Appendix G
Hydrology and Water Quality

November 14, 2024

FUSCOE ENGINEERING

Surface Water Technical Report
(Hydrology and Water Quality)

Burbank Dual Brand Hotel

2500 North Hollywood Way
Burbank, CA

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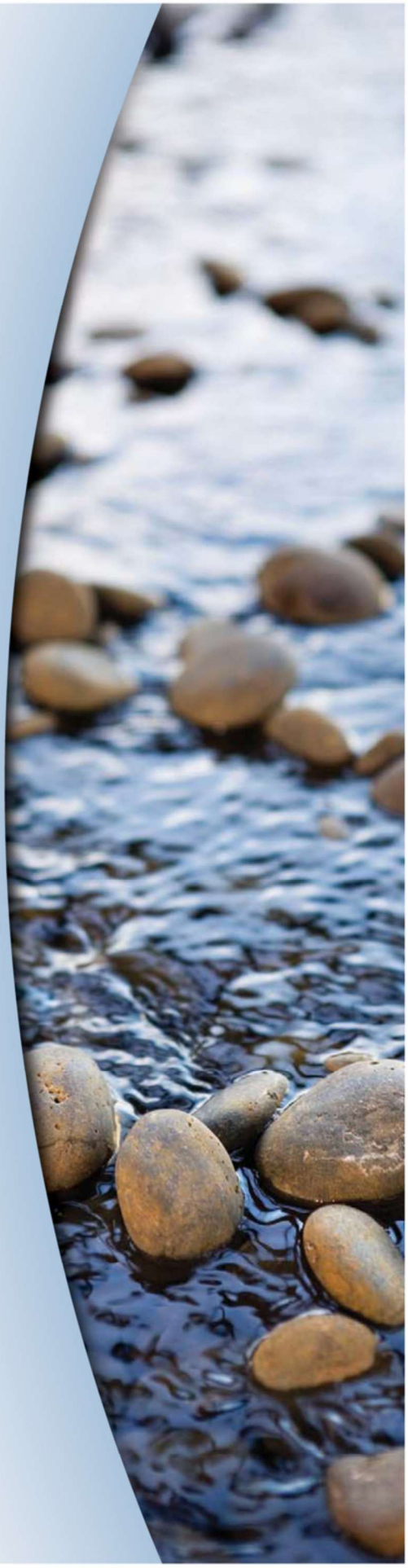

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1. INTRODUCTION

PROJECT OVERVIEW

The Burbank Dual Brand Hotel project (Project) is a proposed commercial mixed-use development project on a 6.14-acre site (Project Site) located on 2500 North Hollywood Way in Burbank, California, north of the City of Los Angeles. The Project Site is bounded by Thornton Ave to the north, and commercial buildings and parking lots to the west, south and east.

The Project Site is a portion of a larger property with APN: 6464-04-015. The property is currently owned by Trifecta Hotel B Owner, LLC[1]. Under existing conditions, the Project Site is a parking lot serving an adjacent convention center and hotel.

Under proposed conditions, the Project will consist of a 7-story dual-brand hotel with associated retail and restaurants. The hotel will be located on the western portion of the project site and consist of approximately 420 guest rooms. Parking for the hotel and retail center will be provided

[1] Per Los Angeles Assessor's Office. Information accessed February 2020.

through a 4-story parking garage on the eastern portion of the site and a proposed surface-level parking lot.

SCOPE OF WORK AND PURPOSE OF REPORT

As part of the Environmental Impact report (EIR) for the Project, this report describes the existing and proposed surface water hydrology, surface water quality, and groundwater at the Project Site and its immediate surrounding areas. It also analyzes the Project's potential impacts on each of these water resources.

2. PROJECT DESCRIPTION AND SETTING

LOCAL DRAINAGE AND HYDROLOGY

2.1.1. Onsite Drainage

The existing Project Site is a parking lot that serves adjacent commercial buildings. The majority of on-site runoff sheet flows across the project site towards the southeast. Surface flows are captured by a series of 5 grate or curb inlet catch basins located throughout the lot, that outflow to a private 30-inch diameter line. Attachment C calls out the onsite private storm drain system and shows a 30-inch diameter pipe. This private line then connects to City storm drain infrastructure that runs north-south directly to the west of the property. Refer to Attachment C for the existing drainage pattern of the surface flow, the interior pipe flow, and the existing hydrology of the Project Site. The onsite private storm drain infrastructure was mapped using an ALTA/ACSM Land Title Survey by TAIT, dated December 2014, associated CAD files, and in-person site walks (See Attachment N). Additionally, no groundwater was encountered to depths of 80 feet below the surface.

2.1.2. Local Storm Drain Infrastructure

After on-site flows drain through private storm drain infrastructure, they connect to the Lockheed storm drain, a 60-inch reinforced concrete pipe (RCP) maintained by the City of Burbank. The Lockheed storm drain runs south before draining to the Lockheed storm drain channel. The Lockheed storm drain channel is a 12-foot channel maintained by the City of Burbank that outlets to the Burbank Western Flood Control Channel.

All runoff from the Project Site is discharged into the Los Angeles River (Reach 4) and ultimately into the Pacific Ocean. Reach 4, which represents the Glendale Narrows, is approximately 10-miles long and spans the area that encompasses portions of the cities of Glendale, Burbank, and Los Angeles.

Existing Hydrology Conditions

In accordance with the Urban Flood and storm drain design requirements set forth in the Los Angeles County Department of Public Works Hydrology Manual[2], the 10-year and 25-year storms were analyzed for existing and proposed conditions. Table 1 below provides the 10-year and 25-year storm frequency analysis for the Project Site's existing conditions. The existing imperviousness was obtained from Appendix D (Proportion Impervious Data) of the Los Angeles County Public Works Hydrology Manual (2006). The Hydrology Manual calls for an imperviousness of 91% for all parking lot land uses and was used to determine peak flows. Output calculations are provided in Attachment D.

Table 1 Existing Hydrology Conditions

Drainage Area	Area (acres)	% Imperviousness	Q10 (cfs)	Q25 (cfs)
A	2.52	91	5.9	8.0
B1	2.45	91	5.4	7.1
B2	1.20	91	3.1	3.8
Existing Total	6.17	91 (average)	14.4	18.9

Proposed Hydrology Conditions

Under the proposed buildout scenario comprised of a 7-story hotel, and an associated 4-story parking garage surface parking, the proposed drainage patterns will slightly deviate from existing conditions.

Previously, there were two outfalls from the Project Site to the 60-inch Lockheed storm drain. In the proposed condition there is only one outfall to the 60-inch pipe as all the site drainage is routed to a LID BMP that overflows to an existing on-site private 30-inch storm drain and ultimately to the existing 60-inch outfall.

Development of the Project will result in an increase in pervious areas (opposite of impervious) throughout the Project Site and would decrease the impervious surfaces from 91 percent to 85 percent, while simultaneously increasing the flow path length of incoming sheet flow. The pervious percentage was found by taking the planter/landscaping area (shown in Attachment G in the Proposed Condition Storm Events Table) and dividing by the total square footage. These factors will result in reduced peak flows. Table 2 below provides an analysis of the proposed 10-year and 25-year frequency design storm events following construction of the Project. Attachment G provides the Proposed Hydrology Map and output calculations are provided in Attachment H.

Table 2 Proposed Hydrology Conditions

Drainage Area	Area (acres)	% Imperviousness	Q10 (cfs)	Q25 (cfs)
A	6.17	85	9.5	12.9

Table 3 provides a comparison of the existing and proposed peak flows for the 10-year and 25-year storm events. These values provide the basis for the peak flow values and pipe sizing design. See Attachment M for the Proposed Hydrology Exhibit.

Table 3 Existing Vs Proposed Hydrology Conditions

Condition	Area (acres)	Q10 (cfs)	Q25 (cfs)
Existing	6.17	14.4	18.9
Proposed	6.17	9.5	12.9
Difference	--	-4.9	-6.0
% Increase or Decrease from Existing to Proposed Conditions	--	-34%	-32%

The above analysis includes the assumption that with the new building footprints, there would be an increase in flow path length due to the increased path of travel of stormwater around the proposed buildings. As shown in Table 3, under proposed conditions peak flows are reduced across all design storm events for the Project.

All the existing catch basins to remain will either have new proposed connections to the proposed onsite storm drain infrastructure or will continue to connect to the existing onsite storm drain infrastructure to remain. Segments of pipe connecting to the existing 60-inch Lockheed

storm drain will also be protected in place to the point of the overflow connection for the LID BMP.

Storm Drain Capacity

Based on the above analysis, operation of the Project would not result in increased site runoff or create negative impacts to the capacity of the existing downstream storm drain system. Flows are anticipated to decrease due to longer flow paths and increased pervious surfaces throughout the Project Site. In addition, the Project would not substantially reduce or increase the amount of surface water in the local water body (LA River) or result in a permanent adverse change in the drainage pattern that would result in an incremental effect on the capacity of the existing storm drain system.

The existing 30-inch storm drain (SD) pipe running along the southern edge of the project site will continue to serve as the project's primary local SD outfall pipe. This existing 30-inch SD pipe runs from the southeast corner of site westerly towards offsite Avon Street and ultimately connects into the existing 60-inch SD Lateral A running in Avon Street. The below Table 4 shows the conveyance capacity of the existing 30-inch SD and how it compares to the proposed project's 25-year peak flow rate. Attachment O gives the calculations of each pipe by size. Pipe slope for the 60" Lockheed Storm Drain was acquired per the storm drain As-Built in Attachment B. Pipe slope for the private storm drain infrastructure uses a conservative value of 0.5% for each pipe. Additional flow into the 30-inch private storm drain was conservatively estimated to be 3.1cfs for a 25-year storm, 50-foot flow path, and a slope of 2%, this is also included in Attachment O.

Table 2 Existing Capacity vs. Proposed Peak Flows

Drainage Area(s)	Pipe Size (inches)	Max Pipe Capacity (cfs)	Cumulative Q25 (cfs)	% of Pipe Capacity Used
All	30 (South)	29	15.9	55%

As shown in the table above, the capacity in the southern infrastructure (30-inch storm drain pipe) will be able to convey the project site's tributary stormwater flows during a 25-year peak flow rate with a 55% pipe capacity used (30-inch pipe capacity of 29 cfs > Cumulative Q25 of 15.9 cfs) see Table 4.The overflow path will remain the same as the existing site conditions.

2.1.3. FEMA

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) No. 06037C1328F, dated September 26, 2008[3], the Project Site is located within Zone X, which depicts areas determined to be outside the 0.2-percent (500-year) annual chance floodplain. Therefore, the processing of a letter of map revision or conditional letter of map revision (LOMR/CLOMR) through FEMA will not be required for the project. The Project will not locate any structures in a floodplain or area otherwise subject to mudflow or tsunami. See Attachment E for the floodplain map.

WATER QUALITY

Stormwater runoff from the Project has the potential to discharge pollutants into the City and County storm drain system. The sections below describe Low Impact Development (LID) design features that will be included in the Project to ensure local and regional water quality is protected.

2.1.4. Onsite Groundwater Conditions

To evaluate the soil and geological site characteristics associated with the proposed Project, a site-specific geotechnical investigation was performed by Geotechnologies, Inc. on February 21, 2020. See Attachment K. No groundwater was encountered on the Project Site to depths of 80 feet below ground surface (bgs) per the preliminary geotechnical report.

A stormwater 'capture and re-use' (i.e., water harvesting) Best Management Practice (BMP) solution is the proposed conceptual stormwater management strategy for the Project. The capture and re-use strategy is anticipated to be feasible for the proposed Project. During final design phases of the Project, water demands for site irrigation will be quantified to allow for the final system component sizing and placement (e.g., storage gallery under the parking lot pavement surface, and associated irrigation piping and small submersible pump equipment placed inside the storage gallery BMP). During the final design stages of the Project, the potential for an infiltration BMP strategy may be assessed, in lieu of the capture and re-use BMP strategy. An infiltration BMP strategy may be utilized if onsite percolation testing confirms the ability of the onsite soils to percolate well enough to support an infiltration BMP strategy, based on the site-specific design values, as noted in a final geotechnical report.

Regardless of the final stormwater BMP solution under the proposed conditions – capture and re-use or infiltration - regional and local groundwater levels and adjacent wells or well fields will not be impacted by the Project. The Project does not propose any groundwater pumping and relies on Burbank Water and Power for potable water supplies. Implementation of the Project would also result in an increase in pervious areas over the existing conditions. The increase in pervious areas would marginally improve the groundwater recharge capacity of the Project Site over existing conditions.

2.1.5. Permanent Water Quality Features

Anticipated pollutants and typical source of the pollutants are summarized in Table below.

Table 5 Potential Pollutants

Potential Pollutants	Source of Pollutants
Sediment	Pedestrian, vehicle tracking, and discharge from landscaped areas
Oils	Spills from restaurants and leakage from vehicles or other mechanical machines
Nutrients	Landscaped areas and lawns (fertilizer)
Pesticides	Landscaped areas and lawns

Trash/Debris	Parking lots and pedestrian areas
Chemicals	Leakage from vehicles, accidental maintenance spills

To meet the local MS4 Permit and LID requirements consistent with the City's Municipal Storm Water and Urban Runoff Discharges & and Low Impact Development Standards Manual ("LID Manual") (2015), stormwater management strategies will be implemented throughout the Project Site. As mentioned above, it is proposed that a capture and re-use system be implemented at the Project Site.

Table 6 shows the storm water quality design volumes (SWQDv, a volume of water representative of an 85th percentile storm event for the project site), as well as water quality flow rates (Q_{pm}, a flow rate representing the max flow of an 85th percentile storm event for the project site), that are required to be detained and treated for each drainage area based on an 85th percentile storm event of 1.1". Please refer to Attachment I for LA County 85th Percentile exhibit and Attachment J for the HydroCalc LID Results for the Proposed Site. The proposed project site currently accounts for a single LID BMP device that all flow is routed to; therefore, the site is calculated as a single sub-area.

Table 6 Low Impact Development Calculations (85th Percentile)

Drainage Area	Area (acres)	Qpm (cfs)	SWQDv (cf)
A	6.17	1.2	20,445

Capture and reuse LID BMPs are proposed for the Project Site and a subsurface storage BMP (e.g. cistern or retention chamber) is included in the current conceptual Project design. And as stated earlier, the final stormwater treatment solution under the proposed conditions, whether it is a capture and re-use solution, or an infiltration solution will be based on supplemental soil testing and final irrigation demands and other possible treated stormwater effluent project demands. The proposed conceptual BMP scheme and location can be seen in Attachment M. The Operations and Maintenance as well as the City of Burbank SUSMP Covenant can be seen in Attachment P. The proposed LID BMP will effectively treat the pollutants of concern for the Project Site and are projected to improve water quality over existing conditions.

2.1.6. Construction Impacts and Best Management Practices

Implementation of the Project would result in construction activities that includes demolition of the existing parking lot and landscaping areas on-site and excavation of existing soils. It is anticipated that the Project would result in excavating soil in order to construct a proposed garage building. With further analysis on the amount of export material accumulated based off the cut/fill of the Project Site, the material will be hauled to a nearby permitted landfill.

Construction activities have the potential to temporarily alter the existing drainage patterns of the Project Site and also increase the permeability of the site based on the increase pervious surface coverage during construction. Exposed pervious surfaces also have the potential for erosion, scour, and increased sediment and associated pollutants discharging from the Project Site during construction activities. The main pollutant of concern during construction is typically sediment and soil particles that discharge off-site due to wind, rain, and construction patterns. In the event exceedances of receiving water quality objectives are observed, measures must be

taken and documented within the Storm Water Pollution Prevention Plan (SWPPP) to improve discharge water quality and runoff effluent. This may include but not be limited to increasing the size of existing BMPs, adding more BMPs to the drainage area, additional filtering, and/or a reduction in active grading areas.

Construction Best Management Practices (BMPs)

Prior to commencement of construction activities, the Construction General Permit requires the Project to prepare a SWPPP in accordance with the site-specific information including grading limits, BMPs for each phase, schedule, and sediment risk analyses. In accordance with the Construction General Permit, the SWPPP must be made available for review upon request, shall describe construction BMPs that address pollutant source reduction, and provide measures/controls necessary to mitigate potential pollutant sources. These measures/controls include, but are not limited to erosion controls, sediment controls, tracking controls, non-storm water management, materials and waste management, and good housekeeping practices including the following:

- Erosion control BMPs, such as hydraulic mulch, soil binders, and geotextiles and mats, protect the soil surface by covering and/or binding the soil particles. Temporary earth dikes or drainage swales may also be employed to divert runoff away from exposed areas and into more suitable locations. If implemented correctly, erosion controls can effectively reduce the sediment loads entrained in storm water runoff from construction sites.
- Sediment controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water. Storm drain inlets on the Project Site or within the project vicinity (i.e., along streets immediately adjacent to the project boundary) should be adequately protected with an impoundment (i.e., gravel bags) around the inlet and equipped with a sediment filter (i.e., fiber roll). Bags should also be placed around areas of soil disturbing activities, such as grading or clearing.
- Stabilize construction entrance/exit points to reduce the tracking of sediments onto adjacent streets. Wind erosion controls should be employed in conjunction with tracking controls.
- Non-storm water management BMPs prohibit the discharge of materials other than storm water, as well as reduce the potential for pollutants from discharging at their source. Examples include avoiding paving and grinding operations during the rainy season (i.e., October 1 through April 30 each year) where feasible, and performing any vehicle equipment cleaning, fueling and maintenance in designated areas that are adequately protected and contained.
- Waste management consists of implementing procedural and structural BMPs for collecting, handling, storing and disposing of wastes generated by a construction project to prevent the release of waste materials into storm water discharges.

The phases of construction will define the maximum amount of soil disturbed, the appropriately sized sediment basins, and other control measures to accommodate all active soil disturbance areas and the appropriate monitoring and sampling plans.

Through compliance with the Construction General Permit including the preparation of a SWPPP, implementation of BMPs appropriate for each major phase of construction, and

compliance with applicable City grading regulations, construction of the Project would not cause flooding, substantially increase or decrease the amount of surface water in a water body, or result in a permanent, adverse change to flow direction. The construction of the Project would also not result in discharges that would cause: (1) pollution that would impact the quality of waters of the State to a degree which negatively impacts beneficial uses of the waters; (2) contamination of the quality of the waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health, affect an entire community or neighborhood or any considerable number of persons, and occurs during or as a result of the treatment or disposal of wastes. Lastly, construction of the Project would not result in discharges that would cause regulatory impacts within the Los Angeles River.

REGIONAL ENVIRONMENTAL SETTING

2.1.7. Receiving Waters

The Project Site is located within the Los Angeles River Watershed, which covers over 830 square miles. The watershed includes the western portion of the San Gabriel Mountains, the Santa Susana Mountains, the Verdugo Hills, and the northern slope of the Santa Monica Mountains. The Los Angeles River flows from the wester San Fernando Valley, crosses the San Fernando Valley and the central portion of the Los Angeles Basin, and outlets in San Pedro Bay near Long Beach. The watersheds terrain consists of mountains, foothills, valleys, and the coastal plain.
The major tributaries or sub-watersheds of the Los Angeles River include the Burbank Western Channel, Pacoima Wash, Tujunga Wash, and Verdugo Wash in the San Fernando Valley; and the Arroyo Seco, Rio Hondo, and Compton Creek in the Los Angeles Basin. The project falls within the Burbank Western Channel sub-watershed.

2.1.8. Water Quality Objectives and Impaired Water Bodies

As described above, the Project is tributary to the Burbank Western Channel sub-watershed that in turn drains to Los Angeles River Reach 4 and Reach 3. Based on the Board Basin Plan for Coastal Watersheds of Los Angeles and Ventura Counties, the proposed beneficial uses of the Burbank Western Channel are municipal and domestic water supply, warm freshwater habitat, and wildlife habitat.

CWA 303(d) List of Water Quality Limited Segments

Under Section 303(d) of the CWA, states are required to identify water bodies that do not meet their water quality standards. Biennially, the LARWQCB prepares a list of impaired waterbodies in the region, referred to as the 303(d) list. The 303(d) list outlines the impaired waterbody and the specific pollutant(s) for which it is impaired. All waterbodies on the 303(d) list are subject to the development of a TMDL.

According to the SWRCB, Los Angeles River Reach 3, which is located southeast of the project site, is listed as an impaired water body. Impairments for Los Angeles River Reach 3 include the following: Ammonia, Copper, Indicator Bacteria, Nutrients (Algae), Toxicity, and Trash. (See Attachment F.)

Total Maximum Daily Loads (TMDLs)

Once a water body has been listed as impaired on the 303(d) list, a TMDL for the constituent of concern (pollutant) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standard. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. In general terms, municipal, small Municipal Separate Storm Sewer System (MS4), and other dischargers within each watershed are collectively responsible for meeting the required reductions and other TMDL requirements by the assigned deadline.

TMDLs for the Los Angeles River Reach 3 and its tributaries have been established for the following pollutants: trash, toxicity, and nutrients.

The proposed Project would potentially discharge pollutants into the City and County storm drain system. Anticipated pollutants include sediments, nutrients, pesticides, trash, oil & grease, and metals. However, the Project Site shall implement LID BMPs as summarized above in Section 2.1.5 to ensure water quality is protected in downstream receiving waters. Through implementation of LID BMPs, it is anticipated that the pollutants of concern for the Project will be effectively treated.

2.1.9. Regional Groundwater Supplies and Quality

The City of Burbank overlies the San Fernando Valley Groundwater Basin (Basin). Replenishment of the Basin occurs primarily through percolation of rainfall throughout the watershed via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins. Groundwater within the Basin generally flows towards the middle of the basin from the edges and then southernly towards the Coastal Plain of Los Angeles Groundwater Basin.

The San Fernando Basin is managed by the Upper Los Angeles River Area (ULARA) Watermaster. In a 1975 ruling by the California Supreme Court, the Pueblo Water Right of the City of Los Angeles to all water in the Basin were upheld. The Cities of Burbank and Glendale were given rights to all groundwater in the Basin derived from "return water" imported by the Cities from outside ULARA but delivered and utilized within ULARA.

The ULARA Watermaster submits an Annual Watermaster Report that identifies groundwater supplies, quality, and demand projections. Increases in demand as a result of redevelopment within the groundwater basin are planned for as part of ULARA long-term supply and demand planning.

3. SIGNIFICANCE THRESHOLDS

CEQA significance criteria are used to evaluate the degree of impact caused by a development project on environmental resources such as hydrology, surface water quality, and groundwater. According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would impact any of the items listed below.

Would the Project:

A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

    (i) Result in a substantial erosion or siltation on- or off-site;
    (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
    (iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    (iv) Impede or redirect flood flows?

D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

These CEQA significance criteria are addressed below to determine if the Project will have any significant impacts on local and regional hydrology and water quality.

4. PROJECT IMPACT ANALYSIS

A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Impact Analysis: The Project will comply with all City and State grading permits and construction regulations and will not violate any standards. Section 2.1.6 provides a discussion of the Construction General Permit and the actions that will be taken to comply during construction of the Project. LID BMPs will be implemented on-site during the operations and maintenance phase of the Project in order to ensure that no water quality standards are violated. The usage of LID BMPs will not adversely impact the quality of local groundwater supplies. The Project will not have a significant impact on surface water or groundwater quality standards or discharge requirements.

B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Impact Analysis: There are no groundwater supply wells located on the Project Site. See Section 2.1.4 for a discussion on groundwater quality and hydrology during operations of the proposed Project. As mentioned, impervious conditions will decrease under proposed Project conditions and increase incidental infiltration of stormwater runoff. The San Fernando Basin is managed by the Upper Los Angeles River Area Watermaster. The proposed potable water demands of the project are covered by long-term supply planning projections and will not adversely impact groundwater supplies. Therefore, no significant impact to groundwater sources is anticipated.

C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) Result in a substantial erosion or siltation on- or offsite.
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
(iv) Impede or redirect flood flows?

Impact Analysis: The Project is not anticipated to alter existing drainage patterns nor cause substantial erosion or siltation on or off site. The Project site is located in a largely built-out, impervious area and is not expected to contribute any additional sediment to water bodies or increase the risks of erosion. The greatest on-site erosion risk will occur during construction. Per Impact Analysis A above and Section Construction Impacts and Best Management Practices 2.1.6, the Project site will comply fully with the Construction General Permit and is not expected to generate excess sediment or be at risk of erosion.

As discussed in Section 2.1.1, the Project has been shown to reduce peak flows for the 10- and 25-year design storm events when compared to existing conditions based on a decrease in on-site impervious surfaces and increased flow path length. Peak flows will be reduced as more runoffs will be retained on-site. Incidental infiltration will increase via the increase in pervious area, reducing off-site flows. Implementation of the project would not adversely impact the capacity of existing off-site City and County storm drain systems. Operation of the Project would not result in increased site runoff or create negative impacts to the capacity of the existing downstream storm drain system. No significant impact to flooding or storm drainage systems is anticipated. Three of the five existing catch basins on-site to remain will have new connections to the proposed private storm drain system and will not adversely affect the drainage pattern and create/contribute runoff water to exceed the existing City and County Storm Drain system's capacity.

D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Impact Analysis: The Project site is located entirely in FEMA Flood Zone X, outside of the 100-year flood hazard area. The Project site is also located inland and is outside of all tsunami hazard zones and is not at risk of inundation by seiche. The Project site and surrounding areas are largely paved, and not at risk of inundation by mudflow. No significant impacts based on inundation by seiche, tsunami, or mudflow are anticipated. No significant impacts due to flooding are anticipated.

E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Analysis: The Project will not obstruct implementation of either a water quality control plan or sustainable groundwater management plan. Proposed on-site LID features are designed to infiltrate, capture and reuse or biofilter stormwater, in accordance with local and regional permit regulations and regional groundwater management goals. No significant impacts are anticipated.

5. LEVEL OF SIGNIFICANCE

Based on the analysis contained in this report, no significant impacts have been identified for surface water hydrology, surface water quality, or groundwater for this Project.

6. REFERENCES

1) Los Angeles Assessor's Office. Information accessed February 2020
2) Los Angeles County Department of Public Works Hydrology Manual
3) Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) No. 06037C1328F, dated September 26, 2008[3]
4) State Water Resource Control Board's (SWRCB) Geotracker, accessed September 2023

ATTACHMENT A

REGULATORY FRAMEWORK

Surface Water Hydrology

County of Los Angeles Hydrology Manual

The Project Site is located within the Los Angeles River Watershed, which covers over 830 square miles. The Los Angeles County Flood Control District (LACFCD) is responsible for providing flood protection, water conservation, recreation and aesthetic enhancement within this entire watershed. LACFCD is governed, as a separate entity, by the County of Los Angeles Board of Supervisors.

LACFCD consists of more than 3,000 square miles, 85 cities and approximately 2.1 million land parcels. It includes the vast majority of drainage infrastructure within incorporated and unincorporated areas in every watershed, including 500 miles of open channel, 2,800 miles of underground storm drain, and an estimated 120,000 catch basins. The Los Angeles County Department of Public Works (LACDPW) and LACFCD are responsible for the development of a hydrology manual for consistent hydrologic design throughout the County.

The LACDPW Hydrology Manual (January 2006) establishes the LACDPW hydrologic design procedures based on historic rainfall and runoff data collected within the County. The hydrologic techniques in the manual apply for the design of local storm drains, retention and detention basins, pump stations, and major channel projects.

The Project is required to utilize the 2006 Hydrology Manual and accompanying hydrologic tools including HydroCalc Calculator to calculate existing and proposed discharges and volumes from the Project.

Surface Water Quality

Clean Water Act

Controlling pollution of the nation's receiving water bodies has been a major environmental concern for more than three decades. In 1972, growing public awareness of the impacts of water pollution in the United States culminated in the establishment of the federal Clean Water Act[2] (CWA), which provided the regulatory framework for surface water quality protection.

The United States Congress amended the CWA in 1987 to specifically regulate discharges to waters of the United States from public storm drain systems and storm water flows from industrial facilities, including construction sites, and require such discharges be regulated through permits under the National Pollutant Discharge Elimination System (NPDES).[3] Rather than setting numeric effluent limitations for storm water and urban runoff, CWA regulation calls for the implementation of Best Management Practices (BMPs) to reduce or prevent the discharge of pollutants from these activities to the Maximum Extent Practicable (MEP) for urban runoff and meeting the Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) standards for construction storm water. Regulations and permits have been implemented at the federal, state, and local level to form a comprehensive regulatory framework to serve and protect the quality of the nation's surface water resources.

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[2] Also referred to as the Federal Water Pollution Control Act of 1972.

[3] CWA Section 402(p).

In addition to reducing pollution with the regulations described above, the CWA also seeks to maintain the integrity of clean waters of the United States – in other words, to keep clean waters clean and to prevent undue degradation of others. As part of the CWA, the Federal Anti-Degradation Policy [40 Code of Federal Regulations (CFR) Section 131.12] states that each state "shall develop and adopt a statewide anti-degradation policy and identify the methods for implementing such policy…" [40 CFR Section 131.12(a)]. Three levels of protection are defined by the federal regulations:

> *Existing uses must be protected in all of the Nation's receiving waters, prohibiting any degradation that would compromise those existing uses;*
>
> *Where existing uses are better than those needed to support propagation of aquatic wildlife and water recreation, those uses shall be maintained, unless the state finds that degradation is "…necessary to accommodate important economic or social development" [40 CFR Section 131.12(a)(2)]. Degradation, however, is not allowed to fall below the existing use of the receiving water; and*
>
> *States must prohibit the degradation of Outstanding National Resource Waters, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreation or ecological significance.*

Federal Anti-Degradation Policy

The Federal Anti-Degradation Policy (40 CFR 131.12) requires states to develop statewide anti-degradation policies and identify methods for implementing them. Pursuant to the CFR, state anti-degradation policies and implementation methods shall, at a minimum, protect and maintain (1) existing in-stream water uses; (2) existing water quality, where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

Porter-Cologne Water Quality Act

In the State of California, the State Water Resources Control Board (SWRCB) and local Regional Water Quality Control Boards (RWQCBs) have assumed the responsibility of implementing the United States Environmental Protection Agency's (USEPA) NPDES Program and other programs under the CWA such as the Impaired Waters Program and the Anti-Degradation Policy. The primary water quality control law in California is the Porter-Cologne Water Quality Act (Water Code Sections 13000 et seq.). Under the Porter-Cologne Act, the SWRCB issues joint federal NPDES Storm Water permits and state Waste Discharge Requirements (WDRs) to operators of municipal separate storm sewer systems (MS4s), industrial facilities, and construction sites to obtain coverage for the storm water discharges from these operations.

California Anti-Degradation Policy

The California Anti-Degradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Water in California, was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the Federal Anti-Degradation Policy, the California Anti-Degradation Policy applies to all waters of the state, not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual Basin Plans, such high quality

shall be maintained and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of such water resource.

California Toxic Rule

In 2000, the EPA promulgated the California Toxic Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the state. The EPA promulgated this rule based on the EPA's determination that the numeric criteria are necessary in the state to protect human health and the environment. The California Toxic Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water such as inland surface waters and enclosed bays and estuaries that are designated by the Los Angeles Regional Water Quality Control Board (LARWQCB) as having beneficial uses protective of aquatic life or human health.

Board Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

As required by the California Water Code (CWC), the LARWQCB has adopted a plan entitled "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable state and regional board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan.

NPDES Permit Program

As indicated above, in California, the NPDES stormwater permitting program is administered by the SWRCB through its nine RWQCBs. This NPDES permit, General Permit for Stormwater Discharges from Construction Activities by the SWRCB (Construction General Permit), establishes a risk-based approach to stormwater control requirements for construction projects.

(i) Construction: Stormwater Pollution Prevention Plan

For all construction activities disturbing 1-acre of land or more, California mandates the development and implementation of Stormwater Pollution Prevention Plans (SWPPP). The SWPPP documents the selection and implementation of best management practices (BMPs) to prevent discharges of water pollutants to surface or groundwater. The SWPPP also charges owners with stormwater quality management responsibilities. The developer or contractor for a construction site subject to the Construction General Permit must prepare and implement a SWPPP that meets the requirements of the Construction General Permit.[4] The purpose of an SWPPP is to identify potential sources and types of pollutants associated with construction activity and list BMPs that would prohibit pollutants from being discharged from the construction site into the public stormwater system. BMPs typically address stabilization of construction areas, minimization of erosion during construction, sediment control, control of pollutants from construction materials, and post-construction stormwater management (e.g.,

[4] https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/docs/2022-0057-dwq-with-attachments/cgp2022_order.pdf

the minimization of impervious surfaces or treatment of stormwater runoff). The SWPPP is also required to include a discussion of the proposed program to inspect and maintain all BMPs.

A site-specific SWPPP could include, but not be limited to the, following BMPs:

- Erosion Control BMPs—to protect the soil surface and prevent soil particles from detaching. Selection of the appropriate erosion control BMPs would be based on minimizing areas of disturbance, stabilizing disturbed areas, and protecting slopes/channels. Such BMPs may include, but would not be limited to, use of geotextiles and mats, earth dikes, drainage swales, and slope drains.
- Sediment Control BMPs—are treatment controls that trap soil particles that have been detached by water or wind. Selection of the appropriate sediment control BMPs would be based on keeping sediments on-site and controlling the site boundaries. Such BMPs may include, but would not be limited, to use of silt fences, sediment traps, and sandbag barriers, street sweeping and vacuuming, and storm drain inlet protection.
- Wind Erosion Control BMPs—consist of applying water to prevent or minimize dust nuisance.
- Tracking Control BMPs—consist of preventing or reducing the tracking of sediment off-site by vehicles leaving the construction area. These BMPs include street sweeping and vacuuming. Project sites are required to maintain a stabilized construction entrance to prevent off-site tracking of sediment and debris.
- Non-Stormwater Management BMPs—also referred to as "good housekeeping practices," involve keeping a clean, orderly construction site.
- Waste Management and Materials Pollution Control BMPs—consist of implementing procedural and structural BMPs for handling, storing, and disposing of wastes generated by a construction project to prevent the release of waste materials into stormwater runoff or discharges through the proper management of construction waste.

The SWRCB adopted a General Permit for Stormwater Discharges from Construction Activities on September 2, 2009, and last amended on September 8, 2022, (Order No. 2022-0057-DWQ, General NPDES Permit No. CAS000002). The Construction General Permit regulates construction activity, including clearing, grading, and excavation of areas 1-acre or more in size, and prohibits the discharge of materials other than stormwater, authorized non-stormwater discharges, and all discharges that contain a hazardous substance, unless a separate NPDES permit has been issued for those discharges.

To obtain coverage under the Construction General Permit, a developer is required to file a Notice of Intent (NOI) with the appropriate RWQCB and provide proof of the NOI prior to applying for a grading or building permit from the local jurisdiction, and must prepare a State SWPPP that incorporates the minimum BMPs required under the permit as well as appropriate project-specific BMPs. The SWPPP must be completed and certified by the developer and BMPs must be implemented prior to the commencement of construction, and may require modification during the course of construction as conditions warrant. When project construction is complete, the developer is required to file a Notice of Termination with the RWQCB certifying that all the conditions of the Construction General permit, including conditions necessary for termination, have been met.

(ii) NPDES Permit for Discharges of Groundwater from Construction and Project Dewatering
Dewatering operations are practices that discharge non-stormwater, such as groundwater, that must be removed from a work location to proceed with construction into the drainage system. Discharges from dewatering operations can contain high levels of fine sediments, which if not properly treated, could

lead to exceedance of the NPDES requirements. An NPDES Permit for dewatering discharges was adopted by the LARWQCB and last amended on December 21, 2023 (Order No. R4-2023-0429, General NPDES Permit No. CAG994004. Similar to the Construction General Permit, to be authorized to discharge under this permit, the developer must submit a NOI to discharge groundwater generated from dewatering operations during construction in accordance with the requirements of this Permit and shall continue in full force until it expires March 21, 2029.[5] In accordance with the NOI, among other requirements and actions, the discharger must demonstrate that the discharges shall not cause or contribute to a violation of any applicable water quality objective/criteria for the receiving waters, perform reasonable potential analysis using a representative sample of groundwater or wastewater to be discharged. The discharger must obtain and analyze (using appropriate methods) a representative sample of the groundwater to be treated and discharged under the Order. The analytical method used shall be capable of achieving a detection limit at or below the minimum level. The discharger must also provide a feasibility study on conservation, reuse, and/or alternative disposal methods of the wastewater and provide a flow diagram of the influent to the discharge point.[6]

(iii) Operation: Los Angeles County Municipal Stormwater NPDES Program

The County of Los Angeles and the City of Burbank the Co-Permittees under the Los Angeles County MS4 Permit (Order No. R4-2021-0105, NPDES Permit No. CAS004004). The Los Angeles County MS4 Permit has been determined by the SWRCB to be consistent with the requirements of the Clean Water Act and the Porter-Cologne Act for discharges through the public storm drains in Los Angeles County to statutorily-defined waters of the U.S. (33 United States Code [USC] §1342(p); 33 CFR Part 328.11). Last amended on July 23, 2021, [6] the LARWQCB amended the Los Angeles County MS4 Permit to incorporate modifications consistent with the revised Ballona Creek Watershed Trash Total Maximum Daily Load (TMDL) and the revised Los Angeles River Watershed Trash TMDL, among other TMDLs incorporated into the Los Angeles County MS4 Permit and the Basin Plan for the Coastal Waters of Los Angeles and Ventura Counties.

Under the amended Los Angeles County MS4 Permit, permittees are required to implement a development planning program to address stormwater pollution. This program requires project applicants for certain types of projects to implement a Low Impact Development (LID) Plan. The purpose of the LID Plan is to reduce the discharge of pollutants in stormwater by outlining BMPs, which must be incorporated into the design of new development and redevelopment. These treatment control BMPs must be sufficiently designed and constructed to treat or retain the greater of an 85th percentile rain event or first 0.75 inch of stormwater runoff from a storm event.

The Los Angeles County MS4 Permit (Part VI.D.7.c, New Development/Redevelopment Project Performance Criteria) includes design requirements for new development and substantial redevelopment. These requirements apply to all projects that create or replace more than 5,000 square feet of impervious cover. Where redevelopment results in an alteration to more than 50 percent of impervious surfaces of a previously existing development and the existing development was not subject to post-construction stormwater quality control requirements, the entire project would be subject to post-construction stormwater quality control measures.

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5 https://www.waterboards.ca.gov/rwqcb4/board_decisions/adopted_orders/general_orders/R4-2023-0429.pdf

6 https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/public_docs/2022/1_Order (ACC-RPSignature).pdf

This Enhanced Watershed Management Program for the Upper Los Angeles River (ULAR EWMP) describes a customized compliance pathway that participating agencies will follow to address the pollutant reduction requirements of the Los Angeles County MS4 Permit.[7] By electing the optional compliance pathway in the MS4 Permit, the Upper Los Angeles River Watershed Management Group (EWMP Group) has leveraged this EWMP to facilitate a robust, comprehensive approach to stormwater planning for the Upper Los Angeles River watershed. The objective of the EWMP Plan is to determine the network of control measures (BMPs) that will achieve required pollutant reductions while also providing multiple benefits to the community and leveraging sustainable green infrastructure practices. The Permit requires the identification of Watershed Control Measures, which are strategies and BMPs that will be implemented through the EWMP, individually or collectively, at watershed-scale to address the Water Quality Priorities. The EWMP Implementation Strategy is used as a recipe for compliance for each jurisdiction to address Water Quality Priorities and comply with the provisions of the MS4 Permit. The EWMP Implementation Strategy includes individual recipes for each of the 18 jurisdictions and each watershed/assessment area—Los Angeles River above Sepulveda Basin, Los Angeles River below Sepulveda Basin, Compton Creek, Rio Hondo, Verdugo Wash, Arroyo Seco, Burbank Western Channel, Tujunga Wash, Bull Creek, Aliso Wash, Bell Creek, McCoy-Dry Canyon, and Browns Canyon Wash. Implementation of the EWMP Implementation Strategy will provide a BMP-based compliance pathway for each jurisdiction under the MS4 Permit. The permit specifies that an adaptive management process will be revisited every two years to evaluate the EWMP and update the program. The EWMP strategy will evolve based on monitoring results by identifying updates to the EWMP Implementation Plan to increase its effectiveness.

The Los Angeles County MS4 Permit contains provisions for implementation and enforcement of the Stormwater Quality Management Program. The objective of the Stormwater Quality Management Program is to reduce pollutants in urban stormwater discharges to the "maximum extent practicable," to attain water quality objectives and protect the beneficial uses of receiving waters in Los Angeles County. Special provisions are provided in the Los Angeles County MS4 Permit to facilitate implementation of the Stormwater Quality Management Program. In addition, the Los Angeles County MS4 Permit requires that permittees implement a LID Plan, as discussed above, that designates BMPs that must be used in specified categories of development projects to infiltrate water, filter, or treat stormwater runoff; control peak flow discharge; and reduce the post-project discharge of pollutants into stormwater conveyance systems. In response to the Los Angeles County MS4 Permit requirements, and because the City of Burbank is a co-permittee to both the regional ULAR EWMP and the state issued MS4 municipal requirements, it must comply.

As a co-permittee, the City supports the requirements of the Los Angeles County MS4 Permit through both the June 2015 ULAR EWMP document and the City of Burbank's *Stormwater Quality Management Program pamphlet*,[8] which provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the Developing Planning Program regulations of the City's Stormwater Program.

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[7] Upper Los Angeles River Watershed Management Group, Enhanced Watershed Management Program, January 2016. www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/los_angeles/upper_losangeles/20160127/UpperLARiver_mainbody_revEWMP_Jan2016.pdf

[8] City of Burbank , Public Works/Water Reclamation & Sewer Systems/Stormwater: https://www.burbankca.gov/web/public-works/stormwater

These documents assist developers with the selection, design, and incorporation of stormwater source control and treatment control BMPs into project design plans, and provides an overview of the City's plan review and permitting process.

The City implements the requirement to incorporate stormwater BMPs, including LID BMPs, through the City's plan review and approval process. During the review process, project plans are reviewed for compliance with the City's General Plan, zoning ordinances, and other applicable local ordinances and codes, including stormwater requirements. Plans and specifications are reviewed to ensure that the appropriate BMPs are incorporated to address stormwater pollution prevention goals.

Stormwater Program—Los Angeles County MS4 Permit Citywide Implementation

The City's Stormwater section under the joint purview of the departments of Public Works and Building Safety is responsible for stormwater pollution control throughout the City in compliance with the Los Angeles County MS4 Permit. The Stormwater section administers the City's Stormwater Program. The City enforces the February 2014 Los Angeles County Low Impact Development Manual (LID Handbook). The LID Handbook assists developers with the selection, design, and incorporation of stormwater source control and treatment control BMPs into project design plans. The LID Handbook addresses the need for frequent and/or regular inspections of infiltration facilities in order to ensure on-site compliance of BMP standards, soil quality, site vegetations, and permeable surfaces. These inspections are required to guarantee that facilities follow all proprietary operation and maintenance requirements.

During the development review process, project plans are reviewed for compliance with the City's General Plan, zoning ordinances, and other applicable local ordinances and codes, including stormwater requirements. Plans and specifications are reviewed to ensure that the appropriate BMPs are incorporated to address stormwater pollution prevention goals.

City of Burbank Municipal Code

City Ordinance 3530 (passed on 9/14/1999 but not yet codified into the City's municipal code) sets forth the City's Stormwater and Urban Runoff Pollution Control Ordinance. The ordinance prohibits the discharge of runoff containing toxic materials, oils or chemicals, food and processing wastes, dirt and landscape debris, and concrete materials, among other constituents. The discharge prohibition is aimed at protecting the health of the public and aquatic ecosystems, as well as preserving the natural flow of storm drain systems.

LID Plans

Under the current Los Angeles County Municipal NPDES Permit, permittees are required to implement a development planning program to address storm water pollution. These programs require project applicants for certain types of projects to implement Low Impact Development (LID) Plans throughout the operational life of their projects. The purpose of LID plans is to reduce the discharge of pollutants in storm water by outlining BMPs which must be incorporated into the design plans of new development and redevelopment.

The Project falls within the definition of "redevelopment" under the MS4 Storm Water Permit which requires compliance with the Low Impact Development (LID) requirements.

Low Impact Development

LID is a stormwater strategy that is used to mitigate the impacts of runoff and stormwater pollution as close to its source as possible. Urban runoff discharged from municipal storm drain systems is one of the principal causes of water quality impacts in most urban areas. The stormwater may contain pollutants such as trash and debris, bacteria and viruses, oil and grease, sediments, nutrients, metals, and toxic chemicals that can negatively affect the ocean, rivers, plant and animal life, and public health.
LID encompasses a set of site design approaches and BMPs that are designed to address runoff and pollution at the source. These LID practices can effectively remove nutrients, bacteria, and metals, while reducing the volume and intensity of stormwater flows.

The Project is subject to compliance with Order No. R4-2012-0175-A01, which became effective on November 8, 2012, and most recently modified June 2018. The main purpose of this law is to ensure that development and redevelopment projects mitigate runoff in a manner that captures or treats rainwater at its source, while utilizing natural resources.

In accordance with Order No. R4-2012-0175, stormwater runoff shall be infiltrated, evapotranspired, captured and used, or treated through high removal efficiency BMPs, onsite, through stormwater management techniques. The LARWQCB has a BMP Hierarchy in which the project must follow when selecting the type or types of BMPs to be constructed on site. The following is the BMP Hierarchy, per Order No. R4-2012-0175 as amended by Order WQ 2015-0075 NPDES NO. CAS004001:

- On-site infiltration,
- On-site bioretention and/or store and re-use (harvest and use),
- On-site biofiltration, off-site ground water replenishment, and/or off-site retrofit

Hydromodification

In addition to the LID requirements listed in the MS4 Permit, the Permit also addresses requirements for Hydromodification as pertaining to the project. Per Part VI.D.7.c.iv of the Permit:

Each Permittee shall require all New Development and Redevelopment projects located within natural drainage systems as described in Part VI.D.7.c.iv.(1)(a)(iii) to implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems. The purpose of the hydrologic controls is to minimize changes in post-development hydrologic storm water runoff discharge rates, velocities, and duration. This shall be achieved by maintaining the project's pre-project stormwater runoff flow rates and durations.

However, per Part VI.D.7.c.iv.(1)(b)(iv) of the Permit, the Project is exempt from such requirements as runoff from the Project Site is discharged directly via storm drain to a receiving water that is not susceptible to hydromodification impacts. Specifically, the Project Site discharges via storm drain to the Los Angeles River, which is categorized as not susceptible to hydromodification. Therefore, the Project is not required to implement hydrologic control measures as mitigation for hydromodification impacts. In addition, as described below, implementation of the Project will result in a reduction of peak flows and volumes as compared to existing conditions, thereby satisfying hydromodification requirements in addition to the receiving water exemption.

Upper Los Angeles River Watershed Enhanced Watershed Management Program

The County of Los Angeles, the City of Burbank and all other cities in the Los Angeles Watershed are responsible for the implementation of watershed improvement plans or Enhanced Watershed

Management Programs (EWMP) to improve water quality and assist in meeting the Total Maximum Daily Load (TMDL) milestones. An EWMP for the Upper Los Angeles River Watershed (ULAR EWMP, January 2016), prepared with the City of Los Angeles as the lead coordinating agency, was approved on March 29, 2016, by the LARWQCB. The vision of the EWMP is to utilize a multi-pollutant approach that maximizes retention and use of urban runoff as a resource for groundwater recharge and irrigation while also improving water quality and providing environmental, aesthetic, recreational, water supply and other community enhancements (ULAR EWMP, January 2016).

The EWMP identifies a toolbox of distributed and regional watershed control measures to address applicable stormwater quality regulations including the following:

- LID at the individual parcels
- Green Streets features within the public right-of-way and privately maintained streets
- Regional projects that retain and treat runoff from large upstream areas
- Institutional control measures to prevent transport of pollutants in the watershed

Groundwater

California Groundwater Sustainability Act

On September 16, 2014, California Governor Jerry Brown signed into law a three-bill legislative package, known as the Sustainable Groundwater Management Act of 2014 (SGMA). The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention only if necessary to protect the resource.

The SGMA requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally based management plans. The act provides substantial time – 20 years – for GSAs to implement plans and achieve long-term groundwater sustainability. It protects existing surface water and groundwater rights and does not impact current drought response measures.

The California Water Commission (CWC) requires a statewide prioritization of California's groundwater basins using the following eight criteria:

- Overlying population;
- Projected growth of overlying population;
- Public supply wells;
- Total wells;
- Overlying irrigated acreage;
- Reliance on groundwater as the primary source of water;
- Impacts on the groundwater—including overdraft, subsidence, saline intrusion, and other water quality degradation;
- Any other information determined to be relevant by the Department.

Water Code §10720.8 identifies adjudicated areas in SGMA, which have an existing defined entity administering the adjudication. Under SGMA, adjudicated portions of basins are exempt from developing a groundwater sustainability plan (GSP) and forming a groundwater sustainability agency (GSA). However, the entities administering the adjudications are subject to submitting annual reports to

DWR by April 1 each year. SGMA requires that annual reports include the following information for the portion of the basin subject to adjudication:

a) Groundwater elevation data unless submitted pursuant to Water Code §10932.
b) Annual aggregated data identifying groundwater extraction for the preceding water year.
c) Surface water supply used for or available for use for groundwater recharge or in-lieu use.
d) Total water use.
e) Change in groundwater storage.
f) The annual report submitted to the court

The San Fernando Valley Groundwater Basin is adjudicated, and managed by the ULARA Watermaster, and is therefore exempted from developing a GSA and GSP.

Board Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

As required by the CWC, the LARWQCB has adopted a plan entitled "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable state and regional board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan. The Basin Plan is a resource for the LARWQCB and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. Finally, the Basin Plan provides valuable information to the public about local water quality issues.

Safe Drinking Water Act (SDWA)

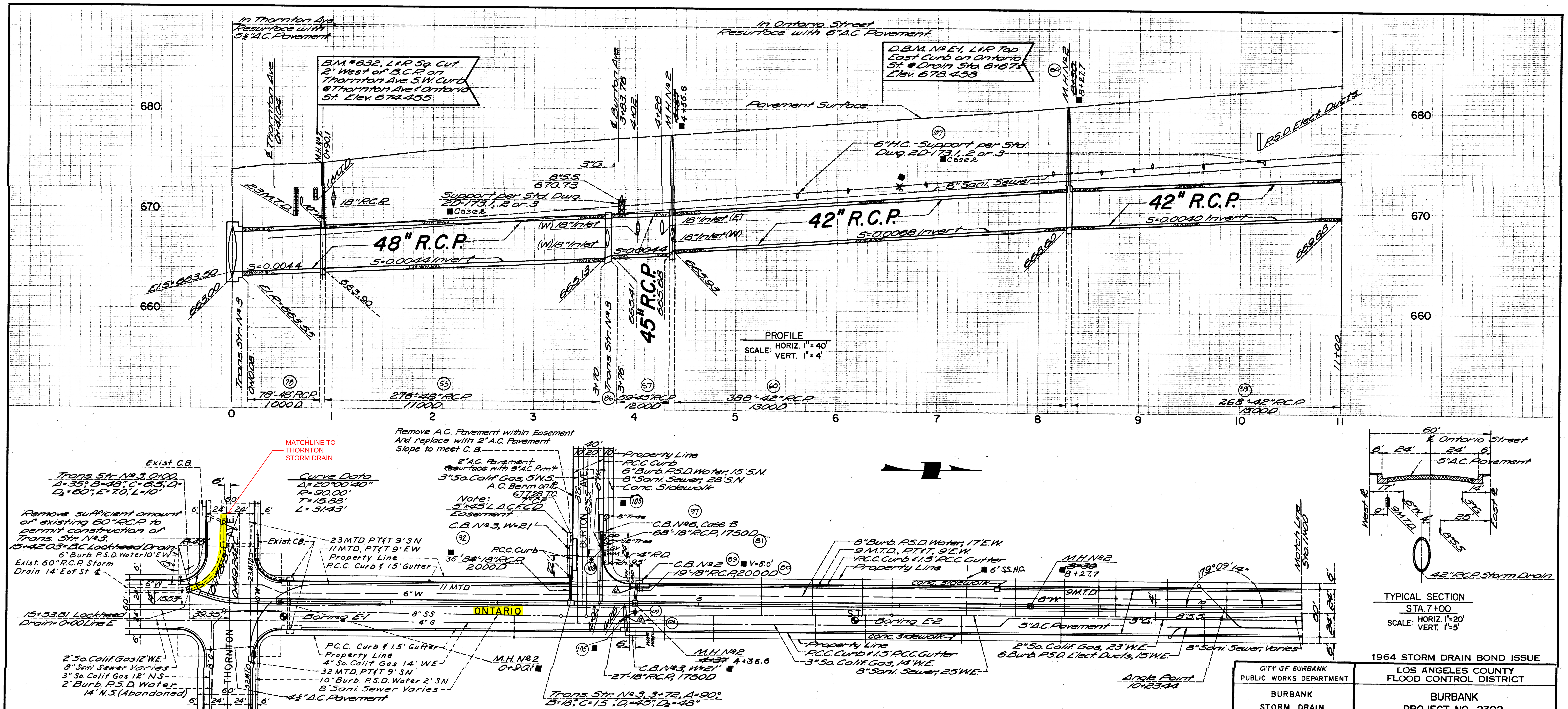
The federal Safe Drinking Water Act (SDWA), established in 1974, sets drinking water standards throughout the country and is administered by the USEPA. The drinking water standards established in the SDWA, as set forth in the CFR, are referred to as the National Primary Drinking Water Regulations (Primary Standards, Title 40, CFR Part 141) and the National Secondary Drinking Water Regulations (Second Standards, 40 CFR Part 143). California passed its own SDWA in 1986 that authorizes the state's Department of Health Services (DHS) to protect the public from contaminants in drinking water by establishing maximum contaminants levels, as set forth in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 15, that are at least as stringent as those developed by the USEPA, as required by the federal SDWA.

California Water Plan

The California Water Plan (The Plan) provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The Plan, which is updated every five years, presents basic data and information on California's water resources including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses. The Plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the state's water needs.

ATTACHMENT B

LOCAL STORM DRAIN SYSTEM EXHIBIT



1964 STORM DRAIN BOND ISSUE

CITY OF BURBANK PUBLIC WORKS DEPARTMENT	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
BURBANK STORM DRAIN JOB NO. 5460	BURBANK PROJECT NO. 2302 UNIT 2 — LINE E STA. 0+00 TO STA. 11+00 PLAN AND PROFILE
APPROVED: 11-20-69 R.J. [signature] DATE CITY ENGINEER	RECOMMENDED BY [signature] DIVISION ENGINEER (DESIGN) / APPROVAL RECOMMENDED BY C. [signature] ASS'T CHIEF DEPUTY ENGINEER 10/23/70
	APPROVED BY [signature] CHIEF ENGINEER
	SCALE AS NOTED — DATE OCT. '70 — DWG. NO. 364-2302-D4.11 SHEET 11 OF 16

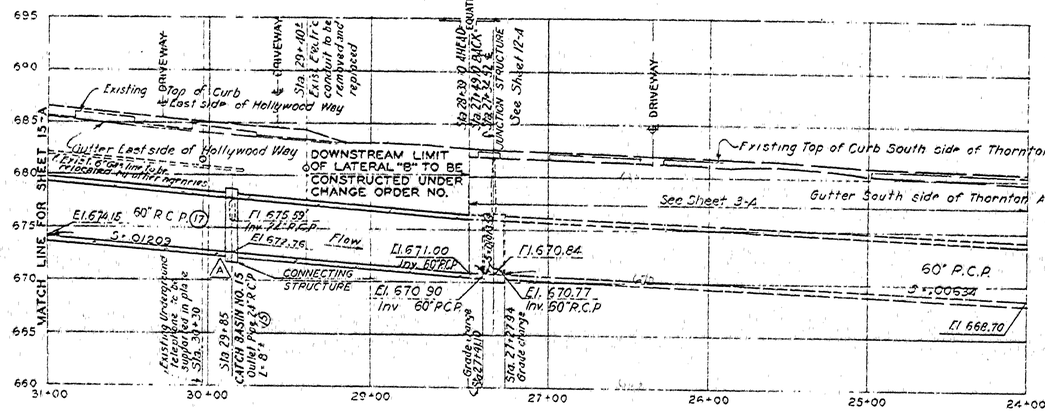
REVISIONS

MARK	DATE	DESCRIPTION
■	2-17-72	As Built

DRAWN BY BURBANK — CHECKED BY BURBANK — DESIGNED BY BURBANK — SUBMITTED BY C.W.H.

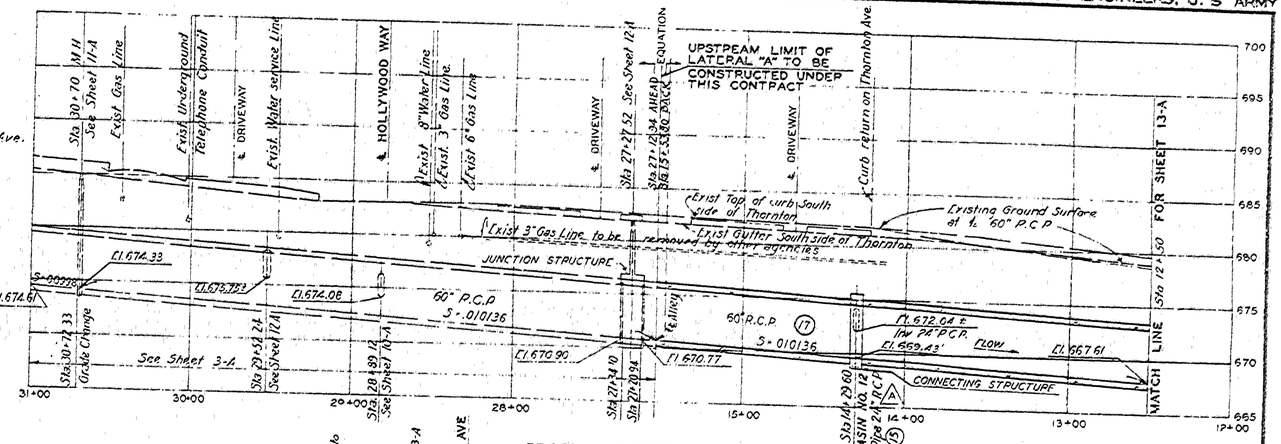
WAR DEPARTMENT

CORPS OF ENGINEERS, U. S. ARMY



PROFILE - LATERAL "B"

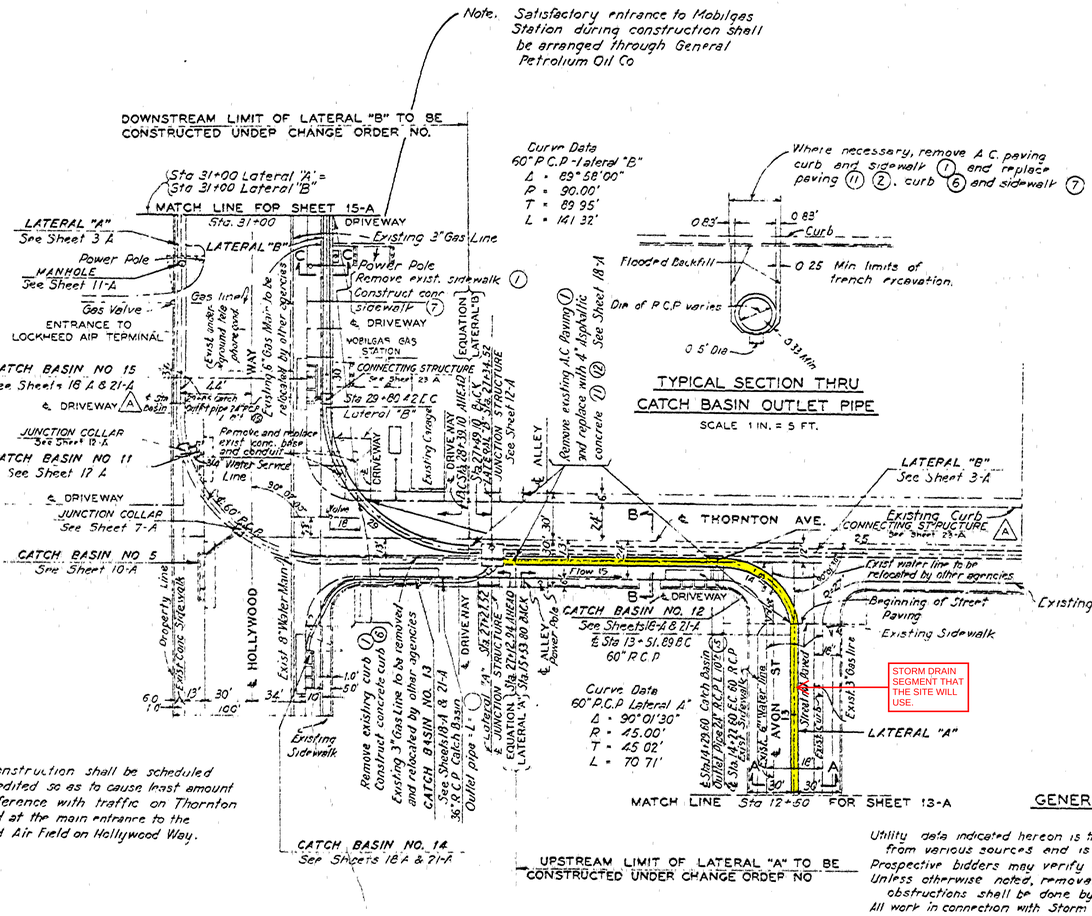
SCALE: HOR. 1 IN. = 40 FT
VERT. 1 IN. = 8 FT.



PROFILE - LATERAL "A"

SCALE: HOR. 1 IN = 40 FT
VERT. 1 IN. = 8 FT.

Note. Satisfactory entrance to Mobilgas Station during construction shall be arranged through General Petrolium Oil Co



Note: Construction shall be scheduled and expedited so as to cause least amount of interference with traffic on Thornton Ave. and at the main entrance to the Lockheed Air Field on Hollywood Way.

Note: Detail plans for Catch Basins No. 12, 13, 14 & 15 will be furnished at later date

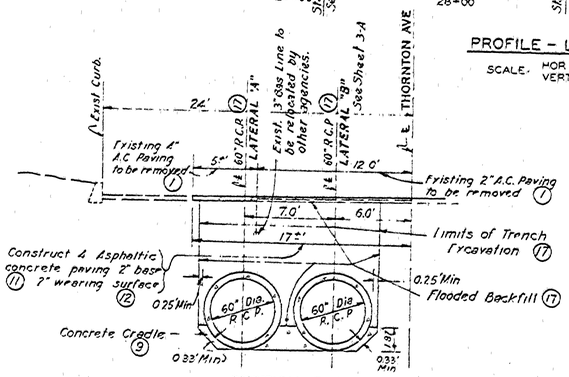
PLAN

SCALE 1 IN = 40 FT

TYPICAL SECTION THRU CATCH BASIN OUTLET PIPE

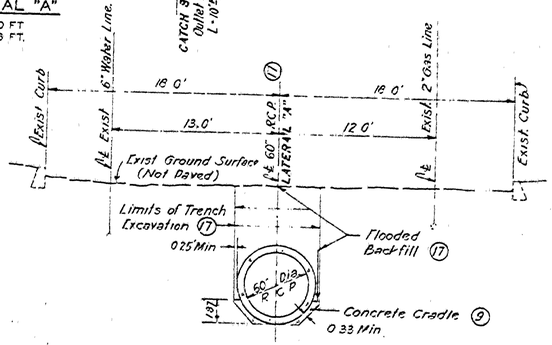
SCALE 1 IN. = 5 FT.

UPSTREAM LIMIT OF LATERAL "A" TO BE CONSTRUCTED UNDER CHANGE ORDER NO



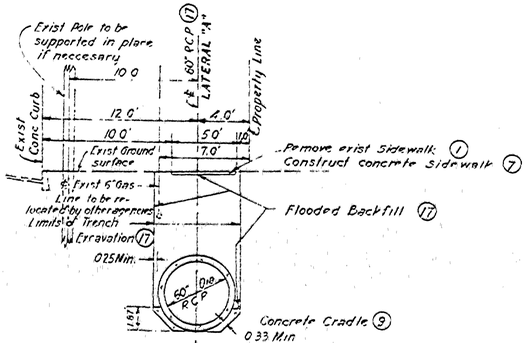
SECTION B-B

SCALE: 1 IN = 5 FT



SECTION A-A

SCALE 1 IN = 5 FT



SECTION C-C

SCALE 1 IN = 5 FT

Ⓡ - SD - 4479F - 14-A

REFERENCE DRAWINGS

For Plan and Profiles No 5 & No. 7 to No 8 Incl. ..... See Sheets 13-A & 15-A to 17-A Incl
For Catch Basin location Details, No 5 (Avon St and Thornton Ave & Hollywood Way & Thornton Ave) ..... See Sheet 16-A
For Typical Catch Basin and Manholes & Miscellaneous Details No. 2 ..... See Sheet 21-A
For Details of Lateral "A" from Sta. 27+12.94 to Sta. 55+72 and Lateral "B" from Sta 3+36 to Sta. 27+49.10 ..... See Sheets 1-A to 12-A Incl
(A) For Details of Connection Structures ..... See Sheet 23-A

GENERAL NOTES

Utility data indicated hereon is the best interpretation of data obtained from various sources and is not guaranteed
Prospective bidders may verify data in field
Unless otherwise noted, removal of all existing structures and obstructions shall be done by the contractor
All work in connection with Storm Drains shown hereon shall be constructed by the contractor unless otherwise noted
Figures in circles indicate contract item numbers under which payment will be made
Where the contractor digs a trench wider than the minimum through carelessness, the extra concrete required to extend the cradle to the sides of the excavation shall be furnished by him at his own expense.
All stations downstream from Junction Structure unless noted refer to Lateral "A" ℄ stations All stations upstream from Junction Structure unless noted refer to Lateral "B" ℄ stations
Pay items for 36" R.C.P., 48" R.C.P. and timber bulkhead to be negotiated

REDRAWN WITHOUT CHANGE AND SIGNATURES TRACED FROM ORIGINAL DRAWING OCT 1, 1943

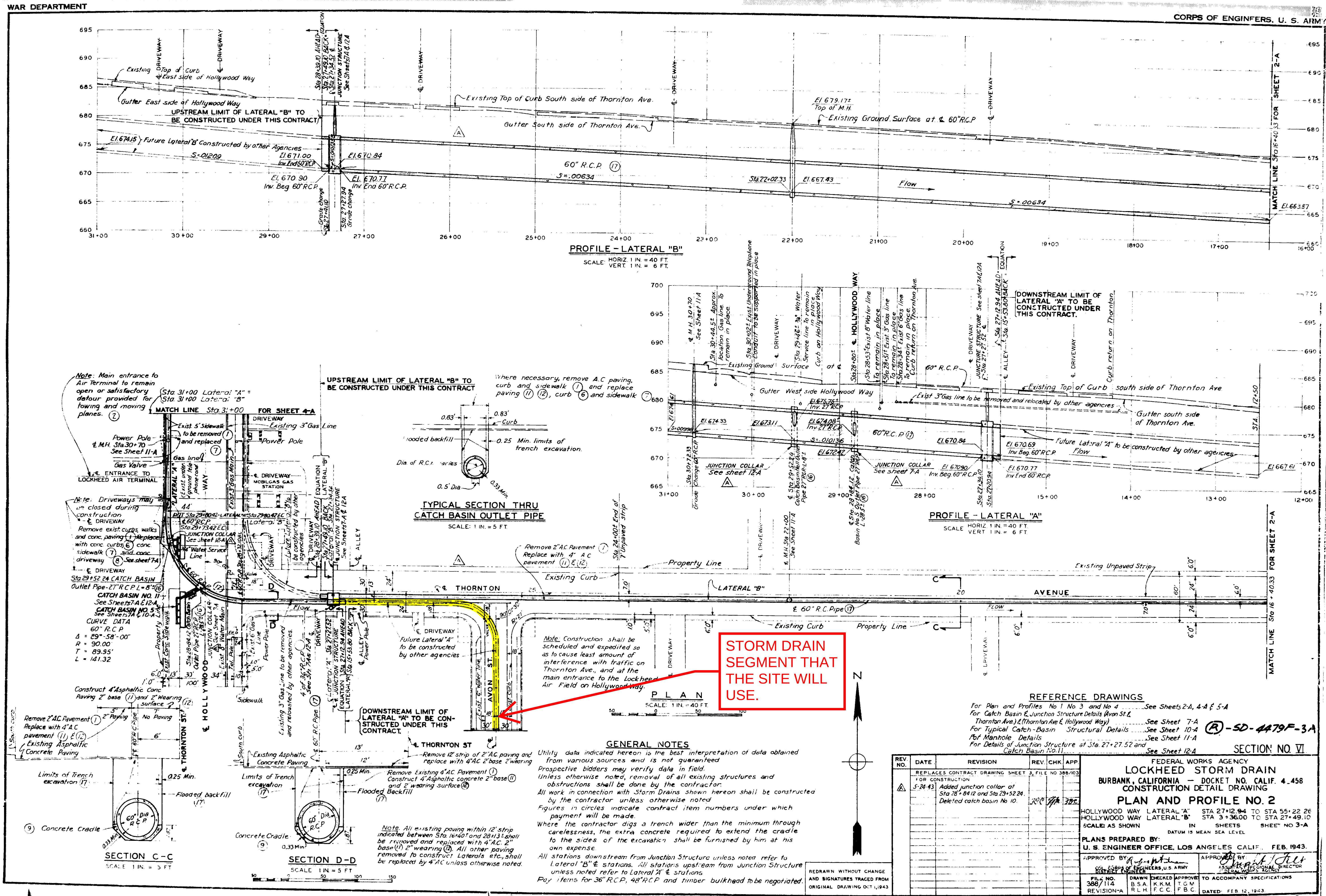
REV. NO.	DATE	REVISION	REV.	CHK	APP.
(A)	5 25 43	Added connecting structures at Sta. 14+29.60 Lateral "A" and Sta 29+85 Lateral "B"	T.M.P.		F.B.C.

SECTION NO VI

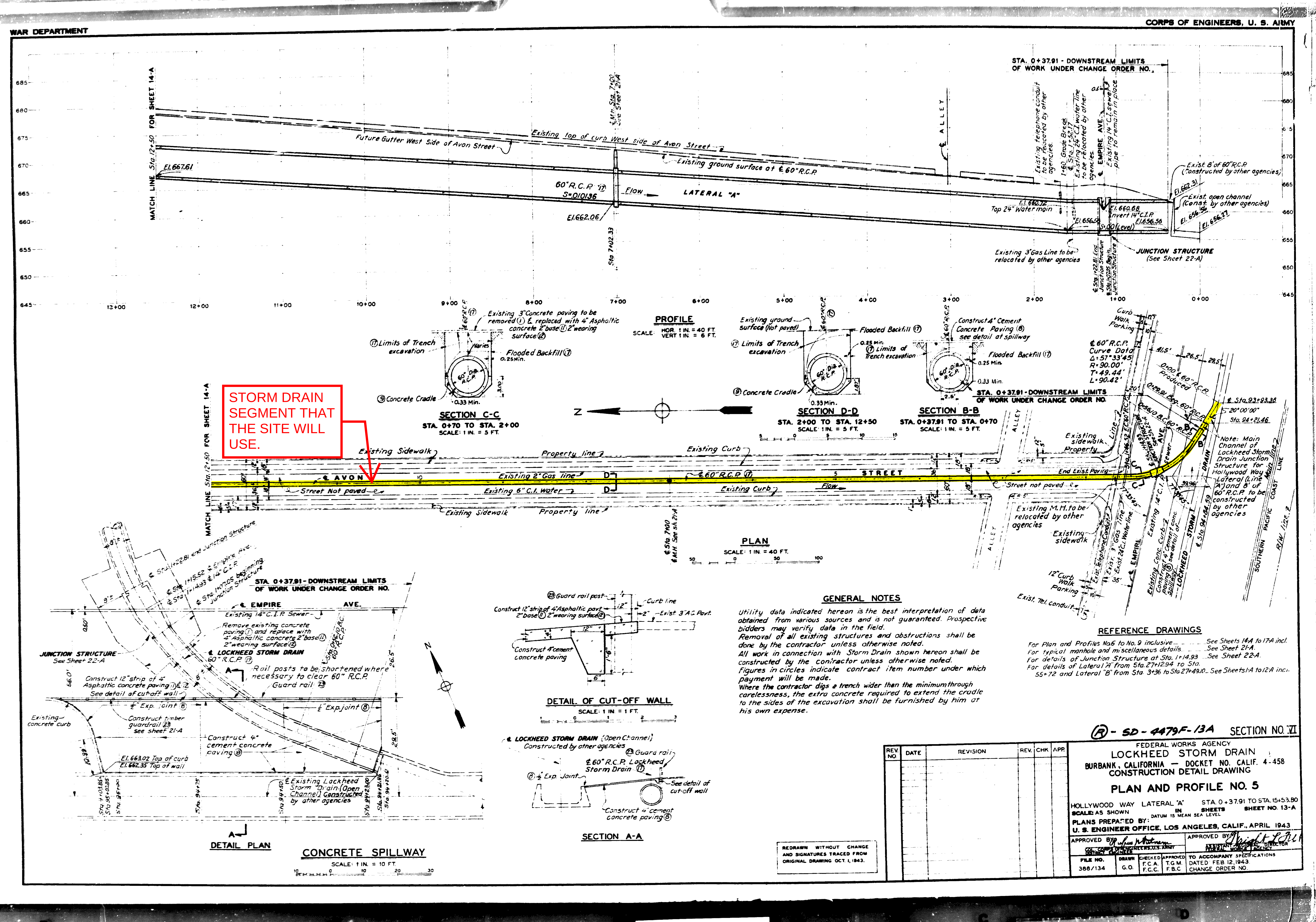
FEDERAL WORKS AGENCY
LOCKHEED STORM DRAIN
BURBANK CALIFORNIA - DOCKET NO CALIF 4-458
CONSTRUCTION DETAIL DRAWING
PLAN AND PROFILE NO. 6
HOLLYWOOD WAY LATERAL "A" STA 0+37.91 TO STA 55+72
HOLLYWOOD WAY LATERAL "B" STA 3+36.00 TO STA 71+60.33
SCALE AS SHOWN — IN SHEETS — SHEET NO 14-A
DATUM IS MEAN SEA LEVEL
PLANS PREPARED BY: U. S. ENGINEER OFFICE, LOS ANGELES, CALIF — MAY 1943

APPROVED BY: Rufus M. Putnam, COL. CORPS OF ENGINEERS U.S. ARMY, DISTRICT ENGINEER
APPROVED BY: Harold L. Ickes, ASSISTANT, REGIONAL DIRECTOR FEDERAL WORKS AGENCY

FILE NO	DRAWN	CHECKED	APPROVED	TO ACCOMPANY SPECIFICATIONS
388/135 REVISION-A	B.S.A. R.L.H.	F.S.A. F.C.C.	T.G.M. F.B.C.	DATED FEB 12, 1943 CHANGE ORDER NO



WAR DEPARTMENT
CORPS OF ENGINEERS, U. S. ARMY
PROFILE - LATERAL "B"
SCALE: HORIZ 1 IN. = 40 FT. VERT 1 IN. = 6 FT.
UPSTREAM LIMIT OF LATERAL "B" TO BE CONSTRUCTED UNDER THIS CONTRACT
Existing Top of Curb East side of Hollywood Way
Gutter East side of Hollywood Way
Future Lateral "B" Constructed by other Agencies
S=.01209
El. 671.00 Inv. End 60" R.C.P.
El. 670.90 Inv. Beg 60" R.C.P.
El. 670.84
El. 670.77 Inv. End 60" R.C.P.
60" R.C.P. (17)
S=.00634
Existing Top of Curb South side of Thornton Ave.
Gutter South side of Thornton Ave.
El. 679.17± Top of M.H.
Existing Ground Surface at ℄ 60" R.C.P.
Sta. 22+02.33
El. 667.43
Flow
S=.00634
El. 663.87
MATCH LINE Sta 16+40.33 FOR SHEET 2-A
JUNCTION STRUCTURE See Sheets 7-A & 12-A
PROFILE - LATERAL "A"
SCALE: HORIZ 1 IN. = 40 FT. VERT 1 IN. = 6 FT.
DOWNSTREAM LIMIT OF LATERAL "A" TO BE CONSTRUCTED UNDER THIS CONTRACT.
Existing Ground Surface
Gutter West side Hollywood Way
60" R.C.P.
Existing Top of Curb South side of Thornton Ave
Exist 3" Gas line to be removed and relocated by other agencies
Gutter south side of Thornton Ave.
Future Lateral "A" to be constructed by other agencies
JUNCTION COLLAR See sheet 12-A
JUNCTION COLLAR See sheet 7-A
S=.01013
El. 670.84
El. 670.69 Inv. Beg 60" R.C.P.
El. 670.77 Inv. End 60" R.C.P.
El. 667.61
TYPICAL SECTION THRU CATCH BASIN OUTLET PIPE
SCALE: 1 IN. = 5 FT.
0.25 Min. limits of trench excavation.
Note: Main entrance to Air Terminal to remain open or satisfactory detour provided for towing and moving planes. (2)
MATCH LINE Sta. 31+00 FOR SHEET 4-A
UPSTREAM LIMIT OF LATERAL "B" TO BE CONSTRUCTED UNDER THIS CONTRACT
Where necessary, remove A.C. paving, curb and sidewalk (1) and replace paving (11) (12), curb (6) and sidewalk (7)
℄ ENTRANCE TO LOCKHEED AIR TERMINAL
Note: Driveways may be closed during construction
CURVE DATA 60" R.C.P. Δ = 89°-58'-00" R = 90.00 T = 89.95' L = 141.32
THORNTON AVENUE
LATERAL "B"
℄ 60" R.C. Pipe (17)
Existing Curb
Property Line
Existing Unpaved Strip
HOLLYWOOD WAY
AVON ST.
Future Lateral "A" to be constructed by other agencies
DOWNSTREAM LIMIT OF LATERAL "A" TO BE CONSTRUCTED UNDER THIS CONTRACT
Note: Construction shall be scheduled and expedited so as to cause least amount of interference with traffic on Thornton Ave., and at the main entrance to the Lockheed Air Field on Hollywood Way.
STORM DRAIN SEGMENT THAT THE SITE WILL USE.
PLAN
SCALE: 1 IN. = 40 FT.
N
SECTION C-C
SCALE: 1 IN. = 5 FT.
SECTION D-D
SCALE: 1 IN. = 5 FT.
Concrete Cradle (9)
Flooded backfill (17)
Limits of Trench excavation (17)
Note: All existing paving within 12' strip indicated between Sta. 16+40± and 28+13± shall be removed and replaced with 4" A.C. 2" base (11) 2" wearing (12). All other paving removed to construct Laterals etc., shall be replaced by 4" A.C. unless otherwise noted.
GENERAL NOTES
Utility data indicated hereon is the best interpretation of data obtained from various sources and is not guaranteed.
Prospective bidders may verify data in field.
Unless otherwise noted, removal of all existing structures and obstructions shall be done by the contractor.
All work in connection with Storm Drains shown hereon shall be constructed by the contractor unless otherwise noted.
Figures in circles indicate contract item numbers under which payment will be made.
Where the contractor digs a trench wider than the minimum through carelessness, the extra concrete required to extend the cradle to the sides of the excavation shall be furnished by him at his own expense.
All stations downstream from Junction Structure unless noted refer to Lateral "B" ℄ stations. All stations upstream from Junction Structure unless noted refer to Lateral "A" ℄ stations.
Pay items for 36" R.C.P., 48" R.C.P. and timber bulkhead to be negotiated.
REFERENCE DRAWINGS
For Plan and Profiles No. 1 No. 3 and No. 4 ... See Sheets 2-A, 4-A & 5-A
For Catch Basin & Junction Structure Details (Avon St & Thornton Ave & Thornton Ave & Hollywood Way) ... See Sheet 7-A
For Typical Catch-Basin Structural Details ... See Sheet 10-A
For Manhole Details ... See Sheet 11-A
For Details of Junction Structure at Sta. 27+27.52 and Catch Basin No. 11 ... See Sheet 12-A
Ⓡ-SD-4479F-3A
SECTION NO. VI
REV. NO. | DATE | REVISION | REV. | CHK. | APP.
REPLACES CONTRACT DRAWING SHEET 3, FILE NO. 388/103 FOR CONSTRUCTION
Δ 5-24-43 Added junction collar at Sta 28+84.12 and Sta 29+52.24. Deleted catch basin No. 10.
FEDERAL WORKS AGENCY
LOCKHEED STORM DRAIN
BURBANK, CALIFORNIA — DOCKET NO. CALIF. 4-458
CONSTRUCTION DETAIL DRAWING
PLAN AND PROFILE NO. 2
HOLLYWOOD WAY LATERAL "A" STA 27+12.94 TO STA 55+22.26
HOLLYWOOD WAY LATERAL "B" STA 3+36.00 TO STA 27+49.10
SCALE: AS SHOWN IN SHEETS SHEET NO. 3-A
DATUM IS MEAN SEA LEVEL
PLANS PREPARED BY: U. S. ENGINEER OFFICE, LOS ANGELES CALIF. FEB. 1943.
REDRAWN WITHOUT CHANGE AND SIGNATURES TRACED FROM ORIGINAL DRAWING OCT. 1, 1943
FILE NO. 388/114 REVISION-A
TO ACCOMPANY SPECIFICATIONS
DATED: FEB. 12, 1943
I CERTIFY THAT THIS IS A COMPLETE, TRUE AND CORRECT COPY OF A RECORD CREATED OR



WAR DEPARTMENT
CORPS OF ENGINEERS, U. S. ARMY
STA. 0+37.91 - DOWNSTREAM LIMITS OF WORK UNDER CHANGE ORDER NO.
MATCH LINE Sta. 12+50 FOR SHEET 14-A
El. 667.61
Future Gutter West Side of Avon Street
Existing top of curb West side of Avon Street
Existing ground surface at ℄ 60" R.C.P.
60" R.C.P. ⑰ S=0.010136
Flow
LATERAL "A"
El. 662.06
Existing telephone conduit to be relocated by other agencies.
1+60 Grade Break
Existing 24" C.I. water line to be relocated by other agencies
℄ EMPIRE AVE.
Existing 14" C.I. sewer pipe to remain in place
Exist. 8' of 60" R.C.P. (Constructed by other agencies)
Exist. open channel (Const. by other agencies)
Top 24" Water main
Existing 3" Gas Line to be relocated by other agencies
JUNCTION STRUCTURE (See Sheet 22-A)
PROFILE
SCALE: HOR. 1 IN. = 40 FT. VERT. 1 IN. = 6 FT.
Existing 3" Concrete paving to be removed ① ℄ replaced with 4" Asphaltic concrete 2" base ⑪ 2" wearing surface ⑫
⑰ Limits of Trench excavation
Flooded Backfill ⑦
⑨ Concrete Cradle
SECTION C-C
STA. 0+70 TO STA. 2+00
SCALE: 1 IN. = 5 FT.
Existing ground surface (not paved)
SECTION D-D
STA. 2+00 TO STA. 12+50
SCALE: 1 IN. = 5 FT.
Construct 4" Cement Concrete Paving ⑧ see detail at spillway
SECTION B-B
STA. 0+37.91 TO STA. 0+70
SCALE: 1 IN. = 5 FT.
STA. 0+37.91 - DOWNSTREAM LIMITS OF WORK UNDER CHANGE ORDER NO.
℄ 60" R.C.P. Curve Data Δ=57°33'45" R=90.00' T=49.44' L=90.42'
STORM DRAIN SEGMENT THAT THE SITE WILL USE.
Existing Sidewalk
Property line
Existing Curb
℄ AVON STREET
Existing 2" Gas line
℄ 60" R.C.P. ⑰
Street Not paved
Existing 6" C.I. Water
Existing Sidewalk
Property line
ALLEY
Note: Main Channel of Lockheed Storm Drain Junction Structure for Hollywood Way Lateral (Line "A") and 8' of 60" R.C.P. to be constructed by other agencies
Existing M.H. to be relocated by other agencies
℄ LOCKHEED STORM DRAIN
SOUTHERN PACIFIC COAST MAIN LINE
PLAN
SCALE: 1 IN. = 40 FT.
STA. 0+37.91 - DOWNSTREAM LIMITS OF WORK UNDER CHANGE ORDER NO.
℄ EMPIRE AVE.
Existing 14" C.I.P. Sewer
Remove existing concrete paving ① and replace with 4" Asphaltic concrete 2" base ⑪ 2" wearing surface ⑫
JUNCTION STRUCTURE See Sheet 22-A
℄ LOCKHEED STORM DRAIN 60" R.C.P. ⑰
Construct 12" strip of 4" Asphaltic concrete paving ⑪ ⑫ See detail of cut-off wall
Rail posts to be shortened where necessary to clear 60" R.C.P.
Guard rail ㉓
Existing concrete curb
Construct timber guardrail ㉓ see sheet 21-A
Construct 4" cement concrete paving ⑧
El. 663.02 Top of curb
El. 662.35 Top of wall
℄ Existing Lockheed Storm Drain (Open Channel) Constructed by other agencies
DETAIL PLAN
CONCRETE SPILLWAY
SCALE: 1 IN. = 10 FT.
㉓ Guard rail post
Construct 12" strip of 4" Asphaltic pavt. 2" base ⑪ 2" wearing surface ⑫
Curb line
Exist. 3" A.C. Pavt.
Construct 4" cement concrete paving
DETAIL OF CUT-OFF WALL
SCALE: 1 IN. = 1 FT.
℄ LOCKHEED STORM DRAIN (Open Channel) Constructed by other agencies
㉓ Guard rail
℄ 60" R.C.P. Lockheed Storm Drain ⑰
See detail of cut-off wall
Construct 4" cement concrete paving ⑧
SECTION A-A
GENERAL NOTES
Utility data indicated hereon is the best interpretation of data obtained from various sources and is not guaranteed. Prospective bidders may verify data in the field.
Removal of all existing structures and obstructions shall be done by the contractor unless otherwise noted.
All work in connection with Storm Drain shown hereon shall be constructed by the contractor unless otherwise noted.
Figures in circles indicate contract item number under which payment will be made.
Where the contractor digs a trench wider than the minimum through carelessness, the extra concrete required to extend the cradle to the sides of the excavation shall be furnished by him at his own expense.
REFERENCE DRAWINGS
For Plan and Profiles No.6 to No.9 inclusive ... See Sheets 14-A to 17-A incl.
For typical manhole and miscellaneous details ... See Sheet 21-A.
For details of Junction Structure at Sta. 1+14.93 ... See Sheet 22-A.
For details of Lateral "A" from Sta. 27+12.94 to Sta. 55+72 and Lateral "B" from Sta. 3+36 to Sta. 27+49.10 ... See Sheets 1-A to 12-A incl.
R - SD - 4479F - 13A
SECTION NO. VI
REV. NO. | DATE | REVISION | REV. | CHK | APP.
REDRAWN WITHOUT CHANGE AND SIGNATURES TRACED FROM ORIGINAL DRAWING OCT. 1, 1943.
FEDERAL WORKS AGENCY
LOCKHEED STORM DRAIN
BURBANK, CALIFORNIA — DOCKET NO. CALIF. 4-458
CONSTRUCTION DETAIL DRAWING
PLAN AND PROFILE NO. 5
HOLLYWOOD WAY LATERAL "A" STA. 0+37.91 TO STA. 15+53.80
SCALE: AS SHOWN
IN SHEETS SHEET NO. 13-A
DATUM IS MEAN SEA LEVEL
PLANS PREPARED BY:
U. S. ENGINEER OFFICE, LOS ANGELES, CALIF., APRIL 1943
APPROVED BY
APPROVED BY
FILE NO. 388/134
DRAWN G.O.
CHECKED F.C.A. F.C.C.
APPROVED T.G.M. F.B.C.
TO ACCOMPANY SPECIFICATIONS DATED FEB. 12, 1943
CHANGE ORDER NO.

PROJECT LOCATION

LEGEND

CITY

COUNTY

U.S. ARMY E.D.

STATE

OPEN CHANNEL

L.A.C.F.C.D. DEBRIS BASINS

STORM DRAIN MAP OF

CITY OF BURBANK

LOS ANGELES COUNTY, CALIF

PUBLIC WORKS DIRECTOR

1889

SCALE IN FEET

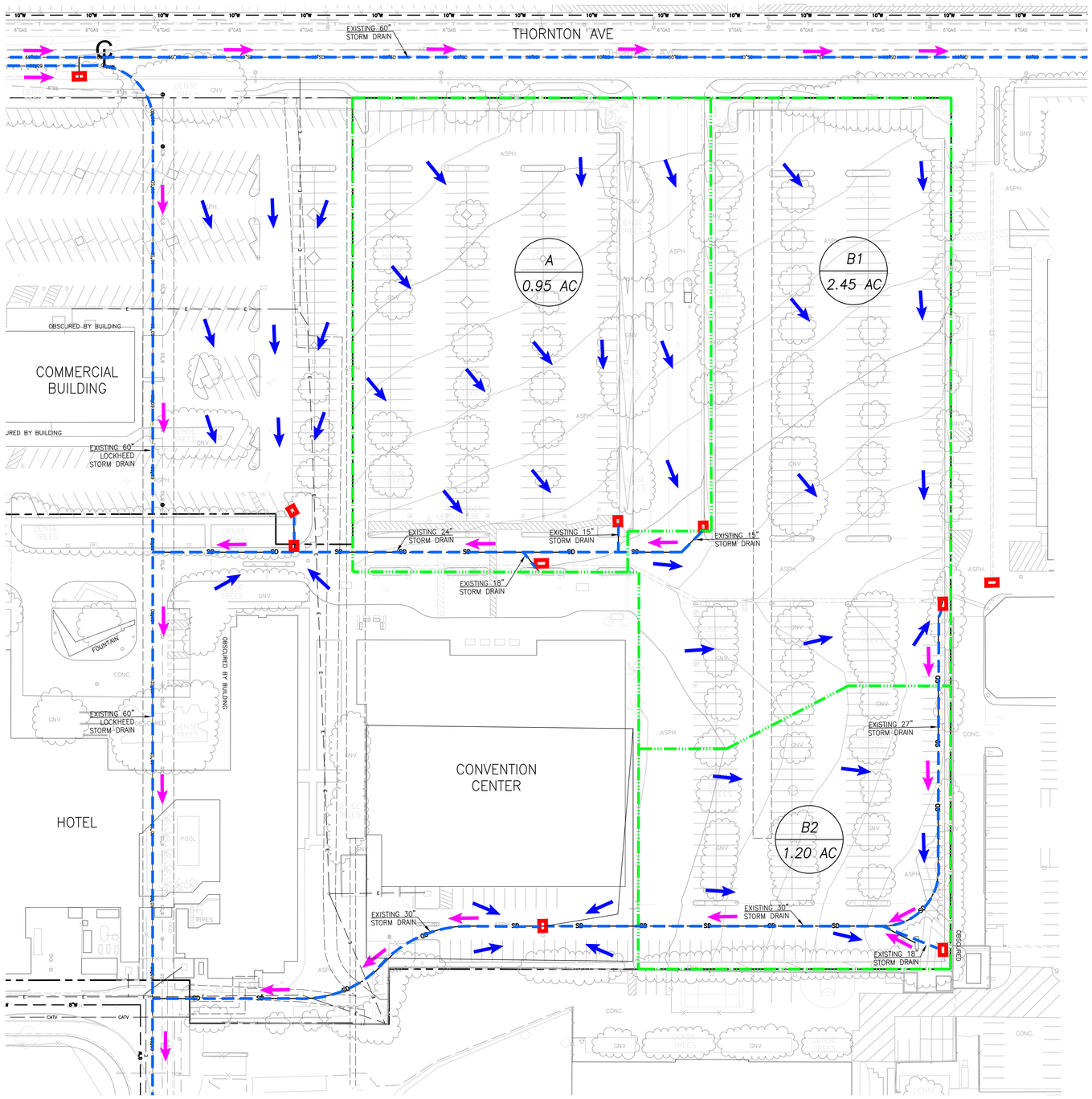
0 1000 2000 3000 4000 5000

CITY OF BURBANK – PUBLIC WORKS DEPARTMENT

Storm Drain Map

ATTACHMENT C

EXISTING ON-SITE HYDROLOGY MAP



LEGEND

- EXISTING STORM DRAIN
- HYDRAULIC BOUNDARY
- DIRECTION OF SURFACE FLOW
- DIRECTION OF STORM DRAIN FLOW
- C-1 / 3.03 AC — AREA DESIGNATION / ACREAGE
- EXISTING CATCH BASIN

NOTE

ONSITE STORM DRAIN INFRASTRUCTURE TO BE FIELD VERIFIED.

EXISTING CONDITION STORM EVENTS				
DRAINAGE AREA	AREA (ACRES)	% IMPERVIOUSNESS	Q10(cfs)	Q25(cfs)
A	2.52	91	5.5	7.3
B1	2.45	91	5.4	7.1
B2	1.20	91	3.1	3.8
TOTAL	6.17	91 (AVERAGE)	14.0	18.2

EXISTING CONDITION HYDROLOGY
DUAL BRAND HOTEL
BURBANK, CA
8/14/2023

40' 0' 20' 40'
SCALE: 1" = 40'

FUSCOE ENGINEERING
600 Wilshire Blvd., Suite 1470, Los Angeles, California 90017
tel 213.988.8802 ◦ fax 213.988.8803 ◦ www.fuscoe.com

ATTACHMENT D

HydroCalc Hydrology Results for Existing Site

Peak Flow Hydrologic Analysis

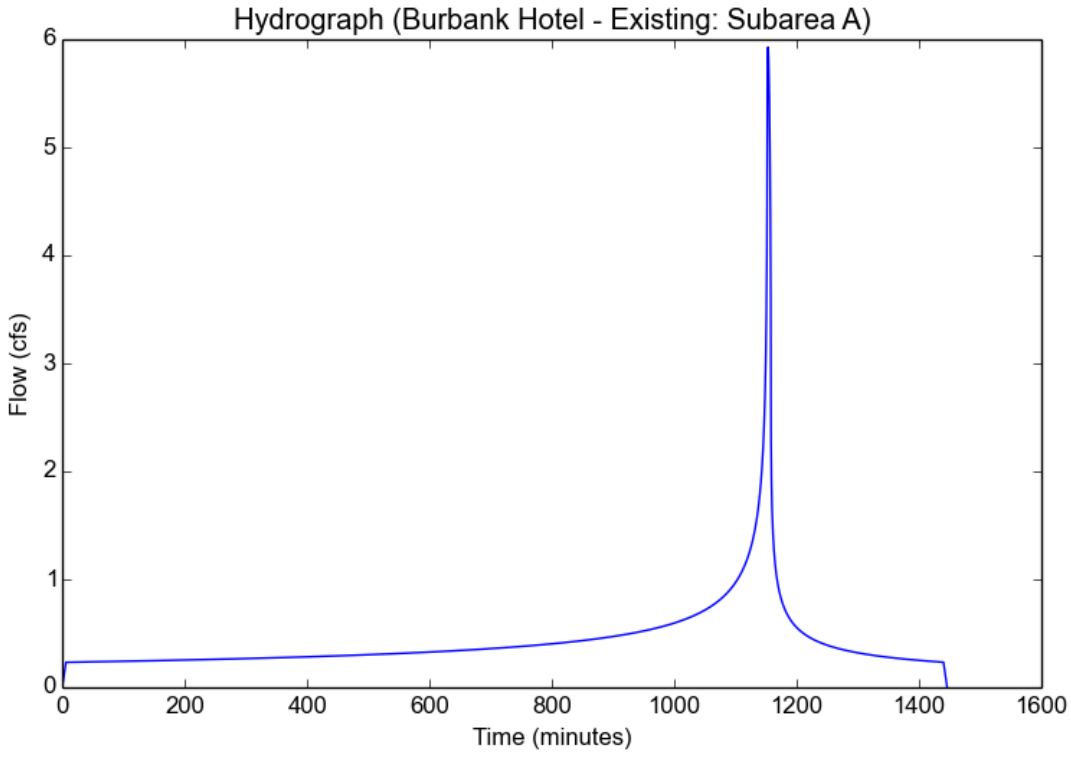
File location: F:/Projects/4147/001/_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Burbank Hotel Report Existing.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Burbank Hotel - Existing
Subarea ID	Subarea A
Area (ac)	2.52
Flow Path Length (ft)	406.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	10-yr
Fire Factor	0
LID	False

Output Results

Modeled (10-yr) Rainfall Depth (in)	5.0337
Peak Intensity (in/hr)	2.7566
Undeveloped Runoff Coefficient (Cu)	0.3813
Developed Runoff Coefficient (Cd)	0.8533
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	5.9277
Burned Peak Flow Rate (cfs)	5.9277
24-Hr Clear Runoff Volume (ac-ft)	0.8695
24-Hr Clear Runoff Volume (cu-ft)	37874.6235



Peak Flow Hydrologic Analysis

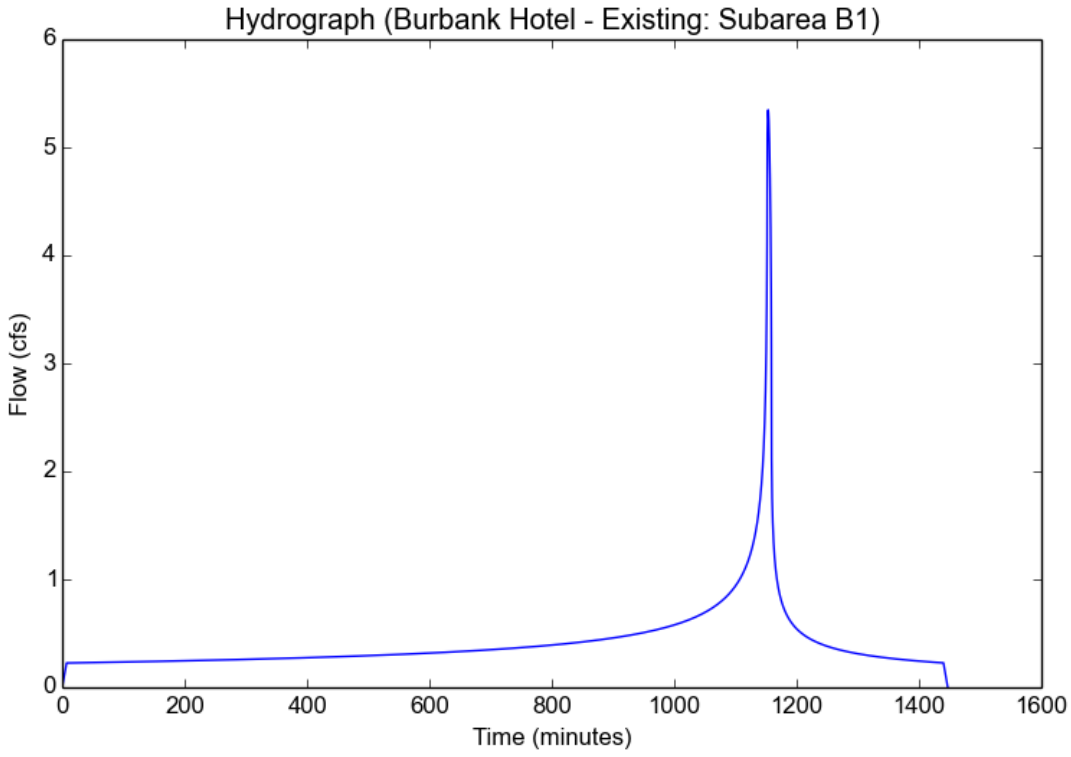
File location: F:/Projects/4147/001/_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Burbank Hotel Report Existing.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Burbank Hotel - Existing
Subarea ID	Subarea B1
Area (ac)	2.45
Flow Path Length (ft)	450.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	10-yr
Fire Factor	0
LID	False

Output Results

Modeled (10-yr) Rainfall Depth (in)	5.0337
Peak Intensity (in/hr)	2.564
Undeveloped Runoff Coefficient (Cu)	0.3582
Developed Runoff Coefficient (Cd)	0.8512
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	5.3472
Burned Peak Flow Rate (cfs)	5.3472
24-Hr Clear Runoff Volume (ac-ft)	0.8453
24-Hr Clear Runoff Volume (cu-ft)	36820.3271



Peak Flow Hydrologic Analysis

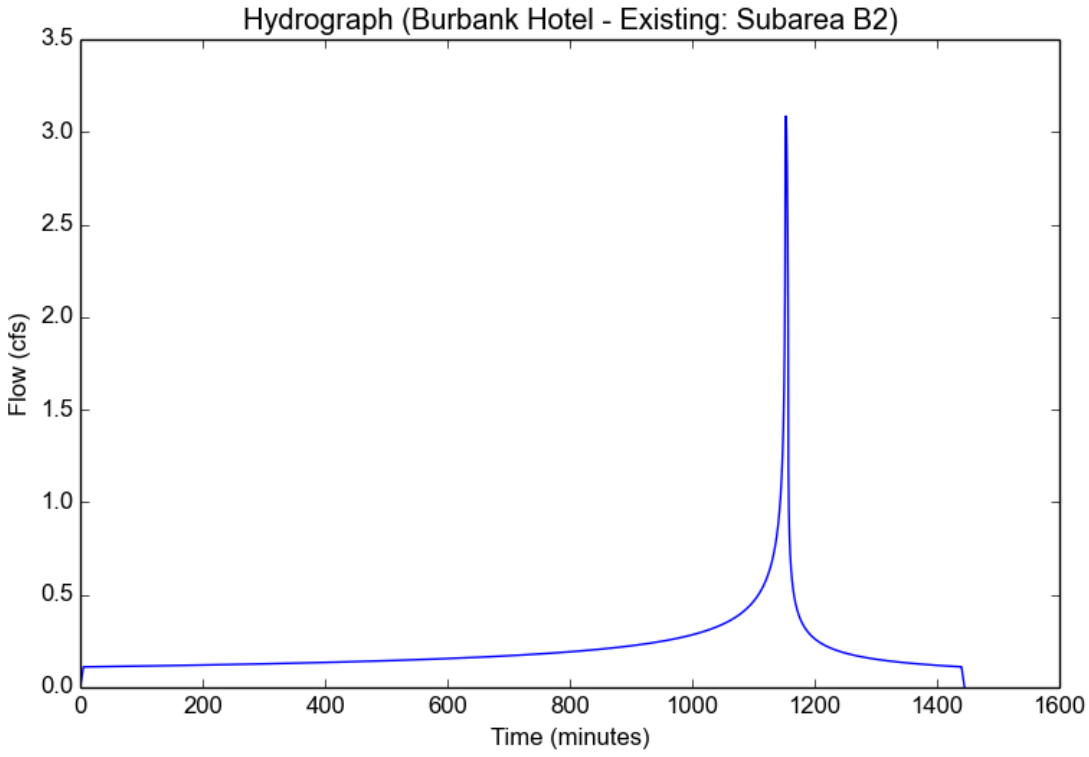
File location: F:/Projects/4147/001/_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Burbank Hotel Report Existing.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Burbank Hotel - Existing
Subarea ID	Subarea B2
Area (ac)	1.2
Flow Path Length (ft)	290.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	10-yr
Fire Factor	0
LID	False

Output Results

Modeled (10-yr) Rainfall Depth (in)	5.0337
Peak Intensity (in/hr)	3.0032
Undeveloped Runoff Coefficient (Cu)	0.4109
Developed Runoff Coefficient (Cd)	0.856
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.0849
Burned Peak Flow Rate (cfs)	3.0849
24-Hr Clear Runoff Volume (ac-ft)	0.4141
24-Hr Clear Runoff Volume (cu-ft)	18036.8386



Peak Flow Hydrologic Analysis

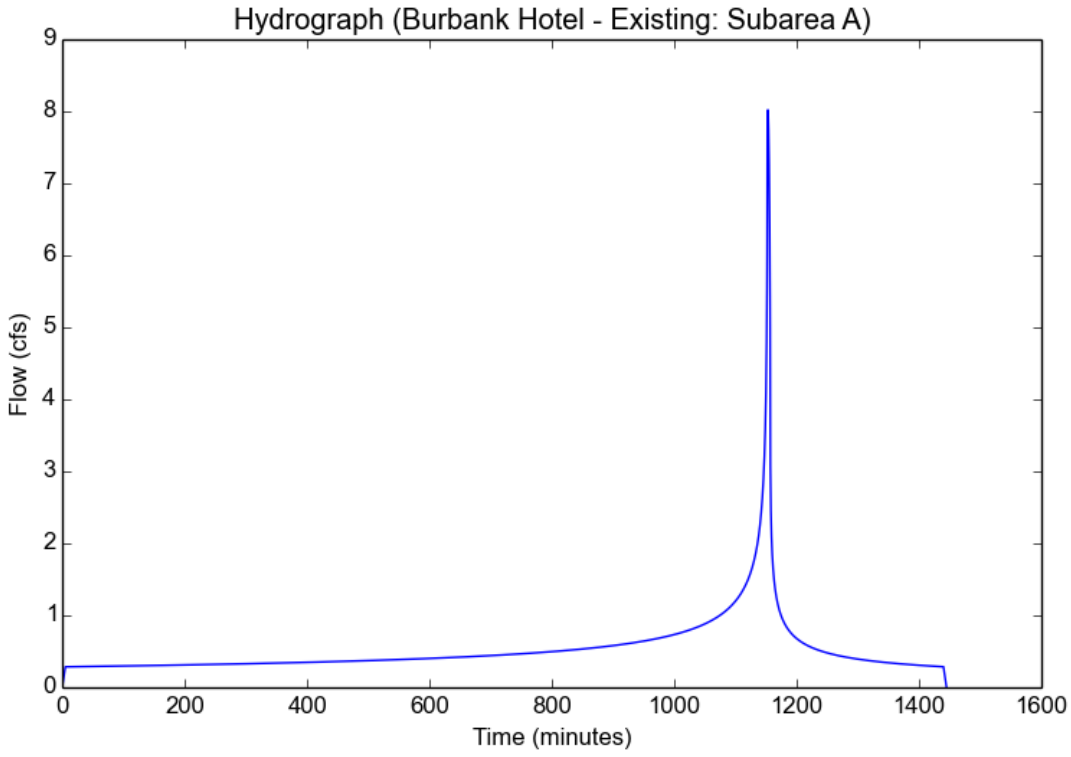
File location: F:/Projects/4147/001/_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Burbank Hotel Report Existing.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Burbank Hotel - Existing
Subarea ID	Subarea A
Area (ac)	2.52
Flow Path Length (ft)	406.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.1899
Peak Intensity (in/hr)	3.6931
Undeveloped Runoff Coefficient (Cu)	0.4769
Developed Runoff Coefficient (Cd)	0.8619
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	8.0215
Burned Peak Flow Rate (cfs)	8.0215
24-Hr Clear Runoff Volume (ac-ft)	1.0699
24-Hr Clear Runoff Volume (cu-ft)	46606.8362



Peak Flow Hydrologic Analysis

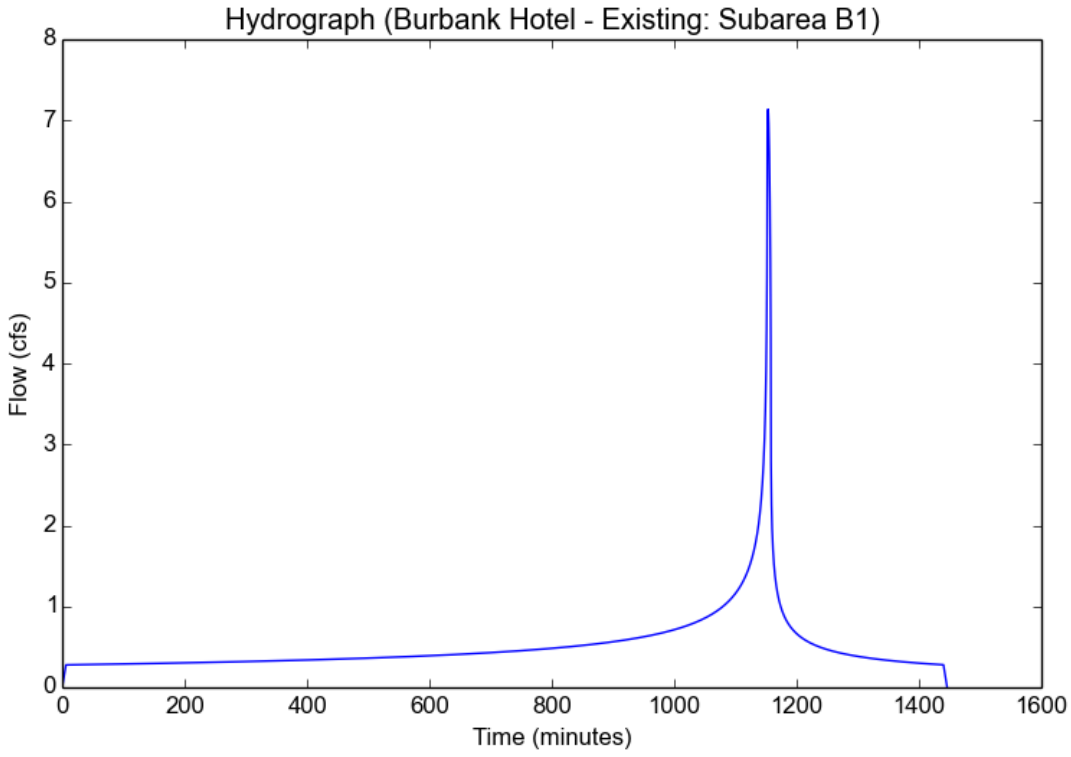
File location: F:/Projects/4147/001/_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Burbank Hotel Report Existing.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Burbank Hotel - Existing
Subarea ID	Subarea B1
Area (ac)	2.45
Flow Path Length (ft)	450.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.1899
Peak Intensity (in/hr)	3.3898
Undeveloped Runoff Coefficient (Cu)	0.4479
Developed Runoff Coefficient (Cd)	0.8593
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	7.1365
Burned Peak Flow Rate (cfs)	7.1365
24-Hr Clear Runoff Volume (ac-ft)	1.0402
24-Hr Clear Runoff Volume (cu-ft)	45309.1255



Peak Flow Hydrologic Analysis

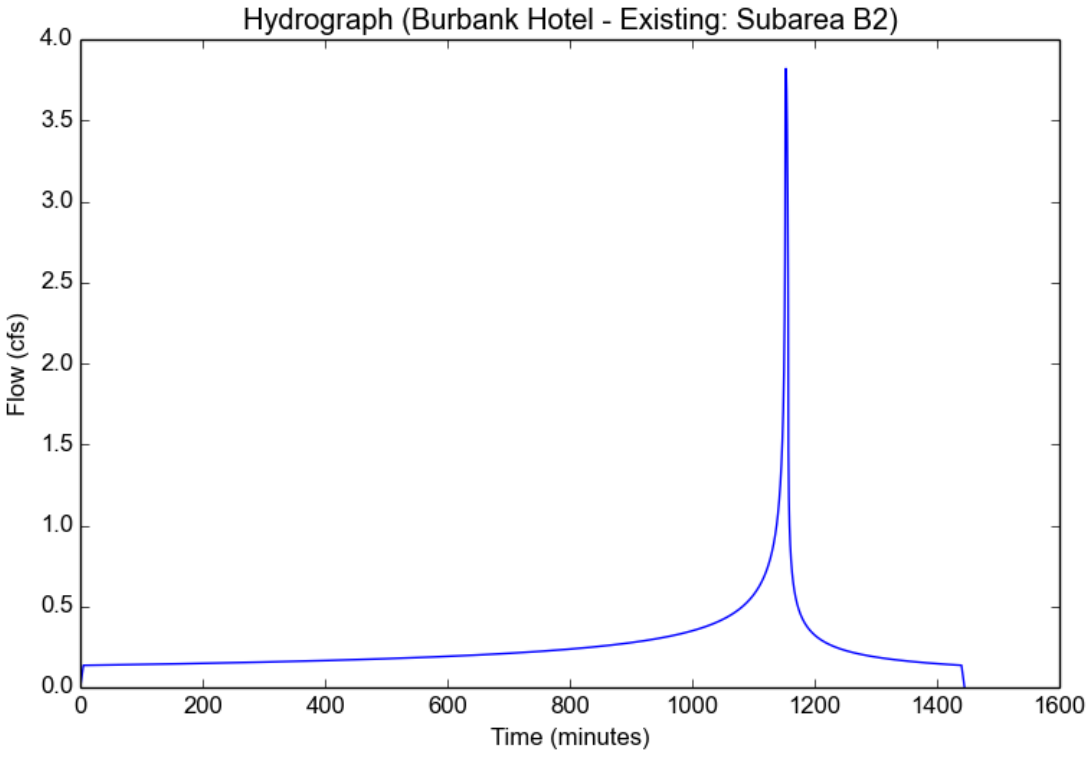
File location: F:/Projects/4147/001/_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Burbank Hotel Report Existing.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Burbank Hotel - Existing
Subarea ID	Subarea B2
Area (ac)	1.2
Flow Path Length (ft)	290.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.1899
Peak Intensity (in/hr)	3.6931
Undeveloped Runoff Coefficient (Cu)	0.4769
Developed Runoff Coefficient (Cd)	0.8619
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.8198
Burned Peak Flow Rate (cfs)	3.8198
24-Hr Clear Runoff Volume (ac-ft)	0.5095
24-Hr Clear Runoff Volume (cu-ft)	22193.7315



ATTACHMENT E

FEMA FLOODPLAIN MAP

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242,** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1994 or later and from National Geospatial Intelligence Agency imagery produced at a scale of 1:4,000 from photography dated 2003 or later.

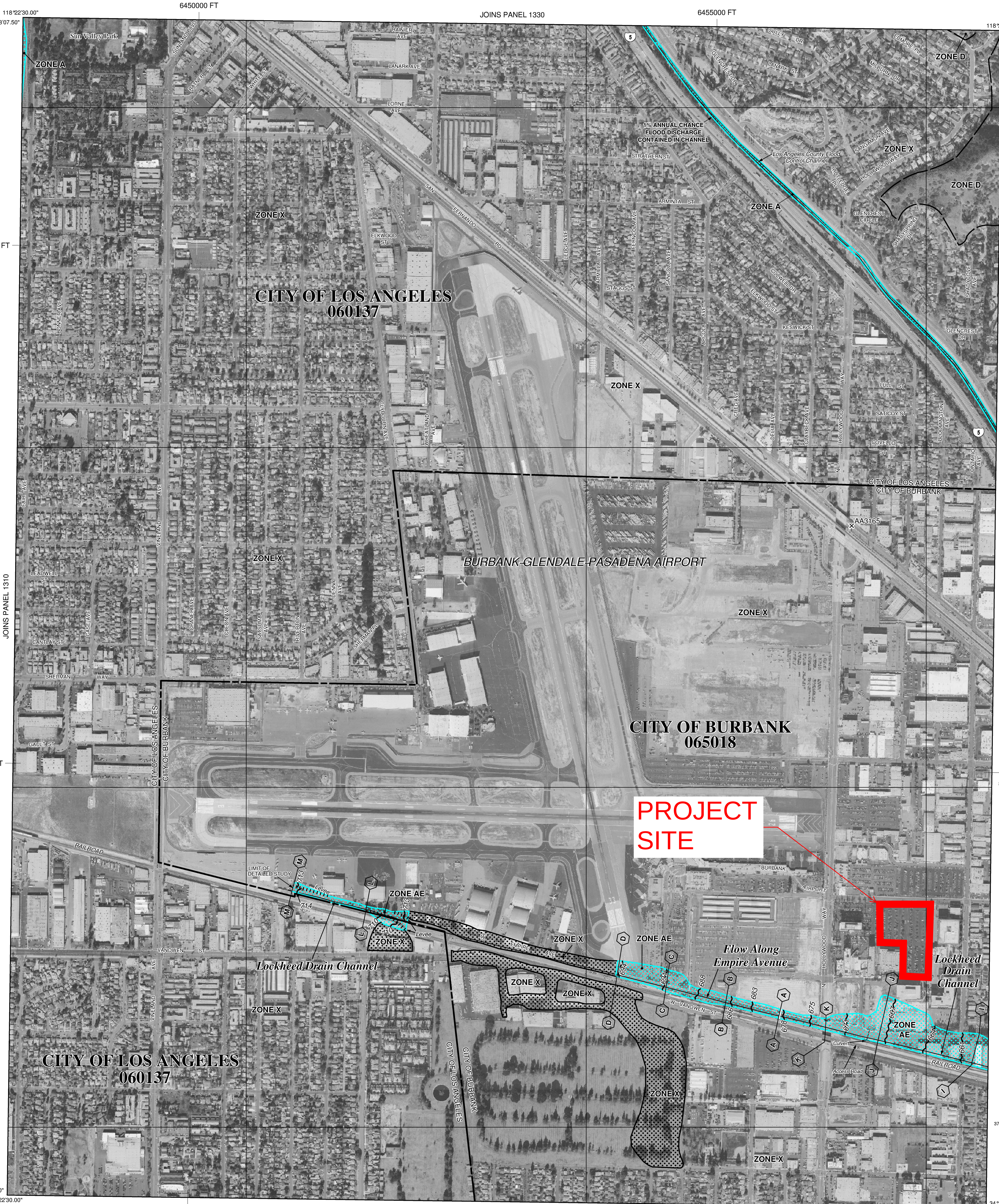
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables *in the Flood Insurance Study report (which contains authoritative hydraulic data)* may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, *a Flood Insurance Study report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

(A)———(A)	Cross section line
(23)- - - - -(23)	Transect line
97°07'30", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
$^{42}75^{000m}$N	1000-meter Universal Transverse Mercator grid values, zone 11
6000000 FT	5000-foot grid ticks: California State Plane coordinate system, V zone (FIPSZONE 0405), Lambert Conformal Conic
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 26, 2008
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1328F

FIRM
FLOOD INSURANCE RATE MAP
LOS ANGELES COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 1328 OF 2350
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BURBANK, CITY OF	065018	1328	F
LOS ANGELES, CITY OF	060137	1328	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06037C1328F

EFFECTIVE DATE
SEPTEMBER 26, 2008

Federal Emergency Management Agency

ATTACHMENT F

2014-16 303(D) LIST

Statewide
October 3, 2017

CATEGORY 5

Final 2014 and 2016 Integrated Report (CWA Section 303(d) List / 305(b) Report)

2014 and 2016 CALIFORNIA 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS*

Category 5 criteria: 1) A water segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for this segment.

* USGS HUC = US Geological Survey Hydrologic Unit Code. Calwater = State Water Resources Control Board hydrological subunit area or even smaller planning watershed.

** TMDL requirement status definitions for listed pollutants are: A= TMDL still required, B= being addressed by USEPA approved TMDL, C= being addressed by action other than a TMDL, ALT= being addressed by USEPA approved TMDL alternative

*** Dates relate to the TMDL requirement status, so a date for A= TMDL scheduled completion date, B= Date USEPA approved TMDL, and C= Completion date for action other than a TMDL

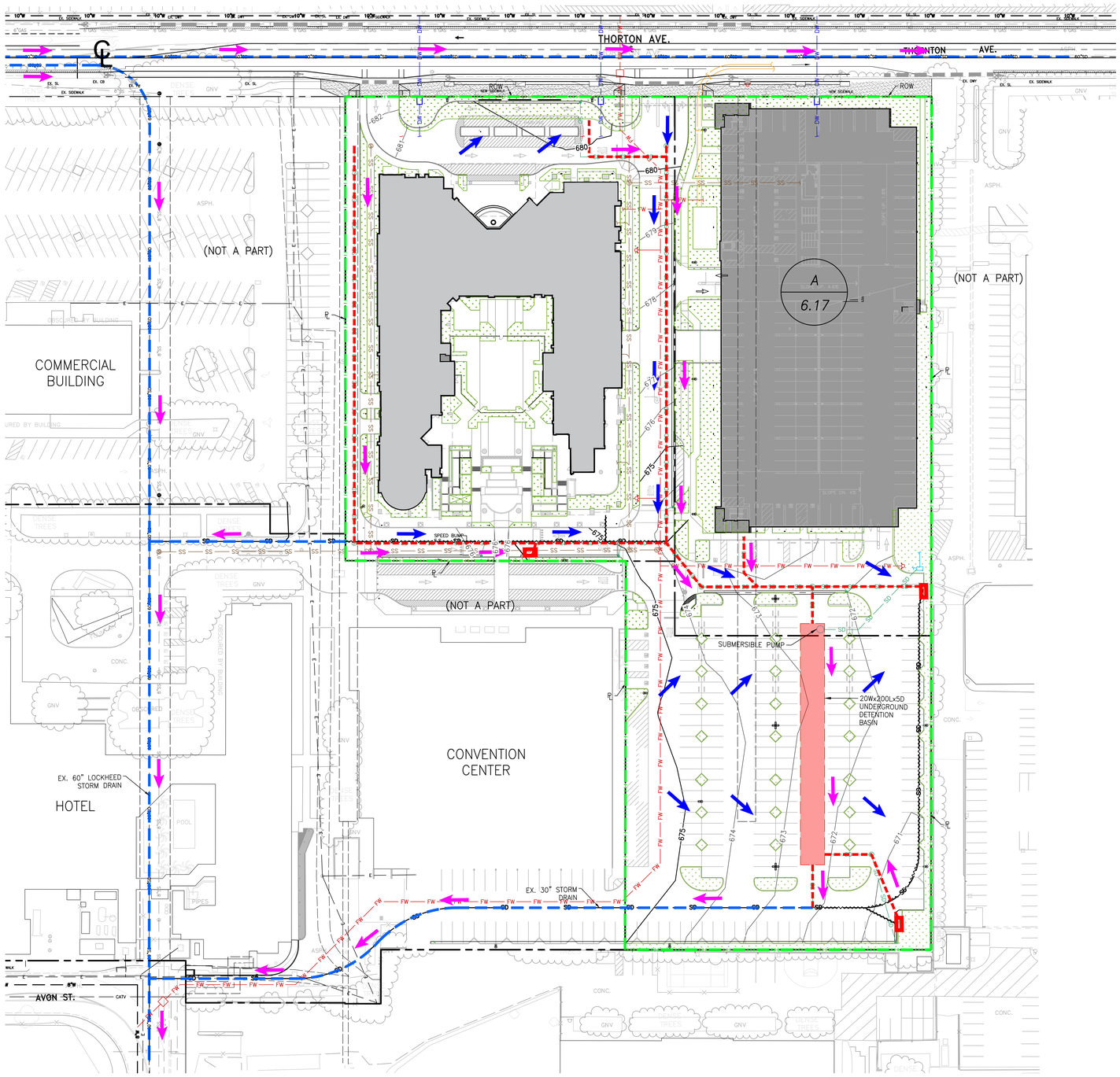
REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	• POLLUTANT ◦ POTENTIAL SOURCES *Relevant Notes*	ESTIMATED AREA ASSESSED	FIRST YEAR LISTED	TMDL REQUIREMENT STATUS**	DATE***
1	Big River Beach at Mendocino Bay	Coastal & Bay Shoreline	1113.300405 / 18010108	• Indicator Bacteria ◦ Source Unknown	3.9 Miles	2010	5A	2025
1	Bodega HU, Bodega Harbor HA	Bay & Harbor	11522000 / 18010111	• Invasive Species ◦ Source Unknown	810 Acres	2006	5A	2025
1	Bodega HU, Estero Americano HA, Americano Creek	River & Stream	11530000 / 18010111	• Nutrients ◦ Source Unknown	38 Miles	1996	5A	2025
1	Bodega HU, Estero Americano HA, estuary	Estuary	11530012 / 18010111	• Nutrients ◦ Source Unknown	199 Acres	1996	5A	2025
				• Sedimentation/Siltation ◦ Source Unknown	199 Acres	1992	5A	2025
1	Bodega HU, Estero de San Antonio HA, Stemple Creek/Estero de San Antonio	River & Stream	1115.400001,1115.400002,1115.400003 / 18010111	• Nutrients ◦ Source Unknown	87 Miles	2016	5A	2025
				• Sediment ◦ Source Unknown	87 Miles	2006	5A	2025
1	Campbell Cove	Coastal & Bay Shoreline	1115.210000,1115.220000 / 18010111	• Indicator Bacteria ◦ Source Unknown	0.24 Miles	2006	5A	2019
1	Caspar Headlands State Beach	Coastal & Bay Shoreline	1113.300404,1113.300405 / 18010108	• Indicator Bacteria ◦ Source Unknown	0.19 Miles	2010	5A	2025
1	Clam Beach (near Mad River mouth)	Coastal & Bay Shoreline	1109.100101 / 18010102	• Indicator Bacteria ◦ Source Unknown	1.5 Miles	2012	5A	2025

REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	• POLLUTANT ○ POTENTIAL SOURCES *Relevant Notes*	ESTIMATED AREA ASSESSED	FIRST YEAR LISTED	TMDL REQUIREMENT STATUS**	DATE***
4	Los Angeles River Reach 2 (Carson to Figueroa Street)	River & Stream	40515010 / 18070104	• Ammonia ○ Nonpoint Source ○ Point Source	19 Miles	1996	5B	2004
				• Copper ○ Source Unknown	19 Miles	2006	5B	2005
				• Indicator Bacteria ○ Source Unknown	19 Miles	2014	5B	2012
				• Lead ○ Nonpoint Source ○ Point Source	19 Miles	1996	5B	2005
				• Nutrients (Algae) ○ Nonpoint Source ○ Point Source	19 Miles	1996	5B	2004
				• Oil ○ Natural Sources	19 Miles	1996	5A	2019
				• Trash ○ Nonpoint Source ○ Surface Runoff ○ Urban Runoff/Storm Sewers	19 Miles	1996	5B	2008
4	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)	River & Stream	40521000 / 18070104	• Ammonia ○ Nonpoint Source ○ Point Source	7.9 Miles	1996	5B	2004
				• Copper ○ Source Unknown	7.9 Miles	2006	5B	2008
				• Indicator Bacteria ○ Source Unknown	7.9 Miles	2014	5B	2012
				• Nutrients (Algae) ○ Nonpoint Source ○ Point Source	7.9 Miles	1996	5B	2004
				• Toxicity ○ Source Unknown	7.9 Miles	2014	5A	2027
				• Trash ○ Nonpoint Source ○ Surface Runoff ○ Urban Runoff/Storm Sewers	7.9 Miles	1996	5B	2008

REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	• POLLUTANT ○ POTENTIAL SOURCES *Relevant Notes*	ESTIMATED AREA ASSESSED	FIRST YEAR LISTED	TMDL REQUIREMENT STATUS**	DATE***
4	Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam)	River & Stream	40521000 / 18070105	• Indicator Bacteria ○ Source Unknown	11 Miles	2014	5A	2019
				• Nutrients (Algae) ○ Nonpoint Source ○ Point Source	11 Miles	1996	5B	2004
				• Toxicity ○ Source Unknown	11 Miles	2014	5A	2027
				• Trash ○ Nonpoint Source ○ Surface Runoff ○ Urban Runoff/Storm Sewers	11 Miles	1996	5B	2008
4	Los Angeles River Reach 5 (within Sepulveda Basin)	River & Stream	40521000 / 18070105	• Ammonia ○ Source Unknown	1.9 Miles	1996	5B	2004
				• Benthic Community Effects ○ Source Unknown	1.9 Miles	2014	5A	2025
				• Copper ○ Source Unknown	1.9 Miles	2006	5B	2005
				• Lead ○ Source Unknown	1.9 Miles	2006	5B	2005
				• Nutrients (Algae) ○ Nonpoint Source ○ Point Source	1.9 Miles	1996	5B	2004
				• Oil ○ Source Unknown	1.9 Miles	1996	5A	2019
				• Toxicity ○ Source Unknown	1.9 Miles	2014	5A	2027
				• Trash ○ Nonpoint Source ○ Surface Runoff ○ Urban Runoff/Storm Sewers	1.9 Miles	1996	5B	2008
4	Los Angeles River Reach 6 (Above Sepulveda Flood Control Basin)	River & Stream	40521000 / 18070105	• Copper ○ Source Unknown	7 Miles	2014	5B	2008
				• Indicator Bacteria ○ Source Unknown	7 Miles	2014	5B	2012

ATTACHMENT G

PROPOSED ON-SITE HYDROLOGY MAP



LEGEND

- EXISTING STORM DRAIN (TO REMAIN)
- PROPOSED BMP STORM DRAIN
- HYDRAULIC BOUNDARY
- DIRECTION OF SURFACE FLOW
- DIRECTION OF PROPOSED STORM DRAIN FLOW
- DIRECTION OF EXISTING STORM DRAIN FLOW
- C-1 / 3.03 AC — AREA DESIGNATION / ACREAGE
- EXISTING CATCH BASIN TO REMAIN
- PROPOSED LANDSCAPING/PLANTER AREA

NOTES:

1. ONSITE STORM DRAIN INFRASTRUCTURE TO BE FIELD VERIFIED.
2. EXISTING CATCH BASINS WILL HAVE PROPOSED PIPING ROUTED TO PROPOSED BMP LOCATIONS.

PROPOSED CONDITION STORM EVENTS					
DRAINAGE AREA	AREA (ACRES)	PLANTER AREA (ACRES)	% IMPERVIOUSNESS	Q10(cfs)	Q25(cfs)
A-1	6.17	0.94	85	9.5	12.9

PROPOSED CONDITION HYDROLOGY
DUAL BRAND HOTEL
BURBANK, CA
11/14/2024

40' 0' 20' 40'
SCALE: 1" = 40'

FUSCOE ENGINEERING
600 Wilshire Blvd., Suite 1470, Los Angeles, California 90017
tel 213.988.8802 ◦ fax 213.988.8803 ◦ www.fuscoe.com

ATTACHMENT H

HYDROCALC HYDROLOGY RESULTS FOR PROPOSED SITE

Peak Flow Hydrologic Analysis

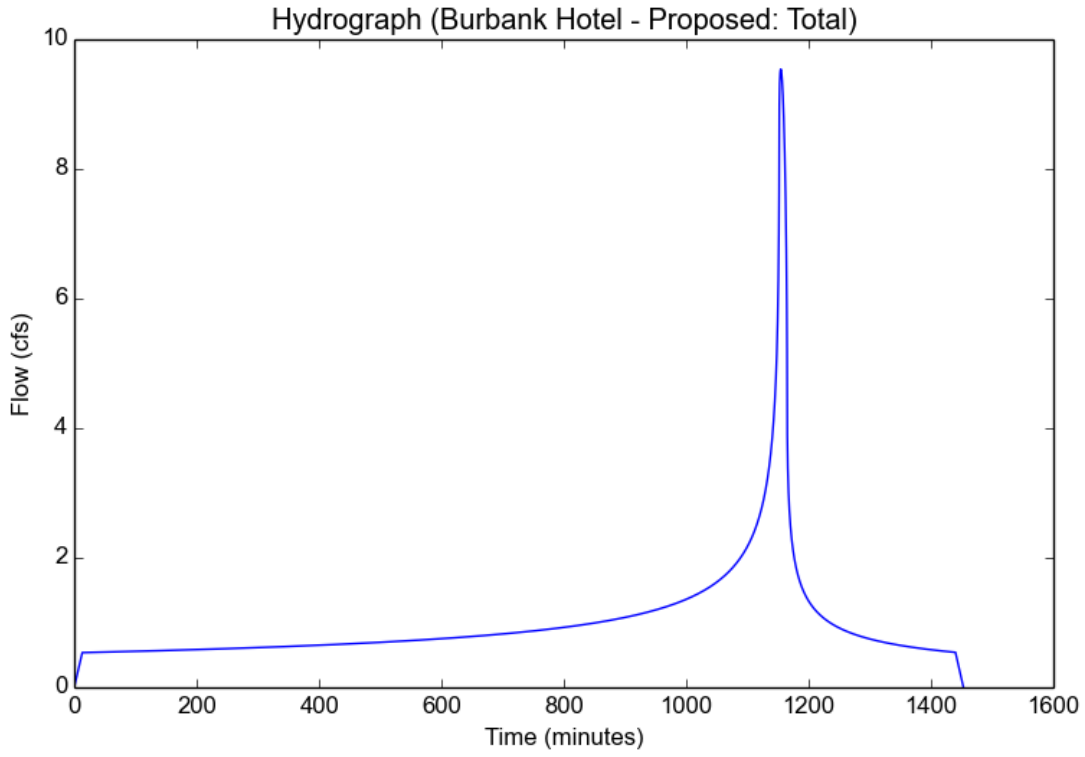
File location: F:/Projects/4147/001/_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Burbank Hotel Report Existing.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Burbank Hotel - Proposed
Subarea ID	Total
Area (ac)	6.17
Flow Path Length (ft)	1200.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.85
Soil Type	15
Design Storm Frequency	10-yr
Fire Factor	0
LID	False

Output Results

Modeled (10-yr) Rainfall Depth (in)	5.0337
Peak Intensity (in/hr)	1.9167
Undeveloped Runoff Coefficient (Cu)	0.2786
Developed Runoff Coefficient (Cd)	0.8068
Time of Concentration (min)	13.0
Clear Peak Flow Rate (cfs)	9.5411
Burned Peak Flow Rate (cfs)	9.5411
24-Hr Clear Runoff Volume (ac-ft)	2.0068
24-Hr Clear Runoff Volume (cu-ft)	87416.8404



Peak Flow Hydrologic Analysis

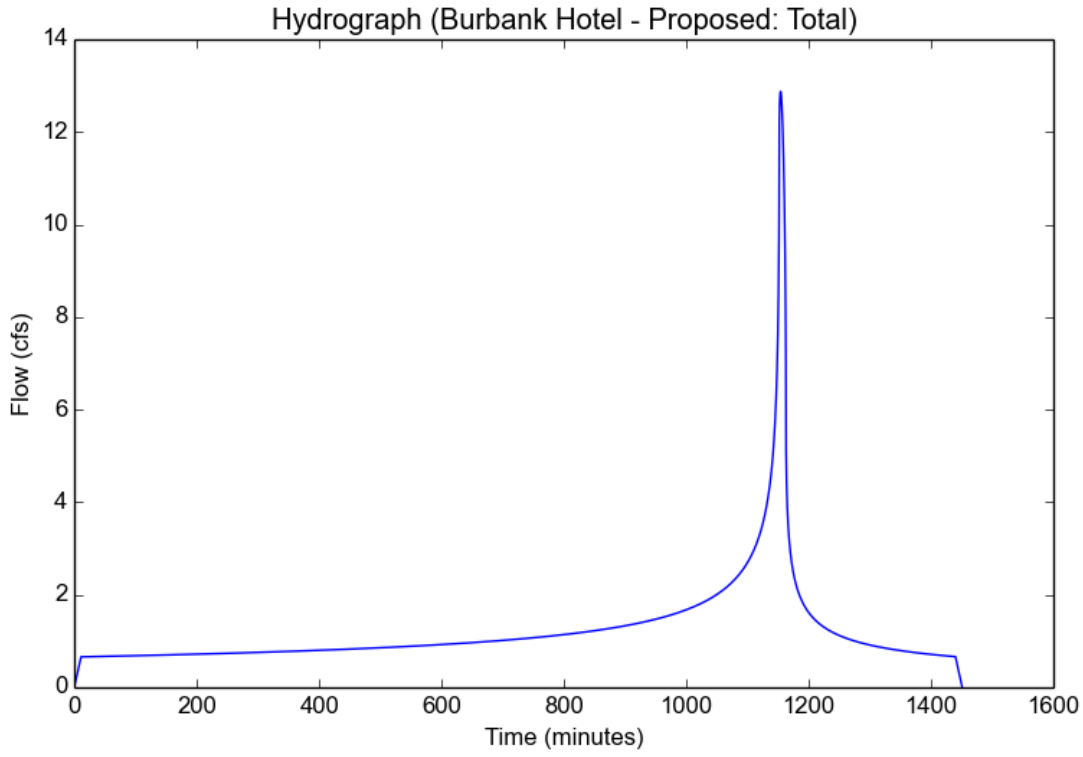
File location: F:/Projects/4147/001/_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Burbank Hotel Report Existing.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Burbank Hotel - Proposed
Subarea ID	Total
Area (ac)	6.17
Flow Path Length (ft)	1200.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.85
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

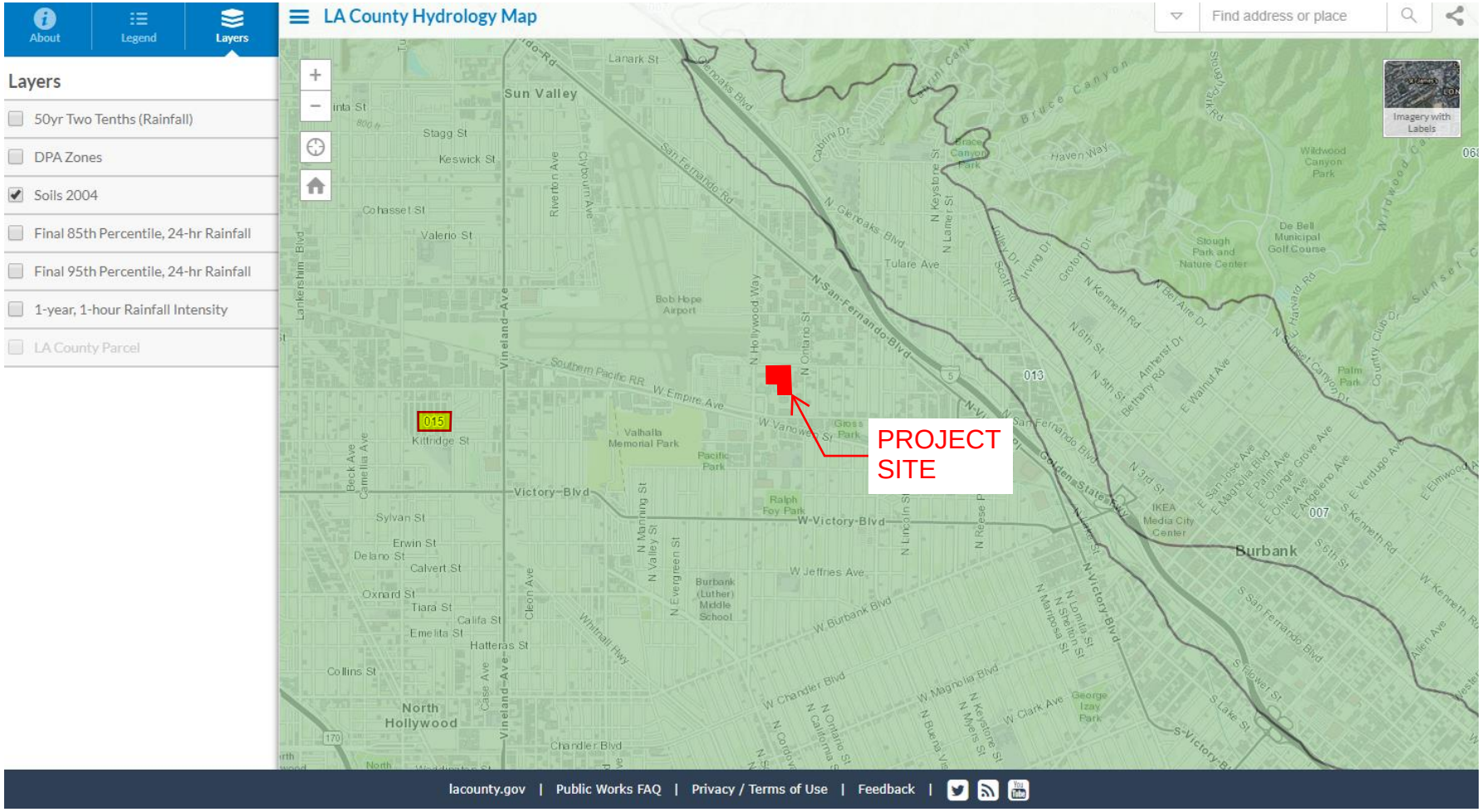
Output Results

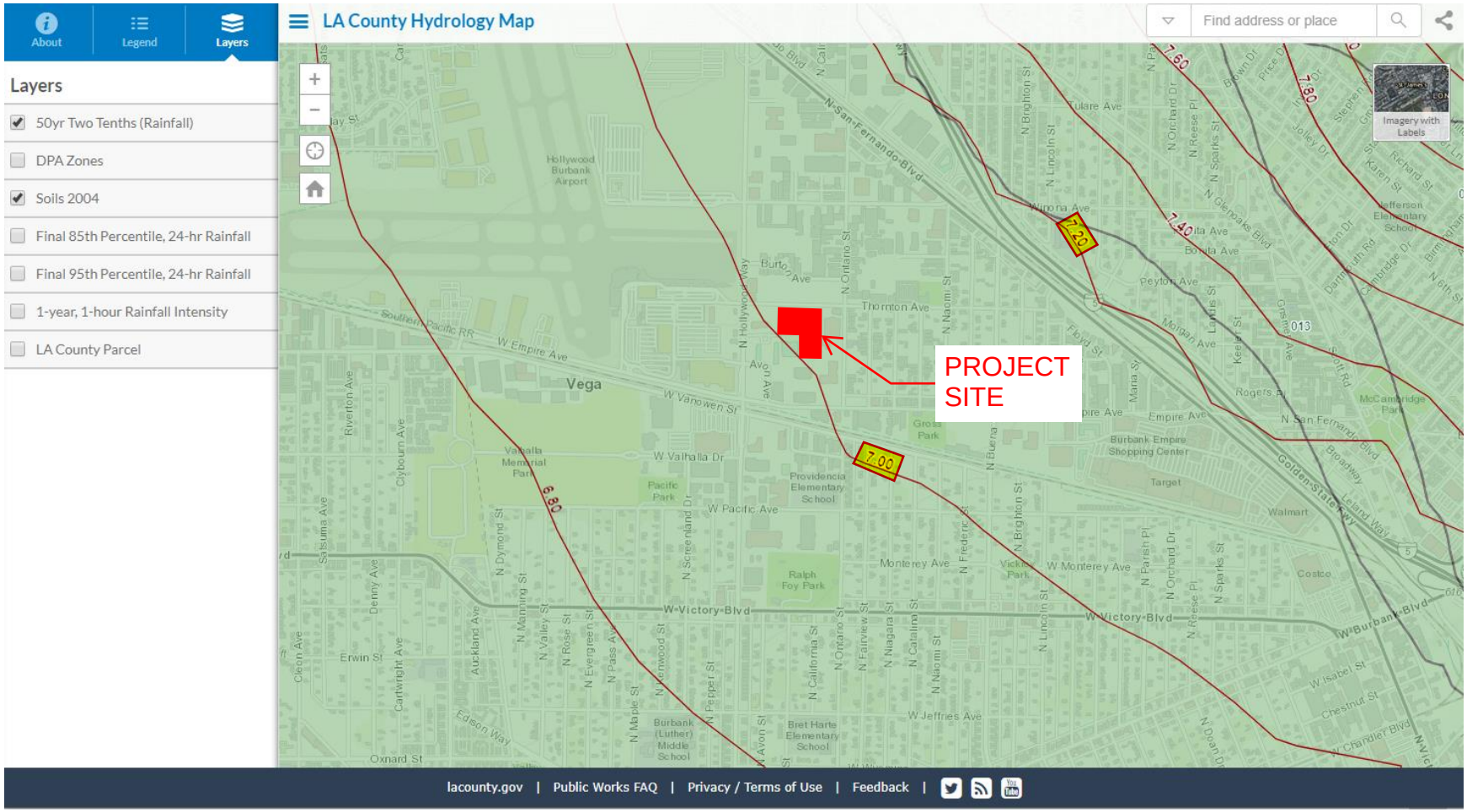
Modeled (25-yr) Rainfall Depth (in)	6.1899
Peak Intensity (in/hr)	2.5495
Undeveloped Runoff Coefficient (Cu)	0.3564
Developed Runoff Coefficient (Cd)	0.8185
Time of Concentration (min)	11.0
Clear Peak Flow Rate (cfs)	12.8746
Burned Peak Flow Rate (cfs)	12.8746
24-Hr Clear Runoff Volume (ac-ft)	2.4708
24-Hr Clear Runoff Volume (cu-ft)	107628.3023



ATTACHMENT I

LA COUNTY GIS 85TH PERCENTILE MAP


About
Legend
Layers
LA County Hydrology Map
Find address or place
Layers
50yr Two Tenths (Rainfall)
DPA Zones
Soils 2004
Final 85th Percentile, 24-hr Rainfall
Final 95th Percentile, 24-hr Rainfall
1-year, 1-hour Rainfall Intensity
LA County Parcel
Imagery with Labels
PROJECT SITE
Sun Valley
North Hollywood
Burbank
Victory Blvd
W Victory Blvd
San Fernando Rd
N San Fernando Blvd
Golden State Fwy
Southern Pacific RR
Bob Hope Airport
Valhalla Memorial Park
Pacific Park
Ralph Foy Park
Gross Park
Stough Park and Nature Center
De Bell Municipal Golf Course
Wildwood Canyon Park
Bracer Canyon Park
IKEA Media City Center
Burbank (Luther) Middle School
George Izay Park
Palm Park
015
013
007
lacounty.gov | Public Works FAQ | Privacy / Terms of Use | Feedback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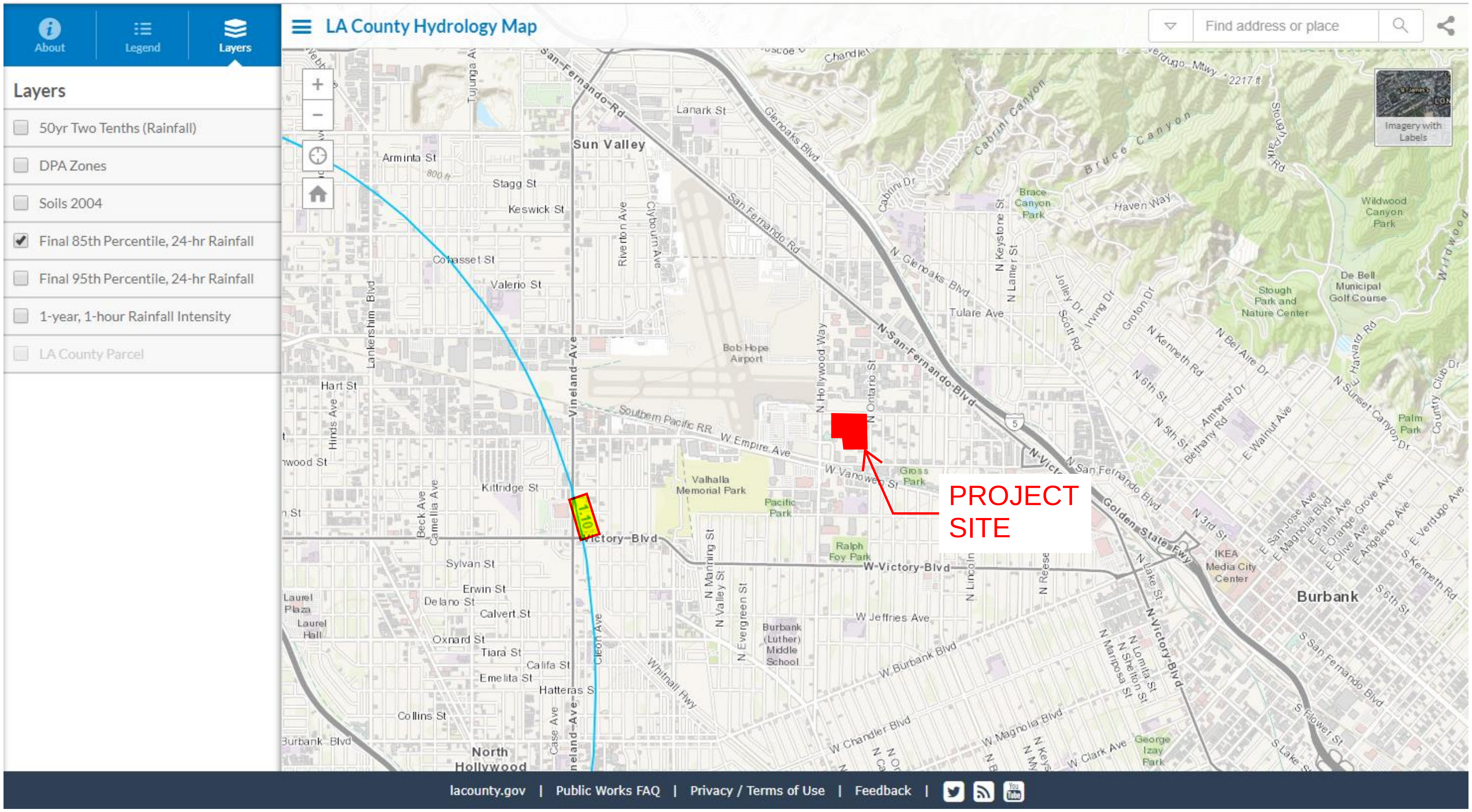
50yr Two Tenths (Rainfall)
DPA Zones
Soils 2004
Final 85th Percentile, 24-hr Rainfall
Final 95th Percentile, 24-hr Rainfall
1-year, 1-hour Rainfall Intensity
LA County Parcel
LA County Hydrology Map
Find address or place
Imagery with Labels
PROJECT SITE
7.20
7.00
8.80
7.60
7.80
7.40
Vega
Hollywood Burbank Airport
Thornton Ave
W Empire Ave
W Valhalla Dr
W Pacific Ave
Monterey Ave
W Victory Blvd
W Burbank Blvd
Empire Ave
Burbank Empire Shopping Center
Target
Walmart
Costco
Ralph Foy Park
Providencia Elementary School
Burbank (Luther) Middle School
Bret Harte Elementary School
Jefferson Elementary School
McCambridge Park
Oxnard St
W Jeffries Ave
lacounty.gov | Public Works FAQ | Privacy / Terms of Use | Feedback



About
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LA County Hydrology Map
Find address or place
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50yr Two Tenths (Rainfall)
DPA Zones
Soils 2004
Final 85th Percentile, 24-hr Rainfall
Final 95th Percentile, 24-hr Rainfall
1-year, 1-hour Rainfall Intensity
LA County Parcel
PROJECT SITE
Sun Valley
Bob Hope Airport
Burbank
North Hollywood
1.10
lacounty.gov | Public Works FAQ | Privacy / Terms of Use | Feedback |

ATTACHMENT J

LID CALCULATIONS

LID AREA SUMMARY

	TOTAL AREA (ACRES)	PERVIOUS AREA (ACRES)	PERCENT IMPERVIOUS
EXISTING CONDITIONS	6.16	0.48	92.18%
PROPOSED CONDITIONS	6.16	0.85	86.26%

Peak Flow Hydrologic Analysis

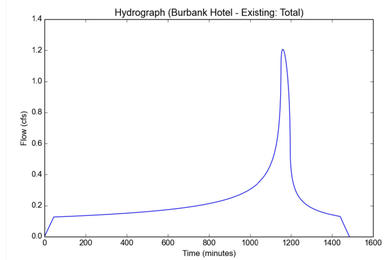
File location: F:/Projects/4147/001/Sandbox/Varand/230515 - LID Study/HydroCalc/Burbank Hotel - Existing - Total (85th Percentile).pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Burbank Hotel - Existing
Subarea ID	Total
Area (ac)	6.165
Flow Path Length (ft)	1600.0
Flow Path Slope (vft/hft)	0.015
85th Percentile Rainfall Depth (in)	1.1
Percent Impervious	0.9218
Soil Type	15
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.1
Peak Intensity (in/hr)	0.2337
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.8374
Time of Concentration (min)	45.0
Clear Peak Flow Rate (cfs)	1.2064
Burned Peak Flow Rate (cfs)	1.2064
24-Hr Clear Runoff Volume (ac-ft)	0.4694
24-Hr Clear Runoff Volume (cu-ft)	20445.2911



Peak Flow Hydrologic Analysis

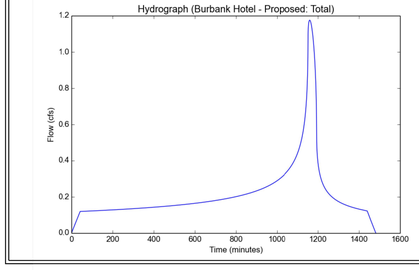
File location: F:/Projects/4147/001/_Support Files/Reports/SUSUMP/HydroCalc/Burbank Hotel - Proposed - Total.pdf
Version: HydroCalc 1.0.2

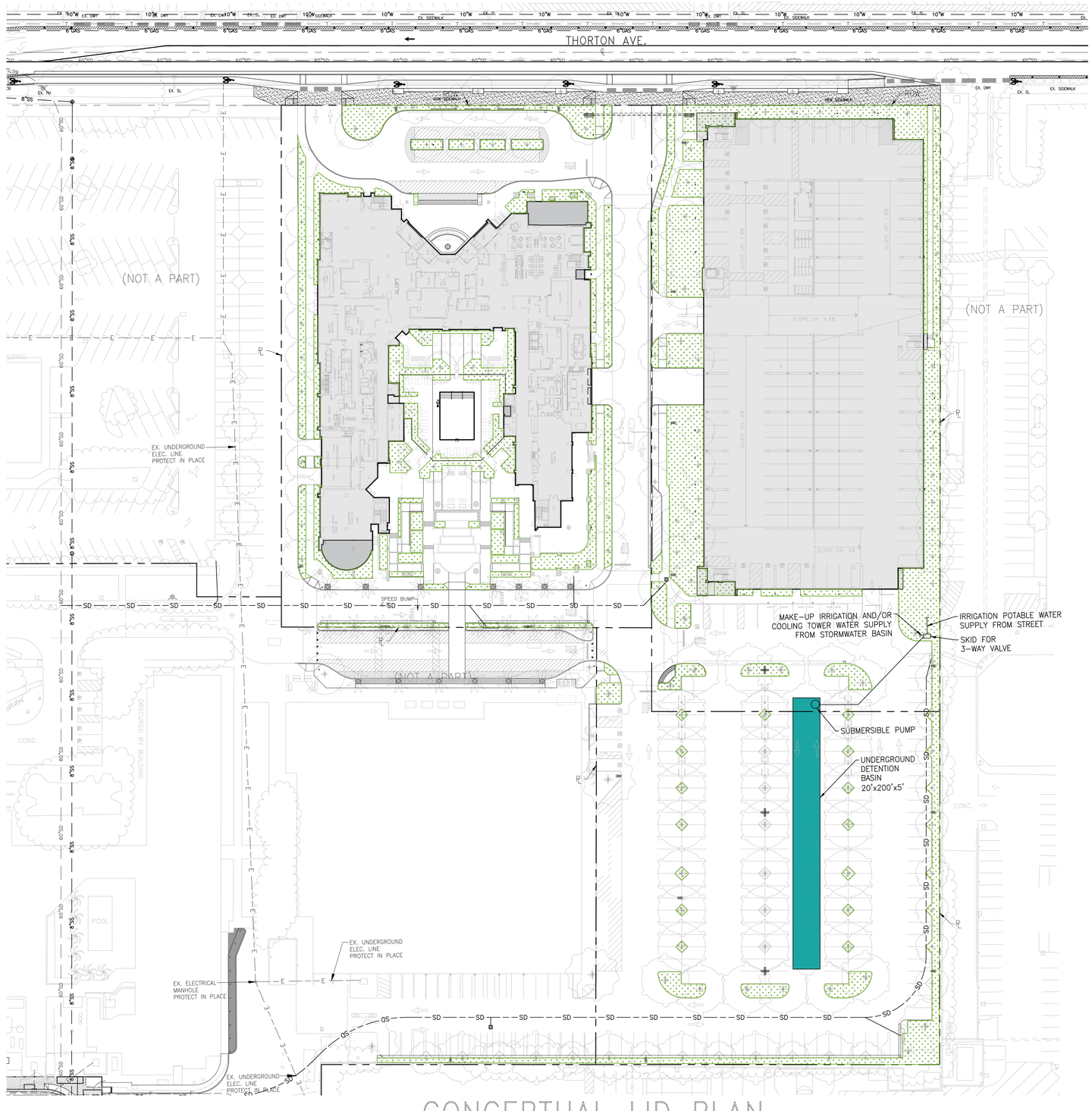
Input Parameters

Project Name	Burbank Hotel - Proposed
Subarea ID	Total
Area (ac)	6.165
Flow Path Length (ft)	1200.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	1.1
Percent Impervious	0.8626
Soil Type	15
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.1
Peak Intensity (in/hr)	0.2414
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.7901
Time of Concentration (min)	42.0
Clear Peak Flow Rate (cfs)	1.1757
Burned Peak Flow Rate (cfs)	1.1757
24-Hr Clear Runoff Volume (ac-ft)	0.4428
24-Hr Clear Runoff Volume (cu-ft)	19288.9766





LEGEND

- CENTER LINE
- PROPERTY LINE / RIGHT OF WAY
- PERVIOUS AREA

N

40' 0' 20' 40'

SCALE: 1" = 40'

CONCEPTUAL LID PLAN

ARCHITECTURAL DIMENSIONS
801 Ygnacio Valley Road
Suite #230
Walnut Creek, CA 94549
TEL. 510.463.8300 • FAX. 510.463.8395

PROJECT INFO.
1. RESPONSE TO CITY COMMENTS 9/4/2023
UPDATED PLANTING AREA
2. UPDATED PLANTING AREA 3/06/2024
4. RESPONSE TO DRAINAGE REPORT REVIEW COMMENTS 9/9/2024
UPDATE TO LID PLAN

MARRIOTT - ALOFT AND RESIDENCE INN
2500 NORTH HOLLWOOD WAY
BURBANK, CA

JOB NO. **AWH04**
DATE. **09/09/2024**
DRAWING NO. **C4.0**

ATTACHMENT K

GEOTECHNICAL REPORT

Geotechnologies, Inc.
Consulting Geotechnical Engineers

439 Western Avenue
Glendale, California 91201-2837
818.240.9600 • Fax 818.240.9675

February 21, 2020
File No. 21947

AWH Partners
1040 Avenue of the Americas
9th Floor
New York, New York 10018

Attention: Timothy Osiecki

Subject: Preliminary Geotechnical Assessment
Proposed Hotel and Parking Structure
2500 North Hollywood Way, Burbank, California

Dear Mr. Osiecki:

1.0 INTRODUCTION

The purpose and intent of this document is to evaluate the soil and geological site characteristics associated with the proposed development including potential geotechnical issues regarding environmental impacts to the surrounding area, as required by the California Environmental Quality Act (CEQA) Guidelines. This report includes information from geotechnical investigations performed in vicinity of the site, engineering analysis, review of published geologic data, and review of available geotechnical engineering information.

2.0 PROJECT SCOPE

The proposed development consists of the construction of a seven-story hotel structure, which will be located in the western half of the subject site. The hotel structure is anticipated to provide a total of 420 guestrooms and will be constructed at or near existing site grade. In addition, a four-story parking structure is anticipated to be built adjacent to the proposed hotel in the eastern half of the site. The proposed parking structure is anticipated to include double-stacked parking facilities and may include a partially subterranean parking level along the northern perimeter of the site. The proposed development is illustrated on the attached Site Plan included in the Appendix of this report.

Preliminarily, column loads are estimated to be between 800 and 1,000 kips for the hotel structure and 600 to 800 kips for the proposed parking structure. Wall loads are estimated to be between 10 and 20 kips per lineal foot. Grading will consist of excavations between 5 to 20 feet for construction of a certified recompacted fill pad for support of the proposed hotel and possible subterranean parking level for the proposed parking structure. The enclosed Site Plan illustrates the proposed structural features anticipated for the development.

3.0 SITE CONDITIONS

The subject site is located at 2500 North Hollywood Way, in the City of Burbank, California. The property is currently occupied by an existing hotel and a convention center along the southern perimeter of the property. The subject site is located in the northeast region of the property as indicated by the enclosed Site Plan. The area of planned development within the site is currently occupied by a paved parking lot and planter areas.

The site is bounded by Thornton Avenue to the north, by a paved parking lot followed by an existing four-story hospital to the east, by an existing two-story convention center building and paved parking lot to the south, and a paved parking lot followed by a six-story urgent-care building to the west. The site is shown relative to nearby topographic features in the enclosed Vicinity Map and Site Plan.

The topography observed across the site descends to the southeast. There is an estimated elevation difference of approximately 12 feet across the site for an overall site gradient of 35 to 1 (horizontal to vertical).

Vegetation at the site consists of mature trees along the perimeter, and limited amount of bushes and shrubs contained in small landscaped areas and planter boxes. Drainage across the site appears to be by sheetflow to the city streets and toward the southeast.

4.0 RESEARCH - PREVIOUS LOCAL SITE INVESTIGATIONS

This firm has conducted geotechnical engineering investigations in the immediate vicinity of the site as indicated on the enclosed Vicinity Map. The investigations in nearest proximity to the proposed development are summarized below. Pertinent results and observations from these investigations have been incorporated into the preparation of this report. Boring logs from the following site investigations are included in the Appendix of this report.

1. ***Geotechnologies, Inc., November 9, 2011, Geotechnical Engineering Investigation, Proposed Storage Facility, Northeast Corner of Hollywood Way and Thornton Avenue, Burbank, California, File Number 20195.***

   Five exploratory excavations were drilled during preparation of this geotechnical investigation report. The excavations ranged in depth from 20 to 50 feet below the existing ground surface within the site. Shallow fill and native alluvial soils were observed below the existing site grade during exploration. Groundwater was not encountered during the subsurface exploration of this site.

2. ***Geotechnologies, Inc., July 20, 2006, Geotechnical Engineering Investigation, Proposed Commercial Structure, Northwest Corner of Empire Avenue and Avon Street, Burbank, California, File Number 18954.***

   Four boring excavations were drilled within this site in preparation of the geotechnical engineering investigation. The borings ranged in depth from 50 to 80 feet. Fill material was observed between depths of 2 to 5 feet below ground surface. Native alluvial soils were encountered below the fill to a maximum excavated depth of 80 feet. Groundwater was not observed during the subsurface explorations of this site.

3. ***Geotechnologies, Inc., January 13, 2005, Geotechnical Engineering Investigation, Proposed Commercial Structures, Northeast Corner of Empire Avenue and Avon Street, Burbank, California, File Number 18771.***

   The site was explored by excavating two exploratory borings during preparation of the geotechnical engineering investigation. The borings were excavated to a depth of 80 feet. Fill and native alluvial soil was observed during onsite excavation of borings. Groundwater was not encountered during the exploration of this site to a maximum excavated depth of 80 feet.

5.0 GROUNDWATER

Review of the Seismic Hazard Zone Report (SHZR) for the Burbank 7½-Minute Quadrangle, (CDMG, 1998, Revised 2006), indicates that the historically highest groundwater level in the vicinity of the site is estimated at 58 feet below ground surface. A copy of this plate is included in the Appendix as Historically Highest Groundwater Levels Map.

Static groundwater was not encountered during exploration of the nearby sites to a maximum explored depth of 80 feet below grade. The locations of nearby site investigations are indicated on the enclosed Vicinity Map.

Groundwater Monitoring Stations -

The State of California Department of Water Resources lists a groundwater monitoring well approximately 0.8 miles southwest of the site. The well location is indicated on the enclosed Groundwater Station Map and the well data logs are also enclosed in the Appendix. The well readings are summarized in the following table:

GROUNDWATER MONITORING WELL SUMMARY			
Well Station	**Ground Surface Elevation**	**Highest Rec. Water Surface Elevation**	**Lowest Rec. Water Surface Elevation**
341864N1183612W001	661.4 feet	559.8 feet on 4/1/1952	428.8 feet on 9/17/1968

Due to the proximity of the monitoring well to the subject site and the uniform geologic conditions within the region, it is the opinion of this firm that the data readings are representative of the groundwater levels underlying the site. The highest recorded water elevation corresponds to approximately 115 feet below the ground surface at the subject site. Based on these considerations, it is the opinion of this firm that the historic high-water level indicated in the Seismic Hazard Zone Report (CDMG, 1998, Revised 2006) is a conservative estimate of historic high and future water levels anticipated within the site.

6.0 REGIONAL GEOLOGIC SETTINGS

The subject property is located in the Transverse Ranges Geomorphic Province. The Transverse Ranges are characterized by roughly east-west trending mountains and the northern and southern boundaries are formed by reverse fault scarps. The convergent deformational features of the Transverse Ranges are a result of north-south shortening due to plate tectonics. This has resulted in local folding and uplift of the mountains along with the propagation of thrust faults (including blind thrusts). The intervening valleys have been filled with sediments derived from the bordering mountains.

7.0 LOCAL GEOLOGY

Review of the geologic map indicates the subject site is located in an area underlain by alluvial sediments. This geologic characterization is consistent with the earth materials encountered on previous geotechnical investigations conducted within the vicinity of the subject site. Copies of the Local Geologic Map (Dibblee) and Regional Geologic Maps are enclosed herein.

8.0 SEISMIC AND GEOLOGIC HAZARDS

a) Regional Faulting

Based on criteria established by the California Division of Mines and Geology (CDMG) now called California Geologic Survey (CGS), faults may be categorized as active, potentially active, or inactive. Active faults are those which show evidence of surface displacement within the last 11,000 years (Holocene-age). Potentially-active faults are those that show evidence of most recent surface displacement within the last 1.6 million years (Quaternary-age). Faults showing no evidence of surface displacement within the last 1.6 million years are considered inactive for most purposes, with the exception of design of some critical structures.

Buried thrust faults are faults without a surface expression but are a significant source of seismic activity. They are typically broadly defined based on the analysis of seismic wave recordings of hundreds of small and large earthquakes in the Southern California area. Due to the buried nature of these thrust faults, their existence is usually not known until they produce an earthquake. The risk for surface rupture potential of these buried thrust faults is inferred to be low (Leighton, 1990). However, the seismic risk of these buried structures in terms of recurrence and maximum potential magnitude is not well established.

Therefore, the potential for surface rupture on these surface-verging splays at magnitudes higher than 6.0 cannot be precluded.

A list of faults located within 60 miles (100 kilometers) from the project site has been provided in the enclosed table entitled Seismic Source Summary Table. This table is based on information provided by the United States Geologic Survey (USGS) 2008 National Seismic Hazard Maps–Source Parameters database. The distances provided in the enclosed table are measured from a point selected near the center of the subject site. A Southern California Fault Map has also been enclosed for reference. The following sections describe regional active faults of interest, potentially active faults, blind thrust faults and unnamed faults:

i) Active Faults

Verdugo Fault

The Verdugo fault runs along the southwest edge of the Verdugo Mountains and is located approximately 1.4 miles to the northeast of the site. According to Weber, et.-al., (1980) 2 to 3-meter-high scarps were identified in alluvial fan deposits in the Burbank and Glendale areas. Further to the northwest, in Sun Valley, a fault was reportedly identified at a depth of 40 feet in a sand and gravel pit. Although considered active by the County of Los Angeles, Department of Public Works (Leighton, 1990), and the United States Geological Survey, the fault is not designated with an earthquake fault zone by the California Geological Survey. It is estimated that the Verdugo fault is capable of producing a maximum 6.9 magnitude earthquake.

Sierra Madre Fault System

The Sierra Madre fault alone forms the southern tectonic boundary of the San Gabriel Mountains in the northern San Fernando Valley. It consists of a system of faults approximately 75 miles in length. The individual segments of the Sierra Madre fault system range up to 16 miles in length and display a reverse sense of displacement and dip to the north. The most recently active portions of the zone include the Mission Hills, Sylmar and Lakeview segments, which produced an earthquake in 1971 of magnitude 6.4. Tectonic rupture along the Lakeview Segment during the San Fernando Earthquake of 1971 produced displacements of approximately 2½ to 4 feet upward and southwestward.

It is believed that the Sierra Madre fault zone is capable of producing an earthquake of magnitude 7.3. The closest trace of the fault is located approximately 5.7 miles to the east of the subject site.

Hollywood Fault

The Hollywood fault is part of the Transverse Ranges Southern Boundary fault system. The Hollywood fault is located approximately 6.0 miles south of site. This fault trends east-west along the base of the Santa Monica Mountains from the West Beverly Hills Lineament in the West Hollywood–Beverly Hills area to the Los Feliz area of Los Angeles. The Hollywood fault is the eastern segment of the reverse oblique Santa Monica–Hollywood fault. Based on geomorphic evidence, stratigraphic correlation between exploratory borings, and fault trenching studies, this fault is classified as active.

Until recently, the approximately 9.3-mile long Hollywood fault was considered to be expressed as a series of linear ground-surface geomorphic expressions and south-facing ridges along the south margin of the eastern Santa Monica Mountains and the Hollywood Hills. Multiple recent fault rupture hazard investigations have shown that the Hollywood fault is located south of the ridges and bedrock outcroppings along portions of Sunset Boulevard. The Hollywood fault has not produced any damaging earthquakes during the historical period and has had relatively minor micro-seismic activity. It is estimated that the Hollywood fault is capable of producing a maximum 6.7 magnitude earthquake. In 2014, the California Geological Survey established an Earthquake Fault Zone for the Hollywood Fault.

Raymond Fault

The Raymond fault is located approximately 8.7 miles southeast of the subject site. Much of the geomorphic evidence for the Raymond fault has been obscured by urbanization of the San Gabriel Valley. However, a discontinuous escarpment can be traced from Monrovia to the Arroyo Seco in South Pasadena. The very bold, "knife edge" escarpment in Monrovia parallel to Scenic Drive is believed to be a fault scarp of the Raymond fault. Trenching of the Raymond fault is reported to have revealed Holocene movement (Weaver and Dolan, 1997). The Raymond fault has been found to be an effective groundwater barrier which divides the San Gabriel Valley into groundwater sub-basins.

The recurrence interval for the Raymond fault is probably slightly less than 3,000 years, with the most recent documented event occurring approximately 1,600 years ago (Crook, et al, 1978). However, historical accounts of an earthquake that occurred in July 1855 as reported by Toppozada and others, 1981, place the epicenter of a Richter Magnitude 6 earthquake within the Raymond fault. It is believed that the Raymond fault is capable of producing a 6.8 magnitude earthquake. The Raymond Fault is considered active by the California Geological Survey.

Whittier-Elsinore Fault System

The Whittier fault is located approximately 19 miles southeast of the site. The Whittier fault together with the Chino fault comprises the northernmost extension of the northwest trending Elsinore fault system. The mapped surface of the Whittier fault extends in a west-northwest direction for a distance of 20 miles from the Santa Ana River to the terminus of the Puente Hills. The Whittier fault is essentially a strike-slip, northeast dipping fault zone which also exhibits evidence of reverse movement along with en echelon fault segments, en echelon folds and anatomizing (braided) fault segments. Right lateral offsets of stream drainages of up to 8800 feet (Durham and Yerkes, 1964) and vertical separation of the basement complex of 6,000 to 12,000 feet (Yerkes, 1972), have been documented. It is believed that the Whittier fault is capable of producing a 7.8 magnitude earthquake.

The Whittier Narrows earthquakes of October 1, 1987, and October 4, 1987, occurred in the area between the westernmost terminus of the mapped trace of the Whittier fault and the frontal fault system. The main 5.9 magnitude shock of October 1, 1987 was not caused by slip on the Whittier fault. The quake ruptured a gently dipping thrust fault with an east-west strike (Haukson, Jones, Davis and others, 1988). In contrast, the earthquake of October 4, 1987, is assumed to have occurred on the Whittier fault as focal mechanisms show mostly strike-slip movement with a small reverse component on a steeply dipping northwest striking plane (Haukson, Jones, Davis and others, 1988).

San Gabriel Fault System

The San Gabriel fault system is located approximately 9.3 miles north of the subject site. The San Gabriel fault system comprises a series of subparallel, steeply north-dipping faults trending approximately north 40 degrees west with a right-lateral sense of displacement. There is also a small component of vertical dip-slip separation. The fault system exhibits a strong topographic expression and extends approximately 90 miles from San Antonio Canyon on the southeast to Frazier Mountain on the northwest. The estimated right lateral displacement on the fault varies from 34 miles (Crowell, 1982) to 40 miles (Ehlig, 1986), to 10 miles (Weber, 1982). Most scholars accept the larger displacement values and place the majority of activity between the Late Miocene and Late Pliocene Epochs of the Tertiary Era (65 to 1.8 million years before present).

Portions of the San Gabriel fault system are considered active by California Geological Survey. Recent seismic exploration in the Valencia area (Cotton and others, 1983; Cotton, 1985) has established Holocene offset. Radiocarbon data acquired by Cotton (1985) indicate that faulting in the Valencia area occurred between 3,500 and 1,500 years before present.

It is hypothesized by Ehlig (1986) and Stitt (1986) that the Holocene offset on the San Gabriel fault system is due to sympathetic (passive) movement as a result of north-south compression of the upper Santa Susana thrust sheet. Seismic evidence indicates that the San Gabriel fault system is truncated at depth by the younger, north-dipping Santa Susana-Sierra Madre faults (Oakeshott, 1975; Namson and Davis, 1988).

Newport-Inglewood Fault System

The Newport-Inglewood fault zone is a broad zone of discontinuous north to northwestern echelon faults and northwest to west trending folds. The closest fault segment of this fault system to the subject site is located about 10.7 miles to the southwest. The fault zone extends southeastward from West Los Angeles, across the Los Angeles Basin, to Newport Beach and possibly offshore beyond San Diego (Barrows, 1974; Weber, 1982; Ziony, 1985).

The onshore segment of the Newport-Inglewood fault zone extends for about 37 miles from the Santa Ana River to the Santa Monica Mountains. Here it is overridden by, or merges with, the east-west trending Santa Monica zone of reverse faults.

The surface expression of the Newport-Inglewood fault zone is made up of a strikingly linear alignment of domal hills and mesas that rise on the order of 400 feet above the surrounding plains. From the northern end to its southernmost onshore expression, the Newport-Inglewood fault zone is made up of: Cheviot Hills, Baldwin Hills, Rosecrans Hills, Dominguez Hills, Signal Hill-Reservoir Hill, Alamitos Heights, Landing Hill, Bolsa Chica Mesa, Huntington Beach Mesa, and Newport Mesa. Several single and multiple fault strands, arranged in a roughly left stepping en echelon arrangement, make up the fault zone and account for the uplifted mesas.

The most significant earthquake associated with the Newport-Inglewood fault system was the Long Beach earthquake of 1933 with a magnitude of 6.3 on the Richter scale. It is believed that the Newport-Inglewood fault zone is capable of producing a 7.5 magnitude earthquake.

Santa Susana Fault

The Santa Susana fault extends approximately 17 miles west-northwest from the northwest edge of the San Fernando Valley into Ventura County and is at the surface high on the south flank of the Santa Susana Mountains. The fault ends near the point where it overrides the south-side-up South strand of the Oak Ridge fault. The Santa Susana fault strikes northeast at the Fernando lateral ramp and turns east at the northern margin of the Sylmar Basin to become the Sierra Madre fault. This fault is exposed near the base of the San Gabriel Mountains for approximately 46

miles from the San Fernando Pass at the Fernando lateral ramp east to its intersection with the San Antonio Canyon fault in the eastern San Gabriel Mountains, east of which the range front is formed by the Cucamonga fault. The Santa Susana fault has not experienced any recent major ruptures except for a slight rupture during the 6.5 magnitude 1971 Sylmar earthquake. The Santa Susana Fault is considered to be active by the County of Los Angeles. It is believed that the Santa Susana fault has the potential to produce a 6.9 magnitude earthquake. The closest trace of the fault is located approximately 12.4 miles northwest of the site.

Malibu Coast Fault

The Malibu Coast fault is part of the Transverse Ranges Southern Boundary fault system, a west-trending system of reverse, oblique-slip, and strike-slip faults that extends for more than approximately 124 miles along the southern edge of the Transverse Ranges and includes the Hollywood, Raymond, Anacapa–Dume, Malibu Coast, Santa Cruz Island, and Santa Rosa Island faults.

The Malibu Coast fault zone runs in an east-west orientation onshore subparallel to and along the shoreline for a linear distance of about 17 miles through the Malibu City limits, but also extends offshore to the east and west for a total length of approximately 37.5 miles. The onshore Malibu Coast fault zone involves a broad, wide zone of faulting and shearing as much as one mile in width. While the Malibu Coast Fault Zone has not been officially designated as an active fault zone by the State of California and no Special Studies Zones have been delineated along any part of the fault zone under the Alquist-Priolo Act of 1972, evidence for Holocene activity (movement in the last 11,000 years) has been established in several locations along individual fault splays within the fault zone. Due to such evidence, several fault splays within the onshore portion of the fault zone are identified as active.

Large historic earthquakes along the Malibu Coast fault include the 1979, 5.2 magnitude earthquake and the 1989, 5.0 magnitude earthquake. The Malibu Coast fault zone is approximately 15.3 miles to the southwest of the site. This fault is believed to be capable of producing a maximum 7.0 magnitude earthquake.

Palos Verdes Fault

Studies indicate that there are several active on-shore extensions of the strike-slip Palos Verdes fault, which is located approximately 19.6 miles southwest of site. Geophysical data also indicate the off-shore extensions of the fault are active, offsetting Holocene age deposits. No historic large magnitude earthquakes are associated with this fault. However, the fault is considered active by the California Geological Survey. It is estimated that the Palos Verdes fault is capable of producing a maximum 7.7 magnitude earthquake.

San Andreas Fault System

The San Andreas Fault system forms a major plate tectonic boundary along the western portion of North America. The system is predominantly a series of northwest trending faults characterized by a predominant right lateral sense of movement. At its closest point the San Andreas Fault system is located approximately 27.9 miles to the northeast of the site.

The San Andreas and associated faults have had a long history of inferred and historic earthquakes. Cumulative displacement along the system exceeds 150 miles in the past 25 million years (Jahns, 1973). Large historic earthquakes have occurred at Fort Tejon in 1857, at Point Reyes in 1906, and at Loma Prieta in 1989. Based on single-event rupture length, the maximum Richter magnitude earthquake is expected to be approximately 8.25 (Allen, 1968). The recurrence interval for large earthquakes on the southern portion of the fault system is on the order of 100 to 200 years.

ii) Potentially Active Faults

Santa Monica Fault

The Santa Monica fault, located approximately 6.8 miles to the southwest of the site, is also part of the Transverse Ranges Southern Boundary fault system. The Santa Monica fault extends east from the coastline in Pacific Palisades through Santa Monica and West Los Angeles and merges with the Hollywood fault at the West Beverly Hills Lineament in Beverly Hills where its strike is northeast. It is believed that at least six surface ruptures have occurred in the past 50 thousand years. In addition, a well-documented surface rupture occurred between 10 and 17 thousand years ago, although a more recent earthquake probably occurred 1 to 3 thousand years ago. This leads to an average earthquake recurrence interval of 7 to 8 thousand years. It is thought that the Santa Monica fault system may produce earthquakes with a maximum magnitude of 7.4.

Anacapa-Dume Fault

The Anacapa–Dume fault, located approximately 16.8 miles southwest of the subject site, is a near-vertical offshore escarpment exceeding 600 meters locally, with a total length exceeding 62 miles. This fault is also part of the Transverse Ranges Southern Boundary fault system. It occurs as close as 3.6 miles offshore south of Malibu at its western end, but trends northeast where it merges with the offshore segments of the Santa Monica Fault Zone. It is believed that the Anacapa–Dume fault is responsible for generating the historic 1930 magnitude 5.2 Santa Monica earthquake, the 1973 magnitude 5.3 Point Mugu earthquake, and the 1979 and 1989 Malibu earthquakes, each of which possessed a magnitude of 5.0. The

Anacapa–Dume fault is thought to be capable of producing a maximum magnitude 7.2 earthquake.

iii) Blind Thrusts Faults and Unnamed Faults

Blind or buried thrust faults are faults without a surface expression but are a significant source of seismic activity. By definition, these faults have no surface trace, therefore the potential for ground surface rupture is considered remote. They are typically broadly defined based on the analysis of seismic wave recordings of hundreds of small and large earthquakes in the Southern California area. Due to the buried nature of these thrust faults, their existence is sometimes not known until they produce an earthquake. Two blind thrust faults in the Los Angeles metropolitan area are the Puente Hills blind thrust and the Elysian Park blind thrust. Another blind thrust fault of note is the Northridge fault located in the northwestern portion of the San Fernando Valley.

The Elysian Park anticline is thought to overlie the Elysian Park blind thrust. This fault has been estimated to cause an earthquake every 500 to 1,300 years in the magnitude range 6.2 to 6.7. The Elysian Park thrust fault is located approximately 6.3 miles to the southeast of the site.

The Puente Hills blind thrust fault extends eastward from Downtown Los Angeles to the City of Brea in northern Orange County. The Puente Hills blind thrust fault includes three north-dipping segments, named from east to west as the Coyote Hills segment, the Santa Fe Springs segment, and the Los Angeles segment. These segments are overlain by folds expressed at the surface as the Coyote Hills, Santa Fe Springs Anticline, and the Montebello Hills. The closest segment of the Puente Hills Blind Thrust is located approximately 11.1 miles to the southeast of the site.

The Santa Fe Springs segment of the Puente Hills blind thrust fault is believed to be the cause of the October 1, 1987, Whittier Narrows Earthquake. The epicenter of this seismic event is located approximately 20 miles southeast of the subject site. Based on deformation of late Quaternary age sediments above this fault system and the occurrence of the Whittier Narrows earthquake, the Puente Hills blind thrust fault is considered an active fault capable of generating future earthquakes beneath the Los Angeles Basin. A maximum moment magnitude of 7.0 is estimated by researchers for the Puente Hills blind thrust fault.

The Mw 6.7 Northridge earthquake was caused by the sudden rupture of a previously unknown, blind thrust fault. This fault has since been named the Northridge Thrust; however, it is also known in some of the literature as the Pico Thrust. It has been assigned a maximum magnitude of 6.9 and a 1,500 to 1,800-year recurrence interval. The Northridge thrust is located 8.2 miles to the northwest of the site.

b) Local Faulting

Local faults including quaternary and pre-quaternary faults are illustrated in relation to the site on the attached "Local Fault Map". The Raymond fault, located approximately 8.7 miles southeast of the site, contributes significantly to the historic seismic activity of the localized region as exemplified by the Pasadena earthquake of 1988 (discussed below). The Northridge fault is located 8.1 miles to the west of the site as indicated on the "Local Fault Map". The Northridge fault specifically has demonstrated recent activity within the region and is credited with the Northridge Earthquake of 1994. Unnamed quaternary and pre-quaternary faults lie to the southeast of the site as indicated on the attached fault map. The nearest projected fault is identified as the Verdugo fault and is located approximately 1.4 miles northeast of the site.

c) Significant Seismic Events (>4.0 Magnitude)

Significant seismic event earthquakes (>4.0 Mag) for the greater Los Angeles area (for incident dates later than 1933) are indicated on the attached map entitled "Historical Seismic Event Map – Regional". Seismic events in close proximity to the site are indicated on the "Historical Seismic Event Map – Local". Historical earthquake events in close proximity to the site are discussed as follows:

Northridge Earthquake -

The Northridge earthquake event took place on January 17, 1994 at 4:30 am on a blind thrust fault directly beneath the urban developed area of the San Fernando Valley within the City of Los Angeles. Significant and widespread damage was incurred by the Northridge event including: Section collapse of major freeways, office buildings, parking structures, and residential structures. Due to the high acceleration in both vertical and horizontal direction, some structures were lifted from their foundations.

Building code revisions and earthquake mitigation policies were initiated in response to the Northridge earthquake. Due to the significant vertical accelerations, design methodologies were re-evaluated to account for vertical as well as lateral earthquake accelerations. In addition, the City of Los Angeles and adjacent unincorporated regions recently require seismic retrofit of soft-story residential structures, in part, due to lessons learned from the Northridge seismic event.

San Fernando Earthquake -

Also known as the Sylmar Earthquake, the San Fernando Earthquake took place on February 9, 1971 at 6:01 am. The earthquake was centered along the San Fernando thrust fault and exhibited surface rupture roughly 12 miles in length and a maximum slip of up to 6 feet. The San Fernando Earthquake caused approximately 500 million in property damage and 65 fatalities - primarily as a result of the partial collapse of the Veteran's Administration Hospital.

In response to the San Fernando Earthquake, building codes were strengthened. In addition, the Alquist-Priolo Special Studies Zone Act was passed in 1972 which prohibits structures designed for human occupancy to be positioned in close proximity to active fault traces.

Whittier Narrows Earthquake -

The Whittier Narrows earthquakes of October 1, 1987, and October 4, 1987, occurred in the area between the westernmost terminus of the mapped trace of the Whittier fault and the frontal fault system in a previously unknown thrust fault approximately 20 km east of downtown Los Angeles as indicated by the "Historical Seismic Event Map – Local". The main 5.9 magnitude shock of October 1, 1987 was not caused by slip on the Whittier fault. The quake ruptured a gently dipping thrust fault with an east-west strike (Haukson, Jones, Davis and others, 1988). In contrast, the earthquake of October 4, 1987, is assumed to have occurred on the Whittier fault as focal mechanisms show mostly strike-slip movement with a small reverse component on a steeply dipping northwest striking plane (Haukson, Jones, Davis and others, 1988).

The most significant structural damage was concentrated in the uptown district of Whitter, the old downtown section of Alhambra and the regions of Pasadena that include older structures. Unreinforced masonry structures and structures which exhibit "soft-story" design sustained the most severe damage during the Whittier Narrows seismic event.

Pasadena Earthquake -

The Pasadena earthquake of December 3, 1988 has an established epicenter to the southeast of the site as indicated by the attached "Historic Seismic Event Map – Local". The earthquake was followed by an unusually small number of aftershocks. The Pasadena event of 1988 was determined to be associated with the Raymond fault and provided a clear example of left-lateral movement along the fault. The Montebello earthquake of 1989 is considered to be a potential aftershock of the Pasadena earthquake.

Montebello Earthquake -

The Montebello earthquake of June 12, 1989 was measured as a magnitude 4.9 event and was located just east of downtown Los Angeles and southeast of the site. The event was followed 25 minutes later by a magnitude 4.4 aftershock. The earthquake originated from a depth of 15.6 km, similar to the depth of the Pasadena earthquake which occurred six months earlier. As previously stated, it is considered by many that the Montebello earthquake is likely to be an aftershock of the Pasadena earthquake.

d) Surface Ground Rupture

In 1972, the Alquist-Priolo Special Studies Zones Act (now known as the Alquist-Priolo Earthquake Fault Zoning Act) was passed into law. The Act defines "active" and

"potentially active" faults utilizing the same aging criteria as that used by California Geological Survey (CGS). However, established state policy has been to zone only those faults which have direct evidence of movement within the last 11,000 years. It is this recency of fault movement that the CGS considers as a characteristic for faults that have a relatively high potential for ground rupture in the future.

Surface rupture is defined as surface displacement which occurs along the surface trace of the causative fault during an earthquake. Based on review of the Earthquake Fault Zones Burbank Quadrangle, the site is not located within an earthquake fault zone. A copy of Earthquake Fault Zone Map may be found in the Appendix of this report.

e) Seismicity

Continual seismic activity is expected to occur within the immediate and general region of the site. The seismic conditions identified in this document and referenced reports are typical of sites within this area of Burbank and Los Angeles County, and of a type that are routinely addressed through regulatory measures. Design of the proposed development in accordance with the provisions of the applicable California Building Code will be required to mitigate the potential effects of strong ground shaking.

f) Deaggregated Seismic Source Parameters

The peak ground acceleration (PGA_M) and modal magnitude for the site was obtained from the USGS Probabilistic Seismic Hazard Deaggregation program and Structural Engineers Association of California & the Office of Statewide Health Planning and Development (OSHPD, 2020). The parameters are based on a 2 percent in 50 years ground motion (2475-year return period). A shear wave velocity (Vs30) of 259 meters per second was utilized in the computation. The USGS Seismic Hazard and OSHPD utility programs indicate a PGA_M of 0.9g and a modal magnitude of 6.69 for the site.

g) ASCE 7-16 / 2019 California Building Code Seismic Parameters

Based on information derived from nearby subsurface investigations, the subject site is classified as Site Class D, which corresponds to a "Stiff Soil" Profile, according to Table 20.3-1 of ASCE 7-16. This information and the site coordinates were input into the Structural Engineers Association of California & OSHPD seismic utility program in order to calculate ground motion parameters for the site:

CALIFORNIA BUILDING CODE SEISMIC PARAMETERS	
California Building Code	2019
ASCE Design Standard	7-16
Risk Category	II
Site Class	D
Mapped Spectral Acceleration at Short Periods (S_S)	1.990g
Site Coefficient (F_a)	1.0
Maximum Considered Earthquake Spectral Response for Short Periods (S_{MS})	1.990g
Five-Percent Damped Design Spectral Response Acceleration at Short Periods (S_{DS})	1.327g
Mapped Spectral Acceleration at One-Second Period (S_1)	0.666g
Site Coefficient (F_v)	1.7*
Maximum Considered Earthquake Spectral Response for One-Second Period (S_{M1})	1.132g*
Five-Percent Damped Design Spectral Response Acceleration for One-Second Period (S_{D1})	0.755g*

** According to ASCE 7-16, a Long Period Site Coefficient (F_v) of 1.7 may be utilized provided that the value of the Seismic Response Coefficient (C_s) is determined by Equation 12.8-2 for values of $T \leq 1.5T_s$ and taken as equal to 1.5 times the value computed in accordance with either Equation 12.8-3 for $T_L \geq T > 1.5T_s$ or equation 12.8-4 for $T > T_L$. Alternatively, a site-specific ground motion hazard analysis may be performed in accordance with ASCE 7-16 Section 21.1 and/or a ground motion hazard analysis in accordance with ASCE 7-16 Section 21.2 to determine ground motions for any structure.*

h) Liquefaction

Liquefaction is a phenomenon in which saturated silty to cohesionless soils below the groundwater table are subject to a temporary loss of strength due to the buildup of excess pore pressure during cyclic loading conditions such as those induced by an earthquake. Liquefaction-related effects include loss of bearing strength, amplified ground oscillations, lateral spreading, and flow failures.

Based on review of the Seismic Hazards Maps of the State of California (CDMG, 1999), the site is not located within an area designated as potentially liquefiable. This determination is based on groundwater depth records, soil type and distance to a fault capable of producing a substantial earthquake. A copy of this map is included in the Appendix.

The investigations in nearest proximity to the proposed development submitted by this firm concluded that the possibility of liquefaction was considered to be remote within the sites explored. Nonetheless, a site-specific liquefaction assessment including site excavation, laboratory testing and analysis is recommended to determine the susceptibility of liquefaction of onsite soils.

i) Dynamic Settlement

Seismically-induced settlement or compaction of dry or moist, cohesionless soils can be an effect related to earthquake ground motion. Such settlements are typically most damaging when the settlements are differential in nature across the length of structures.

Some seismically-induced settlement of the proposed structures should be expected as a result of strong ground-shaking, however, due to the uniform nature of the underlying geologic materials observed in nearby site investigations, excessive differential settlements are not expected to occur.

j) Regional Subsidence

The site is not located within a zone of known subsidence due to oil or other fluid withdrawal.

k) Landsliding

The probability of seismically-induced landslides occurring on the site is considered to be negligible due to the general lack of substantive elevation difference across or adjacent to the site. Therefore, potential impacts related to landsliding would be less than significant.

l) Collapsible Soils

Based on previous geotechnical investigations conducted within the near vicinity of the site, the soils underlying the area would not be considered prone to hydroconsolidation.

m) Expansive Soils

The geologic materials previously tested by this firm for nearby sites indicate a very low expansion potential for near-surface onsite soils. Accordingly, the geologic materials are anticipated to be in the very low to low expansion range within the subject site. Special design considerations for mitigation of highly expansive soils will not likely be required. Design of the proposed structures in accordance with the California Building Code is anticipated to fully mitigate the potential effects of moderately expansive soils.

n) Tsunamis, Seiches and Flooding

Tsunamis are large ocean waves generated by sudden water displacement caused by a submarine earthquake, landslide, or volcanic eruption. The site is high enough and far enough from the ocean to preclude being prone to hazards of a tsunami.

Review of the County of Los Angeles Flood and Inundation Hazards Map (Leighton, 1990), indicates the site lies within an inundation boundary due to a seiche or a breached upgradient reservoir.

Review of the Flood Insurance Rate Map established by the Federal Emergency Management Agency (FEMA) indicates the site lies within an area of minimal flood hazard. A copy of this map is enclosed in the Appendix of this report.

o) Oil Fields and Oil Wells

Based on review of the Division of Oil, Gas, and Geothermal Resources, DOGGR Online Mapping system, http://maps.conservation.ca.gov/doms/doms-app.html, the site is not located within the limits of an oil field. No evidence of an oil or gas well has been drilled within the site. The closest oil well in proximity to the site is approximately 1.9 miles to the west and is identified as API No. 0403705527. The operator of record is listed as B. J. Jeffrey and the well status is designated as "Idle". A copy of the Oil Field & Oil Well Location Map is included in the Appendix of this report.

p) Methane Zone

Based on research of available documentation, the site does not appear to be located within a methane hazard zone as designated by state and county information resources. According to the County of Los Angeles Methane Research Tool, Department of Public Works, Los Angeles County, Methane Mitigation Website: https://dpw.lacounty.gov/epd /swims/OnlineServices/search-methane-hazards-esri.aspx, the site is not located within 300 feet of an oil or gas well or 1,000 feet of a methane producing site.

q) Temporary Excavations

All required excavations are expected to be sloped, or properly shored, in accordance with the provisions of the applicable building code. Accordingly, the project would not result in any on-site or off-site landslide. Excavations on the order of 20 feet in depth within the site are anticipated during construction of the proposed parking structure. Shoring systems, if required, may include soldier piles with rakers and/or tiebacks or trench shoring utilizing a cross-braced design. Should tiebacks be required, components of the tieback anchor would likely extend below adjacent properties and public right of ways. Appropriate notifications and agreements should be obtained by the development team prior to tieback installations.

r) Septic Tanks

It is the understanding of this firm that infrastructure and facilities are available at the site for wastewater disposal. No septic tanks or alternative disposal systems are necessary or anticipated for the proposed site project.

s) Ground Failure

The proposed construction is not anticipated to cause or increase the potential for any seismic related ground failure on the project site or adjacent sites. The project site is not located within an Earthquake Fault Zone, or a Seismically Induced Landslide Zone. The proposed structures and any required shoring system shall be designed in accordance with the City of Burbank and California Building Codes and shall mitigate the potential effects of ground failure.

t) Erosion

The project would not result in substantial off-site soil erosion or the loss of topsoil due to the paved nature of the surrounding sites, and the lack of elevation difference slope geometry across or adjacent to the site. In addition, earthwork activities associated with the grading and export of soil would occur in accordance with the city requirements as specified in the Burbank Building Code and through the grading plan review and approval process. Grading and erosion control measures shall be implemented during site grading to reduce erosion impacts as part of the regulatory requirements.

u) Landform Alterations

There are no significant hills, canyons, ravines, outcrops or other geologic or topographic features on the site. Therefore, any proposed project would not adversely affect any prominent geologic or topographic features.

9.0 PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Based upon nearby geotechnical site exploration, laboratory testing, and research, it is the preliminary finding of Geotechnologies, Inc. that development of the site, as described here, is considered feasible from a geotechnical engineering standpoint. This report is preliminary in nature because it is based on information obtained from nearby projects.

A site-specific subsurface geotechnical exploration program, with laboratory testing and engineering analyses, should be prosecuted in order to generate a geotechnical engineering investigation for the project site. The comprehensive geotechnical report with design parameters and recommendations should be submitted to the local governing agency for review prior to construction. The proposed development shall be designed and constructed in accordance with the provisions of the most current applicable building code and requirements of the local building official.

The project site is not located within an earthquake fault zone, or a seismically-induced landslide zone. The site is not located within an area identified as potentially liquefiable. The conditions identified in this report are typical of sites within this area of Los Angeles County, and of a type that are routinely addressed through regulatory measures.

Excavations on the order of 5 to 20 feet in depth will be required for the foundation elements and anticipated elevator pit enclosures for the proposed hotel and parking structure. The excavations are expected to remove the existing fill soils and expose the underlying dense native soils. Preliminarily, it is anticipated that the proposed hotel may be supported on conventional spread footings and/or mat foundation bearing in a certified recompacted fill pad. The parking structure may be supported by conventional foundation bearing in competent undisturbed alluvial soils anticipated at the bottom of the proposed excavation.

As with all of Southern California, the site is subject to potential strong ground motion should a moderate to strong earthquake occur on a local or regional fault. Design of the project in accordance with the provisions of the applicable California Building Code will be required to mitigate the potential effects of strong ground shaking.

Stormwater Infiltration

Compliance to LID requirements and the City of Burbank guidelines regarding stormwater management within the site is viable based on existing development plans and favorable geologic conditions encountered on nearby sites. Stormwater infiltration into onsite soils will likely be feasible based on preliminary geologic assessment. Onsite percolation testing and evaluation will be necessary to determine actual infiltration performance including site specific design values.

10.0 CLOSURE

This report is general in nature and does not present specific geotechnical design criteria sufficient for use during design phase of the development. A comprehensive geotechnical investigation including subsurface exploration and laboratory testing should be prepared for design input, when necessary.

Geotechnologies, Inc. appreciates the opportunity to provide our services on this project. Should you have any questions, please contact this office.

Respectfully submitted,
GEOTECHNOLOGIES, INC.

SCOTT T. PRINCE
R.C.E. 83961

EDWARD F. HILL
G.E. 2126

STP/EFH:dy

Enclosures: References
Vicinity Map
Site Plan
Local Geologic Map
Regional Geologic Map
Historically Highest Groundwater Levels
Seismic Source Summary Table
Southern California Fault Map
Local Fault Map
Historical Seismic Event Map – Regional
Historical Seismic Event Map – Local
Earthquake Fault Zone Map
Flood Insurance Rate Map
Oil Field & Oil Well Location Map
Seismic Hazard Zone Map
Groundwater Well Station Data (13 pages)
Boring from Previous Investigation, dated November 9, 2011, Job No. 20195 (6 pages)
Borings from Previous Investigation, dated July 20, 2006, Job No. 18954 (10 pages)
Borings from Previous Investigation, dated January 13, 2005, Job No. 18771 (6 pages)

Distribution: (4) Addressee

E-mail to: [tosiecki@awhpartners.com], Attn: Timothy Osiecki

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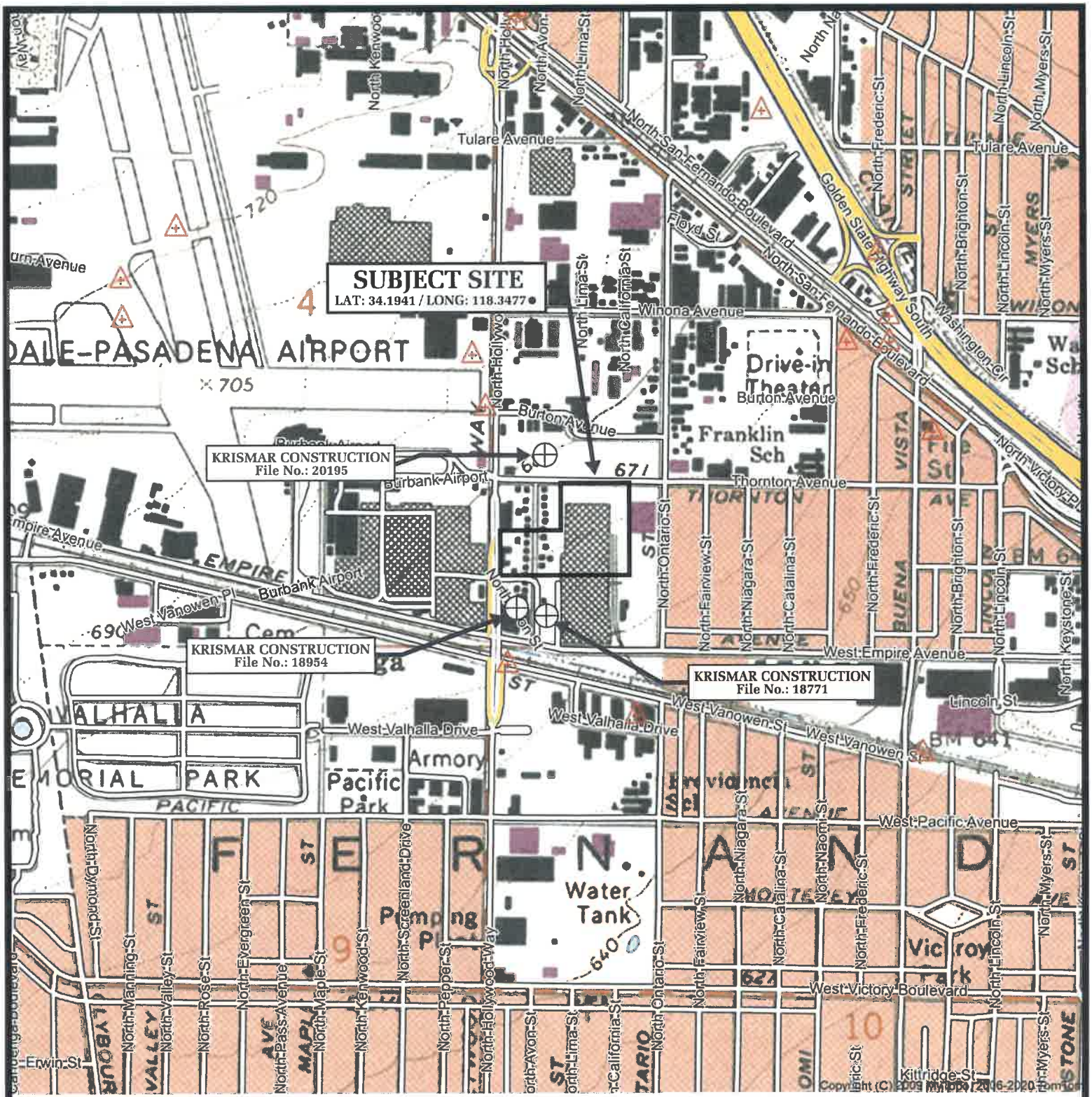

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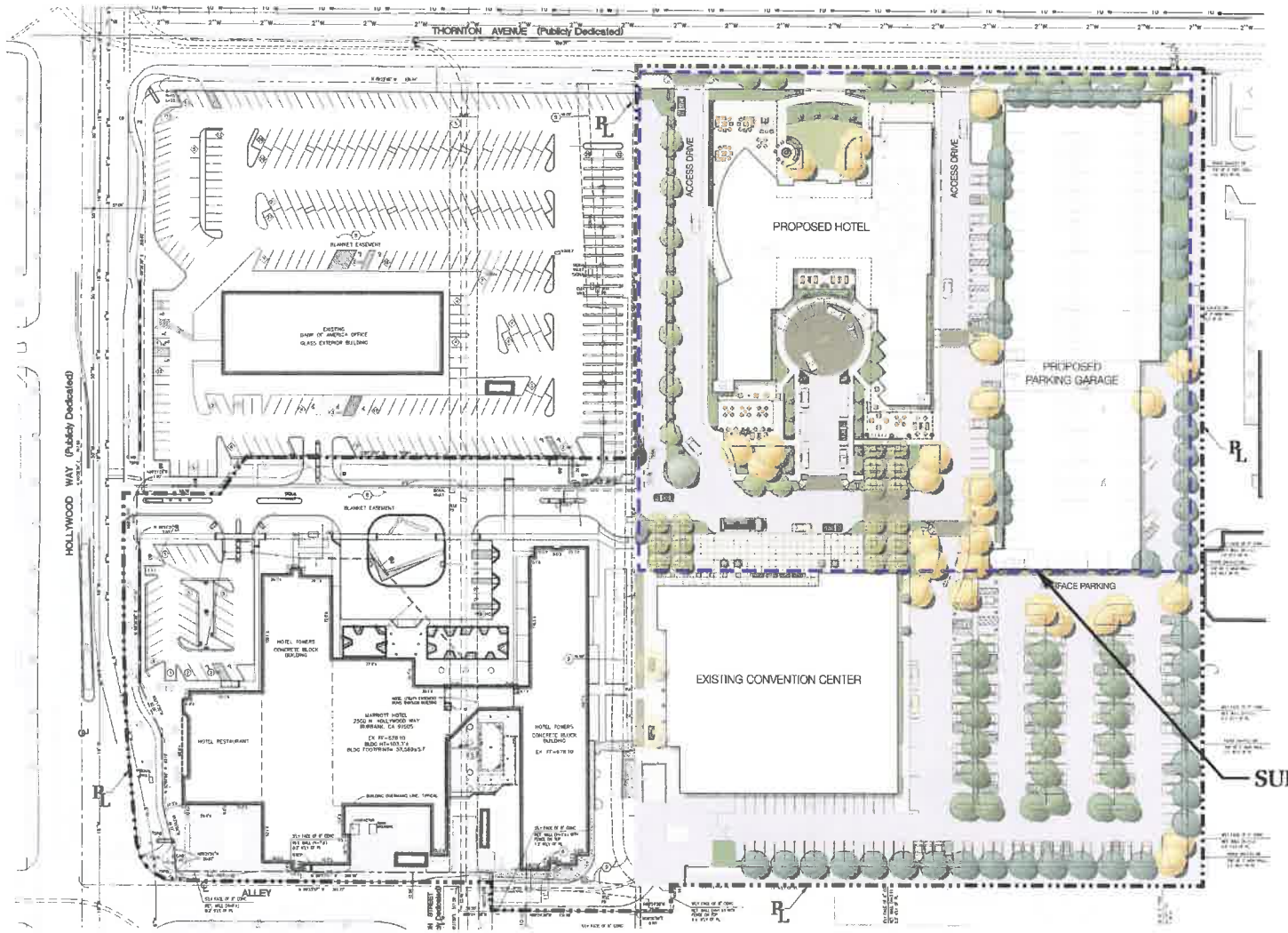
REFERENCE: U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES, BURBANK, CA QUADRANGLE

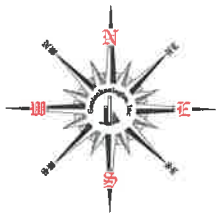
VICINITY MAP

Geotechnologies, Inc.
Consulting Geotechnical Engineers

AWH PARTNERS
2500 N. HOLLYWOOD WAY, BURBANK

FILE NO. 21947





SCALE IN FEET

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REFERENCE: SITE PLAN PROVIDED BY AWH PARTNERS
DATED JUNE 27, 2019

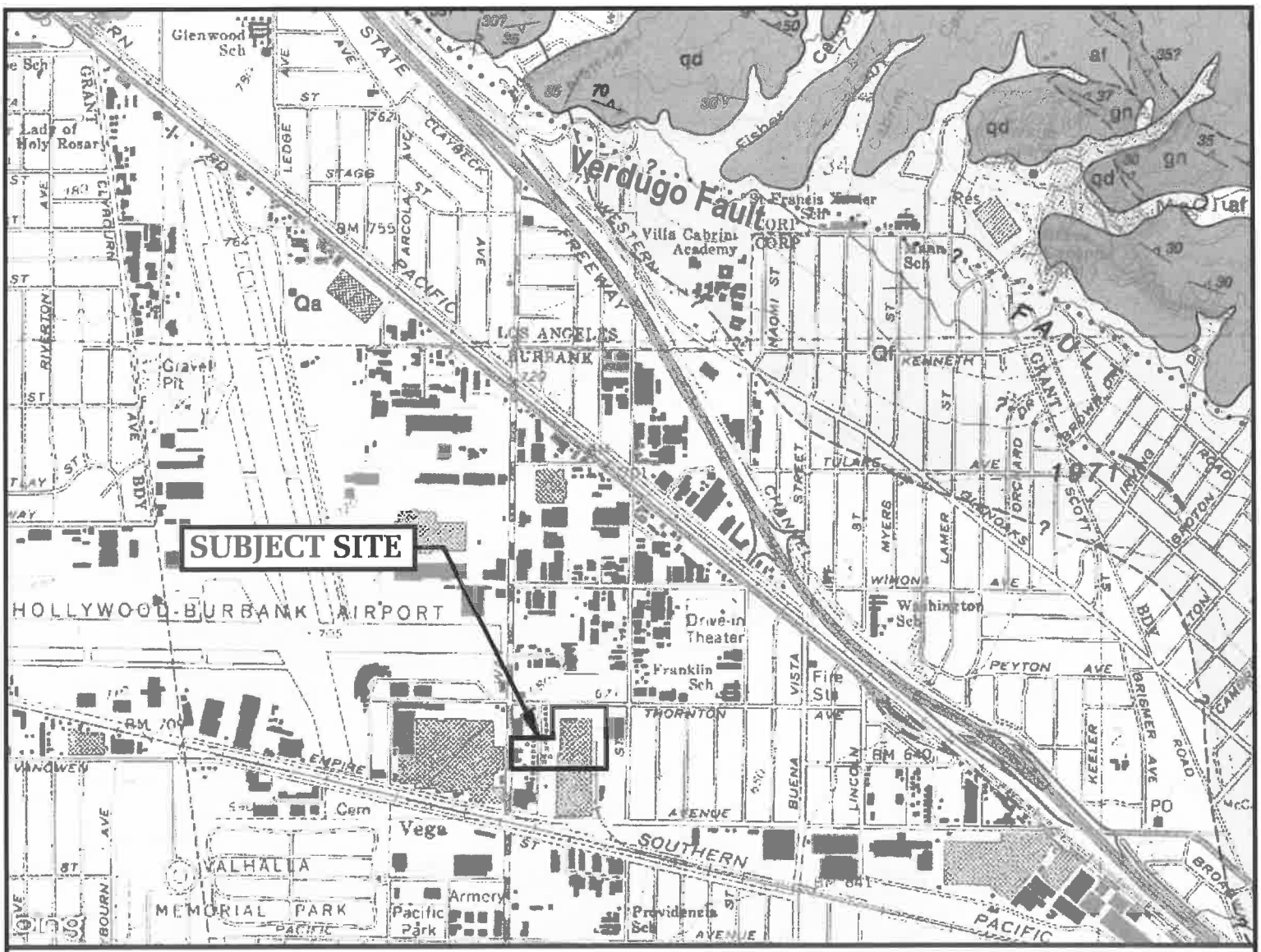
SITE PLAN

Geotechnologies, Inc.
Consulting Geotechnical Engineers

AWH PARTNERS
2500 N. HOLLYWOOD WAY, BURBANK

FILE No. 21947 | DRAWN BY: TC

DATE: February 2020



LEGEND

Qa: Surficial Sediments - alluvium: gravel, sand and clay of valley areas

Folds - arrow on axial trace of fold indicates direction of plunge

Fault - dashed where indefinite or inferred, dotted where concealed, queried where existence is doubtful

REFERENCE: DIBBLEE, T.W., (1991) GEOLOGIC MAP OF THE SUNLAND AND BURBANK QUADRANGLES (#DF-32)

LOCAL GEOLOGIC MAP - DIBBLEE

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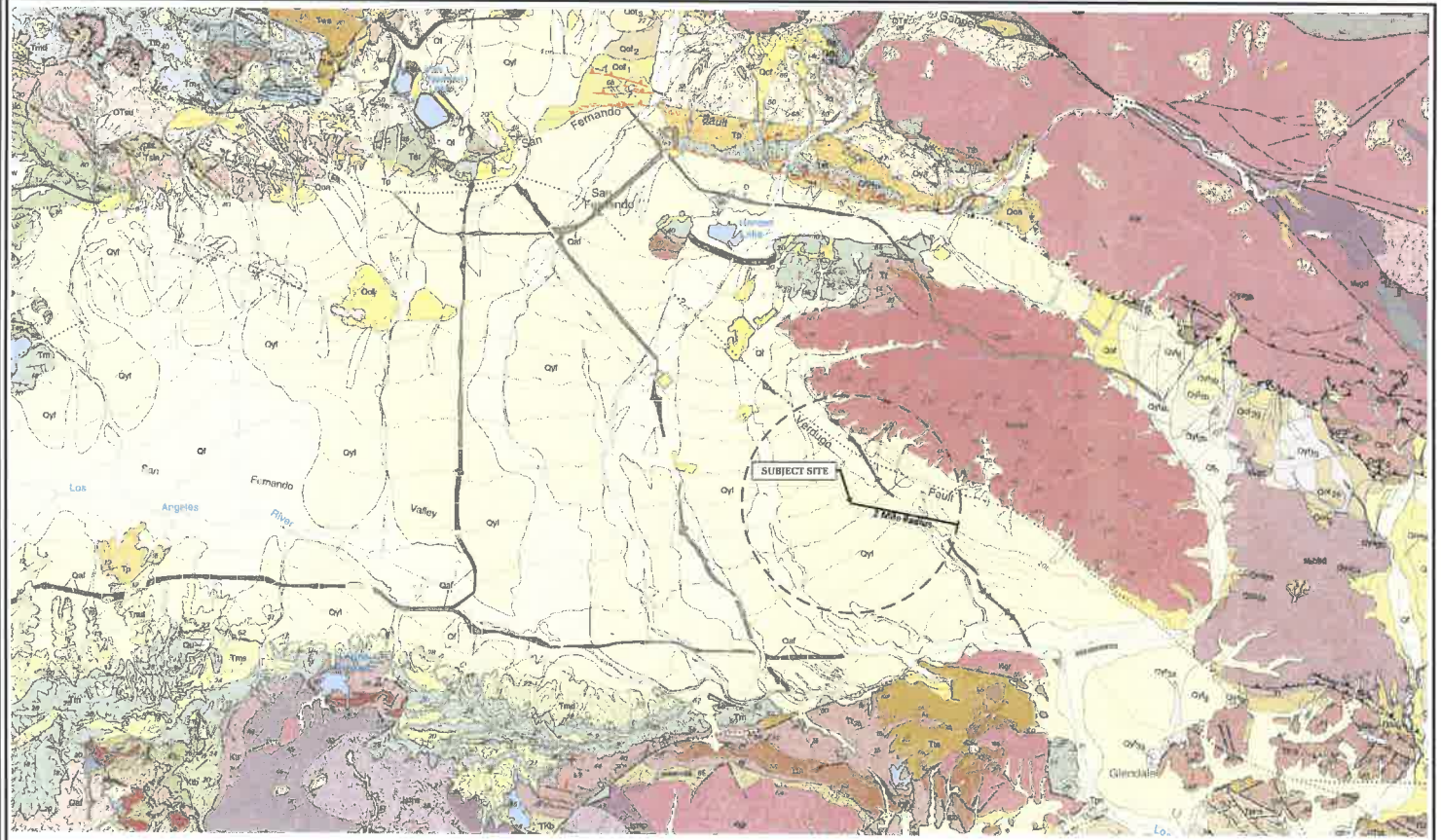

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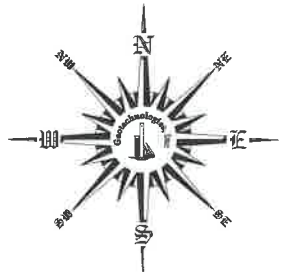
1 .5 0 1 2 3 4 5 6 7 MILES

1 .5 0 1 2 3 4 5 6 7 KILOMETERS

Contour Interval 40m



LEGEND

Qyf: Young alluvial-fan deposits, undivided (Holocene and late Pleistocene)—
Qf: Alluvial-Fan Deposits
Mzbqd: Biotite-quartz diorite (Mesozoic?)

Fault - Solid where accurately located, dashed where approximately located, dotted where concealed, queried where location or existence uncertain. includes strike slip, normal, reverse, oblique, and unspecified slip.

REFERENCE: U.S. DEPARTMENT OF THE INTERIOR, U.S. GEOLOGICAL SURVEY, PRELIMINARY GEOLOGIC MAP OF THE LOS ANGELES 30' X 60' QUADRANGLE, SOUTHERN CALIFORNIA, VERSION 1.0, 2005, COMPILED BY ROBERT F. YERKES AND RUSSELL H. CAMPBELL.

REGIONAL GEOLOGIC MAP

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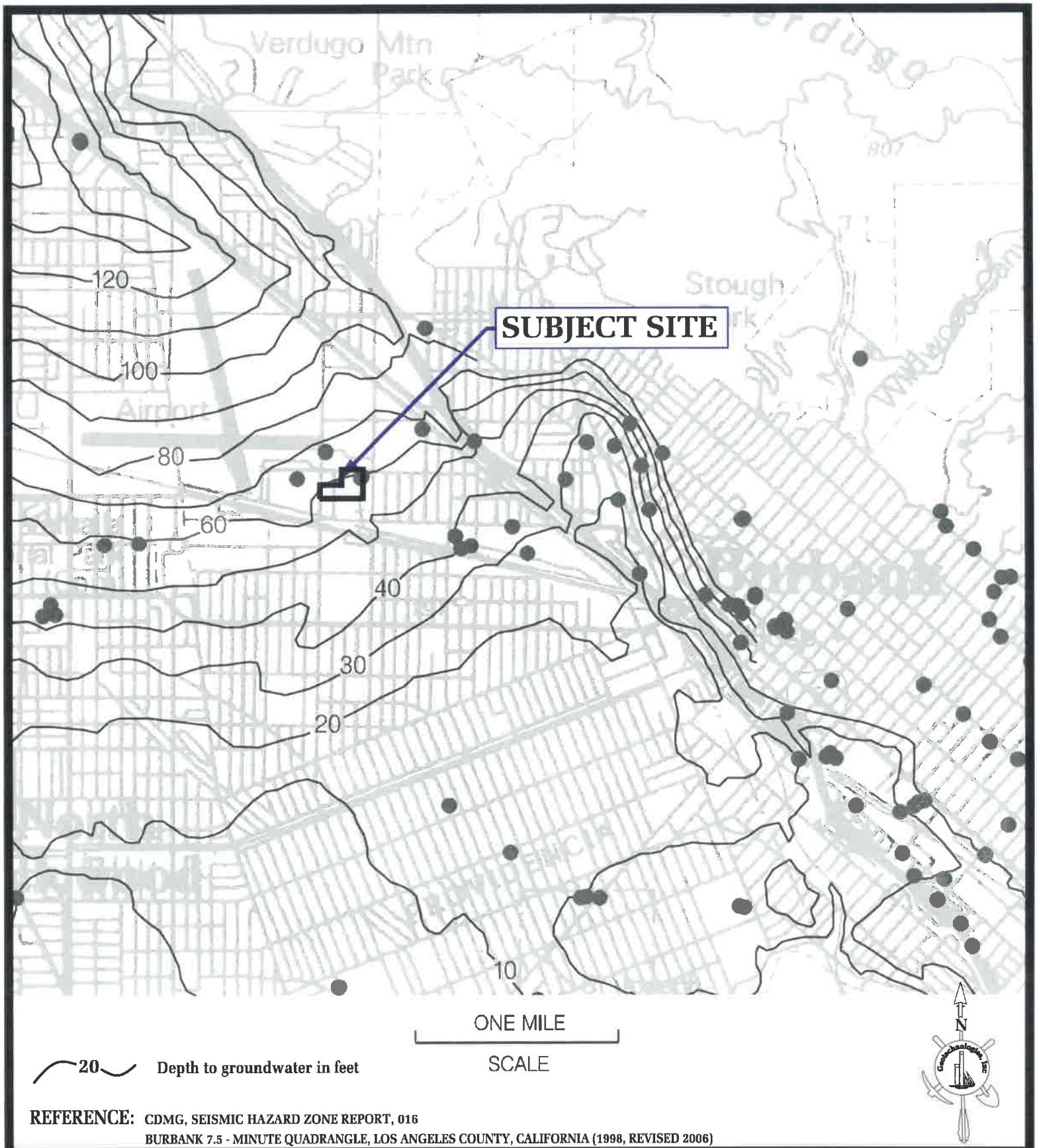

REFERENCE: CDMG, SEISMIC HAZARD ZONE REPORT, 016
BURBANK 7.5 - MINUTE QUADRANGLE, LOS ANGELES COUNTY, CALIFORNIA (1998, REVISED 2006)

HISTORICALLY HIGHEST GROUNDWATER LEVELS

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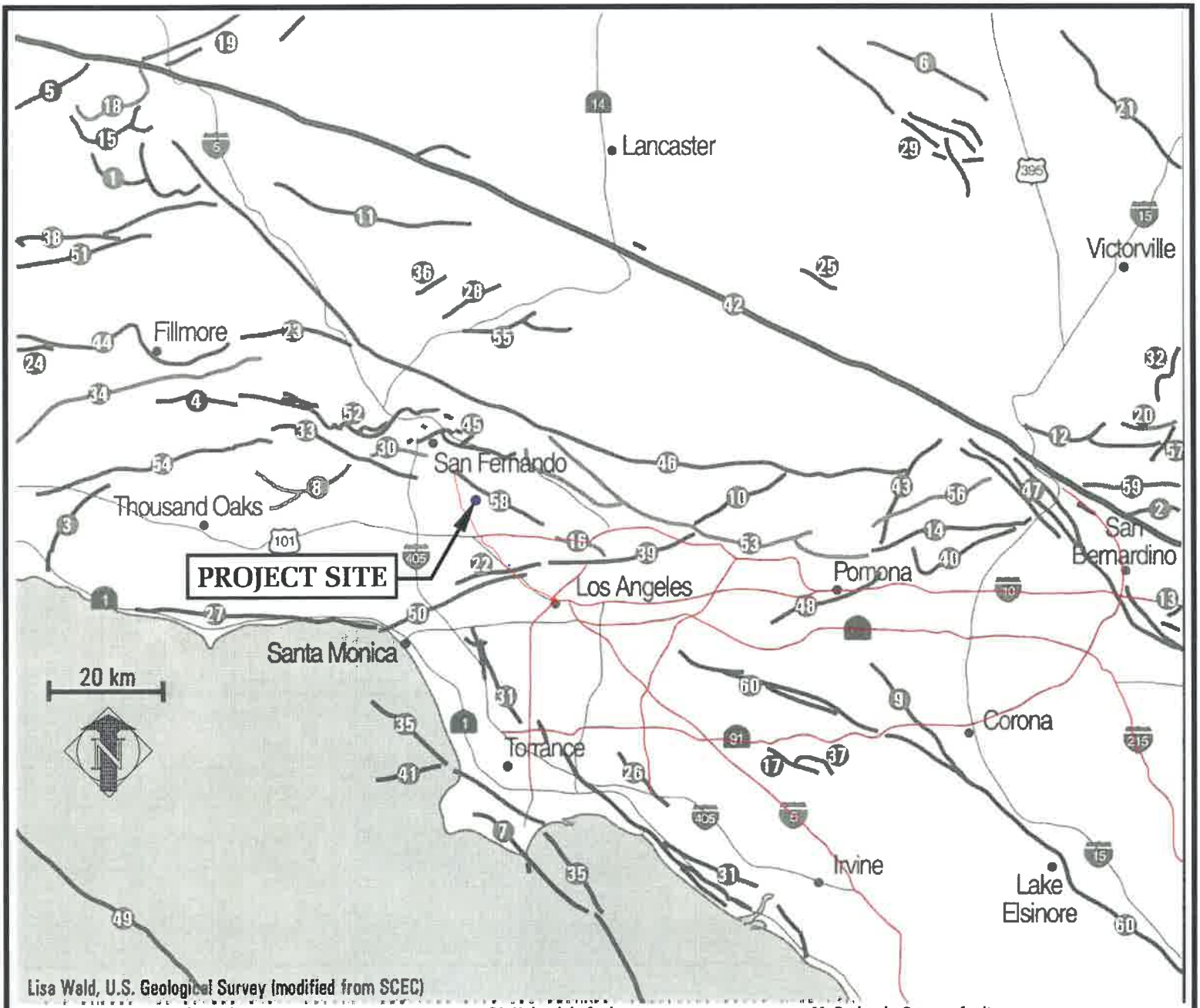
FILE NO. 21947

Seismic Source Summary Table

AWH Partners
File No. 21947

Name	Distance in Miles	Pref Slip Rate (mm/yr)	Dip (deg)	Dip Dir	Slip Sense	Rupture Top (km)	Rupture Bottom (km)	Length (km)	Mag*
Verdugo	1.41	0.5	55	NE	reverse	0	15	29	6.9
Sierra Madre (San Fernando)	5.75	2	45	N	thrust	0	13	18	6.7
Sierra Madre	5.88	2	53	N	reverse	0	14	57	7.2
Hollywood	6.01	1	70	N	strike slip	0	17	17	6.7
Elysian Park (Upper)	6.30	1.3	50	NE	reverse	3	15	20	6.7
Santa Monica Connected	6.78	2.4	44		strike slip	0.8	11	93	7.4
Northridge	8.17	1.5	35	S	thrust	7.4	17	33	6.9
Raymond	8.67	1.5	79	N	strike slip	0	16	22	6.8
San Gabriel	9.35	1	61	N	strike slip	0	15	71	7.3
Newport-Inglewood	10.68	1	88		strike slip	0	15	65	7.2
Puente Hills (LA)	11.14	0.7	27	N	thrust	2.1	15	22	7.0
Santa Susana	12.37	5	55	N	reverse	0	16	27	6.9
Malibu Coast	15.31	0.3	74	N	strike slip	0	16	38	7.0
Anacapa-Dume	16.79	3	41	N	thrust	1.2	12	65	7.2
Holser	19.22	0.4	58	S	reverse	0	19	20	6.8
Palos Verdes	19.58	3	90	V	strike slip	0	14	99	7.3
Clamshell-Sawpit	19.95	0.5	50	NW	reverse	0	14	16	6.7
Simi-Santa Rosa	21.37	1	60		strike slip	1	12	39	6.9
Elsinore	21.95	n/a	81	NE	strike slip	0	14	83	7.3
Puente Hills (Santa Fe Springs)	23.12	0.7	29	N	thrust	2.8	15	11	6.7
Anacapa-Dume	24.70	3	45	N	thrust	0	16	51	7.2
Oak Ridge Connected	25.69	3.6	53		reverse	0.6	15	94	7.4
Puente Hills (Coyote Hills)	27.09	0.7	26	N	thrust	2.8	15	17	6.9
S. San Andreas	27.94	n/a	90	V	strike slip	0	14	279	7.8
San Jose	28.87	0.5	74	NW	strike slip	0	15	20	6.7
San Cayetano	29.02	6	42	N	thrust	0	16	42	7.2
Cucamonga	35.73	5	45	N	thrust	0	8	28	6.7
Chino	36.21	1	65	SW	strike slip	0	14	29	6.8
Santa Ynez (East)	41.66	2	70	S	strike slip	0	13	68	7.2
San Joaquin Hills	41.81	0.5	23	SW	thrust	2	13	27	7.1
San Jacinto	45.27	n/a	90	V	strike slip	0	17	181	7.7
Pitas Point Connected	46.60	1	55		reverse	1.2	13	78	7.3
Ventura-Pitas Point	46.60	1	64	N	reverse	1	15	44	7.0
Mission Ridge-Arroyo Parida-Santa Ana	50.54	0.4	70	S	reverse	0	8	69	6.9
Cleghorn	51.15	3	90	V	strike slip	0	16	25	6.8
Garlock	52.70	n/a	90	V	strike slip	0.4	12	210	7.6
Channel Islands Thrust	53.79	1.5	20	N	thrust	5	12	59	7.3
Santa Cruz Island	54.36	1	90	V	strike slip	0	13	69	7.2
Red Mountain	55.68	2	56	N	reverse	0	14	101	7.4
Pleito	59.41	2	46	S	reverse	0	14	44	7.1

Reference: USGS National Seismic Hazard Maps - Source Parameters
*Maximum Magnitude - Ellsworth



1 Alamo thrust
2 Arrowhead fault
3 Bailey fault
4 Big Mountain fault
5 Big Pine fault
6 Blake Ranch fault
7 Cabrillo fault
8 Chatsworth fault
9 Chino fault
10 Clamshell-Sawpit fault
11 Clearwater fault
12 Cleghorn fault
13 Crafton Hills fault zone
14 Cucamonga fault zone
15 Dry Creek fault
16 Eagle Rock fault
17 El Modeno fault
18 Frazier Mountain thrust
19 Garlock fault zone
20 Grass Valley fault
21 Helendale fault
22 Hollywood fault
23 Holser fault
24 Lion Canyon fault
25 Llano fault
26 Los Alamitos fault
27 Malibu Coast fault
28 Mint Canyon fault
29 Mirage Valley fault zone
30 Mission Hills fault
31 Newport Inglewood fault zone
32 North Frontal fault zone
33 Northridge Hills fault
34 Oak Ridge fault
35 Palos Verdes fault zone
36 Pelona fault
37 Peralta Hills fault
38 Pine Mountain fault
39 Raymond fault
40 Red Hill (Etiwanda Ave) fault
41 Redondo Canyon fault
42 San Andreas Fault
43 San Antonio fault
44 San Cayetano fault
45 San Fernando fault zone
46 San Gabriel fault zone
47 San Jacinto fault
48 San Jose fault
49 Santa Cruz-Santa Catalina Ridge f.z.
50 Santa Monica fault
51 Santa Ynez fault
52 Santa Susana fault zone
53 Sierra Madre fault zone
54 Simi fault
55 Soledad Canyon fault
56 Stoddard Canyon fault
57 Tunnel Ridge fault
58 Verdugo fault
59 Waterman Canyon fault
60 Whittier fault

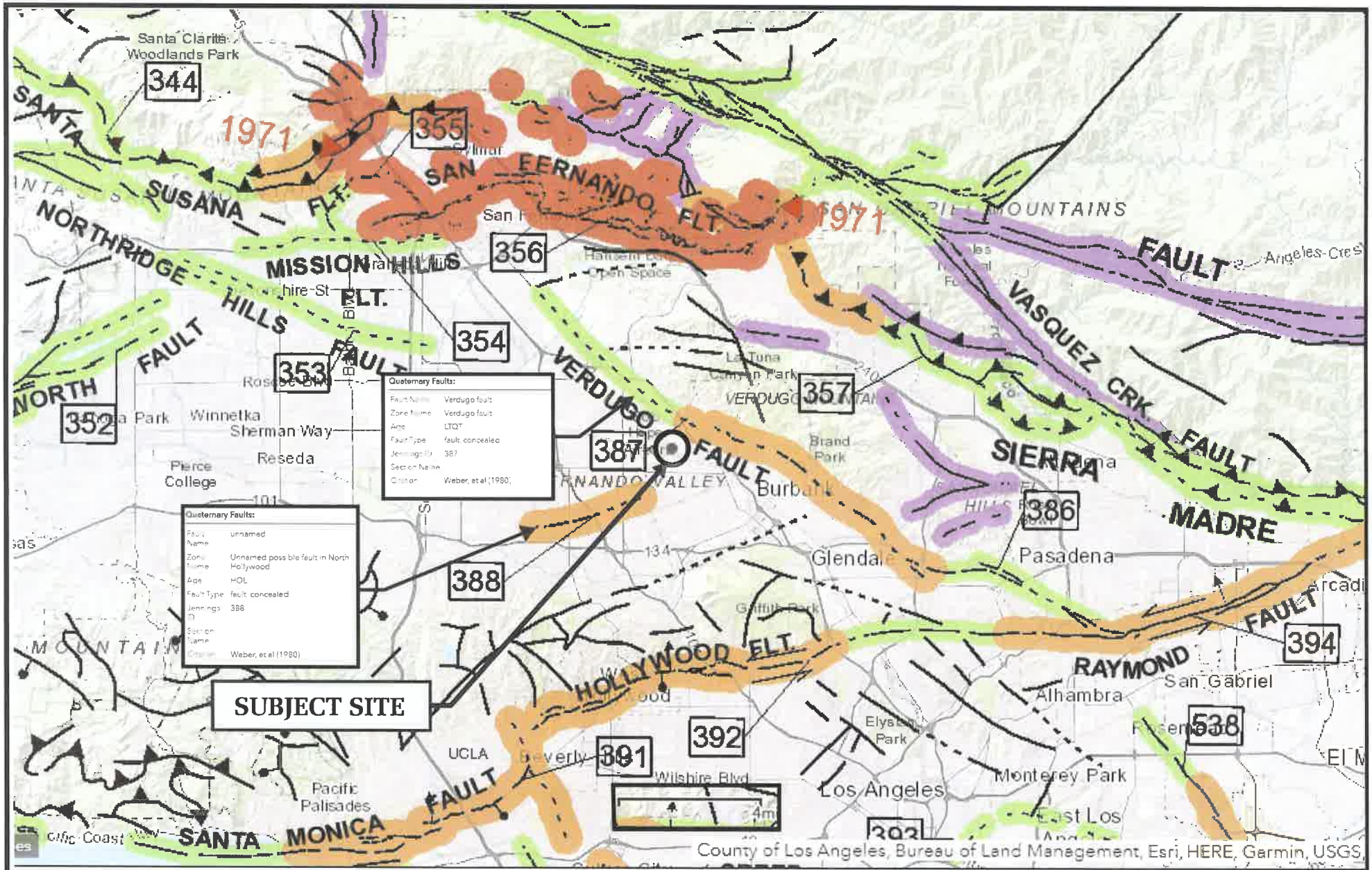
REFERENCE: http://pasadena.wr.usgs.gov/info/images/LA%20Faults.pdf

SOUTHERN CALIFORNIA FAULT MAP

Geotechnologies, Inc.
Consulting Geotechnical Engineers

AWH PARTNERS
2500 N. HOLLYWOOD WAY, BURBANK

FILE No. 21947



LOCAL FAULT MAP

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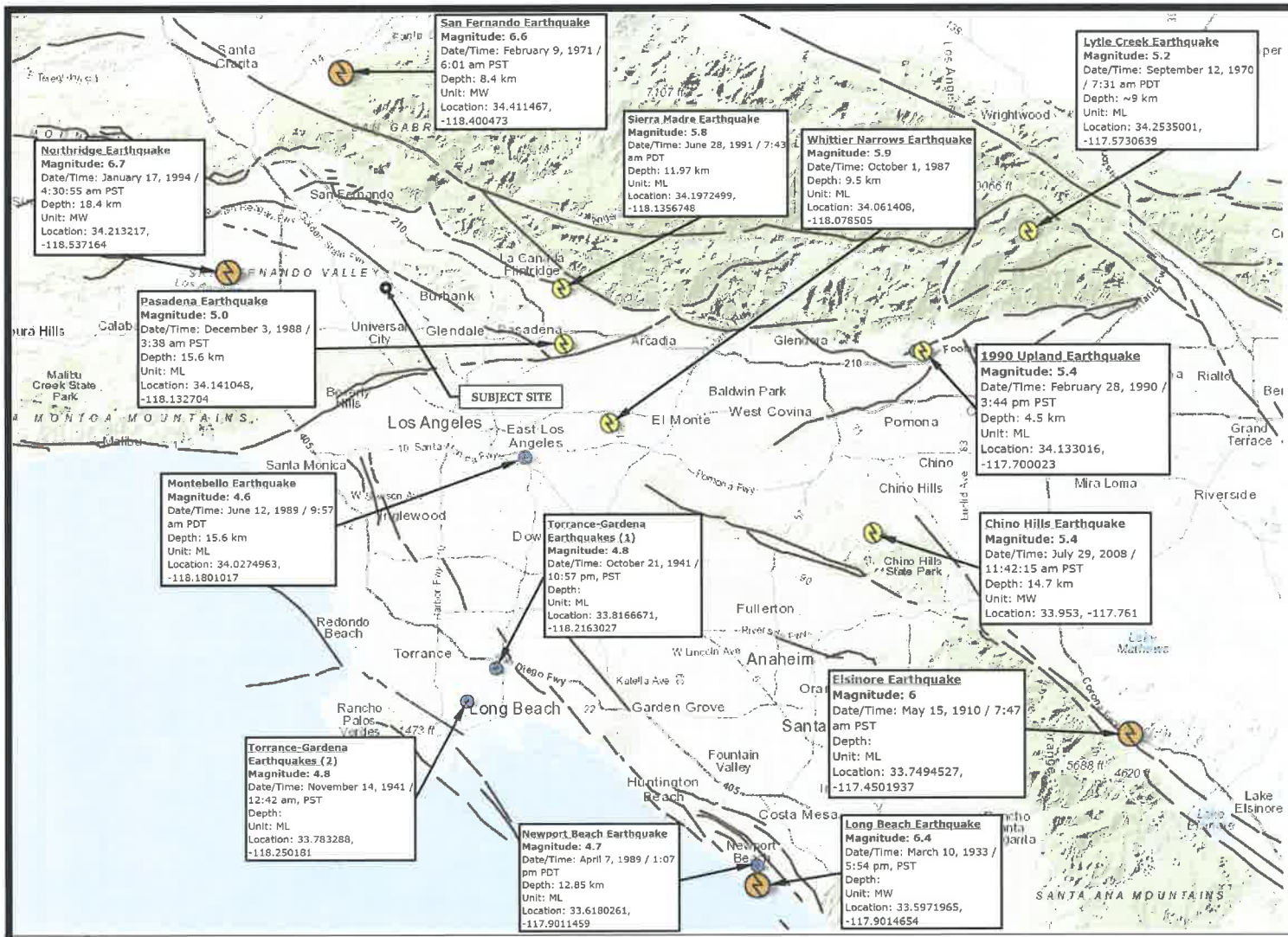
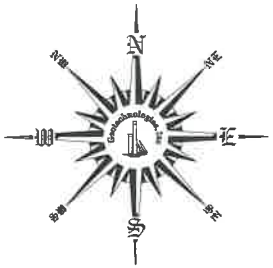
FILE No. 21947





SIGNIFICANT EVENT BY MAGNITUDE:

Marker	Magnitude
	☑ 4 ≤ 4.9
	☑ 5 ≤ 5.9
	☑ 6 ≤ 6.9
	☑ 7 ≤ 9.0

REFERENCE: SIGNIFICANT EARTHQUAKE AND FAULTS, SOUTHERN CALIFORNIA EARTHQUAKE DATA CENTER, CALTECH

HISTORICAL SEISMIC EVENT MAP - REGIONAL

Geotechnologies, Inc.
Consulting Geotechnical Engineers

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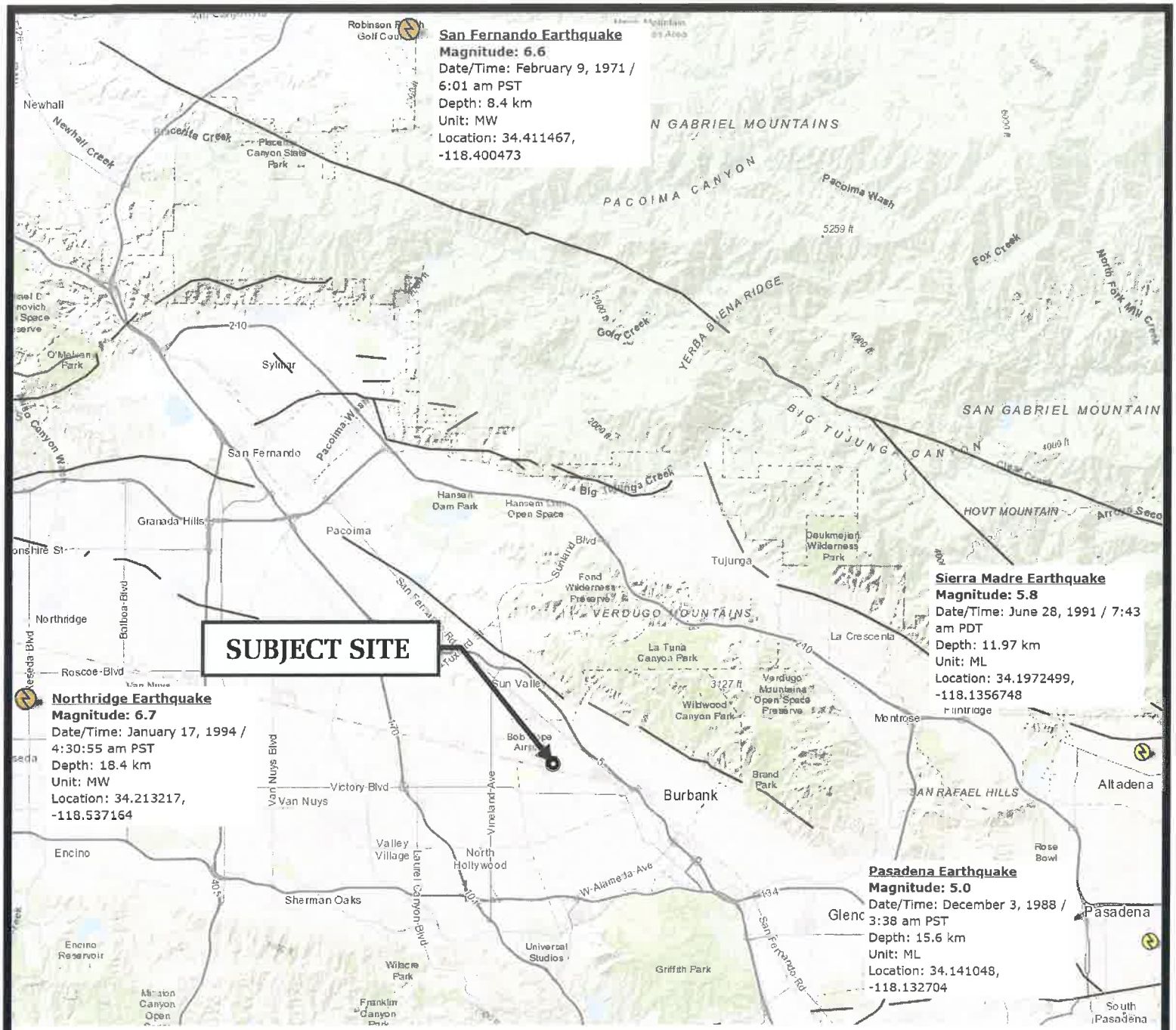
FILE NO. 21947



SIGNIFICANT EVENT BY MAGNITUDE:

Marker	Magnitude
	☑ 4 ≤ 4.9
	☑ 5 ≤ 5.9
	☑ 6 ≤ 6.9
	☑ 7 ≤ 9.0

REFERENCE: SIGNIFICANT EARTHQUAKE AND FAULTS, SOUTHERN CALIFORNIA EARTHQUAKE DATA CENTER, CALTECH

HISTORICAL SEISMIC EVENT MAP - LOCAL

Geotechnologies, Inc.
Consulting Geotechnical Engineers

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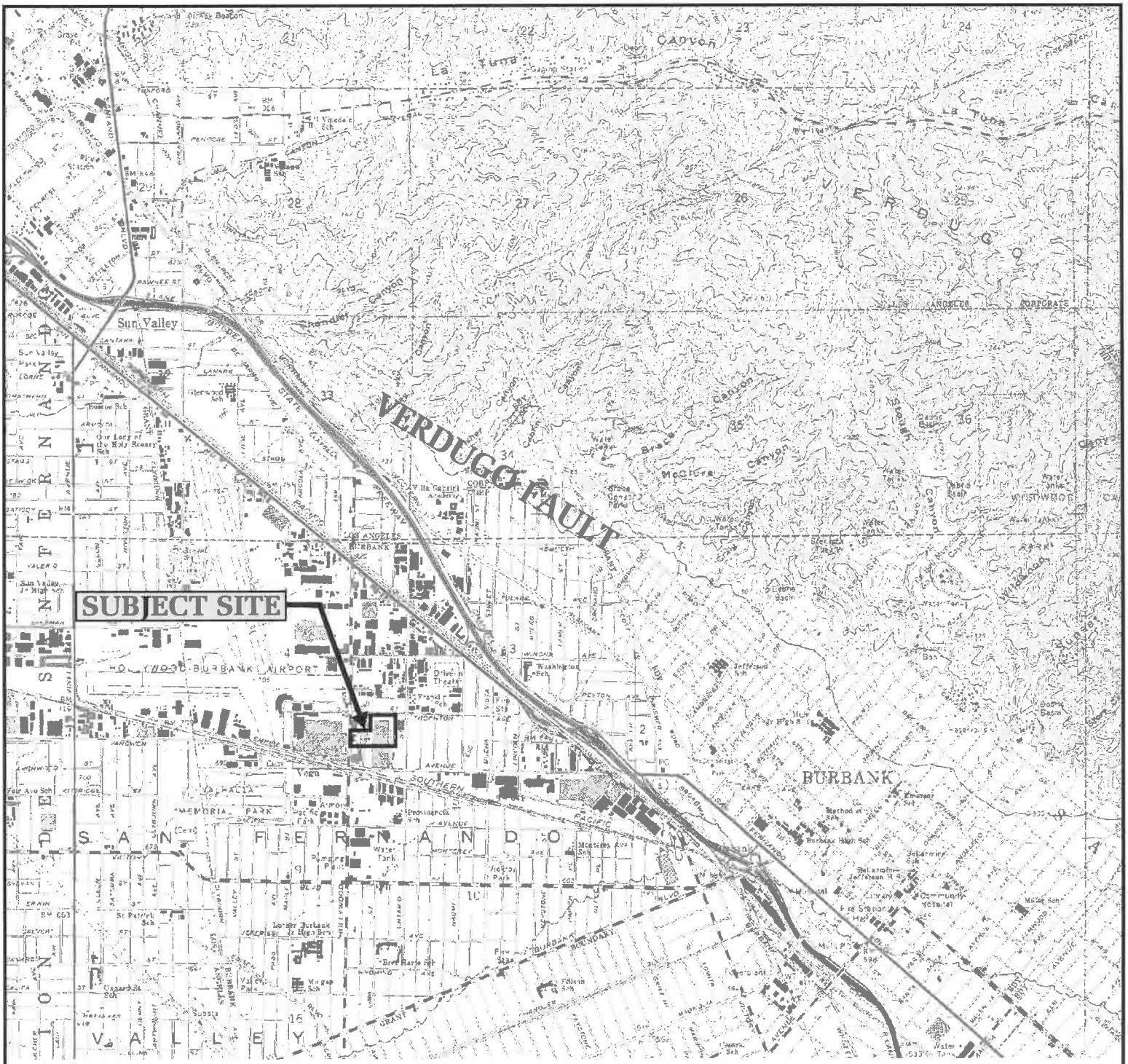
2500 N. HOLLYWOOD WAY, BURBANK

FILE No. 21947



Earthquake Fault Zones
Alquist-Priolo Earthquake Fault Zone

REFERENCE: EARTHQUAKE FAULT ZONES, BURBANK QUADRANGLE, CALIFORNIA GEOLOGICAL SURVEY, JANUARY 1979

EARTHQUAKE FAULT ZONE

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FILE No. 21947

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/17/2020 at 2:27:03 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

FLOOD INSURANCE RATE MAP

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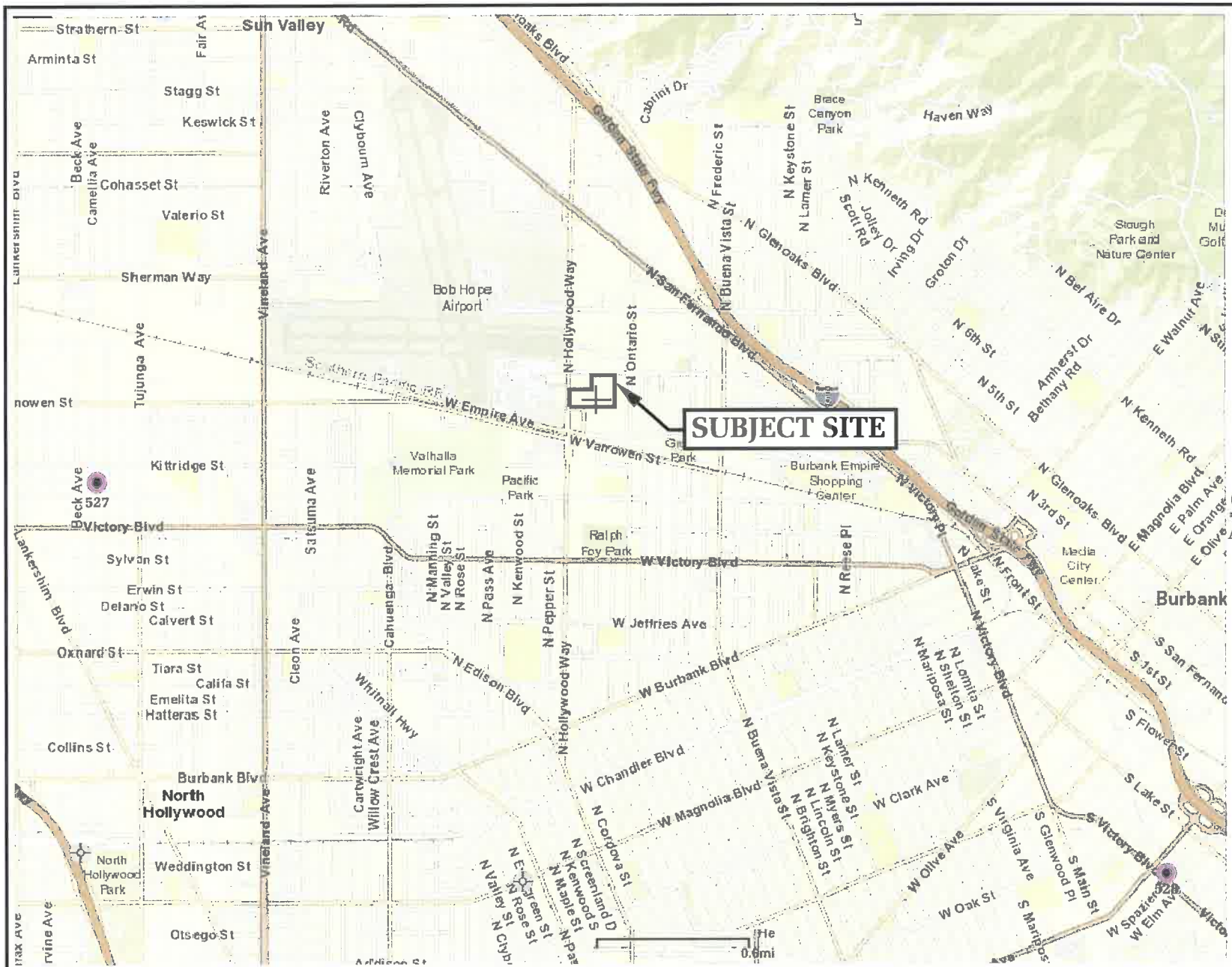
Consulting Geotechnical Engineers

AWH PARTNERS
2500 N. HOLLYWOOD WAY, BURBANK

FILE No. 21947 | DRAWN BY: TC

DATE: February 2020



REFERENCE: DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES WELL FINDER, STATE OF CALIFORNIA, 2014

OIL WELL LEGEND

API NO.	OPERATOR, WELL NO.
527	B.J. Jeffrey, #2
528	Jeffrey, Overton & Halfhill, #1

OIL WELL LOCATION MAP

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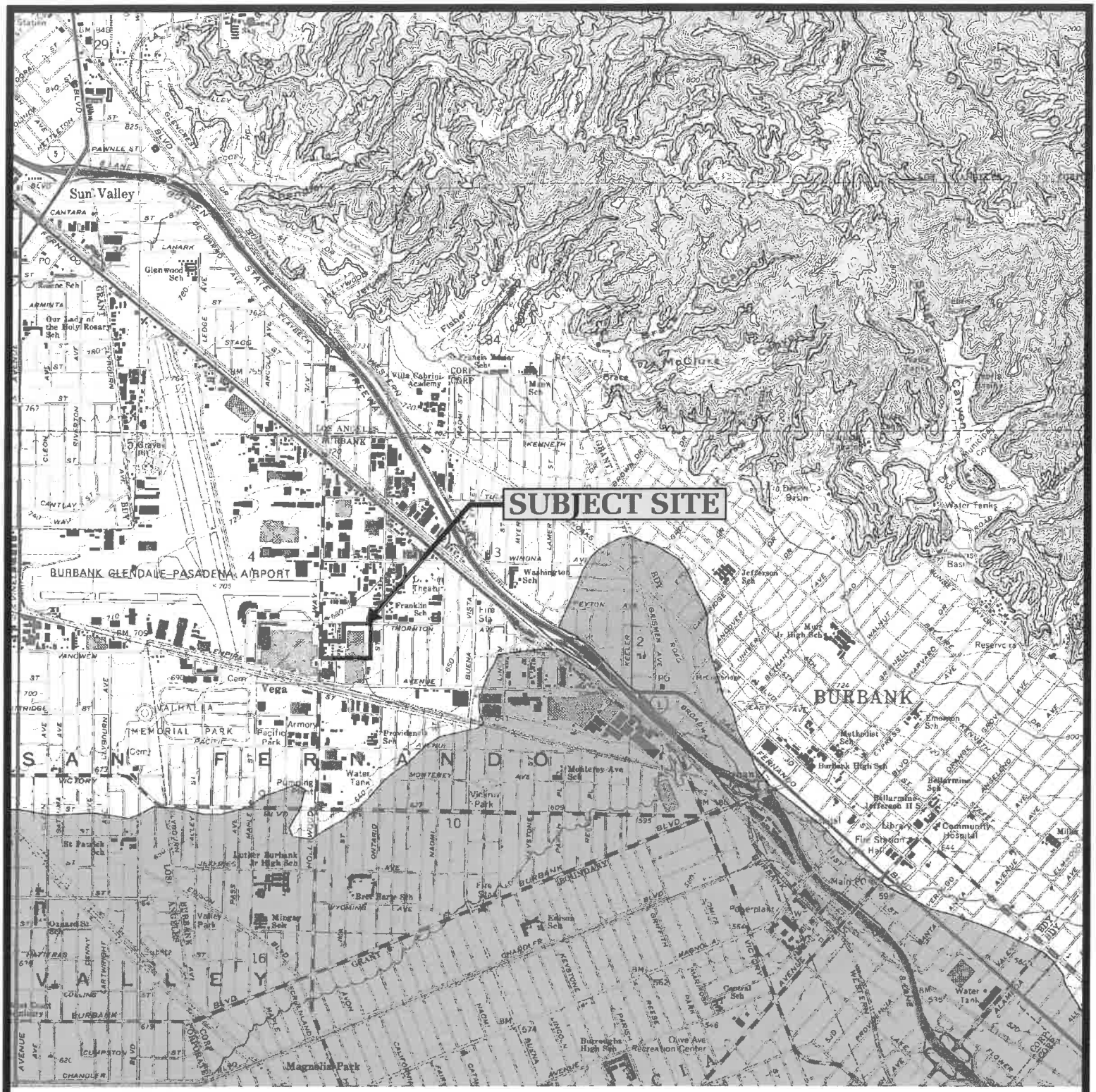
2500 N. HOLLYWOOD WAY, BURBANK

FILE NO. 21947



LIQUEFACTION AREA

REFERENCE: SEISMIC HAZARD ZONES, BURBANK QUADRANGLE OFFICIAL MAP (CDMG, 1999)

SEISMIC HAZARD ZONE MAP

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Consulting Geotechnical Engineers

AWH PARTNERS
2500 N. HOLLYWOOD WAY, BURBANK

FILE NO. 21947

GROUNDWATER DATA FROM WELL STATION (SITE CODE): 34186N1183612W001

(13 PAGES)

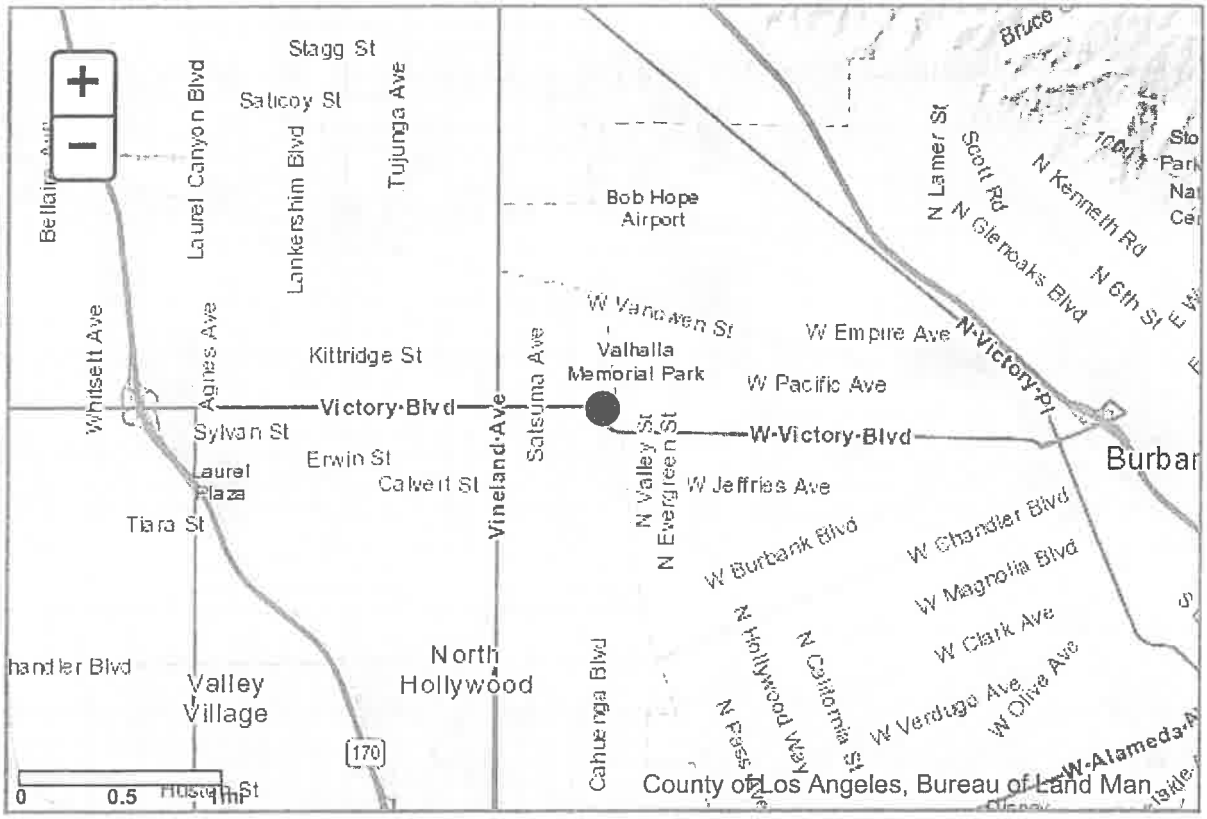
Groundwater Levels for Station 341864N1183612W001

Data for your selected well is shown in the tabbed interface below. To view data managed in the updated WDL tables, including data collected under the CASGEM program, click the "Recent Groundwater Level Data" tab. To view data stored in the former WDL tables, click the "Historical Groundwater Level Data" tab. To download the data in CSV format, click the "Download CSV File" button on the respective tab. Please note that the vertical datum for "recent" measurements is NAVD88, while the vertical datum for "historical" measurements is NGVD29. To change your well selection criteria, click the "Perform a New Well Search" button.

Station Data » Recent Groundwater Level Data » Historical Groundwater Level Data

State Well Number: 01N14W09E003S
Local Well ID: 3841H
Site Code: 341864N1183612W001
Latitude (NAD83): 34.186434
Longitude (NAD83): -118.361198
Groundwater Basin (code): San Fernando Valley (4-012)

Well Use: Observation
Well Status: Active
Well Completion Report Number:
Reference Point Elevation (NAVD88 ft): 661.400
Ground Surface Elevation (NAVD88 ft): 661.400
Total Depth (ft): 238
Perforated Interval Depths (ft): 144.000 154.000 210.000 220.000

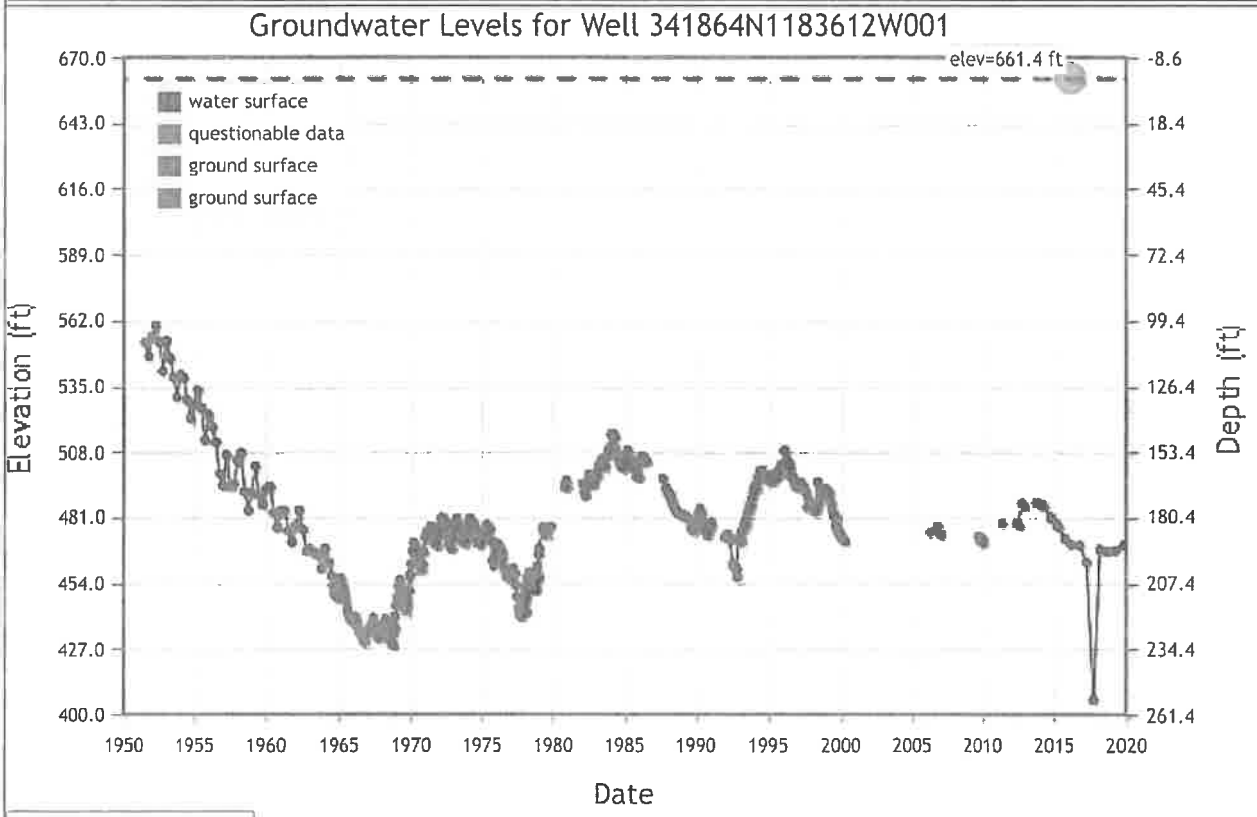


Perform a New Well Search

Groundwater Levels for Station 341864N1183612W001

Data for your selected well is shown in the tabbed interface below. To view data managed in the updated WDL tables, including data collected under the CASGEM program, click the "Recent Groundwater Level Data" tab. To view data stored in the former WDL tables, click the "Historical Groundwater Level Data" tab. To download the data in CSV format, click the "Download CSV File" button on the respective tab. Please note that the vertical datum for "recent" measurements is NAVD88, while the vertical datum for "historical" measurements is NGVD29. To change your well selection criteria, click the "Perform a New Well Search" button.

Station Data» **Recent Groundwater Level Data»** Historical Groundwater Level Data



Download CSV File

Date	RPE	GSE	RPWS	WSE	GS to WS	Msmt Code	CASGEM Msmt	Agency	Co
07/01/1951 00:00	661.400	661.400	108.15	553.25	108.15		N	5123	384
10/01/1951 00:00	661.400	661.400	114.1	547.3	114.1		N	5123	384
01/01/1952 00:00	661.400	661.400	105.8	555.6	105.8		N	5123	384
04/01/1952 00:00	661.400	661.400	101.63	559.77	101.63		N	5123	384
07/01/1952 00:00	661.400	661.400	108.13	553.27	108.13		N	5123	384
10/01/1952 00:00	661.400	661.400	120.2	541.2	120.2		N	5123	384
01/01/1953 00:00	661.400	661.400	107.67	553.73	107.67		N	5123	384
04/01/1953 00:00	661.400	661.400	114.76	546.64	114.76		N	5123	384
07/01/1953 00:00	661.400	661.400	122.79	538.61	122.79		N	5123	384
10/01/1953 00:00	661.400	661.400	130.8	530.6	130.8		N	5123	384
01/01/1954 00:00	661.400	661.400	121.61	539.79	121.61		N	5123	384
04/01/1954 00:00	661.400	661.400	122.77	538.63	122.77		N	5123	384
07/01/1954 00:00	661.400	661.400	131.95	529.45	131.95		N	5123	384

10/01/1954 00:00	661.400	661.400	139.58	521.82	139.58	N	5123	384
01/01/1955 00:00	661.400	661.400	134.03	527.37	134.03	N	5123	384
04/01/1955 00:00	661.400	661.400	128.12	533.28	128.12	N	5123	384
07/01/1955 00:00	661.400	661.400	135.2	526.2	135.2	N	5123	384
10/01/1955 00:00	661.400	661.400	148.4	513	148.4	N	5123	384
01/01/1956 00:00	661.400	661.400	137.91	523.49	137.91	N	5123	384
04/01/1956 00:00	661.400	661.400	143.2	518.2	143.2	N	5123	384
07/01/1956 00:00	661.400	661.400	149.3	512.1	149.3	N	5123	384
10/01/1956 00:00	661.400	661.400	162.3	499.1	162.3	N	5123	384
01/01/1957 00:00	661.400	661.400	167.17	494.23	167.17	N	5123	384
04/01/1957 00:00	661.400	661.400	154.53	506.87	154.53	N	5123	384
07/01/1957 00:00	661.400	661.400	167.71	493.69	167.71	N	5123	384
10/01/1957 00:00	661.400	661.400	166.74	494.66	166.74	N	5123	384
01/01/1958 00:00	661.400	661.400	156.87	504.53	156.87	N	5123	384
04/01/1958 00:00	661.400	661.400	153.84	507.56	153.84	N	5123	384
07/01/1958 00:00	661.400	661.400	170.02	491.38	170.02	N	5123	384
10/01/1958 00:00	661.400	661.400	177.32	484.08	177.32	N	5123	384
01/01/1959 00:00	661.400	661.400	170.03	491.37	170.03	N	5123	384
04/01/1959 00:00	661.400	661.400	159.21	502.19	159.21	N	5123	384
07/01/1959 00:00	661.400	661.400	171.29	490.11	171.29	N	5123	384
10/01/1959 00:00	661.400	661.400	175.13	486.27	175.13	N	5123	384
01/01/1960 00:00	661.400	661.400	168.44	492.96	168.44	N	5123	384
04/01/1960 00:00	661.400	661.400	167.64	493.76	167.64	N	5123	384
07/01/1960 00:00	661.400	661.400	178.34	483.06	178.34	N	5123	384
10/01/1960 00:00	661.400	661.400	184.59	476.81	184.59	N	5123	384
01/01/1961 00:00	661.400	661.400	177.54	483.86	177.54	N	5123	384
04/01/1961 00:00	661.400	661.400	177.41	483.99	177.41	N	5123	384
07/01/1961 00:00	661.400	661.400	185.8	475.6	185.8	N	5123	384
10/01/1961 00:00	661.400	661.400	190.64	470.76	190.64	N	5123	384
01/01/1962 00:00	661.400	661.400	183.5	477.9	183.5	N	5123	384
04/01/1962 00:00	661.400	661.400	177.49	483.91	177.49	N	5123	384
07/01/1962 00:00	661.400	661.400	185.44	475.96	185.44	N	5123	384
10/01/1962 00:00	661.400	661.400	194.3	467.1	194.3	N	5123	384
01/01/1963 00:00	661.400	661.400	193.4	468	193.4	N	5123	384
04/01/1963 00:00	661.400	661.400	194.49	466.91	194.49	N	5123	384
07/01/1963 00:00	661.400	661.400	195.94	465.46	195.94	N	5123	384
10/01/1963 00:00	661.400	661.400	201.59	459.81	201.59	N	5123	384
01/01/1964 00:00	661.400	661.400	193.18	468.22	193.18	N	5123	384
04/01/1964 00:00	661.400	661.400	198.89	462.51	198.89	N	5123	384
06/16/1964 00:00	661.400	661.400	204.5	456.9	204.5	N	5123	384
07/14/1964 00:00	661.400	661.400	208.4	453	208.4	N	5123	384
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09/15/1964 00:00	661.400	661.400	212.7	448.7	212.7	N	5123	384
10/13/1964 00:00	661.400	661.400	213.3	448.1	213.3	N	5123	384
11/17/1964 00:00	661.400	661.400	210.1	451.3	210.1	N	5123	384
12/15/1964 00:00	661.400	661.400	208.7	452.7	208.7	N	5123	384
01/12/1965 00:00	661.400	661.400	205.6	455.8	205.6	N	5123	384
02/16/1965 00:00	661.400	661.400	205.6	455.8	205.6	N	5123	384
03/16/1965 00:00	661.400	661.400	209	452.4	209	N	5123	384

04/13/1965 00:00	661.400	661.400	209.8	451.6	209.8	N	5123	384
05/18/1965 00:00	661.400	661.400	212.2	449.2	212.2	N	5123	384
06/15/1965 00:00	661.400	661.400	214.7	446.7	214.7	N	5123	384
07/20/1965 00:00	661.400	661.400	218.1	443.3	218.1	N	5123	384
08/17/1965 00:00	661.400	661.400	220.1	441.3	220.1	N	5123	384
09/21/1965 00:00	661.400	661.400	222	439.4	222	N	5123	384
10/19/1965 00:00	661.400	661.400	222.1	439.3	222.1	N	5123	384
11/23/1965 00:00	661.400	661.400	223.1	438.3	223.1	N	5123	384
12/07/1965 00:00	661.400	661.400	223.4	438	223.4	N	5123	384
12/14/1965 00:00	661.400	661.400	223	438.4	223	N	5123	384
12/21/1965 00:00	661.400	661.400	223.2	438.2	223.2	N	5123	384
12/28/1965 00:00	661.400	661.400	223.2	438.2	223.2	N	5123	384
01/18/1966 00:00	661.400	661.400	222.3	439.1	222.3	N	5123	384
02/15/1966 00:00	661.400	661.400	221	440.4	221	N	5123	384
03/15/1966 00:00	661.400	661.400	222.7	438.7	222.7	N	5123	384
04/19/1966 00:00	661.400	661.400	225.2	436.2	225.2	N	5123	384
05/17/1966 00:00	661.400	661.400	226.8	434.6	226.8	N	5123	384
06/14/1966 00:00	661.400	661.400	228	433.4	228	N	5123	384
07/12/1966 00:00	661.400	661.400	228.9	432.5	228.9	N	5123	384
08/16/1966 00:00	661.400	661.400	230.5	430.9	230.5	N	5123	384
09/13/1966 00:00	661.400	661.400	231.5	429.9	231.5	N	5123	384
10/18/1966 00:00	661.400	661.400	228.7	432.7	228.7	N	5123	384
11/15/1966 00:00	661.400	661.400	227.2	434.2	227.2	N	5123	384
01/17/1967 00:00	661.400	661.400	226.6	434.8	226.6	N	5123	384
02/14/1967 00:00	661.400	661.400	225.9	435.5	225.9	N	5123	384
03/14/1967 00:00	661.400	661.400	225.3	436.1	225.3	N	5123	384
04/18/1967 00:00	661.400	661.400	223.2	438.2	223.2	N	5123	384
05/16/1967 00:00	661.400	661.400	221.6	439.8	221.6	N	5123	384
06/20/1967 00:00	661.400	661.400	224.7	436.7	224.7	N	5123	384
07/18/1967 00:00	661.400	661.400	227.3	434.1	227.3	N	5123	384
08/15/1967 00:00	661.400	661.400	229.2	432.2	229.2	N	5123	384
09/19/1967 00:00	661.400	661.400	230.2	431.2	230.2	N	5123	384
10/24/1967 00:00	661.400	661.400	228.4	433	228.4	N	5123	384
11/24/1967 00:00	661.400	661.400	228.4	433	228.4	N	5123	384
01/16/1968 00:00	661.400	661.400	224.3	437.1	224.3	N	5123	384
02/13/1968 00:00	661.400	661.400	224.6	436.8	224.6	N	5123	384
03/19/1968 00:00	661.400	661.400	222.2	439.2	222.2	N	5123	384
04/23/1968 00:00	661.400	661.400	223.6	437.8	223.6	N	5123	384
05/14/1968 00:00	661.400	661.400	226.5	434.9	226.5	N	5123	384
06/18/1968 00:00	661.400	661.400	230.1	431.3	230.1	N	5123	384
07/16/1968 00:00	661.400	661.400	231.4	430	231.4	N	5123	384
08/20/1968 00:00	661.400	661.400	232.2	429.2	232.2	N	5123	384
09/17/1968 00:00	661.400	661.400	232.6	428.8	232.6	N	5123	384
10/15/1968 00:00	661.400	661.400	228.7	432.7	228.7	N	5123	384
11/19/1968 00:00	661.400	661.400	221	440.4	221	N	5123	384
12/12/1968 00:00	661.400	661.400	226.2	435.2	226.2	N	5123	384
12/17/1968 00:00	661.400	661.400	216.9	444.5	216.9	N	5123	384
01/14/1969 00:00	661.400	661.400	213.1	448.3	213.1	N	5123	384
02/18/1969 00:00	661.400	661.400	208.9	452.5	208.9	N	5123	384

03/18/1969 00:00	661.400	661.400	206	455.4	206	N	5123	384
04/15/1969 00:00	661.400	661.400	206.2	455.2	206.2	N	5123	384
05/20/1969 00:00	661.400	661.400	210.1	451.3	210.1	N	5123	384
06/17/1969 00:00	661.400	661.400	213.6	447.8	213.6	N	5123	384
07/15/1969 00:00	661.400	661.400	217.7	443.7	217.7	N	5123	384
08/19/1969 00:00	661.400	661.400	218.9	442.5	218.9	N	5123	384
09/16/1969 00:00	661.400	661.400	215.8	445.6	215.8	N	5123	384
10/14/1969 00:00	661.400	661.400	214.2	447.2	214.2	N	5123	384
11/18/1969 00:00	661.400	661.400	210.5	450.9	210.5	N	5123	384
12/16/1969 00:00	661.400	661.400	204.1	457.3	204.1	N	5123	384
01/13/1970 00:00	661.400	661.400	199.6	461.8	199.6	N	5123	384
02/17/1970 00:00	661.400	661.400	194.1	467.3	194.1	N	5123	384
03/17/1970 00:00	661.400	661.400	190.6	470.8	190.6	N	5123	384
04/14/1970 00:00	661.400	661.400	191.6	469.8	191.6	N	5123	384
05/19/1970 00:00	661.400	661.400	194.1	467.3	194.1	N	5123	384
06/16/1970 00:00	661.400	661.400	196.4	465	196.4	N	5123	384
07/14/1970 00:00	661.400	661.400	198.1	463.3	198.1	N	5123	384
08/18/1970 00:00	661.400	661.400	200.6	460.8	200.6	N	5123	384
09/15/1970 00:00	661.400	661.400	202.4	459	202.4	N	5123	384
10/13/1970 00:00	661.400	661.400	199.5	461.9	199.5	N	5123	384
11/17/1970 00:00	661.400	661.400	194.5	466.9	194.5	N	5123	384
12/29/1970 00:00	661.400	661.400	188.9	472.5	188.9	N	5123	384
01/19/1971 00:00	661.400	661.400	186.6	474.8	186.6	N	5123	384
02/16/1971 00:00	661.400	661.400	186.8	474.6	186.8	N	5123	384
03/16/1971 00:00	661.400	661.400	186	475.4	186	N	5123	384
04/20/1971 00:00	661.400	661.400	186.9	474.5	186.9	N	5123	384
05/18/1971 00:00	661.400	661.400	184.1	477.3	184.1	N	5123	384
06/01/1971 00:00	661.400	661.400	184.2	477.2	184.2	N	5123	384
07/13/1971 00:00	661.400	661.400	188.3	473.1	188.3	N	5123	384
08/17/1971 00:00	661.400	661.400	191.4	470	191.4	N	5123	384
09/14/1971 00:00	661.400	661.400	190.8	470.6	190.8	N	5123	384
10/12/1971 00:00	661.400	661.400	191.9	469.5	191.9	N	5123	384
11/16/1971 00:00	661.400	661.400	188.8	472.6	188.8	N	5123	384
12/14/1971 00:00	661.400	661.400	185.2	476.2	185.2	N	5123	384
01/11/1972 00:00	661.400	661.400	183.2	478.2	183.2	N	5123	384
02/15/1972 00:00	661.400	661.400	180.2	481.2	180.2	N	5123	384
03/14/1972 00:00	661.400	661.400	180.8	480.6	180.8	N	5123	384
04/18/1972 00:00	661.400	661.400	180.8	480.6	180.8	N	5123	384
05/16/1972 00:00	661.400	661.400	182.4	479	182.4	N	5123	384
06/20/1972 00:00	661.400	661.400	184.5	476.9	184.5	N	5123	384
07/18/1972 00:00	661.400	661.400	188.2	473.2	188.2	N	5123	384
08/15/1972 00:00	661.400	661.400	191.2	470.2	191.2	N	5123	384
09/19/1972 00:00	661.400	661.400	192.7	468.7	192.7	N	5123	384
10/03/1972 00:00	661.400	661.400	192.8	468.6	192.8	N	5123	384
10/17/1972 00:00	661.400	661.400	191.3	470.1	191.3	N	5123	384
11/14/1972 00:00	661.400	661.400	188.3	473.1	188.3	N	5123	384
12/12/1972 00:00	661.400	661.400	185.4	476	185.4	N	5123	384
01/16/1973 00:00	661.400	661.400	184.6	476.8	184.6	N	5123	384
02/13/1973 00:00	661.400	661.400	182	479.4	182	N	5123	384

03/13/1973 00:00	661.400	661.400	180.7	480.7	180.7	N	5123	384
04/17/1973 00:00	661.400	661.400	182.9	478.5	182.9	N	5123	384
05/15/1973 00:00	661.400	661.400	185.1	476.3	185.1	N	5123	384
06/19/1973 00:00	661.400	661.400	187.2	474.2	187.2	N	5123	384
07/17/1973 00:00	661.400	661.400	189.9	471.5	189.9	N	5123	384
08/14/1973 00:00	661.400	661.400	189.8	471.6	189.8	N	5123	384
09/18/1973 00:00	661.400	661.400	190.6	470.8	190.6	N	5123	384
10/16/1973 00:00	661.400	661.400	190.1	471.3	190.1	N	5123	384
11/13/1973 00:00	661.400	661.400	187.9	473.5	187.9	N	5123	384
12/18/1973 00:00	661.400	661.400	184.2	477.2	184.2	N	5123	384
01/19/1974 00:00	661.400	661.400	182.2	479.2	182.2	N	5123	384
02/19/1974 00:00	661.400	661.400	181.1	480.3	181.1	N	5123	384
02/26/1974 00:00	661.400	661.400	180.8	480.6	180.8	N	5123	384
03/12/1974 00:00	661.400	661.400	184.2	477.2	184.2	N	5123	384
04/09/1974 00:00	661.400	661.400	186.9	474.5	186.9	N	5123	384
05/21/1974 00:00	661.400	661.400	184	477.4	184	N	5123	384
05/28/1974 00:00	661.400	661.400	183.7	477.7	183.7	N	5123	384
06/11/1974 00:00	661.400	661.400	183.1	478.3	183.1	N	5123	384
07/02/1974 00:00	661.400	661.400	184.4	477	184.4	N	5123	384
07/16/1974 00:00	661.400	661.400	186.1	475.3	186.1	N	5123	384
07/30/1974 00:00	661.400	661.400	187.5	473.9	187.5	N	5123	384
08/13/1974 00:00	661.400	661.400	189.4	472	189.4	N	5123	384
08/27/1974 00:00	661.400	661.400	190.9	470.5	190.9	N	5123	384
09/17/1974 00:00	661.400	661.400	189.7	471.7	189.7	N	5123	384
09/24/1974 00:00	661.400	661.400	190.9	470.5	190.9	N	5123	384
10/15/1974 00:00	661.400	661.400	190.1	471.3	190.1	N	5123	384
11/12/1974 00:00	661.400	661.400	189.4	472	189.4	N	5123	384
11/26/1974 00:00	661.400	661.400	188.2	473.2	188.2	N	5123	384
12/17/1974 00:00	661.400	661.400	187.4	474	187.4	N	5123	384
01/07/1975 00:00	661.400	661.400	187.3	474.1	187.3	N	5123	384
02/18/1975 00:00	661.400	661.400	185.7	475.7	185.7	N	5123	384
03/25/1975 00:00	661.400	661.400	185.2	476.2	185.2	N	5123	384
04/22/1975 00:00	661.400	661.400	183.5	477.9	183.5	N	5123	384
05/27/1975 00:00	661.400	661.400	184.7	476.7	184.7	N	5123	384
06/24/1975 00:00	661.400	661.400	184	477.4	184	N	5123	384
07/29/1975 00:00	661.400	661.400	189.7	471.7	189.7	N	5123	384
09/16/1975 00:00	661.400	661.400	198	463.4	198	N	5123	384
10/14/1975 00:00	661.400	661.400	200.3	461.1	200.3	N	5123	384
11/18/1975 00:00	661.400	661.400	196.3	465.1	196.3	N	5123	384
12/16/1975 00:00	661.400	661.400	192.6	468.8	192.6	N	5123	384
01/13/1976 00:00	661.400	661.400	191.1	470.3	191.1	N	5123	384
02/17/1976 00:00	661.400	661.400	191.6	469.8	191.6	N	5123	384
03/16/1976 00:00	661.400	661.400	194.5	466.9	194.5	N	5123	384
04/13/1976 00:00	661.400	661.400	193.2	468.2	193.2	N	5123	384
05/18/1976 00:00	661.400	661.400	194.4	467	194.4	N	5123	384
06/15/1976 00:00	661.400	661.400	197.7	463.7	197.7	N	5123	384
07/13/1976 00:00	661.400	661.400	200.8	460.6	200.8	N	5123	384
08/17/1976 00:00	661.400	661.400	202.8	458.6	202.8	N	5123	384
09/14/1976 00:00	661.400	661.400	205	456.4	205	N	5123	384

10/12/1976 00:00	661.400	661.400	204.2	457.2	204.2	N	5123	384
11/16/1976 00:00	661.400	661.400	205.2	456.2	205.2	N	5123	384
12/14/1976 00:00	661.400	661.400	204.8	456.6	204.8	N	5123	384
01/18/1977 00:00	661.400	661.400	202.9	458.5	202.9	N	5123	384
02/15/1977 00:00	661.400	661.400	202	459.4	202	N	5123	384
03/15/1977 00:00	661.400	661.400	201.2	460.2	201.2	N	5123	384
04/19/1977 00:00	661.400	661.400	203.3	458.1	203.3	N	5123	384
05/17/1977 00:00	661.400	661.400	208.2	453.2	208.2	N	5123	384
06/14/1977 00:00	661.400	661.400	213	448.4	213	N	5123	384
07/19/1977 00:00	661.400	661.400	217.6	443.8	217.6	N	5123	384
08/16/1977 00:00	661.400	661.400	220.3	441.1	220.3	N	5123	384
09/13/1977 00:00	661.400	661.400	221	440.4	221	N	5123	384
10/18/1977 00:00	661.400	661.400	219.4	442	219.4	N	5123	384
11/15/1977 00:00	661.400	661.400	218.8	442.6	218.8	N	5123	384
12/06/1977 00:00	661.400	661.400	218.4	443	218.4	N	5123	384
12/13/1977 00:00	661.400	661.400	218.2	443.2	218.2	N	5123	384
12/20/1977 00:00	661.400	661.400	218.1	443.3	218.1	N	5123	384
12/27/1977 00:00	661.400	661.400	217.6	443.8	217.6	N	5123	384
01/03/1978 00:00	661.400	661.400	215.8	445.6	215.8	N	5123	384
01/10/1978 00:00	661.400	661.400	213.9	447.5	213.9	N	5123	384
01/17/1978 00:00	661.400	661.400	212.7	448.7	212.7	N	5123	384
01/24/1978 00:00	661.400	661.400	211.5	449.9	211.5	N	5123	384
01/31/1978 00:00	661.400	661.400	210.5	450.9	210.5	N	5123	384
02/07/1978 00:00	661.400	661.400	209.4	452	209.4	N	5123	384
02/14/1978 00:00	661.400	661.400	208.5	452.9	208.5	N	5123	384
02/21/1978 00:00	661.400	661.400	208	453.4	208	N	5123	384
02/28/1978 00:00	661.400	661.400	207.4	454	207.4	N	5123	384
03/07/1978 00:00	661.400	661.400	207	454.4	207	N	5123	384
03/14/1978 00:00	661.400	661.400	206.4	455	206.4	N	5123	384
03/21/1978 00:00	661.400	661.400	205.8	455.6	205.8	N	5123	384
03/28/1978 00:00	661.400	661.400	205.3	456.1	205.3	N	5123	384
04/04/1978 00:00	661.400	661.400	205	456.4	205	N	5123	384
04/11/1978 00:00	661.400	661.400	204.5	456.9	204.5	N	5123	384
04/18/1978 00:00	661.400	661.400	204.2	457.2	204.2	N	5123	384
04/25/1978 00:00	661.400	661.400	204.7	456.7	204.7	N	5123	384
05/02/1978 00:00	661.400	661.400	204	457.4	204	N	5123	384
05/09/1978 00:00	661.400	661.400	203.1	458.3	203.1	N	5123	384
05/16/1978 00:00	661.400	661.400	202.7	458.7	202.7	N	5123	384
05/23/1978 00:00	661.400	661.400	203.2	458.2	203.2	N	5123	384
05/30/1978 00:00	661.400	661.400	203.2	458.2	203.2	N	5123	384
06/06/1978 00:00	661.400	661.400	204.1	457.3	204.1	N	5123	384
06/13/1978 00:00	661.400	661.400	204.5	456.9	204.5	N	5123	384
06/20/1978 00:00	661.400	661.400	204.8	456.6	204.8	N	5123	384
06/27/1978 00:00	661.400	661.400	205.1	456.3	205.1	N	5123	384
07/04/1978 00:00	661.400	661.400	206.3	455.1	206.3	N	5123	384
07/11/1978 00:00	661.400	661.400	207.6	453.8	207.6	N	5123	384
07/18/1978 00:00	661.400	661.400	209.1	452.3	209.1	N	5123	384
07/25/1978 00:00	661.400	661.400	209.3	452.1	209.3	N	5123	384
08/01/1978 00:00	661.400	661.400	208.9	452.5	208.9	N	5123	384

08/08/1978 00:00	661.400	661.400	208.9	452.5	208.9	N	5123	384
08/15/1978 00:00	661.400	661.400	208.9	452.5	208.9	N	5123	384
08/22/1978 00:00	661.400	661.400	209.1	452.3	209.1	N	5123	384
08/29/1978 00:00	661.400	661.400	209.1	452.3	209.1	N	5123	384
09/05/1978 00:00	661.400	661.400	209	452.4	209	N	5123	384
09/12/1978 00:00	661.400	661.400	206.8	454.6	206.8	N	5123	384
09/19/1978 00:00	661.400	661.400	205.2	456.2	205.2	N	5123	384
09/26/1978 00:00	661.400	661.400	204.2	457.2	204.2	N	5123	384
10/03/1978 00:00	661.400	661.400	203.5	457.9	203.5	N	5123	384
10/10/1978 00:00	661.400	661.400	204.6	456.8	204.6	N	5123	384
10/17/1978 00:00	661.400	661.400	204.6	456.8	204.6	N	5123	384
10/24/1978 00:00	661.400	661.400	204	457.4	204	N	5123	384
10/31/1978 00:00	661.400	661.400	202.9	458.5	202.9	N	5123	384
11/28/1978 00:00	661.400	661.400	200.4	461	200.4	N	5123	384
12/19/1978 00:00	661.400	661.400	195.7	465.7	195.7	N	5123	384
01/02/1979 00:00	661.400	661.400	193.3	468.1	193.3	N	5123	384
03/27/1979 00:00	661.400	661.400	185	476.4	185	N	5123	384
04/24/1979 00:00	661.400	661.400	184.7	476.7	184.7	N	5123	384
05/01/1979 00:00	661.400	661.400	184.2	477.2	184.2	N	5123	384
05/08/1979 00:00	661.400	661.400	184.9	476.5	184.9	N	5123	384
05/15/1979 00:00	661.400	661.400	185.8	475.6	185.8	N	5123	384
05/22/1979 00:00	661.400	661.400	186.7	474.7	186.7	N	5123	384
05/29/1979 00:00	661.400	661.400	187.4	474	187.4	N	5123	384
11/13/1979 00:00	661.400	661.400	184.1	477.3	184.1	N	5123	384
11/04/1980 00:00	661.400	661.400	167.9	493.5	167.9	N	5123	384
11/11/1980 00:00	661.400	661.400	167.5	493.9	167.5	N	5123	384
11/18/1980 00:00	661.400	661.400	166	495.4	166	N	5123	384
11/25/1980 00:00	661.400	661.400	165	496.4	165	N	5123	384
01/19/1982 00:00	661.400	661.400	166.5	494.9	166.5	N	5123	384
02/18/1982 00:00	661.400	661.400	169.9	491.5	169.9	N	5123	384
03/23/1982 00:00	661.400	661.400	171.5	489.9	171.5	N	5123	384
04/13/1982 00:00	661.400	661.400	168.3	493.1	168.3	N	5123	384
05/11/1982 00:00	661.400	661.400	165.8	495.6	165.8	N	5123	384
06/15/1982 00:00	661.400	661.400	162.6	498.8	162.6	N	5123	384
07/20/1982 00:00	661.400	661.400	163.3	498.1	163.3	N	5123	384
08/31/1982 00:00	661.400	661.400	164.4	497	164.4	N	5123	384
09/21/1982 00:00	661.400	661.400	165.6	495.8	165.6	N	5123	384
10/12/1982 00:00	661.400	661.400	166.7	494.7	166.7	N	5123	384
11/16/1982 00:00	661.400	661.400	163.8	497.6	163.8	N	5123	384
12/14/1982 00:00	661.400	661.400	162.2	499.2	162.2	N	5123	384
01/11/1983 00:00	661.400	661.400	162.7	498.7	162.7	N	5123	384
02/22/1983 00:00	661.400	661.400	160.9	500.5	160.9	N	5123	384
03/15/1983 00:00	661.400	661.400	158.7	502.7	158.7	N	5123	384
04/12/1983 00:00	661.400	661.400	158.2	503.2	158.2	N	5123	384
05/17/1983 00:00	661.400	661.400	156.4	505	156.4	N	5123	384
06/14/1983 00:00	661.400	661.400	158	503.4	158	N	5123	384
07/19/1983 00:00	661.400	661.400	158.7	502.7	158.7	N	5123	384
08/16/1983 00:00	661.400	661.400	159.1	502.3	159.1	N	5123	384
09/20/1983 00:00	661.400	661.400	155.8	505.6	155.8	N	5123	384

10/25/1983 00:00	661.400	661.400	153.5	507.9	153.5	N	5123	384
11/22/1983 00:00	661.400	661.400	154	507.4	154	N	5123	384
12/13/1983 00:00	661.400	661.400	151.2	510.2	151.2	N	5123	384
01/24/1984 00:00	661.400	661.400	146.5	514.9	146.5	N	5123	384
02/21/1984 00:00	661.400	661.400	146.1	515.3	146.1	N	5123	384
03/20/1984 00:00	661.400	661.400	147.1	514.3	147.1	N	5123	384
04/24/1984 00:00	661.400	661.400	146.1	515.3	146.1	N	5123	384
05/22/1984 00:00	661.400	661.400	151.6	509.8	151.6	N	5123	384
06/19/1984 00:00	661.400	661.400	153.6	507.8	153.6	N	5123	384
07/10/1984 00:00	661.400	661.400	154.9	506.5	154.9	N	5123	384
08/14/1984 00:00	661.400	661.400	156.7	504.7	156.7	N	5123	384
09/18/1984 00:00	661.400	661.400	158.3	503.1	158.3	N	5123	384
10/16/1984 00:00	661.400	661.400	159.3	502.1	159.3	N	5123	384
11/13/1984 00:00	661.400	661.400	160	501.4	160	N	5123	384
12/11/1984 00:00	661.400	661.400	159.2	502.2	159.2	N	5123	384
01/15/1985 00:00	661.400	661.400	156.9	504.5	156.9	N	5123	384
02/12/1985 00:00	661.400	661.400	156.9	504.5	156.9	N	5123	384
03/27/1985 00:00	661.400	661.400	152.6	508.8	152.6	N	5123	384
04/16/1985 00:00	661.400	661.400	154	507.4	154	N	5123	384
05/21/1985 00:00	661.400	661.400	159.3	502.1	159.3	N	5123	384
06/25/1985 00:00	661.400	661.400	156.5	504.9	156.5	N	5123	384
07/30/1985 00:00	661.400	661.400	158.2	503.2	158.2	N	5123	384
08/27/1985 00:00	661.400	661.400	159.2	502.2	159.2	N	5123	384
09/24/1985 00:00	661.400	661.400	160.7	500.7	160.7	N	5123	384
10/29/1985 00:00	661.400	661.400	163.7	497.7	163.7	N	5123	384
11/26/1985 00:00	661.400	661.400	163.3	498.1	163.3	N	5123	384
12/10/1985 00:00	661.400	661.400	162.3	499.1	162.3	N	5123	384
01/28/1986 00:00	661.400	661.400	158	503.4	158	N	5123	384
02/25/1986 00:00	661.400	661.400	155.6	505.8	155.6	N	5123	384
03/25/1986 00:00	661.400	661.400	155.2	506.2	155.2	N	5123	384
04/29/1986 00:00	661.400	661.400	156.8	504.6	156.8	N	5123	384
05/27/1986 00:00	661.400	661.400	155.9	505.5	155.9	N	5123	384
07/01/1986 00:00	661.400	661.400	156.7	504.7	156.7	N	5123	384
09/22/1987 00:00	661.400	661.400	164.3	497.1	164.3	N	5123	384
11/24/1987 00:00	661.400	661.400	168.1	493.3	168.1	N	5123	384
12/29/1987 00:00	661.400	661.400	168.8	492.6	168.8	N	5123	384
01/26/1988 00:00	661.400	661.400	170.5	490.9	170.5	N	5123	384
02/23/1988 00:00	661.400	661.400	170.9	490.5	170.9	N	5123	384
03/29/1988 00:00	661.400	661.400	170.6	490.8	170.6	N	5123	384
04/26/1988 00:00	661.400	661.400	173.4	488	173.4	N	5123	384
05/24/1988 00:00	661.400	661.400	174.2	487.2	174.2	N	5123	384
06/21/1988 00:00	661.400	661.400	175.5	485.9	175.5	N	5123	384
07/26/1988 00:00	661.400	661.400	176.7	484.7	176.7	N	5123	384
08/23/1988 00:00	661.400	661.400	177.2	484.2	177.2	N	5123	384
09/20/1988 00:00	661.400	661.400	177.8	483.6	177.8	N	5123	384
10/25/1988 00:00	661.400	661.400	178.6	482.8	178.6	N	5123	384
11/22/1988 00:00	661.400	661.400	179	482.4	179	N	5123	384
12/20/1988 00:00	661.400	661.400	179	482.4	179	N	5123	384
01/24/1989 00:00	661.400	661.400	179	482.4	179	N	5123	384

02/21/1989 00:00	661.400	661.400	179.3	482.1	179.3	N	5123	384
03/21/1989 00:00	661.400	661.400	179.5	481.9	179.5	N	5123	384
04/18/1989 00:00	661.400	661.400	179.9	481.5	179.9	N	5123	384
05/16/1989 00:00	661.400	661.400	180.1	481.3	180.1	N	5123	384
06/20/1989 00:00	661.400	661.400	181	480.4	181	N	5123	384
07/18/1989 00:00	661.400	661.400	181.5	479.9	181.5	N	5123	384
08/22/1989 00:00	661.400	661.400	184	477.4	184	N	5123	384
09/26/1989 00:00	661.400	661.400	185.8	475.6	185.8	N	5123	384
10/31/1989 00:00	661.400	661.400	184.8	476.6	184.8	N	5123	384
11/28/1989 00:00	661.400	661.400	184.4	477	184.4	N	5123	384
12/19/1989 00:00	661.400	661.400	183.4	478	183.4	N	5123	384
01/23/1990 00:00	661.400	661.400	182.2	479.2	182.2	N	5123	384
02/27/1990 00:00	661.400	661.400	179	482.4	179	N	5123	384
03/27/1990 00:00	661.400	661.400	177.8	483.6	177.8	N	5123	384
04/17/1990 00:00	661.400	661.400	176.8	484.6	176.8	N	5123	384
05/29/1990 00:00	661.400	661.400	179.1	482.3	179.1	N	5123	384
06/26/1990 00:00	661.400	661.400	182.4	479	182.4	N	5123	384
07/31/1990 00:00	661.400	661.400	183.3	478.1	183.3	N	5123	384
08/28/1990 00:00	661.400	661.400	185.4	476	185.4	N	5123	384
09/18/1990 00:00	661.400	661.400	186.5	474.9	186.5	N	5123	384
10/02/1990 00:00	661.400	661.400	187.5	473.9	187.5	N	5123	384
11/13/1990 00:00	661.400	661.400	185.3	476.1	185.3	N	5123	384
12/04/1990 00:00	661.400	661.400	184.4	477	184.4	N	5123	384
01/08/1991 00:00	661.400	661.400	183.3	478.1	183.3	N	5123	384
02/05/1991 00:00	661.400	661.400	182.1	479.3	182.1	N	5123	384
01/14/1992 00:00	661.400	661.400	188.6	472.8	188.6	N	5123	384
02/18/1992 00:00	661.400	661.400	187.8	473.6	187.8	N	5123	384
03/10/1992 00:00	661.400	661.400	187.8	473.6	187.8	N	5123	384
04/21/1992 00:00	661.400	661.400	187.6	473.8	187.6	N	5123	384
05/05/1992 00:00	661.400	661.400	189.4	472	189.4	N	5123	384
07/21/1992 00:00	661.400	661.400	199.3	462.1	199.3	N	5123	384
08/04/1992 00:00	661.400	661.400	200.1	461.3	200.1	N	5123	384
09/01/1992 00:00	661.400	661.400	200.4	461	200.4	N	5123	384
10/06/1992 00:00	661.400	661.400	201.2	460.2	201.2	N	5123	384
11/10/1992 00:00	661.400	661.400	204.9	456.5	204.9	N	5123	384
12/01/1992 00:00	661.400	661.400	189.7	471.7	189.7	N	5123	384
01/12/1993 00:00	661.400	661.400	188.5	472.9	188.5	N	5123	384
02/04/1993 00:00	661.400	661.400	189.7	471.7	189.7	N	5123	384
03/10/1993 00:00	661.400	661.400	186	475.4	186	N	5123	384
04/13/1993 00:00	661.400	661.400	184.2	477.2	184.2	N	5123	384
05/04/1993 00:00	661.400	661.400	182.9	478.5	182.9	N	5123	384
06/01/1993 00:00	661.400	661.400	181.5	479.9	181.5	N	5123	384
07/06/1993 00:00	661.400	661.400	180.4	481	180.4	N	5123	384
08/03/1993 00:00	661.400	661.400	178.2	483.2	178.2	N	5123	384
09/14/1993 00:00	661.400	661.400	176.2	485.2	176.2	N	5123	384
10/05/1993 00:00	661.400	661.400	175	486.4	175	N	5123	384
11/02/1993 00:00	661.400	661.400	172.9	488.5	172.9	N	5123	384
12/07/1993 00:00	661.400	661.400	170.2	491.2	170.2	N	5123	384
01/04/1994 00:00	661.400	661.400	168.2	493.2	168.2	N	5123	384

02/01/1994 00:00	661.400	661.400	167.5	493.9	167.5	N	5123	384
03/01/1994 00:00	661.400	661.400	166.4	495	166.4	N	5123	384
04/05/1994 00:00	661.400	661.400	164.4	497	164.4	N	5123	384
05/03/1994 00:00	661.400	661.400	162.8	498.6	162.8	N	5123	384
06/01/1994 00:00	661.400	661.400	161.1	500.3	161.1	N	5123	384
07/13/1994 00:00	661.400	661.400	160.8	500.6	160.8	N	5123	384
08/11/1994 00:00	661.400	661.400	160.8	500.6	160.8	N	5123	384
09/13/1994 00:00	661.400	661.400	162.5	498.9	162.5	N	5123	384
10/20/1994 00:00	661.400	661.400	164.5	496.9	164.5	N	5123	384
12/06/1994 00:00	661.400	661.400	164.7	496.7	164.7	N	5123	384
01/18/1995 00:00	661.400	661.400	163.4	498	163.4	N	5123	384
03/14/1995 00:00	661.400	661.400	165	496.4	165	N	5123	384
04/25/1995 00:00	661.400	661.400	164.9	496.5	164.9	N	5123	384
05/16/1995 00:00	661.400	661.400	162.7	498.7	162.7	N	5123	384
06/06/1995 00:00	661.400	661.400	162.7	498.7	162.7	N	5123	384
07/11/1995 00:00	661.400	661.400	161.7	499.7	161.7	N	5123	384
08/08/1995 00:00	661.400	661.400	162.6	498.8	162.6	N	5123	384
09/06/1995 00:00	661.400	661.400	162.3	499.1	162.3	N	5123	384
10/03/1995 00:00	661.400	661.400	160.8	500.6	160.8	N	5123	384
11/07/1995 00:00	661.400	661.400	159.4	502	159.4	N	5123	384
12/04/1995 00:00	661.400	661.400	158.2	503.2	158.2	N	5123	384
01/17/1996 00:00	661.400	661.400	158.8	502.6	158.8	N	5123	384
02/01/1996 00:00	661.400	661.400	152.8	508.6	152.8	N	5123	384
03/05/1996 00:00	661.400	661.400	157.9	503.5	157.9	N	5123	384
04/02/1996 00:00	661.400	661.400	156.5	504.9	156.5	N	5123	384
05/07/1996 00:00	661.400	661.400	157.2	504.2	157.2	N	5123	384
06/18/1996 00:00	661.400	661.400	159.7	501.7	159.7	N	5123	384
07/02/1996 00:00	661.400	661.400	163.3	498.1	163.3	N	5123	384
08/06/1996 00:00	661.400	661.400	163	498.4	163	N	5123	384
09/18/1996 00:00	661.400	661.400	164.7	496.7	164.7	N	5123	384
10/17/1996 00:00	661.400	661.400	166.9	494.5	166.9	N	5123	384
11/26/1996 00:00	661.400	661.400	167.7	493.7	167.7	N	5123	384
12/31/1996 00:00	661.400	661.400	167.5	493.9	167.5	N	5123	384
01/28/1997 00:00	661.400	661.400	166.6	494.8	166.6	N	5123	384
02/04/1997 00:00	661.400	661.400	166.4	495	166.4	N	5123	384
03/04/1997 00:00	661.400	661.400	166	495.4	166	N	5123	384
04/01/1997 00:00	661.400	661.400	165.9	495.5	165.9	N	5123	384
05/27/1997 00:00	661.400	661.400	167.6	493.8	167.6	N	5123	384
06/11/1997 00:00	661.400	661.400	168	493.4	168	N	5123	384
07/09/1997 00:00	661.400	661.400	169.5	491.9	169.5	N	5123	384
08/20/1997 00:00	661.400	661.400	176.2	485.2	176.2	N	5123	384
09/05/1997 00:00	661.400	661.400	172	489.4	172	N	5123	384
10/22/1997 00:00	661.400	661.400	173.5	487.9	173.5	N	5123	384
11/26/1997 00:00	661.400	661.400	174.7	486.7	174.7	N	5123	384
12/10/1997 00:00	661.400	661.400	175.4	486	175.4	N	5123	384
01/14/1998 00:00	661.400	661.400	175.8	485.6	175.8	N	5123	384
02/04/1998 00:00	661.400	661.400	176.6	484.8	176.6	N	5123	384
03/04/1998 00:00	661.400	661.400	177.7	483.7	177.7	N	5123	384
04/15/1998 00:00	661.400	661.400	176.1	485.3	176.1	N	5123	384

05/21/1998 00:00	661.400	661.400	165.6	495.8	165.6		N	5123	384
06/01/1998 00:00	661.400	661.400	174.8	486.6	174.8		N	5123	384
07/01/1998 00:00	661.400	661.400	172.5	488.9	172.5		N	5123	384
08/01/1998 00:00	661.400	661.400	171.9	489.5	171.9		N	5123	384
10/01/1998 00:00	661.400	661.400	170.6	490.8	170.6		N	5123	384
11/01/1998 00:00	661.400	661.400	169.1	492.3	169.1		N	5123	384
12/01/1998 00:00	661.400	661.400	169.1	492.3	169.1		N	5123	384
01/01/1999 00:00	661.400	661.400	168.5	492.9	168.5		N	5123	384
02/01/1999 00:00	661.400	661.400	169.5	491.9	169.5		N	5123	384
03/01/1999 00:00	661.400	661.400	169.8	491.6	169.8		N	5123	384
04/01/1999 00:00	661.400	661.400	172.7	488.7	172.7		N	5123	384
05/01/1999 00:00	661.400	661.400	174.8	486.6	174.8		N	5123	384
06/01/1999 00:00	661.400	661.400	177.2	484.2	177.2		N	5123	384
07/01/1999 00:00	661.400	661.400	179.6	481.8	179.6		N	5123	384
08/01/1999 00:00	661.400	661.400	179.9	481.5	179.9		N	5123	384
09/01/1999 00:00	661.400	661.400	183.6	477.8	183.6		N	5123	384
10/01/1999 00:00	661.400	661.400	185.3	476.1	185.3		N	5123	384
11/01/1999 00:00	661.400	661.400	186.6	474.8	186.6		N	5123	384
12/01/1999 00:00	661.400	661.400	187.1	474.3	187.1		N	5123	384
01/01/2000 00:00	661.400	661.400	188.4	473	188.4		N	5123	384
02/01/2000 00:00	661.400	661.400	189.1	472.3	189.1		N	5123	384
04/01/2000 00:00	661.400	661.400	190	471.4	190		N	5123	384
05/05/2006 00:00	661.400	661.400	186.3	475.1	186.3		N	5123	384
10/27/2006 00:00	661.400	661.400	183.9	477.5	183.9		N	5123	384
01/20/2007 00:00	661.400	661.400	187.1	474.3	187.1		N	5123	384
09/18/2009 00:00	661.400	661.400	188.2	473.2	188.2		N	5123	384
10/06/2009 00:00	661.400	661.400	189.7	471.7	189.7		N	5123	384
12/03/2009 00:00	661.400	661.400	190.1	471.3	190.1		N	5123	384
12/03/2009 00:00	661.400	661.400	190.1	471.3	190.1		N	5123	384
01/05/2010 00:00	661.400	661.400	189	472.4	189		N	5123	384
06/13/2011 00:00	661.400	661.400	182.8	478.6	182.8		Y	5123	384
10/01/2011 00:00	661.400	661.400				N-9	Y	5123	384
06/13/2012 00:00	661.400	661.400	182.8	478.6	182.8		Y	5123	384
06/13/2012 00:00	661.400	661.400	182.8	478.6	182.8		N	5123	384
10/15/2012 00:00	661.400	661.400	174.7	486.7	174.7		Y	5123	384
10/15/2012 00:00	661.400	661.400	174.7	486.7	174.7		N	5123	384
03/01/2013 00:00	661.400	661.400				N-9	Y	5123	384
10/02/2013 00:00	661.400	661.400	174.3	487.1	174.3		N	5123	384
10/02/2013 00:00	661.400	661.400	174.3	487.1	174.3		Y	5123	384
12/09/2013 00:00	661.400	661.400	174.3	487.1	174.3		Y	5123	384
03/13/2014 00:00	661.400	661.400	175.23	486.17	175.23		Y	5123	384
03/13/2014 00:00	661.400	661.400	175.23	486.17	175.23		N	5123	384
10/15/2014 00:00	661.400	661.400	180.52	480.88	180.52		N	5123	384
10/15/2014 00:00	661.400	661.400	180.52	480.88	180.52		Y	5123	384
03/18/2015 11:25	661.400	661.400	183.6	477.8	183.6		N	5123	384
03/18/2015 11:25	661.400	661.400	183.6	477.8	183.6		Y	5123	384
10/08/2015 12:22	661.400	661.400	189.05	472.35	189.05		Y	5123	384
03/03/2016 00:00	661.400	661.400	191.34	470.06	191.34		Y	5123	384
10/13/2016 09:40	661.400	661.400	191.9	469.5	191.9		Y	5123	384

04/10/2017 09:20	661.400	661.400	198.87	462.53	198.87	Y	5123	384
10/03/2017 00:00	661.400	661.400	255.3	406.1	255.3	Y	5171	384
03/15/2018 00:00	661.400	661.400	193.58	467.82	193.58	Y	5123	384
10/03/2018 00:00	661.400	661.400	194.21	467.19	194.21	Y	5123	384
04/09/2019 00:00	661.400	661.400	193.98	467.42	193.98	Y	5123	384
11/07/2019 00:00	661.400	661.400	191.7	469.7	191.7	Y	5123	384

All elevation and depth measurements are in feet. The vertical datum for recent measurements is NAVD88.

Perform a New Well Search

EXCAVATION LOGS FROM PREVIOUS EXPLORATION BY GEOTECHNOLOGIES, INC. FILE NO. 20195

(6 PAGES)

EXCAVATION LOG NUMBER 1

Krismar Construction Company, Inc. **Date: 09/01/11** **Elevation: 688.0'**

File No. 20195 **Method: 8-inch diameter Hollow Stem Auger**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt
				0		4-inch Asphalt, No Base
1	12	4.5	105.3	1		FILL: Silty Sand to Sand, dark to yellowish brown, slightly moist, medium dense, fine grained
				2	SP	Sand, yellowish brown, slightly moist, medium dense, fine grained
3	9	5.2	94.3	3		
				4	SM/SP	Silty Sand to Sand, dark to yellowish brown, slightly moist, medium dense, fine grained
5	9	6.8	104.4	5		
				6		
7	22	2.8	115.7	7	SP	Sand, yellowish brown, slightly moist, dense, fine grained
				8		
				9		
10	19	2.0	102.6	10		Sand, yellowish brown to brown, slightly moist, medium dense to dense, fine to medium grained
				11		
				12		
				13		
				14		
15	33	2.1	108.5	15		
				16		
				17		
				18		
				19		
20	57	2.1	112.8	20	SP/SW	Sand, yellowish brown, slightly moist, very dense, fine to coarse grained, with gravel
				21		Total depth: 20 feet; No Water; Fill to 2 feet
				22		
				23		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual
				24		
				25		Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop Modified California Sampler used unless otherwise noted

EXCAVATION LOG NUMBER 2

Krismar Construction Company, Inc. **Date: 09/01/11** **Elevation: 684.75'**

File No. 20195 **Method: 8-inch diameter Hollow Stem Auger**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt
				0		5-inch Asphalt, No Base
				1		FILL: Silty Sand to Sand, yellowish brown, slightly moist, medium dense, fine grained
2.5	27	1.8	108.6	2	SP	Sand, yellow to olive brown, slightly moist, medium dense to dense, fine grained
				3		
				4		
5	12	2.9	SPT	5		
				6		
				7		
7.5	28	2.3	116.2	8		
				9		
10	20	2.7	SPT	10		
				11		
				12		
12.5	28	4.0	118.2	13	SM/SP	Silty Sand to Sand, dark to yellowish brown, slightly moist, dense, fine grained
				14		
15	24	2.8	SPT	15	SP	Sand, yellow to grayish brown, slightly moist, dense, fine grained, occasional cobble
				16		
				17		
17.5	77 50/5"	1.8	129.9	18	SP/SW	Sand to Gravelly Sand, yellowish brown, slightly moist, very dense, fine grained
				19		
20	34	2.8	SPT	20	SP	Sand, yellow to grayish brown, slightly moist, dense, fine grained
				21		
				22		
22.5	49	2.9	114.2	23		Sand, yellow to grayish brown, slightly moist, dense, occasional gravel
				24		
25	22	3.2	SPT	25		

EXCAVATION LOG NUMBER 2

Krismar Construction Company, Inc.

File No. 20195

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				26		
				27		
27.5	38	11.7	112.0	28		
				29		
30	28	3.1	SPT	30		
				31		
				32		
32.5	47 50/3"	2.5	122.9	33		
				34		
35	29	2.6	SPT	35		
				36		
				37		
37.5	78	1.9	113.3	38		
				39		
40	67	2.1	SPT	40		
				41	SP/SW	Sand, yellow to grayish brown, slightly moist, very dense, fine to coarse grained, occasional gravel
				42		
42.5	66 50/3"	1.9	113.9	43		
				44		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual
45	52	1.7	SPT	45		Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop Modified California Sampler used unless otherwise noted
				46		
				47		
47.5	24 50/6"	2.6	114.4	48	SP	Sand, yellow to grayish brown, slightly moist, very dense, fine grained
				49		
50	59	3.1	SPT	50		Total depth: 50 feet; No Water; Fill to 2½ feet

EXCAVATION LOG NUMBER 3

Krismar Construction Company, Inc. **Date: 09/01/11** **Elevation: 683.50'**

File No. 20195 **Method: 8-inch diameter Hollow Stem Auger**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt
				0		4-inch Asphalt, No Base
1	33	3.4	106.8	1		FILL: Silty Sand, dark to yellowish brown, slightly moist, dense, fine grained
				2	SP	Sand, yellow to grayish brown, slightly moist, dense, fine grained
3	24	3.5	107.5	3		
				4		
5	17	4.9	103.2	5		
				6		
7	33	3.5	111.0	7		Sand, yellowish brown, slightly moist, dense, fine to medium grained
				8		
				9		
10	36	5.7	108.0	10		
				11		
				12		
				13		
				14		
15	28	7.1	109.8	15	SM/SP	Silty Sand to Sand, dark to yellowish brown, slightly moist, dense, fine grained
				16		
				17		
				18		
				19		
20	84	1.8	127.1	20	SP	Sand, yellowish brown, slightly moist, very dense, fine grained
				21		Total depth: 20 feet No Water Fill to 2 feet
				22		
				23		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual
				24		
				25		Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop Modified California Sampler used unless otherwise noted

EXCAVATION LOG NUMBER 4

Krismar Construction Company, Inc. **Date: 09/15/11** **Elevation: 685.75'**

File No. 20195 **Method: 8-inch diameter Hollow Stem Auger**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt
				0		3-inch Asphalt, No Base
				1		FILL: Silty Sand, dark brown, slightly moist, medium dense, fine grained
2	11	2.2	100.2	2	SP	Sand, grayish brown, slightly moist, medium dense, fine grained
				3		
4	15	10.8	106.0	4	SM/SP	Silty Sand to Sand, dark to grayish brown, moist, medium dense, fine grained
				5		
				6		
7	21	1.8	101.2	7	SP	Sand, gray to light gray, slightly moist, dense, fine grained
				8		
				9		
10	28	1.3	111.2	10		
				11		
				12		
				13		
				14		
15	32	1.9	112.6	15		Sand, light brown, slightly moist, dense, fine grained
				16		
				17		
				18		
				19		
20	44	2.9	104.3	20		Total depth: 20 feet No Water Fill to 2 feet
				21		
				22		
				23		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual
				24		
				25		Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop Modified California Sampler used unless otherwise noted

EXCAVATION LOG NUMBER 5

Krismar Construction Company, Inc. **Date: 09/15/11** **Elevation: 685.25'**

File No. 20195 **Method: 8-inch diameter Hollow Stem Auger**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt
				0		3½-inch Asphalt, No Base
1	15	11.4	103.3	1		FILL: Silty Sand, dark brown, moist, medium dense, fine grained
				2	SP	Sand, dark brown, slightly moist, medium dense, fine grained
3	17	2.0	105.8	3		
				4		
5	25	3.6	108.3	5	SM/SP	Silty Sand to Sand, dark to grayish brown, slightly moist, dense, fine grained
				6		
7	25	2.2	108.9	7	SP	Sand, light gray, slightly moist, dense, fine to medium grained
				8		
				9		
10	32	5.0	111.4	10		
				11		
				12		
				13		
				14		
15	57	10.6	113.5	15	SM/SP	Silty Sand to Sand, dark brown to grayish brown, moist, very dense, fine grained
				16		
				17		
				18		
				19	SP	Sand, light gray to yellowish brown, slightly moist, very dense, fine grained, occasional cobbles
20	78	1.4	128.8	20		Total depth: 20 feet No Water Fill to 2 feet
				21		
				22		
				23		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual
				24		
				25		Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop Modified California Sampler used unless otherwise noted

EXCAVATION LOGS FROM PREVIOUS EXPLORATION BY GEOTECHNOLOGIES, INC. FILE NO. 18954

(10 PAGES)

BORING LOG NUMBER 1

Drilling Date: 07/07/05 **Elevation: 670.10'*

Project: File No. 18954 **Krismar Construction**

km *Based on Topographic Survey provided by Client

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Bare Ground
				0 --		FILL: Silty Sand, grayish-brown, moist, medium dense, fine grained, minor gravel
				1 --		
2	48	11.3	113.7	2 --		
				3 --	SM	Silty Sand, grayish-brown, moist, very dense, fine grained, some gravel
				4 --		
5	48	6.0	106.9	5 --		
				6 --	SP	Sand, gray, slightly moist, dense, fine grained, some gravel
7	67	10.0	105.8	7 --		
				8 --	SM	Silty Sand, olive-brown, moist, dense, fine grained, some gravel
				9 --		
10	30	8.3	106.9	10 --		
				11 --	SM/SP	Silty Sand to Sand, grayish-brown, moist, dense, fine grained, some gravel
				12 --		
				13 --		
				14 --		
15	36	21.8	97.8	15 --		
				16 --	SP	Sand, grayish-brown, moist, dense, fine grained, some gravel
				17 --	SM	Silty Sand, olive-brown, moist, dense, fine grained, some gravel
				18 --		
				19 --		
20	69	2.6	114.9	20 --		
				21 --	SW	Sand with Gravel, grayish-brown, slightly moist, very dense, fine to coarse grained
				22 --		
				23 --		
				24 --		
25	63	6.0	109.2	25 --		
				26 --	SP	Sand, grayish-brown, slightly moist, dense, fine grained
				27 --	SM	Silty Sand, grayish-brown, slightly moist, dense, fine grained
				28 --		
				29 --		
30	50/6"	3.2	SPT	30 --	SP	Sand, gray, slightly moist, very dense, fine to medium grained, some gravel

BORING LOG NUMBER 1

Project: File No. 18954 **Krismar Construction**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				31 --		
				32 --		
				33 --		
				34 --		
35	75/7"	3.2	128.0	35 --	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained
				36 --		
				37 --		
				38 --		
				39 --		
40	50/6"	3.4	SPT	40 --	SP	Sand, gray, slightly moist, very dense, fine grained, minor gravel
				41 --		
				42 --		
				43 --		
				44 --		
45	22 50/5"	7.8	109.1	45 --	SW	Sand with Gravel, grayish-brown, slightly moist, very dense, fine to coarse grained
				46 --		
				47 --		
				48 --		
				49 --		
50	50/6"	4.2	SPT	50 --		
				51 --		
				52 --		
				53 --		
				54 --		
55	24 50/5"	2.9	114.6	55 --	SP	Sand, gray, slightly moist, very dense, fine grained, some gravel
				56 --		
				57 --		
				58 --		
				59 --		
60	68	2.4	SPT	60 --	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained

BORING LOG NUMBER 1

Project: File No. 18954 **Krismar Construction**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				61 --		
				62 --		
				63 --		
				64 --		
65	75/7"	3.3	113.8	65 --		
				66 --		
				67 --		
				68 --		
				69 --		
70	50/6"	2.2	SPT	70 --		abundant gravel
				71 --		
				72 --		
				73 --		
				74 --		
75	69	6.0	113.9	75 --	SP	Sand, grayish-brown, slightly moist, very dense, fine grained, minor gravel
				76 --		
				77 --		
				78 --		
				79 --		some cobbles
80	50/6"	4.3	SPT	80 --		Total depth: 80 feet No Water Fill to 2 feet
				81 --		
				82 --		
				83 --		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual
				84 --		
				85 --		For Borings 1 and 2: Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop
				86 --		Modified California Sampler used unless otherwise noted
				87 --		SPT=Standard Penetration Test
				88 --		
				89 --		
				90 --		

BORING LOG NUMBER 2

Drilling Date: 07/07/05 **Elevation: 672.0'****

Project: File No. 18954 **Krismar Construction**

km *Based on Topographic Survey provided by Client

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Bare Ground
				0 --		FILL: Silty Sand, gray, slightly moist, medium dense, fine grained
				1 --		
2	72	1.6	117.2	2 --		
				3 --	SP	Sand, gray, slightly moist, very dense, fine grained, minor gravel
				4 --		
5	21 50/5"	2.6	114.9	5 --		more gravel
				6 --		
7	26 50/4"	2.9	113.1	7 --		
				8 --		
				9 --		
10	75/6"	1.7	115.7	10 --	SM	Silty Sand, gray, slightly moist, very dense, fine grained, gravel
				11 --		
				12 --		
				13 --		
				14 --		
15	68	33.6	88.2	15 --	ML	Sandy Silt, olive-brown, very moist, firm
				16 --		
				17 --		
				18 --		
				19 --		
20	75/6"	4.3	116.3	20 --	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained
				21 --		
				22 --		
				23 --		
				24 --		
25	22 50/3"	3.8	111.0	25 --		fine to medium grained
				26 --		
				27 --		
				28 --		
				29 --		
30	75/7"	2.1	117.9	30 --	SP	Sand, gray, slightly moist, very dense, fine grained, minor gravel

BORING LOG NUMBER 2

Project: File No. 18954 **Krismar Construction**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				31 --		
				32 --		
				33 --		
				34 --		
35	28 50/4"	5.3	117.1	35 --	SM	Silty Sand, grayish-brown, slightly moist, very dense, fine grained, minor gravel
				36 --		
				37 --		
				38 --		
				39 --		
40	30 50/2"	3.8	111.2	40 --	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained
				41 --		
				42 --		
				43 --		
				44 --		
45	22 50/5"	2.3	113.8	45 --		
				46 --		
				47 --		
				48 --		
				49 --		
50	68	8.4	107.1	50 --	SM	Silty Sand, olive brown, moist, very dense, fine grained
				51 --		
				52 --		
				53 --		
				54 --		
55	55	12.5	107.7	55 --	ML	Sandy Silt, olive-brown, moist, hard
				56 --		
				57 --		
				58 --		
				59 --		
60	19 50/5"	3.1	114.4	60 --	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained

BORING LOG NUMBER 2

Project: File No. 18954 **Krismar Construction**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				61 --		
				62 --		
				63 --		
				64 --		
65	75/6"	3.9	112.7	65 --		
				66 --		
				67 --		
				68 --		
				69 --		
70	75/6"	4.6	111.2	70 --		some cobbles
				71 --		
				72 --		
				73 --		
				74 --		
75	75/7"	4.5	113.3	75 --	SM	Silty Sand, olive-brown, slightly moist, very dense, fine grained, minor gravel
				76 --		
				77 --		
				78 --		
				79 --		
80	75/7"	6.8	106.6	80 --	SP	Sand, olive-brown, moist, very dense, fine grained, minor gravel
				81 --		
				82 --		Total depth: 80 feet No Water Fill to 2 feet
				83 --		
				84 --		
				85 --		
				86 --		
				87 --		
				88 --		
				89 --		
				90 --		

BORING LOG NUMBER 3

Drilling Date: 07/18/05 **Elevation: 668.0'***

Project: File No. 18954 **Krismar Construction**

km *Based on Topographic Survey provided by Client

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Bare Ground
				0 --		FILL: Silty Sand to Sand, grayish-brown, moist, medium dense, fine grained, minor gravel
				1 --		
				2 --		
				3 --		
				4 --		
5	4/12"	2.8	119.2	5 --		
				6 --	SW	Sand with Gravel, grayish-brown, slightly moist, dense, fine to coarse grained
				7 --		
				8 --		
				9 --		
10	7/12"	6.9	103.3	10 --		
				11 --	SP	Sand, gray, slightly moist, very dense, fine grained, some gravel
				12 --		
				13 --		
				14 --		
15	8/12"	3.5	111.6	15 --		
				16 --	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained, some cobbles and gravel, slight caving
				17 --		
				18 --		
				19 --		
20	6/12"	4.5	120.0	20 --		
				21 --		grayish-brown
				22 --		
				23 --		
				24 --		
25	4/12"	4.1	106.2	25 --		
				26 --	SP	Sand, gray, slightly moist, dense, fine grained, some gravel
				27 --		
				28 --		
				29 --		
30	10/12"	6.5	109.1	30 --	SM	Silty Sand, olive-brown, moist, very dense, fine grained, some cobbles and gravel

BORING LOG NUMBER 3

Project: File No. 18954 **Krismar Construction**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				31 --		
				32 --		
				33 --		
				34 --		
35	11/12"	3.0	107.0	35 --	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained
				36 --		
				37 --		
				38 --		
				39 --		
40	12/12"	2.5	110.4	40 --		
				41 --		
				42 --		
				43 --		
				44 --		
45	12/12"	2.0	121.9	45 --		
				46 --		
				47 --		
				48 --		
				49 --		
50	17/12"	2.3	113.2	50 --		Total depth: 50 feet No Water Fill to 5 feet Caving from 30 feet to 50 feet below grade For Borings 3 and 4: Used 24-inch diameter Bucket Auger Sampled with a 2½ diameter California Modified Split-Spoon Sampler Kelley Weights: 0 - 24' = 1590# 25 - 50' = 765#
				51 --		
				52 --		
				53 --		
				54 --		
				55 --		
				56 --		
				57 --		
				58 --		
				59 --		
				60 --		

BORING LOG NUMBER 4

Drilling Date: 07/18/05 **Elevation: 672.0'***

Project: File No. 18954 **Krismar Construction**

km *Based on Topographic Survey provided by Client

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Bare Ground
				0 --		FILL: Silty Sand, gray, brown, moist, medium dense, fine grained, minor gravel, slight caving
				1 --		
				2 --		
				3 --		
				4 --		
5	5/12"	3.2	114.2	5 --	SW	Sand with Gravel, gray, slightly moist, dense, fine to coarse grained
				6 --		
				7 --		
				8 --		abundant gravel
				9 --		
10	6/12"	9.1	116.8	10 --	SM	Silty Sand, olive-brown, moist, very dense, minor gravel
				11 --		
				12 --		
				13 --		
				14 --		
15	7/12"	2.6	113.5	15 --	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained, slight caving
				16 --		
				17 --		
				18 --		
				19 --		
20	8/12"	3.3	119.9	20 --		
				21 --		
				22 --		
				23 --		
				24 --		
25	8/12"	3.4	116.7	25 --		more gravel, slight caving
				26 --		
				27 --		
				28 --		
				29 --		
30	19/12"	3.0	116.2	30 --		more gravel

BORING LOG NUMBER 4

Project: File No. 18954 **Krismar Construction**

km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				31		
				32		
				33		
				34		
35	19/12"	3.2	117.4	35		slight caving
				36		
				37		
				38		
				39		
40	27/12"	3.8	122.9	40		some cobbles
				41		
				42		
				43		
				44		
45	33/12"	4.5	122.5	45		slight caving
				46		
				47		
				48		
				49		
50	35/12"	4.5	122.3	50		Total depth: 50 feet No Water Fill to 5 feet Slight Caving 15 to 50 feet
				51		
				52		
				53		
				54		
				55		
				56		
				57		
				58		
				59		
				60		

EXCAVATION LOGS FROM PREVIOUS EXPLORATION BY GEOTECHNOLOGIES, INC. FILE NO. 18771

(6 PAGES)

BORING LOG NUMBER 1

Drilling Date: 11/09/04

Project: File No. 18771 **Krismar Construction**

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Barren Ground
				0 --		FILL: Sand to Silty Sand, medium brown, moist, dense, fine grained
				1 --		
				2 --		
				3 --		
				4 --		
5	19 50/4"	3.9	116.0	5 --	SW	Sand with gravel, medium brown, moist, very dense, fine to coarse grained
				6 --		
				7 --		
				8 --		
				9 --		
10	21 50/4"	1.4	SPT	10 --	SP/SM	Sand to Silty Sand, medium brown, moist, very dense, fine to medium grained
				11 --		
				12 --		
				13 --		
				14 --		
15	44	3.9	99.8	15 --	SP	Sand, medium brown, moist, dense, fine grained
				16 --		
				17 --		
				18 --		
				19 --		
20	28	7.1	SPT	20 --		
				21 --		
				22 --		
				23 --		
				24 --		
25	45	5.8	108.8	25 --		
				26 --		
				27 --		
				28 --		
				29 --		
30	66	2.6	SPT	30 --		

BORING LOG NUMBER 1 (continued)

Project: File No. 18771 **Krismar Construction**

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				31		
				32		
				33		
				34		
35	68	3.9	114.4	35		cobbles
				36		
				37		
				38		
				39		
40	50/6"	2.8	SPT	40		no cobbles
				41		
				42		
				43		
				44		
45	26 50/3"	3.1	113.6	45		
				46		
				47		
				48		
				49		
50	59	3.5	SPT	50		
				51		
				52		
				53		
				54		
55	18 50/3"	3.1	111.6	55		
				56		
				57		
				58		
				59		
60	72	3.0	SPT	60		

BORING LOG NUMBER 1 (continued)

Project: File No. 18771 **Krismar Construction**

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				61		
				62		
				63		
				64		
65	23 50/4"	2.4	117.7	65		
				66		
				67		
				68		
				69		
70	73	9.3	SPT	70		
				71		
				72		
				73		
				74		
75	19 50/4"	3.9	103.8	75		fine grained
				76		
				77		
				78		
				79		
80	50/4"	2.6	SPT	80		fine to coarse grained
				81		Total depth: 80 feet No Water Fill to 5 feet
				82		
				83		
				84		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual
				85		Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop
				86		Modified California Sampler used unless otherwise noted
				87		SPT=Standard Penetration Test
				88		
				89		
				90		

BORING LOG NUMBER 2

Drilling Date: 11/09/04

Project: File No. 18771 **Krismar Construction**

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Barren Ground
				0 --		FILL: Sand with gravel, light brown, moist, dense, fine to coarse grained
				1 --		
				2 --		
				3 --		
				4 --		
5	34	16.2	107.8	5 --	SM	Silty Sand, brown, moist, dense, fine grained
				6 --		
				7 --		
				8 --		
				9 --		
10	30	8.0	Disturbed	10 --		cobble
				11 --		
				12 --		
				13 --		
				14 --		
15	47	4.5	110.4	15 --	SP	Sand, brown, moist, dense, fine to medium grained
				16 --		
				17 --		
				18 --		
				19 --		
20	75/3"	No Recovery		20 --		
				21 --		
				22 --		
				23 --		
				24 --		
25	50/2"	No Recovery		25 --		
				26 --		
				27 --		
				28 --		
				29 --		
30	71	3.2	108.6	30 --		fine to medium grained

BORING LOG NUMBER 2 (continued)

Project: File No. 18771 **Krismar Construction**

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				31		
				32		
				33		
				34		
35	17 50/4"	2.7	122.1	35		cobbles
				36		
				37		
				38		
				39		
40	75	3.0	113.2	40		fine to coarse grained
				41		
				42		
				43		
				44		
45	22 50/3"	6.2	112.4	45		fine to medium grained
				46		
				47		
				48		
				49		
50	89	2.9	104.4	50		light brown, fine grained
				51		
				52		
				53		
				54		
55	22 50/4"	2.7	113.3	55		fine to medium grained, cobbles
				56		
				57		
				58		
				59		
60	21 50/3"	2.2	115.4	60		

BORING LOG NUMBER 2 (continued)

Project: File No. 18771 **Krismar Construction**

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				61		
				62		
				63		
				64		
65	22 50/4"	3.9	101.2	65		fine grained, no cobbles
				66		
				67		
				68		
				69		
70	20 50/4"	5.7	102.3	70		
				71		
				72		
				73		
				74		
75	76	3.2	102.8	75		fine to coarse grained
				76		
				77		
				78		
				79		
80	28 50/4"	2.9	115.8	80		fine to coarse grained
				81		Total depth: 80 feet No Water Fill to 5 feet
				82		
				83		
				84		
				85		
				86		
				87		
				88		
				89		
				90		

ATTACHMENT L

LOS ANGELES RIVER WATERSHED MAP

COUNTY OF LOS ANGELES

LOS ANGELES RIVER WATERSHED

Los Angeles River Watershed

PACIFIC OCEAN

ORANGE

MILES
0 1 2 4

LEGEND

- LOS ANGELES RIVER WATERSHED
- UNINCORPORATED AREA
- DAM / LAKE / RESERVOIR
- MAJOR RIVER
- MAJOR CHANNEL

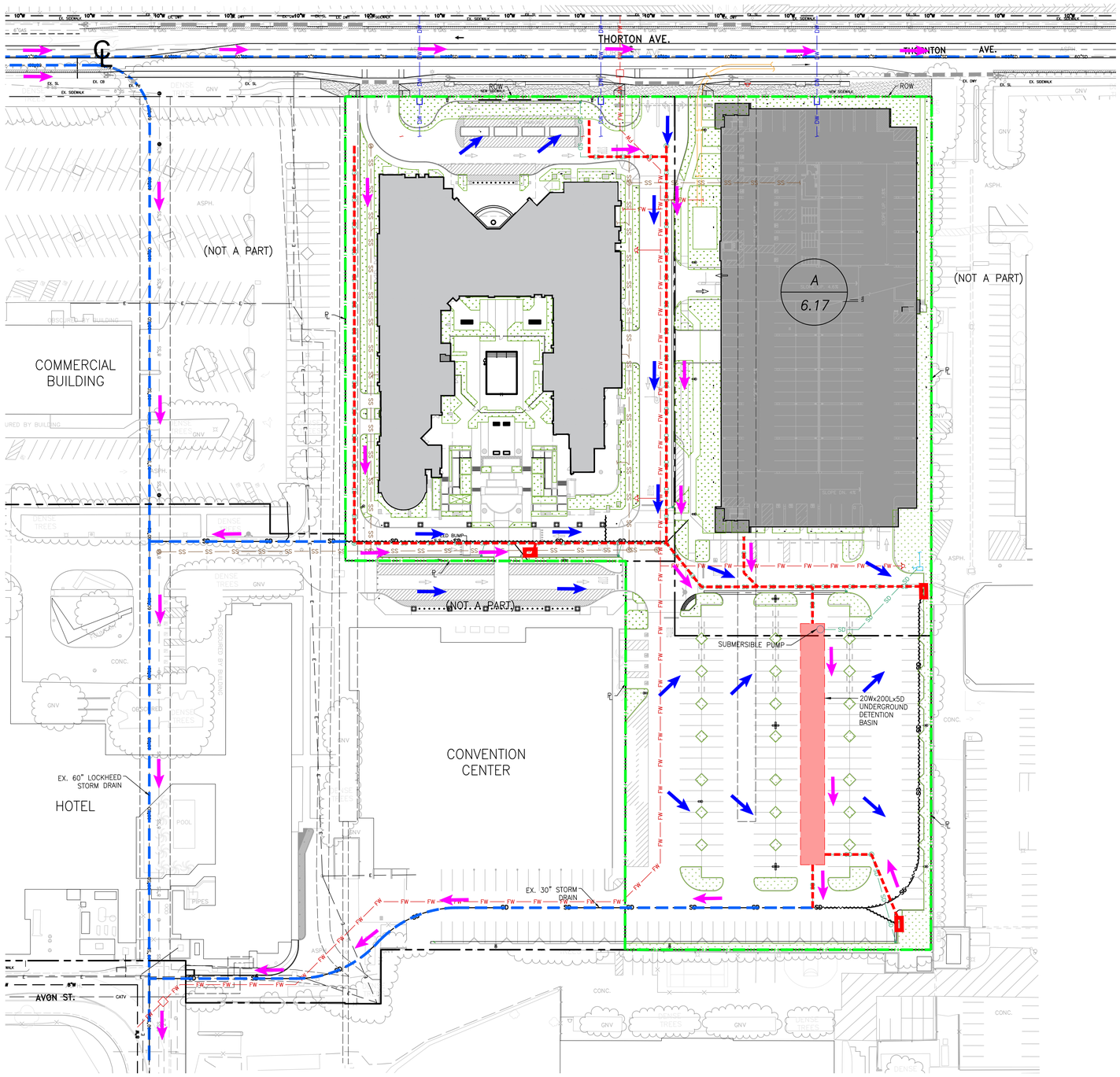
Data contained in this map is produced in whole or part from the Los Angeles County Department of Public Works' digital database.

REF: \\pwgis02\mpmgis$\MPMGIS\projects\mpm\gismaps\wk_2627\lariver_wtrsheds.mxd DATE: 08/22/07

Mapping & Property Management Division, Mapping & GIS Services Section

ATTACHMENT M

PROPOSED HYDROLOGY EXHIBIT



LEGEND

- EXISTING STORM DRAIN (TO REMAIN)
- PROPOSED BMP STORM DRAIN
- HYDRAULIC BOUNDARY
- DIRECTION OF SURFACE FLOW
- DIRECTION OF PROPOSED STORM DRAIN FLOW
- DIRECTION OF EXISTING STORM DRAIN FLOW
- C-1 / 3.03 AC — AREA DESIGNATION / ACREAGE
- EXISTING CATCH BASIN TO REMAIN
- PROPOSED LANDSCAPING/PLANTER AREA

NOTES:

1. ONSITE STORM DRAIN INFRASTRUCTURE TO BE FIELD VERIFIED.
2. EXISTING CATCH BASINS WILL HAVE PROPOSED PIPING ROUTED TO PROPOSED BMP LOCATIONS.

PROPOSED CONDITION STORM EVENTS					
DRAINAGE AREA	AREA (ACRES)	PLANTER AREA (ACRES)	% IMPERVIOUSNESS	Q10(cfs)	Q25(cfs)
A-1	6.17	0.94	85	9.5	12.9

N

40' 0' 20' 40'

SCALE: 1" = 40'

PROPOSED CONDITION HYDROLOGY
DUAL BRAND HOTEL
BURBANK, CA
9/9/2024

FUSCOE ENGINEERING
600 Wilshire Blvd., Suite 1470, Los Angeles, California 90017
tel 213.988.8802 ◦ fax 213.988.8803 ◦ www.fuscoe.com

ATTACHMENT N

ALTA BY TAIT

LEGAL DESCRIPTION

PER COMMONWEALTH LAND TITLE INSURANCE COMPANY, POLICY/ FILE NO. 08011267, DATED SEPTEMBER 19, 2014:

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL A:
PARCEL 1 OF PARCEL MAP NO. 24868, IN THE CITY OF BURBANK, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS SHOWN ON MAP FILED IN BOOK 279 PAGES 84 TO 86 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL B:
NON-EXCLUSIVE EASEMENTS OVER PARCEL 2 OF THE ABOVE REFERENCED PARCEL MAP SET FORTH IN RECIPROCAL PARKING AND MAINTENANCE AGREEMENT ("RECIPROCAL AGREEMENT") RECORDED DECEMBER 24, 1997 AS INSTRUMENT NO. 97-2019758 FOR PEDESTRIAN, VEHICULAR INGRESS AND EGRESS AND PARKING ON THE TERMS AND CONDITIONS SET FORTH THEREIN.

EASEMENTS

⬡ ITEMS SHOWN HEREON, NUMBERED ACCORDING TO THE ABOVE REFERENCED PRELIMINARY TITLE REPORT.

A–B PROPERTY TAXES

C–D SUPPLEMENTAL TAXES

E THE LIEN OF SUPPLEMENTAL TAXES, IF ANY

1 WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.

⬡2 AN EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA TELEPHONE COMPANY FOR PUBLIC UTILITIES PURPOSES RECORDED IN BOOK 18085, PAGE 11, O.R.

3 AN EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA TELEPHONE COMPANY FOR AERIAL AND UNDERGROUND TELEPHONE, TELEGRAPH AND COMMUNICATION STRUCTURES PURPOSES RECORDED MARCH 28, 1944 AS INSTRUMENT NO. 1608, IN BOOK 20800, PAGE 152, O.R. (NOT PLOTTABLE. THE EXACT LOCATION COULD NOT BE DETERMINED FROM RECORD)

4 THE FACT THAT SAID LAND IS INCLUDED WITHIN A PROJECT AREA OF THE REDEVELOPMENT AGENCY, CITY OF BURBANK RECORDED DECEMBER 29, 1970, AS INSTRUMENT NO. 3044 AND RECORDED DECEMBER 29, 1970, AS INSTRUMENT NO. 3045, O.R. (BLANKET OVER PTR PARCELS A AND B)

⬡5 AN EASEMENT FOR PUBLIC UTILITY, STORM DRAIN AND SEWER PURPOSES RECORDED NOVEMBER 7, 1980, AS INSTRUMENT NO. 80-1124311, O.R. AND RECORDED NOVEMBER 10, 1980, AS INSTRUMENT NO. 80-1130139, O.R.

⬡6 AN EASEMENT IN FAVOR OF THE CITY OF BURBANK FOR UTILITY PURPOSES RECORDED NOVEMBER 8, 1990, AS INSTRUMENT NO. 90-1884686, O.R. AND RECORDED NOVEMBER 10, 1980, AS INSTRUMENT NO. 80-1130139, O.R.

⬡7 EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS SET FORTH IN A RECIPROCAL PARKING AND MAINTENANCE AGREEMENT RECORDED DECEMBER 24, 1997, AS INSTRUMENT NO. 97-2019758, O.R. FOR PEDESTRIAN AND VEHICULAR INGRESS TO AND EGRESS FROM THE "OFFICE PARCEL," AS DEFINED THEREIN TO AND FROM ALL STREETS AND ROADS ABUTTING THE "HOTEL PARCEL", INCLUDING BUT LIMITED TO, INGRESS AND EGRESS FOR DELIVERY AND SERVICE TRUCKS AND VEHICLES OVER "DRIVEWAYS" AS DEFINED THEREIN FOR PARKING AND VEHICULAR AND PEDESTRIAN USE INCIDENTAL THERETO IN "PARKING AREAS" OF THE "HOTEL PARCEL" AS SAID TERMS ARE DEFINED THEREIN, AS RESERVED IN DEED RECORDED FEBRUARY 2, 1998, AS INSTRUMENT NO. 98-165685, O.R. (BLANKET OVER PARCELS 1 AND 2 OF PARCEL MAP NO. 24868, P.M.B. 279 PAGES 84 TO 86)

⬡8 AN EASEMENT FOR PUBLIC UTILITIES PURPOSES, AS SHOWN IN PARCEL MAP NO. 24868 FILED IN BOOK 279, PAGES 84 TO 86, INCLUSIVE OF PARCEL MAPS.

9 DISPOSITION AND DEVELOPMENT AGREEMENT BETWEEN THE REDEVELOPMENT AGENCY OF THE CITY OF BURBANK AND THE CENTER AT BURBANK AIRPORT, A GENERAL PARTNERSHIP RECORDED NOVEMBER 12, 1980, AS INSTRUMENT NO. 80-1131928, O.R. AS AMENDED BY SUPPLEMENTAL AGREEMENT RECORDED NOVEMBER 12, 1980, AS INSTRUMENT NO. 80-1131932 OF O.R., SECOND IMPLEMENTATION AGREEMENT RECORDED NOVEMBER 12, 1980, AS INSTRUMENT NO. 80-1131930, O.R., THIRD IMPLEMENTATION AGREEMENT RECORDED NOVEMBER 12, 1980 AS INSTRUMENT NO. 80-1131931, OF O.R. AND MEMORANDUM OF UNDERSTANDING RECORDED NOVEMBER 12, 1980, AS INSTRUMENT NO. 80-1131929, O.R. A CERTIFICATE OF COMPLETION OF CONSTRUCTION EXECUTED BY THE REDEVELOPMENT AGENCY OF THE CITY OF BURBANK, RECORDED DECEMBER 15, 1983, AS INSTRUMENT NO. 83-1487284, O.R. A "CERTIFICATE OF COMPLETION IS MADE BY THE REDEVELOPMENT AGENCY OF THE CITY OF BURBANK, A PUBLIC BODY, CORPORATE AND POLITIC IN FAVOR OF STRATEGIC HOTEL CAPITAL, INCORPORATED, A DELAWARE CORPORATION, DATED AS OF JANUARY 30, 2004, AND RECORDED FEBRUARY 3, 2004, AS INSTRUMENT NO. 04-0237887 AND THE TERMS AND CONDITIONS CONTAINED THEREIN."

10 ANY RIGHTS, INTEREST, OR CLAIMS WHICH MAY EXIST OR ARISE BY REASON OF THE FOLLOWING FACTS SHOWN ON A SURVEY PLAT ENTITLED ALTA/ACSM LAND TITLE SURVEY DATED MAY 27, 2007, LAST REVISED SEPTEMBER 14, 2012, PREPARED BY TAIT & ASSOCIATES WITH JOB NO. SP6608:

A. THE CONVENTION CENTER BUILDING EXTENDS ONTO THE EASEMENT RECORDED IN BOOK 18055 PAGE 11, O.R.

B. AN 8-STORY BUILDING EXTENDS ONTO THE EASEMENT RECORDED NOVEMBER 8, 1990 AS INSTRUMENT NO. 90-1884686, O.R.

C. A MEANDERING SIDEWALK ALONG THE NORTHERLY LINE EXTENDS ON THE LAND IN TWO PLACES.

11 AN UNRECORDED AGREEMENT WITH RESPECT TO SITE IMPROVEMENTS ENTERED INTO AS OF MAY 1, 2008, BY AND BETWEEN PHF II BURBANK LLC, A DELAWARE LIMITED LIABILITY COMPANY AND UNILEV MANAGEMENT CORP., A TEXAS CORPORATION, UPON AND SUBJECT TO ALL OF THE TERMS AND CONDITIONS THEREIN SET FORTH.

12 A DEED OF TRUST RECORDED DECEMBER 7, 2012 AS INSTRUMENT NO. 20121880375, O.R.

13 AN ASSIGNMENT OF ALL THE MONEYS DUE, OR TO BECOME DUE AS RENTAL, AS ADDITIONAL SECURITY FOR THE OBLIGATIONS SECURED BY DEED OF TRUST RECORDED DECEMBER 7, 2012 AS INSTRUMENT NO. 20121880375 O.R., ASSIGNED TO MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY RECORDED DECEMBER 7, 2012 AS INSTRUMENT NO. 20121880376, O.R.

14 MATTERS CONTAINED IN A DOCUMENT ENTITLED "SUBORDINATION, ASSIGNMENT, NONDISTURBANCE AND ATTORNMENT AGREEMENT (HOTEL MANAGEMENT AGREEMENT)" RECORDED DECEMBER 7, 2012 AS INSTRUMENT NO. 20121880377, O.R.

15 A FINANCING STATEMENT RECORDED DECEMBER 7, 2012 AS INSTRUMENT NO. 20121880378, O.R.

16 THE MATTERS CONTAINED IN A DOCUMENT ENTITLED "MEMORANDUM OF RIGHT OF FIRST REFUSAL" RECORDED APRIL 18, 2013 AS INSTRUMENT NO. 20130582069, O.R.

17 MATTERS WHICH MAY BE DISCLOSED BY AN INSPECTION AND/OR BY A CORRECT ALTA/ACSM LAND TITLE SURVEY OF SAID LAND THAT IS SATISFACTORY TO THE TITLE COMPANY, AND/OR BY INQUIRY OF THE PARTIES IN POSSESSION THEREOF.

18 ANY RIGHTS OF THE PARTIES IN POSSESSION OF A PORTION OF, OR ALL OF, SAID LAND, WHICH RIGHTS ARE NOT DISCLOSED BY THE PUBLIC RECORDS.

19 ANY EASEMENTS NOT DISCLOSED BY THE PUBLIC RECORDS AS TO MATTERS AFFECTING TITLE TO REAL PROPERTY, WHETHER OR NOT SAID EASEMENTS ARE VISIBLE AND APPARENT.

20 DISCREPANCIES, CONFLICTS IN BOUNDARY LINES, SHORTAGE IN AREA, ENCROACHMENTS, OR ANY OTHER MATTERS WHICH A CORRECT SURVEY WOULD DISCLOSE AND WHICH ARE NOT SHOWN BY THE PUBLIC RECORDS.

21 DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT.

UTILITY PURVEYORS

AT&T
271 NORTH CAMELO AVENUE
PASADENA, CA 91107-3641
ATTN: ARMAND DABUET
TEL: (626) 578-3679

QWEST
700 W. MINERAL AVENUE, NEJ31.2
DENVER, CO 80202
ATTN: MIKE GARRISON
TEL: (714) 666-8016
FAX: (714) 666-8036

METROMEDIA FIBER NETWORK
7905 S. 196TH STREET
KENT, WA 98032-1122
ATTN: ADOLFO GUTIERREZ
TEL: (714) 236-8502
FAX: (714) 821-4768

SC GAS – CHATSWORTH
9400 OAKDALE AVENUE, ML 9331
CHATSWORTH, CA 91311
ATTN: ED HALE
TEL: (818) 701-3319
FAX: (818) 701-3380

CLEAR CHANNEL
ATTN: KEVIN KOCIC
TEL: (310) 755-7299
FAX: (310) 755-7347

SPRINT
3065 KILGORE ROAD,
MAIL STOP CARACF0203-282
RANCHO CORDOVA, CA 95670
ATTN: TABOR LAKY
TEL: (949) 225-2931
FAX: (949) 225-2950

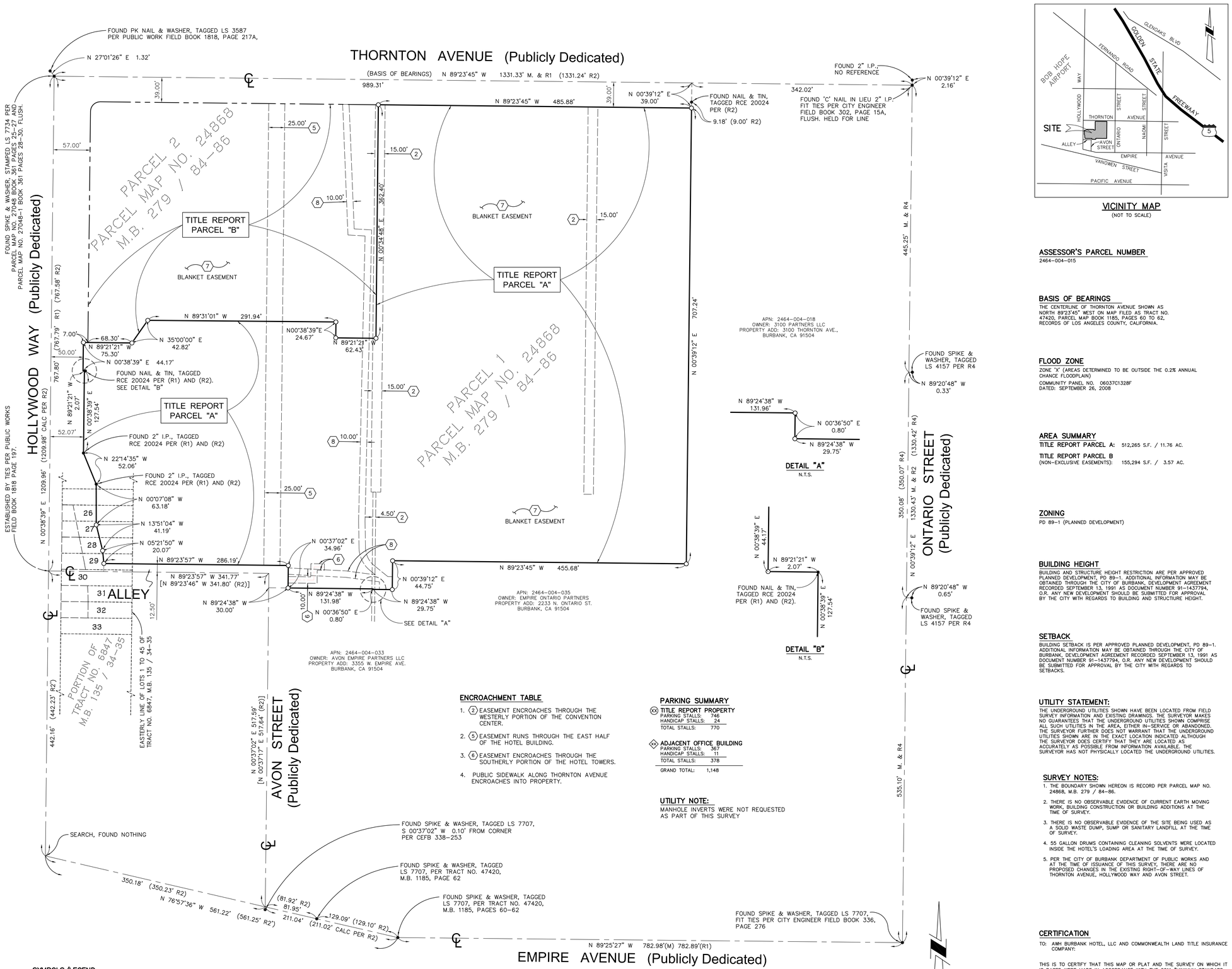
AT&T
ATTN: MARY RAMOS
TEL: (626) 578-3701
FAX: (626) 356-0954

CHARTER
ATTN: JIM REICK
TEL: (818) 847-5013
FAX: (818) 847-5004

IMPORTANT NOTICE
SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR DIG ALERT ID NUMBER CALL

UNDERGROUND SERVICE ALERT
1-800-422-4133
FOR UNDERGROUND LOCATING 2 WORKING DAYS BEFORE YOU DIG

ENGINEERS NOTE TO CONTRACTOR:
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES, PIPES, AND / OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION OF THOSE UNDERGROUND UTILITIES TO BE USED AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN HEREON.



ENCROACHMENT TABLE

1. ⬡2 EASEMENT ENCROACHES THROUGH THE WESTERLY PORTION OF THE CONVENTION CENTER.
2. ⬡5 EASEMENT RUNS THROUGH THE EAST HALF OF THE HOTEL BUILDING.
3. ⬡6 EASEMENT ENCROACHES THROUGH THE SOUTHERLY PORTION OF THE HOTEL TOWERS.
4. PUBLIC SIDEWALK ALONG THORNTON AVENUE ENCROACHES INTO PROPERTY.

PARKING SUMMARY

⟨XX⟩ TITLE REPORT PROPERTY
PARKING STALLS: 746
HANDICAP STALLS: 24
TOTAL STALLS: 770

⟨XX⟩ ADJACENT OFFICE BUILDING
PARKING STALLS: 367
HANDICAP STALLS: 11
TOTAL STALLS: 378

GRAND TOTAL: 1,148

UTILITY NOTE:

MANHOLE INVERTS WERE NOT REQUESTED AS PART OF THIS SURVEY

SYMBOLS/LEGEND:

- ● INDICATES FOUND MONUMENT AS NOTED
- (R1) RECORD PER PARCEL MAP NO. 24868 BOOK 279 / PAGES 84-86
- (R2) RECORD PER TRACT NO. 47420 BOOK 1185 / PAGES 60-62
- (R3) RECORD PER PUBLIC WORK FIELD BOOK 1818 / PAGES 216-217, RECORDED OCTOBER 15, 1996
- (R4) RECORD PER PUBLIC WORK FIELD BOOK 1818 / PAGES 323-324 RECORDED JANUARY 21, 2002
- ⟨XX⟩ PARKING COUNT ON TITLE REPORT PROPERTY
- ⟨XX⟩ PARKING COUNT ON ADJACENT OFFICE BUILDING PROPERTY

- CONCRETE
- BACKFLOW PREVENTOR
- BOLLARD
- BREAK LINE
- CB CATCH BASIN
- DCDA DOUBLE DETECTOR CHECK
- DI DROP INLET
- ELECTRICAL METER
- ELEC VAULT ELECTRICAL VAULT
- E ELECTRICAL MANHOLE
- EXTERIOR BUILDING WALL
- FDC FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT
- FP FLAG POLE
- GATE
- HANDICAP PARKING STALL
- ICV IRRIGATION CONTROL VALVE
- M MANHOLE
- M METER
- PALM TREE
- PB PULL BOX
- POST INDICATOR VALVE
- POWER POLE
- D STORM DRAIN MANHOLE
- S SEWER CLEANOUT
- T STORM DRAIN MANHOLE
- S SEWER MANHOLE
- SIGN
- SPOT ELEVATION
- TS STREET LIGHT WITH TRAFFIC LIGHT
- STREET LIGHT
- SLPB STREET LIGHT PULL BOX
- SITE LIGHTING
- TELE PB TELEPHONE PULL BOX
- TS TRAFFIC SIGNAL
- TSPB TRAFFIC SIGNAL PULL BOX
- OR TREE
- V VALVE
- WATER VALVE
- WM WATER METER
- UB UTILITY BOX
- PROPERTY LINE
- CHAIN LINK FENCE
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- ELEC ELECTRICAL LINE
- X" G GAS LINE
- X" W WATER LINE
- X" SD STORM DRAIN LINE
- BW BACK OF WALK
- CL CENTERLINE
- CONC CONCRETE
- ELEC ELECTRICAL
- EP EDGE OF PAVEMENT
- E'LY EASTERLY
- W'LY WESTERLY
- N'LY NORTHERLY
- S'LY SOUTHERLY
- FL FLOWLINE
- FS FINISHED SURFACE
- HC HANDICAP
- PA PLANTER AREA
- PL PROPERTY LINE
- RET. RETAINING WALL
- SD STORM DRAIN
- TELE TELEPHONE
- TBC TOP BACK OF CURB
- VG VALLEY GUTTER
- N.T.S. NOT TO SCALE

VICINITY MAP
(NOT TO SCALE)

ASSESSOR'S PARCEL NUMBER
2464-004-015

BASIS OF BEARINGS
THE CENTERLINE OF THORNTON AVENUE SHOWN AS NORTH 89°23'45" WEST ON MAP FILED AS TRACT NO. 47420, PARCEL MAP BOOK 1185, PAGES 60 TO 62, RECORDS OF LOS ANGELES COUNTY, CALIFORNIA.

FLOOD ZONE
ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN)
COMMUNITY PANEL NO. 06037C1328F
DATED: SEPTEMBER 26, 2008

AREA SUMMARY
TITLE REPORT PARCEL A: 512,265 S.F. / 11.76 AC.
TITLE REPORT PARCEL B (NON-EXCLUSIVE EASEMENTS): 155,294 S.F. / 3.57 AC.

ZONING
PD 89-1 (PLANNED DEVELOPMENT)

BUILDING HEIGHT
BUILDING AND STRUCTURE HEIGHT RESTRICTION ARE PER APPROVED PLANNED DEVELOPMENT, PD 89-1. ADDITIONAL INFORMATION MAY BE OBTAINED THROUGH THE CITY OF BURBANK, DEVELOPMENT AGREEMENT RECORDED SEPTEMBER 13, 1991 AS DOCUMENT NUMBER 91-1437794, O.R. ANY NEW DEVELOPMENT SHOULD BE SUBMITTED FOR APPROVAL BY THE CITY WITH REGARDS TO BUILDING AND STRUCTURE HEIGHT.

SETBACK
BUILDING SETBACK IS PER APPROVED PLANNED DEVELOPMENT, PD 89-1. ADDITIONAL INFORMATION MAY BE OBTAINED THROUGH THE CITY OF BURBANK, DEVELOPMENT AGREEMENT RECORDED SEPTEMBER 13, 1991 AS DOCUMENT NUMBER 91-1437794, O.R. ANY NEW DEVELOPMENT SHOULD BE SUBMITTED FOR APPROVAL BY THE CITY WITH REGARDS TO SETBACKS.

UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

SURVEY NOTES:
1. THE BOUNDARY SHOWN HEREON IS RECORD PER PARCEL MAP NO. 24868, M.B. 279 / 84-86.
2. THERE IS NO OBSERVABLE EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS AT THE TIME OF SURVEY.
3. THERE IS NO OBSERVABLE EVIDENCE OF THE SITE BEING USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL AT THE TIME OF SURVEY.
4. 55 GALLON DRUMS CONTAINING CLEANING SOLVENTS WERE LOCATED INSIDE THE HOTEL'S LOADING AREA AT THE TIME OF SURVEY.
5. PER THE CITY OF BURBANK DEPARTMENT OF PUBLIC WORKS AND AT THE TIME OF ISSUANCE OF THIS SURVEY, THERE ARE NO PROPOSED CHANGES IN THE EXISTING RIGHT-OF-WAY LINES OF THORNTON AVENUE, HOLLYWOOD WAY AND AVON STREET.

CERTIFICATION
TO: AWH BURBANK HOTEL, LLC AND COMMONWEALTH LAND TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(b), 7(a), 7(b)(1), 7(c), 8, 9, 10(a), 11(a), 13, 14, 16, 17, 18, 19 and 20(a) OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON OCTOBER 6, 2014.

DATE: _____

_____
DUSTIN BYRON WILTON, PLS 8080
LICENSE EXPIRES: 12/31/2015

PROFESSIONAL LAND SURVEYOR DUSTIN BYRON WILTON No. 8080 EXP. 12-31-2015 STATE OF CALIFORNIA

NO.	DESCRIPTION	BY	DATE	CHK
	REVISIONS			
1	REVISED PARKING COUNT	GS	10-07-14	D.W.
2	UPDATED ALTA PER PTR DATED 10-15-12	GS/DM	9-14-12	D.W.
3	UPDATED ALTA PER PTR DATED 09-19-14	GS	10-07-14	D.W.

TAIT
Since 1944
701 N. Parkcenter Drive
Santa Ana, CA 92705
p: 714/560/8200 f: 714/560/8211
www.tait.com
Los Angeles Sacramento San Francisco Dallas Phoenix
Ontario San Diego Boise Denver Portland

ALTA/ACSM LAND TITLE SURVEY
MARRIOTT BURBANK AIRPORT HOTEL & CONVENTION CENTER
AWH BURBANK HOTEL, LLC
1040 AVENUE OF THE AMERICAS, 9TH FLOOR
NEW YORK, NY 10075

DRAWN: L.B.
DATE: 5-27-07
CHECKED: D.P.
DATE: 8-30-07
REVISION #: 3
DATE: 10-07-14
JOB NO: SP6608D

1 OF 2

Oct 08, 2014 - 3:40pm by gpulpeo K:\Drawings\SP\SP6608D - Burbank, CA\Survey\Office\ALTA\SP6608D-ALSheet 1.dwg

THORNTON AVENUE (Publicly Dedicated)

HOLLYWOOD WAY (Publicly Dedicated)

ALLEY

AVON STREET (Publicly Dedicated)

EXISTING
BANK OF AMERICA OFFICE
GLASS EXTERIOR BUILDING

HOTEL TOWERS
CONCRETE BLOCK
BUILDING

HOTEL RESTAURANT

MARRIOTT HOTEL
2500 N. HOLLYWOOD WAY
BURBANK, CA 91505

EX. FF=678.10
BLDG HT=103.3'±
BLDG FOOTPRINT= 57,569±S.F.

HOTEL TOWERS
CONCRETE BLOCK
BUILDING
EX. FF=678.10

MARRIOTT CONVENTION CENTER
2500 N. HOLLYWOOD WAY
BURBANK, CA 91505

EX. FF=677.00
BLDG HT=36.9'±
BLDG FOOTPRINT=40,769±S.F.

BLANKET EASEMENT

ONSITE
PRIVATE
STORM
DRAIN

ONSITE
PRIVATE
STORM
DRAIN

Storm drain pipe sizes were extracted from the ALTA CAD files provided by TAIT

SCALE: 1"=30'

(IN FEET)
1 INCH = 30 FEET

NO.	DESCRIPTION	BY	DATE	CHK
4	UPDATED ALTA PER PRO FORMA REPORT	GG	11-06-14	D.W.
3	UPDATED ALTA PER PTR DATED 09-19-14	GG	10-07-14	D.W.
2	UPDATED ALTA PER PTR DATED 10-15-12	GG/SM	5-14-13	D.W.
1	REVISED PARKING COUNT	GG	8-14-12	D.W.

REVISIONS

TAIT
Since 1944
701 N. Parkcenter Drive
Santa Ana, CA 92705
p: 714/560/8200 f: 714/560/8211
www.tait.com
Los Angeles Sacramento San Francisco Dallas Phoenix
San Diego Boise Denver Portland
Ontario

ALTA/ACSM LAND TITLE SURVEY

MARRIOTT BURBANK AIRPORT HOTEL & CONVENTION CENTER

PREPARED FOR: AWH BURBANK HOTEL, LLC
1040 AVENUE OF THE AMERICAS, 16TH FLOOR
NEW YORK, NY 10075

DRAWN: L.B.
DATE: 5-27-07
CHECKED: D.P.
DATE: 8-30-07
REVISION #: 4
DATE: 11-06-14
JOB NO: SP6608D

Nov 24, 2020 - 4:12pm by Alex Flores P:\Projects\1351\001\Consultants\Lmcoming\Owner) AWH\161021 - ALTA CAD\2015.09.30 SP6608D-AL-Sheet 2 - Standard\SP6608D-AL-Sheet 2.dwg

ATTACHMENT O

EXISTING STORM DRAIN CAPACITY CALCULATIONS

Peak Flow Hydrologic Analysis

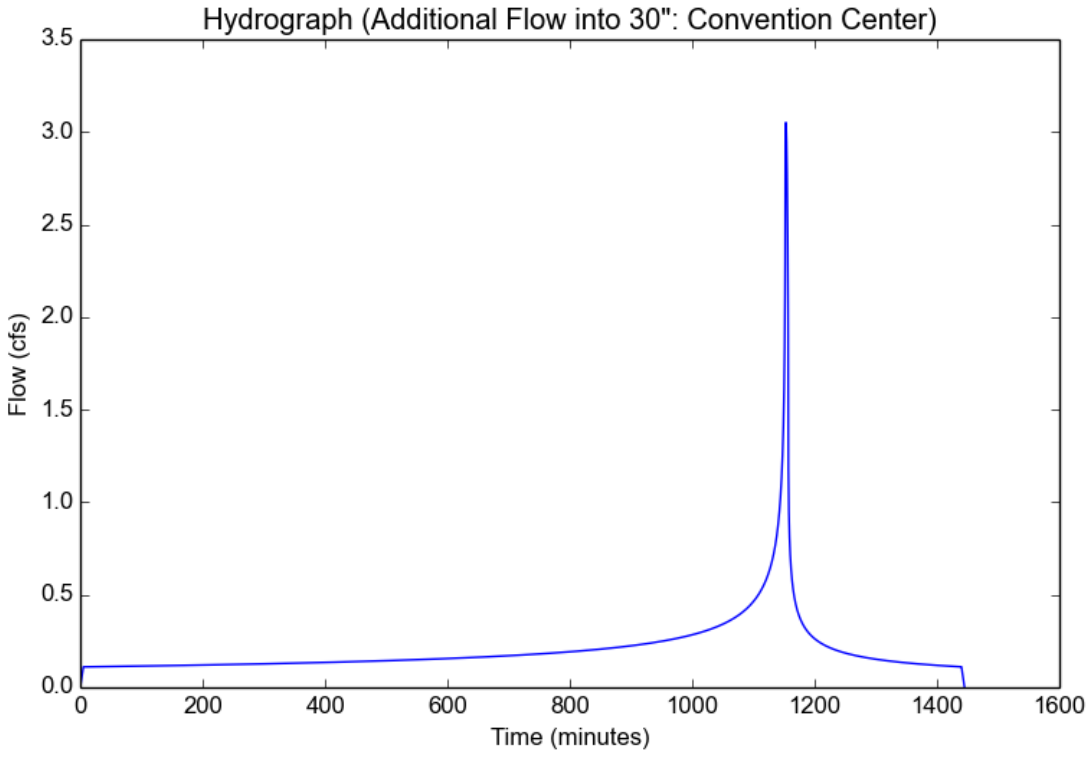
File location: F:/Projects/4147/001/_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Additional Appendix O.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Additional Flow into 30"
Subarea ID	Convention Center
Area (ac)	0.94
Flow Path Length (ft)	50.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.95
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.1899
Peak Intensity (in/hr)	3.6931
Undeveloped Runoff Coefficient (Cu)	0.4769
Developed Runoff Coefficient (Cd)	0.8788
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.0509
Burned Peak Flow Rate (cfs)	3.0509
24-Hr Clear Runoff Volume (ac-ft)	0.4141
24-Hr Clear Runoff Volume (cu-ft)	18037.0344



Calculation for 30" RCP SD

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Normal Depth	30.00	in
Diameter	30.00	in

Results

Discharge	29.00	ft³/s
Flow Area	4.91	ft²
Wetted Perimeter	7.85	ft
Hydraulic Radius	7.50	in
Top Width	0.00	ft
Critical Depth	1.84	ft
Percent Full	100.0	%
Critical Slope	0.00632	ft/ft
Velocity	5.91	ft/s
Velocity Head	0.54	ft
Specific Energy	3.04	ft
Froude Number	0.00	
Maximum Discharge	31.20	ft³/s
Discharge Full	29.00	ft³/s
Slope Full	0.00500	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s

Calculation for 30" RCP SD

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	30.00	in
Critical Depth	1.84	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00632	ft/ft

ATTACHMENT P

OPERATIONS AND MAINTENANCE, AND CITY OF BURBANK COVENANT

Infiltration Facility Operations and Maintenance

General Requirements

Infiltration facility maintenance should include frequent inspections to ensure that water infiltrates into the subsurface completely within the recommended infiltration time of 72 hours or less after a storm (see Appendix E for guidance on facility inspection and Appendix F for an infiltration inspection and maintenance checklist).

Maintenance and regular inspections are of primary importance if infiltration basins and trenches are to continue to function as originally designed. A specific maintenance plan shall be developed specific to each facility outlining the schedule and scope of maintenance operations, as well as the documentation and reporting requirements. The following are general maintenance requirements:

1. Regular inspection should determine if the sediment pretreatment structures require routine maintenance.

2. If water is noticed in the basin more than 72 hours after a major storm or in the observation well of the infiltration trench more than 48 hours after a major storm, the infiltration facility may be clogged. Maintenance activities triggered by a potentially clogged facility include:

    - Check for debris/sediment accumulation, rake surface and remove sediment (if any) and evaluate potential sources of sediment and vegetative or other debris (e.g., embankment erosion, channel scour, overhanging trees, etc). If suspected upland sources are outside of the County's jurisdiction, additional pretreatment operations (e.g., trash racks, vegetated swales, etc.) may be necessary.

    - For basins, removal of the top layer of native soil may be required to restore infiltrative capacity.

    - For trenches, assess the condition of the top aggregate layer for sediment buildup and crusting. Remove top layer of pea gravel and replace. If slow draining conditions persist, entire trench may need to be excavated and replaced.

3. Any debris or algae growth located on top of the infiltration facility should be removed and disposed of properly.

4. Facilities should be inspected annually. Trash and debris should be removed as needed, but at least annually prior to the beginning of the wet season.

5. Site vegetation should be maintained as frequently as necessary to maintain the aesthetic appearance of the site, and as follows:

    - Vegetation, large shrubs, or trees that limit access or interfere with basin operation should be pruned or removed.

- Slope areas that have become bare should be revegetated and eroded areas should be regraded prior to being revegetated.
- Grass should be mowed to 4"-9" high and grass clippings should be removed.
- Fallen leaves and debris from deciduous plant foliage should be raked and removed.
- Invasive vegetation, such as Alligatorweed (*Alternanthera philoxeroides*), Halogeton (*Halogeton glomeratus*), Spotted Knapweed (*Centaurea maculosa*), Giant Reed (*Arundo donax*), Castor Bean (*Ricinus communis*), Perennial Pepperweed (*Lepidium latifolium*), and Yellow Starthistle (*Centaurea solstitalis*) must be removed and replaced with non-invasive species. Invasive species should never contribute more than 25% of the vegetated area. For more information on invasive weeds, including biology and control of listed weeds, look at the "encycloweedia" located at the California Department of Food and Agriculture website at http://www.cdfa.ca.gov/wma or the California Invasive Plant Council website at http://portal.cal-ipc.org/weedlist. .
- Dead vegetation should be removed if it exceeds 10% of area coverage. Vegetation should be replaced immediately to maintain cover density and control erosion where soils are exposed.

6. For infiltration basins, sediment buildup exceeding 50% of the forebay sediment storage capacity, as indicated by the steel markers, should be removed. Sediment from the remainder of the basin should be removed when 6 inches of sediment accumulates. Sediments should be tested for toxic substance accumulation in compliance with current disposal requirements if visual or olfactory indications of pollution are noticed. If toxic substances are encountered at concentrations exceeding thresholds of Title 22, Section 66261 of the California Code of Regulations, the sediment must be disposed of in a hazardous waste landfill and the source of the contaminated sediments should be investigated and mitigated to the extent possible.

7. Following sediment removal activities, replanting and/or reseeding of vegetation may be required for reestablishment.

Maintenance Standards

A summary of the routine and major maintenance activities recommended for infiltration facilities is shown in Table 6-1. Detailed routine and major maintenance standards are listed in Tables 6-2 and 6-3.

Table 6-1: Infiltration Facility Routine and Major Maintenance Quick Guide

Inspection and Maintenance Activities Summary	
Routine Maintenance	• Remove trash and debris as required • Repair and reseed erosion near inlet if necessary • Remove any visual evidence of contamination from floatables such as oil and grease • Clean under-drain (if present) and outlet piping to alleviate ponding and restore infiltrative capacity. • Remove minor sediment accumulation, debris and obstructions near inlet and outlet structures as needed • Mow routinely to maintain ideal grass height and to suppress weeds • Periodically observe function under wet weather conditions • Take photographs before and after maintenance (encouraged)
Major Maintenance	• Clean out under-drains if present to alleviate ponding. Replace media if ponding or loss of infiltrative capacity persists and revegetate • Repair structural damage to flow control structures including inlet, outlet and overflow structures • De-thatch grass to remove accumulated sediment and aerate compacted areas to promote infiltration

Table 6-2: Routine Maintenance – Infiltration Facilities

Defect	**Conditions When Maintenance Is Needed**	**Results Expected When Maintenance Is Performed**	**Frequency**
Trash & Debris	Any trash and debris which exceed 5 cubic feet per 1,000 square feet (one standard garbage can). In general, there should be no visual evidence of dumping. If less than threshold, all trash and debris will be removed as part of next scheduled maintenance.	Trash and debris cleared from site.	Annually prior to wet season. After major storm events (>0.75 in/24 hrs) if spot checks indicate widespread damage/ maintenance needs. Litter removal is dependent on site conditions and desired aesthetics and should be done at a frequency to meet those objectives.
Inlet Erosion	Visible evidence of erosion occurring near inlet structures.	Eroded areas repaired/reseeded	
Visual Contaminants and Pollution	Any evidence of oil, gasoline, contaminants or other pollutants.	No contaminants or pollutants present.	
Slow Drain Time	Standing water long after storm has passed (after 48 to 72 hours), or visual inspection of wells (if available) indicates that design drain times are not being achieved.	Water drains within 48 to 72 hours. Drainage pipe is cleared, accumulated litter on surface is removed, and top 1-2" of soil is raked or replaced.	
Inlets Blocked	Trash and debris or sediment blocking inlet structures.	Inlets clear and free of trash and debris.	
Appearance of Poisonous, Noxious or Nuisance Vegetation	Excessive grass and weed growth. Noxious weeds, woody vegetation establishing, Turf growing over rock filter.	Vegetation is mowed or trimmed to restore function. Weeds are removed to prevent noxious and nuisance plants from becoming established.	Monthly (or as dictated by agreement between County and landscape contractor).

Table 6-3: Major Maintenance – Infiltration Facilities

Defect	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed	Frequency
Standing Water	Standing water long after storm has passed (after 24 to 48 hours), or visual inspection of wells (if available) indicates that design drain times are not being achieved	Design infiltration rate restored, either through excavation and filter media replacement or surface sediment removal. If applicable, underdrain cleaned, reset or replaced.	As needed

APPENDIX

SAMPLE AGREEMENT AND COVENANT FOR SUSMP MAINTENANCE

This agreement for SUSMP Maintenance, dated this _____ day of _____, 20___ ("Effective Date") is executed between _____ and the City of Burbank, a municipal corporation (the "City").

1.) _____ ("Owner") is the owner of real property within the City of Burbank described in attached Exhibit A (*attach legal description*) and is developing a project known as _____ (the "Project") at _____, Burbank, California, situated on real property.

2.) The City desires that under the provisions of City Ordinance No. 3522, adopted September 5, 2000, relating to storm water discharge and urban runoff (the "Ordinance"), that certain storm water treatment devices are to be properly maintained on a regular basis. Said Ordinance incorporates the "Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County", adopted by the regional Water Quality Control Board, Los Angeles Region, on March 8, 2000 ("SUSMP").

3) In compliance with said Ordinance and the approved Project plans filed with the City, _____ will be installing storm water treatment devices as specified on the approved drawings for Building Permit _____.

4) _____ hereby agrees to maintain the installed storm water treatment devices in accordance with the maintenance schedule supplied by the device manufacturer, or at a level necessary to ensure continuing function and operability of the devices to ensure compliance with SUSMP as determined by the City Engineer, in his or her reasonable discretion and in accordance with industry standards, at no cost to the City. _____'s obligation to maintain the installed storm water treatment devices shall include the obligation to replace or repair the devices as to be operable and functioning in compliance with SUSMP in the event said devices become defective or in a state of disrepair.

5) This agreement shall run in perpetuity with the land, or for the operating life of the Project, and shall be binding on the property owner, their heirs, successors, agents, or assigns. This Agreement may be released if, in the City's reasonable discretion and in accordance with industry standards, alternative storm water treatment devices are substituted into the Project, or are otherwise no longer necessary.

"CITY" City of Burbank, a Municipal Corporation

By:_____

Its: _____

"OWNER" _____

By: _____

Its: _____

APPROVED this _____ day of _____, 20_____, Office of the City Attorney

By: _____

Name: _____

Title: _____