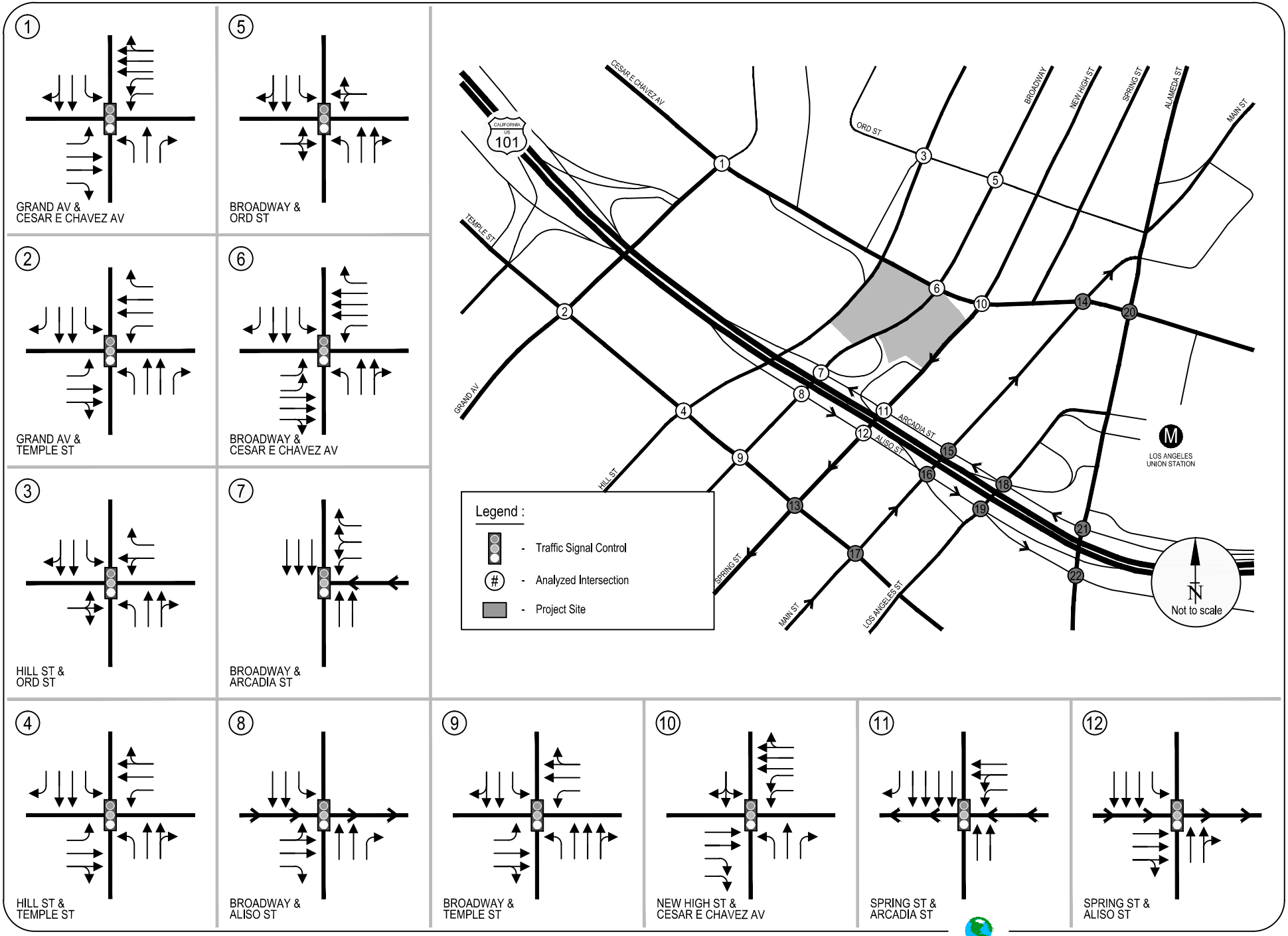
- With implementation of the above improvement measures, the Proposed Project would not result in significant impacts at any of the analyzed intersections. No residual significant impacts would remain due to the Proposed Project and its mitigations.

- The Proposed Project would add less than 50 trips to the nearest Congestion Management Program (CMP) arterial monitoring locations and would add less than 150 trips in either direction to the nearest CMP mainline freeway monitoring locations during the weekday evening peak hour. Per CMP guidelines, no further CMP analysis is required.

- Two project alternatives were evaluated in this study. They include the “No-Project” alternative and “40% Reduced Project” alternative. The Reduced Project alternative would not cause any residual significant traffic impacts with implementation of the same mitigation measures as those recommended for the Proposed Project.

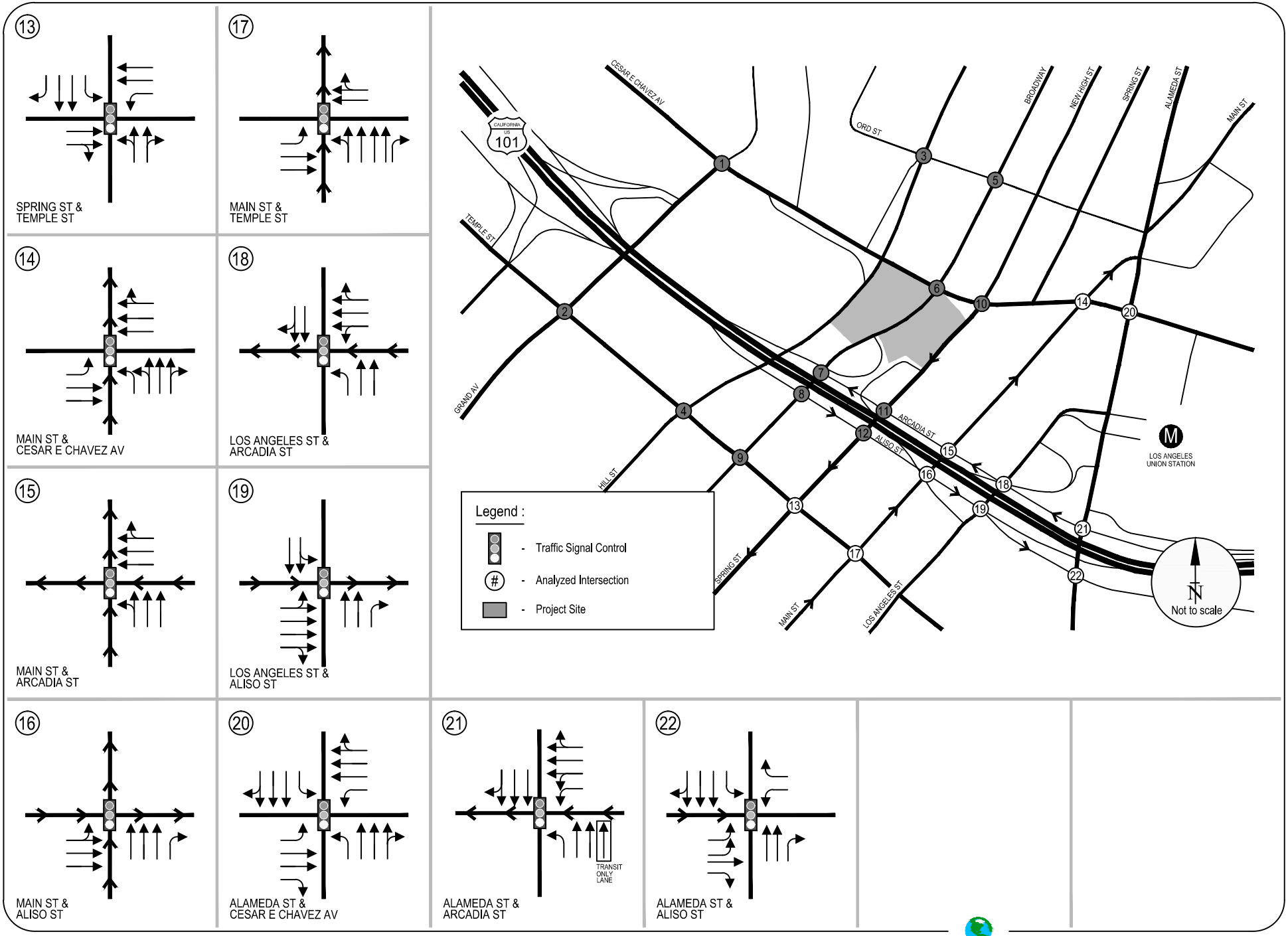
APPENDIX A

Intersection Lane Configurations



APPENDIX A1
EXISTING INTERSECTION LANE CONFIGURATIONS

RAJU Associates, Inc.



APPENDIX A2
EXISTING INTERSECTION LANE CONFIGURATIONS

RAJU Associates, Inc.

APPENDIX B

Traffic Counts

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Grand
EAST & WEST: Cesar Chavez

PROJECT #: SC0325
LOCATION #: 1
CONTROL: SIGNAL

NOTES:

AM / PM / MID / OTHER / OTHER

N ▲ / ◄ W / E ► / S ▼

	NORTHBOUND Grand			SOUTHBOUND Grand			EASTBOUND Cesar Chavez			WESTBOUND Cesar Chavez				U-TURNS				
LANES:	NL 1	NT 1	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 1	WL 2	WT 3	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL
AM 7:00 AM	12	3	13	5	55	8	2	111	49	162	242	0	662	0	0	0	0	0
7:15 AM	24	4	21	5	59	7	3	156	55	176	297	0	807	0	0	0	0	0
7:30 AM	19	12	61	7	70	14	2	199	42	191	298	1	916	0	0	0	0	0
7:45 AM	42	7	73	12	52	14	4	207	29	190	299	2	931	0	0	0	0	0
8:00 AM	29	13	41	13	71	11	6	192	74	193	278	2	923	0	0	0	0	0
8:15 AM	16	5	15	6	72	8	5	200	71	182	277	0	857	0	0	0	0	0
8:30 AM	21	7	16	2	91	10	3	204	85	198	252	0	889	0	0	0	0	0
8:45 AM	21	5	23	5	64	7	3	243	66	206	239	0	882	0	0	0	0	0
9:00 AM	19	4	20	6	60	4	6	190	75	140	255	1	780	0	0	1	0	1
9:15 AM	20	6	9	0	46	7	5	166	95	143	224	0	721	0	0	0	0	0
9:30 AM	25	6	14	5	43	4	9	159	72	138	230	0	705	0	0	0	0	0
9:45 AM	24	7	20	6	40	4	0	143	74	136	185	0	639	0	0	0	0	0
VOLUMES	272	79	326	72	723	98	48	2,170	787	2,055	3,076	6	9,712	0	0	1	0	1
APPROACH %	40%	12%	48%	8%	81%	11%	2%	72%	26%	40%	60%	0%						
APP/DEPART	677	/	133	893	/	3,565	3,005	/	2,568	5,137	/	3,446	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	106	37	190	38	265	47	17	798	216	756	1,152	5	3,627					
APPROACH %	32%	11%	57%	11%	76%	13%	2%	77%	21%	40%	60%	0%						
PEAK HR FACTOR		0.682			0.921			0.934			0.974		0.974					
APP/DEPART	333	/	59	350	/	1,237	1,031	/	1,026	1,913	/	1,305	0					
PM 03:00 PM	40	23	27	8	24	8	6	178	33	65	209	0	621	0	0	0	0	0
3:15 PM	42	16	39	4	24	8	14	191	37	51	210	0	636	0	0	0	0	0
3:30 PM	36	36	33	6	19	15	5	216	31	79	193	1	670	0	0	0	0	0
3:45 PM	65	38	39	4	21	9	19	209	45	57	194	2	702	0	0	0	0	0
4:00 PM	57	66	36	3	16	6	6	239	44	76	230	1	780	0	0	0	0	0
4:15 PM	70	70	43	1	17	7	9	230	42	78	249	1	817	0	0	0	0	0
4:30 PM	61	81	42	8	30	7	10	260	45	64	266	0	874	1	0	0	0	1
4:45 PM	67	90	50	8	18	2	4	256	61	74	259	0	889	0	0	0	0	0
5:00 PM	55	129	62	10	36	9	15	210	53	105	281	3	968	0	0	0	0	0
5:15 PM	70	152	68	5	20	6	7	236	53	89	310	2	1,018	0	0	0	0	0
5:30 PM	70	156	68	4	29	5	8	224	45	97	331	0	1,037	0	0	0	0	0
5:45 PM	83	166	47	5	22	7	7	226	47	122	313	3	1,048	0	0	0	0	0
VOLUMES	716	1,023	554	66	276	89	110	2,675	536	957	3,045	13	10,060	1	0	0	0	1
APPROACH %	31%	45%	24%	15%	64%	21%	3%	81%	16%	24%	76%	0%						
APP/DEPART	2,293	/	1,146	431	/	1,769	3,321	/	3,295	4,015	/	3,850	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	278	603	245	24	107	27	37	896	198	413	1,235	8	4,071					
APPROACH %	25%	54%	22%	15%	68%	17%	3%	79%	18%	25%	75%	0%						
PEAK HR FACTOR		0.951			0.718			0.955			0.945		0.971					
APP/DEPART	1,126	/	648	158	/	718	1,131	/	1,165	1,656	/	1,540	0					

Grand

NORTH SIDE

Cesar Chavez WEST SIDE EAST SIDE **Cesar Chavez**

SOUTH SIDE

Grand

	ALL PED AND BIKE				PEDESTRIAN CROSSINGS				BICYCLE CROSSINGS				SCHOOL AGE PED			
	N SIDE	S SIDE	E SIDE	W SIDE	N SIDE	S SIDE	E SIDE	W SIDE	NS	SS	ES	WS	NS	SS	ES	WS
AM 7:00 AM	42	31	32	29	31	24	19	28	1	3	1	1	10	4	12	0
7:15 AM	48	51	61	63	38	48	22	63	2	3	1	0	8	0	38	0
7:30 AM	139	181	173	112	85	101	72	112	0	6	1	0	54	74	100	0
7:45 AM	181	337	238	95	77	152	108	95	4	3	0	0	100	182	130	0
8:00 AM	74	69	52	38	40	48	33	38	2	3	1	0	32	18	18	0
8:15 AM	39	43	24	18	33	31	24	18	2	4	0	0	4	8	0	0
8:30 AM	18	27	20	28	16	26	13	28	2	1	1	0	0	0	6	0
8:45 AM	32	25	13	19	29	22	13	17	3	3	0	2	0	0	0	0
9:00 AM	23	10	18	12	23	9	15	12	0	1	3	0	0	0	0	0
9:15 AM	32	17	14	12	31	15	14	12	1	2	0	0	0	0	0	0
9:30 AM	26	10	16	13	25	9	12	13	1	1	0	0	0	0	4	0
9:45 AM	24	22	16	23	21	20	16	23	3	2	0	0	0	0	0	0
TOTAL	678	823	677	462	449	505	361	459	21	32	8	3	208	286	308	0
PM 3:00 PM	63	32	25	31	39	27	12	31	0	3	1	0	24	2	12	0
3:15 PM	202	166	117	71	74	109	48	70	2	5	1	1	126	52	68	0
3:30 PM	430	344	295	173	98	218	81	173	0	2	0	0	332	124	214	0
3:45 PM	115	93	120	82	29	74	23	82	2	3	1	0	84	16	96	0
4:00 PM	44	60	34	43	37	39	20	43	3	5	0	0	4	16	14	0
4:15 PM	72	73	60	46	25	54	17	46	1	1	1	0	46	18	42	0
4:30 PM	94	53	22	41	47	50	13	41	1	1	1	0	46	2	8	0
4:45 PM	48	42	19	25	31	39	13	25	1	3	0	0	4	16	0	6
5:00 PM	58	49	57	40	41	39	32	40	3	2	1	0	14	8	24	0
5:15 PM	39	54	66	60	28	33	23	56	3	11	1	4	8	10	42	0
5:30 PM	53	38	34	48	50	36	12	48	3	2	0	0	0	0	22	0
5:45 PM	45	36	13	21	35	31	12	21	6	3	1	0	4	2	0	0
TOTAL	1,263	1,040	862	681	534	749	306	676	25	41	8	5	704	250	548	0

	TOTAL	NB	SB	EB	WB
AM 7:00 AM	32	1	3	1	1
7:15 AM	46	2	5	1	1
7:30 AM	228	0	6	1	0
7:45 AM	412	4	3	0	0
8:00 AM	68	2	3	1	0
8:15 AM	106	2	4	0	0
8:30 AM	83	2	1	1	0
8:45 AM	81	3	3	0	2
9:00 AM	59	0	1	3	0
9:15 AM	72	1	2	0	0
9:30 AM	59	1	1	0	0
9:45 AM	80	3	2	0	0
TOTAL	1,774	21	32	8	3
PM 3:00 PM	109	0	3	1	0
3:15 PM	301	2	5	1	1
3:30 PM	570	0	2	0	0
3:45 PM	208	2	3	1	0
4:00 PM	139	3	5	0	0
4:15 PM	142	1	1	1	0
4:30 PM	151	1	1	1	0
4:45 PM	108	1	3	0	0
5:00 PM	152	3	2	1	0
5:15 PM	140	3	11	1	4
5:30 PM	146	3	2	0	0
5:45 PM	99	6	3	1	0
TOTAL	2,265	25	41	8	5

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Grand
EAST & WEST: Temple

PROJECT #: SC0325
LOCATION #: 2
CONTROL: SIGNAL

NOTES:

AM / PM / MID / OTHER / OTHER

N ▲ / ◄ W / E ► / S ▼

	NORTHBOUND Grand			SOUTHBOUND Grand			EASTBOUND Temple			WESTBOUND Temple				U-TURNS				
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL
AM 7:00 AM	12	20	11	16	156	87	12	76	46	65	162	17	680	1	0	0	0	1
7:15 AM	7	36	13	10	168	74	20	79	60	49	152	29	697	1	0	0	0	1
7:30 AM	14	71	14	15	172	112	40	86	49	67	191	29	860	0	0	0	0	0
7:45 AM	8	66	18	6	201	88	60	99	52	65	147	47	857	0	0	0	0	0
8:00 AM	19	48	17	14	215	110	28	93	44	61	165	36	850	0	0	0	0	0
8:15 AM	15	28	16	18	189	74	14	133	54	56	171	27	795	0	0	0	0	0
8:30 AM	9	42	12	10	215	97	10	133	39	53	165	40	825	0	0	0	0	0
8:45 AM	14	44	18	21	175	85	10	117	43	70	164	35	796	0	0	0	0	0
9:00 AM	8	42	23	14	187	79	17	81	39	62	137	40	729	0	0	0	0	0
9:15 AM	17	42	21	15	166	63	16	90	52	62	148	38	730	0	0	0	0	0
9:30 AM	14	41	9	14	122	50	15	94	49	64	162	54	688	0	0	0	0	0
9:45 AM	8	42	17	14	128	48	11	85	34	42	111	40	580	0	0	0	0	0
VOLUMES	145	522	189	167	2,094	967	253	1,166	561	716	1,875	432	9,087	2	0	0	0	2
APPROACH %	17%	61%	22%	5%	65%	30%	13%	59%	28%	24%	62%	14%						
APP/DEPART	856	/	1,207	3,228	/	3,371	1,980	/	1,522	3,023	/	2,987	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	56	213	65	53	777	384	142	411	199	249	674	139	3,362					
APPROACH %	17%	64%	19%	4%	64%	32%	19%	55%	26%	23%	63%	13%						
PEAK HR FACTOR		0.843			0.895			0.891			0.925		0.977					
APP/DEPART	334	/	494	1,214	/	1,225	752	/	529	1,062	/	1,114	0					
PM 03:00 PM	36	120	27	16	74	43	24	84	19	26	118	53	640	0	0	0	0	0
3:15 PM	39	136	27	13	91	45	30	90	26	34	162	45	738	0	0	0	0	0
3:30 PM	37	110	38	13	102	33	33	105	20	44	157	43	735	0	0	0	0	0
3:45 PM	47	140	30	11	93	41	25	102	36	47	154	37	763	0	0	0	0	0
4:00 PM	47	149	32	9	84	45	27	117	24	35	148	53	770	1	0	0	0	1
4:15 PM	51	164	33	10	94	44	36	115	26	52	154	36	815	0	0	0	0	0
4:30 PM	72	167	63	13	90	54	32	116	41	45	140	34	867	1	0	0	0	1
4:45 PM	68	170	58	16	128	41	25	142	35	45	157	41	926	1	0	0	0	1
5:00 PM	87	256	97	20	123	43	48	136	29	42	179	54	1,114	0	0	0	0	0
5:15 PM	64	247	68	13	130	49	32	144	40	65	182	78	1,112	0	0	0	0	0
5:30 PM	65	251	57	17	161	37	37	133	48	54	191	57	1,108	0	0	0	0	0
5:45 PM	58	228	37	11	123	40	31	97	67	64	192	71	1,019	0	0	0	0	0
VOLUMES	671	2,138	567	162	1,293	515	380	1,381	411	553	1,934	602	10,607	3	0	0	0	3
APPROACH %	20%	63%	17%	8%	66%	26%	17%	64%	19%	18%	63%	19%						
APP/DEPART	3,376	/	3,120	1,970	/	2,257	2,172	/	2,110	3,089	/	3,120	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	274	982	259	61	537	169	148	510	184	225	744	260	4,353					
APPROACH %	18%	65%	17%	8%	70%	22%	18%	61%	22%	18%	61%	21%						
PEAK HR FACTOR		0.861			0.892			0.966			0.940		0.977					
APP/DEPART	1,515	/	1,390	767	/	946	842	/	830	1,229	/	1,187	0					

Grand

NORTH SIDE

Temple WEST SIDE EAST SIDE **Temple**

SOUTH SIDE

Grand

	ALL PED AND BIKE				PEDESTRIAN CROSSINGS				BICYCLE CROSSINGS				SCHOOL AGE PED			
	N SIDE	S SIDE	E SIDE	W SIDE	N SIDE	S SIDE	E SIDE	W SIDE	NS	SS	ES	WS	NS	SS	ES	WS
AM 7:00 AM	5	17	15	7	5	15	15	7	0	0	0	0	0	2	0	0
7:15 AM	9	39	33	17	3	28	21	17	0	1	0	0	6	10	12	0
7:30 AM	25	110	79	16	25	41	63	15	0	1	2	1	4	0	68	14
7:45 AM	40	160	111	31	40	38	98	31	0	0	1	0	1	0	122	12
8:00 AM	12	32	32	10	12	27	32	7	0	1	0	3	4	0	4	0
8:15 AM	4	34	21	13	3	30	21	10	1	0	0	3	4	0	4	0
8:30 AM	13	23	14	9	10	21	14	7	1	0	0	2	3	2	2	0
8:45 AM	6	20	21	13	5	16	20	11	1	0	1	2	4	0	4	0
9:00 AM	14	30	19	13	6	28	17	11	0	0	2	2	4	8	2	0
9:15 AM	24	98	46	21	8	30	46	21	0	0	0	0	0	16	68	0
9:30 AM	6	28	23	16	6	20	22	16	0	0	1	0	1	0	8	0
9:45 AM	10	49	29	22	4	45	29	21	0	0	0	1	1	6	4	0
TOTAL	168	640	443	188	127	339	398	174	3	3	7	14	27	38	298	38
PM 3:00 PM	5	21	22	13	4	19	19	13	1	2	1	0	4	0	0	2
3:15 PM	23	74	42	29	8	30	38	28	1	0	0	1	2	14	44	4
3:30 PM	72	228	202	38	44	38	158	35	0	0	0	3	3	28	190	44
3:45 PM	50	60	60	47	22	35	32	46	0	1	2	1	4	28	24	26
4:00 PM	31	52	45	46	21	36	32	43	0	0	1	3	4	10	16	12
4:15 PM	11	44	44	29	5	24	28	25	0	2	2	4	8	6	18	14
4:30 PM	21	50	26	28	12	34	24	27	1	0	2	1	4	8	16	0
4:45 PM	22	77	56	22	11	24	52	20	1	1	2	2	6	10	52	2
5:00 PM	19	73	51	17	11	41	49	17	2	0	2	0	4	6	32	0
5:15 PM	12	43	22	25	12	25	21	25	0	0	1	0	1	0	18	0
5:30 PM	13	35	42	25	7	16	23	23	0	3	1	2	6	6	16	18
5:45 PM	8	16	19	25	5	14	17	25	1	0	2	0	3	2	2	0
TOTAL	287	773	631	344	162	336	493	327	7	9	16	17	49	118	428	122

	TOTAL	NB	SB	EB	WB
AM 7:00 AM	44	0	0	0	0
7:15 AM	98	6	10	0	0
7:30 AM	230	0	68	14	0
7:45 AM	342	0	122	12	0
8:00 AM	86	0	4	0	0
8:15 AM	72	1	0	0	3
8:30 AM	59	1	0	0	2
8:45 AM	60	1	0	1	2
9:00 AM	76	6	2	2	4
9:15 AM	189	8	0	0	0
9:30 AM	73	6	0	0	1
9:45 AM	110	4	0	0	1
TOTAL	1,439	127	339	398	174
PM 3:00 PM	61	4	19	19	13
3:15 PM	168	8	30	38	28
3:30 PM	540	44	38	158	35
3:45 PM	217	22	35	32	46
4:00 PM	174	21	36	32	43
4:15 PM	128	5	24	28	25
4:30 PM	125	12	34	24	27
4:45 PM	167	11	24	52	20
5:00 PM	160	11	41	49	17
5:15 PM	102	12	25	21	25
5:30 PM	115	7	16	23	23
5:45 PM	68	5	14	17	25
TOTAL	2,035	162	336	493	327

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:	LOCATION:	China Town	PROJECT #:	SC0325
Tue, Mar 18, 14	NORTH & SOUTH:	Hill	LOCATION #:	3
	EAST & WEST:	Ord	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — N ▲ / ◄ W / E ► / S ▼

	NORTHBOUND (Hill)			SOUTHBOUND (Hill)			EASTBOUND (Ord)			WESTBOUND (Ord)				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	2	0	1	2	0	0	1	0	0	1	1		X	X	X	X	
AM 7:00 AM	0	45	6	4	372	1	0	0	5	32	0	4	469	0	0	0	0	0
7:15 AM	3	35	6	5	350	0	0	0	11	46	0	5	461	0	0	0	0	0
7:30 AM	3	65	7	16	409	0	0	0	4	52	0	10	566	0	0	0	0	0
7:45 AM	7	61	7	17	376	1	1	2	10	43	1	10	536	0	0	0	0	0
8:00 AM	6	47	9	13	365	2	0	0	4	42	0	13	501	0	0	0	0	0
8:15 AM	5	58	9	14	406	1	0	0	7	51	1	10	562	1	0	0	0	1
8:30 AM	3	58	11	10	350	2	2	0	9	48	0	10	503	0	0	0	0	0
8:45 AM	8	42	8	6	369	6	0	0	6	45	0	14	504	1	0	0	0	1
9:00 AM	3	51	7	9	333	1	0	0	7	38	0	12	461	1	0	0	0	1
9:15 AM	3	64	5	17	334	5	0	0	15	24	1	16	484	1	1	0	0	2
9:30 AM	4	42	10	13	280	4	3	0	2	17	0	24	399	0	0	0	0	0
9:45 AM	5	55	13	20	253	2	1	0	6	11	0	18	384	0	0	0	0	0
VOLUMES	50	623	98	144	4,197	25	7	2	86	449	3	146	5,830	4	1	0	0	5
APPROACH %	6%	81%	13%	3%	96%	1%	7%	2%	91%	75%	1%	24%						
APP/DEPART	771	/	776	4,366	/	4,732	95	/	244	598	/	78	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	21	231	32	60	1,556	4	1	2	25	188	2	43	2,165					
APPROACH %	7%	81%	11%	4%	96%	0%	4%	7%	89%	81%	1%	18%						
PEAK HR FACTOR		0.947			0.953			0.538			0.940		0.956					
APP/DEPART	284	/	275	1,620	/	1,769	28	/	94	233	/	27	0					
PM 03:00 PM	2	118	5	13	121	2	1	0	2	9	0	19	292	1	0	0	0	1
3:15 PM	5	119	9	15	219	1	0	1	6	16	0	31	422	0	0	0	0	0
3:30 PM	9	149	20	12	282	0	1	0	8	15	0	26	522	0	0	0	0	0
3:45 PM	7	180	14	22	283	2	3	0	8	12	0	32	563	0	0	0	0	0
4:00 PM	8	225	5	12	253	2	2	0	6	15	0	31	559	0	0	0	0	0
4:15 PM	8	311	12	12	302	1	1	0	3	19	0	37	706	0	1	0	0	1
4:30 PM	8	274	26	19	252	6	1	0	7	26	0	31	650	0	0	0	0	0
4:45 PM	12	289	32	20	316	6	4	2	7	20	3	41	752	0	0	0	0	0
5:00 PM	7	240	24	23	312	4	4	0	5	13	0	36	668	0	0	0	0	0
5:15 PM	20	206	26	17	302	9	0	0	5	33	1	39	658	0	0	0	0	0
5:30 PM	23	201	33	13	317	3	3	0	5	18	0	35	651	0	0	0	0	0
5:45 PM	22	274	46	14	286	3	2	1	6	17	0	41	712	0	0	0	0	0
VOLUMES	131	2,586	252	192	3,245	39	22	4	68	213	4	399	7,155	1	1	0	0	2
APPROACH %	4%	87%	8%	6%	93%	1%	23%	4%	72%	35%	1%	65%						
APP/DEPART	2,969	/	3,007	3,476	/	3,526	94	/	448	616	/	174	0					
BEGIN PEAK HR		4:15 PM																
VOLUMES	35	1,114	94	74	1,182	17	10	2	22	78	3	145	2,776					
APPROACH %	3%	90%	8%	6%	93%	1%	29%	6%	65%	35%	1%	64%						
PEAK HR FACTOR		0.933			0.931			0.654			0.883		0.923					
APP/DEPART	1,243	/	1,269	1,273	/	1,282	34	/	170	226	/	55	0					

Hill

NORTH SIDE

Ord WEST SIDE EAST SIDE Ord

SOUTH SIDE

Hill

	ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM 7:00 AM	10	22	14	17	63	8	22	12	17	59	0	0	0	0	0	2	0	2	0	4
7:15 AM	22	19	23	28	92	22	19	13	27	81	0	0	0	1	1	0	0	10	0	10
7:30 AM	18	38	22	30	108	14	33	15	30	92	0	1	1	0	2	4	4	6	0	14
7:45 AM	22	20	14	28	84	22	18	14	27	81	0	2	0	1	3	0	0	0	0	0
8:00 AM	23	31	10	34	98	23	31	10	34	98	0	0	0	0	0	0	0	0	0	0
8:15 AM	22	16	10	10	58	22	16	10	10	58	0	0	0	0	0	0	0	0	0	0
8:30 AM	36	21	25	34	116	36	21	25	34	116	0	0	0	0	0	0	0	0	0	0
8:45 AM	35	10	15	19	79	34	9	12	19	74	1	1	3	0	5	0	0	0	0	0
9:00 AM	41	12	13	23	89	41	12	13	23	89	0	0	0	0	0	0	0	0	0	0
9:15 AM	29	19	18	25	91	29	19	18	25	91	0	0	0	0	0	0	0	0	0	0
9:30 AM	34	22	18	21	95	32	22	18	21	93	0	0	0	0	0	2	0	0	0	2
9:45 AM	35	26	28	28	117	35	26	28	28	117	0	0	0	0	0	0	0	0	0	0
TOTAL	327	256	210	297	1,090	318	248	188	295	1,049	1	4	4	2	11	8	4	18	0	30
PM 3:00 PM	47	34	38	31	150	34	33	14	30	111	1	1	2	1	5	12	0	22	0	34
3:15 PM	45	24	25	35	129	39	21	9	32	101	0	3	0	3	6	6	0	16	0	22
3:30 PM	64	37	44	38	183	52	31	24	38	145	0	0	0	0	0	12	6	20	0	38
3:45 PM	51	30	20	17	118	47	29	16	17	109	2	1	0	0	3	2	0	4	0	6
4:00 PM	35	33	30	29	127	21	33	15	29	98	2	0	1	0	3	12	0	14	0	26
4:15 PM	40	33	28	33	134	35	31	21	32	119	1	2	1	1	5	4	0	6	0	10
4:30 PM	33	28	23	24	108	33	28	18	23	102	0	0	1	1	2	0	0	4	0	4
4:45 PM	38	25	29	31	123	38	25	17	31	111	0	0	0	0	0	0	0	12	0	12
5:00 PM	40	31	28	29	128	40	29	24	27	120	0	2	0	2	4	0	0	4	0	4
5:15 PM	28	30	11	27	96	28	30	11	27	96	0	0	0	0	0	0	0	0	0	0
5:30 PM	49	54	21	27	151	37	48	12	26	123	2	2	1	1	6	10	4	8	0	22
5:45 PM	23	19	31	27	100	21	19	21	22	83	0	0	0	5	5	2	0	10	0	12
TOTAL	493	378	328	348	1,547	425	357	202	334	1,318	8	11	6	14	39	60	10	120	0	190

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:	LOCATION:	China Town	PROJECT #:	SC0325
Tue, Mar 18, 14	NORTH & SOUTH:	Hill	LOCATION #:	4
	EAST & WEST:	Temple	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — N ▲ / ◄ W / E ► / S ▼

	NORTHBOUND (Hill)			SOUTHBOUND (Hill)			EASTBOUND (Temple)			WESTBOUND (Temple)				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	1	0	1	2	1	1	2	0	1	2	0		X	X	X	X	
AM 7:00 AM	15	44	21	50	318	87	7	71	39	57	164	11	884	0	0	0	0	0
7:15 AM	12	43	24	46	316	78	8	104	44	38	158	17	888	0	0	0	0	0
7:30 AM	15	46	13	45	263	56	10	96	40	40	180	13	817	0	0	0	0	0
7:45 AM	15	52	21	49	255	68	8	99	36	29	168	12	812	0	0	0	0	0
8:00 AM	20	39	15	42	245	53	7	74	33	29	166	17	740	0	0	0	0	0
8:15 AM	17	52	20	36	209	59	8	84	30	15	143	10	683	0	0	0	0	0
8:30 AM	29	43	16	51	224	58	5	85	25	23	181	11	751	0	0	0	0	0
8:45 AM	15	59	20	40	180	48	10	73	33	30	157	13	678	0	0	0	0	0
9:00 AM	15	54	24	36	173	36	15	80	27	22	140	17	639	0	0	0	0	0
9:15 AM	24	41	24	44	143	34	10	66	35	26	140	11	598	0	0	0	0	0
9:30 AM	17	74	17	36	102	29	11	78	33	17	98	11	523	0	0	0	0	0
9:45 AM	24	39	22	38	94	35	15	66	33	18	137	9	530	0	0	0	0	0
VOLUMES	218	586	237	513	2,522	641	114	976	408	344	1,832	152	8,543	0	0	0	0	0
APPROACH %	21%	56%	23%	14%	69%	17%	8%	65%	27%	15%	79%	7%						
APP/DEPART	1,041	/	852	3,676	/	3,274	1,498	/	1,726	2,328	/	2,691	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	57	185	79	190	1,152	289	33	370	159	164	670	53	3,401					
APPROACH %	18%	58%	25%	12%	71%	18%	6%	66%	28%	18%	76%	6%						
PEAK HR FACTOR		0.912			0.896			0.901			0.952		0.957					
APP/DEPART	321	/	271	1,631	/	1,475	562	/	639	887	/	1,016	0					
PM 03:00 PM	29	102	17	24	74	16	14	98	33	16	143	14	580	1	0	0	0	1
3:15 PM	25	97	12	42	125	37	13	75	29	11	156	21	643	0	0	0	1	1
3:30 PM	22	138	8	23	175	52	18	117	30	28	170	35	816	0	0	0	0	0
3:45 PM	32	152	15	26	193	49	24	92	32	14	160	23	812	0	0	0	0	0
4:00 PM	24	186	16	26	150	37	24	124	18	4	163	39	811	0	0	0	0	0
4:15 PM	21	203	18	22	197	57	30	108	20	7	167	58	908	0	0	0	0	0
4:30 PM	18	218	22	23	194	28	34	126	32	12	163	43	913	0	0	0	0	0
4:45 PM	17	194	14	27	194	55	29	141	30	8	194	36	939	0	0	0	0	0
5:00 PM	18	180	27	25	230	56	32	193	32	7	210	36	1,046	0	0	0	0	0
5:15 PM	21	208	21	23	218	56	28	151	24	5	215	37	1,007	0	0	0	0	0
5:30 PM	27	197	12	21	220	57	38	152	17	7	229	31	1,008	0	0	0	0	0
5:45 PM	26	196	17	20	196	64	14	120	10	10	231	44	948	0	0	0	0	0
VOLUMES	280	2,071	199	302	2,166	564	298	1,497	307	129	2,201	417	10,431	1	0	0	1	2
APPROACH %	11%	81%	8%	10%	71%	19%	14%	71%	15%	5%	80%	15%						
APP/DEPART	2,550	/	2,786	3,032	/	2,602	2,102	/	1,998	2,747	/	3,045	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	92	781	77	89	864	233	112	616	83	29	885	148	4,009					
APPROACH %	10%	82%	8%	8%	73%	20%	14%	76%	10%	3%	83%	14%						
PEAK HR FACTOR		0.950			0.953			0.789			0.932		0.958					
APP/DEPART	950	/	1,041	1,186	/	976	811	/	782	1,062	/	1,210	0					

Hill

NORTH SIDE

Temple WEST SIDE EAST SIDE Temple

SOUTH SIDE

Hill

	ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM 7:00 AM	61	72	63	56	252	31	55	37	56	179	0	1	0	0	1	30	16	26	0	72
7:15 AM	78	108	58	83	327	38	97	30	82	247	2	1	0	1	4	38	10	28	0	76
7:30 AM	34	77	51	78	240	15	64	25	77	181	1	1	0	1	3	18	12	26	0	56
7:45 AM	111	97	69	67	344	41	85	26	67	219	0	0	1	0	1	70	12	42	0	124
8:00 AM	68	90	37	51	246	34	72	29	50	185	0	0	0	1	1	34	18	8	0	60
8:15 AM	304	277	251	106	938	146	115	97	106	464	0	0	0	0	0	158	162	154	0	474
8:30 AM	109	105	58	49	321	27	87	33	49	196	0	2	1	0	3	82	16	24	0	122
8:45 AM	40	71	31	55	197	28	63	27	55	173	0	2	0	0	2	12	6	4	0	22
9:00 AM	49	79	38	44	210	48	77	35	44	204	1	2	3	0	6	0	0	0	0	0
9:15 AM	48	63	34	47	192	35	59	30	46	170	1	0	0	1	2	12	4	4	0	20
9:30 AM	28	55	30	56	169	28	51	30	56	165	0	0	0	0	0	0	4	0	0	4
9:45 AM	29	50	36	53	168	29	44	32	51	156	0	0	0	2	2	0	6	4	0	10
TOTAL	959	1,144	756	745	3,604	500	869	431	739	2,539	5	9	5	6	25	454	266	320	0	1,040
PM 3:00 PM	20	60	22	34	136	18	58	15	32	123	0	2	1	2	5	2	0	6	0	8
3:15 PM	37	83	47	30	197	20	67	39	30	156	3	0	0	0	3	14	16	8	0	38
3:30 PM	141	209	138	70	558	63	137	80	68	348	0	0	0	2	2	78	72	58	0	208
3:45 PM	43	86	31	35	195	37	82	31	32	182	0	0	0	3	3	6	4	0	0	10
4:00 PM	62	128	59	68	317	58	104	51	68	281	2	0	0	0	2	2	24	8	0	34
4:15 PM	27	88	45	47	207	26	83	43	47	199	1	1	2	0	4	0	4	0	0	4
4:30 PM	58	108	43	51	260	26	108	33	51	218	0	0	0	0	0	32	0	10	0	42
4:45 PM	35	112	69	59	275	30	99	58	59	246	1	1	1	0	3	4	12	10	0	26
5:00 PM	46	137	87	104	374	38	133	57	103	331	0	0	2	1	3	8	4	28	0	40
5:15 PM	24	50	28	31	133	22	44	21	31	118	0	0	1	0	1	2	6	6	0	14
5:30 PM	12	41	26	24	103	12	41	25	24	102	0	0	1	0	1	0	0	0	0	0
5:45 PM	21	39	16	21	97	18	36	15	20	89	1	1	1	1	4	2	2	0	0	4
TOTAL	526	1,141	611	574	2,852	368	992	468	565	2,393	8	5	9	9	31	150	144	134	0	428

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:	LOCATION:	China Town	PROJECT #:	SC0325
Tue, Mar 18, 14	NORTH & SOUTH:	Broadway	LOCATION #:	5
	EAST & WEST:	Ord	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — N ▲ ◄ W E ► S ▼

		NORTHBOUND Broadwa			SOUTHBOUND Broadwa			EASTBOUND Ord			WESTBOUND Ord				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	1	2	0	1	2	1	0	1	0	0	1	0		X	X	X	X	
AM	7:00 AM	6	79	2	11	228	18	3	6	3	4	17	7	384	0	0	0	0	0
	7:15 AM	6	67	5	9	255	32	0	8	8	0	23	4	417	0	0	0	0	0
	7:30 AM	15	90	8	13	248	33	4	11	9	8	24	5	468	0	0	0	0	0
	7:45 AM	17	120	11	10	242	30	3	17	11	1	19	7	488	0	0	0	0	0
	8:00 AM	13	108	7	12	250	23	4	18	11	4	24	10	484	0	0	0	0	0
	8:15 AM	10	78	9	15	261	33	5	13	10	0	21	14	469	0	0	1	0	1
	8:30 AM	17	99	11	13	281	23	5	13	7	4	26	8	507	0	0	0	0	0
	8:45 AM	8	96	6	13	230	31	2	9	4	5	20	3	427	0	0	0	0	0
	9:00 AM	11	93	15	11	224	32	5	13	6	8	12	5	435	0	0	0	0	0
	9:15 AM	9	107	14	11	185	26	2	16	6	2	19	18	415	0	0	0	0	0
	9:30 AM	12	83	13	10	160	10	3	20	6	2	17	10	346	0	0	0	0	0
	9:45 AM	14	115	13	11	138	11	2	24	9	1	20	12	370	0	0	0	0	0
	VOLUMES	138	1,135	114	139	2,702	302	38	168	90	39	242	103	5,210	0	0	1	0	1
	APPROACH %	10%	82%	8%	4%	86%	10%	13%	57%	30%	10%	63%	27%						
	APP/DEPART	1,387	/	1,276	3,143	/	2,831	296	/	421	384	/	682	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	57	405	38	50	1,034	109	17	61	39	9	90	39	1,948					
	APPROACH %	11%	81%	8%	4%	87%	9%	15%	52%	33%	7%	65%	28%						
	PEAK HR FACTOR		0.845			0.941			0.886			0.908		0.961					
	APP/DEPART	500	/	461	1,193	/	1,082	117	/	149	138	/	256	0					
PM	03:00 PM	11	242	5	6	88	6	4	14	4	8	10	13	411	0	0	0	0	0
	3:15 PM	23	284	9	16	102	8	2	20	9	6	28	17	524	0	0	0	0	0
	3:30 PM	17	286	18	7	142	17	3	27	11	2	19	11	560	0	0	0	0	0
	3:45 PM	17	272	12	5	114	12	5	26	12	10	22	18	525	0	0	0	0	0
	4:00 PM	17	300	11	12	129	14	1	21	10	0	17	11	543	0	0	0	0	0
	4:15 PM	15	269	19	12	129	18	5	19	9	4	18	12	529	0	0	0	0	0
	4:30 PM	12	276	18	5	110	18	8	26	13	11	22	9	528	0	0	0	0	0
	4:45 PM	18	266	18	11	134	19	18	34	17	4	28	17	584	0	0	0	0	0
	5:00 PM	18	268	16	13	107	15	13	34	12	4	25	24	549	0	0	0	0	0
	5:15 PM	16	250	15	16	126	14	27	29	4	6	26	32	561	0	0	0	0	0
	5:30 PM	18	242	12	11	154	13	25	22	5	6	22	45	575	0	0	0	0	0
	5:45 PM	19	240	11	14	100	15	29	28	14	1	34	50	555	0	0	0	0	0
	VOLUMES	201	3,195	164	128	1,435	169	140	300	120	62	271	259	6,444	0	0	0	0	0
	APPROACH %	6%	90%	5%	7%	83%	10%	25%	54%	21%	10%	46%	44%						
	APP/DEPART	3,560	/	3,594	1,732	/	1,617	560	/	592	592	/	641	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	70	1,026	61	51	521	61	83	119	38	20	101	118	2,269					
	APPROACH %	6%	89%	5%	8%	82%	10%	35%	50%	16%	8%	42%	49%						
	PEAK HR FACTOR		0.958			0.889			0.870			0.818		0.971					
	APP/DEPART	1,157	/	1,227	633	/	579	240	/	231	239	/	232	0					

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	13	16	9	16	54	11	16	6	13	46	0	0	1	3	4	2	0	2	0	4
	7:15 AM	16	24	14	14	68	16	24	9	10	59	0	0	1	4	5	0	0	4	0	4
	7:30 AM	14	27	4	22	67	14	27	4	21	66	0	0	0	1	1	0	0	0	0	0
	7:45 AM	40	30	9	35	114	40	29	8	33	110	0	1	1	2	4	0	0	0	0	0
	8:00 AM	27	31	9	22	89	26	31	8	22	87	1	0	1	0	2	0	0	0	0	0
	8:15 AM	41	36	22	39	138	40	36	20	39	135	1	0	2	0	3	0	0	0	0	0
	8:30 AM	64	50	37	36	187	57	50	37	32	176	1	0	0	4	5	6	0	0	0	6
	8:45 AM	63	61	62	50	236	58	58	59	50	225	1	1	1	0	3	4	2	2	0	8
	9:00 AM	68	66	78	43	255	52	66	76	41	235	0	0	0	2	2	16	0	2	0	18
	9:15 AM	62	50	72	53	237	58	50	70	52	230	0	0	2	1	3	4	0	0	0	4
	9:30 AM	80	74	102	67	323	80	71	98	66	315	0	1	0	1	2	0	2	4	0	6
	9:45 AM	105	68	146	46	365	105	68	146	41	360	0	0	0	5	5	0	0	0	0	0
	TOTAL	593	533	564	443	2,133	557	526	541	420	2,044	4	3	9	23	39	32	4	14	0	50
PM	3:00 PM	78	93	107	44	322	66	73	105	44	288	0	0	2	0	2	12	20	0	0	32
	3:15 PM	86	57	104	45	292	85	56	103	42	286	1	1	1	3	6	0	0	0	0	0
	3:30 PM	73	86	105	33	297	69	66	103	33	271	0	0	0	0	0	4	20	2	0	26
	3:45 PM	67	74	56	76	273	48	73	53	75	249	3	1	3	1	8	16	0	0	0	16
	4:00 PM	63	63	90	45	261	55	61	86	41	243	2	0	2	4	8	6	2	2	0	10
	4:15 PM	63	52	70	43	228	60	30	68	41	199	3	2	2	2	9	0	20	0	0	20
	4:30 PM	75	62	70	42	249	72	50	67	40	229	1	0	3	2	6	2	12	0	0	14
	4:45 PM	49	54	74	50	227	49	52	70	49	220	0	0	4	1	5	0	2	0	0	2
	5:00 PM	66	59	82	47	254	59	51	72	44	226	1	2	6	3	12	6	6	4	0	16
	5:15 PM	61	54	64	68	247	61	53	58	67	239	0	1	0	1	2	0	0	6	0	6
	5:30 PM	43	43	58	46	190	42	41	51	41	175	1	2	7	5	15	0	0	0	0	0
	5:45 PM	28	59	40	41	168	26	53	38	40	157	2	2	2	1	7	0	4	0	0	4
	TOTAL	752	756	920	580	3,008	692	659	874	557	2,782	14	11	32	23	80	46	86	14	0	146

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:	LOCATION:	China Town	PROJECT #:	SC0325
Tue, Mar 18, 14	NORTH & SOUTH:	Broadway	LOCATION #:	6
	EAST & WEST:	Cesar Chavez	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — N ▲ ◄ W E ► S ▼

		NORTHBOUND Broadwa			SOUTHBOUND Broadwa			EASTBOUND Ce ar Cha e			WESTBOUND Ce ar Cha e				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	1	2	0	1	2	0	2	2.5	0.5	1	3	1		X	X	X	X	
AM	7:00 AM	38	61	27	22	146	63	10	102	9	24	304	13	819	0	0	0	0	0
	7:15 AM	37	53	31	23	169	72	21	122	11	30	327	5	901	0	0	0	0	0
	7:30 AM	47	84	40	28	165	68	20	182	22	23	356	11	1,046	0	0	0	0	0
	7:45 AM	43	102	35	37	148	70	35	172	28	31	376	13	1,090	0	0	0	0	0
	8:00 AM	36	86	42	24	164	77	28	182	28	23	318	18	1,026	0	0	0	0	0
	8:15 AM	38	53	36	41	171	64	22	167	9	37	295	17	950	0	0	0	0	0
	8:30 AM	41	85	41	48	187	57	26	175	7	23	309	20	1,019	0	0	0	0	0
	8:45 AM	37	78	40	30	150	55	25	205	12	30	327	10	999	0	0	0	0	0
	9:00 AM	40	69	32	38	148	48	22	179	14	16	299	23	928	0	0	0	0	0
	9:15 AM	36	97	56	24	126	46	17	135	12	13	265	18	845	0	0	0	0	0
	9:30 AM	37	78	37	25	107	38	21	127	12	13	265	13	773	0	0	0	0	0
	9:45 AM	39	98	39	20	98	25	23	129	7	31	228	24	761	0	0	0	0	0
	VOLUMES	469	944	456	360	1,779	683	270	1,877	171	294	3,669	185	11,157	0	0	0	0	0
	APPROACH %	25%	51%	24%	13%	63%	24%	12%	81%	7%	7%	88%	4%						
	APP/DEPART	1,869	/	1,399	2,822	/	2,244	2,318	/	2,693	4,148	/	4,821	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	164	325	153	130	648	279	105	703	87	114	1,345	59	4,112					
	APPROACH %	26%	51%	24%	12%	61%	26%	12%	79%	10%	8%	89%	4%						
	PEAK HR FACTOR		0.892			0.957			0.940			0.904		0.943					
	APP/DEPART	642	/	489	1,057	/	849	895	/	986	1,518	/	1,788	0					
PM	03:00 PM	40	188	43	13	64	24	41	183	15	11	188	32	842	0	0	0	0	0
	3:15 PM	23	219	42	16	79	19	58	176	9	32	200	35	908	0	0	0	0	0
	3:30 PM	46	210	40	16	99	44	56	219	13	27	209	57	1,036	0	0	0	0	0
	3:45 PM	21	213	28	18	93	26	54	161	13	35	290	30	982	0	0	0	0	0
	4:00 PM	47	209	27	12	101	26	57	272	12	29	271	58	1,121	0	0	0	0	0
	4:15 PM	26	206	24	14	99	31	64	229	16	25	271	44	1,049	0	0	0	0	0
	4:30 PM	41	212	35	11	97	29	53	195	7	33	292	46	1,051	0	0	0	0	0
	4:45 PM	56	192	38	17	109	34	69	207	8	22	261	40	1,053	0	0	0	0	0
	5:00 PM	33	216	39	18	75	30	47	200	16	17	238	37	966	0	0	0	0	0
	5:15 PM	40	193	43	18	89	27	55	154	17	22	240	35	933	0	0	0	0	0
	5:30 PM	43	175	44	19	96	50	53	140	10	27	238	50	945	0	0	0	0	0
	5:45 PM	34	197	40	16	71	28	43	148	9	17	152	38	793	1	0	0	0	1
	VOLUMES	450	2,430	443	188	1,072	368	650	2,284	145	297	2,850	502	11,679	1	0	0	0	1
	APPROACH %	14%	73%	13%	12%	66%	23%	21%	74%	5%	8%	78%	14%						
	APP/DEPART	3,323	/	3,582	1,628	/	1,514	3,079	/	2,915	3,649	/	3,668	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	170	819	124	54	406	120	243	903	43	109	1,095	188	4,274					
	APPROACH %	15%	74%	11%	9%	70%	21%	20%	76%	4%	8%	79%	14%						
	PEAK HR FACTOR		0.966			0.906			0.872			0.938		0.953					
	APP/DEPART	1,113	/	1,250	580	/	558	1,189	/	1,081	1,392	/	1,385	0					

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	18	9	10	9	46	16	8	9	9	42	2	1	1	0	4	0	0	0	0	0
	7:15 AM	16	32	11	16	75	15	27	11	13	66	1	1	0	3	5	0	4	0	0	4
	7:30 AM	23	31	17	16	87	21	27	15	15	78	0	4	0	1	5	2	0	2	0	4
	7:45 AM	20	32	17	30	99	17	31	16	29	93	3	1	1	1	6	0	0	0	0	0
	8:00 AM	13	15	8	16	52	11	11	7	15	44	2	4	1	1	8	0	0	0	0	0
	8:15 AM	21	8	24	12	65	16	7	21	9	53	5	1	3	3	12	0	0	0	0	0
	8:30 AM	20	10	24	20	74	18	9	24	18	69	2	1	0	2	5	0	0	0	0	0
	8:45 AM	18	9	17	8	52	18	6	17	8	49	0	3	0	0	3	0	0	0	0	0
	9:00 AM	22	7	10	13	52	19	5	10	12	46	3	2	0	1	6	0	0	0	0	0
	9:15 AM	31	10	34	12	87	30	10	31	12	83	1	0	3	0	4	0	0	0	0	0
	9:30 AM	33	11	50	17	111	33	11	50	16	110	0	0	0	1	1	0	0	0	0	0
	9:45 AM	25	16	25	15	81	23	15	23	15	76	2	1	2	0	5	0	0	0	0	0
	TOTAL	260	190	247	184	881	237	167	234	171	809	21	19	11	13	64	2	4	2	0	8
PM	3:00 PM	27	15	9	23	74	22	13	7	20	62	3	2	2	3	10	2	0	0	0	2
	3:15 PM	14	12	12	19	57	13	9	10	17	49	1	3	2	2	8	0	0	0	0	0
	3:30 PM	28	18	26	19	91	27	16	23	19	85	1	2	3	0	6	0	0	0	0	0
	3:45 PM	37	25	22	24	108	34	24	19	22	99	3	1	3	2	9	0	0	0	0	0
	4:00 PM	19	34	16	36	105	14	28	14	33	89	3	6	2	3	14	2	0	0	0	2
	4:15 PM	27	42	31	20	120	20	30	31	20	101	3	4	0	0	7	4	8	0	0	12
	4:30 PM	32	33	18	26	109	26	29	13	23	91	2	0	5	3	10	4	4	0	0	8
	4:45 PM	30	21	11	13	75	20	19	9	13	61	2	2	2	0	6	8	0	0	0	8
	5:00 PM	26	17	20	14	77	21	13	16	14	64	5	4	4	0	13	0	0	0	0	0
	5:15 PM	17	19	9	24	69	16	18	7	20	61	1	1	2	4	8	0	0	0	0	0
	5:30 PM	15	8	3	9	35	13	7	3	7	30	2	1	0	2	5	0	0	0	0	0
	5:45 PM	26	21	12	15	74	21	20	10	12	63	5	1	2	3	11	0	0	0	0	0
	TOTAL	298	265	189	242	994	247	226	162	220	855	31	27	27	22	107	20	12	0	0	32

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Broadway
EAST & WEST: Arcadia

PROJECT #: SC0325
LOCATION #: 7
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER — ▲ N / ◄ W / E ► / S ▼

	LANES:	NORTHBOUND Broadwa NL X	NT 2	NR X	SOUTHBOUND Broadwa SL X	ST 3	SR X	EASTBOUND Arcadia EL X	ET X	ER X	WESTBOUND Arcadia WL 1.5	WT X	WR 1.5	TOTAL	U-TURNS NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	81	0	0	191	0	0	0	0	79	0	34	385	0	0	0	0	0
	7:15 AM	0	104	0	0	187	0	0	0	0	64	0	56	411	0	0	0	0	0
	7:30 AM	0	120	0	0	185	0	0	0	0	69	0	62	436	0	0	0	0	0
	7:45 AM	0	107	0	0	224	0	0	0	0	49	0	57	437	0	0	0	0	0
	8:00 AM	0	115	0	0	204	0	0	0	0	37	0	48	404	0	0	0	0	0
	8:15 AM	0	91	0	0	217	0	0	0	0	57	0	50	415	0	0	0	0	0
	8:30 AM	0	99	1	0	222	0	0	0	0	60	0	63	445	0	0	0	0	0
	8:45 AM	0	92	0	0	211	0	0	0	0	59	0	49	411	0	0	0	0	0
	9:00 AM	0	85	0	0	180	0	0	0	0	60	0	71	396	0	0	0	0	0
	9:15 AM	0	121	0	0	159	0	0	0	0	67	0	53	400	1	0	0	0	1
	9:30 AM	0	93	0	0	137	0	0	0	0	80	0	65	375	1	0	0	0	1
	9:45 AM	0	102	0	0	133	0	0	0	0	63	0	56	354	0	0	0	0	0
	VOLUMES	0	1,210	1	0	2,250	0	0	0	0	744	0	664	4,869	2	0	0	0	2
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	53%	0%	47%						
	APP/DEPART	1,211	/	1,874	2,250	/	2,994	0	/	1	1,408	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	412	1	0	867	0	0	0	0	203	0	218	1,701					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	48%	0%	52%						
	PEAK HR FACTOR		0.898			0.968			0.000			0.856		0.956					
	APP/DEPART	413	/	630	867	/	1,070	0	/	1	421	/	0	0					
PM	03:00 PM	0	121	0	0	93	0	0	0	0	39	0	64	317	0	0	0	0	0
	3:15 PM	0	146	0	0	117	0	0	0	0	44	0	83	390	0	0	0	0	0
	3:30 PM	0	166	0	0	136	0	0	0	0	54	0	76	432	0	0	0	0	0
	3:45 PM	0	173	0	1	118	0	0	0	0	45	0	69	406	0	0	0	0	0
	4:00 PM	0	195	0	0	109	0	1	0	0	19	0	50	374	0	0	0	0	0
	4:15 PM	0	220	0	0	140	0	0	0	0	33	0	56	449	0	0	0	0	0
	4:30 PM	0	261	0	0	138	0	0	0	0	25	0	53	477	0	0	0	0	0
	4:45 PM	0	222	0	0	143	0	0	0	0	49	0	59	473	1	0	0	0	1
	5:00 PM	0	230	0	0	134	0	0	0	0	50	0	56	470	0	0	0	0	0
	5:15 PM	0	213	0	0	154	0	0	0	0	65	0	55	487	0	0	0	0	0
	5:30 PM	0	240	0	0	147	0	0	0	0	44	0	69	500	1	0	0	0	1
	5:45 PM	0	194	0	0	130	0	0	0	0	61	0	70	455	0	0	0	0	0
	VOLUMES	0	2,381	0	1	1,559	0	1	0	0	528	0	760	5,230	2	0	0	0	2
	APPROACH %	0%	100%	0%	0%	100%	0%	100%	0%	0%	41%	0%	59%						
	APP/DEPART	2,381	/	3,142	1,560	/	2,087	1	/	1	1,288	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	905	0	0	578	0	0	0	0	208	0	239	1,930					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	47%	0%	53%						
	PEAK HR FACTOR		0.943			0.938			0.000			0.931		0.965					
	APP/DEPART	905	/	1,144	578	/	786	0	/	0	447	/	0	0					

Broadway

NORTH SIDE

Arcadia — WEST SIDE — EAST SIDE — Arcadia

SOUTH SIDE

Broadway

		ALL PED AND BIKE N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	PEDESTRIAN CROSSINGS N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	BICYCLE CROSSINGS NS	SS	ES	WS	TOTAL	SCHOOL AGE PED NS	SS	ES	WS	TOTAL
AM	7:00 AM	4	0	0	0	4	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0
	7:15 AM	9	2	3	3	17	9	0	3	0	12	0	0	0	3	3	0	2	0	0	2
	7:30 AM	5	0	0	0	5	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0
	7:45 AM	5	0	4	1	10	5	0	4	0	9	0	0	0	1	1	0	0	0	0	0
	8:00 AM	3	0	4	1	8	3	0	4	0	7	0	0	0	1	1	0	0	0	0	0
	8:15 AM	4	0	6	2	12	4	0	4	0	8	0	0	2	2	4	0	0	0	0	0
	8:30 AM	2	0	1	0	3	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0
	8:45 AM	2	0	4	0	6	2	0	4	0	6	0	0	0	0	0	0	0	0	0	0
	9:00 AM	5	0	5	1	11	5	0	5	0	10	0	0	0	1	1	0	0	0	0	0
	9:15 AM	1	4	6	0	11	1	0	6	0	7	0	0	0	0	0	0	4	0	0	4
	9:30 AM	1	2	7	0	10	1	0	7	0	8	0	0	0	0	0	0	2	0	0	2
	9:45 AM	5	0	8	0	13	5	0	8	0	13	0	0	0	0	0	0	0	0	0	0
	TOTAL	46	8	48	8	110	46	0	46	0	92	0	0	2	8	10	0	8	0	0	8
PM	3:00 PM	0	0	2	1	3	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0
	3:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	3:30 PM	1	0	2	1	4	0	0	2	0	2	1	0	0	1	2	0	0	0	0	0
	3:45 PM	6	0	2	0	8	6	0	0	0	6	0	0	2	0	2	0	0	0	0	0
	4:00 PM	11	0	5	3	19	11	0	4	0	15	0	0	1	3	4	0	0	0	0	0
	4:15 PM	5	0	3	3	11	5	0	1	0	6	0	0	2	3	5	0	0	0	0	0
	4:30 PM	11	0	6	0	17	11	0	4	0	15	0	0	2	0	2	0	0	0	0	0
	4:45 PM	2	0	1	3	6	2	0	1	0	3	0	0	0	3	3	0	0	0	0	0
	5:00 PM	2	2	7	0	11	2	0	5	0	7	0	0	2	0	2	0	2	0	0	2
	5:15 PM	3	0	3	0	6	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0
	5:30 PM	4	0	6	1	11	4	0	2	0	6	0	0	4	1	5	0	0	0	0	0
	5:45 PM	6	0	5	0	11	6	0	2	0	8	0	0	3	0	3	0	0	0	0	0
	TOTAL	52	2	42	12	108	51	0	24	0	75	1	0	18	12	31	0	2	0	0	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Broadway
EAST & WEST: Aliso

PROJECT #: SC0325
LOCATION #: 8
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER — ▲ N / ◄ W / E ► / S ▼

	LANES:	NORTHBOUND Broadwa NL X	NT 2	NR 0	SOUTHBOUND Broadwa SL 1	ST 2	SR X	EASTBOUND Aliso EL 0.5	ET 1.5	ER 1	WESTBOUND Aliso WL X	WT X	WR X	TOTAL	U-TURNS NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	53	11	28	245	0	24	36	31	0	0	0	428	0	0	0	0	0
	7:15 AM	0	69	13	28	227	0	29	46	39	0	0	0	451	0	0	0	0	0
	7:30 AM	0	94	17	29	225	0	24	41	31	0	0	0	461	0	0	0	0	0
	7:45 AM	0	83	22	39	243	0	22	48	33	0	0	0	490	0	0	0	0	0
	8:00 AM	0	85	23	24	212	0	25	48	38	0	0	0	455	0	0	0	0	0
	8:15 AM	0	60	21	45	227	0	33	57	40	0	0	0	483	0	0	0	0	0
	8:30 AM	0	74	14	41	240	0	25	51	28	0	0	0	473	0	0	0	0	0
	8:45 AM	0	66	15	39	234	0	26	61	41	0	0	0	482	0	0	0	0	0
	9:00 AM	0	59	29	25	219	0	24	60	44	0	0	0	460	0	0	0	0	0
	9:15 AM	0	90	18	16	208	0	30	57	29	0	0	0	448	0	0	0	0	0
	9:30 AM	0	56	24	28	192	0	30	57	41	0	0	0	428	0	0	0	0	0
	9:45 AM	0	65	29	21	174	0	39	61	51	0	0	0	440	0	0	0	0	0
	VOLUMES	0	854	236	363	2,646	0	331	623	446	0	0	0	5,499	0	0	0	0	0
	APPROACH %	0%	78%	22%	12%	88%	0%	24%	45%	32%	0%	0%	0%						
	APP/DEPART	1,090	/	1,185	3,009	/	3,092	1,400	/	1,222	0	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	302	80	149	922	0	105	204	139	0	0	0	1,901					
	APPROACH %	0%	79%	21%	14%	86%	0%	23%	46%	31%	0%	0%	0%						
	PEAK HR FACTOR		0.884			0.949			0.862			0.000		0.970					
	APP/DEPART	382	/	407	1,071	/	1,061	448	/	433	0	/	0	0					
PM	03:00 PM	0	96	42	21	114	0	27	86	24	0	0	0	410	0	0	0	0	0
	3:15 PM	0	114	40	30	127	0	33	83	19	0	0	0	446	0	0	0	0	0
	3:30 PM	0	144	38	25	166	0	26	75	20	0	0	0	494	0	0	0	0	0
	3:45 PM	0	147	23	15	144	0	25	75	17	0	0	0	446	0	0	0	0	0
	4:00 PM	0	166	40	18	114	0	28	92	12	0	0	0	470	0	0	0	0	0
	4:15 PM	0	182	32	17	153	0	31	86	14	0	0	0	515	0	0	0	0	0
	4:30 PM	0	231	39	30	134	0	27	74	14	0	0	0	549	0	0	0	0	0
	4:45 PM	0	203	41	30	156	0	21	64	11	0	0	0	526	0	0	0	0	0
	5:00 PM	0	210	34	23	159	0	17	66	19	0	0	0	528	0	0	0	0	0
	5:15 PM	0	191	45	22	199	0	20	58	23	0	0	0	558	0	0	0	0	0
	5:30 PM	0	216	40	29	160	0	17	48	12	0	0	0	522	0	0	0	0	0
	5:45 PM	0	181	34	27	162	0	18	66	21	0	0	0	509	0	0	0	0	0
	VOLUMES	0	2,081	448	287	1,788	0	290	873	206	0	0	0	5,973	0	0	0	0	0
	APPROACH %	0%	82%	18%	14%	86%	0%	21%	64%	15%	0%	0%	0%						
	APP/DEPART	2,529	/	2,371	2,075	/	1,994	1,369	/	1,608	0	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	835	159	105	648	0	85	262	67	0	0	0	2,161					
	APPROACH %	0%	84%	16%	14%	86%	0%	21%	63%	16%	0%	0%	0%						
	PEAK HR FACTOR		0.920			0.852			0.900			0.000		0.968					
	APP/DEPART	994	/	920	753	/	715	414	/	526	0	/	0	0					

Broadway

NORTH SIDE

Aliso — WEST SIDE — EAST SIDE — Aliso

SOUTH SIDE

Broadway

		ALL PED AND BIKE N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	PEDESTRIAN CROSSINGS N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	BICYCLE CROSSINGS NS	SS	ES	WS	TOTAL	SCHOOL AGE PED NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	14	14	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	3	4	25	32	0	3	3	22	28	0	0	1	3	4	0	0	0	0	0
	7:30 AM	0	6	7	22	35	0	6	7	22	35	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	4	3	27	34	0	4	3	26	33	0	0	0	1	1	0	0	0	0	0
	8:00 AM	0	2	5	30	37	0	2	3	29	34	0	0	0	1	1	0	0	2	0	2
	8:15 AM	0	0	5	19	24	0	0	3	16	19	0	0	2	3	5	0	0	0	0	0
	8:30 AM	0	3	4	20	27	0	3	4	18	25	0	0	0	2	2	0	0	0	0	0
	8:45 AM	0	2	4	12	18	0	2	4	12	18	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	5	6	15	26	0	5	6	13	24	0	0	0	2	2	0	0	0	0	0
	9:15 AM	0	1	2	10	13	0	1	2	10	13	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	5	8	12	25	0	2	8	11	21	0	1	0	1	2	0	2	0	0	2
	9:45 AM	0	4	7	6	17	0	4	7	6	17	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	35	55	212	302	0	32	50	199	281	0	1	3	13	17	0	2	2	0	4
PM	3:00 PM	0	1	5	15	21	0	1	1	14	16	0	0	2	1	3	0	0	2	0	2
	3:15 PM	0	1	3	13	17	0	1	1	11	13	0	0	2	2	4	0	0	0	0	0
	3:30 PM	0	4	3	8	15	0	0	3	8	11	0	0	0	0	0	0	4	0	0	4
	3:45 PM	0	4	3	14	25	0	3	2	14	19	0	0	2	0	2	0	4	0	0	4
	4:00 PM	0	3	6	20	29	0	3	5	20	28	0	0	1	0	1	0	0	0	0	0
	4:15 PM	0	3	7	32	42	0	3	0	29	32	0	0	3	3	6	0	0	4	0	4
	4:30 PM	0	4	4	44	52	0	4	2	44	50	0	0	2	0	2	0	0	0	0	0
	4:45 PM	0	2	2	22	26	0	2	2	20	24	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	4	10	53	67	0	4	8	52	64	0	0	2	1	3	0	0	0	0	0
	5:15 PM	0	3	3	16	22	0	3	3	15	21	0	0	0	1	1	0	0	0	0	0
	5:30 PM	0	2	10	9	21	0	2	2	9	13	0	0	4	0	4	0	0	4	0	4
	5:45 PM	0	1	4	15	20	0	1	1	14	16	0	0	3	1	4	0	0	0	0	0
	TOTAL	4	31	61	261	357	0	27	30	250	307	0	0	21	11	32	4	4	10	0	18

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Broadway
EAST & WEST: Temple

PROJECT #: SC0325
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER1 / OTHER2

◄ W ▲ N S ▼ E ►

	LANES:	NORTHBOUND Broadwa NL 1	NT 3	NR 0	SOUTHBOUND Broadwa SL 1	ST 2	SR 0	EASTBOUND Temple EL 1	ET 2	ER 0	WESTBOUND Temple WL 1	WT 2	WR 0	TOTAL	U-TURNS NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	15	48	12	18	174	70	3	79	17	9	139	11	595	0	0	0	0	0
	7:15 AM	16	52	13	18	174	53	7	104	17	5	120	7	586	0	0	0	0	0
	7:30 AM	14	76	14	33	155	63	13	96	13	9	137	10	633	0	0	0	0	0
	7:45 AM	24	85	19	18	188	55	12	91	8	12	152	8	672	0	0	0	0	0
	8:00 AM	16	82	18	14	168	56	8	116	16	16	156	9	675	0	0	0	1	1
	8:15 AM	17	58	22	17	170	59	8	137	15	18	146	8	675	0	0	0	0	0
	8:30 AM	18	74	29	27	179	51	6	130	19	18	161	6	718	0	0	0	0	0
	8:45 AM	17	58	20	37	189	51	6	139	19	15	182	13	746	0	0	0	0	0
	9:00 AM	11	54	23	38	156	71	11	131	19	20	129	11	674	0	0	0	0	0
	9:15 AM	17	80	22	35	140	54	12	101	14	15	113	11	614	0	0	0	1	1
	9:30 AM	16	70	10	30	124	76	8	121	19	9	117	5	605	0	0	0	0	0
	9:45 AM	11	68	19	29	115	80	7	119	14	5	107	7	581	0	0	0	0	0
	VOLUMES	192	805	221	314	1,932	739	101	1,364	190	151	1,659	106	7,774	0	0	0	2	2
	APPROACH %	16%	66%	18%	11%	65%	25%	6%	82%	11%	8%	87%	6%						
	APP/DEPART	1,218	/	1,012	2,985	/	2,273	1,655	/	1,899	1,916	/	2,590	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	68	272	89	95	706	217	28	522	69	67	645	36	2,814					
	APPROACH %	16%	63%	21%	9%	69%	21%	5%	84%	11%	9%	86%	5%						
	PEAK HR FACTOR		0.886			0.919			0.944			0.890		0.943					
	APP/DEPART	429	/	336	1,018	/	842	619	/	706	748	/	930	0					
PM	03:00 PM	15	102	8	5	117	41	15	100	14	8	99	16	540	0	0	0	0	0
	3:15 PM	16	126	12	8	90	46	11	105	17	4	133	3	571	0	0	0	0	0
	3:30 PM	23	137	16	10	123	52	11	105	12	10	161	13	673	0	0	0	0	0
	3:45 PM	16	154	10	11	111	51	6	121	6	6	127	9	628	0	0	0	0	0
	4:00 PM	31	159	16	4	100	24	11	108	15	6	143	22	639	0	1	0	0	1
	4:15 PM	29	173	13	23	112	25	15	109	20	6	154	13	692	0	0	0	0	0
	4:30 PM	20	228	22	11	118	26	22	141	9	5	151	24	777	0	2	0	0	2
	4:45 PM	22	194	14	22	127	43	15	159	12	9	167	33	817	0	0	0	0	0
	5:00 PM	13	206	27	18	121	47	20	186	9	8	174	19	848	0	0	0	0	0
	5:15 PM	34	187	18	15	102	68	17	183	8	5	193	21	851	0	0	0	0	0
	5:30 PM	20	192	22	14	143	51	18	161	4	8	192	20	845	0	0	0	0	0
	5:45 PM	27	161	15	15	134	54	15	142	4	7	200	13	787	0	0	0	0	0
	VOLUMES	266	2,019	193	156	1,398	528	176	1,620	130	82	1,894	206	8,668	0	3	0	0	3
	APPROACH %	11%	81%	8%	7%	67%	25%	9%	84%	7%	4%	87%	9%						
	APP/DEPART	2,478	/	2,401	2,082	/	1,610	1,926	/	1,969	2,182	/	2,688	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	89	779	81	69	493	209	70	689	33	30	726	93	3,361					
	APPROACH %	9%	82%	9%	9%	64%	27%	9%	87%	4%	4%	86%	11%						
	PEAK HR FACTOR		0.964			0.927			0.921			0.965		0.987					
	APP/DEPART	949	/	942	771	/	556	792	/	839	849	/	1,024	0					

Broadway

NORTH SIDE

Temple WEST SIDE EAST SIDE **Temple**

SOUTH SIDE

Broadway

		ALL PED AND BIKE N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	PEDESTRIAN CROSSINGS N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	BICYCLE CROSSINGS NS	SS	ES	WS	TOTAL	SCHOOL AGE PED NS	SS	ES	WS	TOTAL
AM	7:00 AM	8	89	7	20	124	8	89	7	19	123	0	0	0	1	1	0	0	0	0	0
	7:15 AM	7	122	5	42	176	5	121	4	40	170	0	1	1	2	4	2	0	0	0	2
	7:30 AM	15	158	24	39	236	15	157	18	38	228	0	1	0	1	2	0	0	0	0	0
	7:45 AM	10	171	14	32	227	9	171	13	29	222	1	0	1	3	5	0	0	0	0	0
	8:00 AM	10	129	16	45	200	10	129	15	45	199	0	0	1	0	1	0	0	0	0	0
	8:15 AM	9	136	11	21	177	7	136	10	20	173	0	0	1	1	2	2	0	0	0	2
	8:30 AM	8	144	10	24	186	8	143	10	23	184	0	1	0	1	2	0	0	0	0	0
	8:45 AM	8	147	9	28	192	8	147	9	27	191	0	0	0	1	1	0	0	0	0	0
	9:00 AM	12	113	13	24	162	11	113	13	23	160	1	0	0	1	2	0	0	0	0	0
	9:15 AM	127	193	17	41	378	17	193	17	41	268	0	0	0	0	0	110	0	0	0	110
	9:30 AM	20	136	15	31	202	6	134	15	29	184	0	2	0	2	4	14	0	0	0	14
	9:45 AM	21	113	17	25	176	21	111	17	25	174	0	2	0	0	2	0	0	0	0	0
	TOTAL	255	1,651	158	372	2,436	125	1,644	148	359	2,276	2	7	4	13	26	128	0	6	0	134
PM	3:00 PM	8	35	7	17	67	8	34	5	17	64	0	1	2	0	3	0	0	0	0	0
	3:15 PM	5	58	9	10	82	4	56	8	10	78	1	2	1	0	4	0	0	0	0	0
	3:30 PM	21	89	19	20	149	17	80	17	18	132	0	1	0	2	3	4	8	2	0	14
	3:45 PM	5	80	9	19	113	3	78	7	19	107	0	2	2	0	4	2	0	0	0	2
	4:00 PM	4	125	10	25	164	4	122	9	23	158	0	3	1	2	6	0	0	0	0	0
	4:15 PM	4	175	9	36	224	3	173	7	32	215	1	2	2	4	9	0	0	0	0	0
	4:30 PM	23	127	11	25	186	13	127	9	25	174	0	0	0	2	2	10	0	0	0	10
	4:45 PM	13	79	20	29	141	13	79	14	27	133	0	0	0	2	2	0	0	6	0	6
	5:00 PM	54	128	17	56	255	6	124	3	54	187	0	0	2	2	4	48	4	12	0	64
	5:15 PM	11	50	8	25	94	11	49	6	24	90	0	1	0	1	2	0	0	2	0	2
	5:30 PM	3	42	7	10	62	3	37	5	10	55	0	1	2	0	3	0	4	0	0	4
	5:45 PM	2	21	5	15	43	2	21	1	13	37	0	0	4	2	6	0	0	0	0	0
	TOTAL	153	1,009	131	287	1,580	87	980	91	272	1,430	2	13	18	15	48	64	16	22	0	102

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: New High
EAST & WEST: Cesar Chavez

PROJECT #: SC0325
LOCATION #: 10
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER1 / OTHER2

◄ W ▲ N S ▼ E ►

	LANES:	NORTHBOUND New Hi h NL 1	NT 2	NR 0	SOUTHBOUND New Hi h SL 0	ST 1	SR 0	EASTBOUND Ce ar Cha e EL X	ET 2	ER 2	WESTBOUND Ce ar Cha e WL 2	WT 3	WR 0	TOTAL	U-TURNS NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	8	1	36	10	0	116	46	35	333	3	588	0	0	0	0	0
	7:15 AM	0	1	7	0	47	4	0	133	53	49	359	2	655	0	0	0	0	0
	7:30 AM	2	0	6	0	58	9	0	202	59	51	378	7	772	0	0	0	0	0
	7:45 AM	0	4	8	1	76	19	0	189	68	44	402	4	815	0	0	0	0	0
	8:00 AM	0	0	9	1	70	12	0	207	48	68	347	2	764	0	0	0	0	0
	8:15 AM	0	2	6	2	66	6	0	163	83	63	344	5	740	0	0	0	0	0
	8:30 AM	1	0	8	0	68	8	0	204	70	54	342	4	759	0	0	0	0	0
	8:45 AM	2	2	7	1	75	6	0	199	80	43	361	8	784	0	0	0	0	0
	9:00 AM	1	0	6	4	37	9	0	219	59	58	326	9	728	0	0	0	0	0
	9:15 AM	0	1	9	1	46	7	0	167	59	35	291	8	624	0	0	0	0	0
	9:30 AM	0	2	7	1	20	4	0	148	47	54	287	1	571	0	0	0	0	0
	9:45 AM	1	1	5	1	18	8	0	149	36	30	275	8	532	0	0	0	0	0
	VOLUMES	7	13	86	13	617	102	0	2,096	708	584	4,045	61	8,332	0	0	0	0	0
	APPROACH %	7%	12%	81%	2%	84%	14%	0%	75%	25%	12%	86%	1%						
	APP/DEPART	106	/	74	732	/	1,909	2,804	/	2,195	4,690	/	4,154	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	2	6	29	4	270	46	0	761	258	226	1,471	18	3,091					
	APPROACH %	5%	16%	78%	1%	84%	14%	0%	75%	25%	13%	86%	1%						
	PEAK HR FACTOR		0.771			0.833			0.913			0.953		0.948					
	APP/DEPART	37	/	24	320	/	754	1,019	/	794	1,715	/	1,519	0					
PM	3:00 PM	0	2	9	1	15	12	0	203	27	39	217	12	537	0	0	0	0	0
	3:15 PM	1	1	7	6	10	7	0	195	34	25	261	11	558	0	0	0	0	0
	3:30 PM	2	0	5	3	12	9	0	223	38	37	283	8	620	0	0	0	0	0
	3:45 PM	1	6	7	2	16	9	0	173	32	40	347	6	639	0	0	0	0	0
	4:00 PM	2	0	7	3	4	6	0	271	30	24	352	6	705	0	0	0	0	0
	4:15 PM	0	4	10	1	21	9	0	230	30	29	333	11	678	0	0	0	0	0
	4:30 PM	3	0	10	6	12	10	0	206	31	27	357	10	672	0	0	0	0	0
	4:45 PM	2	3	11	6	21	7	0	232	28	46	313	5	674	0	0	0	0	0
	5:00 PM	3	5	6	2	21	9	1	218	36	44	280	6	631	0	0	0	0	0
	5:15 PM	3	3	8	2	18	10	0	182	27	46	283	5	587	0	0	0	0	0
	5:30 PM	3	7	11	3	17	9	0	168	33	52	303	14	620	0	0	0	0	0
	5:45 PM	0	4	8	0	26	9	0	178	24	41	199	16	505	0	0	0	0	0
	VOLUMES	20	35	99	35	193	106	1	2,479	370	450	3,528	110	7,426	0	0	0	0	0
	APPROACH %	13%	23%	64%	10%	58%	32%	0%	87%	13%	11%	86%	3%						
	APP/DEPART	154	/	146	334	/	1,013	2,850	/	2,613	4,088	/	3,654	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	7	7	38	16	58	32	0	939	119	126	1,355	32	2,729					
	APPROACH %	13%	13%	73%	15%	55%	30%	0%	89%	11%	8%	90%	2%						
	PEAK HR FACTOR		0.813			0.779			0.879			0.960		0.968					
	APP/DEPART	52	/	39	106	/	303	1,058	/	993	1,513	/	1,394	0					

New High

NORTH SIDE

Cesar Chavez WEST SIDE EAST SIDE **Cesar Chavez**

SOUTH SIDE

New High

		ALL PED AND BIKE N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	PEDESTRIAN CROSSINGS N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	BICYCLE CROSSINGS NS	SS	ES	WS	TOTAL	SCHOOL AGE PED SS	ES	WS	TOTAL
AM	7:00 AM	9	16	16	8	49	9	12	16	8	45	0	0	0	0	0	4	0	0	4
	7:15 AM	3	14	8	5	30	2	13	7	5	27	1	1	1	0	3	0	0	0	0
	7:30 AM	17	20	22	6	65	16	14	22	6	58	1	0	0	0	1	6	0	0	6
	7:45 AM	24	29	21	19	93	24	27	21	15	87	0	0	0	4	4	2	0	0	2
	8:00 AM	13	10	20	12	55	12	9	14	12	47	1	1	0	0	2	0	6	0	6
	8:15 AM	8	10	19	11	48	7	10	19	9	45	1	0	0	2	3	0	0	0	0
	8:30 AM	9	12	21	17	59	7	11	21	17	56	2	1	0	0	3	0	0	0	0
	8:45 AM	8	11	15	14	48	7	11	14	12	44	1	0	1	2	4	0	0	0	0
	9:00 AM	8	23	26	19	76	7	18	26	19	70	1	1	0	0	2	4	0	0	4
	9:15 AM	21	25	45	20	111	21	19	45	20	105	0	0	0	0	0	6	0	0	6
	9:30 AM	13	19	31	12	75	13	15	30	12	70	0	0	1	0	1	4	0	0	4
	9:45 AM	11	6	36	16	69	11	4	34	16	65	0	2	2	0	4	0	0	0	0
	TOTAL	144	195	280	159	778	136	163	269	151	719	8	6	5	8	27	26	6	0	32
PM	3:00 PM	23	64	50	16	153	22	35	37	15	109	1	1	1	1	4	28	12	0	40
	3:15 PM	44	30	52	19	145	33	22	51	17	123	3	0	1	2	6	8	0	0	16
	3:30 PM	51	62	44	16	173	51	41	38	16	146	0	1	0	0	1	20	6	0	26
	3:45 PM	31	34	28	10	103	30	26	28	9	93	1	0	0	1	2	8	0	0	8
	4:00 PM	15	34	24	25	98	14	32	22	21	89	1	2	2	4	9	0	0	0	0
	4:15 PM	18	30	25	9	82	17	27	22	6	72	1	1	3	3	8	2	0	0	2
	4:30 PM	29	34	41	18	122	27	29	40	16	112	2	1	1	2	6	4	0	0	4
	4:45 PM	28	39	33	5	105	26	32	31	4	93	2	1	2	1	6	6	0	0	6
	5:00 PM	28	36	79	15	158	24	15	75	13	127	4	3	2	2	11	18	2	0	20
	5:15 PM	43	33	51	18	145	35	26	33	14	108	4	3	4	4	15	4	14	0	22
	5:30 PM	17	22	40	13	92	16	18	37	11	82	1	0	3	2	6	4	0	0	4
	5:45 PM	25	19	53	10	107	24	18	50	10	102	1	1	3	0	5	0	0	0	0
	TOTAL	352	437	520	174	1,483	319	321	464	152	1,256	21	14	22	22	79	102	34	0	148

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:	LOCATION:	China Town	PROJECT #:	SC0325
Tue, Mar 18, 14	NORTH & SOUTH:	Spring	LOCATION #:	11
	EAST & WEST:	Arcadia	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Sprin			SOUTHBOUND Sprin			EASTBOUND Arcadia			WESTBOUND Arcadia			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	X	X	3	0	X	X	X	1.5	1.5	X	
AM 7:00 AM	0	8	0	0	117	1	0	0	0	107	92	1	326
7:15 AM	0	8	0	0	168	4	0	0	0	114	113	0	407
7:30 AM	0	8	0	0	194	4	0	0	0	156	124	2	488
7:45 AM	0	14	0	0	232	5	0	0	0	146	98	1	496
8:00 AM	0	8	0	0	237	4	0	0	0	142	99	2	492
8:15 AM	0	9	0	0	249	4	0	0	0	193	105	0	560
8:30 AM	0	8	0	0	214	4	0	0	0	145	116	2	489
8:45 AM	0	10	0	0	257	8	0	0	0	180	98	1	554
9:00 AM	0	8	0	0	255	8	0	0	0	150	112	2	535
9:15 AM	0	5	0	0	172	10	0	0	0	118	109	1	415
9:30 AM	0	9	0	0	169	7	0	0	0	116	138	1	440
9:45 AM	0	8	0	0	135	2	0	0	0	123	123	1	392
VOLUMES	0	103	0	0	2,399	61	0	0	0	1,690	1,327	14	5,594
APPROACH %	0%	100%	0%	0%	98%	2%	0%	0%	0%	56%	44%	0%	
APP/DEPART	103	/	117	2,460	/	4,089	0	/	0	3,031	/	1,388	0
BEGIN PEAK HR		8:15 AM											
VOLUMES	0	35	0	0	975	24	0	0	0	668	431	5	2,138
APPROACH %	0%	100%	0%	0%	98%	2%	0%	0%	0%	61%	39%	0%	
PEAK HR FACTOR		0.875			0.942			0.000			0.926		0.954
APP/DEPART	35	/	40	999	/	1,643	0	/	0	1,104	/	455	0
PM 03:00 PM	0	14	0	0	102	7	0	0	0	25	81	1	230
3:15 PM	0	7	0	0	73	7	0	0	0	52	136	2	277
3:30 PM	0	6	0	0	99	6	0	0	0	49	133	2	295
3:45 PM	0	7	0	0	99	5	0	0	0	64	125	1	301
4:00 PM	0	6	0	0	81	3	0	0	0	38	83	0	211
4:15 PM	0	9	0	0	97	7	0	0	0	30	92	2	237
4:30 PM	0	10	0	0	103	6	0	0	0	39	88	2	248
4:45 PM	0	10	0	0	103	4	0	0	0	53	114	4	288
5:00 PM	0	6	0	0	123	10	0	0	0	53	110	8	310
5:15 PM	0	13	0	0	118	6	0	0	0	63	107	5	312
5:30 PM	1	13	0	0	118	4	0	0	0	52	102	5	295
5:45 PM	0	9	0	0	109	4	0	0	0	54	116	6	298
VOLUMES	1	110	0	0	1,225	69	0	0	0	572	1,287	38	3,302
APPROACH %	1%	99%	0%	0%	95%	5%	0%	0%	0%	30%	68%	2%	
APP/DEPART	111	/	148	1,294	/	1,797	0	/	0	1,897	/	1,357	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	1	41	0	0	468	24	0	0	0	222	435	24	1,215
APPROACH %	2%	98%	0%	0%	95%	5%	0%	0%	0%	33%	64%	4%	
PEAK HR FACTOR		0.750			0.925			0.000			0.967		0.974
APP/DEPART	42	/	65	492	/	690	0	/	0	681	/	460	0

U-TURNS	NB	SB	EB	WB	TTL
LANES	X	X	X	X	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

Spring
NORTH SIDE

Arcadia WEST SIDE — EAST SIDE **Arcadia**

SOUTH SIDE
Spring

	ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM 7:00 AM	9	0	11	9	29	9	0	9	6	24	0	0	0	3	3	0	0	2	0	2
7:15 AM	13	0	13	12	38	13	0	13	10	36	0	0	0	2	2	0	0	0	0	0
7:30 AM	4	0	12	16	32	4	0	11	12	27	0	0	1	4	5	0	0	0	0	0
7:45 AM	4	2	14	29	49	4	0	14	21	39	0	0	0	8	8	0	2	0	0	2
8:00 AM	7	2	10	13	32	7	0	8	9	24	0	0	0	4	4	0	2	2	0	4
8:15 AM	6	2	18	24	50	6	0	14	23	43	0	0	0	1	1	0	2	4	0	6
8:30 AM	1	0	16	19	36	1	0	16	14	31	0	0	0	5	5	0	0	0	0	0
8:45 AM	1	0	11	27	39	1	0	10	23	34	0	0	1	4	5	0	0	0	0	0
9:00 AM	4	0	17	26	47	4	0	15	22	41	0	0	2	4	6	0	0	0	0	0
9:15 AM	4	0	13	22	39	4	0	12	18	34	0	0	1	4	5	0	0	0	0	0
9:30 AM	5	2	13	13	33	5	0	13	10	28	0	0	0	3	3	0	2	0	0	2
9:45 AM	7	0	16	22	45	7	0	15	18	40	0	0	1	4	5	0	0	0	0	0
TOTAL	65	8	164	232	469	65	0	150	186	401	0	0	6	46	52	0	8	8	0	16
PM 3:00 PM	2	8	6	5	21	2	0	6	3	11	0	0	0	2	2	0	8	0	0	8
3:15 PM	2	2	23	8	35	2	0	22	7	31	0	0	1	1	2	0	2	0	0	2
3:30 PM	5	0	9	2	16	5	0	9	2	16	0	0	0	0	0	0	0	0	0	0
3:45 PM	3	0	12	8	23	3	0	12	6	21	0	0	0	2	2	0	0	0	0	0
4:00 PM	22	4	14	12	52	21	0	10	7	38	1	0	0	5	6	0	4	4	0	8
4:15 PM	5	2	8	10	25	5	0	8	9	22	0	0	0	1	1	0	2	0	0	2
4:30 PM	10	0	4	16	30	10	0	4	15	29	0	0	0	1	1	0	0	0	0	0
4:45 PM	5	0	15	5	25	5	0	9	3	17	0	0	6	2	8	0	0	0	0	0
5:00 PM	13	0	23	11	47	13	0	22	9	44	0	0	1	2	3	0	0	0	0	0
5:15 PM	6	0	12	7	25	6	0	12	5	23	0	0	0	2	2	0	0	0	0	0
5:30 PM	4	3	11	5	23	4	0	10	3	17	0	1	1	2	4	0	2	0	0	2
5:45 PM	8	0	20	16	44	7	0	19	14	40	1	0	1	2	4	0	0	0	0	0
TOTAL	85	19	157	105	366	83	0	143	83	309	2	1	10	22	35	0	18	4	0	22

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:	LOCATION:	China Town	PROJECT #:	SC0325
Tue, Mar 18, 14	NORTH & SOUTH:	Spring	LOCATION #:	12
	EAST & WEST:	Aliso	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Sprin			SOUTHBOUND Sprin			EASTBOUND Ali o			WESTBOUND Ali o			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	0	1	4	X	X	3	0	X	X	X	
AM 7:00 AM	0	9	5	17	205	0	0	46	28	0	0	0	310
7:15 AM	0	10	4	29	254	0	0	68	19	0	0	0	384
7:30 AM	0	11	6	38	307	0	0	55	28	0	0	0	445
7:45 AM	0	12	5	38	342	0	0	79	29	0	0	0	505
8:00 AM	0	10	4	37	345	0	0	76	18	0	0	0	490
8:15 AM	0	12	5	45	396	0	0	82	39	0	0	0	579
8:30 AM	0	9	8	31	327	0	0	66	39	0	0	0	480
8:45 AM	0	12	6	34	401	0	0	64	48	0	0	0	565
9:00 AM	0	11	3	39	367	0	0	77	37	0	0	0	534
9:15 AM	0	10	5	33	254	0	0	60	29	0	0	0	391
9:30 AM	0	14	6	26	260	0	0	79	27	0	0	0	412
9:45 AM	0	12	6	25	232	0	0	86	23	0	0	0	384
VOLUMES	0	132	63	392	3,690	0	0	838	364	0	0	0	5,479
APPROACH %	0%	68%	32%	10%	90%	0%	0%	70%	30%	0%	0%	0%	
APP/DEPART	195	/	132	4,082	/	4,054	1,202	/	1,293	0	/	0	0
BEGIN PEAK HR		8:15 AM											
VOLUMES	0	44	22	149	1,491	0	0	289	163	0	0	0	2,158
APPROACH %	0%	67%	33%	9%	91%	0%	0%	64%	36%	0%	0%	0%	
PEAK HR FACTOR		0.917			0.930			0.934			0.000		0.932
APP/DEPART	66	/	44	1,640	/	1,654	452	/	460	0	/	0	0
PM 03:00 PM	0	15	4	23	99	0	0	137	9	0	0	0	287
3:15 PM	0	8	9	16	113	0	0	141	9	0	0	0	296
3:30 PM	0	8	10	33	115	0	0	132	4	0	0	0	302
3:45 PM	0	8	10	27	139	0	0	104	4	0	0	0	292
4:00 PM	0	9	13	27	88	0	0	137	7	0	0	0	281
4:15 PM	0	7	12	14	116	0	0	129	3	0	0	0	281
4:30 PM	0	10	17	25	118	0	0	136	6	0	0	0	312
4:45 PM	0	11	15	26	134	0	0	126	7	0	0	0	319
5:00 PM	0	7	16	27	149	0	0	113	5	0	0	0	317
5:15 PM	0	11	14	35	152	0	1	115	5	0	0	0	333
5:30 PM	0	14	15	22	150	0	1	112	3	0	0	0	317
5:45 PM	0	9	22	23	140	0	0	117	5	0	0	0	316
VOLUMES	0	117	157	298	1,513	0	2	1,499	67	0	0	0	3,653
APPROACH %	0%	43%	57%	16%	84%	0%	0%	96%	4%	0%	0%	0%	
APP/DEPART	274	/	119	1,811	/	1,580	1,568	/	1,954	0	/	0	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	43	60	110	585	0	2	466	20	0	0	0	1,286
APPROACH %	0%	42%	58%	16%	84%	0%	0%	95%	4%	0%	0%	0%	
PEAK HR FACTOR		0.888			0.929			0.917			0.000		0.965
APP/DEPART	103	/	45	695	/	605	488	/	636	0	/	0	0

U-TURNS	NB	SB	EB	WB	TTL
LANES	X	X	X	X	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

Spring
NORTH SIDE

Aliso WEST SIDE — EAST SIDE **Aliso**

SOUTH SIDE
Spring

	ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM 7:00 AM	9	0	11	9	29	9	0	9	6	24	0	0	0	3	3	0	0	2	0	2
7:15 AM	13	0	13	12	38	13	0	13	10	36	0	0	0	2	2	0	0	0	0	0
7:30 AM	4	0	12	16	32	4	0	11	12	27	0	0	1	4	5	0	0	0	0	0
7:45 AM	4	2	14	29	49	4	0	14	21	39	0	0	0	8	8	0	2	0	0	2
8:00 AM	7	2	10	13	32	7	0	8	9	24	0	0	0	4	4	0	2	2	0	4
8:15 AM	6	2	18	24	50	6	0	14	23	43	0	0	0	1	1	0	2	4	0	6
8:30 AM	1	0	16	19	36	1	0	16	14	31	0	0	0	5	5	0	0	0	0	0
8:45 AM	1	0	11	27	39	1	0	10	23	34	0	0	1	4	5	0	0	0	0	0
9:00 AM	4	0	17	26	47	4	0	15	22	41	0	0	2	4	6	0	0	0	0	0
9:15 AM	4	0	13	22	39	4	0	12	18	34	0	0	1	4	5	0	0	0	0	0
9:30 AM	5	2	13	13	33	5	0	13	10	28	0	0	0	3	3	0	2	0	0	2
9:45 AM	7	0	16	22	45	7	0	15	18	40	0	0	1	4	5	0	0	0	0	0
TOTAL	65	8	164	232	469	65	0	150	186	401	0	0	6	46	52	0	8	8	0	16
PM 3:00 PM	2	8	6	5	21	2	0	6	3	11	0	0	0	2	2	0	8	0	0	8
3:15 PM	2	2	23	8	35	2	0	22	7	31	0	0	1	1	2	0	2	0	0	2
3:30 PM	5	0	9	2	16	5	0	9	2	16	0	0	0	0	0	0	0	0	0	0
3:45 PM	3	0	12	8	23	3	0	12	6	21	0	0	0	2	2	0	0	0	0	0
4:00 PM	22	4	14	12	52	21	0	10	7	38	1	0	0	5	6	0	4	4	0	8
4:15 PM	5	2	8	10	25	5	0	8	9	22	0	0	0	1	1	0	2	0	0	2
4:30 PM	10	0	4	16	30	10	0	4	15	29	0	0	0	1	1	0	0	0	0	0
4:45 PM	5	0	15	5	25	5	0	9	3	17	0	0	6	2	8	0	0	0	0	0
5:00 PM	13	0	23	11	47	13	0	22	9	44	0	0	1	2	3	0	0	0	0	0
5:15 PM	6	0	12	7	25	6	0	12	5	23	0	0	0	2	2	0	0	0	0	0
5:30 PM	4	3	11	5	23	4	0	10	3	17	0	1	1	2	4	0	2	0	0	2
5:45 PM	8	0	20	16	44	7	0	19	14	40	1	0	1	2	4	0	0	0	0	0
TOTAL	85	19	157	105	366	83	0	143	83	309	2	1	10	22	35	0	18	4	0	22

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Spring
EAST & WEST: Temple

PROJECT #: SC0325
LOCATION #: 13
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Spring			SOUTHBOUND Spring			EASTBOUND Temple			WESTBOUND Temple				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 1	ST 4	SR 0	EL X	ET 2	ER 0	WL 1	WT 2	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	1	20	0	8	200	27	0	91	20	11	120	0	498	0	0	0	0	0
	7:15 AM	0	15	0	3	237	25	0	97	34	14	115	0	540	0	0	0	0	0
	7:30 AM	0	13	0	9	290	30	0	105	28	16	138	0	629	0	0	0	1	1
	7:45 AM	0	20	0	16	336	44	0	91	36	19	138	1	701	0	0	0	1	1
	8:00 AM	0	12	2	7	330	16	0	101	32	11	153	0	664	0	0	0	0	0
	8:15 AM	0	15	0	15	398	37	0	122	48	19	138	0	792	0	0	0	0	0
	8:30 AM	0	19	0	16	342	36	0	159	41	15	144	1	773	0	0	0	0	0
	8:45 AM	1	17	2	23	387	40	0	142	50	18	159	1	840	0	0	0	0	0
	9:00 AM	0	18	1	13	348	29	0	150	43	37	131	1	771	0	0	0	0	0
	9:15 AM	0	11	1	12	251	23	0	113	46	23	120	0	600	0	0	0	0	0
	9:30 AM	0	17	2	8	246	30	1	129	44	12	112	1	602	0	0	0	0	0
	9:45 AM	0	16	3	9	194	26	1	123	29	17	99	4	521	0	0	0	0	0
	VOLUMES	2	193	11	139	3,559	363	2	1,423	451	212	1,567	9	7,931	0	0	0	2	2
	APPROACH %	1%	94%	5%	3%	88%	9%	0%	76%	24%	12%	88%	1%						
	APP/DEPART	206	/	204	4,061	/	4,222	1,876	/	1,573	1,788	/	1,932	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	1	69	3	67	1,475	142	0	573	182	89	572	3	3,176					
	APPROACH %	1%	95%	4%	4%	88%	8%	0%	76%	24%	13%	86%	0%						
	PEAK HR FACTOR		0.913			0.936			0.944			0.933		0.945					
	APP/DEPART	73	/	72	1,684	/	1,746	755	/	643	664	/	715	0					
PM	03:00 PM	0	13	0	14	87	6	0	104	14	15	129	0	382	0	0	0	0	0
	3:15 PM	0	17	0	9	97	14	0	110	20	21	116	0	404	0	0	0	0	0
	3:30 PM	0	17	2	8	102	17	0	124	14	12	178	0	474	0	0	0	0	0
	3:45 PM	0	21	1	3	135	18	0	133	17	18	146	0	492	0	0	0	0	0
	4:00 PM	1	18	0	5	83	10	0	116	17	16	160	0	426	0	0	0	0	0
	4:15 PM	0	23	1	16	82	19	0	140	12	13	162	0	468	0	0	0	0	0
	4:30 PM	0	32	0	6	110	15	0	174	9	20	174	0	540	0	0	0	0	0
	4:45 PM	1	24	0	13	122	11	0	169	28	15	182	0	565	0	0	0	0	0
	5:00 PM	0	24	0	10	135	16	0	221	23	12	176	0	617	0	0	0	0	0
	5:15 PM	0	26	1	5	132	10	0	227	11	13	215	0	640	0	0	0	0	0
	5:30 PM	0	24	0	7	121	12	0	175	16	19	194	4	572	0	0	0	0	0
	5:45 PM	0	31	0	6	127	15	0	159	11	18	218	0	585	0	0	0	0	0
	VOLUMES	2	270	5	102	1,333	163	0	1,852	192	192	2,050	4	6,165	0	0	0	0	0
	APPROACH %	1%	97%	2%	6%	83%	10%	0%	91%	9%	9%	91%	0%						
	APP/DEPART	277	/	274	1,598	/	1,717	2,044	/	1,959	2,246	/	2,215	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	105	1	28	515	53	0	782	61	62	803	4	2,414					
	APPROACH %	0%	99%	1%	5%	86%	9%	0%	93%	7%	7%	92%	0%						
	PEAK HR FACTOR		0.855			0.925			0.864			0.921		0.943					
	APP/DEPART	106	/	109	596	/	638	843	/	811	869	/	856	0					

Spring

NORTH SIDE

Temple — WEST SIDE — EAST SIDE — Temple

SOUTH SIDE

Spring

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	31	54	13	62	160	31	54	13	59	157	0	0	0	3	3	0	0	0	0	0
	7:15 AM	40	82	36	85	243	40	82	36	83	241	0	0	0	2	2	0	0	0	0	0
	7:30 AM	62	58	46	62	228	35	55	25	59	174	1	1	1	3	6	26	2	20	0	48
	7:45 AM	54	65	57	75	251	48	64	37	70	219	0	1	0	5	6	6	0	20	0	26
	8:00 AM	52	77	16	67	212	52	77	16	65	210	0	0	0	2	2	0	0	0	0	0
	8:15 AM	65	79	24	99	267	65	77	24	99	265	0	0	0	0	0	0	2	0	0	2
	8:30 AM	36	123	33	66	258	33	116	33	62	244	1	1	0	4	6	2	6	0	0	8
	8:45 AM	23	68	25	30	146	23	68	24	26	141	0	0	1	4	5	0	0	0	0	0
	9:00 AM	60	51	29	27	167	57	49	27	27	160	1	2	2	0	5	2	0	0	0	2
	9:15 AM	23	70	32	33	158	23	70	32	30	155	0	0	0	3	3	0	0	0	0	0
	9:30 AM	31	65	28	38	162	29	65	28	34	156	0	0	0	4	4	2	0	0	0	2
	9:45 AM	36	49	15	47	147	36	46	14	44	140	0	1	1	3	5	0	2	0	0	2
	TOTAL	513	841	354	691	2,399	472	823	309	658	2,262	3	6	5	33	47	38	12	40	0	90
PM	3:00 PM	13	41	18	9	81	9	37	17	6	69	0	0	1	3	4	4	4	0	0	8
	3:15 PM	22	66	28	12	128	21	62	26	11	120	1	0	2	1	4	0	4	0	0	4
	3:30 PM	11	44	19	8	82	11	43	19	8	81	0	1	0	0	1	0	0	0	0	0
	3:45 PM	30	64	20	17	131	24	58	18	16	116	2	2	2	1	7	4	4	0	0	8
	4:00 PM	44	98	19	29	190	36	94	19	23	172	0	2	0	6	8	8	2	0	0	10
	4:15 PM	22	110	27	34	193	20	107	26	32	185	0	1	1	2	4	2	2	0	0	4
	4:30 PM	36	104	28	28	196	28	102	28	28	186	0	0	0	0	0	8	2	0	0	10
	4:45 PM	27	87	27	25	166	25	87	21	23	156	2	0	6	2	10	0	0	0	0	0
	5:00 PM	39	75	36	41	191	39	75	35	40	189	0	0	1	1	2	0	0	0	0	0
	5:15 PM	18	49	20	22	109	17	47	20	18	102	1	2	0	4	7	0	0	0	0	0
	5:30 PM	6	31	21	16	74	6	29	20	12	67	0	2	1	4	7	0	0	0	0	0
	5:45 PM	5	36	20	9	70	3	32	17	7	59	0	4	3	2	9	2	0	0	0	2
	TOTAL	273	805	283	250	1,611	239	773	266	224	1,502	6	14	17	26	63	28	18	0	0	46

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Main
EAST & WEST: Cesar Chavez

PROJECT #: SC0325
LOCATION #: 14
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Main			SOUTHBOUND Main			EASTBOUND Cesar Chavez			WESTBOUND Cesar Chavez				U-TURNS				
	LANES:	NL 1,5	NT 2,5	NR 0	SL X	ST X	SR X	EL 1	ET 2	ER X	WL X	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	16	32	18	0	0	0	7	113	0	0	352	3	541	0	0	0	0	0
	7:15 AM	12	16	17	0	0	0	8	131	0	0	397	5	586	0	0	0	0	0
	7:30 AM	27	22	18	0	0	0	7	202	0	0	410	2	688	0	0	0	0	0
	7:45 AM	24	29	23	0	0	0	13	181	0	0	425	3	698	0	0	0	0	0
	8:00 AM	20	36	20	0	0	0	18	196	0	0	399	6	695	0	0	0	0	0
	8:15 AM	26	38	26	0	0	0	13	161	0	0	388	0	652	0	0	0	0	0
	8:30 AM	22	32	30	0	0	1	22	186	1	0	379	4	677	0	0	0	0	0
	8:45 AM	13	42	31	0	0	0	5	196	0	0	397	7	691	0	0	0	0	0
	9:00 AM	16	35	15	0	0	0	6	218	0	1	379	5	675	0	0	0	0	0
	9:15 AM	22	40	23	0	0	0	14	155	0	0	308	3	565	0	0	0	0	0
	9:30 AM	26	33	21	0	0	0	11	142	0	1	315	4	553	0	0	0	0	0
	9:45 AM	34	31	37	0	0	0	12	137	0	0	279	4	534	0	0	0	0	0
	VOLUMES	258	386	279	0	0	1	136	2,018	1	2	4,428	46	7,555	0	0	0	0	0
	APPROACH %	28%	42%	30%	0%	0%	100%	6%	94%	0%	0%	99%	1%						
	APP/DEPART	923	/	568	1	/	3	2,155	/	2,297	4,476	/	4,687	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	97	125	87	0	0	0	51	740	0	0	1,622	11	2,733					
	APPROACH %	31%	40%	28%	0%	0%	0%	6%	94%	0%	0%	99%	1%						
	PEAK HR FACTOR		0.858			0.000			0.883			0.954		0.979					
	APP/DEPART	309	/	187	0	/	0	791	/	827	1,633	/	1,719	0					
PM	3:00 PM	45	55	26	0	0	0	22	187	0	0	223	4	562	0	0	0	0	0
	3:15 PM	38	48	27	0	0	0	27	186	0	0	256	6	588	0	0	0	0	0
	3:30 PM	34	66	42	0	0	1	19	214	0	0	294	3	673	0	0	0	0	0
	3:45 PM	32	95	45	0	0	0	32	148	1	0	361	6	720	0	0	0	0	0
	4:00 PM	64	90	31	0	0	0	22	258	0	0	315	2	782	0	0	0	0	0
	4:15 PM	55	116	57	0	0	1	19	220	0	0	318	2	788	0	0	0	0	0
	4:30 PM	82	148	50	0	0	0	17	208	0	0	312	8	825	0	0	0	0	0
	4:45 PM	105	177	62	0	0	0	14	233	0	0	260	7	858	0	0	0	0	0
	5:00 PM	127	171	58	0	0	0	19	211	0	0	201	10	797	0	0	0	0	0
	5:15 PM	143	219	66	0	0	1	13	176	0	1	192	8	819	0	0	0	0	0
	5:30 PM	124	175	65	0	0	0	27	150	0	0	243	5	789	0	0	0	0	0
	5:45 PM	116	186	53	0	0	0	28	155	0	0	139	5	682	0	0	0	0	0
	VOLUMES	965	1,546	582	0	0	3	259	2,346	1	1	3,114	66	8,883	0	0	0	0	0
	APPROACH %	31%	50%	19%	0%	0%	100%	10%	90%	0%	0%	98%	2%						
	APP/DEPART	3,093	/	1,871	3	/	2	2,606	/	2,928	3,181	/	4,082	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	457	715	236	0	0	1	63	828	0	1	965	33	3,299					
	APPROACH %	32%	51%	17%	0%	0%	100%	7%	93%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.822			0.250			0.902			0.780		0.961					
	APP/DEPART	1,408	/	811	1	/	1	891	/	1,064	999	/	1,423	0					

Main

NORTH SIDE

Cesar Chavez — WEST SIDE — EAST SIDE — Cesar Chavez

SOUTH SIDE

Main

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	SS	ES	WS	TOTAL
AM	7:00 AM	12	7	9	1	29	11	6	8	0	25	1	1	1	1	4	0	0	0	0
	7:15 AM	6	11	13	1	31	6	10	12	1	29	0	1	1	0	2	0	0	0	0
	7:30 AM	12	6	10	0	28	11	4	10	0	25	1	2	0	0	3	0	0	0	0
	7:45 AM	14	18	24	0	56	14	11	23	0	48	0	1	1	0	2	6	0	0	6
	8:00 AM	21	10	22	0	53	18	7	18	0	43	3	1	4	0	8	2	0	0	2
	8:15 AM	17	4	10	0	31	15	4	7	0	26	2	0	3	0	5	0	0	0	0
	8:30 AM	23	14	21	0	58	22	5	21	0	48	1	1	0	0	2	8	0	0	8
	8:45 AM	12	11	21	0	44	12	5	21	0	38	0	2	0	0	2	4	0	0	4
	9:00 AM	25	15	18	1	59	24	5	17	0	46	1	2	1	1	5	8	0	0	8
	9:15 AM	16	6	13	1	36	15	2	11	1	29	1	0	2	0	3	4	0	0	4
	9:30 AM	22	24	30	0	76	22	12	26	0	60	0	0	4	0	4	12	0	0	12
	9:45 AM	23	14	17	0	54	22	9	17	0	48	1	1	0	0	2	4	0	0	4
	TOTAL	203	140	208	4	555	192	80	191	2	465	11	12	17	2	42	48	0	0	48
PM	3:00 PM	59	38	50	0	147	44	36	48	0	128	1	2	2	0	5	0	0	0	14
	3:15 PM	53	19	43	0	115	50	19	40	0	109	1	0	3	0	4	0	0	0	2
	3:30 PM	48	41	37	5	131	44	39	36	2	121	0	2	1	3	6	0	0	0	4
	3:45 PM	71	38	54	0	163	69	33	53	0	155	2	3	1	0	6	2	0	0	2
	4:00 PM	53	26	41	1	121	50	22	36	0	108	1	2	5	1	9	2	0	0	4
	4:15 PM	49	30	24	3	106	48	27	23	0	98	1	3	1	3	8	0	0	0	0
	4:30 PM	51	18	50	0	119	49	15	46	0	110	2	1	4	0	7	2	0	0	2
	4:45 PM	37	14	30	0	81	35	11	27	0	73	2	1	3	0	6	2	0	0	2
	5:00 PM	38	21	30	0	89	32	20	23	0	75	6	1	7	0	14	0	0	0	0
	5:15 PM	65	9	60	0	134	63	8	57	0	128	2	1	3	0	6	0	0	0	0
	5:30 PM	67	12	48	1	128	64	12	46	1	123	3	0	2	0	5	0	0	0	0
	5:45 PM	52	26	55	0	133	48	20	52	0	120	4	2	3	0	9	4	0	0	4
	TOTAL	643	292	522	10	1,467	596	262	487	3	1,348	25	18	35	7	85	12	0	0	34

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Main
EAST & WEST: Arcadia

PROJECT #: SC0325
LOCATION #: 15
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND (Main)			SOUTHBOUND (Main)			EASTBOUND (Arcadia)			WESTBOUND (Arcadia)				U-TURNS				
	LANES:	NL 1	NT 3	NR X	SL X	ST X	SR X	EL X	ET X	ER X	WL X	WT 3	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	5	52	0	0	0	0	0	8	0	0	190	10	265	0	0	0	0	0
	7:15 AM	5	48	0	0	0	0	0	0	0	0	225	7	285	0	0	0	0	0
	7:30 AM	8	76	0	0	0	0	0	0	0	0	281	5	370	0	0	0	0	0
	7:45 AM	11	93	0	0	0	0	0	0	0	0	247	7	358	0	0	0	0	0
	8:00 AM	8	78	0	0	0	0	0	0	0	0	247	3	336	0	0	0	0	0
	8:15 AM	11	98	0	0	0	0	0	0	0	0	296	9	414	0	0	0	0	0
	8:30 AM	8	80	0	0	0	0	0	0	0	0	266	14	368	0	0	0	0	0
	8:45 AM	9	86	0	0	0	0	0	0	0	0	272	9	376	0	0	0	0	0
	9:00 AM	9	56	0	0	0	0	0	0	0	0	265	9	339	0	0	0	0	0
	9:15 AM	10	90	0	0	0	0	0	0	0	0	230	6	336	0	0	0	0	0
	9:30 AM	11	95	0	0	0	0	0	0	0	0	259	15	380	0	0	0	0	0
	9:45 AM	11	92	0	0	0	0	0	0	0	0	245	9	357	0	0	0	0	0
	VOLUMES	106	944	0	0	0	0	0	8	0	0	3,023	103	4,184	0	0	0	0	0
	APPROACH %	10%	90%	0%	0%	0%	0%	0%	100%	0%	0%	97%	3%						
	APP/DEPART	1,050	/	1,047	0	/	0	8	/	8	3,126	/	3,129	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	37	320	0	0	0	0	0	0	0	0	1,099	41	1,497					
	APPROACH %	10%	90%	0%	0%	0%	0%	0%	0%	0%	0%	96%	4%						
	PEAK HR FACTOR		0.819			0.000			0.000			0.934		0.904					
	APP/DEPART	357	/	361	0	/	0	0	/	0	1,140	/	1,136	0					
PM	03:00 PM	18	101	0	0	0	0	0	0	0	0	85	10	214	0	0	0	0	0
	3:15 PM	31	99	0	0	0	0	0	0	0	0	149	12	291	0	0	0	0	0
	3:30 PM	15	124	0	0	0	0	0	0	0	0	159	16	314	0	0	0	0	0
	3:45 PM	28	155	0	0	0	0	0	0	0	0	146	15	344	0	0	0	0	0
	4:00 PM	29	170	0	0	0	0	0	0	0	0	75	15	289	0	0	0	0	0
	4:15 PM	27	192	0	0	0	0	0	0	0	0	87	6	312	0	0	0	0	0
	4:30 PM	21	258	0	0	0	0	0	0	0	0	93	19	391	0	0	0	0	0
	4:45 PM	18	296	0	0	0	0	0	0	0	0	147	23	484	0	0	0	0	0
	5:00 PM	31	334	0	0	0	0	0	0	0	0	140	24	529	0	0	0	0	0
	5:15 PM	23	360	0	0	0	0	0	0	0	0	175	23	581	0	0	0	0	0
	5:30 PM	23	327	0	0	0	0	0	0	0	0	127	32	509	0	0	0	0	0
	5:45 PM	22	309	0	0	0	0	0	0	0	0	154	26	511	0	0	0	0	0
	VOLUMES	286	2,725	0	0	0	0	0	0	0	0	1,537	221	4,769					
	APPROACH %	9%	91%	0%	0%	0%	0%	0%	0%	0%	0%	87%	13%						
	APP/DEPART	3,011	/	2,946	0	/	0	0	/	0	1,758	/	1,823	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	99	1,330	0	0	0	0	0	0	0	0	596	105	2,130					
	APPROACH %	7%	93%	0%	0%	0%	0%	0%	0%	0%	0%	85%	15%						
	PEAK HR FACTOR		0.933			0.000			0.000			0.885		0.917					
	APP/DEPART	1,429	/	1,435	0	/	0	0	/	0	701	/	695	0					

Main

NORTH SIDE

Arcadia WEST SIDE EAST SIDE **Arcadia**

SOUTH SIDE

Main

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	19	6	28	1	54	7	6	24	1	38	1	0	4	0	5	11	0	0	0	11
	7:15 AM	23	18	20	2	63	8	16	20	2	46	0	0	0	0	0	15	2	0	0	17
	7:30 AM	21	19	22	0	62	9	18	21	0	48	0	1	1	0	2	12	0	0	0	12
	7:45 AM	29	20	13	1	63	9	15	13	1	38	1	0	0	0	1	19	5	0	0	24
	8:00 AM	18	27	17	0	62	8	21	15	0	44	0	0	2	0	2	10	6	0	0	16
	8:15 AM	16	30	12	2	60	11	26	11	2	50	0	1	1	0	2	5	3	0	0	8
	8:30 AM	33	41	12	1	87	19	41	12	1	73	1	0	0	0	1	13	0	0	0	13
	8:45 AM	25	48	20	0	93	13	40	19	0	72	0	2	1	0	3	12	6	0	0	18
	9:00 AM	32	22	38	1	93	22	22	38	1	83	2	0	0	0	2	8	0	0	0	8
	9:15 AM	9	31	15	0	55	9	31	15	0	55	0	0	0	0	0	0	0	0	0	0
	9:30 AM	11	19	12	0	42	8	19	12	0	39	1	0	0	0	1	2	0	0	0	2
	9:45 AM	6	12	7	0	25	6	12	5	0	23	0	0	2	0	2	0	0	0	0	0
	TOTAL	242	293	216	8	759	129	267	205	8	609	6	4	11	0	21	107	22	0	0	129
PM	3:00 PM	17	18	6	1	42	11	17	5	1	34	0	1	1	0	2	6	0	0	0	6
	3:15 PM	20	19	6	0	45	10	16	6	0	32	0	3	0	0	3	10	0	0	0	10
	3:30 PM	19	25	16	0	60	13	23	16	0	52	2	2	0	0	4	4	0	0	0	4
	3:45 PM	9	27	3	1	40	9	25	3	1	38	0	2	0	0	2	0	0	0	0	0
	4:00 PM	20	37	18	0	75	10	28	18	0	56	0	5	0	0	5	10	4	0	0	14
	4:15 PM	19	37	8	0	64	10	28	8	0	46	1	5	0	0	6	8	4	0	0	12
	4:30 PM	22	57	20	1	100	20	53	19	1	93	0	4	1	0	5	2	0	0	0	2
	4:45 PM	29	49	15	0	93	15	43	15	0	73	0	4	0	0	4	14	2	0	0	16
	5:00 PM	25	43	30	2	100	25	28	30	2	85	0	7	0	0	7	0	8	0	0	8
	5:15 PM	16	45	14	0	75	9	35	14	0	58	1	6	0	0	7	6	4	0	0	10
	5:30 PM	11	19	7	3	40	11	12	6	1	30	0	7	1	2	10	0	0	0	0	0
	5:45 PM	17	24	4	0	45	5	18	3	0	26	2	6	1	0	9	10	0	0	0	10
	TOTAL	224	400	147	8	779	148	326	143	6	623	6	52	4	2	64	70	22	0	0	92

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Ma 20, 14

LOCATION: China town
NORTH & SOUTH: Main
EAST & WEST: Aliso

PROJECT #: SC0376
LOCATION #: 2
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND (Main)			SOUTHBOUND (Main)			EASTBOUND (Ali o)			WESTBOUND (Ali o)				U-TURNS				
	LANES:	NL X	NT 3	NR 1	SL X	ST X	SR X	EL 0	ET 3	ER X	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	40	35	0	0	0	11	72	0	0	0	0	158	0	0	0	0	0
	7:15 AM	0	71	35	0	0	0	15	77	0	0	0	0	198	0	0	0	0	0
	7:30 AM	0	75	43	0	0	0	19	92	0	0	0	0	229	0	0	0	0	0
	7:45 AM	0	68	51	0	0	0	16	112	0	0	0	0	247	0	0	0	0	0
	8:00 AM	0	73	49	0	0	0	18	115	0	0	0	0	255	0	0	0	0	0
	8:15 AM	0	63	41	0	0	0	12	83	0	0	0	0	199	0	0	0	0	0
	8:30 AM	0	74	37	0	0	0	14	116	0	0	0	0	241	0	0	0	0	0
	8:45 AM	0	81	45	0	0	0	20	85	0	0	0	0	231	0	0	0	0	0
	9:00 AM	0	79	48	0	0	0	21	112	0	0	0	0	260	0	0	0	0	0
	9:15 AM	0	84	59	0	0	0	17	120	0	0	0	0	280	0	0	0	0	0
	9:30 AM	0	94	58	0	0	0	16	105	0	0	0	0	273	0	0	0	0	0
	9:45 AM	0	82	59	0	0	0	15	105	0	0	0	0	261	0	0	0	0	0
	VOLUMES	0	884	560	0	0	0	194	1,194	0	0	0	0	2,832	0	0	0	0	0
	APPROACH %	0%	61%	39%	0%	0%	0%	14%	86%	0%	0%	0%	0%						
	APP/DEPART	1,444	/	1,078	0	/	0	1,388	/	1,754	0	/	0	0					
	BEGIN PEAK HR		9:00 AM																
	VOLUMES	0	339	224	0	0	0	69	442	0	0	0	0	1,074					
	APPROACH %	0%	60%	40%	0%	0%	0%	14%	86%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.926			0.000			0.932			0.000		0.959					
	APP/DEPART	563	/	408	0	/	0	511	/	666	0	/	0	0					
PM	3:00 PM	0	109	98	0	0	0	18	143	0	0	0	0	368	0	0	0	0	0
	3:15 PM	0	156	75	0	0	0	18	136	0	0	0	0	385	0	0	0	0	0
	3:30 PM	0	152	81	0	0	0	18	166	0	0	0	0	417	0	0	0	0	0
	3:45 PM	0	161	97	0	0	0	16	138	0	0	0	0	412	0	0	0	0	0
	4:00 PM	0	191	88	0	0	0	9	124	0	0	0	0	412	0	0	0	0	0
	4:15 PM	0	239	103	0	0	0	18	136	0	0	0	0	496	0	0	0	0	0
	4:30 PM	0	280	116	0	0	0	15	137	0	0	0	0	548	0	0	0	0	0
	4:45 PM	0	310	90	0	0	0	11	134	0	0	0	0	545	0	0	0	0	0
	5:00 PM	0	377	107	0	0	0	18	156	0	0	0	0	658	0	0	0	0	0
	5:15 PM	0	329	81	0	0	0	16	148	0	0	0	0	574	0	0	0	0	0
	5:30 PM	0	373	88	0	0	0	17	122	0	0	0	0	600	0	0	0	0	0
	5:45 PM	0	314	84	0	0	0	19	108	0	0	0	0	525	0	0	0	0	0
	VOLUMES	0	2,991	1,108	0	0	0	193	1,648	0	0	0	0	5,940	0	0	0	0	0
	APPROACH %	0%	73%	27%	0%	0%	0%	10%	90%	0%	0%	0%	0%						
	APP/DEPART	4,099	/	3,184	0	/	0	1,841	/	2,756	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	1,389	366	0	0	0	62	560	0	0	0	0	2,377					
	APPROACH %	0%	79%	21%	0%	0%	0%	10%	90%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.907			0.000			0.894			0.000		0.903					
	APP/DEPART	1,755	/	1,451	0	/	0	622	/	926	0	/	0	0					

Main

NORTH SIDE

Aliso WEST SIDE EAST SIDE **Aliso**

SOUTH SIDE

Main

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Main
EAST & WEST: Temple

PROJECT #: SC0325
LOCATION #: 16
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER

N ▲ / ◄ W / E ► / S ▼

		NORTHBOUND Main			SOUTHBOUND Main			EASTBOUND Temple			WESTBOUND Temple				U-TURNS				
	LANES:	NL 0	NT 5	NR 0	SL X	ST X	SR X	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	15	80	24	0	0	0	12	80	0	0	115	1	327	0	0	0	0	0
	7:15 AM	24	55	29	0	0	0	16	84	0	0	102	3	313	0	0	0	0	0
	7:30 AM	24	85	31	0	0	0	13	97	1	0	133	7	391	0	0	0	0	0
	7:45 AM	22	110	34	0	0	0	13	91	0	0	133	7	410	0	0	0	0	0
	8:00 AM	24	86	32	0	0	0	5	102	0	0	141	9	399	0	0	0	0	0
	8:15 AM	11	114	40	0	0	0	10	124	0	0	148	7	454	0	0	0	0	0
	8:30 AM	21	89	47	0	0	0	18	156	1	0	137	16	485	0	0	0	0	0
	8:45 AM	30	99	40	0	0	0	22	142	1	0	144	12	490	0	0	0	0	0
	9:00 AM	28	96	41	0	0	0	14	150	1	0	144	15	489	0	0	0	0	0
	9:15 AM	26	104	34	0	0	0	13	113	0	0	119	14	423	0	0	0	0	0
	9:30 AM	14	111	38	0	0	0	21	121	0	0	115	14	434	0	0	0	0	0
	9:45 AM	20	110	30	0	0	0	22	111	2	0	99	17	411	0	0	0	0	0
	VOLUMES	259	1,139	420	0	0	0	179	1,371	6	0	1,530	122	5,026	0	0	0	0	0
	APPROACH %	14%	63%	23%	0%	0%	0%	12%	88%	0%	0%	93%	7%						
	APP/DEPART	1,818	/	1,440	0	/	6	1,556	/	1,791	1,652	/	1,789	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	90	398	168	0	0	0	64	572	3	0	573	50	1,918					
	APPROACH %	14%	61%	26%	0%	0%	0%	10%	90%	0%	0%	92%	8%						
	PEAK HR FACTOR		0.970			0.000			0.913			0.980		0.979					
	APP/DEPART	656	/	512	0	/	3	639	/	740	623	/	663	0					
PM	03:00 PM	25	174	42	0	0	0	11	104	0	0	115	17	488	0	0	0	0	0
	3:15 PM	31	174	27	0	0	0	13	106	0	0	105	7	463	0	0	0	0	0
	3:30 PM	30	202	40	0	0	0	14	120	0	0	155	20	581	0	0	0	0	0
	3:45 PM	32	241	31	0	0	0	15	121	1	0	130	16	587	0	0	0	0	0
	4:00 PM	43	220	30	0	0	0	18	100	0	0	128	26	565	0	0	0	0	0
	4:15 PM	57	301	49	0	0	0	16	141	0	0	118	22	704	0	0	0	0	0
	4:30 PM	34	322	46	0	0	0	27	152	0	1	155	31	768	0	0	0	0	0
	4:45 PM	28	358	51	0	0	0	23	157	0	0	164	24	805	0	0	0	0	0
	5:00 PM	46	366	42	0	0	0	27	204	0	0	141	25	851	0	0	0	0	0
	5:15 PM	48	334	48	0	0	0	35	197	0	0	177	41	880	0	0	0	0	0
	5:30 PM	56	396	40	0	0	0	27	154	0	0	161	23	857	0	0	0	0	0
	5:45 PM	43	349	40	0	0	0	24	138	0	0	193	24	811	0	0	0	0	0
	VOLUMES	473	3,437	486	0	0	0	250	1,694	1	1	1,742	276	8,360	0	0	0	0	0
	APPROACH %	11%	78%	11%	0%	0%	0%	13%	87%	0%	0%	86%	14%						
	APP/DEPART	4,396	/	3,963	0	/	2	1,945	/	2,180	2,019	/	2,215	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	193	1,445	170	0	0	0	113	693	0	0	672	113	3,399					
	APPROACH %	11%	80%	9%	0%	0%	0%	14%	86%	0%	0%	86%	14%						
	PEAK HR FACTOR		0.919			0.000			0.869			0.900		0.966					
	APP/DEPART	1,808	/	1,671	0	/	0	806	/	863	785	/	865	0					

Main

NORTH SIDE

Temple WEST SIDE EAST SIDE **Temple**

SOUTH SIDE

Main

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5253_003 **Day:** WEDNESDAY

City: City of Los Angeles **Date:** 6/6/2012

AM

NS/EW Streets:	Los Angeles St			Los Angeles St			Arcadia St			Arcadia St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 3	WR 0	TOTAL
7:00 AM	6	49			54	5				76	168	5	363
7:15 AM	2	39			66	2				73	210	2	394
7:30 AM	4	35			89	7				83	227	4	449
7:45 AM	9	47			85	3				74	254	6	478
8:00 AM	3	45			64	6				89	250	5	462
8:15 AM	10	53			84	8				66	232	7	460
8:30 AM	5	52			79	4				68	214	5	427
8:45 AM	7	56			76	6				41	161	10	357
9:00 AM	8	64			72	10				105	240	4	503
9:15 AM	5	62			29	5				80	192	9	382
9:30 AM	9	67			34	8				95	205	8	426
9:45 AM	13	56			25	1				73	225	7	400
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	81	625	0	0	757	65	0	0	0	923	2578	72	5101
APPROACH %'s :	11.47%	88.53%	0.00%	0.00%	92.09%	7.91%	#DIV/0!	#DIV/0!	#DIV/0!	25.83%	72.15%	2.02%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	26	180	0	0	322	24	0	0	0	312	963	22	1849
PEAK HR FACTOR :		0.817			0.901			0.000			0.943		0.967

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5253_003 **Day:** WEDNESDAY

City: City of Los Angeles **Date:** 6/6/2012

PM

NS/EW Streets:	Los Angeles St			Los Angeles St			Arcadia St			Arcadia St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	0	0	0	0	0	3	0	
3:00 PM	10	105			32	5				21	138	3	314
3:15 PM	7	122			20	12				29	140	6	336
3:30 PM	7	126			28	9				28	145	5	348
3:45 PM	9	103			27	10				27	118	14	308
4:00 PM	7	125			32	10				25	141	14	354
4:15 PM	6	128			33	14				19	157	4	361
4:30 PM	12	145			21	9				32	173	1	393
4:45 PM	20	175			40	16				24	183	5	463
5:00 PM	21	157			27	7				25	180	2	419
5:15 PM	26	190			38	7				29	170	3	463
5:30 PM	22	197			29	14				27	196	7	492
5:45 PM	17	207			42	6				11	164	4	451
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	164	1780	0	0	369	119	0	0	0	297	1905	68	4702
APPROACH %'s :	8.44%	91.56%	0.00%	0.00%	75.61%	24.39%	#DIV/0!	#DIV/0!	#DIV/0!	13.08%	83.92%	3.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	89	719	0	0	134	44	0	0	0	105	729	17	1837
PEAK HR FACTOR :		0.922			0.795			0.000			0.925		0.933

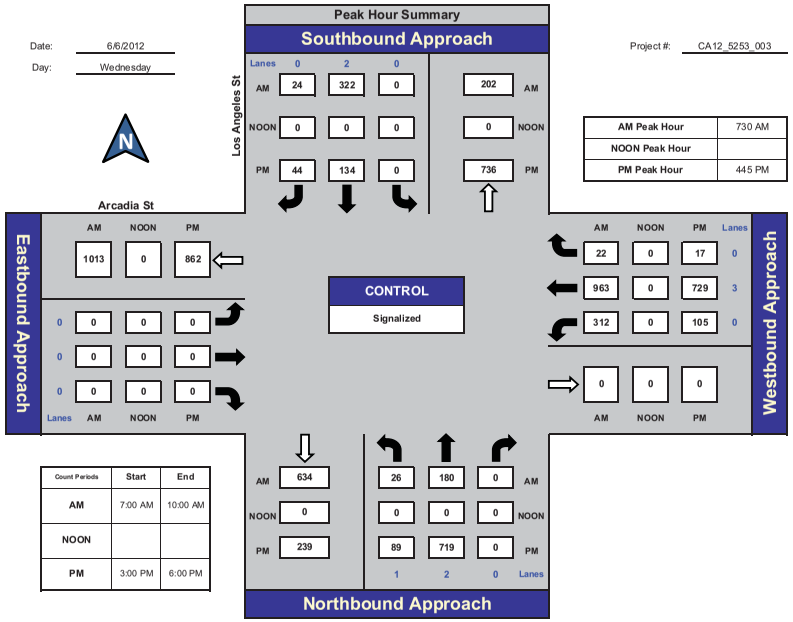
CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

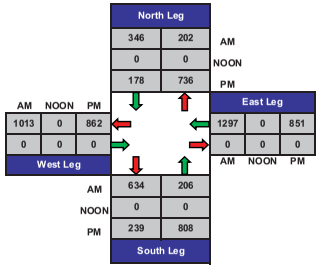
Los Angeles St and Arcadia St , City of Los Angeles



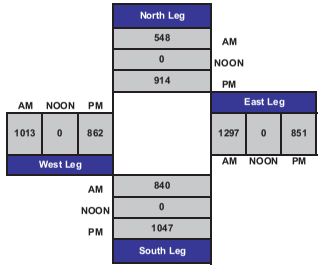
Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 12-5253-003
N/S Street: Los Angeles St
E/W Street: Arcadia St
DATE: 6/6/2012
CITY: Los Angeles

DAY: Wednesday

	Start	End
AM	7:00	10:00
PM	15:00	18:00

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	4	13	0	0	2	28	0	14
7:15 AM	4	41	0	0	4	26	2	13
7:30 AM	7	23	0	0	3	7	0	4
7:45 AM	9	18	0	0	4	20	2	6
8:00 AM	9	15	0	0	12	22	3	7
8:15 AM	9	16	0	0	12	20	5	4
8:30 AM	12	17	0	0	9	13	0	7
8:45 AM	5	12	0	0	7	14	3	7
9:00 AM	2	3	0	0	6	14	6	3
9:15 AM	6	7	0	0	14	13	1	1
9:30 AM	7	11	0	0	13	9	3	4
9:45 AM	6	8	0	0	12	12	1	5
TOTALS	**80**	**184**	**0**	**0**	**98**	**198**	**26**	**75**

BIKES

TIME	TURNING MOVEMENTS											
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	2	0	0	0	0	1	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0
7:30 AM	0	1	0	0	2	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	3	0	0	0	0	0	1	0
8:00 AM	0	1	0	0	1	0	0	0	0	0	1	0
8:15 AM	0	0	0	0	1	0	0	0	0	1	0	0
8:30 AM	0	0	0	0	2	0	0	0	1	1	0	0
8:45 AM	0	0	0	0	3	0	0	0	0	0	1	0
9:00 AM	0	2	0	0	4	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	1	0	0	0	0	0	1	0
9:30 AM	0	0	0	0	2	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	1	1	0	0	0	0	0	0
TOTALS	**0**	**4**	**0**	**0**	**22**	**1**	**0**	**1**	**1**	**3**	**4**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	12	10	0	0	17	4	9	0
3:15 PM	3	6	0	0	18	1	3	3
3:30 PM	13	7	0	0	18	6	1	4
3:45 PM	8	2	0	0	24	9	3	3
4:00 PM	15	6	0	0	29	3	6	5
4:15 PM	3	7	0	0	13	2	6	0
4:30 PM	12	3	0	0	12	1	4	1
4:45 PM	6	2	0	0	8	0	7	1
5:00 PM	23	8	0	0	18	5	7	1
5:15 PM	21	5	0	0	7	3	6	8
5:30 PM	18	2	0	0	5	2	3	0
5:45 PM	5	11	0	0	6	0	4	0
TOTALS	**139**	**69**	**0**	**0**	**175**	**36**	**59**	**26**

BIKES

TIME	TURNING MOVEMENTS											
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
3:00 PM	0	2	0	0	1	0	0	0	0	0	0	0
3:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	2	2	0	0	0	0	1	0	0	0	1
3:45 PM	0	3	0	0	4	0	0	0	0	0	0	0
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	0
4:30 PM	0	3	0	0	1	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	3	1	0	1	0	0	1	0	1	0	0
5:15 PM	0	2	0	0	2	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0
5:45 PM	0	2	0	0	2	0	0	0	0	0	2	0
TOTALS	**0**	**20**	**3**	**0**	**12**	**0**	**1**	**2**	**0**	**1**	**2**	**1**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5253_005 **Day:** WEDNESDAY

City: City of Los Angeles **Date:** 6/6/2012

AM

NS/EW Streets:	Los Angeles St			Los Angeles St			Aliso St/US 101 SB on-ramp			Aliso St/US 101 SB on-ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	0	3	0	0	3	0	0	0	0	
7:00 AM		50	18	1	121		6	84	12				292
7:15 AM		41	31	1	134		4	66	17				294
7:30 AM		36	35	1	176		2	92	24				366
7:45 AM		57	34	0	161		2	85	38				377
8:00 AM		48	28	2	149		1	99	35				362
8:15 AM		59	34	1	155		5	100	25				379
8:30 AM		55	49	1	147		5	97	32				386
8:45 AM		63	24	0	114		2	82	24				309
9:00 AM		69	41	3	175		4	96	30				418
9:15 AM		64	38	2	108		7	105	27				351
9:30 AM		71	30	2	133		9	105	27				377
9:45 AM		68	47	1	89		5	91	21				322
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	681	409	15	1662	0	52	1102	312	0	0	0	4233
APPROACH %'s :	0.00%	62.48%	37.52%	0.89%	99.11%	0.00%	3.55%	75.17%	21.28%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	219	145	4	612	0	13	381	130	0	0	0	1504
PEAK HR FACTOR :		0.875			0.957			0.970			0.000		0.974

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5253_005 **Day:** WEDNESDAY

City: City of Los Angeles **Date:** 6/6/2012

PM

NS/EW Streets:	Los Angeles St			Los Angeles St			Aliso St/US 101 SB on-ramp			Aliso St/US 101 SB on-ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	0	3	0	0	3	0	0	0	0	
3:00 PM		109	78	4	49		9	185	8				442
3:15 PM		122	87	1	49		8	165	8				440
3:30 PM		123	88	2	57		7	208	8				493
3:45 PM		107	76	1	53		9	180	13				439
4:00 PM		121	73	2	56		6	205	7				470
4:15 PM		129	67	0	54		5	218	8				481
4:30 PM		146	86	0	47		12	207	2				500
4:45 PM		184	76	2	62		13	247	8				592
5:00 PM		167	98	0	50		8	205	4				532
5:15 PM		217	107	0	68		5	230	3				630
5:30 PM		207	99	0	57		11	229	5				608
5:45 PM		208	85	1	50		16	224	7				591
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1840	1020	13	652	0	109	2503	81	0	0	0	6218
APPROACH %'s :	0.00%	64.34%	35.66%	1.95%	98.05%	0.00%	4.05%	92.94%	3.01%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	775	380	2	237	0	37	911	20	0	0	0	2362
PEAK HR FACTOR :		0.891			0.879			0.903			0.000		0.937

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

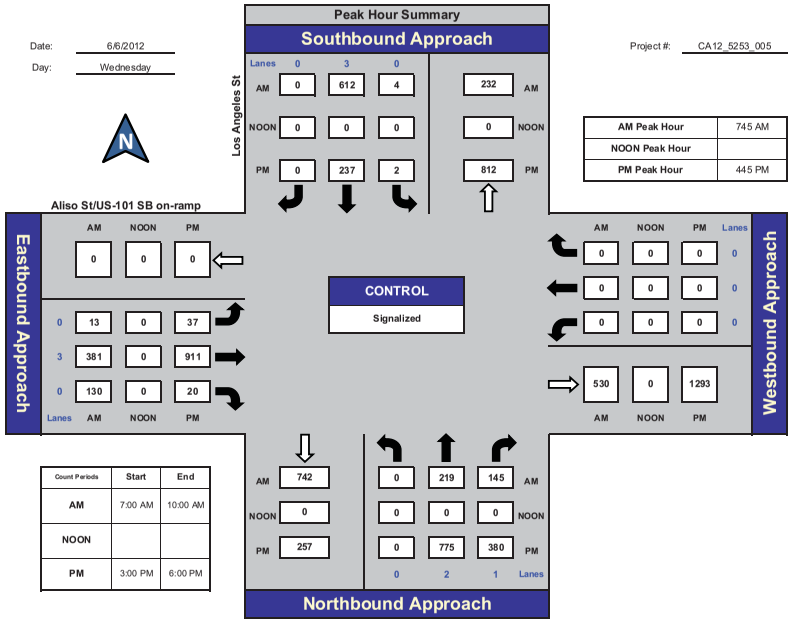
Los Angeles St and Aliso St/US-101 SB on-ramp , City of Los Angeles

Date: 6/6/2012

Day: Wednesday

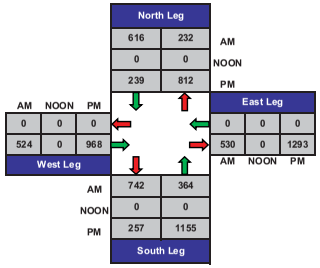
Project #: CA12_5253_005

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	445 PM

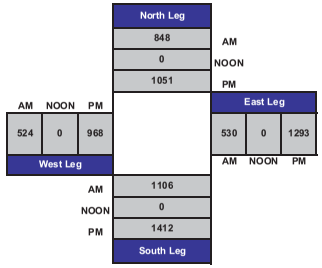


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 12-5253-005
N/S Street: Los Angeles St
E/W Street: Aliso St
DATE: 6/6/2012
CITY: Los Angeles

DAY: Wednesday

	Start	End
AM	7:00	10:00
PM	15:00	18:00

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	11	4	33	0	14
7:15 AM	0	0	4	10	5	35	1	15
7:30 AM	0	0	2	6	6	13	1	2
7:45 AM	0	1	0	9	2	27	3	8
8:00 AM	0	0	2	13	11	24	2	7
8:15 AM	0	0	8	12	10	23	4	6
8:30 AM	0	0	5	5	8	10	0	6
8:45 AM	0	0	0	8	9	18	2	6
9:00 AM	0	0	9	16	9	13	6	4
9:15 AM	0	0	5	15	10	10	1	3
9:30 AM	0	0	2	8	14	11	3	3
9:45 AM	0	0	6	15	13	11	5	4
TOTALS	**0**	**1**	**43**	**128**	**101**	**228**	**28**	**78**

BIKES

TIME	TURNING MOVEMENTS											
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	3	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	1	2	0	0	1	0	0	0	0
7:45 AM	1	0	0	0	2	1	0	0	0	0	0	0
8:00 AM	0	2	0	0	1	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	3	0	0	0	0	0	0	0
8:30 AM	0	0	0	1	3	0	0	1	0	0	1	0
8:45 AM	0	0	1	0	4	0	0	0	0	1	1	0
9:00 AM	0	1	0	0	2	0	1	0	0	0	0	0
9:15 AM	0	0	0	0	1	0	0	0	0	0	0	0
9:30 AM	0	1	0	0	2	0	0	0	0	0	0	0
9:45 AM	0	1	0	0	0	0	0	0	0	0	0	0
TOTALS	**1**	**6**	**2**	**2**	**23**	**1**	**1**	**2**	**0**	**1**	**2**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	4	5	14	4	10	0
3:15 PM	0	0	4	16	22	1	3	3
3:30 PM	0	0	5	13	19	8	3	3
3:45 PM	0	0	11	8	20	8	7	8
4:00 PM	0	0	11	23	45	3	7	5
4:15 PM	0	0	5	15	16	4	5	0
4:30 PM	0	0	7	14	22	2	4	1
4:45 PM	0	0	20	10	13	0	8	0
5:00 PM	0	0	7	10	26	5	5	2
5:15 PM	0	0	7	3	13	3	6	8
5:30 PM	0	0	11	5	13	1	4	0
5:45 PM	0	0	2	4	6	1	4	0
TOTALS	**0**	**0**	**94**	**126**	**229**	**40**	**66**	**30**

BIKES

TIME	TURNING MOVEMENTS											
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
3:00 PM	0	2	1	0	1	0	0	0	0	0	0	0
3:15 PM	0	4	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	2	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	3	0	0	5	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	3	0	0	1	0	0	2	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	5	0	0	2	0	1	0	0	0	0	0
5:15 PM	0	2	0	0	2	0	0	0	0	0	0	0
5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	3	0	0	0	0	0	0	0
TOTALS	**0**	**24**	**1**	**0**	**14**	**0**	**1**	**2**	**0**	**0**	**0**	**1**

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE: Tue, Mar 18, 14

LOCATION: China Town
NORTH & SOUTH: Alameda
EAST & WEST: Cesar Chavez

PROJECT #: SC0325
LOCATION #: 17
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER1 OTHER2

▲ N ◄ W E ► S ▼

	LANES:	NORTHBOUND Alameda NL 1	NT 3	NR 0	SOUTHBOUND Alameda SL 1	ST 3	SR 0	EASTBOUND Cesar Chavez EL 1	ET 2	ER 0	WESTBOUND Cesar Chavez WL 1	WT 3	WR 0	TOTAL
AM	7:00 AM	20	76	23	21	251	52	17	90	21	29	283	9	892
AM	7:15 AM	26	72	14	17	242	52	15	112	21	33	328	6	938
AM	7:30 AM	40	65	9	18	265	42	10	169	45	33	329	16	1,041
AM	7:45 AM	33	59	23	20	267	54	11	156	40	42	344	12	1,061
AM	8:00 AM	32	71	21	12	259	51	8	164	42	33	319	10	1,022
AM	8:15 AM	32	85	14	13	282	55	14	143	35	27	300	17	1,017
AM	8:30 AM	43	97	22	20	247	43	13	153	51	25	299	23	1,036
AM	8:45 AM	34	132	35	20	266	54	20	171	37	41	311	15	1,136
AM	9:00 AM	36	103	26	16	207	46	11	163	59	38	304	15	1,024
AM	9:15 AM	34	98	20	15	274	41	15	119	42	40	234	11	943
AM	9:30 AM	26	73	23	14	232	45	15	96	50	27	247	18	866
AM	9:45 AM	28	101	29	15	241	33	12	106	58	42	219	14	898
AM	VOLUMES	384	1,032	259	201	3,033	568	161	1,642	501	410	3,517	166	11,874
AM	APPROACH %	23%	62%	15%	5%	80%	15%	7%	71%	22%	10%	86%	4%	
AM	APP/DEPART	1,675	/	1,359	3,802	/	3,944	2,304	/	2,102	4,093	/	4,469	0
AM	BEGIN PEAK HR		8:15 AM											
AM	VOLUMES	145	417	97	69	1,002	198	58	630	182	131	1,214	70	4,213
AM	APPROACH %	22%	63%	15%	5%	79%	16%	7%	72%	21%	9%	86%	5%	
AM	PEAK HR FACTOR		0.820			0.906			0.933			0.964		0.927
AM	APP/DEPART	659	/	545	1,269	/	1,315	870	/	796	1,415	/	1,557	0
PM	3:00 PM	30	151	26	17	191	29	11	149	55	31	165	11	866
PM	3:15 PM	34	149	29	23	214	57	15	135	60	21	171	13	921
PM	3:30 PM	36	138	24	15	170	35	12	181	67	30	219	10	937
PM	3:45 PM	40	136	22	19	186	32	19	122	56	25	295	8	960
PM	4:00 PM	34	136	28	25	192	18	20	215	50	29	271	16	1,034
PM	4:15 PM	25	145	31	30	154	44	14	205	57	36	251	29	1,021
PM	4:30 PM	33	178	37	20	154	52	16	188	54	35	234	21	1,022
PM	4:45 PM	29	164	27	41	226	51	15	242	37	36	193	16	1,077
PM	5:00 PM	42	163	28	36	179	34	11	203	56	24	137	28	941
PM	5:15 PM	32	178	28	43	157	42	19	191	34	29	126	20	899
PM	5:30 PM	38	179	19	31	170	41	15	157	45	37	169	21	922
PM	5:45 PM	43	235	27	23	196	42	12	150	50	25	67	14	884
PM	VOLUMES	416	1,952	326	323	2,189	477	179	2,138	621	358	2,298	207	11,484
PM	APPROACH %	15%	72%	12%	11%	73%	16%	6%	73%	21%	13%	80%	7%	
PM	APP/DEPART	2,694	/	2,338	2,989	/	3,168	2,938	/	2,787	2,863	/	3,191	0
PM	BEGIN PEAK HR		4:00 PM											
PM	VOLUMES	121	623	123	116	726	165	65	850	198	136	949	82	4,154
PM	APPROACH %	14%	72%	14%	12%	72%	16%	6%	76%	18%	12%	81%	7%	
PM	PEAK HR FACTOR		0.874			0.792			0.946			0.923		0.964
PM	APP/DEPART	867	/	770	1,007	/	1,060	1,113	/	1,089	1,167	/	1,235	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

Alameda

NORTH SIDE

Cesar Chavez WEST SIDE

EAST SIDE **Cesar Chavez**

SOUTH SIDE

Alameda

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED			
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	SS	ES	WS	TOTAL
AM	7:00 AM	14	7	20	8	49	13	7	16	8	44	1	0	0	0	1	0	4	0	4
AM	7:15 AM	13	16	14	12	55	13	14	14	9	50	0	2	0	3	5	0	0	0	0
AM	7:30 AM	25	18	27	5	75	21	16	23	3	63	2	2	4	2	10	0	0	0	2
AM	7:45 AM	40	72	58	13	183	40	17	58	13	128	0	3	0	0	3	52	0	0	52
AM	8:00 AM	16	22	29	18	85	13	19	27	13	72	3	3	2	5	13	0	0	0	0
AM	8:15 AM	14	20	24	27	85	13	19	19	24	75	1	1	3	3	8	0	2	0	2
AM	8:30 AM	18	25	29	24	96	18	24	27	20	89	0	1	2	4	7	0	0	0	0
AM	8:45 AM	9	15	20	16	60	9	12	19	10	50	0	3	1	6	10	0	0	0	0
AM	9:00 AM	7	26	27	22	82	5	24	27	20	76	2	2	0	2	6	0	0	0	0
AM	9:15 AM	21	9	21	22	73	20	9	21	21	71	1	0	0	1	2	0	0	0	0
AM	9:30 AM	20	12	21	21	74	19	12	15	20	66	1	0	2	1	4	0	4	0	4
AM	9:45 AM	20	15	26	23	84	19	13	26	19	77	1	2	0	4	7	0	0	0	0
	TOTAL	217	257	316	211	1,001	203	186	292	180	861	12	19	14	31	76	52	10	0	64
PM	3:00 PM	14	37	16	26	93	13	35	15	24	87	1	2	1	2	6	0	0	0	0
PM	3:15 PM	14	18	13	19	64	13	17	9	19	58	1	1	0	0	2	0	4	0	4
PM	3:30 PM	30	29	24	20	103	29	26	24	18	97	1	3	0	2	6	0	0	0	0
PM	3:45 PM	23	15	17	46	101	21	13	16	38	88	2	2	1	8	13	0	0	0	0
PM	4:00 PM	15	30	26	18	89	13	29	19	16	77	0	1	1	2	4	0	6	0	8
PM	4:15 PM	23	29	41	30	123	21	22	38	27	108	2	7	3	3	15	0	0	0	0
PM	4:30 PM	17	19	24	21	81	16	18	22	20	76	1	1	2	1	5	0	0	0	0
PM	4:45 PM	14	49	38	28	129	13	48	33	25	119	1	1	1	3	6	0	4	0	4
PM	5:00 PM	30	28	36	47	141	28	22	32	39	121	2	6	4	8	20	0	0	0	0
PM	5:15 PM	29	52	28	39	148	22	45	24	38	129	1	3	2	1	7	4	2	0	12
PM	5:30 PM	28	15	30	31	104	26	15	26	28	95	0	0	2	3	5	0	2	0	4
PM	5:45 PM	22	36	19	43	120	20	34	14	40	108	2	2	3	3	10	0	2	0	2
	TOTAL	259	357	312	368	1,296	235	324	272	332	1,163	14	29	20	36	99	4	20	0	34

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:	LOCATION:	China Town	PROJECT #:	SC0325
Tue, Mar 18, 14	NORTH & SOUTH:	Alameda	LOCATION #:	18
	EAST & WEST:	Arcadia	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Alameda			SOUTHBOUND Alameda			EASTBOUND Arcadia			WESTBOUND Arcadia				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	1	3	X	X	3	0	X	X	X	1.5	2	0.5		X	X	X	X	
AM	7:00 AM	8	273	0	0	241	13	0	0	0	87	276	27	925	0	0	0	0	0
	7:15 AM	13	217	0	0	229	8	0	0	0	112	308	33	920	0	0	0	0	0
	7:30 AM	27	198	0	0	224	14	0	0	0	120	344	31	958	0	0	0	0	0
	7:45 AM	11	210	0	0	269	6	0	0	0	107	338	37	978	0	0	0	0	0
	8:00 AM	21	186	0	0	292	12	0	0	0	108	340	36	995	0	0	0	0	0
	8:15 AM	18	225	0	0	249	13	0	0	0	125	384	38	1,052	0	0	0	0	0
	8:30 AM	20	244	0	0	239	18	0	0	0	123	328	27	999	0	0	0	0	0
	8:45 AM	14	284	0	0	258	13	0	0	0	137	376	44	1,126	0	0	0	0	0
	9:00 AM	11	287	0	0	151	22	0	0	0	239	356	57	1,123	0	0	0	0	0
	9:15 AM	14	221	0	0	202	17	0	0	0	153	340	49	996	0	0	0	0	0
	9:30 AM	10	229	0	0	196	7	0	0	0	131	356	42	971	0	0	0	0	0
	9:45 AM	12	237	0	0	170	9	0	0	0	157	358	49	992	0	0	0	0	0
	VOLUMES	179	2,811	0	0	2,720	152	0	0	0	1,599	4,104	470	12,035	0	0	0	0	0
	APPROACH %	6%	94%	0%	0%	95%	5%	0%	0%	0%	26%	66%	8%						
	APP/DEPART	2,990	/	3,281	2,872	/	4,319	0	/	0	6,173	/	4,435	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	63	1,040	0	0	897	66	0	0	0	624	1,444	166	4,300					
	APPROACH %	6%	94%	0%	0%	93%	7%	0%	0%	0%	28%	65%	7%						
	PEAK HR FACTOR		0.925			0.888			0.000			0.857		0.955					
	APP/DEPART	1,103	/	1,206	963	/	1,521	0	/	0	2,234	/	1,573	0					
PM	03:00 PM	6	373	0	0	185	13	0	0	0	76	114	38	805	0	0	0	0	0
	3:15 PM	7	355	0	0	182	5	0	0	0	88	176	51	864	0	0	0	0	0
	3:30 PM	5	383	0	0	142	7	0	0	0	106	189	53	885	0	0	0	0	0
	3:45 PM	4	425	0	0	198	7	0	0	0	88	187	58	967	0	0	0	0	0
	4:00 PM	4	441	0	0	192	5	0	0	0	50	92	41	825	0	0	0	0	0
	4:15 PM	4	436	0	0	141	10	0	0	0	87	98	41	817	0	0	0	0	0
	4:30 PM	2	417	0	0	158	5	0	0	0	75	127	49	833	0	0	0	0	0
	4:45 PM	4	467	0	0	159	2	0	0	0	95	163	53	943	0	0	0	0	0
	5:00 PM	0	464	1	0	147	10	0	0	1	111	178	55	967	0	0	0	0	0
	5:15 PM	3	462	0	0	184	6	0	0	0	76	206	50	987	0	0	0	0	0
	5:30 PM	3	473	0	0	194	4	0	0	0	66	151	59	950	0	0	0	0	0
	5:45 PM	2	495	0	0	186	16	0	0	0	95	186	56	1,036	0	0	0	0	0
	VOLUMES	44	5,191	1	0	2,068	90	0	0	1	1,013	1,867	604	10,879	0	0	0	0	0
	APPROACH %	1%	99%	0%	0%	96%	4%	0%	0%	100%	29%	54%	17%						
	APP/DEPART	5,236	/	5,795	2,158	/	3,082	1	/	1	3,484	/	2,001	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	8	1,894	1	0	711	36	0	0	1	348	721	220	3,940					
	APPROACH %	0%	100%	0%	0%	95%	5%	0%	0%	100%	27%	56%	17%						
	PEAK HR FACTOR		0.957			0.925			0.250			0.937		0.951					
	APP/DEPART	1,903	/	2,114	747	/	1,060	1	/	1	1,289	/	765	0					

Alameda NORTH SIDE

Arcadia WEST SIDE — EAST SIDE **Arcadia**

SOUTH SIDE **Alameda**

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:	LOCATION:	China Town	PROJECT #:	SC0325
Tue, Mar 18, 14	NORTH & SOUTH:	Alameda	LOCATION #:	19
	EAST & WEST:	Aliso	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Alameda			SOUTHBOUND Alameda			EASTBOUND Ali o			WESTBOUND Ali o				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	X	3	1	1	3	X	2	1	1	1	X	1		X	X	X	X	
AM	7:00 AM	0	239	28	19	308	0	12	8	23	40	0	32	709	0	0	0	0	0
	7:15 AM	0	193	28	36	305	0	15	9	29	41	0	26	682	0	0	0	0	0
	7:30 AM	0	177	19	34	311	0	14	8	34	39	0	35	671	0	0	0	0	0
	7:45 AM	0	177	37	35	340	0	8	5	25	51	0	37	715	0	0	0	0	0
	8:00 AM	0	164	31	21	377	0	18	8	26	32	0	24	701	0	0	0	0	0
	8:15 AM	0	201	17	24	348	0	14	10	30	50	0	27	721	0	0	0	0	0
	8:30 AM	0	218	29	31	332	0	18	8	35	31	0	32	734	0	0	0	0	0
	8:45 AM	0	244	15	18	376	0	20	15	42	42	0	34	806	0	0	0	0	0
	9:00 AM	0	225	25	22	363	0	19	9	36	55	0	50	804	0	0	0	0	0
	9:15 AM	0	183	27	32	323	1	19	7	38	45	0	33	708	0	0	0	0	0
	9:30 AM	0	190	38	23	300	0	16	8	43	46	0	29	693	0	0	0	0	0
	9:45 AM	0	201	43	21	301	0	13	10	37	49	0	34	709	0	0	0	0	0
	VOLUMES	0	2,412	337	316	3,984	1	186	105	398	521	0	393	8,653	0	0	0	0	0
	APPROACH %	0%	88%	12%	7%	93%	0%	27%	15%	58%	57%	0%	43%						
	APP/DEPART	2,749	/	2,991	4,301	/	4,903	689	/	758	914	/	1	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	0	888	86	95	1,419	0	71	42	143	178	0	143	3,065					
	APPROACH %	0%	91%	9%	6%	94%	0%	28%	16%	56%	55%	0%	45%						
	PEAK HR FACTOR		0.940			0.961			0.831			0.764		0.951					
	APP/DEPART	974	/	1,102	1,514	/	1,740	256	/	223	321	/	0	0					
PM	03:00 PM	0	259	58	41	217	0	84	21	9	32	0	34	755	0	0	0	0	0
	3:15 PM	0	244	37	50	221	0	83	13	24	20	0	31	723	0	0	0	0	0
	3:30 PM	0	260	40	38	209	0	85	16	19	23	0	44	734	0	0	0	0	0
	3:45 PM	0	280	50	40	244	0	111	25	22	29	0	39	840	0	0	0	0	0
	4:00 PM	0	298	27	28	212	0	106	18	19	25	0	39	772	0	0	0	0	0
	4:15 PM	0	317	25	27	199	0	96	13	13	29	0	31	750	0	1	0	0	1
	4:30 PM	0	283	31	33	197	0	104	12	14	38	0	32	744	0	3	0	0	3
	4:45 PM	0	328	36	25	235	0	111	11	12	31	0	34	823	0	2	0	0	2
	5:00 PM	0	329	22	32	229	0	103	22	5	31	0	28	801	0	3	0	0	3
	5:15 PM	0	329	22	32	229	0	103	22	5	31	0	28	801	0	3	0	0	3
	5:30 PM	0	327	22	37	223	0	113	12	11	16	0	33	794	0	1	0	0	1
	5:45 PM	0	340	30	28	250	0	110	14	8	26	0	43	849	0	2	0	0	2
	VOLUMES	0	3,594	400	411	2,665	0	1,209	199	161	331	0	416	9,386	0	15	0	0	15
	APPROACH %	0%	90%	10%	13%	87%	0%	77%	13%	10%	44%	0%	56%						
	APP/DEPART	3,994	/	5,219	3,076	/	3,157	1,569	/	1,010	747	/	0	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	1,325	96	129	931	0	429	70	29	104	0	132	3,245					
	APPROACH %	0%	93%	7%	12%	88%	0%	81%	13%	5%	44%	0%	56%						
	PEAK HR FACTOR		0.960			0.953			0.971			0.855		0.956					
	APP/DEPART	1,421	/	1,886	1,060	/	1,064	528	/	295	236	/	0	0					

Alameda NORTH SIDE

Aliso WEST SIDE — EAST SIDE **Aliso**

SOUTH SIDE **Alameda**

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	28	59	27	25	139	2	59	27	23	111	0	0	0	2	2	26	0	0	0	26
	7:15 AM	12	105	42	23	182	0	101	42	21	164	0	0	0	2	2	12	4	0	0	16
	7:30 AM	26	90	40	14	170	0	76	36	12	124	0	0	0	2	2	26	14	4	0	44
	7:45 AM	34	97	48	29	208	0	63	48	27	138	0	0	0	2	2	34	34	0	0	68
	8:00 AM	32	82	22	20	156	0	81	22	16	119	0	1	0	4	5	32	0	0	0	32
	8:15 AM	20	65	24	12	121	0	65	24	10	99	0	0	0	2	2	20	0	0	0	20
	8:30 AM	0	63	9	18	90	0	63	9	16	88	0	0	0	2	2	0	0	0	0	0
	8:45 AM	12	66	14	20	112	0	61	9	14	84	0	1	1	6	8	12	4	4	0	20
	9:00 AM	8	44	14	15	81	0	44	8	15	67	0	0	0	0	0	8	0	6	0	14
	9:15 AM	6	37	13	6	62	0	37	13	5	55	0	0	0	1	1	6	0	0	0	6
	9:30 AM	8	46	4	10	68	0	45	4	9	58	0	1	0	1	2	8	0	0	0	8
	9:45 AM	2	28	14	22	66	0	28	8	20	56	0	0	0	2	2	2	0	6	0	8
	TOTAL	188	782	271	214	1,455	2	723	250	188	1,163	0	3	1	26	30	186	56	20	0	262
PM	3:00 PM	1	30	0	23	54	0	30	0	21	51	1	0	0	2	3	0	0	0	0	0
	3:15 PM	10	41	6	15	72	0	41	1	15	57	0	0	1	0	1	10	0	4	0	14
	3:30 PM	12	48	8	21	89	0	48	8	20	76	0	0	0	1	1	12	0	0	0	12
	3:45 PM	6	41	20	25	92	0	40	17	21	78	0	1	1	4	6	6	0	2	0	8
	4:00 PM	6	45	43	32	126	0	45	40	32	117	0	0	1	0	1	6	0	2	0	8
	4:15 PM	0	53	10	29	92	0	52	7	25	84	0	1	3	4	8	0	0	0	0	0
	4:30 PM	26	103	15	47	191	0	99	15	43	157	0	0	0	4	4	26	4	0	0	30
	4:45 PM	0	48	20	26	94	0	47	19	23	89	0	1	1	3	5	0	0	0	0	0
	5:00 PM	0	31	31	29	91	0	29	26	29	84	0	0	1	0	1	0	2	4	0	6
	5:15 PM	0	31	31	29	91	0	29	26	29	84	0	0	1	0	1	0	2	4	0	6
	5:30 PM	2	35	24	13	74	2	29	21	9	61	0	2	1	4	7	0	4	2	0	6
	5:45 PM	0	17	12	13	42	0	17	6	7	30	0	0	6	6	12	0	0	0	0	0
	TOTAL	63	523	220	302	1,108	2	506	186	274	968	1	5	16	28	50	60	12	18	0	90

APPENDIX C

Level of Service Worksheets

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Grand Avenue	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
1	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3			3			3			3			3			3			3		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0			0			0			0			0			0		
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0
	EB--	0	WB--	0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2			2			2			2			2			2			2		
Override Capacity				0			0			0			0			0			0			0		

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	106	1	106	0	106	106	39	149	1	149	0	149	1	149	0	149	1	149
	Left-Through		0							0				0				0	
	Through	37	1	37	0	37	37	2	41	1	41	0	41	1	41	0	41	1	41
	Through-Right		0							0				0				0	
	Right	190	1	0	3	193	0	17	215	1	0	3	218	1	0	0	218	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	38	1	38	0	38	38	0	40	1	40	0	40	1	40	0	40	1	40
	Left-Through		0							0				0				0	
	Through	265	1	156	0	265	156	1	277	1	163	0	277	1	163	0	277	1	163
	Through-Right		1							1				1				1	
	Right	47	0	47	0	47	47	0	49	0	49	0	49	0	49	0	49	0	49
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	1	17	0	17	17	2	20	1	20	0	20	1	20	0	20	1	20
	Left-Through		0							0				0				0	
	Through	798	2	399	3	801	401	203	1033	2	517	3	1036	2	518	0	1036	2	518
	Through-Right		0							0				0				0	
	Right	216	1	163	0	216	163	72	297	1	223	0	297	1	223	0	297	1	223
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	756	2	416	7	763	420	42	829	2	456	7	836	2	460	0	836	2	460
	Left-Through		0							0				0				0	
	Through	1152	2	386	6	1158	388	192	1391	2	465	6	1397	2	467	0	1397	2	467
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	0	5	0	5	0	5	0	5	0	5	0	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		262	North-South:		262	North-South:			312	North-South:			312	North-South:			312
		East-West:		815	East-West:		821	East-West:			973	East-West:			978	East-West:			978
		SUM:		1077	SUM:		1083	SUM:			1285	SUM:			1290	SUM:			1290
VOLUME/CAPACITY (V/C) RATIO:				0.756			0.760				0.902				0.905				0.905
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.656			0.660				0.802				0.805				0.805
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.003 | Δv/c after mitigation: 0.003

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Grand Avenue	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
1	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3			3			3			3			3			3			3		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0			0			0			0			0			0		
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0
	EB--	0	WB--	0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2			2			2			2			2			2			2		
Override Capacity				0			0			0			0			0			0			0		

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	278	1	278	0	278	278	97	386	1	386	0	386	1	386	0	386	1	386
	Left-Through		0							0				0				0	
	Through	603	1	603	0	603	603	7	634	1	634	0	634	1	634	0	634	1	634
	Through-Right		0							0				0				0	
	Right	245	1	18	10	255	22	16	271	1	5	10	281	1	9	0	281	1	9
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	24	1	24	0	24	24	0	25	1	25	0	25	1	25	0	25	1	25
	Left-Through		0							0				0				0	
	Through	107	1	67	0	107	67	1	112	1	70	0	112	1	70	0	112	1	70
	Through-Right		1							1				1				1	
	Right	27	0	27	0	27	27	0	28	0	28	0	28	0	28	0	28	0	28
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	37	1	37	0	37	37	2	41	1	41	0	41	1	41	0	41	1	41
	Left-Through		0							0				0				0	
	Through	896	2	448	12	908	454	253	1185	2	593	12	1197	2	599	0	1197	2	599
	Through-Right		0							0				0				0	
	Right	198	1	59	0	198	59	74	280	1	87	0	280	1	87	0	280	1	87
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	413	2	227	11	424	233	53	483	2	266	11	494	2	272	0	494	2	272
	Left-Through		0							0				0				0	
	Through	1235	2	414	8	1243	417	237	1522	2	510	8	1530	2	513	0	1530	2	513
	Through-Right		1							1				1				1	
	Right	8	0	8	0	8	8	0	8	0	8	0	8	0	8	0	8	0	8
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		627	North-South:		627	North-South:			659	North-South:			659	North-South:			659
		East-West:		675	East-West:		687	East-West:			859	East-West:			871	East-West:			871
		SUM:		1302	SUM:		1314	SUM:			1518	SUM:			1530	SUM:			1530
VOLUME/CAPACITY (V/C) RATIO:				0.914			0.922				1.065				1.074				1.074
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.814			0.822				0.965				0.974				0.974
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.009 | Δv/c after mitigation: 0.009

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Grand Avenue	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
2	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				4				4				4				4				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	56	1	56	0	56	56	23	81	1	81	0	81	1	81	0	81	1	81
	Left-Through		0							0				0				0	
	Through	213	2	107	1	214	107	104	326	2	163	1	327	2	164	0	327	2	164
	Through-Right		0							0				0				0	
	Right	65	1	0	1	66	0	6	74	1	0	1	75	1	0	0	75	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	53	1	53	0	53	53	23	78	1	78	0	78	1	78	0	78	1	78
	Left-Through		0							0				0				0	
	Through	777	2	389	2	779	390	110	919	2	460	2	921	2	461	0	921	2	461
	Through-Right		0							0				0				0	
	Right	384	1	242	2	386	243	28	428	1	278	2	430	1	279	0	430	1	279
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	142	1	142	1	143	143	2	150	1	150	1	151	1	151	0	151	1	151
	Left-Through		0							0				0				0	
	Through	411	1	305	4	415	307	118	546	1	385	4	550	1	387	0	550	1	387
	Through-Right		1							1				1				1	
	Right	199	0	199	0	199	199	17	224	0	224	0	224	0	224	0	224	0	224
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	249	1	249	4	253	253	2	261	1	261	4	265	1	265	0	265	1	265
	Left-Through		0							0				0				0	
	Through	674	2	337	4	678	339	85	786	2	393	4	790	2	395	0	790	2	395
	Through-Right		0							0				0				0	
	Right	139	1	113	0	139	113	5	150	1	111	0	150	1	111	0	150	1	111
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		445	North-South:		446	North-South:			541	North-South:			542	North-South:			542
		East-West:		554	East-West:		560	East-West:			646	East-West:			652	East-West:			652
		SUM:		999	SUM:		1006	SUM:			1187	SUM:			1194	SUM:			1194
VOLUME/CAPACITY (V/C) RATIO:				0.727			0.732				0.863				0.868				0.868
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.627			0.632				0.763				0.768				0.768
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.005 | Δv/c after mitigation: 0.005

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Grand Avenue	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
2	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				4				4				4				4				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	274	1	274	0	274	274	26	311	1	311	0	311	1	311	0	311	1	311
	Left-Through		0							0				0				0	
	Through	982	2	491	5	987	494	83	1105	2	553	5	1110	2	555	0	1110	2	555
	Through-Right		0							0				0				0	
	Right	259	1	34	5	264	36	1	271	1	31	5	276	1	33	0	276	1	33
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	61	1	61	0	61	61	11	74	1	74	0	74	1	74	0	74	1	74
	Left-Through		0							0				0				0	
	Through	537	2	269	4	541	271	169	728	2	364	4	732	2	366	0	732	2	366
	Through-Right		0							0				0				0	
	Right	169	1	21	4	173	20	49	225	1	50	4	229	1	49	0	229	1	49
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	148	1	148	5	153	153	21	175	1	175	5	180	1	180	0	180	1	180
	Left-Through		0							0				0				0	
	Through	510	1	347	15	525	355	115	646	1	436	15	661	1	443	0	661	1	443
	Through-Right		1							1				1				1	
	Right	184	0	184	0	184	184	34	225	0	225	0	225	0	225	0	225	0	225
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	225	1	225	3	228	228	6	240	1	240	3	243	1	243	0	243	1	243
	Left-Through		0							0				0				0	
	Through	744	2	372	3	747	374	139	913	2	457	3	916	2	458	0	916	2	458
	Through-Right		0							0				0				0	
	Right	260	1	230	0	260	230	27	298	1	261	0	298	1	261	0	298	1	261
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		552	North-South:		555	North-South:			675	North-South:			677	North-South:			677
		East-West:		572	East-West:		583	East-West:			676	East-West:			686	East-West:			686
		SUM:		1124	SUM:		1138	SUM:			1351	SUM:			1363	SUM:			1363
VOLUME/CAPACITY (V/C) RATIO:				0.817			0.828				0.983				0.991				0.991
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.717			0.728				0.883				0.891				0.891
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.008 | Δv/c after mitigation: 0.008

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill Street /1st Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
3	East-West Street:	Ord Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	21	1	21	0	21	21	0	22	1	22	0	22	1	22	0	22	1	22
	Left-Through		0							0				0				0	
	Through	231	1	132	10	241	140	82	322	1	180	10	332	1	188	0	332	1	188
	Through-Right		1							1				1				1	
	Right	32	0	32	7	39	39	4	37	0	37	7	44	0	44	0	44	0	44
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	60	1	60	6	66	66	14	76	1	76	6	82	1	82	0	82	1	82
	Left-Through		0							0				0				0	
	Through	1556	1	780	0	1556	780	55	1674	1	839	0	1674	1	839	0	1674	1	839
	Through-Right		1							1				1				1	
	Right	4	0	4	0	4	4	0	4	0	4	0	4	0	4	0	4	0	4
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through		0							0				0				0	
	Through	2	0	28	0	2	28	8	10	0	45	0	10	0	45	0	10	0	45
	Through-Right		0							0				0				0	
	Right	25	0	0	0	25	0	8	34	0	0	0	34	0	0	0	34	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	188	0	188	4	192	192	0	196	0	196	4	200	0	200	0	200	0	200
	Left-Through		1							1				1				1	
	Through	2	0	190	0	2	194	2	4	0	200	0	4	0	204	0	4	0	204
	Through-Right		0							0				0				0	
	Right	43	1	13	6	49	16	11	56	1	18	6	62	1	21	0	62	1	21
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		801	North-South:		801	North-South:			861	North-South:			861	North-South:			861
		East-West:		216	East-West:		220	East-West:			241	East-West:			245	East-West:			245
		SUM:		1017	SUM:		1021	SUM:			1102	SUM:			1106	SUM:			1106
VOLUME/CAPACITY (V/C) RATIO:				0.678			0.681				0.735				0.737				0.737
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.578			0.581				0.635				0.637				0.637
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.002 | Δv/c after mitigation: 0.002

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill Street /1st Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
3	East-West Street:	Ord Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	35	1	35	0	35	35	1	37	1	37	0	37	1	37	0	37	1	37
	Left-Through		0							0				0				0	
	Through	1114	1	604	8	1122	612	84	1243	1	677	8	1251	1	685	0	1251	1	685
	Through-Right		1							1				1				1	
	Right	94	0	94	7	101	101	13	111	0	111	7	118	0	118	0	118	0	118
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	74	1	74	25	99	99	12	89	1	89	25	114	1	114	0	114	1	114
	Left-Through		0							0				0				0	
	Through	1182	1	600	0	1182	600	112	1342	1	680	0	1342	1	680	0	1342	1	680
	Through-Right		1							1				1				1	
	Right	17	0	17	0	17	17	0	18	0	18	0	18	0	18	0	18	0	18
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	10	0	10	0	10	10	0	10	0	10	0	10	0	10	0	10	0	10
	Left-Through		0							0				0				0	
	Through	2	0	34	0	2	34	4	6	0	43	0	6	0	43	0	6	0	43
	Through-Right		0							0				0				0	
	Right	22	0	0	0	22	0	4	27	0	0	0	27	0	0	0	27	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	78	0	78	4	82	82	0	81	0	81	4	85	0	85	0	85	0	85
	Left-Through		1							1				1				1	
	Through	3	0	81	0	3	85	8	11	0	92	0	11	0	96	0	11	0	96
	Through-Right		0							0				0				0	
	Right	145	1	108	9	154	105	21	172	1	128	9	181	1	124	0	181	1	124
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		678	North-South:		711	North-South:			766	North-South:			799	North-South:			799
		East-West:		118	East-West:		116	East-West:			138	East-West:			134	East-West:			134
		SUM:		796	SUM:		827	SUM:			904	SUM:			933	SUM:			933
VOLUME/CAPACITY (V/C) RATIO:				0.531			0.551				0.603				0.622				0.622
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.431			0.451				0.503				0.522				0.522
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.019 | Δv/c after mitigation: 0.019

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
4	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	57	1	57	0	57	57	10	69	1	69	0	69	1	69	0	69	1	69
	Left-Through		0							0				0				0	
	Through	185	1	132	1	186	133	77	270	1	180	1	271	1	181	0	271	1	181
	Through-Right		1							1				1				1	
	Right	79	0	79	1	80	80	7	89	0	89	1	90	0	90	0	90	0	90
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	190	1	190	0	190	190	22	220	1	220	0	220	1	220	0	220	1	220
	Left-Through		0							0				0				0	
	Through	1152	2	576	0	1152	576	41	1240	2	620	0	1240	2	620	0	1240	2	620
	Through-Right		0							0				0				0	
	Right	289	1	273	0	289	272	3	304	1	284	0	304	1	283	0	304	1	283
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	33	1	33	1	34	34	7	41	1	41	1	42	1	42	0	42	1	42
	Left-Through		0							0				0				0	
	Through	370	1	265	4	374	267	131	516	1	345	4	520	1	347	0	520	1	347
	Through-Right		1							1				1				1	
	Right	159	0	159	0	159	159	9	174	0	174	0	174	0	174	0	174	0	174
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	164	1	164	5	169	169	8	179	1	179	5	184	1	184	0	184	1	184
	Left-Through		0							0				0				0	
	Through	670	1	362	7	677	368	78	775	1	423	7	782	1	429	0	782	1	429
	Through-Right		1							1				1				1	
	Right	53	0	53	6	59	59	15	70	0	70	6	76	0	76	0	76	0	76
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		633	North-South:		633	North-South:			689	North-South:			689	North-South:			689
		East-West:		429	East-West:		436	East-West:			524	East-West:			531	East-West:			531
		SUM:		1062	SUM:		1069	SUM:			1213	SUM:			1220	SUM:			1220
VOLUME/CAPACITY (V/C) RATIO:				0.745			0.750				0.851				0.856				0.856
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.645			0.650				0.751				0.756				0.756
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.005 | Δv/c after mitigation: 0.005

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
4	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	92	1	92	0	92	92	17	113	1	113	0	113	1	113	0	113	1	113
	Left-Through		0							0				0				0	
	Through	781	1	429	3	784	432	63	876	1	480	3	879	1	483	0	879	1	483
	Through-Right		1							1				1				1	
	Right	77	0	77	3	80	80	3	83	0	83	3	86	0	86	0	86	0	86
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	89	1	89	0	89	89	29	122	1	122	0	122	1	122	0	122	1	122
	Left-Through		0							0				0				0	
	Through	864	2	432	0	864	432	95	994	2	497	0	994	2	497	0	994	2	497
	Through-Right		0							0				0				0	
	Right	233	1	177	0	233	175	9	251	1	189	0	251	1	186	0	251	1	186
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	112	1	112	5	117	117	8	125	1	125	5	130	1	130	0	130	1	130
	Left-Through		0							0				0				0	
	Through	616	1	350	15	631	357	107	748	1	424	15	763	1	431	0	763	1	431
	Through-Right		1							1				1				1	
	Right	83	0	83	0	83	83	13	99	0	99	0	99	0	99	0	99	0	99
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	29	1	29	5	34	34	12	42	1	42	5	47	1	47	0	47	1	47
	Left-Through		0							0				0				0	
	Through	885	1	517	6	891	532	146	1067	1	628	6	1073	1	643	0	1073	1	643
	Through-Right		1							1				1				1	
	Right	148	0	148	25	173	173	34	188	0	188	25	213	0	213	0	213	0	213
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		524	North-South:		524	North-South:			610	North-South:			610	North-South:			610
		East-West:		629	East-West:		649	East-West:			753	East-West:			773	East-West:			773
		SUM:		1153	SUM:		1173	SUM:			1363	SUM:			1383	SUM:			1383
VOLUME/CAPACITY (V/C) RATIO:				0.809			0.823				0.956				0.971				0.971
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.709			0.723				0.856				0.871				0.871
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.015 | Δv/c after mitigation: 0.015

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
5	East-West Street:	Ord Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	57	1	57	10	67	67	13	72	1	72	10	82	1	82	0	82	1	82
	Left-Through		0							0				0				0	
	Through	405	1	222	2	407	224	105	526	1	284	2	528	1	286	0	528	1	286
	Through-Right		1							1				1				1	
	Right	38	0	38	2	40	40	2	42	0	42	2	44	0	44	0	44	0	44
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	50	1	50	1	51	51	0	52	1	52	1	53	1	53	0	53	1	53
	Left-Through		0							0				0				0	
	Through	1034	1	572	1	1035	572	86	1162	1	638	1	1163	1	638	0	1163	1	638
	Through-Right		1							1				1				1	
	Right	109	0	109	0	109	109	0	113	0	113	0	113	0	113	0	113	0	113
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	0	17	4	21	21	0	18	0	18	4	22	0	22	0	22	0	22
	Left-Through		0							0				0				0	
	Through	61	0	117	7	68	131	21	84	0	148	7	91	0	162	0	91	0	162
	Through-Right		0							0				0				0	
	Right	39	0	0	3	42	0	5	46	0	0	3	49	0	0	0	49	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	9	0	9	1	10	10	3	12	0	12	1	13	0	13	0	13	0	13
	Left-Through		0							0				0				0	
	Through	90	0	138	0	90	139	0	94	0	147	0	94	0	148	0	94	0	148
	Through-Right		0							0				0				0	
	Right	39	0	0	0	39	0	0	41	0	0	0	41	0	0	0	41	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		629	North-South:		639	North-South:			710	North-South:			720	North-South:			720
		East-West:		155	East-West:		160	East-West:			165	East-West:			175	East-West:			175
		SUM:		784	SUM:		799	SUM:			875	SUM:			895	SUM:			895
VOLUME/CAPACITY (V/C) RATIO:				0.550			0.561				0.614				0.628				0.628
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.450			0.461				0.514				0.528				0.528
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.014 | Δv/c after mitigation: 0.014

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
5	East-West Street:	Ord Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	70	1	70	13	83	83	28	101	1	101	13	114	1	114	0	114	1	114
	Left-Through		0							0				0				0	
	Through	1026	1	544	4	1030	548	131	1199	1	634	4	1203	1	638	0	1203	1	638
	Through-Right		1							1				1				1	
	Right	61	0	61	4	65	65	6	69	0	69	4	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	51	1	51	6	57	57	0	53	1	53	6	59	1	59	0	59	1	59
	Left-Through		0							0				0				0	
	Through	521	1	291	5	526	294	148	690	1	377	5	695	1	379	0	695	1	379
	Through-Right		1							1				1				1	
	Right	61	0	61	0	61	61	0	63	0	63	0	63	0	63	0	63	0	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	83	0	83	4	87	87	0	86	0	86	4	90	0	90	0	90	0	90
	Left-Through		0							0				0				0	
	Through	119	0	240	16	135	272	7	131	0	265	16	147	0	297	0	147	0	297
	Through-Right		0							0				0				0	
	Right	38	0	0	12	50	0	8	48	0	0	12	60	0	0	0	60	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	20	0	20	3	23	23	9	30	0	30	3	33	0	33	0	33	0	33
	Left-Through		0							0				0				0	
	Through	101	0	239	0	101	242	1	106	0	259	0	106	0	262	0	106	0	262
	Through-Right		0							0				0				0	
	Right	118	0	0	0	118	0	0	123	0	0	0	123	0	0	0	123	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		595	North-South:		605	North-South:			687	North-South:			697	North-South:			697
		East-West:		322	East-West:		329	East-West:			345	East-West:			352	East-West:			352
		SUM:		917	SUM:		934	SUM:			1032	SUM:			1049	SUM:			1049
VOLUME/CAPACITY (V/C) RATIO:				0.644			0.655				0.724				0.736				0.736
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.544			0.555				0.624				0.636				0.636
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.012 | Δv/c after mitigation: 0.012

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
6	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2		2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Project Traffic	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	164	1	164	11	175	175	28	199	1	199	11	210	1	210	0	210	1	210
	Left-Through		0							0				0				0	
	Through	325	1	239	12	337	260	110	448	1	321	12	460	1	342	0	460	1	342
	Through-Right		1							1				1				1	
	Right	153	0	153	30	183	183	35	194	0	194	30	224	0	224	-1	223	0	223
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	130	1	130	0	130	130	16	151	1	151	0	151	1	151	0	151	1	151
	Left-Through		0							0				0				0	
	Through	648	2	324	6	654	327	134	808	2	404	6	814	2	407	-1	813	2	407
	Through-Right		0							0				0				0	
	Right	279	1	250	0	279	249	23	313	1	278	0	313	1	277	0	313	1	277
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	105	2	58	4	109	60	20	129	2	71	4	133	2	73	0	133	2	73
	Left-Through		0							0				0				0	
	Through	703	2	263	14	717	268	198	930	2	344	14	944	2	349	0	944	2	349
	Through-Right		1							1				1				1	
	Right	87	0	87	0	87	87	11	102	0	102	0	102	0	102	0	102	0	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	114	1	114	9	123	123	13	132	1	132	9	141	1	141	-1	140	1	140
	Left-Through		0							0				0				0	
	Through	1345	3	448	0	1345	448	175	1575	3	525	0	1575	3	525	0	1575	3	525
	Through-Right		0							0				0				0	
	Right	59	1	0	0	59	0	8	69	1	0	0	69	1	0	0	69	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		488	North-South:		502	North-South:			603	North-South:			617	North-South:			617
		East-West:		506	East-West:		508	East-West:			596	East-West:			598	East-West:			598
		SUM:		994	SUM:		1010	SUM:			1199	SUM:			1215	SUM:			1215
VOLUME/CAPACITY (V/C) RATIO:				0.723			0.735				0.872				0.884				0.884
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.623			0.635				0.772				0.784				0.784
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Signal System Uprgrade Credit= -0.01
V/C LESS CREDIT ADJUSTMENT: 0.774
LEVEL OF SERVICE (LOS): C

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.012 Δv/c after mitigation: 0.002
Significant impacted? NO Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
6	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2		2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Project Traffic	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	170	1	170	22	192	192	38	215	1	215	22	237	1	237	-1	236	1	236
	Left-Through		0							0				0				0	
	Through	819	1	472	23	842	512	196	1048	1	608	23	1071	1	648	-1	1070	1	646
	Through-Right		1							1				1				1	
	Right	124	0	124	58	182	182	38	167	0	167	58	225	0	225	-4	221	0	221
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	54	1	54	0	54	54	21	77	1	77	0	77	1	77	0	77	1	77
	Left-Through		0							0				0				0	
	Through	406	2	203	23	429	215	178	600	2	300	23	623	2	312	-2	621	2	311
	Through-Right		0							0				0				0	
	Right	120	1	53	0	120	52	28	153	1	74	0	153	1	72	0	153	1	72
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	243	2	134	5	248	136	36	289	2	159	5	294	2	162	0	294	2	162
	Left-Through		0							0				0				0	
	Through	903	2	315	22	925	323	208	1148	2	409	22	1170	2	416	-2	1168	2	415
	Through-Right		1							1				1				1	
	Right	43	0	43	0	43	43	33	78	0	78	0	78	0	78	0	78	0	78
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	109	1	109	33	142	142	42	155	1	155	33	188	1	188	-2	186	1	186
	Left-Through		0							0				0				0	
	Through	1095	3	365	0	1095	365	238	1377	3	459	0	1377	3	459	0	1377	3	459
	Through-Right		0							0				0				0	
	Right	188	1	161	0	188	161	29	225	1	187	0	225	1	187	0	225	1	187
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		526	North-South:		566	North-South:			685	North-South:			725	North-South:			723
		East-West:		499	East-West:		501	East-West:			618	East-West:			621	East-West:			621
		SUM:		1025	SUM:		1067	SUM:			1303	SUM:			1346	SUM:			1344
VOLUME/CAPACITY (V/C) RATIO:				0.745			0.776				0.948				0.979				0.977
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.645			0.676				0.848				0.879				0.877
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Signal System Uprgrade Credit= -0.01
V/C LESS CREDIT ADJUSTMENT: 0.867
LEVEL OF SERVICE (LOS): D

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.031 Δv/c after mitigation: 0.019
Significant impacted? YES Fully mitigated? YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
7	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	412	2	206	13	425	213	189	618	2	309	13	631	2	316	0	631	2	316
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	867	3	289	30	897	299	123	1025	3	342	30	1055	3	352	0	1055	3	352
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	203	1	140	0	203	149	0	211	1	147	0	211	1	156	0	211	1	156
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	218	1	140	27	245	149	4	231	1	147	27	258	1	156	0	258	1	156
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
CRITICAL VOLUMES		North-South:		289	North-South:		299	North-South:			342	North-South:			352	North-South:			352
		East-West:		140	East-West:		149	East-West:			147	East-West:			156	East-West:			156
		SUM:		429	SUM:		448	SUM:			489	SUM:			508	SUM:			508
VOLUME/CAPACITY (V/C) RATIO:				0.286			0.299				0.326				0.339				0.339
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.186			0.199				0.226				0.239				0.239
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.013 | Δv/c after mitigation: 0.013

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
7	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	905	2	453	50	955	478	286	1228	2	614	50	1278	2	639	0	1278	2	639
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	578	3	193	29	607	202	211	812	3	271	29	841	3	280	0	841	3	280
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	208	1	149	0	208	181	0	216	1	162	0	216	1	194	0	216	1	194
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	239	1	149	95	334	181	22	271	1	162	95	366	1	194	0	366	1	194
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
CRITICAL VOLUMES		North-South:		453	North-South:		478	North-South:			614	North-South:			639	North-South:			639
		East-West:		149	East-West:		181	East-West:			162	East-West:			194	East-West:			194
		SUM:		602	SUM:		659	SUM:			776	SUM:			833	SUM:			833
VOLUME/CAPACITY (V/C) RATIO:				0.401			0.439				0.517				0.555				0.555
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.301			0.339				0.417				0.455				0.455
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.038 | Δv/c after mitigation: 0.038

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
8	East-West Street:	Alliso Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?								2				2				2				2				2
Override Capacity								0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	302	2	151	7	309	155	169	483	2	242	7	490	2	245	0	490	2	245
	Through-Right		0							0				0				0	
	Right	80	1	80	0	80	80	110	193	1	193	0	193	1	193	0	193	1	193
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	149	1	149	12	161	161	18	173	1	173	12	185	1	185	0	185	1	185
	Left-Through		0							0				0				0	
	Through	922	2	461	17	939	470	105	1064	2	532	17	1081	2	541	0	1081	2	541
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	105	0	105	3	108	108	21	130	0	130	3	133	0	133	0	133	0	133
	Left-Through		1							1				1				1	
	Through	204	1	155	0	204	156	52	264	1	197	0	264	1	199	0	264	1	199
	Through-Right		0							0				0				0	
	Right	139	1	139	3	142	142	3	148	1	148	3	151	1	151	0	151	1	151
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		461	North-South:		470	North-South:			532	North-South:			541	North-South:			541
		East-West:		155	East-West:		156	East-West:			197	East-West:			199	East-West:			199
		SUM:		616	SUM:		626	SUM:			729	SUM:			740	SUM:			740
VOLUME/CAPACITY (V/C) RATIO:				0.411			0.417				0.486				0.493				0.493
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.311			0.317				0.386				0.393				0.393
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.007 | Δv/c after mitigation: 0.007

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
8	East-West Street:	Alliso Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?								2				2				2				2				2
Override Capacity								0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	835	2	418	27	862	431	233	1102	2	551	27	1129	2	565	0	1129	2	565
	Through-Right		0							0				0				0	
	Right	159	1	159	0	159	159	97	262	1	262	0	262	1	262	0	262	1	262
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	105	1	105	10	115	115	8	117	1	117	10	127	1	127	0	127	1	127
	Left-Through		0							0				0				0	
	Through	648	2	324	14	662	331	203	877	2	439	14	891	2	446	0	891	2	446
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	85	0	85	11	96	96	53	141	0	141	11	152	0	152	0	152	0	152
	Left-Through		1							1				1				1	
	Through	262	1	174	0	262	179	61	334	1	238	0	334	1	243	0	334	1	243
	Through-Right		0							0				0				0	
	Right	67	1	67	11	78	78	21	91	1	91	11	102	1	102	0	102	1	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		523	North-South:		546	North-South:			668	North-South:			692	North-South:			692
		East-West:		174	East-West:		179	East-West:			238	East-West:			243	East-West:			243
		SUM:		697	SUM:		725	SUM:			906	SUM:			935	SUM:			935
VOLUME/CAPACITY (V/C) RATIO:				0.465			0.483				0.604				0.623				0.623
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.365			0.383				0.504				0.523				0.523
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.019 | Δv/c after mitigation: 0.019

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
9	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	68	1	68	1	69	69	11	82	1	82	1	83	1	83	0	83	1	83
	Left-Through		0							0				0				0	
	Through	272	2	120	1	273	121	245	528	2	208	1	529	2	208	0	529	2	208
	Through-Right		1							1				1				1	
	Right	89	0	89	0	89	89	3	96	0	96	0	96	0	96	0	96	0	96
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	95	1	95	4	99	99	30	129	1	129	4	133	1	133	0	133	1	133
	Left-Through		0							0				0				0	
	Through	706	1	462	4	710	470	62	797	1	520	4	801	1	528	0	801	1	528
	Through-Right		1							1				1				1	
	Right	217	0	217	12	229	229	16	242	0	242	12	254	0	254	0	254	0	254
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	28	1	28	4	32	32	28	57	1	57	4	61	1	61	0	61	1	61
	Left-Through		0							0				0				0	
	Through	522	1	296	0	522	296	122	665	1	374	0	665	1	374	0	665	1	374
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	10	82	0	82	0	82	0	82	0	82	0	82
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	67	1	67	2	69	69	4	74	1	74	2	76	1	76	0	76	1	76
	Left-Through		0							0				0				0	
	Through	645	1	341	4	649	343	73	744	1	405	4	748	1	407	0	748	1	407
	Through-Right		1							1				1				1	
	Right	36	0	36	1	37	37	28	65	0	65	1	66	0	66	0	66	0	66
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		530	North-South:		539	North-South:			602	North-South:			611	North-South:			611
		East-West:		369	East-West:		375	East-West:			462	East-West:			468	East-West:			468
		SUM:		899	SUM:		914	SUM:			1064	SUM:			1079	SUM:			1079
VOLUME/CAPACITY (V/C) RATIO:				0.631			0.641				0.747				0.757				0.757
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.531			0.541				0.647				0.657				0.657
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.010 — Δv/c after mitigation: 0.010

Significant impacted? NO — Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
9	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	89	1	89	5	94	94	15	108	1	108	5	113	1	113	0	113	1	113
	Left-Through		0							0				0				0	
	Through	779	2	287	5	784	288	204	1015	2	367	5	1020	2	369	0	1020	2	369
	Through-Right		1							1				1				1	
	Right	81	0	81	0	81	81	2	86	0	86	0	86	0	86	0	86	0	86
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	69	1	69	3	72	72	35	107	1	107	3	110	1	110	0	110	1	110
	Left-Through		0							0				0				0	
	Through	493	1	351	3	496	362	169	682	1	460	3	685	1	471	0	685	1	471
	Through-Right		1							1				1				1	
	Right	209	0	209	19	228	228	20	237	0	237	19	256	0	256	0	256	0	256
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	70	1	70	18	88	88	16	89	1	89	18	107	1	107	0	107	1	107
	Left-Through		0							0				0				0	
	Through	689	1	361	0	689	361	106	823	1	437	0	823	1	437	0	823	1	437
	Through-Right		1							1				1				1	
	Right	33	0	33	0	33	33	17	51	0	51	0	51	0	51	0	51	0	51
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	30	1	30	4	34	34	16	47	1	47	4	51	1	51	0	51	1	51
	Left-Through		0							0				0				0	
	Through	726	1	410	10	736	417	158	913	1	526	10	923	1	533	0	923	1	533
	Through-Right		1							1				1				1	
	Right	93	0	93	4	97	97	41	138	0	138	4	142	0	142	0	142	0	142
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		440	North-South:		456	North-South:			568	North-South:			584	North-South:			584
		East-West:		480	East-West:		505	East-West:			615	East-West:			640	East-West:			640
		SUM:		920	SUM:		961	SUM:			1183	SUM:			1224	SUM:			1224
VOLUME/CAPACITY (V/C) RATIO:				0.646			0.674				0.830				0.859				0.859
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.546			0.574				0.730				0.759				0.759
LEVEL OF SERVICE (LOS):				A			A				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.029 — Δv/c after mitigation: 0.029

Significant impacted? NO — Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	New High Street-Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
10	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	2	1	2	0	2	2	0	2	1	2	0	2	1	2	0	2	1	2
	Left-Through		0							0				0				0	
	Through	6	1	6	0	6	6	0	6	1	6	0	6	1	6	0	6	1	6
	Through-Right		0							0				0				0	
	Right	29	1	0	0	29	0	0	30	1	0	0	30	1	0	0	30	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	4	0	4	0	4	4	0	4	0	4	0	4	0	4	0	4	0	4
	Left-Through		0							0				0				0	
	Through	270	0	320	8	278	329	26	307	0	361	8	315	0	370	0	315	0	370
	Through-Right		0							0				0				0	
	Right	46	0	0	1	47	0	2	50	0	0	1	51	0	0	0	51	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	761	2	381	18	779	390	222	1014	2	507	18	1032	2	516	0	1032	2	516
	Through-Right		0							0				0				0	
	Right	258	2	141	27	285	156	22	290	2	159	27	317	2	173	0	317	2	173
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	226	2	124	4	230	127	12	247	2	136	4	251	2	138	0	251	2	138
	Left-Through		0							0				0				0	
	Through	1471	2	496	8	1479	499	192	1723	2	581	8	1731	2	584	0	1731	2	584
	Through-Right		1							1				1				1	
	Right	18	0	18	0	18	18	1	20	0	20	0	20	0	20	0	20	0	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		322	North-South:		331	North-South:			363	North-South:			372	North-South:			372
		East-West:		505	East-West:		517	East-West:			643	East-West:			654	East-West:			654
		SUM:		827	SUM:		848	SUM:			1006	SUM:			1026	SUM:			1026
VOLUME/CAPACITY (V/C) RATIO:				0.580			0.595				0.706				0.720				0.720
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.480			0.495				0.606				0.620				0.620
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.014 | Δv/c after mitigation: 0.014

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	New High Street-Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
10	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	7	1	7	0	7	7	0	7	1	7	0	7	1	7	0	7	1	7
	Left-Through		0							0				0				0	
	Through	7	1	7	0	7	7	0	7	1	7	0	7	1	7	0	7	1	7
	Through-Right		0							0				0				0	
	Right	38	1	0	0	38	0	0	40	1	0	0	40	1	0	0	40	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	16	0	16	0	16	16	0	17	0	17	0	17	0	17	0	17	0	17
	Left-Through		0							0				0				0	
	Through	58	0	106	32	90	140	9	69	0	125	32	101	0	159	0	101	0	159
	Through-Right		0							0				0				0	
	Right	32	0	0	2	34	0	6	39	0	0	2	41	0	0	0	41	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	939	2	470	26	965	483	230	1207	2	604	26	1233	2	617	0	1233	2	617
	Through-Right		0							0				0				0	
	Right	119	2	62	53	172	92	32	156	2	83	53	209	2	112	0	209	2	112
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	126	2	69	16	142	78	3	134	2	74	16	150	2	83	0	150	2	83
	Left-Through		0							0				0				0	
	Through	1355	2	462	31	1386	473	303	1713	2	585	31	1744	2	595	0	1744	2	595
	Through-Right		1							1				1				1	
	Right	32	0	32	0	32	32	9	42	0	42	0	42	0	42	0	42	0	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		113	North-South:		147	North-South:			132	North-South:			166	North-South:			166
		East-West:		539	East-West:		561	East-West:			678	East-West:			700	East-West:			700
		SUM:		652	SUM:		708	SUM:			810	SUM:			866	SUM:			866
VOLUME/CAPACITY (V/C) RATIO:				0.458			0.497				0.568				0.608				0.608
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.358			0.397				0.468				0.508				0.508
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.040 | Δv/c after mitigation: 0.040

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
11	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?								2				2				2				2				2
Override Capacity								0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	35	2	18	0	35	18	0	36	2	18	0	36	2	18	0	36	2	18
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	975	4	244	18	993	248	124	1139	4	285	18	1157	4	289	0	1157	4	289
	Through-Right		0							0				0				0	
	Right	24	1	24	23	47	47	1	26	1	26	23	49	1	49	0	49	1	49
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	668	1	366	0	668	368	0	695	1	382	0	695	1	384	0	695	1	384
	Left-Through		1							1				1				1	
	Through	431	1	366	5	436	368	3	452	1	382	5	457	1	384	0	457	1	384
	Through-Right		0							0				0				0	
	Right	5	0	0	0	5	0	0	5	0	0	0	5	0	0	0	5	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			North-South:	244		North-South:	248		North-South:	285			North-South:	289			North-South:	289	
			East-West:	366		East-West:	368		East-West:	382			East-West:	384			East-West:	384	
			SUM:	610		SUM:	616		SUM:	667			SUM:	673			SUM:	673	
VOLUME/CAPACITY (V/C) RATIO:				0.407			0.411			0.445				0.449				0.449	
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.307			0.311			0.345				0.349				0.349	
LEVEL OF SERVICE (LOS):				A			A			A				A				A	

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
11	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?								2				2				2				2				2
Override Capacity								0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	41	2	21	0	41	21	0	43	2	22	0	43	2	22	0	43	2	22
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	468	4	117	33	501	125	251	738	4	185	33	771	4	193	0	771	4	193
	Through-Right		0							0				0				0	
	Right	24	1	24	76	100	100	4	29	1	29	76	105	1	105	0	105	1	105
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	222	1	219	0	222	222	0	231	1	231	0	231	1	231	0	231	1	231
	Left-Through		1							1				1				1	
	Through	435	1	219	19	454	227	18	471	1	236	19	490	1	245	0	490	1	245
	Through-Right		0							0				0				0	
	Right	24	0	0	0	24	0	0	25	0	0	0	25	0	0	0	25	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			North-South:	117		North-South:	125		North-South:	185			North-South:	193			North-South:	193	
			East-West:	219		East-West:	227		East-West:	236			East-West:	245			East-West:	245	
			SUM:	336		SUM:	352		SUM:	421			SUM:	438			SUM:	438	
VOLUME/CAPACITY (V/C) RATIO:				0.224			0.235			0.281				0.292				0.292	
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.124			0.135			0.181				0.192				0.192	
LEVEL OF SERVICE (LOS):				A			A			A				A				A	

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.011 | Δv/c after mitigation: 0.011

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
12	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?								2				2				2				2				2
Override Capacity								0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	44	1	33	0	44	33	0	46	1	35	0	46	1	35	0	46	1	35
	Through-Right		1							1				1				1	
	Right	22	0	22	0	22	22	0	23	0	23	0	23	0	23	0	23	0	23
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	149	1	149	8	157	157	4	159	1	159	8	167	1	167	0	167	1	167
	Left-Through		0							0				0				0	
	Through	1491	3	497	8	1499	500	120	1672	3	557	8	1680	3	560	0	1680	3	560
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	289	2	145	12	301	151	149	450	2	217	12	462	2	221	0	462	2	221
	Through-Right		1							1				1				1	
	Right	163	0	163	0	163	163	31	201	0	201	0	201	0	201	0	201	0	201
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		497	North-South:		500	North-South:			557	North-South:			560	North-South:			560
		East-West:		163	East-West:		163	East-West:			217	East-West:			221	East-West:			221
		SUM:		660	SUM:		663	SUM:			774	SUM:			781	SUM:			781
VOLUME/CAPACITY (V/C) RATIO:				0.440			0.442				0.516				0.521				0.521
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.340			0.342				0.416				0.421				0.421
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.005 | Δv/c after mitigation: 0.005

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
12	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?								2				2				2				2				2
Override Capacity								0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	43	1	43	0	43	43	0	45	1	45	0	45	1	45	0	45	1	45
	Through-Right		1							1				1				1	
	Right	60	0	60	0	60	60	0	62	0	62	0	62	0	62	0	62	0	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	110	1	110	12	122	122	2	116	1	116	12	128	1	128	0	128	1	128
	Left-Through		0							0				0				0	
	Through	585	3	195	12	597	199	249	858	3	286	12	870	3	290	0	870	3	290
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	466	2	162	10	476	165	160	645	2	224	10	655	2	227	0	655	2	227
	Through-Right		1							1				1				1	
	Right	20	0	20	0	20	20	6	27	0	27	0	27	0	27	0	27	0	27
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		195	North-South:		199	North-South:			286	North-South:			290	North-South:			290
		East-West:		162	East-West:		165	East-West:			224	East-West:			227	East-West:			227
		SUM:		357	SUM:		364	SUM:			510	SUM:			517	SUM:			517
VOLUME/CAPACITY (V/C) RATIO:				0.238			0.243				0.340				0.345				0.345
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.138			0.143				0.240				0.245				0.245
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.005 | Δv/c after mitigation: 0.005

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
13	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through		1							1				1				1	
	Through	69	0	39	0	69	39	0	72	0	41	0	72	0	41	0	72	0	41
	Through-Right		1							1				1				1	
	Right	3	0	39	0	3	39	0	3	0	41	0	3	0	41	0	3	0	41
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	67	1	67	2	69	69	11	81	1	81	2	83	1	83	0	83	1	83
	Left-Through		0							0				0				0	
	Through	1475	2	738	2	1477	739	63	1598	2	799	2	1600	2	800	0	1600	2	800
	Through-Right		0							0				0				0	
	Right	142	1	142	4	146	146	0	148	1	148	4	152	1	152	0	152	1	152
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	573	1	378	4	577	380	143	739	1	468	4	743	1	470	0	743	1	470
	Through-Right		1							1				1				1	
	Right	182	0	182	0	182	182	7	196	0	196	0	196	0	196	0	196	0	196
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	89	1	89	0	89	89	0	93	1	93	0	93	1	93	0	93	1	93
	Left-Through		0							0				0				0	
	Through	572	2	286	3	575	288	98	693	2	347	3	696	2	348	0	696	2	348
	Through-Right		0							0				0				0	
	Right	3	0	0	0	3	0	0	3	0	0	0	3	0	0	0	3	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		739	North-South:		740	North-South:			800	North-South:			801	North-South:			801
		East-West:		467	East-West:		469	East-West:			561	East-West:			563	East-West:			563
		SUM:		1206	SUM:		1209	SUM:			1361	SUM:			1364	SUM:			1364
VOLUME/CAPACITY (V/C) RATIO:				0.846			0.848				0.955				0.957				0.957
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.746			0.748				0.855				0.857				0.857
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.002 | Δv/c after mitigation: 0.002

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
13	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		1							1				1				1	
	Through	105	0	53	0	105	53	0	109	0	55	0	109	0	55	0	109	0	55
	Through-Right		1							1				1				1	
	Right	1	0	53	0	1	53	0	1	0	55	0	1	0	55	0	1	0	55
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	28	1	28	3	31	31	10	39	1	39	3	42	1	42	0	42	1	42
	Left-Through		0							0				0				0	
	Through	515	2	258	3	518	259	241	777	2	389	3	780	2	390	0	780	2	390
	Through-Right		0							0				0				0	
	Right	53	1	53	7	60	60	0	55	1	55	7	62	1	62	0	62	1	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	782	1	422	3	785	423	133	947	1	509	3	950	1	510	0	950	1	510
	Through-Right		1							1				1				1	
	Right	61	0	61	0	61	61	7	70	0	70	0	70	0	70	0	70	0	70
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	62	1	62	0	62	62	0	65	1	65	0	65	1	65	0	65	1	65
	Left-Through		0							0				0				0	
	Through	803	2	402	12	815	408	185	1021	2	511	12	1033	2	517	0	1033	2	517
	Through-Right		0							0				0				0	
	Right	4	0	0	0	4	0	0	4	0	0	0	4	0	0	0	4	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		258	North-South:		259	North-South:			389	North-South:			390	North-South:			390
		East-West:		484	East-West:		485	East-West:			574	East-West:			575	East-West:			575
		SUM:		742	SUM:		744	SUM:			963	SUM:			965	SUM:			965
VOLUME/CAPACITY (V/C) RATIO:				0.521			0.522				0.676				0.677				0.677
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.421			0.422				0.576				0.577				0.577
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.001 | Δv/c after mitigation: 0.001

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
14	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2			2			2			2			2			2			2		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0			0			0			0			0			0		
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--		0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?				2			2			2			2			2			2			2		
Override Capacity				0			0			0			0			0			0			0		

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	97	1	74	4	101	75	27	128	1	86	4	132	1	87	0	132	1	87
	Left-Through		1							1				1				1	
	Through	125	1	74	0	125	75	0	130	1	86	0	130	1	87	0	130	1	87
	Through-Right		1							1				1				1	
	Right	87	0	87	0	87	87	1	92	0	92	0	92	0	92	0	92	0	92
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	51	1	51	6	57	57	2	55	1	55	6	61	1	61	0	61	1	61
	Left-Through		0							0				0				0	
	Through	740	2	370	10	750	375	220	990	2	495	10	1000	2	500	0	1000	2	500
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1622	2	544	6	1628	546	180	1868	2	626	6	1874	2	628	0	1874	2	628
	Through-Right		1							1				1				1	
	Right	11	0	11	0	11	11	0	11	0	11	0	11	0	11	0	11	0	11
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		87	North-South:		87	North-South:			92	North-South:			92	North-South:			92
		East-West:		595	East-West:		603	East-West:			681	East-West:			689	East-West:			689
		SUM:		682	SUM:		690	SUM:			773	SUM:			781	SUM:			781
VOLUME/CAPACITY (V/C) RATIO:				0.455			0.460				0.515				0.521				0.521
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.355			0.360				0.415				0.421				0.421
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.006 | Δv/c after mitigation: 0.006

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
14	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2			2			2			2			2			2			2		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0			0			0			0			0			0		
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--		0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?				2			2			2			2			2			2			2		
Override Capacity				0			0			0			0			0			0			0		

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	457	1	391	14	471	395	35	511	1	418	14	525	1	423	0	525	1	423
	Left-Through		1							1				1				1	
	Through	715	1	391	0	715	395	0	744	1	418	0	744	1	423	0	744	1	423
	Through-Right		1							1				1				1	
	Right	236	0	236	0	236	236	2	248	0	248	0	248	0	248	0	248	0	248
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	63	1	63	7	70	70	1	67	1	67	7	74	1	74	0	74	1	74
	Left-Through		0							0				0				0	
	Through	828	2	414	13	841	421	229	1091	2	546	13	1104	2	552	0	1104	2	552
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	965	2	333	24	989	341	282	1286	2	440	24	1310	2	448	0	1310	2	448
	Through-Right		1							1				1				1	
	Right	33	0	33	0	33	33	0	34	0	34	0	34	0	34	0	34	0	34
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		391	North-South:		395	North-South:			418	North-South:			423	North-South:			423
		East-West:		414	East-West:		421	East-West:			546	East-West:			552	East-West:			552
		SUM:		805	SUM:		816	SUM:			964	SUM:			975	SUM:			975
VOLUME/CAPACITY (V/C) RATIO:				0.537			0.544				0.643				0.650				0.650
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.437			0.444				0.543				0.550				0.550
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.007 | Δv/c after mitigation: 0.007

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
15	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	37	0	37	0	37	37	0	39	0	39	0	39	0	39	0	39	0	39
	Left-Through		1							1				1				1	
	Through	320	2	119	0	320	119	28	361	2	133	0	361	2	133	0	361	2	133
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1099	2	380	3	1102	382	3	1147	2	397	3	1150	2	399	0	1150	2	399
	Through-Right		1							1				1				1	
	Right	41	0	41	4	45	45	0	43	0	43	4	47	0	47	0	47	0	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		119	North-South:		119	North-South:			133	North-South:			133	North-South:			133
		East-West:		380	East-West:		382	East-West:			397	East-West:			399	East-West:			399
		SUM:		499	SUM:		501	SUM:			530	SUM:			532	SUM:			532
VOLUME/CAPACITY (V/C) RATIO:				0.333			0.334				0.353				0.355				0.355
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.233			0.234				0.253				0.255				0.255
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.002 | Δ*v/c* after mitigation: 0.002

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
15	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	99	0	99	2	101	101	0	103	0	103	2	105	0	105	0	105	0	105
	Left-Through		1							1				1				1	
	Through	1330	2	476	0	1330	477	37	1421	2	508	0	1421	2	509	0	1421	2	509
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	596	2	234	12	608	242	18	638	2	249	12	650	2	258	0	650	2	258
	Through-Right		1							1				1				1	
	Right	105	0	105	14	119	119	0	109	0	109	14	123	0	123	0	123	0	123
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		476	North-South:		477	North-South:			508	North-South:			509	North-South:			509
		East-West:		234	East-West:		242	East-West:			249	East-West:			258	East-West:			258
		SUM:		710	SUM:		719	SUM:			757	SUM:			767	SUM:			767
VOLUME/CAPACITY (V/C) RATIO:				0.473			0.479				0.505				0.511				0.511
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.373			0.379				0.405				0.411				0.411
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.006 | Δ*v/c* after mitigation: 0.006

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
16	East-West Street:	Alliso Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

Movement	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Project Traffic	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTHBOUND Left-Through		0							0				0				0	
NORTHBOUND Through	339	3	113	0	339	113	28	381	3	127	0	381	3	127	0	381	3	127
NORTHBOUND Through-Right		0							0				0				0	
NORTHBOUND Right	224	1	224	0	224	224	0	233	1	233	0	233	1	233	0	233	1	233
NORTHBOUND Left-Through-Right		0							0				0				0	
NORTHBOUND Left-Right		0							0				0				0	
SOUTHBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND Left-Through		0							0				0				0	
SOUTHBOUND Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND Through-Right		0							0				0				0	
SOUTHBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND Left-Through-Right		0							0				0				0	
SOUTHBOUND Left-Right		0							0				0				0	
EASTBOUND Left	69	0	69	0	69	69	0	72	0	72	0	72	0	72	0	72	0	72
EASTBOUND Left-Through		1							1				1				1	
EASTBOUND Through	442	2	170	20	462	177	141	601	2	224	20	621	2	231	0	621	2	231
EASTBOUND Through-Right		0							0				0				0	
EASTBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EASTBOUND Left-Through-Right		0							0				0				0	
EASTBOUND Left-Right		0							0				0				0	
WESTBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTBOUND Left-Through		0							0				0				0	
WESTBOUND Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTBOUND Through-Right		0							0				0				0	
WESTBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTBOUND Left-Through-Right		0							0				0				0	
WESTBOUND Left-Right		0							0				0				0	
Critical Volumes	North-South: 224	East-West: 170	SUM: 394	North-South: 224	East-West: 177	SUM: 401	North-South: 233	East-West: 224	SUM: 457	North-South: 233	East-West: 231	SUM: 464	North-South: 233	East-West: 231	SUM: 464			
VOLUME/CAPACITY (V/C) RATIO:			0.263			0.267			0.305			0.309			0.309			
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.163			0.167			0.205			0.209			0.209			
LEVEL OF SERVICE (LOS):			A			A			A			A			A			

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
16	East-West Street:	Alliso Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

Movement	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Project Traffic	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTHBOUND Left-Through		0							0				0				0	
NORTHBOUND Through	1389	3	463	2	1391	464	37	1482	3	494	2	1484	3	495	0	1484	3	495
NORTHBOUND Through-Right		0							0				0				0	
NORTHBOUND Right	366	1	366	0	366	366	0	381	1	381	0	381	1	381	0	381	1	381
NORTHBOUND Left-Through-Right		0							0				0				0	
NORTHBOUND Left-Right		0							0				0				0	
SOUTHBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND Left-Through		0							0				0				0	
SOUTHBOUND Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND Through-Right		0							0				0				0	
SOUTHBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND Left-Through-Right		0							0				0				0	
SOUTHBOUND Left-Right		0							0				0				0	
EASTBOUND Left	62	0	62	0	62	62	0	65	0	65	0	65	0	65	0	65	0	65
EASTBOUND Left-Through		1							1				1				1	
EASTBOUND Through	560	2	207	22	582	215	156	739	2	268	22	761	2	275	0	761	2	275
EASTBOUND Through-Right		0							0				0				0	
EASTBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EASTBOUND Left-Through-Right		0							0				0				0	
EASTBOUND Left-Right		0							0				0				0	
WESTBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTBOUND Left-Through		0							0				0				0	
WESTBOUND Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTBOUND Through-Right		0							0				0				0	
WESTBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTBOUND Left-Through-Right		0							0				0				0	
WESTBOUND Left-Right		0							0				0				0	
Critical Volumes	North-South: 463	East-West: 207	SUM: 670	North-South: 464	East-West: 215	SUM: 679	North-South: 494	East-West: 268	SUM: 762	North-South: 495	East-West: 275	SUM: 770	North-South: 495	East-West: 275	SUM: 770			
VOLUME/CAPACITY (V/C) RATIO:			0.447			0.453			0.508			0.513			0.513			
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.347			0.353			0.408			0.413			0.413			
LEVEL OF SERVICE (LOS):			A			A			A			A			A			

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.005 | Δv/c after mitigation: 0.005

Significant impacted? NO | Fully mitigated? N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
17	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	90	0	90	1	91	91	9	103	0	103	1	104	0	104	0	104	0	104
	Left-Through		1							1				1				1	
	Through	398	3	122	0	398	122	26	440	3	136	0	440	3	136	0	440	3	136
	Through-Right		0							0				0				0	
	Right	168	1	168	0	168	168	0	175	1	175	0	175	1	175	0	175	1	175
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	64	1	64	0	64	64	1	68	1	68	0	68	1	68	0	68	1	68
	Left-Through		0							0				0				0	
	Through	572	2	286	6	578	289	152	747	2	374	6	753	2	377	0	753	2	377
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	573	1	312	2	575	313	88	684	1	369	2	686	1	370	0	686	1	370
	Through-Right		1							1				1				1	
	Right	50	0	50	0	50	50	1	53	0	53	0	53	0	53	0	53	0	53
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			North-South:	168		North-South:	168			North-South:	175			North-South:	175			North-South:	175
			East-West:	376		East-West:	377			East-West:	437			East-West:	438			East-West:	438
			SUM:	544		SUM:	545			SUM:	612			SUM:	613			SUM:	613
VOLUME/CAPACITY (V/C) RATIO:				0.382			0.382				0.429				0.430				0.430
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.282			0.282				0.329				0.330				0.330
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project:	0.001	Δv/c after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
17	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	193	0	193	2	195	195	10	211	0	211	2	213	0	213	0	213	0	213
	Left-Through		1							1				1				1	
	Through	1445	3	410	2	1447	411	26	1530	3	435	2	1532	3	436	0	1532	3	436
	Through-Right		0							0				0				0	
	Right	170	1	170	0	170	170	0	177	1	177	0	177	1	177	0	177	1	177
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	113	1	113	0	113	113	2	120	1	120	0	120	1	120	0	120	1	120
	Left-Through		0							0				0				0	
	Through	693	2	347	5	698	349	143	864	2	432	5	869	2	435	0	869	2	435
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	672	1	393	10	682	398	175	874	1	501	10	884	1	506	0	884	1	506
	Through-Right		1							1				1				1	
	Right	113	0	113	0	113	113	9	127	0	127	0	127	0	127	0	127	0	127
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			North-South:	410		North-South:	411			North-South:	435			North-South:	436			North-South:	436
			East-West:	506		East-West:	511			East-West:	621			East-West:	626			East-West:	626
			SUM:	916		SUM:	922			SUM:	1056			SUM:	1062			SUM:	1062
VOLUME/CAPACITY (V/C) RATIO:				0.643			0.647				0.741				0.745				0.745
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.543			0.547				0.641				0.645				0.645
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project:	0.004	Δv/c after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Los Angeles Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
18	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	27	1	27	0	27	27	0	28	1	28	0	28	1	28	0	28	1	28
	Left-Through		0							0				0				0	
	Through	184	2	92	0	184	92	242	433	2	217	0	433	2	217	0	433	2	217
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	328	1	176	0	328	176	53	394	1	210	0	394	1	210	0	394	1	210
	Through-Right		1							1				1				1	
	Right	24	0	24	0	24	24	0	25	0	25	0	25	0	25	0	25	0	25
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	318	0	318	0	318	318	84	415	0	415	0	415	0	415	0	415	0	415
	Left-Through		1							1				1				1	
	Through	982	1	441	6	988	443	3	1025	1	488	6	1031	1	490	0	1031	1	490
	Through-Right		1							1				1				1	
	Right	22	0	441	0	22	443	0	23	0	488	0	23	0	490	0	23	0	490
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		203	North-South:		203	North-South:			238	North-South:			238	North-South:			238
		East-West:		441	East-West:		443	East-West:			488	East-West:			490	East-West:			490
		SUM:		644	SUM:		646	SUM:			726	SUM:			728	SUM:			728
VOLUME/CAPACITY (V/C) RATIO:				0.429			0.431				0.484				0.485				0.485
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.329			0.331				0.384				0.385				0.385
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.001 | Δv/c after mitigation: 0.001

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Los Angeles Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
18	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	91	1	91	2	93	93	0	95	1	95	2	97	1	97	0	97	1	97
	Left-Through		0							0				0				0	
	Through	733	2	367	0	733	367	491	1254	2	627	0	1254	2	627	0	1254	2	627
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	137	1	91	0	137	91	95	238	1	143	0	238	1	143	0	238	1	143
	Through-Right		1							1				1				1	
	Right	45	0	45	0	45	45	0	47	0	47	0	47	0	47	0	47	0	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	107	0	107	0	107	107	100	211	0	211	0	211	0	211	0	211	0	211
	Left-Through		1							1				1				1	
	Through	744	1	289	24	768	297	18	792	1	340	24	816	1	348	0	816	1	348
	Through-Right		1							1				1				1	
	Right	17	0	289	0	17	297	0	18	0	340	0	18	0	348	0	18	0	348
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		367	North-South:		367	North-South:			627	North-South:			627	North-South:			627
		East-West:		289	East-West:		297	East-West:			340	East-West:			348	East-West:			348
		SUM:		656	SUM:		664	SUM:			967	SUM:			975	SUM:			975
VOLUME/CAPACITY (V/C) RATIO:				0.437			0.443				0.645				0.650				0.650
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.337			0.343				0.545				0.550				0.550
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.005 | Δv/c after mitigation: 0.005

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Los Angeles Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
19	East-West Street:	Alliso Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	2	SB--	0	NB--	2	SB--	0	NB--	2	SB--	0	NB--	2	SB--	0	NB--	2	SB--	0	NB--	2	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?								2				2				2				2				2
Override Capacity								0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	223	2	112	0	223	112	242	474	2	237	0	474	2	237	0	474	2	237
	Through-Right		0							0				0				0	
	Right	148	1	148	0	148	148	98	252	1	252	0	252	1	252	0	252	1	252
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	4	0	4	0	4	4	0	4	0	4	0	4	0	4	0	4	0	4
	Left-Through		1							1				1				1	
	Through	624	1	316	0	624	316	136	785	1	401	0	785	1	401	0	785	1	401
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	13	0	13	0	13	13	0	14	0	14	0	14	0	14	0	14	0	14
	Left-Through		1							1				1				1	
	Through	389	2	134	18	407	139	153	558	2	178	18	576	2	183	0	576	2	183
	Through-Right		1							1				1				1	
	Right	133	0	134	2	135	139	0	138	0	178	2	140	0	183	0	140	0	183
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		316	North-South:		316	North-South:			401	North-South:			401	North-South:			401
		East-West:		134	East-West:		139	East-West:			178	East-West:			183	East-West:			183
		SUM:		450	SUM:		455	SUM:			579	SUM:			584	SUM:			584
VOLUME/CAPACITY (V/C) RATIO:				0.300			0.303				0.386				0.389				0.389
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.200			0.203				0.286				0.289				0.289
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.003 | Δv/c after mitigation: 0.003

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Los Angeles Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
19	East-West Street:	Alliso Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	2	SB--	0	NB--	2	SB--	0	NB--	2	SB--	0	NB--	2	SB--	0	NB--	2	SB--	0	NB--	2	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?								2				2				2				2				2
Override Capacity								0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	791	2	396	2	793	397	491	1314	2	657	2	1316	2	658	0	1316	2	658
	Through-Right		0							0				0				0	
	Right	388	1	388	0	388	388	176	580	1	580	0	580	1	580	0	580	1	580
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	2	0	2	0	2	2	0	2	0	2	0	2	0	2	0	2	0	2
	Left-Through		1							1				1				1	
	Through	242	1	127	0	242	127	193	445	1	229	0	445	1	229	0	445	1	229
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	38	0	38	0	38	38	0	40	0	40	0	40	0	40	0	40	0	40
	Left-Through		1							1				1				1	
	Through	929	2	247	19	948	252	163	1130	2	298	19	1149	2	303	0	1149	2	303
	Through-Right		1							1				1				1	
	Right	20	0	247	3	23	252	0	21	0	298	3	24	0	303	0	24	0	303
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		398	North-South:		399	North-South:			659	North-South:			660	North-South:			660
		East-West:		247	East-West:		252	East-West:			298	East-West:			303	East-West:			303
		SUM:		645	SUM:		651	SUM:			957	SUM:			963	SUM:			963
VOLUME/CAPACITY (V/C) RATIO:				0.430			0.434				0.638				0.642				0.642
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.330			0.334				0.538				0.542				0.542
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
20	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases			4			4			4			4			4			4	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	145	1	145	1	146	146	60	211	1	211	1	212	1	212	0	212	1	212
	Left-Through		0							0				0				0	
	Through	417	2	171	0	417	171	133	567	2	233	0	567	2	233	0	567	2	233
	Through-Right		1							1				1				1	
	Right	97	0	97	0	97	97	30	131	0	131	0	131	0	131	0	131	0	131
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	69	1	69	0	69	69	7	79	1	79	0	79	1	79	0	79	1	79
	Left-Through		0							0				0				0	
	Through	1002	2	400	0	1002	401	150	1193	2	477	0	1193	2	477	0	1193	2	477
	Through-Right		1							1				1				1	
	Right	198	0	198	2	200	200	31	237	0	237	2	239	0	239	0	239	0	239
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	58	1	58	0	58	58	18	78	1	78	0	78	1	78	0	78	1	78
	Left-Through		0							0				0				0	
	Through	630	2	315	6	636	318	152	808	2	404	6	814	2	407	0	814	2	407
	Through-Right		0							0				0				0	
	Right	182	1	37	4	186	40	51	240	1	29	4	244	1	32	0	244	1	32
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	131	1	131	0	131	131	44	180	1	180	0	180	1	180	0	180	1	180
	Left-Through		0							0				0				0	
	Through	1214	2	428	3	1217	429	90	1353	2	476	3	1356	2	477	0	1356	2	477
	Through-Right		1							1				1				1	
	Right	70	0	70	0	70	70	2	75	0	75	0	75	0	75	0	75	0	75
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		545	North-South:		547	North-South:			688	North-South:			689	North-South:			689
		East-West:		486	East-West:		487	East-West:			584	East-West:			587	East-West:			587
		SUM:		1031	SUM:		1034	SUM:			1272	SUM:			1276	SUM:			1276
VOLUME/CAPACITY (V/C) RATIO:				0.750			0.752				0.925				0.928				0.928
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.650			0.652				0.825				0.828				0.828
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.003 | Δv/c after mitigation: 0.003

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
20	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases			4			4			4			4			4			4	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	121	1	121	3	124	124	70	196	1	196	3	199	1	199	0	199	1	199
	Left-Through		0							0				0				0	
	Through	623	2	249	0	623	249	191	839	2	339	0	839	2	339	0	839	2	339
	Through-Right		1							1				1				1	
	Right	123	0	123	0	123	123	50	178	0	178	0	178	0	178	0	178	0	178
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	116	1	116	0	116	116	3	124	1	124	0	124	1	124	0	124	1	124
	Left-Through		0							0				0				0	
	Through	726	2	297	0	726	300	183	938	2	378	0	938	2	382	0	938	2	382
	Through-Right		1							1				1				1	
	Right	165	0	165	10	175	175	25	197	0	197	10	207	0	207	0	207	0	207
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	65	1	65	0	65	65	35	103	1	103	0	103	1	103	0	103	1	103
	Left-Through		0							0				0				0	
	Through	850	2	425	8	858	429	117	1002	2	501	8	1010	2	505	0	1010	2	505
	Through-Right		0							0				0				0	
	Right	198	1	77	4	202	78	79	285	1	89	4	289	1	90	0	289	1	90
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	136	1	136	0	136	136	40	182	1	182	0	182	1	182	0	182	1	182
	Left-Through		0							0				0				0	
	Through	949	2	344	12	961	348	187	1175	2	422	12	1187	2	426	0	1187	2	426
	Through-Right		1							1				1				1	
	Right	82	0	82	0	82	82	7	92	0	92	0	92	0	92	0	92	0	92
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		418	North-South:		424	North-South:			574	North-South:			581	North-South:			581
		East-West:		561	East-West:		565	East-West:			683	East-West:			687	East-West:			687
		SUM:		979	SUM:		989	SUM:			1257	SUM:			1268	SUM:			1268
VOLUME/CAPACITY (V/C) RATIO:				0.712			0.719				0.914				0.922				0.922
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.619			0.619				0.814				0.822				0.822
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.008 | Δv/c after mitigation: 0.008

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
21	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	63	1	63	1	64	64	0	66	1	66	1	67	1	67	0	67	1	67
	Left-Through		0							0				0				0	
	Through [1]	963	2	482	1	964	482	222	1224	2	612	1	1225	2	613	0	1225	2	613
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	897	2	321	4	901	322	176	1109	2	393	4	1113	2	394	0	1113	2	394
	Through-Right		1							1				1				1	
	Right	66	0	66	0	66	66	0	69	0	69	0	69	0	69	0	69	0	69
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	624	1	624	0	624	624	199	848	1	813	0	848	1	814	0	848	1	814
	Left-Through		1							1				1				1	
	Through	1444	1	722	5	1449	725	87	1590	1	813	5	1595	1	814	0	1595	1	814
	Through-Right		1							1				1				1	
	Right	166	0	166	0	166	166	11	184	0	184	0	184	0	184	0	184	0	184
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		482	North-South:		482	North-South:			612	North-South:			613	North-South:			613
		East-West:		722	East-West:		725	East-West:			813	East-West:			814	East-West:			814
		SUM:		1204	SUM:		1207	SUM:			1425	SUM:			1427	SUM:			1427
VOLUME/CAPACITY (V/C) RATIO:				0.845			0.847				1.000				1.001				1.001
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.745			0.747				0.900				0.901				0.901
LEVEL OF SERVICE (LOS):				C			C				D				E				E

REMARKS: [1] NB through volumes excludes bus volume and bus only lane.

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.001 | Δv/c after mitigation: 0.001

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
21	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	8	1	8	3	11	11	0	8	1	8	3	11	1	11	0	11	1	11
	Left-Through		0							0				0				0	
	Through [1]	1821	2	911	3	1824	912	350	2245	2	1123	3	2248	2	1124	0	2248	2	1124
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	711	2	249	4	715	250	206	946	2	328	4	950	2	329	0	950	2	329
	Through-Right		1							1				1				1	
	Right	36	0	36	0	36	36	0	37	0	37	0	37	0	37	0	37	0	37
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	348	1	348	0	348	348	97	459	1	442	0	459	1	449	0	459	1	449
	Left-Through		1							1				1				1	
	Through	721	1	361	21	742	371	118	868	1	442	21	889	1	449	0	889	1	449
	Through-Right		1							1				1				1	
	Right	220	0	220	0	220	220	33	262	0	262	0	262	0	262	0	262	0	262
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		911	North-South:		912	North-South:			1123	North-South:			1124	North-South:			1124
		East-West:		361	East-West:		371	East-West:			442	East-West:			449	East-West:			449
		SUM:		1272	SUM:		1283	SUM:			1565	SUM:			1573	SUM:			1573
VOLUME/CAPACITY (V/C) RATIO:				0.893			0.900				1.098				1.104				1.104
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.793			0.800				0.998				1.004				1.004
LEVEL OF SERVICE (LOS):				C			C				E				F				F

REMARKS: [1] NB through volumes excludes bus volume and bus only lane.

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.006 | Δv/c after mitigation: 0.006

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
22	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Project Traffic	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTHBOUND Left-Through		0							0				0				0	
NORTHBOUND Through	888	2	444	1	889	445	222	1146	2	573	1	1147	2	574	0	1147	2	574
NORTHBOUND Through-Right		0							0				0				0	
NORTHBOUND Right	86	1	0	0	86	0	14	103	1	11	0	103	1	11	0	103	1	11
NORTHBOUND Left-Through-Right		0							0				0				0	
NORTHBOUND Left-Right		0							0				0				0	
SOUTHBOUND Left	95	1	95	0	95	95	29	128	1	128	0	128	1	128	0	128	1	128
SOUTHBOUND Left-Through		0							0				0				0	
SOUTHBOUND Through	1419	3	473	4	1423	474	346	1823	3	608	4	1827	3	609	0	1827	3	609
SOUTHBOUND Through-Right		0							0				0				0	
SOUTHBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND Left-Through-Right		0							0				0				0	
SOUTHBOUND Left-Right		0							0				0				0	
EASTBOUND Left	71	2	39	0	71	39	0	74	2	41	0	74	2	41	0	74	2	41
EASTBOUND Left-Through		0							0				0				0	
EASTBOUND Through	42	1	42	0	42	42	0	44	1	44	0	44	1	44	0	44	1	44
EASTBOUND Through-Right		0							0				0				0	
EASTBOUND Right	143	1	143	0	143	143	27	176	1	176	0	176	1	176	0	176	1	176
EASTBOUND Left-Through-Right		0							0				0				0	
EASTBOUND Left-Right		0							0				0				0	
WESTBOUND Left	178	1	178	0	178	178	0	185	1	185	0	185	1	185	0	185	1	185
WESTBOUND Left-Through		0							0				0				0	
WESTBOUND Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTBOUND Through-Right		0							0				0				0	
WESTBOUND Right	143	1	143	0	143	143	0	149	1	149	0	149	1	149	0	149	1	149
WESTBOUND Left-Through-Right		0							0				0				0	
WESTBOUND Left-Right		0							0				0				0	
CRITICAL VOLUMES	North-South: 539	East-West: 321	SUM: 860	North-South: 540	East-West: 321	SUM: 861	North-South: 701	East-West: 361	SUM: 1062	North-South: 702	East-West: 361	SUM: 1063	North-South: 702	East-West: 361	SUM: 1063			
VOLUME/CAPACITY (V/C) RATIO:			0.604			0.604			0.745			0.746			0.746			
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.504			0.504			0.645			0.646			0.646			
LEVEL OF SERVICE (LOS):			A			A			B			B			B			

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.001 | Δv/c after mitigation: 0.001

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
22	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Project Traffic	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTHBOUND Left-Through		0							0				0				0	
NORTHBOUND Through	1325	2	663	6	1331	666	350	1729	2	865	6	1735	2	868	0	1735	2	868
NORTHBOUND Through-Right		0							0				0				0	
NORTHBOUND Right	96	1	44	0	96	44	47	147	1	93	0	147	1	93	0	147	1	93
NORTHBOUND Left-Through-Right		0							0				0				0	
NORTHBOUND Left-Right		0							0				0				0	
SOUTHBOUND Left	129	1	129	0	129	129	15	149	1	149	0	149	1	149	0	149	1	149
SOUTHBOUND Left-Through		0							0				0				0	
SOUTHBOUND Through	931	3	310	4	935	312	288	1257	3	419	4	1261	3	420	0	1261	3	420
SOUTHBOUND Through-Right		0							0				0				0	
SOUTHBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND Left-Through-Right		0							0				0				0	
SOUTHBOUND Left-Right		0							0				0				0	
EASTBOUND Left	429	2	236	0	429	236	0	446	2	245	0	446	2	245	0	446	2	245
EASTBOUND Left-Through		0							0				0				0	
EASTBOUND Through	70	1	70	0	70	70	0	73	1	73	0	73	1	73	0	73	1	73
EASTBOUND Through-Right		0							0				0				0	
EASTBOUND Right	29	1	29	0	29	29	56	86	1	86	0	86	1	86	0	86	1	86
EASTBOUND Left-Through-Right		0							0				0				0	
EASTBOUND Left-Right		0							0				0				0	
WESTBOUND Left	104	1	104	0	104	104	0	108	1	108	0	108	1	108	0	108	1	108
WESTBOUND Left-Through		0							0				0				0	
WESTBOUND Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTBOUND Through-Right		0							0				0				0	
WESTBOUND Right	132	1	132	0	132	132	0	137	1	137	0	137	1	137	0	137	1	137
WESTBOUND Left-Through-Right		0							0				0				0	
WESTBOUND Left-Right		0							0				0				0	
CRITICAL VOLUMES	North-South: 792	East-West: 368	SUM: 1160	North-South: 795	East-West: 368	SUM: 1163	North-South: 1014	East-West: 382	SUM: 1396	North-South: 1017	East-West: 382	SUM: 1399	North-South: 1017	East-West: 382	SUM: 1399			
VOLUME/CAPACITY (V/C) RATIO:			0.814			0.816			0.980			0.982			0.982			
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.714			0.716			0.880			0.882			0.882			
LEVEL OF SERVICE (LOS):			C			C			D			D			D			

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.002 | Δv/c after mitigation: 0.002

Significant impacted? NO | Fully mitigated? N/A

APPENDIX D

Project Trip Distribution

APPENDIX D - 1
BLOCK A PROJECT TRIP DISTRIBUTION: COMMERCIAL USE - INBOUND

RAJU Associates, Inc.

APPENDIX D - 2
BLOCK A PROJECT TRIP DISTRIBUTION: COMMERCIAL USE - OUTBOUND

RAJU Associates, Inc.

APPENDIX D - 3
BLOCK A PROJECT TRIP DISTRIBUTION: RESIDENTIAL USE - INBOUND

RAJU Associates, Inc.

APPENDIX D - 4
BLOCK A PROJECT TRIP DISTRIBUTION: RESIDENTIAL USE - OUTBOUND

RAJU Associates, Inc.

APPENDIX D - 5
BLOCK B PROJECT TRIP DISTRIBUTION: COMMERCIAL USE - INBOUND

RAJU Associates, Inc.

APPENDIX D - 6
BLOCK B PROJECT TRIP DISTRIBUTION: COMMERCIAL USE - OUTBOUND

RAJU Associates, Inc.

APPENDIX D - 7
BLOCK B PROJECT TRIP DISTRIBUTION: RESIDENTIAL USE - INBOUND

RAJU Associates, Inc.

APPENDIX D - 8
BLOCK B PROJECT TRIP DISTRIBUTION: RESIDENTIAL USE - OUTBOUND

RAJU Associates, Inc.

APPENDIX D - 9
BLOCK B PROJECT TRIP DISTRIBUTION: EXISTING COMMERCIAL USE - INBOUND

RAJU Associates, Inc.

APPENDIX D - 10
BLOCK B PROJECT TRIP DISTRIBUTION: EXISTING COMMERCIAL USE - OUTBOUND

RAJU Associates, Inc.

APPENDIX E

Caltrans' Screening Analysis

RAJU Associates, Inc.

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TECHNICAL MEMORANDUM

TO: Mr. Tomas Carranza, LADOT
CC: Mr. Jeff Pletyak, LACDPW

FROM: Srinath Raju, P.E.
Christopher Muñoz

SUBJECT: La Plaza Cultura Village Project – Caltrans Freeway Screening Analysis

DATE: June 17, 2014 **REF:** RA 440

This memorandum documents and summarizes the freeway screening procedure for the La Plaza Cultura Village Project conducted by Raju Associates, Inc. This freeway screening procedure has been prepared in accordance with the screening criteria described in Section 3 of the "Agreement Between City of Los Angeles and Caltrans District 7 On Freeway Impact Analysis Procedures", dated October 2013. Section 3.1 of the Agreement specifies the following:

> "3.1 City will require Project applicants to work with Caltrans and prepare a Freeway Impact Analysis, utilizing Caltrans' "Guide for the Preparation of Traffic Impact Studies" ("TIS Guide"), for land use proposals that meet any of the following criteria:
>
> - The project's peak hour trips would result in a 1-percent or more increase to the freeway mainline capacity of a freeway segment operating at level-of-service (LOS) E or F (based on an assumed capacity of 2,000 vehicles per hour per lane); or
> - The project's peak hour trips would result in a 2-percent or more increase to the freeway mainline capacity of a freeway segment operating at LOS D (based on an assumed capacity of 2,000 vehicles per hour per lane); or
> - The project's peak hour trips would result in a 1-percent or more increase to the capacity of a freeway off-ramp operating at LOS E or F (based on an assumed ramp capacity of 1,500 vehicles per hour per lane); or

- The project's peak hour trips would result in a 2-percent or more increase to the capacity of a freeway off-ramp operating at LOS D (based on an assumed ramp capacity of 1,500 vehicles per hour per lane)."

The purpose of this analysis is to apply the above screening criteria to determine whether a Freeway Impact Analysis would be required for the La Plaza Cultura Village Project. The methodologies used to conduct the screening analysis for the project, and the results of the screening, are described below.

INITIAL STEPS

- Project trip generation estimates were prepared in accordance with the latest version of LADOT's Traffic Study Policies and Procedures. The project trip generation estimates as accepted by LADOT is shown in Table 1.

- The generalized regional trip distribution for Project trips was determined using the methodology described in *Appendix D of the 2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority and based on existing travel patterns in the vicinity of the study area. The resulting overall trip distribution for the freeway mainlines, on-ramps and off-ramps is shown in Figure 1. As indicated in Figure 1, it was determined that 14% of project trips may utilize the US 101 freeway to/from the south, 9% may utilize the US 101 freeway to/from the north, 8% may utilize the SR-110 Freeway to/from both the east and west.

- Based on this distribution, four freeway mainline segments were determined to be utilized by the Project and were selected for screening. They include:

    - US-101 Freeway south of Alameda Street
    - US-101 Freeway north of Grand Avenue
    - SR-110 Freeway south of US-101 Freeway
    - SR-110 Freeway north of Hill Street

- At Caltrans request and also based on the trip distribution eight freeway off-ramps were selected for screening:

    - US-101 Northbound Off-Ramp at Alameda Street
    - US-101 Northbound Off-Ramp at Spring Street
    - US-101 Northbound Off-Ramp at Grand Avenue
    - US-101 Southbound Off-Ramp at Los Angeles Street
    - US-101 Southbound Off-Ramp at Broadway
    - US-101 Southbound Off-Ramp at Temple Street/Hope Street
    - SR-110 Northbound Off-Ramp at Temple Street
    - SR-110 Southbound Off-Ramp at Hill Street

FREEWAY MAINLINE SEGMENT SCREENING

- The freeway mainline segment screening analysis is shown in Table 2.
- The number of lanes and capacity for each freeway segment was determined. A capacity of 2,000 vehicles per hour per lane was assumed.
- The worst-case LOS screening threshold was used to determine the trigger (i.e. the number of trips) for each freeway segment for exceeding the threshold:
    - Threshold=≥1% of segment capacity if worst-case LOS is E or F

      Where the assumed capacity = 2,000 vphpl multiplied by the number of lanes on the freeway mainline. In other words, the threshold is 20 vphpl at LOS E or F, multiplied by the number of lanes on the freeway mainline.
- The project-added trips to each freeway mainline segment were compared to the trigger threshold. As shown in Table 2, the screening analysis determined that the screening threshold criteria would not be triggered at any of the eight freeway mainline segments. Furthermore, since the project traffic did not trigger the screening thresholds at the mainline segments most likely to be used by project traffic, there is no need to look at segments further away. Therefore, a Freeway Impact Analysis is not required.

FREEWAY RAMP SCREENING

- The freeway ramp screening analysis is shown in Table 3.
- Intersection turning movement count data was obtained for the AM and PM peak periods for the freeway off-ramp termini intersections.
- Existing LOS was estimated using the Highway Capacity Manual (HCM) operational methodology when the ramp termini intersection is signalized and the HCM stop-controlled methodology when the ramp termini intersection is stop-controlled, considering existing turning movement volumes, lane configurations, and the type of traffic control at the end of the ramp. The HCM worksheets attached to this document present the LOS calculations.
- From the HCM intersection analysis, the existing average vehicular delay and LOS was determined for the off-ramp approaches to the termini intersections. For each ramp, the LOS was determined for the off-ramp approaches to the termini intersections. For each ramp, the LOS for the off-ramp approach was used to determine the appropriate screening threshold:
    - Threshold=≥2% of assumed ramp capacity if approach LOS is D
    - Threshold=≥1% of assumed ramp capacity if approach LOS is E or F

Where the assumed ramp capacity = 1,500 vphpl multiplied by the number of approach lanes on the ramp approach to the intersection. In other words, the threshold is 30 vphpl at LOS D and 15 vphpl at LOS E or F, multiplied by the number of lanes on the ramp approach to the intersection.

- The project-added trips to each off-ramp were compared to the appropriate threshold. As shown in Table 3, the screening analysis determined that the screening threshold criteria would not be triggered at any of the eight freeway off-ramps. Furthermore, since the project traffic did not trigger the screening thresholds at the ramps most likely to be used by project traffic, there is no need to look at ramps further away. Therefore, a Freeway Impact Analysis is not required.

FIGURE 1
OVERALL TRIP DISTRIBUTION - FREEWAY MAINLINE AND ON-RAMPS/OFF-RAMPS

RAJU Associates, Inc.

TABLE 1
ESTIMATED WEEKDAY PROJECT TRIP GENERATION

	Size	Daily	AM Peak Hour			PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project - Block A								
Apartment [1]	119 d.u.	764	12	48	60	47	25	72
Retail [2]	15,000 s.f.	1,704	26	16	42	70	76	146
Specialty Retail	11,000 s.f.	440	8	5	13	20	20	40
Restaurant	9,000 s.f.	810	4	3	7	45	22	67
Project Trip Generation Total - Less (20%) Transit Trips		2,974	40	58	98	146	114	260
*Internal Capture/Walk (10%) Trips		(297)	(5)	(5)	(10)	(13)	(13)	(26)
**Retail - Pass-By (50%) Trips		(613)	(8)	(7)	(15)	(27)	(26)	(53)
**Specialty Retail - Pass-By (10%) Trips		(32)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(58)	0	0	0	(3)	(2)	(5)
Block A - Project Trip Generation Total (Net)		**1,974**	**26**	**46**	**72**	**101**	**72**	**173**
Proposed Project - Block B								
Apartment [1]	226 d.u.	1,450	23	90	113	88	47	135
Retail [2]	8,000 s.f.	909	14	8	22	38	40	78
Specialty Retail	10,000 s.f.	400	7	5	12	18	18	36
Restaurant	2,000 s.f.	180	1	1	2	10	5	15
Project Trip Generation Total - Less (20%) Transit Trips		2,351	36	83	119	123	88	211
*Internal Capture/Walk (10%) Trips		(235)	(6)	(6)	(12)	(11)	(10)	(21)
**Retail - Pass-By (50%) Trips		(327)	(4)	(4)	(8)	(14)	(14)	(28)
**Specialty Retail - Pass-By (10%) Trips		(29)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(13)	0	0	0	(1)	0	(1)
Existing Use (to be removed)								
Specialty Retail	(2,000) s.f.	(80)	(1)	(1)	(2)	(4)	(3)	(7)
Quality Restaurant	(1,000) s.f.	(90)	(1)	0	(1)	(5)	(2)	(7)
Existing Uses Trip Generation Total - Less (20%) Transit Trips		(136)	(2)	(1)	(3)	(7)	(4)	(11)
Block B - Project Trip Generation Total (Net)		**1,611**	**23**	**72**	**95**	**88**	**59**	**147**
Overall Project Trip Generation Total (Net)		**3,585**	**49**	**118**	**167**	**189**	**131**	**320**
Trip Rates [3]								
Apartment (ITE Land Use 220)	Trips per d.u.	[4]	20%	80%	[4]	65%	35%	[4]
Retail/Shopping Center (ITE Land Use 820)	Trips per 1,000 s.f.	[5]	62%	38%	[5]	48%	52%	[5]
Quality Restaurant (ITE Land Use 931)	Trips per 1,000 s.f.	89.95	50%	50%	0.81	67%	33%	7.49
Specialty Retail (SANDAG Land Use) [6]	Trips per 1,000 s.f.	40.00	60%	40%	[7]	50%	50%	[7]

* Internal capture/walk trips determined after reduction of transit trips.
** Pass-by trips determined after reduction of transit and internal capture trips.

[1] Trip generation estimates for residential use calculated using effective trip generation rate of the overall dwelling units (345 d.u.).
[2] Trip generation estimates for retail use calculated using effective trip generation rate of the overall retail (23,000 s.f.).
[3] Trip Generation Manual, 9th Edition, ITE 2012, unless otherwise noted.
[4] Trip generation rates for apartment was calculated using the following equations:

Daily:	T = 6.06 (X) + 123.56	Where:
AM Peak Hour:	T = 0.49 (X) + 3.73	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	T = 0.55 (X) + 17.65	X = Number of dwelling units

[5] Trip generation for retail/shopping center was calculated using the following formulas:

		Where:
Daily:	Ln(T) = 0.65 Ln(X) + 5.83	Ln = Natural logarithm
AM Peak Hour:	Ln(T) = 0.61 Ln(X) + 2.24	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	Ln(T) = 0.67 Ln(X) + 3.31	X = Area in 1,000 square feet of gross leasable area

[6] *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* , SANDAG, April 2002
[7] AM peak hour is 3% of Daily Trips. PM peak hour is 9% of Daily Trips.

TABLE 2
LA PLAZA CULTURA VILLAGE PROJECT - FREEWAY MAINLINE SCREENING

Project Trip Generation (from Table 1)

	AM Peak Hour		PM Peak Hour	
	IN	OUT	IN	OUT
Overall Project Trip Generation Total	49	118	189	131

Freeway Segment	% of Project	AM Peak Hour		PM Peak Hour	
		NB	SB	NB	SB
US-101 south of Alameda Street					
Number of Lanes [1]		4	4	4	4
Capacity		8,000	8,000	8,000	8,000
Trigger @ 1% [2]		80	80	80	80
Project Trips		In	Out	In	Out
	14%	7	17	27	19
Exceed Trigger?		No	No	No	No
US-101 north of Grand Avenue					
Number of Lanes [1]		3	3	3	3
Capacity		6,000	6,000	6,000	6,000
Trigger @ 1% [2]		60	60	60	60
Project Trips		Out	In	Out	In
	9%	11	4	12	18
Exceed Trigger?		No	No	No	No
SR-110 north of Hill Street					
Number of Lanes [1]		4	4	4	4
Capacity		8,000	8,000	8,000	8,000
Trigger @ 1% [2]		80	80	80	80
Project Trips		Out	In	Out	In
	8%	10	4	11	16
Exceed Trigger?		No	No	No	No
SR-110 south of US-101					
Number of Lanes [1]		3	3	3	3
Capacity		6,000	6,000	6,000	6,000
Trigger @ 1% [2]		60	60	60	60
Project Trips		In	Out	In	Out
	8%	4	10	16	11
Exceed Trigger?		No	No	No	No
		IN	**OUT**	**IN**	**OUT**
Total Project Trips on Freeway	**39%**	**19**	**47**	**76**	**53**

[1] Number of lanes does not include auxiliary or HOV lanes.
[2] Assumes worst case threshold: 1% of capacity if LOS E or F, using 2,000 vphpl capacity.

TABLE 3
LA PLAZA CULTURA VILLAGE PROJECT - FREEWAY RAMP SCREENING

Project Trip Generation (from Table 1)

	AM Peak Hour		PM Peak Hour	
	IN	OUT	IN	OUT
Overall Project Trip Generation Total	49	118	189	131

Freeway Off-Ramp Screening

Off-Ramp	Peak Hour	Existing Volume [3]	Off-Ramp Delay [4]	LOS	Ramp Terminus # of Lanes	Ramp Terminus Trigger [5]	% of Project	Project Trips	Exceeds Trigger?
US-101 Northbound Off-Ramp at Alameda Street	AM	2,234	14.9	B	2	n/a	11%	5	No
	PM	1,289	34.3	C		n/a		21	No
US-101 Northbound Off-Ramp at Spring Street [1]	AM	101	12.3	B	2	n/a	3%	2	No
	PM	84	9.9	A		n/a		6	No
US-101 Northbound Off-Ramp at Grand Avenue	AM	625	27.6	C	2	n/a	0%	0	No
	PM	192	48.7	D		60		0	No
US-101 Southbound Off-Ramp at Los Angeles Street [1]	AM	506	36.0	E	2	30	0%	0	No
	PM	125	9.4	A		n/a		0	No
US-101 Southbound Off-Ramp at Broadway	AM	448	30.6	C	2	n/a	12%	6	No
	PM	414	27.4	C		n/a		23	No
US-101 Southbound Off-Ramp at Temple Street/Hope Street	AM	519	34.5	C	2	n/a	3%	1	No
	PM	132	34.2	C		n/a		6	No
SR-110 Northbound Off-Ramp at Temple Street	AM	519	15.9	B	2	n/a	2%	1	No
	PM	132	40.0	D		60		4	No
SR-110 Southbound Off-Ramp at Hill Street [2]	AM	n/a	0	A	2	n/a	8%	4	No
	PM	n/a	0	A		n/a		16	No
Overall Project (Inbound) Trips Assigned to Freeway						AM	39%	19	
						PM	39%	76	

[1] Unsignalized intersection. Stop-controlled on minor approach.
[2] SR-110 Southbound Off-Ramp is uncontrolled and flows directly onto Hill Street.
[3] Based on peak hour intersection turning movement counts.
[4] Off-Ramp delay based on HCM LOS methodology, singalized or stop-controlled, as appropriate. Off-ramp approach delay reported in seconds.
[5] Ramp screening threshold:

1% of capacity if ramp is operating at LOS E or F using HCM intersection methodology

2% of capacity if ramp is operating at LOS D using HCM intersection methodology

Based on a ramp capacity of 1,500 vehicles per hour per lane.

ATTACHMENT A

HCM LEVEL OF SERVICE WORKSHEETS

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Alameda St/US-101 NB Off-Ramp-Arcadia St [Existing (2014) Condit

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Cycle (sec):          100                 Critical Vol./Cap.(X):         0.608
Loss Time (sec):        0                 Average Delay (sec/veh):        17.7
Optimal Cycle:         37                 Level Of Service:                  B
```

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted					Permitted					Permitted					Permitted				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0		0
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0		4.0
Lanes:	1	0	2	0	0	0	0	2	1	0	0	0	0	0	0	1	1	1	1	0
Volume Module:																				
Base Vol:	63	963	0		0	897	66		0	0	0		624	1444	166					
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Initial Bse:	63	963	0		0	897	66		0	0	0		624	1444	166					
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Volume:	63	963	0		0	897	66		0	0	0		624	1444	166					
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0					
Reduced Vol:	63	963	0		0	897	66		0	0	0		624	1444	166					
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
FinalVolume:	63	963	0		0	897	66		0	0	0		624	1444	166					
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900					
Adjustment:	0.21	0.95	1.00		1.00	0.90	0.90		1.00	1.00	1.00		0.86	0.86	0.86					
Lanes:	1.00	2.00	0.00		0.00	2.79	0.21		0.00	0.00	0.00		1.12	2.58	0.30					
Final Sat.:	399	3610	0		0	4783	352		0	0	0		1830	4235	487					
Capacity Analysis Module:																				
Vol/Sat:	0.16	0.27	0.00		0.00	0.19	0.19		0.00	0.00	0.00		0.34	0.34	0.34					
Crit Moves:		****												****						
Green/Cycle:	0.44	0.44	0.00		0.00	0.44	0.44		0.00	0.00	0.00		0.56	0.56	0.56					
Volume/Cap:	0.36	0.61	0.00		0.00	0.43	0.43		0.00	0.00	0.00		0.61	0.61	0.61					
Uniform Del:	18.7	21.5	0.0		0.0	19.4	19.4		0.0	0.0	0.0		14.6	14.6	14.6					
IncremntDel:	1.3	0.7	0.0		0.0	0.1	0.1		0.0	0.0	0.0		0.3	0.3	0.3					
InitQueuDel:	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0					
Delay Adj:	1.00	1.00	0.00		0.00	1.00	1.00		0.00	0.00	0.00		1.00	1.00	1.00					
Delay/Veh:	20.0	22.2	0.0		0.0	19.5	19.5		0.0	0.0	0.0		14.9	14.9	14.9					
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
AdjDel/Veh:	20.0	22.2	0.0		0.0	19.5	19.5		0.0	0.0	0.0		14.9	14.9	14.9					
LOS by Move:	B	C	A		A	B	B		A	A	A		B	B	B					
HCM2kAvgQ:	2	12	0		0	8	8		0	0	0		13	13	13					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Spring St/US-101 NB Off-Ramp [Existing (2014) Conditions - AM]

```
Average Delay (sec/veh):      1.3       Worst Case Level Of Service: B[ 12.3]
```

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0
Volume Module:																				
Base Vol:	0	38	0		0	821	0		0	0	101		0	0	0					
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Initial Bse:	0	38	0		0	821	0		0	0	101		0	0	0					
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Volume:	0	38	0		0	821	0		0	0	101		0	0	0					
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0					
FinalVolume:	0	38	0		0	821	0		0	0	101		0	0	0					
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	6.9		xxxxx	xxxx	xxxxx					
FollowUpTim:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	3.3		xxxxx	xxxx	xxxxx					
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	411		xxxx	xxxx	xxxxx					
Potent Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	596		xxxx	xxxx	xxxxx					
Move Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	596		xxxx	xxxx	xxxxx					
Volume/Cap:	xxxx	xxxx	xxxx		xxxx	xxxx	xxxx		xxxx	xxxx	0.17		xxxx	xxxx	xxxx					
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.6		xxxx	xxxx	xxxxx					
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	12.3		xxxxx	xxxx	xxxxx					
LOS by Move:	*	*	*		*	*	*		*	*	B		*	*	*					
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT					
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx					
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx					
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx					
Shared LOS:	*	*	*		*	*	*		*	*	*		*	*	*					
ApproachDel:	xxxxxx				xxxxxx				12.3				xxxxxx							
ApproachLOS:	*				*				B				*							

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Grand Av/US-101 NB Off-Ramp [Existing (2014) Conditions - AM]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.594
Loss Time (sec): 0 Average Delay (sec/veh): 19.2
Optimal Cycle: 46 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 0	0	0	2	0 1	0	0	1!	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	145	85	0	0	1103	468	19	0	606	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	145	85	0	0	1103	468	19	0	606	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	145	85	0	0	1103	468	19	0	606	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	145	85	0	0	1103	468	19	0	606	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	145	85	0	0	1103	468	19	0	606	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	0.85	1.00	0.81	1.00	1.00	1.00				
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.06	0.00	1.94	0.00	0.00	0.00				
Final Sat.:	1805	3610	0	0	3610	1615	91	0	2996	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.02	0.00	0.00	0.31	0.29	0.21	0.00	0.20	0.00	0.00	0.00				
Crit Moves:	****				****		****									
Green/Cycle:	0.65	0.65	0.00	0.00	0.51	0.51	0.35	0.00	0.35	0.00	0.00	0.00				
Volume/Cap:	0.38	0.04	0.00	0.00	0.59	0.56	0.59	0.00	0.58	0.00	0.00	0.00				
Uniform Del:	10.5	6.3	0.0	0.0	17.0	16.6	26.6	0.0	26.4	0.0	0.0	0.0				
IncremntDel:	0.6	0.0	0.0	0.0	0.5	0.9	0.9	0.0	0.8	0.0	0.0	0.0				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00				
Delay/Veh:	11.1	6.3	0.0	0.0	17.5	17.5	27.6	0.0	27.2	0.0	0.0	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	11.1	6.3	0.0	0.0	17.5	17.5	27.6	0.0	27.2	0.0	0.0	0.0				
LOS by Move:	B	A	A	A	B	B	C	A	C	A	A	A				
HCM2kAvgQ:	2	0	0	0	13	10	9	0	8	0	0	0				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Los Angeles St/US-101 SB Off-Ramp [Existing (2014) Conditions -

Average Delay (sec/veh): 10.4 Worst Case Level Of Service: E[36.0]

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0
Volume Module:																				
Base Vol:	0	422	0	0	822	0	0	0	506	0	0	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	422	0	0	822	0	0	0	506	0	0	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	422	0	0	822	0	0	0	506	0	0	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	422	0	0	822	0	0	0	506	0	0	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	411	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	596	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	596	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	7.3	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	36.0	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	E	*	*	*								
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT								
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx			36.0			xxxxxx										
ApproachLOS:	*			*			E			*										

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Broadway/US-101 SB Off-Ramp-Aliso St [Existing (2014) Conditions

Cycle (sec): 100 Critical Vol./Cap.(X): 0.344
Loss Time (sec): 0 Average Delay (sec/veh): 10.4
Optimal Cycle: 22 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	0 1	1	0	2	0 0	0	1	1	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	302	80	149	922	0	105	204	139	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	302	80	149	922	0	105	204	139	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	302	80	149	922	0	105	204	139	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	302	80	149	922	0	105	204	139	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	302	80	149	922	0	105	204	139	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	1.00	0.95	0.85	0.54	0.95	1.00	0.92	0.92	0.85	1.00	1.00	1.00				
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.68	1.32	1.00	0.00	0.00	0.00				
Final Sat.:	0	3610	1615	1034	3610	0	1184	2300	1615	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.08	0.05	0.14	0.26	0.00	0.09	0.09	0.09	0.00	0.00	0.00				
Crit Moves:					****			****								
Green/Cycle:	0.00	0.74	0.74	0.74	0.74	0.00	0.26	0.26	0.26	0.00	0.00	0.00				
Volume/Cap:	0.00	0.11	0.07	0.19	0.34	0.00	0.34	0.34	0.33	0.00	0.00	0.00				
Uniform Del:	0.0	3.6	3.5	3.9	4.5	0.0	30.2	30.2	30.1	0.0	0.0	0.0				
IncremntDel:	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.5	0.0	0.0	0.0				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00				
Delay/Veh:	0.0	3.6	3.5	4.0	4.5	0.0	30.5	30.5	30.6	0.0	0.0	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	0.0	3.6	3.5	4.0	4.5	0.0	30.5	30.5	30.6	0.0	0.0	0.0				
LOS by Move:	A	A	A	A	A	A	C	C	C	A	A	A				
HCM2kAvgQ:	0	1	1	1	5	0	4	4	4	0	0	0				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 US-101 SB Off-Ramp-Hope St/Temple St [Existing (2014) Conditions

Cycle (sec): 100 Critical Vol./Cap.(X): 0.583
Loss Time (sec): 0 Average Delay (sec/veh): 26.8
Optimal Cycle: 45 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	27	99	47	173	271	75	214	532	257	352	608	154				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	27	99	47	173	271	75	214	532	257	352	608	154				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	27	99	47	173	271	75	214	532	257	352	608	154				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	27	99	47	173	271	75	214	532	257	352	608	154				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	27	99	47	173	271	75	214	532	257	352	608	154				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.38	0.90	0.90	0.57	0.92	0.92	0.95	0.90	0.90	0.95	0.95	0.85				
Lanes:	1.00	1.36	0.64	1.00	1.57	0.43	1.00	1.35	0.65	1.00	2.00	1.00				
Final Sat.:	718	2330	1106	1093	2734	757	1805	2315	1118	1805	3610	1615				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.04	0.04	0.16	0.10	0.10	0.12	0.23	0.23	0.20	0.17	0.10				
Crit Moves:				****				****		****						
Green/Cycle:	0.27	0.27	0.27	0.27	0.27	0.27	0.39	0.39	0.39	0.33	0.33	0.33				
Volume/Cap:	0.14	0.16	0.16	0.58	0.37	0.37	0.30	0.58	0.58	0.58	0.50	0.29				
Uniform Del:	27.6	27.7	27.7	31.5	29.5	29.5	20.8	23.8	23.8	27.5	26.6	24.5				
IncremntDel:	0.3	0.1	0.1	3.0	0.2	0.2	0.2	0.7	0.7	1.5	0.3	0.3				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Delay/Veh:	27.9	27.8	27.8	34.5	29.7	29.7	21.1	24.5	24.5	29.0	27.0	24.8				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	27.9	27.8	27.8	34.5	29.7	29.7	21.1	24.5	24.5	29.0	27.0	24.8				
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C				
HCM2kAvgQ:	1	2	2	5	5	5	5	10	10	9	8	4				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 SR-110 NB Off-Ramp/Temple St [Existing (2014) Conditions - AM]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.392
Loss Time (sec): 0 Average Delay (sec/veh): 15.0
Optimal Cycle: 24 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0 0	1	0	1!	0 0	0	0	3	0 0	0	0	2	0 0
Volume Module:																
Base Vol:	0	0	0	272	0	140	0	731	0	0	0	710	0			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	272	0	140	0	731	0	0	0	710	0			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	272	0	140	0	731	0	0	0	710	0			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	0	0	0	272	0	140	0	731	0	0	0	710	0			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
FinalVolume:	0	0	0	272	0	140	0	731	0	0	0	710	0			
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	1.00	1.00	1.00	0.73	1.00	0.76	1.00	0.91	1.00	1.00	0.95	1.00				
Lanes:	0.00	0.00	0.00	1.50	0.00	0.50	0.00	3.00	0.00	0.00	2.00	0.00				
Final Sat.:	0	0	0	2091	0	718	0	5187	0	0	3610	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.13	0.00	0.20	0.00	0.14	0.00	0.00	0.20	0.00				
Crit Moves:						****					****					
Green/Cycle:	0.00	0.00	0.00	0.50	0.00	0.50	0.00	0.50	0.00	0.00	0.50	0.00				
Volume/Cap:	0.00	0.00	0.00	0.26	0.00	0.39	0.00	0.28	0.00	0.00	0.39	0.00				
Uniform Del:	0.0	0.0	0.0	14.5	0.0	15.7	0.0	14.4	0.0	0.0	15.4	0.0				
IncremntDel:	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.0				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00				
Delay/Veh:	0.0	0.0	0.0	14.6	0.0	15.9	0.0	14.5	0.0	0.0	15.6	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	0.0	0.0	0.0	14.6	0.0	15.9	0.0	14.5	0.0	0.0	15.6	0.0				
LOS by Move:	A	A	A	B	A	B	A	B	A	A	B	A				
HCM2kAvgQ:	0	0	0	3	0	5	0	5	0	0	7	0				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Alameda St/US-101 NB Off-Ramp-Arcadia St [Existing (2014) Condit

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724
Loss Time (sec): 0 Average Delay (sec/veh): 16.4
Optimal Cycle: 52 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 0	0	0	2	1 0	0	0	0	0 0	1	1	1	1 0
Volume Module:																
Base Vol:	8	1894	0	0	711	36	0	0	0	348	721	220				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	8	1894	0	0	711	36	0	0	0	348	721	220				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	8	1894	0	0	711	36	0	0	0	348	721	220				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	8	1894	0	0	711	36	0	0	0	348	721	220				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	8	1894	0	0	711	36	0	0	0	348	721	220				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.34	0.95	1.00	1.00	0.90	0.90	1.00	1.00	1.00	0.85	0.85	0.85				
Lanes:	1.00	2.00	0.00	0.00	2.86	0.14	0.00	0.00	0.00	1.08	2.24	0.68				
Final Sat.:	642	3610	0	0	4902	248	0	0	0	1746	3617	1104				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.52	0.00	0.00	0.15	0.15	0.00	0.00	0.00	0.20	0.20	0.20				
Crit Moves:		****									****					
Green/Cycle:	0.72	0.72	0.00	0.00	0.72	0.72	0.00	0.00	0.00	0.28	0.28	0.28				
Volume/Cap:	0.02	0.72	0.00	0.00	0.20	0.20	0.00	0.00	0.00	0.72	0.72	0.72				
Uniform Del:	3.8	8.0	0.0	0.0	4.4	4.4	0.0	0.0	0.0	32.8	32.8	32.8				
IncremntDel:	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00				
Delay/Veh:	3.9	9.0	0.0	0.0	4.5	4.5	0.0	0.0	0.0	34.3	34.3	34.3				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	3.9	9.0	0.0	0.0	4.5	4.5	0.0	0.0	0.0	34.3	34.3	34.3				
LOS by Move:	A	A	A	A	A	A	A	A	A	C	C	C				
HCM2kAvgQ:	0	19	0	0	3	3	0	0	0	11	11	11				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Spring St/US-101 NB Off-Ramp [Existing (2014) Conditions - PM]

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[9.9]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	2	0 0	0	0	2	0 0	0	0	0	0 2	0	0	0	0 0
Volume Module:																
Base Vol:	0	34	0	0	394	0	0	0	84	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	34	0	0	394	0	0	0	84	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	34	0	0	394	0	0	0	84	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	0	34	0	0	394	0	0	0	84	0	0	0				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	197	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	817	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	817	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.3	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.9	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	*	*	A	*	*	*				
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx				xxxxxx				9.9	xxxxxx						
ApproachLOS:	*				*				A	*						

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Grand Av/US-101 NB Off-Ramp [Existing (2014) Conditions - PM]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.668
Loss Time (sec): 0 Average Delay (sec/veh): 15.3
Optimal Cycle: 56 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 0	0	0	2	0 1	0	0	1!	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	742	816	0	0	466	297	32	0	160	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	742	816	0	0	466	297	32	0	160	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	742	816	0	0	466	297	32	0	160	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	742	816	0	0	466	297	32	0	160	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	742	816	0	0	466	297	32	0	160	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	0.83	1.00	0.80	1.00	1.00	1.00				
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.28	0.00	1.72	0.00	0.00	0.00				
Final Sat.:	1805	3610	0	0	3610	1615	440	0	2621	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.41	0.23	0.00	0.00	0.13	0.18	0.07	0.00	0.06	0.00	0.00	0.00				
Crit Moves:	****					****	****									
Green/Cycle:	0.89	0.89	0.00	0.00	0.28	0.28	0.11	0.00	0.11	0.00	0.00	0.00				
Volume/Cap:	0.59	0.25	0.00	0.00	0.47	0.67	0.67	0.00	0.56	0.00	0.00	0.00				
Uniform Del:	4.8	0.8	0.0	0.0	30.1	32.2	42.8	0.0	42.3	0.0	0.0	0.0				
IncremntDel:	0.7	0.0	0.0	0.0	0.4	3.9	5.9	0.0	2.1	0.0	0.0	0.0				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00				
Delay/Veh:	5.6	0.8	0.0	0.0	30.5	36.0	48.7	0.0	44.4	0.0	0.0	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	5.6	0.8	0.0	0.0	30.5	36.0	48.7	0.0	44.4	0.0	0.0	0.0				
LOS by Move:	A	A	A	A	C	D	D	A	D	A	A	A				
HCM2kAvgQ:	6	2	0	0	7	9	5	0	4	0	0	0				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Los Angeles St/US-101 SB Off-Ramp [Existing (2014) Conditions -

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[9.4]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	2	0 0	0	0	2	0 0	0	0	0	0 2	0	0	0	0 0
Volume Module:																
Base Vol:	0	1692	0	0	196	0	0	0	125	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1692	0	0	196	0	0	0	125	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1692	0	0	196	0	0	0	125	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	0	1692	0	0	196	0	0	0	125	0	0	0				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	98	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	945	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	945	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.13	xxxx	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.5	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.4	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	*	*	A	*	*	*				
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx				xxxxxx				9.4	xxxxxx						
ApproachLOS:	*				*				A	*						

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Broadway/US-101 SB Off-Ramp-Aliso St [Existing (2014) Conditions

Cycle (sec): 100 Critical Vol./Cap.(X): 0.330
Loss Time (sec): 0 Average Delay (sec/veh): 9.8
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	0 1	1	0	2	0 0	0	1	1	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	835	159	105	648	0	85	262	67	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	835	159	105	648	0	85	262	67	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	835	159	105	648	0	85	262	67	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	835	159	105	648	0	85	262	67	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	835	159	105	648	0	85	262	67	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	1.00	0.95	0.85	0.29	0.95	1.00	0.92	0.92	0.85	1.00	1.00	1.00				
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.49	1.51	1.00	0.00	0.00	0.00				
Final Sat.:	0	3610	1615	545	3610	0	857	2641	1615	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.23	0.10	0.19	0.18	0.00	0.10	0.10	0.04	0.00	0.00	0.00				
Crit Moves:		****						****								
Green/Cycle:	0.00	0.70	0.70	0.70	0.70	0.00	0.30	0.30	0.30	0.00	0.00	0.00				
Volume/Cap:	0.00	0.33	0.14	0.28	0.26	0.00	0.33	0.33	0.14	0.00	0.00	0.00				
Uniform Del:	0.0	5.9	5.0	5.6	5.5	0.0	27.2	27.2	25.5	0.0	0.0	0.0				
IncremntDel:	0.0	0.1	0.1	0.4	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00				
Delay/Veh:	0.0	5.9	5.1	6.0	5.5	0.0	27.4	27.4	25.7	0.0	0.0	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	0.0	5.9	5.1	6.0	5.5	0.0	27.4	27.4	25.7	0.0	0.0	0.0				
LOS by Move:	A	A	A	A	A	A	C	C	C	A	A	A				
HCM2kAvgQ:	0	5	2	1	4	0	4	4	2	0	0	0				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 US-101 SB Off-Ramp-Hope St/Temple St [Existing (2014) Conditions

Cycle (sec): 100 Critical Vol./Cap.(X): 0.609
Loss Time (sec): 0 Average Delay (sec/veh): 28.3
Optimal Cycle: 48 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	239	439	205	61	42	29	371	576	70	168	781	238				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	239	439	205	61	42	29	371	576	70	168	781	238				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	239	439	205	61	42	29	371	576	70	168	781	238				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	239	439	205	61	42	29	371	576	70	168	781	238				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	239	439	205	61	42	29	371	576	70	168	781	238				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.67	0.90	0.90	0.19	0.89	0.89	0.95	0.93	0.93	0.95	0.95	0.85				
Lanes:	1.00	1.36	0.64	1.00	1.18	0.82	1.00	1.78	0.22	1.00	2.00	1.00				
Final Sat.:	1281	2343	1094	365	2005	1385	1805	3167	385	1805	3610	1615				
Capacity Analysis Module:																
Vol/Sat:	0.19	0.19	0.19	0.17	0.02	0.02	0.21	0.18	0.18	0.09	0.22	0.15				
Crit Moves:		****					****				****					
Green/Cycle:	0.31	0.31	0.31	0.31	0.31	0.31	0.34	0.34	0.34	0.36	0.36	0.36				
Volume/Cap:	0.61	0.61	0.61	0.54	0.07	0.07	0.61	0.54	0.54	0.26	0.61	0.42				
Uniform Del:	29.5	29.5	29.5	28.8	24.5	24.5	27.6	26.8	26.8	22.9	26.5	24.4				
IncremntDel:	2.7	1.0	1.0	5.4	0.0	0.0	1.8	0.5	0.5	0.2	0.9	0.5				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Delay/Veh:	32.2	30.5	30.5	34.2	24.5	24.5	29.4	27.3	27.3	23.1	27.4	24.9				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	32.2	30.5	30.5	34.2	24.5	24.5	29.4	27.3	27.3	23.1	27.4	24.9				
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C				
HCM2kAvgQ:	7	10	10	2	1	1	10	9	9	4	11	6				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 SR-110 NB Off-Ramp/Temple St [Existing (2014) Conditions - PM]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.335
Loss Time (sec): 0 Average Delay (sec/veh): 2.9
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0 0	1	0	1!	0 0	0	0	3	0 0	0	0	2	0 0
Volume Module:																
Base Vol:	0	0	0	53	0	41	0	951	0	0	1049	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	53	0	41	0	951	0	0	1049	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	0	0	53	0	41	0	951	0	0	1049	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	0	0	53	0	41	0	951	0	0	1049	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	0	0	53	0	41	0	951	0	0	1049	0				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	1.00	1.00	1.00	0.78	1.00	0.80	1.00	0.91	1.00	1.00	0.95	1.00				
Lanes:	0.00	0.00	0.00	1.40	0.00	0.60	0.00	3.00	0.00	0.00	2.00	0.00				
Final Sat.:	0	0	0	2079	0	916	0	5187	0	0	3610	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.04	0.00	0.18	0.00	0.00	0.29	0.00				
Crit Moves:						****					****					
Green/Cycle:	0.00	0.00	0.00	0.13	0.00	0.13	0.00	0.87	0.00	0.00	0.87	0.00				
Volume/Cap:	0.00	0.00	0.00	0.19	0.00	0.34	0.00	0.21	0.00	0.00	0.34	0.00				
Uniform Del:	0.0	0.0	0.0	38.5	0.0	39.3	0.0	1.1	0.0	0.0	1.3	0.0				
IncremntDel:	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0	0.1	0.0				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00				
Delay/Veh:	0.0	0.0	0.0	38.7	0.0	40.0	0.0	1.1	0.0	0.0	1.3	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	0.0	0.0	0.0	38.7	0.0	40.0	0.0	1.1	0.0	0.0	1.3	0.0				
LOS by Move:	A	A	A	D	A	D	A	A	A	A	A	A				
HCM2kAvgQ:	0	0	0	1	0	2	0	2	0	0	3	0				

Note: Queue reported is the number of cars per lane.

ATTACHMENT B

INTERSECTION TRAFFIC COUNTS

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:				
Wed, Apr 23, 14	LOCATION:	China Town	PROJECT #:	SC0354
	NORTH & SOUTH:	Spring	LOCATION #:	4
	EAST & WEST:	US101 NB Off-Ramp	CONTROL:	SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
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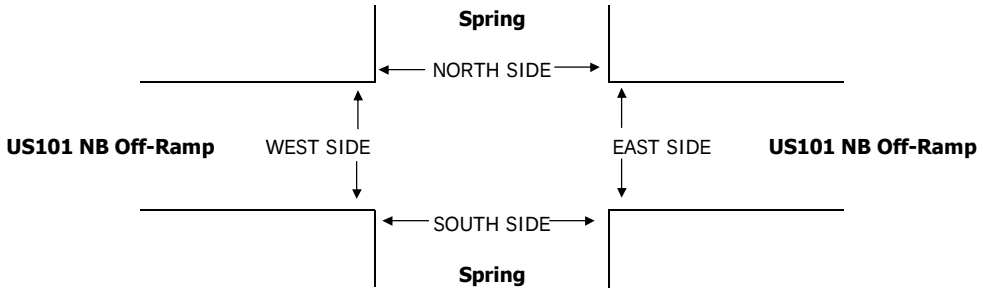
		NORTHBOUND Spring			SOUTHBOUND Spring			EASTBOUND US101 NB Off-Ramp			WESTBOUND US101 NB Off-Ramp				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	X	2	X	X	4	X	X	X	2	X	X	X		X	X	X	X	
AM	7:00 AM	0	7	0	0	120	0	0	0	23	0	0	0	150	0	0	0	0	0
	7:15 AM	0	11	0	0	124	0	0	0	15	0	0	0	150	0	0	0	0	0
	7:30 AM	0	7	0	0	174	0	0	0	27	0	0	0	208	0	0	0	0	0
	7:45 AM	0	13	0	0	201	0	0	0	24	0	0	0	238	0	0	0	0	0
	8:00 AM	0	8	0	0	189	0	1	0	21	0	0	0	219	0	0	0	0	0
	8:15 AM	0	10	0	0	219	0	0	0	27	0	0	0	256	0	0	0	0	0
	8:30 AM	0	7	0	0	212	0	0	0	29	0	0	0	248	0	0	0	0	0
	8:45 AM	0	10	0	0	187	0	0	0	20	0	0	0	217	0	0	0	0	0
	9:00 AM	0	2	0	0	190	0	0	0	24	0	0	0	216	0	0	0	0	0
	9:15 AM	0	13	0	0	158	0	0	0	16	0	0	0	187	0	0	0	0	0
	9:30 AM	0	10	0	0	127	0	0	0	13	0	0	0	150	0	0	0	0	0
	9:45 AM	0	2	0	0	114	0	0	0	22	0	0	0	138	0	0	0	0	0
	VOLUMES	0	100	0	0	2,015	0	1	0	261	0	0	0	2,377	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	100	/	101	2,015	/	2,276	262	/	0	0	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	38	0	0	821	0	1	0	101	0	0	0	961					
	APPROACH %	0%	100%	0%	0%	100%	0%	1%	0%	99%	0%	0%	0%						
	PEAK HR FACTOR		0.731			0.937			0.879			0.000		0.938					
	APP/DEPART	38	/	39	821	/	922	102	/	0	0	/	0	0					
PM	3:00 PM	0	7	0	0	93	0	0	0	21	0	0	0	121	0	0	0	0	0
	3:15 PM	0	13	0	0	107	0	0	0	29	0	0	0	149	0	0	0	0	0
	3:30 PM	0	5	0	0	96	0	0	0	13	0	0	0	114	0	0	0	0	0
	3:45 PM	0	9	0	0	98	0	0	0	21	0	0	0	128	0	0	0	0	0
	4:00 PM	0	10	0	0	86	0	0	0	18	0	0	0	114	0	0	0	0	0
	4:15 PM	0	8	0	0	85	0	0	0	12	0	0	0	105	0	0	0	0	0
	4:30 PM	0	13	0	0	82	0	0	0	26	0	0	0	121	0	0	0	0	0
	4:45 PM	0	12	0	0	83	0	0	0	27	0	0	0	122	0	0	0	0	0
	5:00 PM	0	12	0	0	85	0	1	0	23	0	0	0	121	0	0	0	0	0
	5:15 PM	0	14	0	0	86	0	0	0	11	0	0	0	111	0	0	0	0	0
	5:30 PM	0	20	0	0	88	0	0	0	11	0	0	0	119	0	0	0	0	0
	5:45 PM	0	14	0	0	78	0	0	0	17	0	0	0	109	0	0	0	0	0
	VOLUMES	0	137	0	0	1,067	0	1	0	229	0	0	0	1,434	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	137	/	138	1,067	/	1,296	230	/	0	0	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	34	0	0	394	0	0	0	84	0	0	0	512					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.654			0.921			0.724			0.000		0.859					
	APP/DEPART	34	/	34	394	/	478	84	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:				
Wed, Apr 23, 14	LOCATION:	China Town	PROJECT #:	SC0354
	NORTH & SOUTH:	Los Angeles	LOCATION #:	6
	EAST & WEST:	US101 SB Off-Ramp	CONTROL:	SIGNAL

NOTES:

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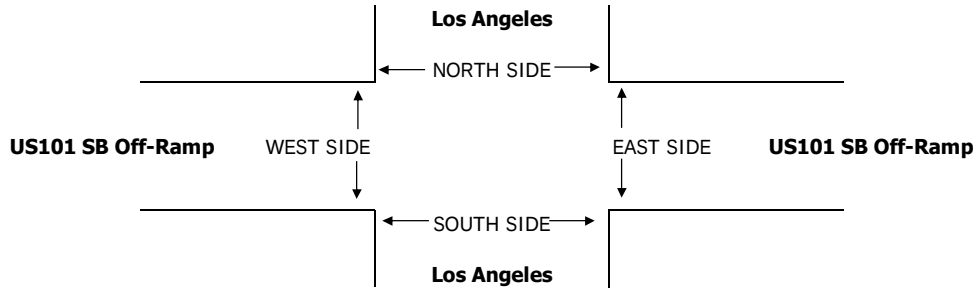
		NORTHBOUND Los Angeles			SOUTHBOUND Los Angeles			EASTBOUND US101 SB Off-Ramp			WESTBOUND US101 SB Off-Ramp				U-TURNS				
	LANES:	NL X	NT 3	NR X	SL X	ST 2	SR X	EL X	ET X	ER 2	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	74	0	0	138	0	0	0	120	0	0	0	332	0	0	0	0	0
	7:15 AM	0	74	0	0	149	0	0	0	100	0	0	0	323	0	0	0	0	0
	7:30 AM	0	97	0	0	172	0	0	0	120	0	0	0	389	0	0	0	0	0
	7:45 AM	0	90	0	0	185	0	0	0	133	0	0	0	408	0	0	0	0	0
	8:00 AM	0	95	0	0	180	0	0	0	133	0	0	0	408	0	0	0	0	0
	8:15 AM	0	101	0	0	219	0	0	0	122	0	0	0	442	0	0	0	0	0
	8:30 AM	0	99	0	0	202	0	0	0	108	0	0	0	409	0	0	0	0	0
	8:45 AM	0	123	0	0	201	0	0	0	129	0	0	0	453	0	0	0	0	0
	9:00 AM	0	99	0	0	200	0	0	0	147	0	0	0	446	0	0	0	0	0
	9:15 AM	0	104	0	0	166	0	0	0	115	0	0	0	385	0	0	0	0	0
	9:30 AM	0	135	0	0	163	0	0	0	131	0	0	0	429	0	0	0	0	0
	9:45 AM	0	129	0	0	142	0	0	0	139	0	0	0	410	0	0	0	0	0
	VOLUMES	0	1,220	0	0	2,117	0	0	0	1,497	0	0	0	4,834	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	1,220	/	1,220	2,117	/	3,614	1,497	/	0	0	/	0	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	0	422	0	0	822	0	0	0	506	0	0	0	1,750					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.858			0.938			0.861			0.000		0.966					
	APP/DEPART	422	/	422	822	/	1,328	506	/	0	0	/	0	0					
PM	3:00 PM	0	256	0	0	56	0	0	0	44	0	0	0	356	0	0	0	0	0
	3:15 PM	0	186	0	0	47	0	0	0	48	0	0	0	281	0	0	0	0	0
	3:30 PM	0	283	0	0	62	0	0	0	35	0	0	0	380	0	0	0	0	0
	3:45 PM	0	200	0	0	48	0	0	0	42	0	0	0	290	0	0	0	0	0
	4:00 PM	0	237	0	0	61	0	0	0	45	0	0	0	343	0	0	0	0	0
	4:15 PM	0	263	0	0	57	0	0	0	33	0	0	0	353	0	0	0	0	0
	4:30 PM	0	289	0	0	64	0	0	0	38	0	0	0	391	0	0	0	0	0
	4:45 PM	0	326	0	0	56	0	0	0	36	0	0	0	418	0	0	0	0	0
	5:00 PM	0	387	0	0	56	0	0	0	31	0	0	0	474	0	0	0	0	0
	5:15 PM	0	420	0	0	50	0	0	0	32	0	0	0	502	0	0	0	0	0
	5:30 PM	0	418	0	0	41	0	0	0	24	0	0	0	483	0	0	0	0	0
	5:45 PM	0	467	0	0	49	0	0	0	38	0	0	0	554	0	0	0	0	0
	VOLUMES	0	3,732	0	0	647	0	0	0	446	0	0	0	4,825	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	3,732	/	3,732	647	/	1,093	446	/	0	0	/	0	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	1,692	0	0	196	0	0	0	125	0	0	0	2,013					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.906			0.875			0.822			0.000		0.908					
	APP/DEPART	1,692	/	1,692	196	/	321	125	/	0	0	/	0	0					



TRAFFIC COUNT SUMMARY

City of Los Angeles
Department of Transportation
(Rev Apr 92)

STREET
North/South Grand Ave
East/West 101 NB Ramp
Day: Tuesday Date: March 15 2011 Weathe Clear & Sunny
Hours: 3:00-7:30pm & 8:00-11:00pm
School Day: Yes LOS ANGELES

	N/B	S/B	E/B	W/B
DUAL-	0	0	0	0
WHEELED	0	0	0	0
BIKES	1	0	13	5
BUSES	48	175	20	0

	S/B	TIME	W/B TIME	N/B	TIME	E/B TIME	
4:30-5:30 15 MIN	202	4:45		393	5:15	50	4:30
9:00-10:00 15 MIN	101	9:15		134	9:45	55	9:00
4:30-5:30 HR	764	4:30		1400	4:30	174	4:30
9:00-10:00 HR	340	9:00		413	9:00	178	9:00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
3-4	427	246	0	673
4-5	646	500	0	1146
5-6	720	792	0	1512
6-7	439	523	0	962
7-7:30	196	121	0	317
8-9	223	100	0	323
9-10	293	120	0	413
10-11	156	75	0	231
TOTAL	3100	2477	0	5577

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
3-4	0	353	288	641
4-5	0	426	292	718
5-6	0	452	288	740
6-7	0	254	190	444
7-7:30	0	119	99	218
8-9	0	132	145	277
9-10	0	147	193	340
10-11	0	108	91	199
TOTAL	0	1991	1586	3577

TOTAL N - S	XIN S Pd	XIN S Sch	XIN N Pd	XIN N Sch
1314	85		62	
1864	26		46	
2252	32		43	
1406	24		30	
535	7		22	
600	17		27	
753	7		7	
430	5		11	
9154	203		248	

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
3-4	44	0	204	248
4-5	71	0	159	230
5-6	31	0	155	186
6-7	47	0	110	157
7-7:30	43	0	76	119
8-9	71	0	88	159
9-10	81	0	97	178
10-11	67	0	85	152
TOTAL	455	0	974	1429

WESTBOUNDApproach

Hours	Lt	Th	Rt	Total
3-4	0	0	0	0
4-5	0	0	0	0
5-6	0	0	0	0
6-7	0	0	0	0
7-7:30	0	0	0	0
8-9	0	0	0	0
9-10	0	0	0	0
10-11	0	0	0	0
TOTAL	0	0	0	0

TOTAL E - W	XIN E Peds	XIN E Sch	XIN W Peds	XIN W Sch
248	0		2	
230	0		0	
186	2		0	
157	1		0	
119	0		0	
159	0		1	
178	0		0	
152	0		0	
1429	3		3	

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Grand Ave DATE: 05/07/2009 LOCATION: City of Los Angeles

E-W STREET: US-101 NB Ramps DAY: THURSDAY PROJECT# 09-5178-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	1	0.5	0	1.5	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	29	24			184	97	3		132				469
7:15 AM	31	29			211	94	10		125				500
7:30 AM	36	28			233	102	12		128				539
7:45 AM	24	21			246	115	5		119				530
8:00 AM	29	22			249	89	4		144				537
8:15 AM	36	24			275	118	5		145				603
8:30 AM	38	19			259	123	4		155				598
8:45 AM	35	16			266	115	5		133				570
9:00 AM	56	31			212	102	10		123				534
9:15 AM	65	27			165	89	9		98				453
9:30 AM	74	39			181	94	3		95				486
9:45 AM	71	46			168	112	6		77				480
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 524	NT 326	NR 0	SL 0	ST 2649	SR 1250	EL 76	ET 0	ER 1474	WL 0	WT 0	WR 0	TOTAL 6299

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	138	81	0	0	1049	445	18	0	577	0	0	0	2308
PEAK HR. FACTOR:		0.913			0.950			0.936			0.000		0.957

CONTROL: Signalized

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:				
Wed, Apr 23, 14	LOCATION:	China Town	PROJECT #:	SC0354
	NORTH & SOUTH:	US110 Off-Ramp	LOCATION #:	2
	EAST & WEST:	Temple	CONTROL:	SIGNAL

NOTES:

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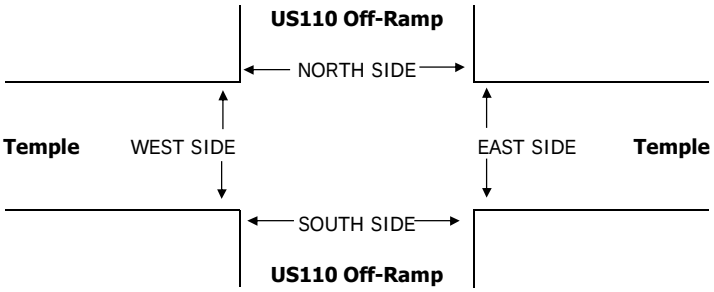
		NORTHBOUND US110 Off-Ramp			SOUTHBOUND US110 Off-Ramp			EASTBOUND Temple			WESTBOUND Temple				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	X	X	X	1.5	X	0.5	X	3	X	X	2	X		X	X	X	X	
AM	7:00 AM	0	0	0	50	0	19	0	102	0	0	141	0	312	0	0	0	0	0
	7:15 AM	0	0	0	54	0	31	0	134	0	0	160	0	379	0	0	0	0	0
	7:30 AM	0	0	0	66	0	33	0	196	0	0	184	0	479	0	0	0	0	0
	7:45 AM	0	0	0	77	0	40	0	216	0	0	206	0	539	0	0	0	0	0
	8:00 AM	0	0	0	68	0	40	0	156	0	0	155	0	419	0	0	0	0	0
	8:15 AM	0	0	0	61	0	27	0	163	0	0	165	0	416	0	0	0	0	0
	8:30 AM	0	0	0	47	0	21	0	174	0	0	128	0	370	0	0	0	0	0
	8:45 AM	0	0	0	44	0	32	0	193	0	0	132	0	401	0	0	0	0	0
	9:00 AM	0	0	0	54	0	28	0	165	0	0	157	0	404	0	0	0	0	0
	9:15 AM	0	0	0	46	0	31	0	140	0	0	157	0	374	0	0	0	0	0
	9:30 AM	0	0	0	46	0	29	0	125	0	0	143	0	343	0	0	0	0	0
	9:45 AM	0	0	0	36	0	20	0	128	0	0	150	0	334	0	0	0	0	0
	VOLUMES	0	0	0	649	0	351	0	1,892	0	0	1,878	0	4,770	0	0	0	0	0
	APPROACH %	0%	0%	0%	65%	0%	35%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	1,000	/	0	1,892	/	2,541	1,878	/	2,229	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	272	0	140	0	731	0	0	710	0	1,853					
	APPROACH %	0%	0%	0%	66%	0%	34%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.880			0.846			0.862		0.859					
	APP/DEPART	0	/	0	412	/	0	731	/	1,003	710	/	850	0					
PM	3:00 PM	0	0	0	22	0	23	0	179	0	0	190	0	414	0	0	0	0	0
	3:15 PM	0	0	0	18	0	19	0	153	0	0	175	0	365	0	0	0	0	0
	3:30 PM	0	0	0	19	0	19	0	213	0	0	193	0	444	0	0	0	0	0
	3:45 PM	0	0	0	14	0	14	0	174	0	0	212	0	414	0	0	0	0	0
	4:00 PM	0	0	0	16	0	14	0	202	0	0	209	0	441	0	0	0	0	0
	4:15 PM	0	0	0	9	0	8	0	204	0	0	193	0	414	0	0	0	0	0
	4:30 PM	0	0	0	6	0	12	0	276	0	0	186	0	480	0	0	0	0	0
	4:45 PM	0	0	0	11	0	5	0	273	0	0	195	0	484	0	0	0	0	0
	5:00 PM	0	0	0	17	0	7	0	273	0	0	230	0	527	0	0	0	0	0
	5:15 PM	0	0	0	13	0	12	0	248	0	0	264	0	537	0	0	0	0	0
	5:30 PM	0	0	0	14	0	12	0	231	0	0	279	0	536	0	0	0	0	0
	5:45 PM	0	0	0	9	0	10	0	199	0	0	276	0	494	0	0	1	0	1
	VOLUMES	0	0	0	168	0	155	0	2,625	0	0	2,602	0	5,551	0	0	1	0	1
	APPROACH %	0%	0%	0%	52%	0%	48%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	323	/	0	2,626	/	2,793	2,602	/	2,758	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	53	0	41	0	951	0	0	1,049	0	2,094					
	APPROACH %	0%	0%	0%	56%	0%	44%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.904			0.871			0.940		0.975					
	APP/DEPART	0	/	0	94	/	0	951	/	1,004	1,049	/	1,090	0					



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA__ **Day:** TUESDAY

CARS

City: 0 **Date:** 1/15/2013

AM

NS/EW Streets:	Hope - US 101 Ramps			Hope - US 101 Ramps			Temple St			Temple St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	5	24	8	33	75	20	39	100	53	77	108	23	565
7:15 AM	4	22	9	52	57	12	40	99	72	63	125	23	578
7:30 AM	5	19	10	54	67	26	63	121	44	53	149	36	647
7:45 AM	9	28	12	48	65	21	46	183	69	68	147	25	721
8:00 AM	6	26	15	39	63	15	58	153	74	72	132	27	680
8:15 AM	7	25	10	30	73	12	45	121	76	83	123	33	638
8:30 AM	5	23	14	19	43	15	61	124	79	75	100	38	596
8:45 AM	12	22	9	31	57	7	30	128	72	83	85	36	572
9:00 AM	4	32	18	34	61	7	38	126	59	78	116	34	607
9:15 AM	5	26	12	34	42	12	27	97	59	65	119	33	531
9:30 AM	6	23	12	27	31	9	25	122	44	72	91	26	488
9:45 AM	5	22	17	16	44	17	45	111	42	41	112	33	505
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	73	292	146	417	678	173	517	1485	743	830	1407	367	7128
APPROACH %'s :	14.29%	57.14%	28.57%	32.89%	53.47%	13.64%	18.83%	54.10%	27.07%	31.87%	54.03%	14.09%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	27	98	47	171	268	74	212	578	263	276	551	121	2686
PEAK HR FACTOR :		0.878			0.872			0.883			0.988		0.931

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_5244_006

Day: TUESDAY

CARS

City: City of Los Angeles

Date: 5/14/2013

PM

NS/EW Streets:	Hope - US 101 Ramps			Hope - US 101 Ramps			Temple St			Temple St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1.5	0.5	1	2	0	1	2	1	
3:00 PM	16	75	23	10	9	7	59	95	24	23	124	32	497
3:15 PM	20	65	25	16	15	7	61	88	20	14	133	33	497
3:30 PM	27	106	30	14	11	11	93	91	26	35	126	28	598
3:45 PM	28	74	41	8	15	9	66	104	26	38	132	23	564
4:00 PM	39	105	34	12	6	3	92	91	36	30	128	40	616
4:15 PM	34	113	26	12	9	8	79	100	30	21	120	23	575
4:30 PM	43	112	37	15	12	4	105	123	23	27	155	41	697
4:45 PM	57	108	36	14	6	4	81	123	20	21	125	36	631
5:00 PM	51	112	37	16	7	8	115	133	19	30	138	60	726
5:15 PM	75	115	41	13	14	8	96	155	18	32	150	44	761
5:30 PM	62	107	34	15	10	7	88	150	16	34	167	36	726
5:45 PM	49	101	30	16	11	6	68	132	16	25	160	31	645
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	501	1193	394	161	125	82	1003	1385	274	330	1658	427	7533
APPROACH %'s :	23.99%	57.14%	18.87%	43.75%	33.97%	22.28%	37.68%	52.03%	10.29%	13.66%	68.65%	17.68%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	237	435	142	60	42	29	367	570	69	121	615	171	2858
PEAK HR FACTOR :		0.881			0.936			0.935			0.957		0.939

CONTROL : Signalized

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:				
Tue, Mar 18, 14	LOCATION:	China Town	PROJECT #:	SC0325
	NORTH & SOUTH:	Alameda	LOCATION #:	18
	EAST & WEST:	Arcadia	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► ▲ N S ▼

		NORTHBOUND Alameda			SOUTHBOUND Alameda			EASTBOUND Arcadia			WESTBOUND Arcadia				U-TURNS				
	LANES:	NL 1	NT 3	NR X	SL X	ST 3	SR 0	EL X	ET X	ER X	WL 1.5	WT 2	WR 0.5	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	8	273	0	0	241	13	0	0	0	87	276	27	925	0	0	0	0	0
	7:15 AM	13	217	0	0	229	8	0	0	0	112	308	33	920	0	0	0	0	0
	7:30 AM	27	198	0	0	224	14	0	0	0	120	344	31	958	0	0	0	0	0
	7:45 AM	11	210	0	0	269	6	0	0	0	107	338	37	978	0	0	0	0	0
	8:00 AM	21	186	0	0	292	12	0	0	0	108	340	36	995	0	0	0	0	0
	8:15 AM	18	225	0	0	249	13	0	0	0	125	384	38	1,052	0	0	0	0	0
	8:30 AM	20	244	0	0	239	18	0	0	0	123	328	27	999	0	0	0	0	0
	8:45 AM	14	284	0	0	258	13	0	0	0	137	376	44	1,126	0	0	0	0	0
	9:00 AM	11	287	0	0	151	22	0	0	0	239	356	57	1,123	0	0	0	0	0
	9:15 AM	14	221	0	0	202	17	0	0	0	153	340	49	996	0	0	0	0	0
	9:30 AM	10	229	0	0	196	7	0	0	0	131	356	42	971	0	0	0	0	0
	9:45 AM	12	237	0	0	170	9	0	0	0	157	358	49	992	0	0	0	0	0
	VOLUMES	179	2,811	0	0	2,720	152	0	0	0	1,599	4,104	470	12,035	0	0	0	0	0
	APPROACH %	6%	94%	0%	0%	95%	5%	0%	0%	0%	26%	66%	8%						
	APP/DEPART	2,990	/	3,281	2,872	/	4,319	0	/	0	6,173	/	4,435	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	63	1,040	0	0	897	66	0	0	0	624	1,444	166	4,300					
	APPROACH %	6%	94%	0%	0%	93%	7%	0%	0%	0%	28%	65%	7%						
	PEAK HR FACTOR		0.925			0.888			0.000			0.857		0.955					
	APP/DEPART	1,103	/	1,206	963	/	1,521	0	/	0	2,234	/	1,573	0					
PM	03:00 PM	6	373	0	0	185	13	0	0	0	76	114	38	805	0	0	0	0	0
	3:15 PM	7	355	0	0	182	5	0	0	0	88	176	51	864	0	0	0	0	0
	3:30 PM	5	383	0	0	142	7	0	0	0	106	189	53	885	0	0	0	0	0
	3:45 PM	4	425	0	0	198	7	0	0	0	88	187	58	967	0	0	0	0	0
	4:00 PM	4	441	0	0	192	5	0	0	0	50	92	41	825	0	0	0	0	0
	4:15 PM	4	436	0	0	141	10	0	0	0	87	98	41	817	0	0	0	0	0
	4:30 PM	2	417	0	0	158	5	0	0	0	75	127	49	833	0	0	0	0	0
	4:45 PM	4	467	0	0	159	2	0	0	0	95	163	53	943	0	0	0	0	0
	5:00 PM	0	464	1	0	147	10	0	0	1	111	178	55	967	0	0	0	0	0
	5:15 PM	3	462	0	0	184	6	0	0	0	76	206	50	987	0	0	0	0	0
	5:30 PM	3	473	0	0	194	4	0	0	0	66	151	59	950	0	0	0	0	0
	5:45 PM	2	495	0	0	186	16	0	0	0	95	186	56	1,036	0	0	0	0	0
	VOLUMES	44	5,191	1	0	2,068	90	0	0	1	1,013	1,867	604	10,879	0	0	0	0	0
	APPROACH %	1%	99%	0%	0%	96%	4%	0%	0%	100%	29%	54%	17%						
	APP/DEPART	5,236	/	5,795	2,158	/	3,082	1	/	1	3,484	/	2,001	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	8	1,894	1	0	711	36	0	0	1	348	721	220	3,940					
	APPROACH %	0%	100%	0%	0%	95%	5%	0%	0%	100%	27%	56%	17%						
	PEAK HR FACTOR		0.957			0.925			0.250			0.937		0.951					
	APP/DEPART	1,903	/	2,114	747	/	1,060	1	/	1	1,289	/	765	0					

Alameda

NORTH SIDE

Arcadia WEST SIDE EAST SIDE **Arcadia**

SOUTH SIDE

Alameda

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:				
Tue, Mar 18, 14	LOCATION:	China Town	PROJECT #:	SC0325
	NORTH & SOUTH:	Broadway	LOCATION #:	8
	EAST & WEST:	Aliso	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ◄ W — ▲ N — S ▼ — E ►

		NORTHBOUND Broadway			SOUTHBOUND Broadway			EASTBOUND Aliso			WESTBOUND Aliso				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0.5	ET 1.5	ER 1	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	53	11	28	245	0	24	36	31	0	0	0	428	0	0	0	0	0
	7:15 AM	0	69	13	28	227	0	29	46	39	0	0	0	451	0	0	0	0	0
	7:30 AM	0	94	17	29	225	0	24	41	31	0	0	0	461	0	0	0	0	0
	7:45 AM	0	83	22	39	243	0	22	48	33	0	0	0	490	0	0	0	0	0
	8:00 AM	0	85	23	24	212	0	25	48	38	0	0	0	455	0	0	0	0	0
	8:15 AM	0	60	21	45	227	0	33	57	40	0	0	0	483	0	0	0	0	0
	8:30 AM	0	74	14	41	240	0	25	51	28	0	0	0	473	0	0	0	0	0
	8:45 AM	0	66	15	39	234	0	26	61	41	0	0	0	482	0	0	0	0	0
	9:00 AM	0	59	29	25	219	0	24	60	44	0	0	0	460	0	0	0	0	0
	9:15 AM	0	90	18	16	208	0	30	57	29	0	0	0	448	0	0	0	0	0
	9:30 AM	0	56	24	28	192	0	30	57	41	0	0	0	428	0	0	0	0	0
	9:45 AM	0	65	29	21	174	0	39	61	51	0	0	0	440	0	0	0	0	0
	VOLUMES	0	854	236	363	2,646	0	331	623	446	0	0	0	5,499	0	0	0	0	0
	APPROACH %	0%	78%	22%	12%	88%	0%	24%	45%	32%	0%	0%	0%						
	APP/DEPART	1,090	/	1,185	3,009	/	3,092	1,400	/	1,222	0	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	302	80	149	922	0	105	204	139	0	0	0	1,901					
	APPROACH %	0%	79%	21%	14%	86%	0%	23%	46%	31%	0%	0%	0%						
	PEAK HR FACTOR		0.884			0.949			0.862			0.000		0.970					
	APP/DEPART	382	/	407	1,071	/	1,061	448	/	433	0	/	0	0					
PM	03:00 PM	0	96	42	21	114	0	27	86	24	0	0	0	410	0	0	0	0	0
	3:15 PM	0	114	40	30	127	0	33	83	19	0	0	0	446	0	0	0	0	0
	3:30 PM	0	144	38	25	166	0	26	75	20	0	0	0	494	0	0	0	0	0
	3:45 PM	0	147	23	15	144	0	25	75	17	0	0	0	446	0	0	0	0	0
	4:00 PM	0	166	40	18	114	0	28	92	12	0	0	0	470	0	0	0	0	0
	4:15 PM	0	182	32	17	153	0	31	86	14	0	0	0	515	0	0	0	0	0
	4:30 PM	0	231	39	30	134	0	27	74	14	0	0	0	549	0	0	0	0	0
	4:45 PM	0	203	41	30	156	0	21	64	11	0	0	0	526	0	0	0	0	0
	5:00 PM	0	210	34	23	159	0	17	66	19	0	0	0	528	0	0	0	0	0
	5:15 PM	0	191	45	22	199	0	20	58	23	0	0	0	558	0	0	0	0	0
	5:30 PM	0	216	40	29	160	0	17	48	12	0	0	0	522	0	0	0	0	0
	5:45 PM	0	181	34	27	162	0	18	66	21	0	0	0	509	0	0	0	0	0
	VOLUMES	0	2,081	448	287	1,788	0	290	873	206	0	0	0	5,973	0	0	0	0	0
	APPROACH %	0%	82%	18%	14%	86%	0%	21%	64%	15%	0%	0%	0%						
	APP/DEPART	2,529	/	2,371	2,075	/	1,994	1,369	/	1,608	0	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	835	159	105	648	0	85	262	67	0	0	0	2,161					
	APPROACH %	0%	84%	16%	14%	86%	0%	21%	63%	16%	0%	0%	0%						
	PEAK HR FACTOR		0.920			0.852			0.900			0.000		0.968					
	APP/DEPART	994	/	920	753	/	715	414	/	526	0	/	0	0					

Broadway

NORTH SIDE

Aliso WEST SIDE — EAST SIDE **Aliso**

SOUTH SIDE

Broadway

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	14	14	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	3	4	25	32	0	3	3	22	28	0	0	1	3	4	0	0	0	0	0
	7:30 AM	0	6	7	22	35	0	6	7	22	35	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	4	3	27	34	0	4	3	26	33	0	0	0	1	1	0	0	0	0	0
	8:00 AM	0	2	5	30	37	0	2	3	29	34	0	0	0	1	1	0	0	2	0	2
	8:15 AM	0	0	5	19	24	0	0	3	16	19	0	0	2	3	5	0	0	0	0	0
	8:30 AM	0	3	4	20	27	0	3	4	18	25	0	0	0	2	2	0	0	0	0	0
	8:45 AM	0	2	4	12	18	0	2	4	12	18	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	5	6	15	26	0	5	6	13	24	0	0	0	2	2	0	0	0	0	0
	9:15 AM	0	1	2	10	13	0	1	2	10	13	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	5	8	12	25	0	2	8	11	21	0	1	0	1	2	0	2	0	0	2
	9:45 AM	0	4	7	6	17	0	4	7	6	17	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	35	55	212	302	0	32	50	199	281	0	1	3	13	17	0	2	2	0	4
PM	3:00 PM	0	1	5	15	21	0	1	1	14	16	0	0	2	1	3	0	0	2	0	2
	3:15 PM	0	1	3	13	17	0	1	1	11	13	0	0	2	2	4	0	0	0	0	0
	3:30 PM	0	4	3	8	15	0	0	3	8	11	0	0	0	0	0	0	4	0	0	4
	3:45 PM	4	3	4	14	25	0	3	2	14	19	0	0	2	0	2	4	0	0	0	4
	4:00 PM	0	3	6	20	29	0	3	5	20	28	0	0	1	0	1	0	0	0	0	0
	4:15 PM	0	3	7	32	42	0	3	0	29	32	0	0	3	3	6	0	0	4	0	4
	4:30 PM	0	4	4	44	52	0	4	2	44	50	0	0	2	0	2	0	0	0	0	0
	4:45 PM	0	2	2	22	26	0	2	2	20	24	0	0	0	2	2	0	0	0	0	0
	5:00 PM	0	4	10	53	67	0	4	8	52	64	0	0	2	1	3	0	0	0	0	0
	5:15 PM	0	3	3	16	22	0	3	3	15	21	0	0	0	1	1	0	0	0	0	0
	5:30 PM	0	2	10	9	21	0	2	2	9	13	0	0	4	0	4	0	0	4	0	4
	5:45 PM	0	1	4	15	20	0	1	1	14	16	0	0	3	1	4	0	0	0	0	0
	TOTAL	4	31	61	261	357	0	27	30	250	307	0	0	21	11	32	4	4	10	0	18

APPENDIX F

Level of Service Worksheets – Alternative 2

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Grand Avenue	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
1	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	106	1	106	0	106	106	39	149	1	149	0	149	1	149	0	149	1	149
	Left-Through		0							0				0				0	
	Through	37	1	37	0	37	37	2	41	1	41	0	41	1	41	0	41	1	41
	Through-Right		0							0				0				0	
	Right	190	1	0	3	193	0	17	215	1	0	3	218	1	0	0	218	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	38	1	38	0	38	38	0	40	1	40	0	40	1	40	0	40	1	40
	Left-Through		0							0				0				0	
	Through	265	1	156	0	265	156	1	277	1	163	0	277	1	163	0	277	1	163
	Through-Right		1							1				1				1	
	Right	47	0	47	0	47	47	0	49	0	49	0	49	0	49	0	49	0	49
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	1	17	0	17	17	2	20	1	20	0	20	1	20	0	20	1	20
	Left-Through		0							0				0				0	
	Through	798	2	399	2	800	400	203	1033	2	517	2	1035	2	518	0	1035	2	518
	Through-Right		0							0				0				0	
	Right	216	1	163	0	216	163	72	297	1	223	0	297	1	223	0	297	1	223
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	756	2	416	5	761	419	42	829	2	456	5	834	2	459	0	834	2	459
	Left-Through		0							0				0				0	
	Through	1152	2	386	6	1158	388	192	1391	2	465	6	1397	2	467	0	1397	2	467
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	0	5	0	5	0	5	0	5	0	5	0	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		262	North-South:		262	North-South:			312	North-South:			312	North-South:			312
		East-West:		815	East-West:		819	East-West:			973	East-West:			977	East-West:			977
		SUM:		1077	SUM:		1081	SUM:			1285	SUM:			1289	SUM:			1289
VOLUME/CAPACITY (V/C) RATIO:				0.756			0.759				0.902				0.905				0.905
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.656			0.659				0.802				0.805				0.805
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.003 | Δv/c after mitigation: 0.003

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Grand Avenue	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
1	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	278	1	278	0	278	278	97	386	1	386	0	386	1	386	0	386	1	386
	Left-Through		0							0				0				0	
	Through	603	1	603	0	603	603	7	634	1	634	0	634	1	634	0	634	1	634
	Through-Right		0							0				0				0	
	Right	245	1	18	10	255	24	16	271	1	5	10	281	1	11	0	281	1	11
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	24	1	24	0	24	24	0	25	1	25	0	25	1	25	0	25	1	25
	Left-Through		0							0				0				0	
	Through	107	1	67	0	107	67	1	112	1	70	0	112	1	70	0	112	1	70
	Through-Right		1							1				1				1	
	Right	27	0	27	0	27	27	0	28	0	28	0	28	0	28	0	28	0	28
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	37	1	37	0	37	37	2	41	1	41	0	41	1	41	0	41	1	41
	Left-Through		0							0				0				0	
	Through	896	2	448	9	905	453	253	1185	2	593	9	1194	2	597	0	1194	2	597
	Through-Right		0							0				0				0	
	Right	198	1	59	0	198	59	74	280	1	87	0	280	1	87	0	280	1	87
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	413	2	227	7	420	231	53	483	2	266	7	490	2	270	0	490	2	270
	Left-Through		0							0				0				0	
	Through	1235	2	414	7	1242	417	237	1522	2	510	7	1529	2	512	0	1529	2	512
	Through-Right		1							1				1				1	
	Right	8	0	8	0	8	8	0	8	0	8	0	8	0	8	0	8	0	8
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		627	North-South:		627	North-South:			659	North-South:			659	North-South:			659
		East-West:		675	East-West:		684	East-West:			859	East-West:			867	East-West:			867
		SUM:		1302	SUM:		1311	SUM:			1518	SUM:			1526	SUM:			1526
VOLUME/CAPACITY (V/C) RATIO:				0.914			0.920				1.065				1.071				1.071
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.814			0.820				0.965				0.971				0.971
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.006 | Δv/c after mitigation: 0.006

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Grand Avenue	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
2	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				4				4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-AL 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	56	1	56	0	56	56	23	81	1	81	0	81	1	81	0	81	1	81
	Left-Through		0							0				0				0	
	Through	213	2	107	1	214	107	104	326	2	163	1	327	2	164	0	327	2	164
	Through-Right		0							0				0				0	
	Right	65	1	0	1	66	0	6	74	1	0	1	75	1	0	0	75	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	53	1	53	0	53	53	23	78	1	78	0	78	1	78	0	78	1	78
	Left-Through		0							0				0				0	
	Through	777	2	389	2	779	390	110	919	2	460	2	921	2	461	0	921	2	461
	Through-Right		0							0				0				0	
	Right	384	1	242	2	386	243	28	428	1	278	2	430	1	279	0	430	1	279
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	142	1	142	1	143	143	2	150	1	150	1	151	1	151	0	151	1	151
	Left-Through		0							0				0				0	
	Through	411	1	305	3	414	307	118	546	1	385	3	549	1	387	0	549	1	387
	Through-Right		1							1				1				1	
	Right	199	0	199	0	199	199	17	224	0	224	0	224	0	224	0	224	0	224
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	249	1	249	4	253	253	2	261	1	261	4	265	1	265	0	265	1	265
	Left-Through		0							0				0				0	
	Through	674	2	337	4	678	339	85	786	2	393	4	790	2	395	0	790	2	395
	Through-Right		0							0				0				0	
	Right	139	1	113	0	139	113	5	150	1	111	0	150	1	111	0	150	1	111
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		445	North-South:		446	North-South:			541	North-South:			542	North-South:			542
		East-West:		554	East-West:		560	East-West:			646	East-West:			652	East-West:			652
		SUM:		999	SUM:		1006	SUM:			1187	SUM:			1194	SUM:			1194
VOLUME/CAPACITY (V/C) RATIO:				0.727			0.732				0.863				0.868				0.868
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.627			0.632				0.763				0.768				0.768
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.005 | Δv/c after mitigation: 0.005

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Grand Avenue	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
2	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				4				4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3	NB--	3	SB--	3
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-AL 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	274	1	274	0	274	274	26	311	1	311	0	311	1	311	0	311	1	311
	Left-Through		0							0				0				0	
	Through	982	2	491	5	987	494	83	1105	2	553	5	1110	2	555	0	1110	2	555
	Through-Right		0							0				0				0	
	Right	259	1	34	3	262	34	1	271	1	31	3	274	1	31	0	274	1	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	61	1	61	0	61	61	11	74	1	74	0	74	1	74	0	74	1	74
	Left-Through		0							0				0				0	
	Through	537	2	269	2	539	270	169	728	2	364	2	730	2	365	0	730	2	365
	Through-Right		0							0				0				0	
	Right	169	1	21	2	171	18	49	225	1	50	2	227	1	47	0	227	1	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	148	1	148	5	153	153	21	175	1	175	5	180	1	180	0	180	1	180
	Left-Through		0							0				0				0	
	Through	510	1	347	11	521	353	115	646	1	436	11	657	1	441	0	657	1	441
	Through-Right		1							1				1				1	
	Right	184	0	184	0	184	184	34	225	0	225	0	225	0	225	0	225	0	225
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	225	1	225	3	228	228	6	240	1	240	3	243	1	243	0	243	1	243
	Left-Through		0							0				0				0	
	Through	744	2	372	3	747	374	139	913	2	457	3	916	2	458	0	916	2	458
	Through-Right		0							0				0				0	
	Right	260	1	230	0	260	230	27	298	1	261	0	298	1	261	0	298	1	261
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		552	North-South:		555	North-South:			675	North-South:			676	North-South:			676
		East-West:		572	East-West:		581	East-West:			676	East-West:			684	East-West:			684
		SUM:		1124	SUM:		1136	SUM:			1351	SUM:			1360	SUM:			1360
VOLUME/CAPACITY (V/C) RATIO:				0.817			0.826				0.983				0.989				0.989
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.717			0.726				0.883				0.889				0.889
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.006 | Δv/c after mitigation: 0.006

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill Street /1st Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
3	East-West Street:	Ord Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	21	1	21	0	21	21	0	22	1	22	0	22	1	22	0	22	1	22
	Left-Through		0							0				0				0	
	Through	231	1	132	10	241	141	82	322	1	180	10	332	1	189	0	332	1	189
	Through-Right		1							1				1				1	
	Right	32	0	32	8	40	40	4	37	0	37	8	45	0	45	0	45	0	45
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	60	1	60	5	65	65	14	76	1	76	5	81	1	81	0	81	1	81
	Left-Through		0							0				0				0	
	Through	1556	1	780	0	1556	780	55	1674	1	839	0	1674	1	839	0	1674	1	839
	Through-Right		1							1				1				1	
	Right	4	0	4	0	4	4	0	4	0	4	0	4	0	4	0	4	0	4
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through		0							0				0				0	
	Through	2	0	28	0	2	28	8	10	0	45	0	10	0	45	0	10	0	45
	Through-Right		0							0				0				0	
	Right	25	0	0	0	25	0	8	34	0	0	0	34	0	0	0	34	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	188	0	188	4	192	192	0	196	0	196	4	200	0	200	0	200	0	200
	Left-Through		1							1				1				1	
	Through	2	0	190	0	2	194	2	4	0	200	0	4	0	204	0	4	0	204
	Through-Right		0							0				0				0	
	Right	43	1	13	4	47	15	11	56	1	18	4	60	1	20	0	60	1	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		801	North-South:		801	North-South:			861	North-South:			861	North-South:			861
		East-West:		216	East-West:		220	East-West:			241	East-West:			245	East-West:			245
		SUM:		1017	SUM:		1021	SUM:			1102	SUM:			1106	SUM:			1106
VOLUME/CAPACITY (V/C) RATIO:				0.678			0.681				0.735				0.737				0.737
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.578			0.581				0.635				0.637				0.637
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.002 | Δv/c after mitigation: 0.002

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill Street /1st Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
3	East-West Street:	Ord Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	35	1	35	0	35	35	1	37	1	37	0	37	1	37	0	37	1	37
	Left-Through		0							0				0				0	
	Through	1114	1	604	8	1122	612	84	1243	1	677	8	1251	1	685	0	1251	1	685
	Through-Right		1							1				1				1	
	Right	94	0	94	7	101	101	13	111	0	111	7	118	0	118	0	118	0	118
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	74	1	74	20	94	94	12	89	1	89	20	109	1	109	0	109	1	109
	Left-Through		0							0				0				0	
	Through	1182	1	600	0	1182	600	112	1342	1	680	0	1342	1	680	0	1342	1	680
	Through-Right		1							1				1				1	
	Right	17	0	17	0	17	17	0	18	0	18	0	18	0	18	0	18	0	18
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	10	0	10	0	10	10	0	10	0	10	0	10	0	10	0	10	0	10
	Left-Through		0							0				0				0	
	Through	2	0	34	0	2	34	4	6	0	43	0	6	0	43	0	6	0	43
	Through-Right		0							0				0				0	
	Right	22	0	0	0	22	0	4	27	0	0	0	27	0	0	0	27	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	78	0	78	4	82	82	0	81	0	81	4	85	0	85	0	85	0	85
	Left-Through		1							1				1				1	
	Through	3	0	81	0	3	85	8	11	0	92	0	11	0	96	0	11	0	96
	Through-Right		0							0				0				0	
	Right	145	1	108	5	150	103	21	172	1	128	5	177	1	123	0	177	1	123
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		678	North-South:		706	North-South:			766	North-South:			794	North-South:			794
		East-West:		118	East-West:		116	East-West:			138	East-West:			133	East-West:			133
		SUM:		796	SUM:		822	SUM:			904	SUM:			927	SUM:			927
VOLUME/CAPACITY (V/C) RATIO:				0.531			0.548				0.603				0.618				0.618
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.431			0.448				0.503				0.518				0.518
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.015 | Δv/c after mitigation: 0.015

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
4	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	57	1	57	0	57	57	10	69	1	69	0	69	1	69	0	69	1	69
	Left-Through		0							0				0				0	
	Through	185	1	132	1	186	133	77	270	1	180	1	271	1	180	0	271	1	180
	Through-Right		1							1				1				1	
	Right	79	0	79	0	79	79	7	89	0	89	0	89	0	89	0	89	0	89
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	190	1	190	0	190	190	22	220	1	220	0	220	1	220	0	220	1	220
	Left-Through		0							0				0				0	
	Through	1152	2	576	0	1152	576	41	1240	2	620	0	1240	2	620	0	1240	2	620
	Through-Right		0							0				0				0	
	Right	289	1	273	0	289	272	3	304	1	284	0	304	1	283	0	304	1	283
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	33	1	33	1	34	34	7	41	1	41	1	42	1	42	0	42	1	42
	Left-Through		0							0				0				0	
	Through	370	1	265	2	372	266	131	516	1	345	2	518	1	346	0	518	1	346
	Through-Right		1							1				1				1	
	Right	159	0	159	0	159	159	9	174	0	174	0	174	0	174	0	174	0	174
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	164	1	164	4	168	168	8	179	1	179	4	183	1	183	0	183	1	183
	Left-Through		0							0				0				0	
	Through	670	1	362	7	677	368	78	775	1	423	7	782	1	429	0	782	1	429
	Through-Right		1							1				1				1	
	Right	53	0	53	6	59	59	15	70	0	70	6	76	0	76	0	76	0	76
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		633	North-South:		633	North-South:			689	North-South:			689	North-South:			689
		East-West:		429	East-West:		434	East-West:			524	East-West:			529	East-West:			529
		SUM:		1062	SUM:		1067	SUM:			1213	SUM:			1218	SUM:			1218
VOLUME/CAPACITY (V/C) RATIO:				0.745			0.749				0.851				0.855				0.855
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.645			0.649				0.751				0.755				0.755
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
4	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	92	1	92	0	92	92	17	113	1	113	0	113	1	113	0	113	1	113
	Left-Through		0							0				0				0	
	Through	781	1	429	3	784	432	63	876	1	480	3	879	1	482	0	879	1	482
	Through-Right		1							1				1				1	
	Right	77	0	77	2	79	79	3	83	0	83	2	85	0	85	0	85	0	85
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	89	1	89	0	89	89	29	122	1	122	0	122	1	122	0	122	1	122
	Left-Through		0							0				0				0	
	Through	864	2	432	0	864	432	95	994	2	497	0	994	2	497	0	994	2	497
	Through-Right		0							0				0				0	
	Right	233	1	177	0	233	175	9	251	1	189	0	251	1	186	0	251	1	186
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	112	1	112	5	117	117	8	125	1	125	5	130	1	130	0	130	1	130
	Left-Through		0							0				0				0	
	Through	616	1	350	9	625	354	107	748	1	424	9	757	1	428	0	757	1	428
	Through-Right		1							1				1				1	
	Right	83	0	83	0	83	83	13	99	0	99	0	99	0	99	0	99	0	99
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	29	1	29	4	33	33	12	42	1	42	4	46	1	46	0	46	1	46
	Left-Through		0							0				0				0	
	Through	885	1	517	6	891	532	146	1067	1	628	6	1073	1	643	0	1073	1	643
	Through-Right		1							1				1				1	
	Right	148	0	148	25	173	173	34	188	0	188	25	213	0	213	0	213	0	213
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		524	North-South:		524	North-South:			610	North-South:			610	North-South:			610
		East-West:		629	East-West:		649	East-West:			753	East-West:			773	East-West:			773
		SUM:		1153	SUM:		1173	SUM:			1363	SUM:			1383	SUM:			1383
VOLUME/CAPACITY (V/C) RATIO:				0.809			0.823				0.956				0.971				0.971
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.709			0.723				0.856				0.871				0.871
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.015 | Δv/c after mitigation: 0.015

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
5	East-West Street:	Ord Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	57	1	57	8	65	65	13	72	1	72	8	80	1	80	0	80	1	80
	Left-Through		0							0				0				0	
	Through	405	1	222	2	407	223	105	526	1	284	2	528	1	286	0	528	1	286
	Through-Right		1							1				1				1	
	Right	38	0	38	1	39	39	2	42	0	42	1	43	0	43	0	43	0	43
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	50	1	50	1	51	51	0	52	1	52	1	53	1	53	0	53	1	53
	Left-Through		0							0				0				0	
	Through	1034	1	572	1	1035	572	86	1162	1	638	1	1163	1	638	0	1163	1	638
	Through-Right		1							1				1				1	
	Right	109	0	109	0	109	109	0	113	0	113	0	113	0	113	0	113	0	113
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	0	17	4	21	21	0	18	0	18	4	22	0	22	0	22	0	22
	Left-Through		0							0				0				0	
	Through	61	0	117	6	67	130	21	84	0	148	6	90	0	161	0	90	0	161
	Through-Right		0							0				0				0	
	Right	39	0	0	3	42	0	5	46	0	0	3	49	0	0	0	49	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	9	0	9	1	10	10	3	12	0	12	1	13	0	13	0	13	0	13
	Left-Through		0							0				0				0	
	Through	90	0	138	0	90	139	0	94	0	147	0	94	0	148	0	94	0	148
	Through-Right		0							0				0				0	
	Right	39	0	0	0	39	0	0	41	0	0	0	41	0	0	0	41	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		629	North-South:		637	North-South:			710	North-South:			718	North-South:			718
		East-West:		155	East-West:		160	East-West:			165	East-West:			174	East-West:			174
		SUM:		784	SUM:		797	SUM:			875	SUM:			892	SUM:			892
VOLUME/CAPACITY (V/C) RATIO:				0.550			0.559				0.614				0.626				0.626
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.450			0.459				0.514				0.526				0.526
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.012 | Δv/c after mitigation: 0.012

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
5	East-West Street:	Ord Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	70	1	70	9	79	79	28	101	1	101	9	110	1	110	0	110	1	110
	Left-Through		0							0				0				0	
	Through	1026	1	544	3	1029	546	131	1199	1	634	3	1202	1	637	0	1202	1	637
	Through-Right		1							1				1				1	
	Right	61	0	61	2	63	63	6	69	0	69	2	71	0	71	0	71	0	71
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	51	1	51	4	55	55	0	53	1	53	4	57	1	57	0	57	1	57
	Left-Through		0							0				0				0	
	Through	521	1	291	5	526	294	148	690	1	377	5	695	1	379	0	695	1	379
	Through-Right		1							1				1				1	
	Right	61	0	61	0	61	61	0	63	0	63	0	63	0	63	0	63	0	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	83	0	83	4	87	87	0	86	0	86	4	90	0	90	0	90	0	90
	Left-Through		0							0				0				0	
	Through	119	0	240	12	131	268	7	131	0	265	12	143	0	293	0	143	0	293
	Through-Right		0							0				0				0	
	Right	38	0	0	12	50	0	8	48	0	0	12	60	0	0	0	60	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	20	0	20	3	23	23	9	30	0	30	3	33	0	33	0	33	0	33
	Left-Through		0							0				0				0	
	Through	101	0	239	0	101	242	1	106	0	259	0	106	0	262	0	106	0	262
	Through-Right		0							0				0				0	
	Right	118	0	0	0	118	0	0	123	0	0	0	123	0	0	0	123	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		595	North-South:		601	North-South:			687	North-South:			694	North-South:			694
		East-West:		322	East-West:		329	East-West:			345	East-West:			352	East-West:			352
		SUM:		917	SUM:		930	SUM:			1032	SUM:			1046	SUM:			1046
VOLUME/CAPACITY (V/C) RATIO:				0.644			0.653				0.724				0.734				0.734
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.544			0.553				0.624				0.634				0.634
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.010 | Δv/c after mitigation: 0.010

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
6	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

	Existing Condition	Existing Plus Project-Alt 2	Future Condition W/O Project	Future Condition W/ Project-Alt 2	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	164	1	**164**	7	171	**171**	28	199	1	**199**	7	206	1	**206**	0	206	1	**206**
	Left-Through		0							0				0				0	
	Through	325	1	239	8	333	253	110	448	1	321	8	456	1	335	-1	455	1	334
	Through-Right		1							1				1				1	
	Right	153	0	153	20	173	173	35	194	0	194	20	214	0	214	-2	212	0	212
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	130	1	130	0	130	130	16	151	1	151	0	151	1	151	0	151	1	151
	Left-Through		0							0				0				0	
	Through	648	2	**324**	6	654	**327**	134	808	2	**404**	6	814	2	**407**	0	814	2	**407**
	Through-Right		0							0				0				0	
	Right	279	1	250	0	279	249	23	313	1	278	0	313	1	277	0	313	1	277
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	105	2	**58**	4	109	**60**	20	129	2	**71**	4	133	2	**73**	0	133	2	**73**
	Left-Through		0							0				0				0	
	Through	703	2	263	14	717	268	198	930	2	344	14	944	2	349	-1	943	2	348
	Through-Right		1							1				1				1	
	Right	87	0	87	0	87	87	11	102	0	102	0	102	0	102	0	102	0	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	114	1	114	9	123	123	13	132	1	132	9	141	1	141	-1	140	1	140
	Left-Through		0							0				0				0	
	Through	1345	3	**448**	0	1345	**448**	175	1575	3	**525**	0	1575	3	**525**	0	1575	3	**525**
	Through-Right		0							0				0				0	
	Right	59	1	0	0	59	0	8	69	1	0	0	69	1	0	0	69	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project-Alt 2	Future Condition W/O Project	Future Condition W/ Project-Alt 2	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	488	498	603	613	613
East-West:	506	508	596	598	598
SUM:	994	1006	1199	1211	1211
VOLUME/CAPACITY *(V/C)* RATIO:	0.723	0.732	0.872	0.881	0.881
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.623	0.632	0.772	0.781	0.781
LEVEL OF SERVICE (LOS):	B	B	C	C	C

REMARKS:

Signal System Uprgrade Credit= -0.01
V/C LESS CREDIT ADJUSTMENT: 0.771
LEVEL OF SERVICE (LOS): C

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.009	Δ*v/c* after mitigation:	-0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
6	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

	Existing Condition	Existing Plus Project-Alt 2	Future Condition W/O Project	Future Condition W/ Project-Alt 2	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	170	1	170	14	184	184	38	215	1	215	14	229	1	229	-1	228	1	228
	Left-Through		0							0				0				0	
	Through	819	1	**472**	14	833	**497**	196	1048	1	**608**	14	1062	1	**633**	0	1062	1	**632**
	Through-Right		1							1				1				1	
	Right	124	0	124	37	161	161	38	167	0	167	37	204	0	204	-3	201	0	201
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	54	1	**54**	0	54	**54**	21	77	1	**77**	0	77	1	**77**	0	77	1	**77**
	Left-Through		0							0				0				0	
	Through	406	2	203	23	429	215	178	600	2	300	23	623	2	312	-1	622	2	311
	Through-Right		0							0				0				0	
	Right	120	1	53	0	120	52	28	153	1	74	0	153	1	72	0	153	1	72
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	243	2	**134**	5	248	**136**	36	289	2	**159**	5	294	2	**162**	0	294	2	**162**
	Left-Through		0							0				0				0	
	Through	903	2	315	19	922	322	208	1148	2	409	19	1167	2	415	-1	1166	2	415
	Through-Right		1							1				1				1	
	Right	43	0	43	0	43	43	33	78	0	78	0	78	0	78	0	78	0	78
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	109	1	109	34	143	143	42	155	1	155	34	189	1	189	-2	187	1	187
	Left-Through		0							0				0				0	
	Through	1095	3	**365**	0	1095	**365**	238	1377	3	**459**	0	1377	3	**459**	0	1377	3	**459**
	Through-Right		0							0				0				0	
	Right	188	1	161	0	188	161	29	225	1	187	0	225	1	187	0	225	1	187
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project-Alt 2	Future Condition W/O Project	Future Condition W/ Project-Alt 2	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	526	551	685	710	709
East-West:	499	501	618	621	621
SUM:	1025	1052	1303	1331	1330
VOLUME/CAPACITY *(V/C)* RATIO:	0.745	0.765	0.948	0.968	0.967
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.645	0.665	0.848	0.868	0.867
LEVEL OF SERVICE (LOS):	B	B	D	D	D

REMARKS:

Signal System Uprgrade Credit= -0.01
V/C LESS CREDIT ADJUSTMENT: 0.857
LEVEL OF SERVICE (LOS): D

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.020	Δ*v/c* after mitigation:	0.009
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
7	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?						2				2					2				2
Override Capacity						0				0					0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	412	2	206	8	420	210	189	618	2	309	8	626	2	313	0	626	2	313
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	867	3	289	31	898	299	123	1025	3	342	31	1056	3	352	0	1056	3	352
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	203	1	140	0	203	146	0	211	1	147	0	211	1	153	0	211	1	153
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	218	1	140	18	236	146	4	231	1	147	18	249	1	153	0	249	1	153
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
CRITICAL VOLUMES		North-South:		289	North-South:		299	North-South:			342	North-South:			352	North-South:			352
		East-West:		140	East-West:		146	East-West:			147	East-West:			153	East-West:			153
		SUM:		429	SUM:		445	SUM:			489	SUM:			505	SUM:			505
VOLUME/CAPACITY (V/C) RATIO:				0.286			0.297				0.326				0.337				0.337
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.186			0.197				0.226				0.237				0.237
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.011 | Δv/c after mitigation: 0.011

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
7	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?						2				2					2				2
Override Capacity						0				0					0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	905	2	453	31	936	468	286	1228	2	614	31	1259	2	630	0	1259	2	630
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	578	3	193	30	608	203	211	812	3	271	30	842	3	281	0	842	3	281
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	208	1	149	0	208	169	0	216	1	162	0	216	1	182	0	216	1	182
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	239	1	149	60	299	169	22	271	1	162	60	331	1	182	0	331	1	182
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
CRITICAL VOLUMES		North-South:		453	North-South:		468	North-South:			614	North-South:			630	North-South:			630
		East-West:		149	East-West:		169	East-West:			162	East-West:			182	East-West:			182
		SUM:		602	SUM:		637	SUM:			776	SUM:			812	SUM:			812
VOLUME/CAPACITY (V/C) RATIO:				0.401			0.425				0.517				0.541				0.541
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.301			0.325				0.417				0.441				0.441
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.024 | Δv/c after mitigation: 0.024

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
8	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	302	2	151	4	306	153	169	483	2	242	4	487	2	244	0	487	2	244
	Through-Right		0							0				0				0	
	Right	80	1	80	0	80	80	110	193	1	193	0	193	1	193	0	193	1	193
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	149	1	149	12	161	161	18	173	1	173	12	185	1	185	0	185	1	185
	Left-Through		0							0				0				0	
	Through	922	2	461	17	939	470	105	1064	2	532	17	1081	2	541	0	1081	2	541
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	105	0	105	2	107	107	21	130	0	130	2	132	0	132	0	132	0	132
	Left-Through		1							1				1				1	
	Through	204	1	155	0	204	156	52	264	1	197	0	264	1	198	0	264	1	198
	Through-Right		0							0				0				0	
	Right	139	1	139	3	142	142	3	148	1	148	3	151	1	151	0	151	1	151
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		461	North-South:		470	North-South:			532	North-South:			541	North-South:			541
		East-West:		155	East-West:		156	East-West:			197	East-West:			198	East-West:			198
		SUM:		616	SUM:		626	SUM:			729	SUM:			739	SUM:			739
VOLUME/CAPACITY (V/C) RATIO:				0.411			0.417				0.486				0.493				0.493
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.311			0.317				0.386				0.393				0.393
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.007 | Δv/c after mitigation: 0.007

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
8	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	835	2	418	17	852	426	233	1102	2	551	17	1119	2	560	0	1119	2	560
	Through-Right		0							0				0				0	
	Right	159	1	159	0	159	159	97	262	1	262	0	262	1	262	0	262	1	262
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	105	1	105	10	115	115	8	117	1	117	10	127	1	127	0	127	1	127
	Left-Through		0							0				0				0	
	Through	648	2	324	14	662	331	203	877	2	439	14	891	2	446	0	891	2	446
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	85	0	85	7	92	92	53	141	0	141	7	148	0	148	0	148	0	148
	Left-Through		1							1				1				1	
	Through	262	1	174	0	262	177	61	334	1	238	0	334	1	241	0	334	1	241
	Through-Right		0							0				0				0	
	Right	67	1	67	12	79	79	21	91	1	91	12	103	1	103	0	103	1	103
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		523	North-South:		541	North-South:			668	North-South:			687	North-South:			687
		East-West:		174	East-West:		177	East-West:			238	East-West:			241	East-West:			241
		SUM:		697	SUM:		718	SUM:			906	SUM:			928	SUM:			928
VOLUME/CAPACITY (V/C) RATIO:				0.465			0.479				0.604				0.619				0.619
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.365			0.379				0.504				0.519				0.519
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.015 | Δv/c after mitigation: 0.015

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
9	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

	EXISTING CONDITION	EXISTING PLUS PROJECT-ALT 2	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT-ALT 2	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	68	1	68	1	69	69	11	82	1	82	1	83	1	83	0	83	1	83
	Left-Through		0							0				0				0	
	Through	272	2	120	1	273	121	245	528	2	208	1	529	2	208	0	529	2	208
	Through-Right		1							1				1				1	
	Right	89	0	89	0	89	89	3	96	0	96	0	96	0	96	0	96	0	96
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	95	1	95	4	99	99	30	129	1	129	4	133	1	133	0	133	1	133
	Left-Through		0							0				0				0	
	Through	706	1	462	4	710	470	62	797	1	520	4	801	1	528	0	801	1	528
	Through-Right		1							1				1				1	
	Right	217	0	217	13	230	230	16	242	0	242	13	255	0	255	0	255	0	255
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	28	1	28	3	31	31	28	57	1	57	3	60	1	60	0	60	1	60
	Left-Through		0							0				0				0	
	Through	522	1	296	0	522	296	122	665	1	374	0	665	1	374	0	665	1	374
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	10	82	0	82	0	82	0	82	0	82	0	82
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	67	1	67	2	69	69	4	74	1	74	2	76	1	76	0	76	1	76
	Left-Through		0							0				0				0	
	Through	645	1	341	3	648	343	73	744	1	405	3	747	1	407	0	747	1	407
	Through-Right		1							1				1				1	
	Right	36	0	36	1	37	37	28	65	0	65	1	66	0	66	0	66	0	66
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		530	North-South:		539	North-South:			602	North-South:			611	North-South:			611
		East-West:		369	East-West:		374	East-West:			462	East-West:			467	East-West:			467
		SUM:		899	SUM:		913	SUM:			1064	SUM:			1078	SUM:			1078
VOLUME/CAPACITY (V/C) RATIO:				0.631			0.641				0.747				0.756				0.756
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.531			0.541				0.647				0.656				0.656
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.009 Δv/c after mitigation: 0.009

Significant impacted? NO Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Broadway	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
9	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

	EXISTING CONDITION	EXISTING PLUS PROJECT-ALT 2	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT-ALT 2	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	89	1	89	5	94	94	15	108	1	108	5	113	1	113	0	113	1	113
	Left-Through		0							0				0				0	
	Through	779	2	287	3	782	288	204	1015	2	367	3	1018	2	368	0	1018	2	368
	Through-Right		1							1				1				1	
	Right	81	0	81	0	81	81	2	86	0	86	0	86	0	86	0	86	0	86
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	69	1	69	3	72	72	35	107	1	107	3	110	1	110	0	110	1	110
	Left-Through		0							0				0				0	
	Through	493	1	351	3	496	363	169	682	1	460	3	685	1	471	0	685	1	471
	Through-Right		1							1				1				1	
	Right	209	0	209	20	229	229	20	237	0	237	20	257	0	257	0	257	0	257
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	70	1	70	11	81	81	16	89	1	89	11	100	1	100	0	100	1	100
	Left-Through		0							0				0				0	
	Through	689	1	361	0	689	361	106	823	1	437	0	823	1	437	0	823	1	437
	Through-Right		1							1				1				1	
	Right	33	0	33	0	33	33	17	51	0	51	0	51	0	51	0	51	0	51
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	30	1	30	3	33	33	16	47	1	47	3	50	1	50	0	50	1	50
	Left-Through		0							0				0				0	
	Through	726	1	410	10	736	416	158	913	1	526	10	923	1	532	0	923	1	532
	Through-Right		1							1				1				1	
	Right	93	0	93	2	95	95	41	138	0	138	2	140	0	140	0	140	0	140
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		440	North-South:		457	North-South:			568	North-South:			584	North-South:			584
		East-West:		480	East-West:		497	East-West:			615	East-West:			632	East-West:			632
		SUM:		920	SUM:		954	SUM:			1183	SUM:			1216	SUM:			1216
VOLUME/CAPACITY (V/C) RATIO:				0.646			0.669				0.830				0.853				0.853
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.546			0.569				0.730				0.753				0.753
LEVEL OF SERVICE (LOS):				A			A				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.023 Δv/c after mitigation: 0.023

Significant impacted? NO Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	New High Street-Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
10	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	2	1	2	0	2	2	0	2	1	2	0	2	1	2	0	2	1	2
	Left-Through		0							0				0				0	
	Through	6	1	6	0	6	6	0	6	1	6	0	6	1	6	0	6	1	6
	Through-Right		0							0				0				0	
	Right	29	1	0	0	29	0	0	30	1	0	0	30	1	0	0	30	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	4	0	4	0	4	4	0	4	0	4	0	4	0	4	0	4	0	4
	Left-Through		0							0				0				0	
	Through	270	0	320	5	275	326	26	307	0	361	5	312	0	367	0	312	0	367
	Through-Right		0							0				0				0	
	Right	46	0	0	1	47	0	2	50	0	0	1	51	0	0	0	51	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	5	5	0	0	0	5	0	0	0	5	0	0
	Left-Through		0							0				0				0	
	Through	761	2	381	15	776	388	222	1014	2	507	15	1029	2	515	0	1029	2	515
	Through-Right		0							0				0				0	
	Right	258	2	141	18	276	151	22	290	2	159	18	308	2	168	0	308	2	168
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	226	2	124	3	229	126	12	247	2	136	3	250	2	138	0	250	2	138
	Left-Through		0							0				0				0	
	Through	1471	2	496	8	1479	499	192	1723	2	581	8	1731	2	584	0	1731	2	584
	Through-Right		1							1				1				1	
	Right	18	0	18	0	18	18	1	20	0	20	0	20	0	20	0	20	0	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		322	North-South:		328	North-South:			363	North-South:			369	North-South:			369
		East-West:		505	East-West:		514	East-West:			643	East-West:			653	East-West:			653
		SUM:		827	SUM:		842	SUM:			1006	SUM:			1022	SUM:			1022
VOLUME/CAPACITY (V/C) RATIO:				0.580			0.591				0.706				0.717				0.717
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.480			0.491				0.606				0.617				0.617
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.011 | Δv/c after mitigation: 0.011

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	New High Street-Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
10	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	7	1	7	0	7	7	0	7	1	7	0	7	1	7	0	7	1	7
	Left-Through		0							0				0				0	
	Through	7	1	7	0	7	7	0	7	1	7	0	7	1	7	0	7	1	7
	Through-Right		0							0				0				0	
	Right	38	1	0	0	38	0	0	40	1	0	0	40	1	0	0	40	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	16	0	16	0	16	16	0	17	0	17	0	17	0	17	0	17	0	17
	Left-Through		0							0				0				0	
	Through	58	0	106	20	78	128	9	69	0	125	20	89	0	147	0	89	0	147
	Through-Right		0							0				0				0	
	Right	32	0	0	2	34	0	6	39	0	0	2	41	0	0	0	41	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	4	4	0	0	0	4	0	0	0	4	0	0
	Left-Through		0							0				0				0	
	Through	939	2	470	21	960	480	230	1207	2	604	21	1228	2	614	0	1228	2	614
	Through-Right		0							0				0				0	
	Right	119	2	62	35	154	82	32	156	2	83	35	191	2	102	0	191	2	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	126	2	69	10	136	75	3	134	2	74	10	144	2	79	0	144	2	79
	Left-Through		0							0				0				0	
	Through	1355	2	462	32	1387	473	303	1713	2	585	32	1745	2	596	0	1745	2	596
	Through-Right		1							1				1				1	
	Right	32	0	32	0	32	32	9	42	0	42	0	42	0	42	0	42	0	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		113	North-South:		135	North-South:			132	North-South:			154	North-South:			154
		East-West:		539	East-West:		555	East-West:			678	East-West:			693	East-West:			693
		SUM:		652	SUM:		690	SUM:			810	SUM:			847	SUM:			847
VOLUME/CAPACITY (V/C) RATIO:				0.458			0.484				0.568				0.594				0.594
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.358			0.384				0.468				0.494				0.494
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.026 | Δv/c after mitigation: 0.026

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
11	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	35	2	18	0	35	18	0	36	2	18	0	36	2	18	0	36	2	18
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	975	4	244	12	987	247	124	1139	4	285	12	1151	4	288	0	1151	4	288
	Through-Right		0							0				0				0	
	Right	24	1	24	15	39	39	1	26	1	26	15	41	1	41	0	41	1	41
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	668	1	366	0	668	367	0	695	1	382	0	695	1	383	0	695	1	383
	Left-Through		1							1				1				1	
	Through	431	1	366	3	434	367	3	452	1	382	3	455	1	383	0	455	1	383
	Through-Right		0							0				0				0	
	Right	5	0	0	0	5	0	0	5	0	0	0	5	0	0	0	5	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		244	North-South:		247	North-South:			285	North-South:			288	North-South:			288
		East-West:		366	East-West:		367	East-West:			382	East-West:			383	East-West:			383
		SUM:		610	SUM:		614	SUM:			667	SUM:			671	SUM:			671
VOLUME/CAPACITY (V/C) RATIO:				0.407			0.409				0.445				0.447				0.447
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.307			0.309				0.345				0.347				0.347
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.002 | Δ*v/c* after mitigation: 0.002

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
11	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	41	2	21	0	41	21	0	43	2	22	0	43	2	22	0	43	2	22
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	468	4	117	22	490	123	251	738	4	185	22	760	4	190	0	760	4	190
	Through-Right		0							0				0				0	
	Right	24	1	24	49	73	73	4	29	1	29	49	78	1	78	0	78	1	78
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	222	1	219	0	222	222	0	231	1	231	0	231	1	231	0	231	1	231
	Left-Through		1							1				1				1	
	Through	435	1	219	12	447	224	18	471	1	236	12	483	1	242	0	483	1	242
	Through-Right		0							0				0				0	
	Right	24	0	0	0	24	0	0	25	0	0	0	25	0	0	0	25	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		117	North-South:		123	North-South:			185	North-South:			190	North-South:			190
		East-West:		219	East-West:		224	East-West:			236	East-West:			242	East-West:			242
		SUM:		336	SUM:		347	SUM:			421	SUM:			432	SUM:			432
VOLUME/CAPACITY (V/C) RATIO:				0.224			0.231				0.281				0.288				0.288
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.124			0.131				0.181				0.188				0.188
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.007 | Δ*v/c* after mitigation: 0.007

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
12	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	44	1	33	0	44	33	0	46	1	35	0	46	1	35	0	46	1	35
	Through-Right		1							1				1				1	
	Right	22	0	22	0	22	22	0	23	0	23	0	23	0	23	0	23	0	23
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	149	1	149	5	154	154	4	159	1	159	5	164	1	164	0	164	1	164
	Left-Through		0							0				0				0	
	Through	1491	3	497	6	1497	499	120	1672	3	557	6	1678	3	559	0	1678	3	559
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	289	2	145	12	301	151	149	450	2	217	12	462	2	221	0	462	2	221
	Through-Right		1							1				1				1	
	Right	163	0	163	0	163	163	31	201	0	201	0	201	0	201	0	201	0	201
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		497	North-South:		499	North-South:			557	North-South:			559	North-South:			559
		East-West:		163	East-West:		163	East-West:			217	East-West:			221	East-West:			221
		SUM:		660	SUM:		662	SUM:			774	SUM:			780	SUM:			780
VOLUME/CAPACITY (V/C) RATIO:				0.440			0.441				0.516				0.520				0.520
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.340			0.341				0.416				0.420				0.420
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
12	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	43	1	43	0	43	43	0	45	1	45	0	45	1	45	0	45	1	45
	Through-Right		1							1				1				1	
	Right	60	0	60	0	60	60	0	62	0	62	0	62	0	62	0	62	0	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	110	1	110	7	117	117	2	116	1	116	7	123	1	123	0	123	1	123
	Left-Through		0							0				0				0	
	Through	585	3	195	8	593	198	249	858	3	286	8	866	3	289	0	866	3	289
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	466	2	162	10	476	165	160	645	2	224	10	655	2	227	0	655	2	227
	Through-Right		1							1				1				1	
	Right	20	0	20	0	20	20	6	27	0	27	0	27	0	27	0	27	0	27
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		195	North-South:		198	North-South:			286	North-South:			289	North-South:			289
		East-West:		162	East-West:		165	East-West:			224	East-West:			227	East-West:			227
		SUM:		357	SUM:		363	SUM:			510	SUM:			516	SUM:			516
VOLUME/CAPACITY (V/C) RATIO:				0.238			0.242				0.340				0.344				0.344
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.138			0.142				0.240				0.244				0.244
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
13	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through		1							1				1				1	
	Through	69	0	39	0	69	39	0	72	0	41	0	72	0	41	0	72	0	41
	Through-Right		1							1				1				1	
	Right	3	0	39	0	3	39	0	3	0	41	0	3	0	41	0	3	0	41
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	67	1	67	1	68	68	11	81	1	81	1	82	1	82	0	82	1	82
	Left-Through		0							0				0				0	
	Through	1475	2	738	2	1477	739	63	1598	2	799	2	1600	2	800	0	1600	2	800
	Through-Right		0							0				0				0	
	Right	142	1	142	2	144	144	0	148	1	148	2	150	1	150	0	150	1	150
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	573	1	378	4	577	380	143	739	1	468	4	743	1	470	0	743	1	470
	Through-Right		1							1				1				1	
	Right	182	0	182	0	182	182	7	196	0	196	0	196	0	196	0	196	0	196
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	89	1	89	0	89	89	0	93	1	93	0	93	1	93	0	93	1	93
	Left-Through		0							0				0				0	
	Through	572	2	286	3	575	288	98	693	2	347	3	696	2	348	0	696	2	348
	Through-Right		0							0				0				0	
	Right	3	0	0	0	3	0	0	3	0	0	0	3	0	0	0	3	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		739	North-South:		740	North-South:			800	North-South:			801	North-South:			801
		East-West:		467	East-West:		469	East-West:			561	East-West:			563	East-West:			563
		SUM:		1206	SUM:		1209	SUM:			1361	SUM:			1364	SUM:			1364
VOLUME/CAPACITY (V/C) RATIO:				0.846			0.848				0.955				0.957				0.957
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.746			0.748				0.855				0.857				0.857
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.002 | Δv/c after mitigation: 0.002

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Spring Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
13	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		1							1				1				1	
	Through	105	0	53	0	105	53	0	109	0	55	0	109	0	55	0	109	0	55
	Through-Right		1							1				1				1	
	Right	1	0	53	0	1	53	0	1	0	55	0	1	0	55	0	1	0	55
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	28	1	28	2	30	30	10	39	1	39	2	41	1	41	0	41	1	41
	Left-Through		0							0				0				0	
	Through	515	2	258	2	517	259	241	777	2	389	2	779	2	390	0	779	2	390
	Through-Right		0							0				0				0	
	Right	53	1	53	4	57	57	0	55	1	55	4	59	1	59	0	59	1	59
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	782	1	422	3	785	423	133	947	1	509	3	950	1	510	0	950	1	510
	Through-Right		1							1				1				1	
	Right	61	0	61	0	61	61	7	70	0	70	0	70	0	70	0	70	0	70
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	62	1	62	0	62	62	0	65	1	65	0	65	1	65	0	65	1	65
	Left-Through		0							0				0				0	
	Through	803	2	402	11	814	407	185	1021	2	511	11	1032	2	516	0	1032	2	516
	Through-Right		0							0				0				0	
	Right	4	0	0	0	4	0	0	4	0	0	0	4	0	0	0	4	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		258	North-South:		259	North-South:			389	North-South:			390	North-South:			390
		East-West:		484	East-West:		485	East-West:			574	East-West:			575	East-West:			575
		SUM:		742	SUM:		744	SUM:			963	SUM:			965	SUM:			965
VOLUME/CAPACITY (V/C) RATIO:				0.521			0.522				0.676				0.677				0.677
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.421			0.422				0.576				0.577				0.577
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.001 | Δv/c after mitigation: 0.001

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
14	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2			2			2			2			2			2			2		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0			0			0			0			0			0		
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--		0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?				2			2			2			2			2			2			2		
Override Capacity				0			0			0			0			0			0			0		

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	97	1	74	4	101	75	27	128	1	86	4	132	1	87	0	132	1	87
	Left-Through		1							1				1				1	
	Through	125	1	74	0	125	75	0	130	1	86	0	130	1	87	0	130	1	87
	Through-Right		1							1				1				1	
	Right	87	0	87	0	87	87	1	92	0	92	0	92	0	92	0	92	0	92
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	51	1	51	5	56	56	2	55	1	55	5	60	1	60	0	60	1	60
	Left-Through		0							0				0				0	
	Through	740	2	370	9	749	375	220	990	2	495	9	999	2	500	0	999	2	500
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1622	2	544	5	1627	546	180	1868	2	626	5	1873	2	628	0	1873	2	628
	Through-Right		1							1				1				1	
	Right	11	0	11	0	11	11	0	11	0	11	0	11	0	11	0	11	0	11
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		87	North-South:		87	North-South:			92	North-South:			92	North-South:			92
		East-West:		595	East-West:		602	East-West:			681	East-West:			688	East-West:			688
		SUM:		682	SUM:		689	SUM:			773	SUM:			780	SUM:			780
VOLUME/CAPACITY (V/C) RATIO:				0.455			0.459				0.515				0.520				0.520
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.355			0.359				0.415				0.420				0.420
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.005 | Δv/c after mitigation: 0.005

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
14	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2			2			2			2			2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2			2			2			2			2			2
Override Capacity				0			0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	457	1	391	14	471	395	35	511	1	418	14	525	1	423	0	525	1	423
	Left-Through		1							1				1				1	
	Through	715	1	391	0	715	395	0	744	1	418	0	744	1	423	0	744	1	423
	Through-Right		1							1				1				1	
	Right	236	0	236	0	236	236	2	248	0	248	0	248	0	248	0	248	0	248
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	63	1	63	6	69	69	1	67	1	67	6	73	1	73	0	73	1	73
	Left-Through		0							0				0				0	
	Through	828	2	414	10	838	419	229	1091	2	546	10	1101	2	551	0	1101	2	551
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	965	2	333	20	985	339	282	1286	2	440	20	1306	2	447	0	1306	2	447
	Through-Right		1							1				1				1	
	Right	33	0	33	0	33	33	0	34	0	34	0	34	0	34	0	34	0	34
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		391	North-South:		395	North-South:			418	North-South:			423	North-South:			423
		East-West:		414	East-West:		419	East-West:			546	East-West:			551	East-West:			551
		SUM:		805	SUM:		814	SUM:			964	SUM:			974	SUM:			974
VOLUME/CAPACITY (V/C) RATIO:				0.537			0.543				0.643				0.649				0.649
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.437			0.443				0.543				0.549				0.549
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.006 | Δv/c after mitigation: 0.006

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
15	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	37	0	37	0	37	37	0	39	0	39	0	39	0	39	0	39	0	39
	Left-Through		1							1				1				1	
	Through	320	2	119	0	320	119	28	361	2	133	0	361	2	133	0	361	2	133
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1099	2	380	2	1101	382	3	1147	2	397	2	1149	2	399	0	1149	2	399
	Through-Right		1							1				1				1	
	Right	41	0	41	4	45	45	0	43	0	43	4	47	0	47	0	47	0	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		119	North-South:		119	North-South:			133	North-South:			133	North-South:			133
		East-West:		380	East-West:		382	East-West:			397	East-West:			399	East-West:			399
		SUM:		499	SUM:		501	SUM:			530	SUM:			532	SUM:			532
VOLUME/CAPACITY (V/C) RATIO:				0.333			0.334				0.353				0.355				0.355
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.233			0.234				0.253				0.255				0.255
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.002 | Δv/c after mitigation: 0.002

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
15	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	99	0	99	1	100	100	0	103	0	103	1	104	0	104	0	104	0	104
	Left-Through		1							1				1				1	
	Through	1330	2	476	0	1330	477	37	1421	2	508	0	1421	2	508	0	1421	2	508
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	596	2	234	8	604	241	18	638	2	249	8	646	2	256	0	646	2	256
	Through-Right		1							1				1				1	
	Right	105	0	105	14	119	119	0	109	0	109	14	123	0	123	0	123	0	123
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		476	North-South:		477	North-South:			508	North-South:			508	North-South:			508
		East-West:		234	East-West:		241	East-West:			249	East-West:			256	East-West:			256
		SUM:		710	SUM:		718	SUM:			757	SUM:			764	SUM:			764
VOLUME/CAPACITY (V/C) RATIO:				0.473			0.479				0.505				0.509				0.509
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.373			0.379				0.405				0.409				0.409
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
16	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	339	3	113	0	339	113	28	381	3	127	0	381	3	127	0	381	3	127
	Through-Right		0							0				0				0	
	Right	224	1	224	0	224	224	0	233	1	233	0	233	1	233	0	233	1	233
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	69	0	69	0	69	69	0	72	0	72	0	72	0	72	0	72	0	72
	Left-Through		1							1				1				1	
	Through	442	2	170	17	459	176	141	601	2	224	17	618	2	230	0	618	2	230
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		224	North-South:		224	North-South:			233	North-South:			233	North-South:			233
		East-West:		170	East-West:		176	East-West:			224	East-West:			230	East-West:			230
		SUM:		394	SUM:		400	SUM:			457	SUM:			463	SUM:			463
VOLUME/CAPACITY (V/C) RATIO:				0.263			0.267				0.305				0.309				0.309
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.163			0.167				0.205				0.209				0.209
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
16	East-West Street:	Aliso Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1389	3	463	1	1390	463	37	1482	3	494	1	1483	3	494	0	1483	3	494
	Through-Right		0							0				0				0	
	Right	366	1	366	0	366	366	0	381	1	381	0	381	1	381	0	381	1	381
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	62	0	62	0	62	62	0	65	0	65	0	65	0	65	0	65	0	65
	Left-Through		1							1				1				1	
	Through	560	2	207	18	578	213	156	739	2	268	18	757	2	274	0	757	2	274
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		463	North-South:		463	North-South:			494	North-South:			494	North-South:			494
		East-West:		207	East-West:		213	East-West:			268	East-West:			274	East-West:			274
		SUM:		670	SUM:		676	SUM:			762	SUM:			768	SUM:			768
VOLUME/CAPACITY (V/C) RATIO:				0.447			0.451				0.508				0.512				0.512
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.347			0.351				0.408				0.412				0.412
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
17	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	90	0	90	1	91	91	9	103	0	103	1	104	0	104	0	104	0	104
	Left-Through		1							1				1				1	
	Through	398	3	122	0	398	122	26	440	3	136	0	440	3	136	0	440	3	136
	Through-Right		0							0				0				0	
	Right	168	1	168	0	168	168	0	175	1	175	0	175	1	175	0	175	1	175
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	64	1	64	0	64	64	1	68	1	68	0	68	1	68	0	68	1	68
	Left-Through		0							0				0				0	
	Through	572	2	286	5	577	289	152	747	2	374	5	752	2	376	0	752	2	376
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	573	1	312	2	575	313	88	684	1	369	2	686	1	370	0	686	1	370
	Through-Right		1							1				1				1	
	Right	50	0	50	0	50	50	1	53	0	53	0	53	0	53	0	53	0	53
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		168	North-South:		168	North-South:			175	North-South:			175	North-South:			175
		East-West:		376	East-West:		377	East-West:			437	East-West:			438	East-West:			438
		SUM:		544	SUM:		545	SUM:			612	SUM:			613	SUM:			613
VOLUME/CAPACITY (V/C) RATIO:				0.382			0.382				0.429				0.430				0.430
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.282			0.282				0.329				0.330				0.330
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.001 | Δv/c after mitigation: 0.001

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Main Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
17	East-West Street:	Temple Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	193	0	193	2	195	195	10	211	0	211	2	213	0	213	0	213	0	213
	Left-Through		1							1				1				1	
	Through	1445	3	410	1	1446	410	26	1530	3	435	1	1531	3	436	0	1531	3	436
	Through-Right		0							0				0				0	
	Right	170	1	170	0	170	170	0	177	1	177	0	177	1	177	0	177	1	177
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	113	1	113	0	113	113	2	120	1	120	0	120	1	120	0	120	1	120
	Left-Through		0							0				0				0	
	Through	693	2	347	4	697	349	143	864	2	432	4	868	2	434	0	868	2	434
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	672	1	393	9	681	397	175	874	1	501	9	883	1	505	0	883	1	505
	Through-Right		1							1				1				1	
	Right	113	0	113	0	113	113	9	127	0	127	0	127	0	127	0	127	0	127
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		410	North-South:		410	North-South:			435	North-South:			436	North-South:			436
		East-West:		506	East-West:		510	East-West:			621	East-West:			625	East-West:			625
		SUM:		916	SUM:		920	SUM:			1056	SUM:			1061	SUM:			1061
VOLUME/CAPACITY (V/C) RATIO:				0.643			0.646				0.741				0.745				0.745
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.543			0.546				0.641				0.645				0.645
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Los Angeles Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
18	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	27	1	27	0	27	27	0	28	1	28	0	28	1	28	0	28	1	28
	Left-Through		0							0				0				0	
	Through	184	2	92	0	184	92	242	433	2	217	0	433	2	217	0	433	2	217
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	328	1	176	0	328	176	53	394	1	210	0	394	1	210	0	394	1	210
	Through-Right		1							1				1				1	
	Right	24	0	24	0	24	24	0	25	0	25	0	25	0	25	0	25	0	25
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	318	0	318	0	318	318	84	415	0	415	0	415	0	415	0	415	0	415
	Left-Through		1							1				1				1	
	Through	982	1	441	5	987	442	3	1025	1	488	5	1030	1	489	0	1030	1	489
	Through-Right		1							1				1				1	
	Right	22	0	441	0	22	442	0	23	0	488	0	23	0	489	0	23	0	489
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		203	North-South:		203	North-South:			238	North-South:			238	North-South:			238
		East-West:		441	East-West:		442	East-West:			488	East-West:			489	East-West:			489
		SUM:		644	SUM:		645	SUM:			726	SUM:			727	SUM:			727
VOLUME/CAPACITY (V/C) RATIO:				0.429			0.430				0.484				0.485				0.485
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.329			0.330				0.384				0.385				0.385
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.001 | Δv/c after mitigation: 0.001

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Los Angeles Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
18	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	91	1	91	1	92	92	0	95	1	95	1	96	1	96	0	96	1	96
	Left-Through		0							0				0				0	
	Through	733	2	367	0	733	367	491	1254	2	627	0	1254	2	627	0	1254	2	627
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	137	1	91	0	137	91	95	238	1	143	0	238	1	143	0	238	1	143
	Through-Right		1							1				1				1	
	Right	45	0	45	0	45	45	0	47	0	47	0	47	0	47	0	47	0	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	107	0	107	0	107	107	100	211	0	211	0	211	0	211	0	211	0	211
	Left-Through		1							1				1				1	
	Through	744	1	289	21	765	296	18	792	1	340	21	813	1	347	0	813	1	347
	Through-Right		1							1				1				1	
	Right	17	0	289	0	17	296	0	18	0	340	0	18	0	347	0	18	0	347
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		367	North-South:		367	North-South:			627	North-South:			627	North-South:			627
		East-West:		289	East-West:		296	East-West:			340	East-West:			347	East-West:			347
		SUM:		656	SUM:		663	SUM:			967	SUM:			974	SUM:			974
VOLUME/CAPACITY (V/C) RATIO:				0.437			0.442				0.645				0.649				0.649
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.337			0.342				0.545				0.549				0.549
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.004 | Δv/c after mitigation: 0.004

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Los Angeles Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
19	East-West Street:	Alisо Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases			2			2			2			2			2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 2	SB--	0	NB-- 2	SB--	0	NB-- 2	SB--	0	NB-- 2	SB--	0	NB-- 2	SB--	0	NB-- 2	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?						2			2			2			2			2
Override Capacity						0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	223	2	112	0	223	112	242	474	2	237	0	474	2	237	0	474	2	237
	Through-Right		0							0				0				0	
	Right	148	1	148	0	148	148	98	252	1	252	0	252	1	252	0	252	1	252
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	4	0	4	0	4	4	0	4	0	4	0	4	0	4	0	4	0	4
	Left-Through		1							1				1				1	
	Through	624	1	316	0	624	316	136	785	1	401	0	785	1	401	0	785	1	401
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	13	0	13	0	13	13	0	14	0	14	0	14	0	14	0	14	0	14
	Left-Through		1							1				1				1	
	Through	389	2	134	15	404	138	153	558	2	178	15	573	2	182	0	573	2	182
	Through-Right		1							1				1				1	
	Right	133	0	134	2	135	138	0	138	0	178	2	140	0	182	0	140	0	182
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		316	North-South:		316	North-South:			401	North-South:			401	North-South:			401
		East-West:		134	East-West:		138	East-West:			178	East-West:			182	East-West:			182
		SUM:		450	SUM:		454	SUM:			579	SUM:			583	SUM:			583
VOLUME/CAPACITY (V/C) RATIO:				0.300			0.303				0.386				0.389				0.389
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.200			0.203				0.286				0.289				0.289
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.003 | Δv/c after mitigation: 0.003

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Los Angeles Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
19	East-West Street:	Alisо Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases			2			2			2			2			2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 2	SB--	0	NB-- 2	SB--	0	NB-- 2	SB--	0	NB-- 2	SB--	0	NB-- 2	SB--	0	NB-- 2	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?						2			2			2			2			2
Override Capacity						0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT-ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT-ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	791	2	396	1	792	396	491	1314	2	657	1	1315	2	658	0	1315	2	658
	Through-Right		0							0				0				0	
	Right	388	1	388	0	388	388	176	580	1	580	0	580	1	580	0	580	1	580
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	2	0	2	0	2	2	0	2	0	2	0	2	0	2	0	2	0	2
	Left-Through		1							1				1				1	
	Through	242	1	127	0	242	127	193	445	1	229	0	445	1	229	0	445	1	229
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	38	0	38	0	38	38	0	40	0	40	0	40	0	40	0	40	0	40
	Left-Through		1							1				1				1	
	Through	929	2	247	15	944	251	163	1130	2	298	15	1145	2	302	0	1145	2	302
	Through-Right		1							1				1				1	
	Right	20	0	247	2	22	251	0	21	0	298	2	23	0	302	0	23	0	302
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		398	North-South:		398	North-South:			659	North-South:			660	North-South:			660
		East-West:		247	East-West:		251	East-West:			298	East-West:			302	East-West:			302
		SUM:		645	SUM:		649	SUM:			957	SUM:			962	SUM:			962
VOLUME/CAPACITY (V/C) RATIO:				0.430			0.433				0.638				0.641				0.641
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.330			0.333				0.538				0.541				0.541
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.003 | Δv/c after mitigation: 0.003

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
20	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases			4			4			4			4			4			4	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT - ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT -ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	145	1	145	1	146	146	60	211	1	211	1	212	1	212	0	212	1	212
	Left-Through		0							0				0				0	
	Through	417	2	171	0	417	171	133	567	2	233	0	567	2	233	0	567	2	233
	Through-Right		1							1				1				1	
	Right	97	0	97	0	97	97	30	131	0	131	0	131	0	131	0	131	0	131
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	69	1	69	0	69	69	7	79	1	79	0	79	1	79	0	79	1	79
	Left-Through		0							0				0				0	
	Through	1002	2	400	0	1002	401	150	1193	2	477	0	1193	2	477	0	1193	2	477
	Through-Right		1							1				1				1	
	Right	198	0	198	2	200	200	31	237	0	237	2	239	0	239	0	239	0	239
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	58	1	58	0	58	58	18	78	1	78	0	78	1	78	0	78	1	78
	Left-Through		0							0				0				0	
	Through	630	2	315	6	636	318	152	808	2	404	6	814	2	407	0	814	2	407
	Through-Right		0							0				0				0	
	Right	182	1	37	3	185	39	51	240	1	29	3	243	1	31	0	243	1	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	131	1	131	0	131	131	44	180	1	180	0	180	1	180	0	180	1	180
	Left-Through		0							0				0				0	
	Through	1214	2	428	2	1216	429	90	1353	2	476	2	1355	2	477	0	1355	2	477
	Through-Right		1							1				1				1	
	Right	70	0	70	0	70	70	2	75	0	75	0	75	0	75	0	75	0	75
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		545	North-South:		547	North-South:			688	North-South:			689	North-South:			689
		East-West:		486	East-West:		487	East-West:			584	East-West:			587	East-West:			587
		SUM:		1031	SUM:		1034	SUM:			1272	SUM:			1276	SUM:			1276
VOLUME/CAPACITY (V/C) RATIO:				0.750			0.752				0.925				0.928				0.928
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.650			0.652				0.825				0.828				0.828
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.003 | Δv/c after mitigation: 0.003

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
20	East-West Street:	Cesar Chavez Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases			4			4			4			4			4			4	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	EB-- 3	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT - ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT -ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	121	1	121	3	124	124	70	196	1	196	3	199	1	199	0	199	1	199
	Left-Through		0							0				0				0	
	Through	623	2	249	0	623	249	191	839	2	339	0	839	2	339	0	839	2	339
	Through-Right		1							1				1				1	
	Right	123	0	123	0	123	123	50	178	0	178	0	178	0	178	0	178	0	178
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	116	1	116	0	116	116	3	124	1	124	0	124	1	124	0	124	1	124
	Left-Through		0							0				0				0	
	Through	726	2	297	0	726	300	183	938	2	378	0	938	2	381	0	938	2	381
	Through-Right		1							1				1				1	
	Right	165	0	165	8	173	173	25	197	0	197	8	205	0	205	0	205	0	205
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	65	1	65	0	65	65	35	103	1	103	0	103	1	103	0	103	1	103
	Left-Through		0							0				0				0	
	Through	850	2	425	7	857	429	117	1002	2	501	7	1009	2	505	0	1009	2	505
	Through-Right		0							0				0				0	
	Right	198	1	77	3	201	77	79	285	1	89	3	288	1	89	0	288	1	89
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	136	1	136	0	136	136	40	182	1	182	0	182	1	182	0	182	1	182
	Left-Through		0							0				0				0	
	Through	949	2	344	9	958	347	187	1175	2	422	9	1184	2	425	0	1184	2	425
	Through-Right		1							1				1				1	
	Right	82	0	82	0	82	82	7	92	0	92	0	92	0	92	0	92	0	92
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		418	North-South:		424	North-South:			574	North-South:			580	North-South:			580
		East-West:		561	East-West:		565	East-West:			683	East-West:			687	East-West:			687
		SUM:		979	SUM:		989	SUM:			1257	SUM:			1267	SUM:			1267
VOLUME/CAPACITY (V/C) RATIO:				0.712			0.719				0.914				0.921				0.921
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.612			0.619				0.814				0.821				0.821
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.007 | Δv/c after mitigation: 0.007

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
21	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT - ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT - ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	63	1	63	1	64	64	0	66	1	66	1	67	1	67	0	67	1	67
	Left-Through		0							0				0				0	
	Through [1]	963	2	482	1	964	482	222	1224	2	612	1	1225	2	613	0	1225	2	613
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	897	2	321	3	900	322	176	1109	2	393	3	1112	2	394	0	1112	2	394
	Through-Right		1							1				1				1	
	Right	66	0	66	0	66	66	0	69	0	69	0	69	0	69	0	69	0	69
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	624	1	624	0	624	624	199	848	1	813	0	848	1	814	0	848	1	814
	Left-Through		1							1				1				1	
	Through	1444	1	722	5	1449	725	87	1590	1	813	5	1595	1	814	0	1595	1	814
	Through-Right		1							1				1				1	
	Right	166	0	166	0	166	166	11	184	0	184	0	184	0	184	0	184	0	184
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		482	North-South:		482	North-South:			612	North-South:			613	North-South:			613
		East-West:		722	East-West:		725	East-West:			813	East-West:			814	East-West:			814
		SUM:		1204	SUM:		1207	SUM:			1425	SUM:			1427	SUM:			1427
VOLUME/CAPACITY (V/C) RATIO:				0.845			0.847				1.000				1.001				1.001
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.745			0.747				0.900				0.901				0.901
LEVEL OF SERVICE (LOS):				C			C				D				E				E

REMARKS: [1] NB through volumes excludes bus volume and bus only lane.

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.001 | Δv/c after mitigation: 0.001

Significant impacted? NO | Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2014	Ambient Growth: (%):	1	Conducted by:	RA	Date:	4/16/2014
21	East-West Street:	Arcadia Street	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	RA	Project:	RA440

No. of Phases				3				3				3				3				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB-- 0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			2
Override Capacity				0				0				0				0				0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT - ALT 2			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT - ALT 2				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	8	1	8	2	10	10	0	8	1	8	2	10	1	10	0	10	1	10
	Left-Through		0							0				0				0	
	Through [1]	1821	2	911	3	1824	912	350	2245	2	1123	3	2248	2	1124	0	2248	2	1124
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	711	2	249	3	714	250	206	946	2	328	3	949	2	329	0	949	2	329
	Through-Right		1							1				1				1	
	Right	36	0	36	0	36	36	0	37	0	37	0	37	0	37	0	37	0	37
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	348	1	348	0	348	348	97	459	1	442	0	459	1	449	0	459	1	449
	Left-Through		1							1				1				1	
	Through	721	1	361	19	740	370	118	868	1	442	19	887	1	449	0	887	1	449
	Through-Right		1							1				1				1	
	Right	220	0	220	0	220	220	33	262	0	262	0	262	0	262	0	262	0	262
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		911	North-South:		912	North-South:			1123	North-South:			1124	North-South:			1124
		East-West:		361	East-West:		370	East-West:			442	East-West:			449	East-West:			449
		SUM:		1272	SUM:		1282	SUM:			1565	SUM:			1573	SUM:			1573
VOLUME/CAPACITY (V/C) RATIO:				0.893			0.900				1.098				1.104				1.104
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.793			0.800				0.998				1.004				1.004
LEVEL OF SERVICE (LOS):				C			C				E				F				F

REMARKS: [1] NB through volumes excludes bus volume and bus only lane.

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project: 0.006 | Δv/c after mitigation: 0.006

Significant impacted? NO | Fully mitigated? N/A

LADOT AND
LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
ASSESSMENT LETTERS

CITY OF LOS ANGELES

CALIFORNIA

Jon Kirk Mukri
GENERAL MANAGER

ERIC GARCETTI
MAYOR

DEPARTMENT OF TRANSPORTATION
100 S. Main St., 10th Floor
LOS ANGELES, CA 90012
(213) 972-8470
FAX (213) 972-8410

527 N. Spring St / 555 N. Broadway
LADOT Case No. 14-42281

July 8, 2014

Srinath Raju, President
Raju Associates, Inc.
505 E. Colorado Boulevard, Suite 202
Pasadena, CA 91101

Subject: **TRANSPORTATION IMPACT ANALYSIS FOR THE PROPOSED LA PLAZA CULTURAL VILLAGE PROJECT (REVISED)**

Dear Mr. Raju,

The City of Los Angeles Department of Transportation (LADOT) appreciates the opportunity to review and comment on the traffic study prepared for the proposed LA Plaza Cultural Village project. The proposed project would construct a mix of land use (described below) over two blocks: **Block A** is generally bounded by Cesar Chavez Avenue to the north, Broadway to the west, Spring Street to the east and the US-101 freeway northbound ramps to the south; **Block B** is located west of Block A and is bounded by Cesar Chavez Avenue to the north, Hill Street to the west, Broadway to the east and the US-101 freeway to the south. The project is proposed on land that is under the jurisdiction of Los Angeles County; nonetheless, the traffic study (dated June 2014) was prepared following the LADOT traffic study guidelines.

In order to evaluate the effects of the project's traffic on the available transportation infrastructure, the significance of the project's traffic impacts is measured in terms of change to the volume-to-capacity (V/C) ratio between the "future no project" and the "future with project" scenarios. This change in the V/C ratio is compared to established threshold standards to assess the project-related traffic impacts. Based on LADOT's traffic impact criteria[1], the study included the detailed analysis of 22 intersections and determined that the proposed development is expected to result in one significant traffic impact. The results of the traffic impact analysis, which adequately evaluated the project's traffic impacts on the surrounding community, are summarized in **Attachment 1.**

[1] Per the DOT Traffic Study Policies and Procedures, a significant impact is identified as an increase in the Critical Movement Analysis (CMA) value, due to project related traffic, of 0.01 or more when the final ("with project") Level of Service (LOS) is LOS E or F; an increase of 0.020 or more when the final LOS is LOS D; or an increase of 0.040 or more when the final LOS is LOS C.

DISCUSSION AND FINDINGS

A. Project Description

In Block A, the project proposes to construct 119 residential units, 15,000 square feet of retail space, 11,000 square feet of specialty retail uses, and 9,000 square feet of restaurant space. The project would provide a parking structure with 297 parking spaces including 150 of these spaces allotted to replacement parking. This Block A parking facility would be accessible via a driveway on Broadway that would be limited to right-turns in and out only.

In Block B, the project would construct 226 residential units, 8,000 square feet of retail space, 10,000 square feet of specialty retail uses, and 2,000 square feet of restaurant space. The project would provide a total of 382 subterranean parking spaces accessible via three driveways – one each along Cesar Chavez Avenue, Hill Street and Broadway. Each of these driveways for Block B should be restricted to right-turns in and out only. The conceptual site plan for the overall project with both Blocks A and B is enclosed (see **Attachment 2**). The project is anticipated to be built out by year 2018.

B. Trip Generation

The project is estimated to generate a net increase of approximately 1,974 daily trips, 72 trips in the a.m. peak hour, and 173 trips in the p.m. peak hour for Block A. For Block B, the project is estimated to generate a net increase of approximately 1,611 daily trips, 95 trips in the a.m. peak hour, and 147 trips in the p.m. peak hour. The trip generation estimates are based on formulas published by the Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition, 2012. These trip generation rates are typically derived from surveys of similar land use developments but in areas with little to no transit service. Therefore, DOT's traffic study guidelines allow projects to reduce their total trip generation to account for potential transit usage to and from the site, and for the internal-trip making opportunities that are afforded by mixed-use projects. Consistent these guidelines, the estimated trip generation includes trip credits to account for the mixed-use nature of the project and for the expected transit mode share. A copy of the trip generation table can be found in **Attachment 3**.

C. Freeway Analysis

The traffic study included a freeway impact analysis that was prepared in accordance with the State-mandated Congestion Management Program (CMP) administered by the Los Angeles County Metropolitan Transportation Authority (MTA). According to this analysis, the project would not result in significant traffic impacts on any of the evaluated freeway mainline segments. To comply with the Freeway Analysis Agreement executed between Caltrans and DOT in October 2013, the study also included a screening analysis to determine if additional evaluation of freeway mainline and ramp segments was necessary beyond the CMP requirements. Exceeding one of the four screening criteria would require the applicant to work directly with Caltrans to prepare more detailed freeway analyses. However, the project did not meet or exceed any of the four thresholds defined in the agreement; therefore, no additional freeway analysis was required.

D. Significant Traffic Impacts

The traffic study estimates that the project would result in a significant traffic impact at the intersection of Broadway and Cesar Chavez Avenue based on a project build-out year of 2018. The study identifies transportation mitigations designed to fully mitigate this impact that is anticipated to occur during the afternoon peak hour.

PROJECT REQUIREMENTS

A. Transportation Mitigations

To off-set the impact at the intersection of Cesar Chavez Avenue and Broadway, the study proposes to implement both a Transportation Demand Management (TDM) plan and traffic control system enhancements. These mitigations are acceptable to LADOT. Specifically, the developer should implement the following:

1. Transportation Demand Management Plan

Consistent with City policies on sustainability and smart growth and with LADOT's trip reduction and multi-modal transportation goals, the project mitigation program first focuses on developing a comprehensive trip reduction program and on solutions that promote other modes of travel. The project proposes to implement a Transportation Demand Management (TDM) program to reduce the number of vehicle trips generated by the site. The purpose of a TDM program should be to reduce the use of single occupant vehicles (SOV) by increasing the number of trips by walking, bicycle, carpool, vanpool and transit. The design of the development should contribute to minimizing traffic impacts by emphasizing non-auto modes of transportation. Also, a pedestrian-friendly project with safe and walkable sidewalks should be included in the overall design of this mixed-use project.

LADOT recommends that the developer submit a TDM program for review and LADOT approval prior to the issuance of the first certificate of occupancy for the project. The TDM program should include, but is not limited to, the following strategies:

- Design the project to ensure a bicycle, transit, and pedestrian friendly environment;
- Improve the condition and/or aesthetics of existing sidewalks leading to transit station(s) with adequate lighting to provide for a safer pedestrian environment;
- Provide continuous paved sidewalks / walkways with adequate lighting from all buildings in the Project to nearby transit services and stops. This may include mid-block paseos;
- Implementation of transit shelter improvements / enhancements;
- Coordinate with LADOT and Metro to contribute to "next bus" technologies at key bus stops;
- Administrative support for the formation of carpools/vanpools and rideshare matching services;

- Provide parking as an option only for all residential unit leases (i.e., unbundle the parking);
- Coupled with the unbundled parking, provide on-site car share amenities;
- Provision of self-service bicycle repair area and shared tools for residents and employees;
- Coordinate with LADOT to determine if the site would be eligible for one or more of the services to be provided by the future Mobility Hubs program (secure bike parking, bike-share kiosks, and car-share parking spaces);
- Provision of subsidized transit passes for eligible tenants and employees;
- Provide transit routing and schedule information on-site;
- Promote active transportation (for example, sponsor bike and walk to work promotions);
- Contribute a one-time fixed-fee of **$50,000** to be deposited into the City's Bicycle Plan Trust Fund to implement bicycle improvements within the area of the proposed project;
- Conduct educational workshops for Project employees and/or tenants related to the usage of bicycles on streets including how to integrate bicycle use with transit use and how to ride next to vehicles;
- Provide secure bicycle parking facilities.

2. Traffic Control System Enhancements

To further augment LADOT's existing Automated Traffic Surveillance and Control (ATSAC) traffic signal system, the applicant should be required to install two closed circuit television (CCTV) cameras along Cesar Chavez Avenue in the vicinity of the intersection of Broadway and Cesar Chavez Avenue. With CCTV cameras placed at strategic locations, LADOT can identify the causes of delay and implement instant signal timing remedies to improve the flow of vehicles and buses – particularly during special events or roadside collisions. The developer should be required to design and install the two CCTV cameras and any necessary infrastructure (including fiber optic and interconnect) via the Bureau of Engineering's B-Permit process. Prior to implementing this improvement, the developer should check with LADOT to finalize the location of the two CCTV cameras which are currently proposed at Cesar Chavez Avenue at Grand Avenue and at Cesar Chavez Avenue and Main Street.

B. Construction Impacts

LADOT recommends that a construction work site traffic control plan be submitted to LADOT for review and approval prior to the start of any construction work involving the closure of traffic lanes. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. LADOT also recommends that all construction related traffic be restricted to off-peak hours, as feasible.

C. Site Access Plan

The conceptual site access plan is acceptable to LADOT. LADOT agrees that the vehicle movements at each of the new driveways should be limited to right-turns in and out only. However, please note that the review of the study does not constitute

approval of the driveway dimensions and internal circulation schemes. Those require separate review and approval and should be coordinated with LADOT's Citywide Planning Coordination Section (201 N. Figueroa Street, 4th Floor, Station 3, @ 213-482-7024) to avoid delays in the building permit approval process. Prior to the commencement of building or parking layout design efforts, the applicant should contact LADOT for driveway width and internal circulation requirements so that such traffic flow considerations are designed and incorporated early into the building and parking layout plans. All driveways should be Case 2 driveways - 30 feet and 16 feet wide for two-way and one-way operations, respectively. All pick-up and drop-off activities should take place on-site. Any security gates should be a minimum of 20 feet from the property line.

D. Highway Dedication Requirements

Highway dedication and street improvements may be required along the project's frontage to improve the affected roadways to the standards identified in the City's Transportation Element of the General Plan. The Transportation Element (now referred to as the Mobility Element) is currently being updated and includes proposed redesignations of Hill Street, Broadway, Spring Street and Cesar Chavez Avenue. The proposed redesignations include new sidewalk and roadway width dimensions. All four roadways would require a minimum sidewalk width of 15-feet. Therefore, LADOT recommends that the developer implement a minimum sidewalk width of 15-feet along the project's frontage on Hill Street, Broadway, Spring Street and Cesar Chavez. This sidewalk width is also consistent with the design standards adopted by the Los Angeles City Council in 2009 for all Downtown streets south of the project area.

E. Cesar Chavez Avenue and Spring Street

The developer should work with LADOT and the City's Bureau of Street Services to ensure that the southwest corner of Cesar Chavez Avenue and Spring Street is designed to promote pedestrian and bicycle activity while enhancing safety. The City currently has a programmed improvement at this intersection. The development's design should ensure that the City's plans are appropriately coordinated and augmented as necessary.

F. Development Review Fees

An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to LADOT for permit issuance activities was adopted by the Los Angeles City Council in 2009. This ordinance identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please call Chris Hy at 213-972-8479 or me at 213-972-8476.

Sincerely,

Tomas Carranza
Senior Transportation Engineer

Attachment

c: Gerald Gubatan, Council District 1
Tanner Blackman, Council District 14
Steve Burger, Los Angeles County
Jeff Pletyak, Los Angeles County
Srinath Raju, Raju Associates, Inc.
Blake Lamb, Department of City Planning
Gregg Vandergriff, Los Angeles City BOE
Taimour Tanvoli, LADOT Development Services

TABLE 7
SUMMARY OF INTERSECTION LEVEL OF SERVICE ANALYSIS - WITH MITIGATION MEASURES

No.	Intersection	Peak Hour	Cumulative (2018) Base Conditions V/C	Cumulative (2018) Base Conditions LOS	Cumulative (2018) Plus Project Conditions V/C	Cumulative (2018) Plus Project Conditions LOS	Project Increase in V/C	Significant Project Impact	Cumulative (2018) Plus Project with Mitigation V/C	Cumulative (2018) Plus Project with Mitigation LOS	Project Increase in V/C	Significant Project Impact
1.	Grand Avenue & Cesar Chavez Avenue	AM	0.802	D	0.805	D	0.003	No	0.805	D	0.003	No
		PM	0.965	E	0.974	E	0.009	No	0.974	E	0.009	No
2.	Grand Avenue & Temple Street	AM	0.763	C	0.768	C	0.005	No	0.768	C	0.005	No
		PM	0.883	D	0.891	D	0.008	No	0.891	D	0.008	No
3.	Hill Street & Ord Street	AM	0.635	B	0.637	B	0.002	No	0.637	B	0.002	No
		PM	0.503	A	0.522	A	0.019	No	0.522	A	0.019	No
4.	Hill Street & Temple Street	AM	0.751	C	0.756	C	0.005	No	0.756	C	0.005	No
		PM	0.856	D	0.871	D	0.015	No	0.871	D	0.015	No
5.	Broadway & Ord Street	AM	0.514	A	0.528	A	0.014	No	0.528	A	0.014	No
		PM	0.624	B	0.636	B	0.012	No	0.636	B	0.012	No
6.	Broadway & Cesar Chavez Avenue	AM	0.772	C	0.784	C	0.012	No	0.774	C	0.002	No
		PM	0.848	D	0.879	D	0.031	**Yes**	0.867	D	0.019	No
7.	Broadway & Arcadia Street	AM	0.226	A	0.239	A	0.013	No	0.239	A	0.013	No
		PM	0.417	A	0.455	A	0.038	No	0.455	A	0.038	No
8.	Broadway & US-101 Southbound Off-Ramp/Aliso Street	AM	0.386	A	0.393	A	0.007	No	0.393	A	0.007	No
		PM	0.504	A	0.523	A	0.019	No	0.523	A	0.019	No
9.	Broadway & Temple Street	AM	0.647	B	0.657	B	0.010	No	0.657	B	0.010	No
		PM	0.730	C	0.759	C	0.029	No	0.759	C	0.029	No
10.	New High Street/Spring Street & Cesar Chavez Avenue	AM	0.606	B	0.620	B	0.014	No	0.620	B	0.014	No
		PM	0.468	A	0.508	A	0.040	No	0.508	A	0.040	No
11.	Spring Street & Arcadia Street	AM	0.345	A	0.349	A	0.004	No	0.349	A	0.004	No
		PM	0.181	A	0.192	A	0.011	No	0.192	A	0.011	No
12.	Spring Street & Aliso Street	AM	0.416	A	0.421	A	0.005	No	0.421	A	0.005	No
		PM	0.240	A	0.245	A	0.005	No	0.245	A	0.005	No
13.	Spring Street & Temple Street	AM	0.855	D	0.857	D	0.002	No	0.857	D	0.002	No
		PM	0.576	A	0.577	A	0.001	No	0.577	A	0.001	No
14.	Main Street & Cesar Chavez Avenue	AM	0.415	A	0.421	A	0.006	No	0.421	A	0.006	No
		PM	0.543	A	0.550	A	0.007	No	0.550	A	0.007	No
15.	Main Street & Arcadia Street	AM	0.253	A	0.255	A	0.002	No	0.255	A	0.002	No
		PM	0.405	A	0.411	A	0.006	No	0.411	A	0.006	No
16.	Main Street & Aliso Street	AM	0.205	A	0.209	A	0.004	No	0.209	A	0.004	No
		PM	0.408	A	0.413	A	0.005	No	0.413	A	0.005	No
17.	Main Street & Temple Street	AM	0.329	A	0.330	A	0.001	No	0.330	A	0.001	No
		PM	0.641	B	0.645	B	0.004	No	0.645	B	0.004	No
18.	Los Angeles Street & Arcadia Street	AM	0.384	A	0.385	A	0.001	No	0.385	A	0.001	No
		PM	0.545	A	0.550	A	0.005	No	0.550	A	0.005	No
19.	Los Angeles Street & Aliso Street/US-101 Southbound On-Ramp	AM	0.286	A	0.289	A	0.003	No	0.289	A	0.003	No
		PM	0.538	A	0.542	A	0.004	No	0.542	A	0.004	No
20.	Alameda Street & Cesar Chavez Avenue	AM	0.825	D	0.828	D	0.003	No	0.828	D	0.003	No
		PM	0.814	D	0.822	D	0.008	No	0.822	D	0.008	No
21.	Alameda Street & Arcadia Street/US-101 Northbound Off-Ramp	AM	0.900	D	0.901	E	0.001	No	0.901	E	0.001	No
		PM	0.998	E	1.004	F	0.006	No	1.004	F	0.006	No
22.	Alameda Street & Aliso Street/Commercial Street	AM	0.645	B	0.646	B	0.001	No	0.646	B	0.001	No
		PM	0.880	D	0.882	D	0.002	No	0.882	D	0.002	No

V/C - Volume to Capacity Ratio
LOS - Level of Service

ATTACHMENT 2

SOURCE: TRAMMELL CROW COMPANY

FIGURE 8
PROJECT CONCEPTUAL SITE PLAN

RAJU Associates, Inc.

ATTACHMENT 3

TABLE 3
ESTIMATED WEEKDAY PROJECT TRIP GENERATION

	Size	Daily	AM Peak Hour			PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project - Block A								
Apartment [1]	119 d.u.	764	12	48	60	47	25	72
Retail [2]	15,000 s.f.	1,704	26	16	42	70	76	146
Specialty Retail	11,000 s.f.	440	8	5	13	20	20	40
Restaurant	9,000 s.f.	810	4	3	7	45	22	67
Project Trip Generation Total - Less (20%) Transit Trips		2,974	40	58	98	146	114	260
*Internal Capture/Walk (10%) Trips		(297)	(5)	(5)	(10)	(13)	(13)	(26)
**Retail - Pass-By (50%) Trips		(613)	(8)	(7)	(15)	(27)	(26)	(53)
**Specialty Retail - Pass-By (10%) Trips		(32)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(58)	0	0	0	(3)	(2)	(5)
Block A - Project Trip Generation Total (Net)		**1,974**	**26**	**46**	**72**	**101**	**72**	**173**
Proposed Project - Block B								
Apartment [1]	226 d.u.	1,450	23	90	113	88	47	135
Retail [2]	8,000 s.f.	909	14	8	22	38	40	78
Specialty Retail	10,000 s.f.	400	7	5	12	18	18	36
Restaurant	2,000 s.f.	180	1	1	2	10	5	15
Project Trip Generation Total - Less (20%) Transit Trips		2,351	36	83	119	123	88	211
*Internal Capture/Walk (10%) Trips		(235)	(6)	(6)	(12)	(11)	(10)	(21)
**Retail - Pass-By (50%) Trips		(327)	(4)	(4)	(8)	(14)	(14)	(28)
**Specialty Retail - Pass-By (10%) Trips		(29)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(13)	0	0	0	(1)	0	(1)
Existing Use (to be removed)								
Specialty Retail	(2,000) s.f.	(80)	(1)	(1)	(2)	(4)	(3)	(7)
Quality Restaurant	(1,000) s.f.	(90)	(1)	0	(1)	(5)	(2)	(7)
Existing Uses Trip Generation Total - Less (20%) Transit Trips		(136)	(2)	(1)	(3)	(7)	(4)	(11)
Block B - Project Trip Generation Total (Net)		**1,611**	**23**	**72**	**95**	**88**	**59**	**147**
Overall Project Trip Generation Total (Net)		**3,585**	**49**	**118**	**167**	**189**	**131**	**320**
Trip Rates [3]								
Apartment (ITE Land Use 220)	Trips per d.u.	[4]	20%	80%	[4]	65%	35%	[4]
Retail/Shopping Center (ITE Land Use 820)	Trips per 1,000 s.f.	[5]	62%	38%	[5]	48%	52%	[5]
Quality Restaurant (ITE Land Use 931)	Trips per 1,000 s.f.	89.95	50%	50%	0.81	67%	33%	7.49
Specialty Retail (SANDAG Land Use) [6]	Trips per 1,000 s.f.	40.00	60%	40%	[7]	50%	50%	[7]

* Internal capture/walk trips determined after reduction of transit trips.
** Pass-by trips determined after reduction of transit and internal capture trips.

[1] Trip generation estimates for residential use calculated using effective trip generation rate of the overall dwelling units (345 d.u.).
[2] Trip generation estimates for retail use calculated using effective trip generation rate of the overall retail (23,000 s.f.).
[3] Trip Generation Manual, 9th Edition, ITE 2012, unless otherwise noted.
[4] Trip generation rates for apartment was calculated using the following equations:

Daily:	T = 6.06 (X) + 123.56	Where:
AM Peak Hour:	T = 0.49 (X) + 3.73	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	T = 0.55 (X) + 17.65	X = Number of dwelling units

[5] Trip generation for retail/shopping center was calculated using the following formulas:

		Where:
Daily:	Ln(T) = 0.65 Ln(X) + 5.83	Ln = Natural logarithm
AM Peak Hour:	Ln(T) = 0.61 Ln(X) + 2.24	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	Ln(T) = 0.67 Ln(X) + 3.31	X = Area in 1,000 square feet of gross leasable area

[6] *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, SANDAG, April 2002
[7] AM peak hour is 3% of Daily Trips. PM peak hour is 9% of Daily Trips.

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
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ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

July 9, 2014

IN REPLY PLEASE
REFER TO FILE: T-4

Mr. Srinath Raju
Raju Associates, Inc.
505 East Colorado Boulevard, Suite 202
Pasadena, CA 91101

Dear Mr. Raju:

LA PLAZA DE CULTURA VILLAGE MIXED-USE PROJECT
TRAFFIC STUDY – JUNE 2014
LOS ANGELES

As requested, we reviewed the Traffic Study for the proposed La Plaza De Cultura Village Mixed-Use Project located entirely within the City of Los Angeles.

We generally agree with the traffic study that the traffic generated cumulatively by the project, and other related projects will have a significant impact at the intersection of Broadway and Cesar Chavez Avenue. Consequently, the project shall implement the transportation mitigations identified under Project Requirements, Section A in the letter from the City of Los Angeles Department of Transportation dated July 8, 2014 (copy enclosed).

If you have any questions, please contact Mr. Andrew Ngumba of Traffic and Lighting Division, Traffic Studies Section, at (626) 300-4851.

Very truly yours,

GAIL FARBER
Director of Public Works

DEAN R. LEHMAN
Assistant Deputy Director
Traffic and Lighting Division

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Enc.

cc: City of Los Angeles Department of Transportation (Carranza)

CITY OF LOS ANGELES

CALIFORNIA

Jon Kirk Mukri
GENERAL MANAGER

ERIC GARCETTI
MAYOR

DEPARTMENT OF TRANSPORTATION
100 S. Main St., 10th Floor
LOS ANGELES, CA 90012
(213) 972-8470
FAX (213) 972-8410

527 N. Spring St / 555 N. Broadway
LADOT Case No. 14-42281

July 8, 2014

Srinath Raju, President
Raju Associates, Inc.
505 E. Colorado Boulevard, Suite 202
Pasadena, CA 91101

Subject: **TRANSPORTATION IMPACT ANALYSIS FOR THE PROPOSED LA PLAZA CULTURAL VILLAGE PROJECT (REVISED)**

Dear Mr. Raju,

The City of Los Angeles Department of Transportation (LADOT) appreciates the opportunity to review and comment on the traffic study prepared for the proposed LA Plaza Cultural Village project. The proposed project would construct a mix of land use (described below) over two blocks: **Block A** is generally bounded by Cesar Chavez Avenue to the north, Broadway to the west, Spring Street to the east and the US-101 freeway northbound ramps to the south; **Block B** is located west of Block A and is bounded by Cesar Chavez Avenue to the north, Hill Street to the west, Broadway to the east and the US-101 freeway to the south. The project is proposed on land that is under the jurisdiction of Los Angeles County; nonetheless, the traffic study (dated June 2014) was prepared following the LADOT traffic study guidelines.

In order to evaluate the effects of the project's traffic on the available transportation infrastructure, the significance of the project's traffic impacts is measured in terms of change to the volume-to-capacity (V/C) ratio between the "future no project" and the "future with project" scenarios. This change in the V/C ratio is compared to established threshold standards to assess the project-related traffic impacts. Based on LADOT's traffic impact criteria[1], the study included the detailed analysis of 22 intersections and determined that the proposed development is expected to result in one significant traffic impact. The results of the traffic impact analysis, which adequately evaluated the project's traffic impacts on the surrounding community, are summarized in **Attachment 1.**

[1] Per the DOT Traffic Study Policies and Procedures, a significant impact is identified as an increase in the Critical Movement Analysis (CMA) value, due to project related traffic, of 0.01 or more when the final ("with project") Level of Service (LOS) is LOS E or F; an increase of 0.020 or more when the final LOS is LOS D; or an increase of 0.040 or more when the final LOS is LOS C.

DISCUSSION AND FINDINGS

A. Project Description

In Block A, the project proposes to construct 119 residential units, 15,000 square feet of retail space, 11,000 square feet of specialty retail uses, and 9,000 square feet of restaurant space. The project would provide a parking structure with 297 parking spaces including 150 of these spaces allotted to replacement parking. This Block A parking facility would be accessible via a driveway on Broadway that would be limited to right-turns in and out only.

In Block B, the project would construct 226 residential units, 8,000 square feet of retail space, 10,000 square feet of specialty retail uses, and 2,000 square feet of restaurant space. The project would provide a total of 382 subterranean parking spaces accessible via three driveways – one each along Cesar Chavez Avenue, Hill Street and Broadway. Each of these driveways for Block B should be restricted to right-turns in and out only. The conceptual site plan for the overall project with both Blocks A and B is enclosed (see **Attachment 2**). The project is anticipated to be built out by year 2018.

B. Trip Generation

The project is estimated to generate a net increase of approximately 1,974 daily trips, 72 trips in the a.m. peak hour, and 173 trips in the p.m. peak hour for Block A. For Block B, the project is estimated to generate a net increase of approximately 1,611 daily trips, 95 trips in the a.m. peak hour, and 147 trips in the p.m. peak hour. The trip generation estimates are based on formulas published by the Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition, 2012. These trip generation rates are typically derived from surveys of similar land use developments but in areas with little to no transit service. Therefore, DOT's traffic study guidelines allow projects to reduce their total trip generation to account for potential transit usage to and from the site, and for the internal-trip making opportunities that are afforded by mixed-use projects. Consistent these guidelines, the estimated trip generation includes trip credits to account for the mixed-use nature of the project and for the expected transit mode share. A copy of the trip generation table can be found in **Attachment 3.**

C. Freeway Analysis

The traffic study included a freeway impact analysis that was prepared in accordance with the State-mandated Congestion Management Program (CMP) administered by the Los Angeles County Metropolitan Transportation Authority (MTA). According to this analysis, the project would not result in significant traffic impacts on any of the evaluated freeway mainline segments. To comply with the Freeway Analysis Agreement executed between Caltrans and DOT in October 2013, the study also included a screening analysis to determine if additional evaluation of freeway mainline and ramp segments was necessary beyond the CMP requirements. Exceeding one of the four screening criteria would require the applicant to work directly with Caltrans to prepare more detailed freeway analyses. However, the project did not meet or exceed any of the four thresholds defined in the agreement; therefore, no additional freeway analysis was required.

D. Significant Traffic Impacts
The traffic study estimates that the project would result in a significant traffic impact at the intersection of Broadway and Cesar Chavez Avenue based on a project build-out year of 2018. The study identifies transportation mitigations designed to fully mitigate this impact that is anticipated to occur during the afternoon peak hour.

PROJECT REQUIREMENTS

A. Transportation Mitigations
To off-set the impact at the intersection of Cesar Chavez Avenue and Broadway, the study proposes to implement both a Transportation Demand Management (TDM) plan and traffic control system enhancements. These mitigations are acceptable to LADOT. Specifically, the developer should implement the following:

1. **Transportation Demand Management Plan**
Consistent with City policies on sustainability and smart growth and with LADOT's trip reduction and multi-modal transportation goals, the project mitigation program first focuses on developing a comprehensive trip reduction program and on solutions that promote other modes of travel. The project proposes to implement a Transportation Demand Management (TDM) program to reduce the number of vehicle trips generated by the site. The purpose of a TDM program should be to reduce the use of single occupant vehicles (SOV) by increasing the number of trips by walking, bicycle, carpool, vanpool and transit. The design of the development should contribute to minimizing traffic impacts by emphasizing non-auto modes of transportation. Also, a pedestrian-friendly project with safe and walkable sidewalks should be included in the overall design of this mixed-use project.

LADOT recommends that the developer submit a TDM program for review and LADOT approval prior to the issuance of the first certificate of occupancy for the project. The TDM program should include, but is not limited to, the following strategies:

- Design the project to ensure a bicycle, transit, and pedestrian friendly environment;
- Improve the condition and/or aesthetics of existing sidewalks leading to transit station(s) with adequate lighting to provide for a safer pedestrian environment;
- Provide continuous paved sidewalks / walkways with adequate lighting from all buildings in the Project to nearby transit services and stops. This may include mid-block paseos;
- Implementation of transit shelter improvements / enhancements;
- Coordinate with LADOT and Metro to contribute to "next bus" technologies at key bus stops;
- Administrative support for the formation of carpools/vanpools and rideshare matching services;

- Provide parking as an option only for all residential unit leases (i.e., unbundle the parking);
- Coupled with the unbundled parking, provide on-site car share amenities;
- Provision of self-service bicycle repair area and shared tools for residents and employees;
- Coordinate with LADOT to determine if the site would be eligible for one or more of the services to be provided by the future Mobility Hubs program (secure bike parking, bike-share kiosks, and car-share parking spaces);
- Provision of subsidized transit passes for eligible tenants and employees;
- Provide transit routing and schedule information on-site;
- Promote active transportation (for example, sponsor bike and walk to work promotions);
- Contribute a one-time fixed-fee of **$50,000** to be deposited into the City's Bicycle Plan Trust Fund to implement bicycle improvements within the area of the proposed project;
- Conduct educational workshops for Project employees and/or tenants related to the usage of bicycles on streets including how to integrate bicycle use with transit use and how to ride next to vehicles;
- Provide secure bicycle parking facilities.

2. **Traffic Control System Enhancements**
To further augment LADOT's existing Automated Traffic Surveillance and Control (ATSAC) traffic signal system, the applicant should be required to install two closed circuit television (CCTV) cameras along Cesar Chavez Avenue in the vicinity of the intersection of Broadway and Cesar Chavez Avenue. With CCTV cameras placed at strategic locations, LADOT can identify the causes of delay and implement instant signal timing remedies to improve the flow of vehicles and buses – particularly during special events or roadside collisions. The developer should be required to design and install the two CCTV cameras and any necessary infrastructure (including fiber optic and interconnect) via the Bureau of Engineering's B-Permit process. Prior to implementing this improvement, the developer should check with LADOT to finalize the location of the two CCTV cameras which are currently proposed at Cesar Chavez Avenue at Grand Avenue and at Cesar Chavez Avenue and Main Street.

B. Construction Impacts
LADOT recommends that a construction work site traffic control plan be submitted to LADOT for review and approval prior to the start of any construction work involving the closure of traffic lanes. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. LADOT also recommends that all construction related traffic be restricted to off-peak hours, as feasible.

C. Site Access Plan
The conceptual site access plan is acceptable to LADOT. LADOT agrees that the vehicle movements at each of the new driveways should be limited to right-turns in and out only. However, please note that the review of the study does not constitute

approval of the driveway dimensions and internal circulation schemes. Those require separate review and approval and should be coordinated with LADOT's Citywide Planning Coordination Section (201 N. Figueroa Street, 4th Floor, Station 3, @ 213-482-7024) to avoid delays in the building permit approval process. Prior to the commencement of building or parking layout design efforts, the applicant should contact LADOT for driveway width and internal circulation requirements so that such traffic flow considerations are designed and incorporated early into the building and parking layout plans. All driveways should be Case 2 driveways - 30 feet and 16 feet wide for two-way and one-way operations, respectively. All pick-up and drop-off activities should take place on-site. Any security gates should be a minimum of 20 feet from the property line.

D. Highway Dedication Requirements

Highway dedication and street improvements may be required along the project's frontage to improve the affected roadways to the standards identified in the City's Transportation Element of the General Plan. The Transportation Element (now referred to as the Mobility Element) is currently being updated and includes proposed redesignations of Hill Street, Broadway, Spring Street and Cesar Chavez Avenue. The proposed redesignations include new sidewalk and roadway width dimensions. All four roadways would require a minimum sidewalk width of 15-feet. Therefore, LADOT recommends that the developer implement a minimum sidewalk width of 15-feet along the project's frontage on Hill Street, Broadway, Spring Street and Cesar Chavez. This sidewalk width is also consistent with the design standards adopted by the Los Angeles City Council in 2009 for all Downtown streets south of the project area.

E. Cesar Chavez Avenue and Spring Street

The developer should work with LADOT and the City's Bureau of Street Services to ensure that the southwest corner of Cesar Chavez Avenue and Spring Street is designed to promote pedestrian and bicycle activity while enhancing safety. The City currently has a programmed improvement at this intersection. The development's design should ensure that the City's plans are appropriately coordinated and augmented as necessary.

F. Development Review Fees

An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to LADOT for permit issuance activities was adopted by the Los Angeles City Council in 2009. This ordinance identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please call Chris Hy at 213-972-8479 or me at 213-972-8476.

Sincerely,

Tomas Carranza
Senior Transportation Engineer

Attachment

c: Gerald Gubatan, Council District 1
Tanner Blackman, Council District 14
Steve Burger, Los Angeles County
Jeff Pletyak, Los Angeles County
Srinath Raju, Raju Associates, Inc.
Blake Lamb, Department of City Planning
Gregg Vandergriff, Los Angeles City BOE
Taimour Tanvoli, LADOT Development Services

ATTACHMENT 1

TABLE 7
SUMMARY OF INTERSECTION LEVEL OF SERVICE ANALYSIS - WITH MITIGATION MEASURES

No.	Intersection	Peak Hour	Cumulative (2018) Base Conditions		Cumulative (2018) Plus Project Conditions		Project Increase in V/C	Significant Project Impact	Cumulative (2018) Plus Project with Mitigation		Project Increase in V/C	Significant Project Impact
			V/C	LOS	V/C	LOS			V/C	LOS		
1.	Grand Avenue & Cesar Chavez Avenue	AM	0.802	D	0.805	D	0.003	No	0.805	D	0.003	No
		PM	0.965	E	0.974	E	0.009	No	0.974	E	0.009	No
2.	Grand Avenue & Temple Street	AM	0.763	C	0.768	C	0.005	No	0.768	C	0.005	No
		PM	0.883	D	0.891	D	0.008	No	0.891	D	0.008	No
3.	Hill Street & Ord Street	AM	0.635	B	0.637	B	0.002	No	0.637	B	0.002	No
		PM	0.503	A	0.522	A	0.019	No	0.522	A	0.019	No
4.	Hill Street & Temple Street	AM	0.751	C	0.756	C	0.005	No	0.756	C	0.005	No
		PM	0.856	D	0.871	D	0.015	No	0.871	D	0.015	No
5.	Broadway & Ord Street	AM	0.514	A	0.528	A	0.014	No	0.528	A	0.014	No
		PM	0.624	B	0.636	B	0.012	No	0.636	B	0.012	No
6.	Broadway & Cesar Chavez Avenue	AM	0.772	C	0.784	C	0.012	No	0.774	C	0.002	No
		PM	0.848	D	0.879	D	0.031	Yes	0.867	D	0.019	No
7.	Broadway & Arcadia Street	AM	0.226	A	0.239	A	0.013	No	0.239	A	0.013	No
		PM	0.417	A	0.455	A	0.038	No	0.455	A	0.038	No
8.	Broadway & US-101 Southbound Off-Ramp/Aliso Street	AM	0.386	A	0.393	A	0.007	No	0.393	A	0.007	No
		PM	0.504	A	0.523	A	0.019	No	0.523	A	0.019	No
9.	Broadway & Temple Street	AM	0.647	B	0.657	B	0.010	No	0.657	B	0.010	No
		PM	0.730	C	0.759	C	0.029	No	0.759	C	0.029	No
10.	New High Street/Spring Street & Cesar Chavez Avenue	AM	0.606	B	0.620	B	0.014	No	0.620	B	0.014	No
		PM	0.468	A	0.508	A	0.040	No	0.508	A	0.040	No
11.	Spring Street & Arcadia Street	AM	0.345	A	0.349	A	0.004	No	0.349	A	0.004	No
		PM	0.181	A	0.192	A	0.011	No	0.192	A	0.011	No
12.	Spring Street & Aliso Street	AM	0.416	A	0.421	A	0.005	No	0.421	A	0.005	No
		PM	0.240	A	0.245	A	0.005	No	0.245	A	0.005	No
13.	Spring Street & Temple Street	AM	0.855	D	0.857	D	0.002	No	0.857	D	0.002	No
		PM	0.576	A	0.577	A	0.001	No	0.577	A	0.001	No
14.	Main Street & Cesar Chavez Avenue	AM	0.415	A	0.421	A	0.006	No	0.421	A	0.006	No
		PM	0.543	A	0.550	A	0.007	No	0.550	A	0.007	No
15.	Main Street & Arcadia Street	AM	0.253	A	0.255	A	0.002	No	0.255	A	0.002	No
		PM	0.405	A	0.411	A	0.006	No	0.411	A	0.006	No
16.	Main Street & Aliso Street	AM	0.205	A	0.209	A	0.004	No	0.209	A	0.004	No
		PM	0.408	A	0.413	A	0.005	No	0.413	A	0.005	No
17.	Main Street & Temple Street	AM	0.329	A	0.330	A	0.001	No	0.330	A	0.001	No
		PM	0.641	B	0.645	B	0.004	No	0.645	B	0.004	No
18.	Los Angeles Street & Arcadia Street	AM	0.384	A	0.385	A	0.001	No	0.385	A	0.001	No
		PM	0.545	A	0.550	A	0.005	No	0.550	A	0.005	No
19.	Los Angeles Street & Aliso Street/US-101 Southbound On-Ramp	AM	0.286	A	0.289	A	0.003	No	0.289	A	0.003	No
		PM	0.538	A	0.542	A	0.004	No	0.542	A	0.004	No
20.	Alameda Street & Cesar Chavez Avenue	AM	0.825	D	0.828	D	0.003	No	0.828	D	0.003	No
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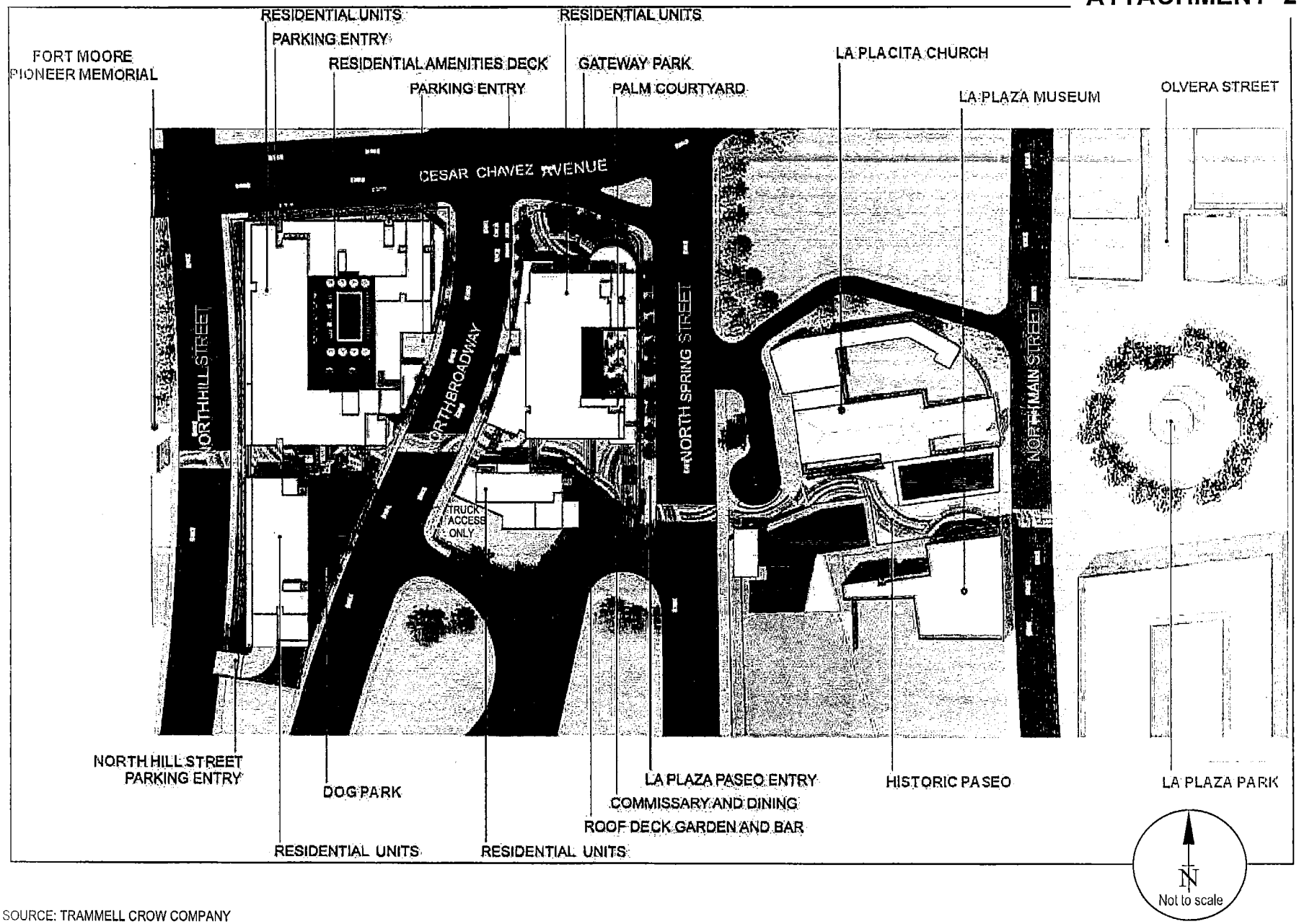

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Project Trip Generation Total - Less (20%) Transit Trips		2,351	36	83	119	123	88	211
*Internal Capture/Walk (10%) Trips		(235)	(6)	(6)	(12)	(11)	(10)	(21)
**Retail - Pass-By (50%) Trips		(327)	(4)	(4)	(8)	(14)	(14)	(28)
**Specialty Retail - Pass-By (10%) Trips		(29)	(1)	0	(1)	(2)	(1)	(3)
**Restaurant - Pass-By (10%) Trips		(13)	0	0	0	(1)	0	(1)
Existing Use (to be removed)								
Specialty Retail	(2,000) s.f.	(80)	(1)	(1)	(2)	(4)	(3)	(7)
Quality Restaurant	(1,000) s.f.	(90)	(1)	0	(1)	(5)	(2)	(7)
Existing Uses Trip Generation Total - Less (20%) Transit Trips		(136)	(2)	(1)	(3)	(7)	(4)	(11)
Block B - Project Trip Generation Total (Net)		**1,611**	**23**	**72**	**95**	**88**	**59**	**147**
Overall Project Trip Generation Total (Net)		**3,585**	**49**	**118**	**167**	**189**	**131**	**320**
Trip Rates [3]								
Apartment (ITE Land Use 220)	Trips per d.u.	[4]	20%	80%	[4]	65%	35%	[4]
Retail/Shopping Center (ITE Land Use 820)	Trips per 1,000 s.f.	[5]	62%	38%	[5]	48%	52%	[5]
Quality Restaurant (ITE Land Use 931)	Trips per 1,000 s.f.	89.95	50%	50%	0.81	67%	33%	7.49
Specialty Retail (SANDAG Land Use) [6]	Trips per 1,000 s.f.	40.00	60%	40%	[7]	50%	50%	[7]

* Internal capture/walk trips determined after reduction of transit trips.
** Pass-by trips determined after reduction of transit and internal capture trips.

[1] Trip generation estimates for residential use calculated using effective trip generation rate of the overall dwelling units (345 d.u.).
[2] Trip generation estimates for retail use calculated using effective trip generation rate of the overall retail (23,000 s.f.).
[3] Trip Generation Manual, 9th Edition, ITE 2012, unless otherwise noted.
[4] Trip generation rates for apartment was calculated using the following equations:

Daily:	T = 6.06 (X) + 123.56	Where:
AM Peak Hour:	T = 0.49 (X) + 3.73	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	T = 0.55 (X) + 17.65	X = Number of dwelling units

[5] Trip generation for retail/shopping center was calculated using the following formulas:

		Where:
Daily:	Ln(T) = 0.65 Ln(X) + 5.83	Ln = Natural logarithm
AM Peak Hour:	Ln(T) = 0.61 Ln(X) + 2.24	T = Two-way volume of traffic (total trip-ends)
PM Peak Hour:	Ln(T) = 0.67 Ln(X) + 3.31	X = Area in 1,000 square feet of gross leasable area

[6] *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, SANDAG, April 2002
[7] AM peak hour is 3% of Daily Trips. PM peak hour is 9% of Daily Trips.

APPENDIX H

Utility and Service Systems Calculations

PROJECT USAGE

WATER

	Rates		Usage		Existing Usage	
Land Use	Water Generation Rates	Unit		Water Generated (gpd)		Water Generated (gpd)
Multifamily Residential	291	gpd/du	345	100,409	-	-
Retaurant	0.88	gpd/sf	11,000	9,731	1,000	885
Retail	0.3	gpd/sf	44,000	14,402	2,000	655
Total				**124,542**		**1,539**

WASTEWATER

	Rates		Usage		Existing Usage	
Land Use	Wastewater Generation Rates	Unit		Wastewater Generated (gpd)		Wastewater Generated (gpd)
Multifamily Residential	142.8	gpd/du	345	49266	0	0
Restaurant	0.67	gpd/sf	11,000	7,318	1,000	665
Retail	0.16	gpd/sf	44,000	7,143	2,000	325
Total				**63,727**		**990**

SOLID WASTE

	Rates		Usage		Existing Usage	
Land Use	Solid Waste Generation Rates	Unit		Solid Waste Generated (lbs per day)		Solid Waste Generated (lbs per day)
Multifamily Residential	2.25	lbs/du/day	345	776.3	-	-
Restaurant	4.99	lbs/1000sf/day	11,000	54.9	1,000	5.0
Retail	5.75	lbs/1000sf/day	44,000	253.0	2,000	11.5
Total				**1,084.1**		**16.5**

ELECTRICITY

	Rates		Usage		Existing Usage	
Land Use	Electricity Generation Rates	Unit		Electricity Generated (kWh/year)		Electricity Generated (kWh/year)
Multifamily Residential	1,008.56	kWh/du/year	345	347,953	-	-
Parking Structure	2.82	kWh/sf/year	314,400	886,608		
Restaurant	18.75	kWh/sf/year	11,000	206,250	1,000	18,750
Retail	11.94	kWh/sf/year	44,000	525,360	2,000	23,880
Total				**1,966,171.2**		**42,630.0**

NATURAL GAS

	Rates		Usage		Existing Usage	
Land Use	Natural Gas Generation Rates	Unit		Natural Gas Generated (cf/year)		Natural Gas Generated (cf/year)
Multifamily Residential	5,415	cf/du/year	345	1,868,175	-	-
Restaurant	44.34		11,000	487,740	1,000	44,340
Retail	1.19	cf/sf/year	44,000	52,360	2,000	2,380
Total				**2,408,275**		**46,720**

Water	Indoor Rate (Yearly)	Outdoor Rate (Yearly)	Combined Rate (Yearly)	Daily Rate
Land Use				
Multifamily Res	65154	41075	106229	291.04
Qual. Restaurant	303534	19374	322908	884.68
Retail	74073	45399	119472	327.32

Wastewater	Yearly Rate (80% of indoor)	Daily Rate
Land Use		
Multifamily Res	52123.2	142.80
Qual. Restaurant	242827.2	665.28
Retail	59258.4	162.35

Natural Gas	Yearly Rate (kBTU)	Yearly Rate (cf)
Land Use		
Multifamily Res	5524	5415.68
Qual. Restaurant	45.23	44.34
Retail	1.21	1.19

Solid Waste	Yearly Rate (Tons per year)	Yearly Rate (lbs per year)	Daily Rate (lbs per day)
Land Use			
Multifamily Res	0.41	820	2.25
Qual. Restaurant	0.91	1820	4.99
Retail	1.05	2100	5.75

Electricity	T24 Rate (kWh per year)	Lighting Rate (kWh per year)	Combined Rate
Multifamily Res	267.12	741.44	1008.56
Qual. Restaurant	9.91	8.84	18.75
Retail	4.9	7.04	11.94
Parking	0.19	2.63	2.82

CUMULATIVE USAGE

WATER

	Rates		Usage	
Land Use	Water Generation Rates	Unit		Water Generated (gpd)
Multifamily Residential	291	gpd/du	15,734	4,578,594
Commercial	0.30	gpd/sf	3,087,969	926,391
Total				**5,504,985**

WASTEWATER

	Rates		Usage	
Land Use	Wastewater Generation Rates	Unit		Wastewater Generated (gpd)
Multifamily Residential	142.80	gpd/du	15,734	2246815.2
Commercial	0.16	gpd per 1000 sf	3,087,969	494
Total				**2,247,309**

SOLID WASTE

	Rates		Usage	
Land Use	Solid Waste Generation Rates	Unit		Solid Waste Generated (lbs per day)
Residential	2.25	lbs/du/day	15,734	35,401.5
Non-Residential	5.75	lbs/1000sf/day	3,087,969	17,755.8
Total				**53,157.3**

ELECTRICITY

	Rates		Usage	
Land Use	Electricity Generation Rates	Unit		Electricity Generated (kWh/year)
Residential	1,008.56	kWh/du/year	15,734	15,868,683
Commercial	11.9	kWh/sf/year	3,087,969	36,870,350
Total				**52,739,032.9**

NATURAL GAS

	Rates		Usage	
Land Use	Natural Gas Generation Rates	Unit		Natural Gas Generated (cf/year)
Multifamily Residential	5,415	cf/du/mo	15,734	85,199,610
Commercial	1.19	cf/sf/year	3,087,969	3,674,683
Total				**88,874,293**