

Appendix M

Water System and Supply Study



JOHN ANSON FORD THEATRES PROJECT
2580 Cahuenga Boulevard East
Hollywood, CA 90068

Water System and Supply Study

Project No. LA30163

April 8, 2014

Prepared For:

Ford Theatres Foundation
2580 Cahuenga Boulevard East
Hollywood, CA 90068
Tel: (323) 856-5793

Prepared by:

Civil Engineering
Survey + Mapping
3D Laser Scanning
Subdivision Mapping
Construction Surveying



MOLLENHAUER

316 W. 2nd Street, Fifth Floor
Los Angeles, CA 90012
Tel: (213) 624-2661
Fax: (213) 614-1863

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JOHN ANSON FORD THEATRES PROJECT

2580 Cahuenga Boulevard East

Hollywood, CA 90068

Project Introduction and Description

Introduction:

The John Anson Ford Theatres is a historic, open air amphitheater that is located in the Cahuenga Pass and built into the Hollywood Hills. Opened in 1931, it is one of the oldest performing arts venues in Los Angeles that is still in use today. The Ford Theatres are owned and operated by the County of Los Angeles.

This report summarizes current water use, future water demands, sources and short-term construction activity related water usage.

Project Location and Overview of Existing Conditions:

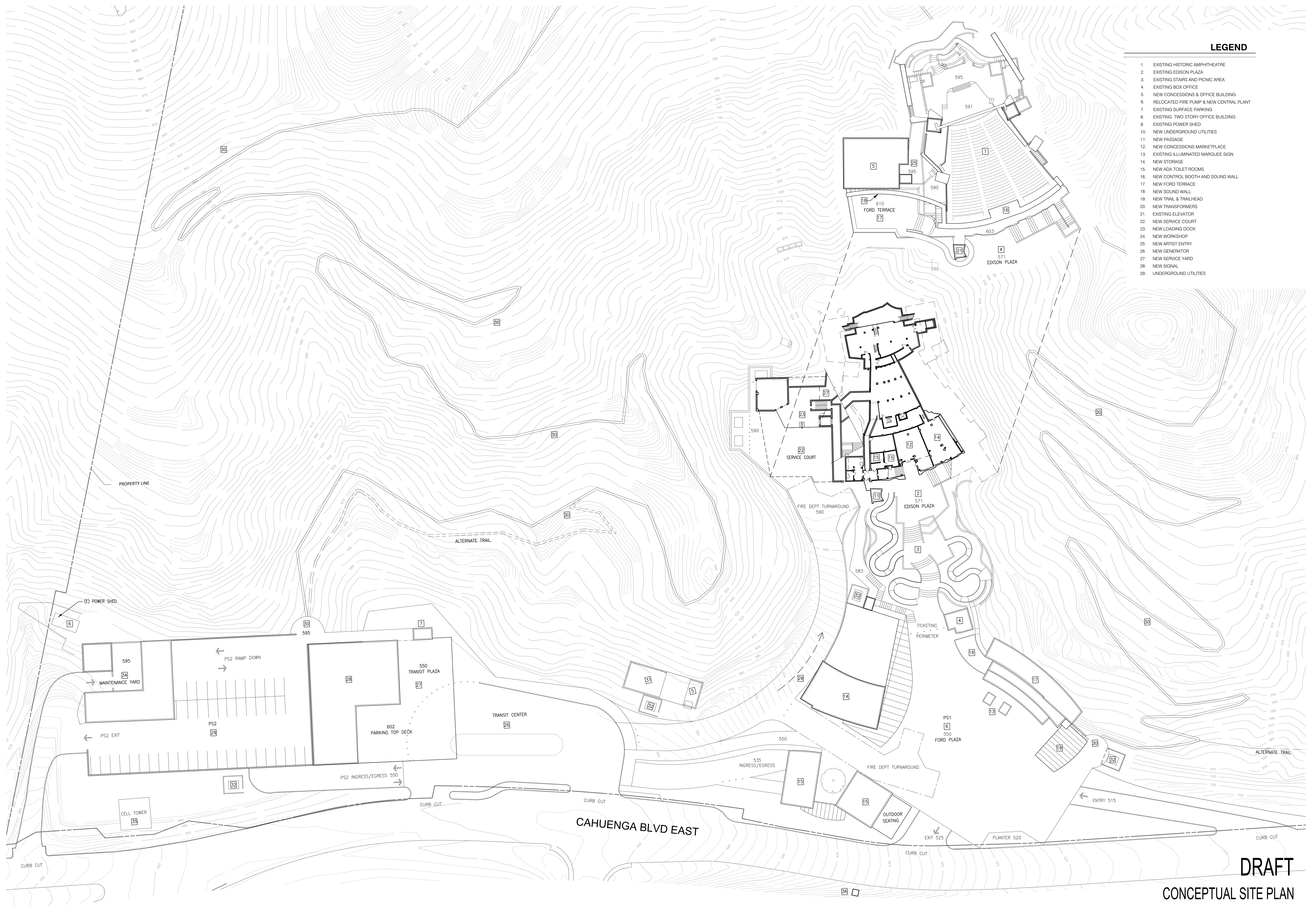
The project site comprises an approximately 32-acre County of Los Angeles regional park, located at 2580 Cahuenga Boulevard East within the City of Los Angeles, California. The area surrounding the project site includes a mix of residential uses and open space. The vicinity map located in Appendix 'A' shows the location of the project site.

Project Description:

The project site includes an approximately 3.5 acre portion of existing, developed area. This includes the historic amphitheater which has a footprint of roughly 0.5 acres.

The proposed project will develop portions of the existing 3.5 acres of existing improvements, as well as expand into undeveloped parts of the site for a total developed area of 4.15 acres. This proposed work will consist of the following activities: removal of existing buildings, concrete structures, retaining walls, concrete sidewalks and pavement areas, as well as landscaping areas and trees; grading activities including fill to provide final graded surface and new subterranean buildings; installation of new storm drainage systems, sewer lines, and domestic water, and fire service lines; construction of new concrete sidewalks, pavement areas and hardscaping; and construction of parking structures and buildings with new stage area as well as new adjacent landscaping and hardscaping.





LEGEND

- 1. EXISTING HISTORIC AMPHITHEATRE
- 2. EXISTING EDISON PLAZA
- 3. EXISTING STAIRS AND PICNIC AREA
- 4. EXISTING BOX OFFICE
- 5. NEW CONCESSIONS & OFFICE BUILDING
- 6. RELOCATED FIRE PUMP & NEW CENTRAL PLANT
- 7. EXISTING SURFACE PARKING
- 8. EXISTING TWO STORY OFFICE BUILDING
- 9. EXISTING POWER SHED
- 10. NEW UNDERGROUND UTILITIES
- 11. NEW PASSAGE
- 12. NEW CONCESSIONS MARKETPLACE
- 13. EXISTING ILLUMINATED MARQUEE SIGN
- 14. NEW STORAGE
- 15. NEW ADA TOILET ROOMS
- 16. NEW CONTROL BOOTH AND SOUND WALL
- 17. NEW FORD TERRACE
- 18. NEW SOUND WALL
- 19. NEW TRAIL & TRAILHEAD
- 20. NEW TRANSFORMERS
- 21. EXISTING ELEVATOR
- 22. NEW SERVICE COURT
- 23. NEW LOADING DOCK
- 24. NEW WORKSHOP
- 25. NEW ARTIST ENTRY
- 26. NEW GENERATOR
- 27. NEW SERVICE YARD
- 28. NEW SIGNAL
- 29. UNDERGROUND UTILITIES

DRAFT

CONCEPTUAL SITE PLAN
FULL BUILD-OUT

JOHN ANSON FORD THEATRES PROJECT
2580 Cahuenga Boulevard East
Hollywood, CA 90068

Water System and Supply Study

Existing Conditions:

The site is situated within the City of Los Angeles and receives its domestic and fire water supplies from the municipal water supply that is operated by the City of Los Angeles, Department of Water and Power, (LADWP).

The LADWP sources its water mainly from the Sierra Nevada via the Los Angeles Aqueduct and from the Metropolitan Water District of Southern California via the California Aqueduct. The LADWP also sources 11% of their water from local groundwater.

The existing project site consumes an estimated peak usage of 6,529 gallons of water per day (GPD).

The theaters water service is supplied via an 8" LADWP water main in Cahuenga Blvd East from a 4" lateral and meter. The existing water lines are assumed to be in deteriorated condition due to their age. Based on an LADWP Service Advisory Report (SAR), see Appendix C, the existing line has a fire flow of 1750 GPM at a residual pressure of 72 PSI in-front of the site.

No record of the location and route of the existing domestic water line has been discovered for this project so it has not been mapped beyond the two known ends of the water line. This water system will be upgraded in stages with the progression of the planned development phases.

No on-site private water wells are known of, the LADWP is the sole source of water for the theater.

Existing landscaping is irrigated. The irrigation system for the recently renovated theater entrance is maintained in good order and is operational. The back of stage hillside irrigation systems is in need of repair and upgrades.

Existing Fire Service:

The site does not have a dedicated separate fire service meter, supply line or on-site fire hydrants.

Regulatory Framework:

Title 20 and Title 24 info here...

Senate Bill 610 info here.....

Project Impacts:

The total future build out of the site per the master plan will increase water demand from the current 6,529 GPD to an estimated 17,470 GPD. The realistic water usage will be significantly reduced by the use of efficient fixtures throughout the project.

- Historic Amphitheater: $1,196 \text{ seats} \times 5 \text{ gallons per day (GPD) per person} = 5,980 \text{ GPD}$.
- Restaurant: $13 \text{ employees} \times 20 \text{ GPD/employee} = 260 \text{ GPD}$; estimate 500 meals per day $\times 12 \text{ gallons per meal} = 6,000 \text{ GPD}$.
- 299 Seat Theater: $299 \times 5 \text{ GPD} = 1,495 \text{ GPD}$.
- Plaza Office and Amenities: Training Room – $66 \text{ people} \times 5 \text{ GPD/person} = 330 \text{ GPD}$; Office – $120 \text{ employees} \times 20 \text{ GPD/employee} = 2,400 \text{ GPD}$.
- Flex Space/ Rehearsal Hall: $99 \text{ seats (event)} \times 5 \text{ GPD/person} = 495 \text{ GPD}$.
- Maintenance Area: $27 \text{ employees} \times 20 \text{ GPD/employee} = 540 \text{ GPD}$.

The total estimate per 2010 California Plumbing code = 17,470 GPD. However this code table has not changed for at least 15 to 20 years and most water fixtures have reduced flow rates by 50% over this period of time. It is not unrealistic to use 50% of this for a total flow of 8,735 GPD.

The LADWP has reviewed the total project build out and has provided a will serve letter to the owners stating that the project will be sufficiently supplied with water subject to the rules and conditions of the LADWP, see Appendix B.

Fixture Recommendations:

The future Master Plan build out of the site will utilize the latest code required water conserving fixtures for all fixture installations; this includes new installations and replacements. By replacing existing low efficiency fixtures and with new low-flow type fixtures there will be a reduction in calculated demand from the municipal water supply.

Construction Activity Water Usage:

Existing off-site hydrants fronting the site will be used to fill water tanks for construction uses. Water will be used during construction, excavation and grading activities. It is estimated that 650,000 to 800,000 gallons of water will be used during the construction.

System Improvements:

As each phase of the master plan is implemented, the entire existing water system will be replaced in stages as well. The end result will be an entirely new water system, both domestic and fire service, to meet the increased demands and serviceability.

New Fire Service:

Up to 4 new fire hydrants are to be installed on-site to supplement two existing public hydrants fronting the site, pending fire department review and approval. As each phase of the master plan is implemented, hydrants will be added in stages as well. It has been determined by the design engineers, civil and plumbing, that the existing municipal water supply has insufficient pressure to supply new hydrants due to low available pressure and the site elevation rise from the points of connection.

The Los Angeles City Fire Department has asked for a total flow of 4,000 GPM provided to the site and 1,500 GPM at any two intermediate fire hydrant locations. As stated in the “Existing Conditions” above, the existing 8” water main under Cahuenga Boulevard is only capable of 1,750 GPM.

To accommodate the Fire Department’s required 4,000 GPM, the *project proposes to relocate one existing gate valve, separating the existing 8” high and 8” low pressure water systems, southerly and making two new connections to the high pressure side of the existing water main. The existing water connection on the south side of the side will remain in service as well.* See Appendix D for a map of the extent of proposed water main improvements.

Booster pump(s) will also be required for all proposed hydrants to meet the minimum flow rate and pressure requirements around the project site. The master plan fire system is to be a dedicated separate fire service line with no shared connections to the domestic supply lines.

Landscaping Irrigation Improvements:

The landscape water use conservation requirements included in the local Municipal Code as per California Government Code Section 65591, the Water Conservation in Landscaping Act are met through the following provisions:

- Existing and proposed planting have been selected as either a native or climate adapted species that has low watering requirements and is drought tolerant.
- Plantings are arranged in groups and located to support each species ideal habit.
- The irrigation system is modeled with hydro zones to most effectively response to the specific location of the site and maximizes water efficiencies.
- Stormwater run-off and erosion is minimized through plantings, planter walls, and forms of terracing.
- A soil test of the existing conditions and management plan will improve the soil conditions and allocate the appropriate amendments within planting areas.

Groundwater:

The underlying site geology is mainly impervious bedrock formations with little to no significant percolation or infiltration to affect any groundwater sources. There are no wells or plans to draw groundwater for use of the project. The master plan project will fall under the LID and SUSMP requirements for stormwater mitigation measures, as dictated by the State of California. This will reduce surface runoff pollutants and volumes to mitigate any off-site ground water impact.

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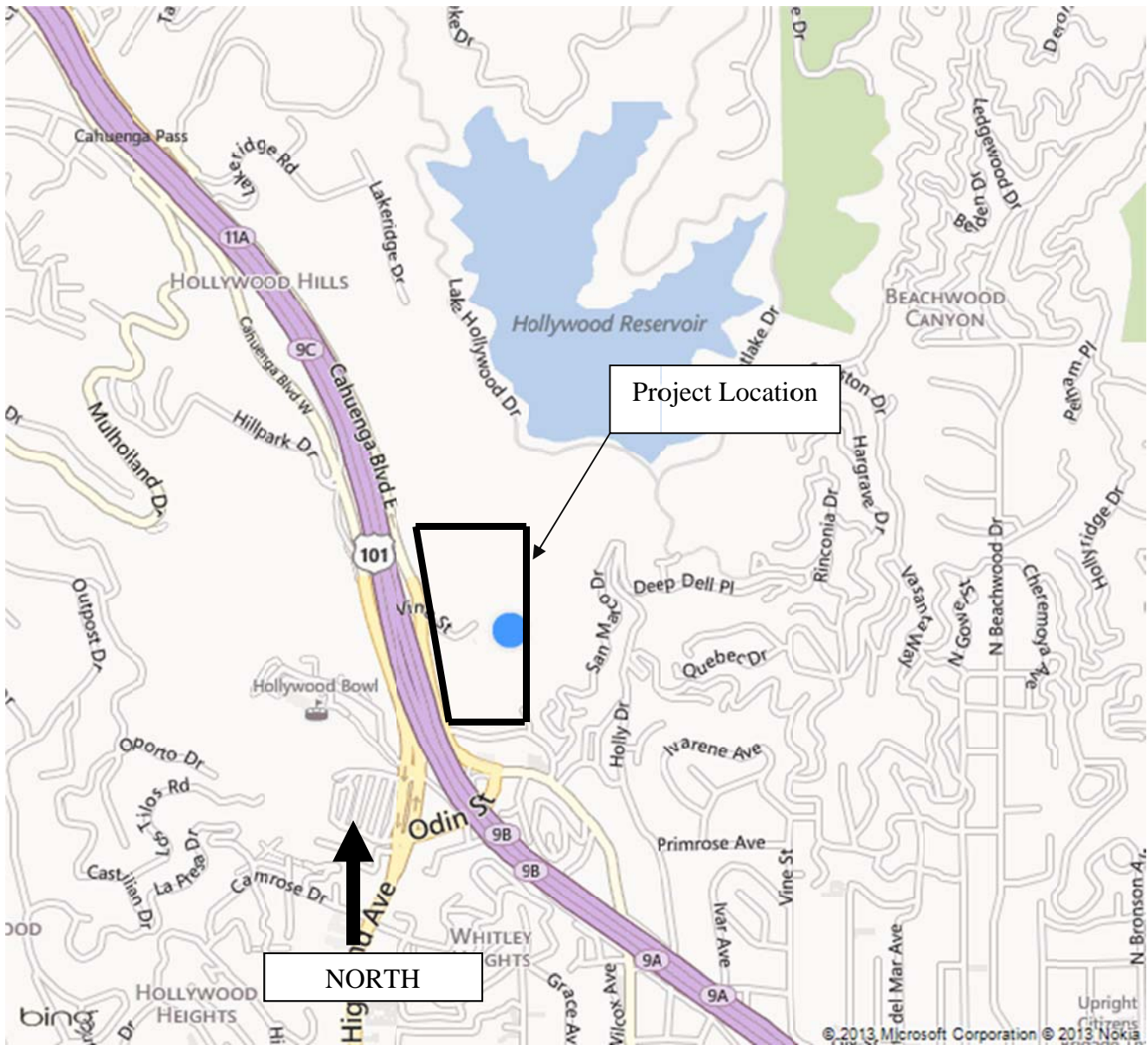
Appendix Index

Appendix:

- A) Vicinity Map
- B) LADWP Will Serve Letter
- C) LADWP Service Advisory
- D) Proposed Water Main Improvements Map

JOHN ANSON FORD THEATRES PROJECT
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Appendix A – Vicinity Map



Vicinity Map
Microsoft Bing Maps
 Not to Scale

JOHN ANSON FORD THEATRES PROJECT
2580 Cahuenga Boulevard East
Hollywood, CA 90068

Appendix B – LADWP Will Serve Letter

Los Angeles



Department of Water & Power

ERIC GARCETTI
Mayor

Commission
MEL LEVINE, *President*
WILLIAM W. FUNDERBURK JR., *Vice President*
JILL BANKS BARAD
MICHAEL F. FLEMING
CHRISTINA E. NOONAN
BARBARA E. MOSCHOS, *Secretary*

RONALD O. NICHOLS
General Manager

December 9, 2013

Map No. 152-186

Mr. Grant Kai, PE, LEED AP, QSP/QSD
Mollenhauer Group
316 West 2nd Street, Fifth Floor
Los Angeles, California 90012

Dear Mr. Kai:

Subject: Water Availability
Address: 2580 Cahuenga Boulevard
APN 5577-025-904

This is in reply to your request for a statement regarding water availability for the above property. The subject property can be supplied with water from the Municipal System, subject to the Water System Rules of the Los Angeles Department of Water and Power (LADWP) and subject to all conditions as set by the LADWP.

Should you require additional information, please contact Ms. Fujiki at (213) 367-1306. Correspondence may be addressed to P.O. Box 51111, Room 1425, Los Angeles, California 90051-5700.

Sincerely,

Hugo A. Torres
Manager-Business Arrangements
Water Distribution Engineering

KF:rp

c: Ms. Kathy Fujiki

Los Angeles Aqueduct Centennial Celebrating 100 Years of Water 1913-2013

111 N. Hope Street, Los Angeles, California 90012-2607 Mailing address: Box 51111, Los Angeles, CA 90051-5700
Telephone: (213) 367-4211 www.LADWP.com

JOHN ANSON FORD THEATRES PROJECT
2580 Cahuenga Boulevard East
Hollywood, CA 90068

Appendix C – LADWP Service Advisory



FORM 196
Rev. 04/03

**COUNTY OF LOS ANGELES FIRE DEPARTMENT
FIRE PREVENTION DIVISION**

Fire Prevention Engineering
5823 Rickenbacker Road
Commerce, CA 90040
Telephone (323) 890-4125 Fax (323) 890-4129

Information on Fire Flow Availability for Building Permit

For All Buildings Other Than Single Family Dwellings (R-3)

INSTRUCTIONS:

Complete parts I, II (A) when:

Verifying fire flow, fire hydrant location and fire hydrant size.

Complete parts I, II (A), & II (B) when:

For buildings equipped with fire sprinkler systems, and/or private on-site fire hydrants.

**PROJECT INFORMATION
(To Be Completed By Applicant)**

PART I

Building Address: 2580 Cahuenga Blvd. East

City or Area: Hollywood

Nearest Cross Street: Highland

Distance of Nearest Cross Street: _____

Applicant: Robert Stone- Levin & Assoc. Architects Telephone: (213) 623-8141

Address: 811 W. 7th Street #900

City: Los Angeles

Occupancy (Use of Building): A-1 Sprinklered: Yes ☒ No ☐

Type of Construction: IIB

Square Footage: 16,205 s.f. Number of Stories: 2

Present Zoning: PF1-XL-H, R1-1

RTS
Applicant's Signature

1/2/2014
Date

RECEIVED

FEB 13 2014

8' Del 1953
8' WE

West.
152-186

PART II-A

INFORMATION ON FIRE FLOW AVAILABILITY

(To be completed by Water Purveyor)

Location EAST SIDE CAHUENGA BLVD., 100' NORTH OF PILGRIMAGEBRIDGE. PROPOSED 8" F.S. Hydrant Number NADistance from
Nearest Property Line _____ Size of Hydrant NA Size of
Water main 8"Static PSI 98 Residual PSI 72 Orifice size NA Pitot NAFire Flow at 20 PSI 1750 GPM Duration CONTINUOUS Flow Test Date / Time HYDRAULIC MODEL

Location _____

Distance from
Nearest Property Line _____ Hydrant Number _____
Size of
Water main _____

Static PSI _____ Residual PSI _____ Orifice size _____ Pitot _____

Fire Flow at 20 PSI _____ Duration _____ Flow Test Date / Time _____

Location _____

Distance from
Nearest Property Line _____ Hydrant Number _____
Size of
Water main _____

Static PSI _____ Residual PSI _____ Orifice size _____ Pitot _____

Fire Flow at 20 PSI _____ Duration _____ Flow Test Date / Time _____

PART II-B

SPRINKLERED BUILDINGS/PRIVATE FIRE HYDRANTS ONLY

Detector Location (check one) ☐ Above Grade ☐ Below Grade ☐ EitherBackflow Protection Required (Fire Sprinklers/Private Hydrant) (check one) ☐ Yes ☐ NoMinimum Type of Protection Required (check one) ☐ Single Check Detector Assembly☐ Double Check Detector Assembly ☐ Reduced Pressure Principle Detector AssemblyLADWP
Water Purveyor3/6/2014
DateMark Peterson
Signature
CIVIL ENGINEERING ASSOCIATE
Title**This Information is Considered Valid for Twelve Months**

Fire Department approval of building plans shall be required prior to the issuance of a Building Permit by the jurisdictional Building Department. Any deficiencies in water systems will need to be resolved by the Fire Prevention Division only prior to this department's approval of building plans.

SAR - For County 8 inch Fire Service

Service Number: _____

From: Water Services

To: Water Distribution Systems Design Section

Receipt Number: W20140220010

Information is needed for Water Services as indicated below:

County _____ Size 8-inch Type F.S.

Date SAR Prepared-

Date SAR Initiated-

Date SAR Released-

Requested by:

February 20, 2014

Linda G. De Vita

Address: 2580 Cahuenga Blvd East

Name(Organization or Firm): Mollenhauer email: gkai@mollenhauergroup.com

Mailing Address: 316 W 2nd St Ste 500 LA CA 90012

SAR Applicant: Grant Kai Phone: 213-624-2661 FAX: 213-614-1863

The 8 -inch main is located Approximately 8 -feet from the property line.

The Requested Location is Approximately 260' SCL Cahuenga Te(?)

On the E side of Cahuenga Bl East

Notified by:

Mail/FAX ☐

Phone ☐

Plan Check ☐

LAFD ☐

Remarks:

Engineering Report

PRESSURE IN STREET MAIN			Street	
<input type="checkbox"/> Dom. Ser.	Enter Service Zone Below		Water Main Charge	
<input type="checkbox"/> Fire Ser.	<u>757</u>		ASC District	
<input type="checkbox"/> F.M. Ser.			Charges per Acre	
Hydraulic Grade	Grade Elevation	Pressure	Area(acreage)	
Max. <u>777</u>	Lowest <u>550</u>	Max. <u>98</u>	Chargeable Size	
Min. <u>717</u>	Highest <u>550</u>	Min. <u>72</u>	Steel or Other	
Dom. Only		Dom. Only	Plotted/Checked by	



This section has reviewed the applicant's request for a County 8-inch F.S. at the location noted above. Attached is a Fire Service "Pressure Report" showing the existing system's capability to serve at this location.

☐ The existing system is not capable of providing the service capacity.

☐ If a larger (demand) is required, a cost estimate for main replacement(s) will be prepared upon written request by the applicant.

☐ Domestic service to this parcel is available from the existing main in _____

Other remarks: _____

M. PATTERSON

MAR 06 2014

Prepared by

Checked by

Approved by

Coord. No. 152-186

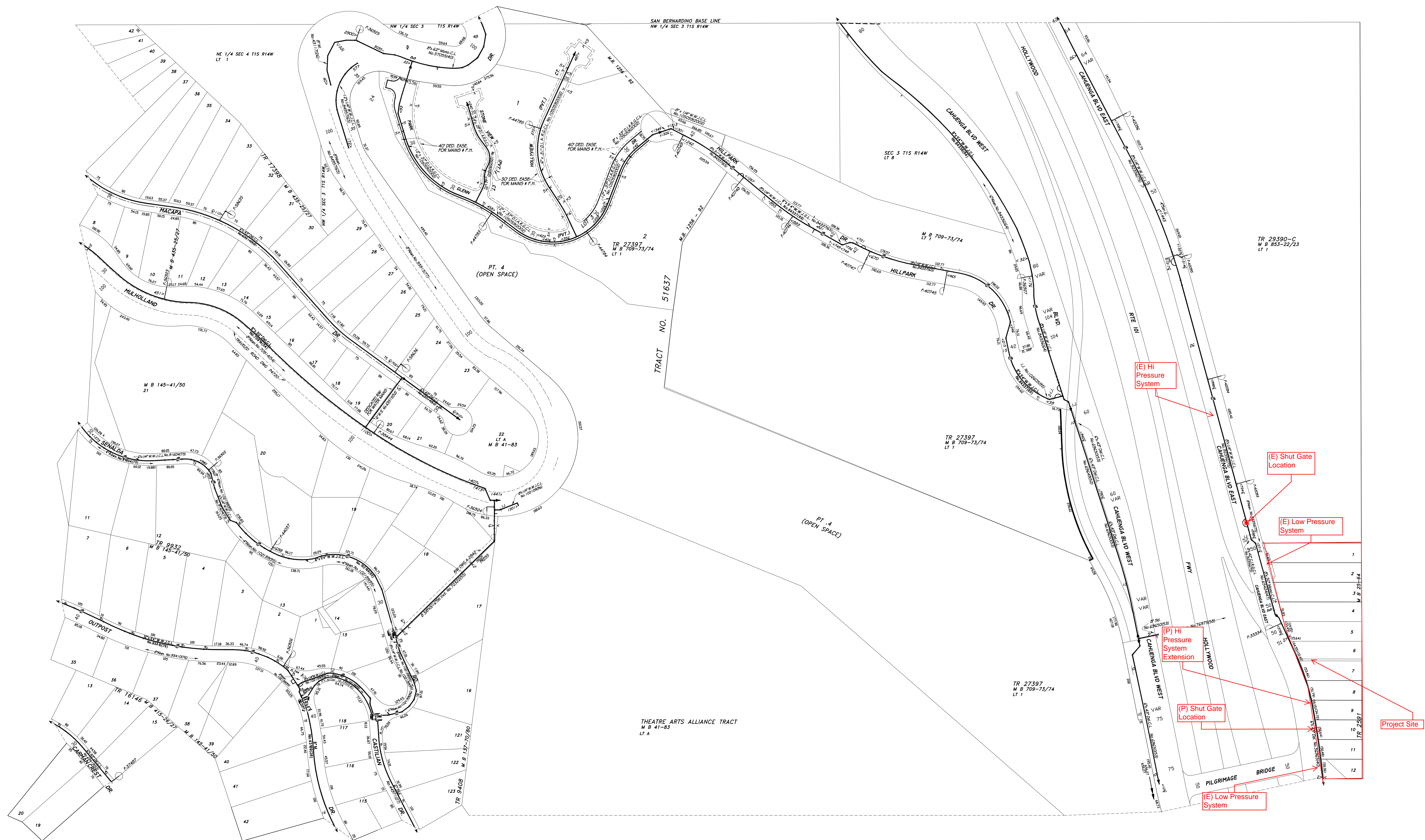
Pipe Map No.

Printed:

Rev. 8/99 AP

JOHN ANSON FORD THEATRES PROJECT
2580 Cahuenga Boulevard East
Hollywood, CA 90068

Appendix D – Proposed Water Main Improvements Map



Robert J. Poppe
Senior Project Manager

Education

University of Oklahoma, School of Environmental Design
California State University, Los Angeles, Computer Technology

Professional Experience and Credentials

Mr. Poppe has over 28 years of experience in all aspects of Civil Engineering Design and Management. He has served as the Senior Project Manager for numerous multi-million dollar projects ranging from flagship OSHPD hospital and medical facilities, governmental projects including police, fire and sheriff's facilities, senior housing projects, mixed-use housing and retail centers, professional and collegiate sports arenas and fields, education projects ranging from elementary school projects, school site rehabilitations and high school campuses.

Mr. Poppe has extensive Civil Engineering experience in all areas of site development including grading, paving as well as utility design and storm water management and mitigation designs. In addition, he has designed and managed street plan projects for numerous local city and county agencies and acts as a mentor to the younger engineers in the firm in utilizing the numerous aspects of AutoCAD as it relates to the civil engineering profession.

Recent Projects of Note

Recent completed projects of note for which Mr. Poppe has served as the senior project manager are as follows:

- **Kaiser Ontario Valley Medical Center**
A new \$550 million medical center located on a 27-acre campus included a new 386,000-square foot hospital, service building expansion and a new HSB hospital support building. This green projects civil designs provided several stages of storm water filtration and retention on site with creative bio-swales and retention ponds that were incorporated into the campus landscaping and architecture.
- **University of Southern California, Galen Center**
This 10,258 seat, \$147 million collegiate multipurpose arena and athletic facility on the campus of USC was one of the first facilities in Los Angeles to incorporate stormwater filtering measures and was awarded the Engineering Project of the Year by the Los Angeles Council of Engineers and Scientists.
- **Los Angeles Dodgers 2013 and 2014 Stadium Renovations**
Stadium and site improvements were designed and implemented within an extremely tight off-season schedule that concluded each year's developments by opening day. Improvements included stadium additions, site grading renovations, LID stormwater mitigation features.

Grant Kai, PE, LEED AP, QSD/QSP
Senior Project Manager

Education

University of California, Los Angeles
Bachelor of Science, Civil Engineering

Professional Experience and Credentials

Mr. Kai is a senior project manager in the civil engineering group of Mollenhauer's Los Angeles office. During his tenure at Mollenhauer, Mr. Kai responsibilities have increased in a natural and logical progression to allow him to fulfill his desire to serve the firm's clients in the area of project management, utility design and precise grading.

Relevant Projects Experience

Recent projects of note for which Mr. Kai has served as project manager are as follows:

- Burbank Water and Power Magnolia Service/Control Building–LEED Platinum Certified
Burbank, CA
Design of grading, paving drainage and utilities for Service Center/Warehouse and adjacent structure. \$11.8 million construction cost.
- Palm Desert Sheriff's Station- LEED Gold Certified
Palm Desert, CA
Developed a previously vacant 10-acre site located in Palm Desert into a sheriff station complete with roadways and parking lot improvements. Prepared all site grading and utility (domestic water, fire water, sewer and storm drain) plans as well as a large Best Management Practice infiltration system. Prepared the LEED submittal for the civil engineering aspects of the project.
- Martin Luther King Jr. Medical Center Ancillary – LEED Gold Certified
Los Angeles, CA
Design of grading, paving drainage and utilities for the New Pediatrics and Trauma Center. The design included the realignment of a fire water line and storm drain lines to clear the site for this 5 story with basement seismic tower constructed in two phases. \$173.4 million construction cost.
- El Cariso Community Regional Park Gym / Community Center – LEED Silver Certified
Sylmar, CA
Design-Build Los Angeles County project consisting of 16,000 square foot includes a gymnasium, classroom, multipurpose room, office area, restrooms, full kitchen and exterior surface parking lot. \$10 million construction cost.

Professional Registrations

- State of California Professional Engineer License No. 73252
- Leadership in Energy and Environmental Design Accredited Professionals (LEED AP)
- Qualified SWPPP Developer (QSD) and Practitioner (QSP)