FINAL INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

WEST LOS ANGELES DISTRICT YARD PROJECT

LOS ANGELES DEPARTMENT OF WATER AND POWER

Environmental Services

111 North Hope Street, Room 1044

Los Angeles, California 90012

With Assistance From

DUDEK

38 North Marengo Avenue

Pasadena, California 91101

MAY 2022

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ACRONYMS AND ABBREVIATIONS

Acronym/ Abbreviation	Definition
AB	Assembly Bill
ACOE	Army Corps of Engineers
ALUC	Airport Land Use Commission
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
BGS	below the ground surface
CAP	Climate Action Plan
CARB	California Air Resources Board
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CO	carbon monoxide
CO2E	carbon dioxide equivalent
CR	California rare
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FT	federally threatened
GHG	greenhouse gas
IS	Initial Study
LACM	Natural History Museum of Los Angeles County
LADWP	Los Angeles Department of Water and Power
MG	million-gallon
MT	metric tons
NO2	nitrogen dioxide
O3	ozone
OHWM	ordinary high water mark
PM10	particulate matter with a diameter less than or equal to 10 microns (coarse particulate matter)
PM2.5	particulate matter with a diameter less than or equal to 2.5 microns (fine particulate matter)
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District

Acronym/ Abbreviation	Definition
SO2	sulfur dioxide
SR-	state route
SSC	state species of special concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
WL	Watch List

PREFACE & ERRATA TO THE FINAL IS/MND

The Final Initial Study / Mitigated Negative Declaration (IS/MND) is an informational document intended to disclose the environmental consequences of approving and implementing the West Los Angeles District Yard Project (proposed project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA) as outlined below. The Los Angeles Department of Water and Power (LADWP) is the lead agency under CEQA.

Public Review Period

The IS/MND for the proposed project was distributed on June 25, 2020, for public review pursuant to CEQA. The public review period concluded on July 25, 2020. The IS/MND was distributed to interested or involved public agencies and organizations for review. Additionally, a Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) was mailed to addresses adjacent to and within the vicinity of the project. The NOI was filed with the city and county clerks, and the IS/MND was made available for general public review at the LADWP Environmental Affairs Division (111 North Hope Avenue, Room 1044, Los Angeles, California 90012). In addition, an electronic version of the Draft IS/MND was made available on the LADWP website at: http://www.ladwp.com/envnotices.

During the public review period, 35 comment letters were received. Responses to comments that address environmental issues in the IS/MND are included in this Final IS/MND in Section 5.0. LADWP has also prepared a mitigation monitoring and reporting program (MMRP) pursuant to CEQA Guidelines, Section 15074(d), which requires that a lead or responsible agency adopt a mitigation monitoring plan when approving or carrying out a project when an MND identifies measures to mitigate or avoid significant environmental effects. The MMRP constitutes Section 6.0 of the Final IS/MND.

CEQA Guidelines Regarding Recirculation

Pursuant to CEQA Guidelines, Section 15073.5, the lead agency is required to recirculate an IS/MND when the document is substantially revised after public notice of its availability but prior to its adoption. A substantial revision is identified as follows: (1) a new avoidable significant effect is identified and mitigation measures or project revisions must be added in order to reduce the effect to insignificance or (2) the lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significant and new measures or revisions must be required.

LADWP has determined that based on CEQA Guidelines Section 15073.5, recirculation of the IS/MND prior to adoption is not required. This conclusion is based on the fact that no new, avoidable significant effects have been identified, no new mitigation measures were added, and the text of the document has not been substantially revised in a manner requiring recirculation. While minor changes have been made to the document in this Final IS/MND, LADWP has evaluated these changes and has determined that none of these changes would alter the impact conclusions in the IS/MND or otherwise warrant recirculation. The changes that have been made to the document subsequent to its publication in June 2020 are shown in the Errata section that follows.

Following this Preface, the original text of the IS/MND is included in its entirety. No changes have been made subsequent to the release of the Draft IS/MND for public review, aside from the revisions shown in the Errata below and the addition of Chapter 5 (Response to Comments Received) and Chapter 6 (Mitigation Monitoring and Reporting Program).

Errata

The changes that have been made to the document subsequent to its publication in June 2020 are described as follows and are shown in the Errata table, below.

As demonstrated below, these additional details represent clarification of the information that was originally presented in the Draft IS/MND. These edits have not changed the impact conclusions in the IS/MND, nor have they revealed a need for new or altered mitigation measures. Rather, this information merely clarifies information and conclusions that were already presented in the Draft IS/MND. As such, these changes would not result in a new significant impact or in an increase in the severity of a previously identified significant impact and, therefore, do not warrant recirculation of the IS/MND.

Revisions to the Draft IS/MND are shown below and are categorized by section number and page number. Text from the Draft IS/MND that has been removed is shown in strikethrough (i.e., ~~strikethrough~~), and text that has been added as part of the Final IS/MND is shown as underlined (i.e., <u>underline</u>).

Final IS/MND Errata

Final IS/MND Location *(section, page no.)*	Revision *(change shown in strikeout & underline text)*	Explanation
Section 2.1, Proposed Facilities, page 8, first paragraph	The majority of the surface parking areas would be demolished to construct an approximately 145,000 square-foot, one-level underground parking structure located beneath the new building on the project site. The underground parking structure would include a total of 389 parking spaces for employee and fleet vehicles. A two-story above ground parking structure would also be constructed directly to the south of the new building. The above ground parking structure would be approximately 156,000 square-feet. A total of 154 parking spaces would be included in the above ground parking structure and would be used by a variety of LADWP fleet vehicles. Additionally, 12 public parking spaces would be included outside the Services Planning office, outside of the security gate. All parking spaces would include electric vehicle charging stations. The proposed project anticipates all fleet vehicle parking to include EV charging stations and 60% of the parking for personnel vehicles during the project's initial installation. A new security gate would be constructed at the northernmost drive way from Nebraska Avenue. Employee parking would follow the LADWP Commuter and Reservation Services (CARS) Office fee and policy requirements. As proposed, LADWP would provide on-site parking to its employees with accommodations increasing the amount of spaces from existing conditions.	Based on the comments received for the Draft IS/MND, additional details regarding the project's proposed parking were added to the Project Description. It should be noted that the final design for the project was not complete at the time of the Draft IS/MND's circulation. The preliminary design is all that was evaluated in the CEQA analysis. These additions do not involve any changes to the project such that the environmental analysis, impacts, or conclusions presented in the IS/MND have changed.
Section 2.1, Proposed Facilities, page 8, second paragraph	The new consolidated services building would range from two to three stories in height with gray and earth-tone color exteriors. Building elevations and the overall concept design for the site is shown in Figure 2-3A and Figure 2-3B, Building Elevations. A green roof deck is proposed to include 6 inches	Based on the comments received for the Draft IS/MND, additional details regarding the project's proposed green roof deck and sustainable features were added to the Project Description. It should be noted that the final design for the project was not complete at the time of the Draft

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Final IS/MND Location *(section, page no.)*	Revision *(change shown in strikeout & underline text)*	Explanation
	of planting modules to create a living roof system which would not be accessible to employees. A metal screen is proposed to extend along the exterior third-floor courtyard and partially along the length of the exterior walls. The proposed design is intended as a shading and privacy screen element for the proposed project. Photovoltaic solar panels would be installed on top of the new building and parking structure. Additionally, solar canopies would be installed over the outdoor storage area. Other sustainable features include high performance façades with exterior shading and electrochromic glazing, battery-energy storage systems for on-site operational energy storage, reduction of embodied energy and life cycle impacts of materials through materials and system selection, and fundamental and enhanced commission. LADWP would provide project design features such as light emitting diode (LED) lighting, optimized building envelope thermal properties, managed water usage, and optimized energy performance and controls. Overall, the proposed design is seeking LEED Gold level certification with the potential of achieving platinum; the proposed project also has the potential to receive Net Zero Building certification.	IS/MND's circulation. The preliminary design is all that was evaluated in the CEQA analysis. These additions do not involve any changes to the project such that the environmental analysis, impacts, or conclusions presented in the IS/MND have changed.
Section 2.1, Proposed Facilities, page 8, third paragraph	The staff vehicle entry would be planned comprehensively with the design of the new building. On-site vehicle circulation would be altered to require all departmental vehicles to access the site via Olympic Boulevard, Centinela Avenue, and the northernmost driveway from Nebraska Avenue. Employee access would be from the new primary driveway from Nebraska Avenue; employees would be required to enter past the security gate into the subterranean parking garage. The	Based on the comments received for the Draft IS/MND, additional details regarding the project's proposed vehicular circulation were added to the Project Description. It should be noted that the final design for the project was not complete at the time of the Draft IS/MND's circulation. The preliminary design is all that was evaluated in the CEQA analysis. These additions do not involve any changes to the project such that the

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Final IS/MND Location *(section, page no.)*	Revision *(change shown in strikeout & underline text)*	Explanation
	existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities. Public access to the project site would be provided via the southernmost driveway from Nebraska Avenue, and would lead to the public parking spaces outside of the proposed Service Planning offices. All the driveways would be designed/modified per standard design requirements in terms of driveway width, throat length, and sight distance.	environmental analysis, impacts, or conclusions presented in the IS/MND have changed.
Section 2.1, Proposed Facilities, page 8, fourth paragraph	An expansion of the existing driveway within the off-site right-of-way along Nebraska Avenue would be required. To accommodate the driveway expansion, one existing street tree is proposed to be removed. New trees would be added to the project site in the landscape designated areas. In addition, the proposed project would incorporate water-conservation landscape design practices while providing an aesthetically pleasing buffer to the surrounding neighborhood. The proposed design would include City-approved accent trees set within the Nebraska Avenue parkway and would be mirrored along the building façade as a visual continuation of the public right-of-way. Landscaping would also feature southern California native and drought-adaptive species. A proposed energy courtyard would be defined by a linear paver system with rows of planting areas and raised seat walls. A proposed living roof system would be a low-profile roof-top planting with 6-inch vegetated modules covering the roof in order to mitigate solar heat gain. No other off-site utility or infrastructure improvements are required.	Based on the comments received for the Draft IS/MND, additional details regarding the project's proposed landscaping were added to the Project Description. It should be noted that the final design for the project was not complete at the time of the Draft IS/MND's circulation. The preliminary design is all that was evaluated in the CEQA analysis. These additions do not involve any changes to the project such that the environmental analysis, impacts, or conclusions presented in the IS/MND have changed.

Final IS/MND Errata

Final IS/MND Location *(section, page no.)*	Revision *(change shown in strikeout & underline text)*	Explanation
Section 3.1, under subsection d), page 27, under the last paragraph	A shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.	Based on the comments received for the Draft IS/MND, additional details regarding the project's impacts related to shade and shadow were added to the environmental analysis. These additions do not involve any changes to the project such that the environmental analysis, impacts, or conclusions presented in the IS/MND have changed. In addition, the inclusion of new figures is shown for informational purposes only.

Final IS/MND Errata

Final IS/MND Location *(section, page no.)*	Revision *(change shown in strikeout & underline text)*	Explanation
Section 3.5, Cultural Resources, under subsection b), page 57, last paragraph	In the event that archaeological resources <u>or tribal cultural resources</u> (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, evaluates the significance of the find and determines whether or not additional study is warranted. Should it be required, temporary flagging may be installed around a resource to avoid any disturbances from construction equipment. Depending upon the significance of the find under CEQA (14 California Code of Regulations Section 15064.5(f); PRC Section 21082), the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted. <u>In the event that an archaeological resource inadvertently discovered during project construction is determined to be potentially of Native American origin based on the initial assessment of the find by a qualified archaeologist pursuant to California Public Resources Code Section 21083.2(i), the Native American tribes that consulted on the proposed project pursuant to California Assembly Bill 52 shall be notified and be provided information about the find to allow for early input from the tribal representatives with regards to the potential significance and treatment of the resource.</u> Work in the area may resume once evaluation and treatment of the resource is completed or the resource is recovered and removed from the site.	CUL-1 is referenced as the appropriate mitigation measure for tribal cultural resources. The additional language allows CUL-1 to be a sufficient mitigation measure in the event of inadvertent discovery of tribal cultural resources.

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Section 3.9, Hazards and Hazardous Materials, under subsection b), page 84	"Three oil and gas wells were identified in the Phase I ESA (Dudek 2018) and on the California Geologic Energy Management Division's (CalGEM) Well Finder online database within 1 mile of the project site. One of the wells is approximately 324 feet to the west of the southwestern leg of the project site (CalGEM 2020). The well is a plugged dry hole which was both drilled and abandoned in 1966 (DOC 1966). While the CalGEM database identifies the well southwest of Centinela Avenue, the proposed operations report (DOC 1966) notes the well in the following location: "480' northwest along Centinela from the intersection of the center lines of Centinela and Olympic, thence 100' northeast at right angles thereto." This description places the well in the substation property adjacent to the west of the project site, approximately 145 feet north/northwest of the southwestern-most portion of the project site. While the exact location of this well is not accurately defined, it still appears, based on available documentation, that the well is not located within the project site boundary. But there is a slight possibility the well may be located on the project site. Should the well be damaged or uncovered during excavation and construction activities, this could result in damage to the well and a potential release of methane gas, causing an upset or accident condition. As the project site is located within the City of Los Angeles, it is subject to the City's building codes, including those pertaining to clearance near oil and gas wells (City of Los Angeles, 2020a) and methane	As further discussed in Section 5, Response to Comments, of this Final MND, the Response to Comment Letter 1 by the California Geologic Energy Management Division (CalGEM) resulted in revisions to the IS/MND's environmental analysis. The October 2018 Phase I Environmental Site Assessment (ESA), included as Appendix D to the Draft IS/MND, identifies three oil and gas wells within 1 mile of the subject property. The closest well, a "dry hole," was identified approximately 600 feet west of the project site; the other two are approximately one mile to the northwest. Dudek reviewed the CalGEM database and confirmed the presence of a plugged dry hole, identified as "Centinela EH 1" located approximately 324 feet west of the southwestern-most point of the project site (approximately 600 feet from the main property parcel). As noted in the CalGEM comment, this well may actually be located within the project site. As such, Dudek proposed the revisions shown. As shown in the revised text, while the exact location of the well is not accurately defined, it still appears, based on available documentation, that the well is not located within the project site boundary. However, there is a slight possibility the well may be located on the project site. In the event that the well be damaged or uncovered during excavation and construction activities, specified regulations under the City of Los Angeles would be

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Final IS/MND Location *(section, page no.)*	Revision *(change shown in strikeout & underline text)*	Explanation
	mitigation standards (LA DBS 2021). As such, building permit review would include review for abandoned oil and gas wells and, as necessary, would include CalGEM review in accordance with City of Los Angeles Building Permit Clearance Handbook, Section IIC.7 (City of Los Angeles, 2020a). Should the well, or any other oil or gas well, be discovered during construction of the proposed project, the CalGEM district office must be contacted pursuant to Section 3000 et seq. of the Public Resources Code and Title 14, Division 2, Chapters 2, 3, and 4 of the California Code of Regulations. As construction of the proposed buildings would require excavation for utilities and footings, it is likely an abandoned well would be identified prior to or during construction. Any identified oil or gas well would be properly abandoned in accordance with these regulations. The project site is not located within a methane zone or methane buffer zone (City of Los Angeles 2020b), therefore methane mitigation is not likely required for construction. However, as stated above, the project site is subject to the City of Los Angeles methane code. With implementation of MM-HAZ-1, and adherence to applicable laws and regulations referenced above, impacts to the proposed project would be less than significant." enforced prior to issuance of a building permit. Additionally, the CalGEM district office must be contacted pursuant to specified regulations. Lastly, no new impacts not previously disclosed in the Draft IS/MND would occur as a result of these revisions as the proposed project would comply with existing regulation and implement MM-HAZ-1, which would result in less than significant impacts to the threshold under Section 3.9, Hazards and Hazardous Materials, subsection b).

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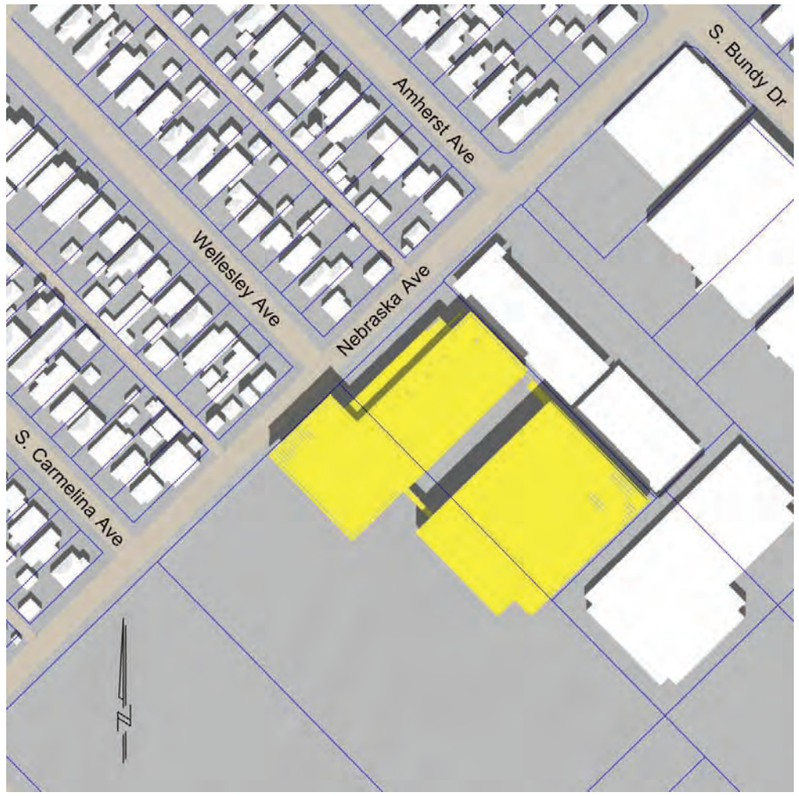
Final IS/MND Location *(section, page no.)*	Revision *(change shown in strikeout & underline text)*	Explanation
Section 3.11, Land Use and Planning, under subsection b), page 102, first paragraph	Less than Significant Impact. The project site is zoned (Q)PF-1XL – Public Facilities and designated Public Facilities in the City's General Plan (City of Los Angeles 2019). The construction of the proposed project is exempt from the zoning requirements set forth for the project site. The project is defined as a "Power Asset" under Charter Section 672(b) of the Los Angeles Municipal Code (LAMC), which encompasses "all the electric energy rights, lands, right-of-way, sites, facilities and property used for generation, transportation, distribution, and delivery of power for the benefit of the City, its inhabitants and its customers." As such, the City's Power Assets are under control of the Board of LADWP Commissioners (the Board), and subject to oversight by the Los Angeles City Council under Charter Section 245 of the LAMC. Specifically, the Board has "the power and duty to make and enforce all necessary rules and regulations governing the construction, maintenance, operation, connection to and use of the Water and Power Assets for (LADWP) Purposes." Therefore, ~~The~~the project would be consistent with this zoning and designation, and with the site's historic use as an LADWP facility.	Based on the comments received for the Draft IS/MND, additional details regarding the project site's consistency with the City's Municipal Code were added to the environmental analysis. These additions do not involve any changes to the project such that the environmental analysis, impacts, or conclusions presented in the IS/MND have changed.
Section 3.12, Mineral Resources, under subsection a), page 104	"Similarly, there are no recorded oil/gas wells on the project site. ~~As explained in Section 3.9, Hazards and Hazardous Materials, there~~There is one historical well ~~located~~mapped approximately ~~3603~~330 feet ~~south~~west of the project site. The well was operated by the Occidental Petroleum Corporation; however, records indicate that the well was abandoned in 1966 and is currently listed as "plugged" (DOC 2019c; DOC 1966).	These revisions were made to be consistent with the revisions discussed under Section 3.9, Hazards and Hazardous Materials, under subsection b), page 84 of this Final IS/MND Errata table, above.

Final IS/MND Errata

Final IS/MND Location *(section, page no.)*	Revision *(change shown in strikeout & underline text)*	Explanation
Section 3.17, Transportation, under subsection a), page 132, Table 3.17-4, footer	Source: Appendix F [a] The City of Los Angeles intersection impact threshold criteria are listed in Table 3.17-1 of this IS/MND <u>Note: The analysis assumes a construction start date of April 2021, which represents the earliest date construction would initiate. Columns [3] and [4] represent Future Conditions (representative of year 2025).</u>	A note has been included in Table 3.17-4 to indicate a change in the proposed project's schedule. These additions do not involve any changes to the project such that the environmental analysis, impacts, or conclusions presented in the IS/MND have changed. "Future Year 2025" was included in the analysis to represent future conditions (representative of year 2025). As such, the analysis provides a conservative analysis including development of other related projects in the vicinity of the proposed project.

9:00 am



12:00 noon

3:00 pm

LA DWP Los Angeles Department of Water & Power

FIGURE 3.1-1

Shade and Shadows, Spring Equinox

West LA District Yard Project

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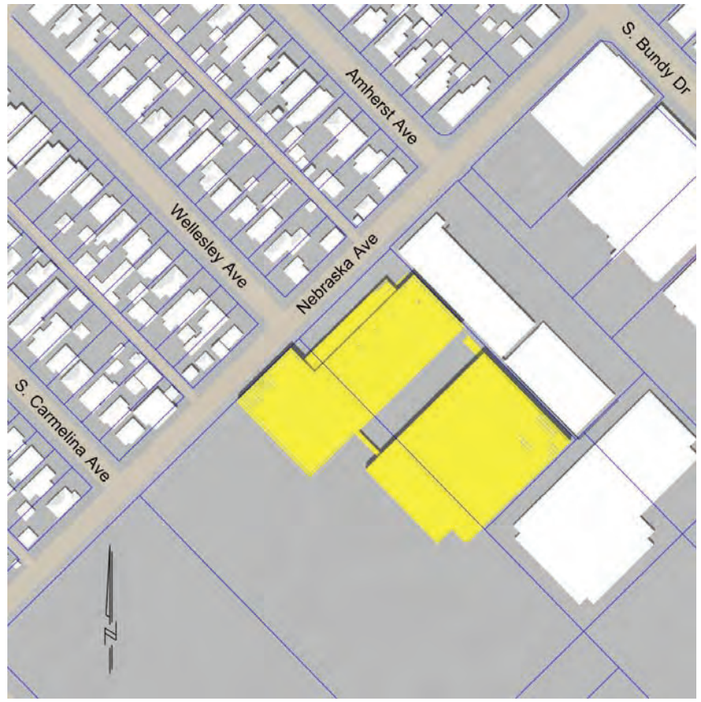

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9:00 am

LA DWP Los Angeles Department of Water & Power

FIGURE 3.1-2

Shade and Shadows, Summer Solstice

West LA District Yard Project

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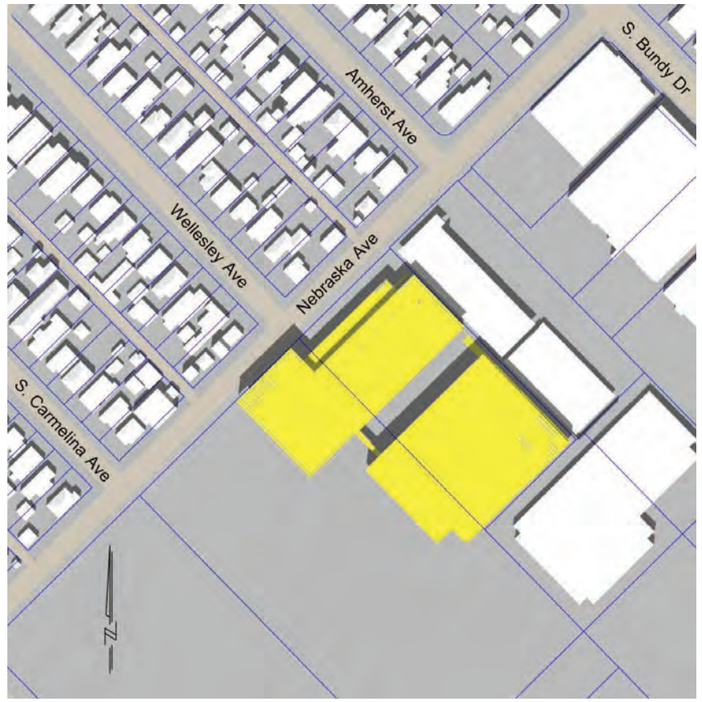

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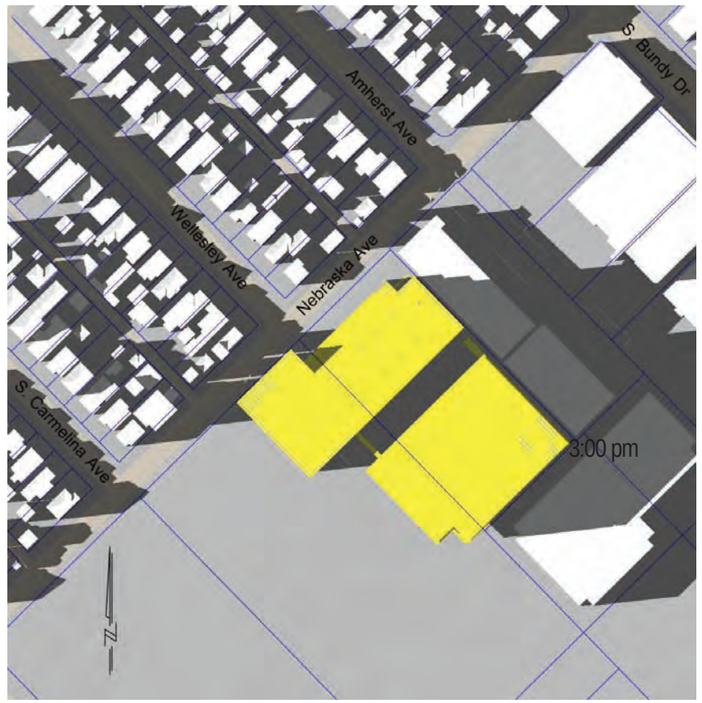

5:00 pm

Los Angeles Department of Water & Power

FIGURE 3.1-3

Shade and Shadows, Autumn Equinox

West LA District Yard Project

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12:00 noon

3:00 pm

LA DWP Los Angeles Department of Water & Power

FIGURE 3.1-4

Shade and Shadows, Winter Solstice

West LA District Yard Project

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Record of Proceedings

The documents and other materials that constitute the record of proceedings upon which LADWP's project approval is based are located at the address below:

Los Angeles Department of Water and Power
Environmental Affairs
111 North Hope Street, Room 1044
Los Angeles, California 90012

The LADWP's Environmental Affairs office is the custodian of such documents and other materials that constitute the record of proceedings. The location of and custodian of the documents or other materials that constitute the record of proceedings for the proposed project is provided in compliance with CEQA Guidelines Section 15074(c).

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1 INTRODUCTION

1.1 Project Overview

The West Los Angeles District Yard Project (proposed project) is a facility improvement project proposed by the Los Angeles Department of Water and Power (LADWP). The project would demolish six structures on the project site, including the West Los Angeles Distribution Headquarters (i.e., district office), warehouse, break room, locker room, fleet shop, and surface parking. One new building, totaling approximately 92,000 square feet, would be constructed in place of the demolished buildings, which would include a warehouse, administration office, electric trouble office, service planning office, and fleet shop. The new building would consolidate all of the functions of the demolished buildings as well as house the relocated Service Planning group at the project site. A two level above-ground parking structure with a total of 154 parking stalls would be constructed adjacent to the new building and would be connected by a horizontal assembly. Beneath the proposed new building, a single-level underground parking structure with a total of 389 parking stalls would also be constructed. An additional 12 public parking spaces would be provided at grade for the Service Planning group, outside of the security gate. Additionally, the gantry crane located within the existing yard would be relocated toward the southeast section of the District Yard closer to the driveway, to allow access to Olympic Boulevard. The existing unleaded and diesel fuel tanks at the on-site fueling station, which is also located along the access driveway that connects the project site to Olympic Boulevard, would remain aboveground. All fleet vehicle parking, which totals 154 oversized parking spaces, would be located in the above-ground parking structure.

1.2 California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to proposed projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies. The proposed project constitutes a project as defined by CEQA (California Public Resources Code, Section 21065). LADWP, as a municipal utility, would implement and operate the proposed project and will therefore act as the CEQA lead agency.

An Initial Study (IS) has been prepared by LADWP as the lead agency in accordance with CEQA guidelines to determine if the proposed project could have the potential to cause significant adverse environmental impacts and to determine whether an Environmental Impact Report (EIR) or a Negative Declaration or Mitigated Negative Declaration (MND) should be prepared for the Proposed Project. An MND is prepared for a project when an Initial Study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.

The Initial Study determined that the implementation of the proposed project could cause some potentially significant impacts on the environment, but as shown in the environmental analysis contained in this MND, all of the project's potentially significant impacts would be reduced to less than significant levels through the implementation of mitigation measures. Consequently, the analysis contained herein concludes that an MND shall be prepared for the proposed project. The MND is composed of four sections. Section 1 provides the introduction to the proposed project, general information about the contents of the MND and information about the Lead Agency. Section 2 provides a description of the proposed project components and information about their construction and operation. Section 3 includes the CEQA Initial Study checklist, which provides the assessment of potential environmental impacts and the applicability of mitigation measures to reduce potentially significant impacts to less than significant. Section 4 provides a list of the Lead Agency staff and consultants involved in preparing the environmental review documents for the proposed project. The MND also includes several appendices that contain technical resource reports related to air quality and greenhouse gas (GHG) emissions, cultural resources, geology and soils, paleontology, hazards and hazardous materials, noise, and traffic.

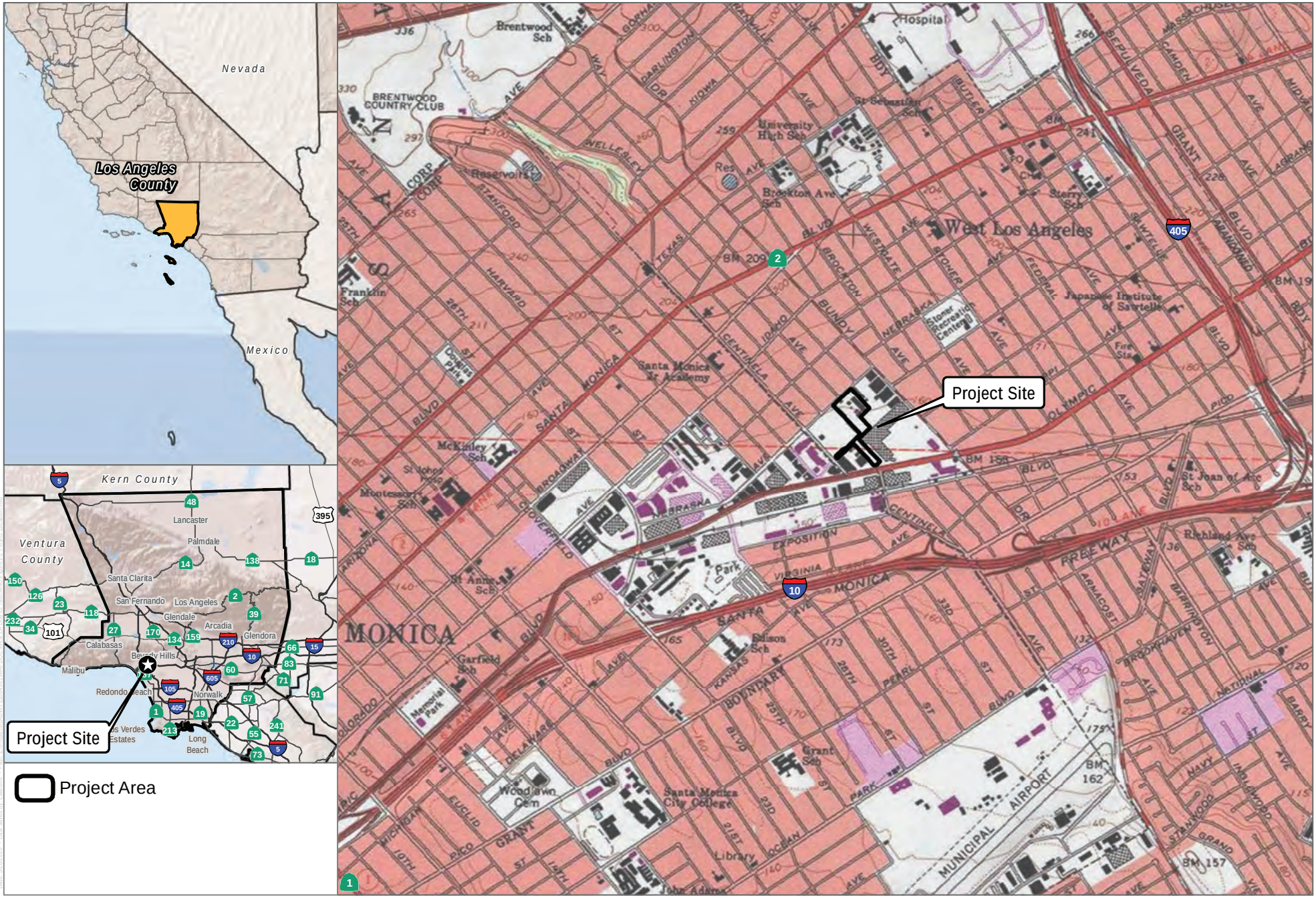
1.3 Project Location

The 6.3-acre project site is located at 12300 Nebraska Avenue in the City of Los Angeles (City). The project site is within the city block that is bound by Nebraska Avenue to the northwest, Bundy Drive to the northeast, Centinela Avenue to the southwest, and Olympic Boulevard to the southeast (see Figure 1-1, Project Location). Access to the project site is available from the west via Nebraska Avenue, from the south via Centinela Avenue, and from the east via Olympic Boulevard, which has direct access to the Interstate (I) 405. Centinela Avenue also represents the boundary between the City of Los Angeles and the City of Santa Monica. The project is located in Council District No. 11 and in the West Los Angeles Community Plan (Community Plan) Area.

1.4 Environmental Setting

The proposed project would occur on an assessor's parcel numbers (APNs) 4259018901 and 4259019900, and a portion of 4259018902, which are all owned and operated by LADWP. The existing West Los Angeles District Yard is developed with LADWP facilities and surface parking under existing conditions. The site is currently used as the West Los Angeles Service Center and includes the district office (3,893 square feet), warehouse/tool room (8,647 square feet), warehouse (5,890 square feet), electric trouble and break room (2,880 square feet), locker room (2,837 square feet), and fleet shop (6,161 square feet). Outdoor storage areas are located along the fences on both sides of the access driveway from Olympic Blvd, and along the western perimeter of the project site. An above ground fueling station is also located in this access driveway. This fueling station includes unleaded and diesel fuel tanks, which would remain above ground as part of the proposed project. A total of 120 employees are currently assigned to this facility, including 105 fleet services employees.

Existing residential development abuts the project site to northwest; the LADWP Receiving Station K (i.e., a high-voltage substation that connects power plants and local distribution lines) is located to the southwest, with industrial uses located further south in the City of Santa Monica; and commercial development and offices are located to the east and northeast.



SOURCE: USGS 7.5-Minute Series Beverly Hills Quadrangle

Los Angeles Department of Water & Power

FIGURE **1-1**

Project Location

West LA District Yard Project

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SOURCE: DigtialGlobe 2016

Los Angeles Department of Water & Power

0 200 400 Feet

FIGURE 1-2

Surrounding Land Uses

West LA District Yard Project

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2 PROJECT DESCRIPTION

2.1 Proposed Facilities

The proposed project is a facility improvement project being proposed by the LADWP. The purpose of this project is to repair and replace aging infrastructure, improve safety, provide functional efficiency, integrate sustainability into the project design, and enhance site beautification. The current facilities are unable to meet increasing customer demands and do not have adequate storage capacity for existing equipment. Additionally, the current site layout does not allow for adequate free space for fleet vehicles to maneuver around. Furthermore, the Service Planning group, who meets with new public clients and manages requests for new electrical connections, desires to relocate from their existing location in Lincoln Heights to the District Yard site to provide these services in a more convenient location. The proposed project would allow for more capacity to accommodate employees and more open space for vehicles, thereby preventing congestion at the facility and improving overall operating conditions, workflow, and safety. The project would involve the demolition of all existing structures and the construction of a new three-story, 92,000 square-foot building on the same site as the existing West Los Angeles District Yard. During construction, approximately half of the employees would temporary relocate to the Palms Yard, located at 2311 South Fairfax Avenue, Los Angeles 90016, with the remaining employees temporarily relocating to a yard site in the western portion of Los Angeles World Airport (LAX).

The structures proposed to be demolished include the existing district office, warehouse, break room, locker room, and fleet shop. One new three-story, approximately 92,000 square-foot building would be constructed on site adjacent to the northern portion of the property, which would include the following uses (approximate square footage):

- Administration – 54,000 square feet
- Warehouse – 16,000 square feet
- Fleet Services – 13,000 square feet
- Electric Trouble Services – 1,100 square feet
- Services Planning – 8,600 square feet
- Security – 15 square feet

Outdoor areas would be reconfigured to allow for newly striped vehicle parking areas and trash receptacles, as well as designated exterior storage areas (30,000 square feet). The new building would consolidate all of the functions of the demolished buildings (see Figure 2-1, Site Plan) as well as accommodate the relocated Services Planning group.

The existing gantry crane located at the yard would be relocated to the entrance driveway that provides access to Olympic Boulevard, as shown in Figure 2-2, Concept Plan. The existing fueling station and the unleaded and diesel fuel tanks that are part of the existing fueling station would remain above ground.

The majority of the surface parking areas would be demolished to construct an approximately 145,000 square-foot, one-level underground parking structure located beneath the new building on the project site. The underground parking structure would include a total of 389 parking spaces for employee and fleet vehicles. A two-story above ground parking structure would also be constructed directly to the south of the new building. The above ground parking structure would be approximately 156,000 square-feet. A total of 154 parking spaces would be included in the above ground parking structure and would be used by a variety of LADWP fleet vehicles. Additionally, 12 public parking spaces would be included outside the Services Planning office. All parking spaces would include electric vehicle charging stations. A new security gate would be constructed at the northernmost driveway from Nebraska Avenue.

The new consolidated services building would range from two to three stories in height with gray and earth-tone color exteriors. Building elevations and the overall concept design for the site is shown in Figure 2-3A and Figure 2-3B, Building Elevations. Photovoltaic solar panels would be installed on top of the new building and parking structure. Additionally, solar canopies would be installed over the outdoor storage area.

On-site vehicle circulation would be altered to require all departmental vehicles to access the site via Olympic Boulevard, Centinela Avenue, and the northernmost driveway from Nebraska Avenue. Employee access would be from the new primary driveway from Nebraska Avenue; employees would be required to enter past the security gate into the subterranean parking garage. Public access to the project site would be provided via the southernmost driveway from Nebraska Avenue, and would lead to the public parking spaces outside of the proposed Service Planning offices.

An expansion of the existing driveway within the off-site right-of-way along Nebraska Avenue would be required. To accommodate the driveway expansion, one existing street tree is proposed to be removed. New trees would be added to the project site in the landscape designated areas. No other off-site utility or infrastructure improvements are required.

2.2 Construction

Construction vehicle access to the yard would be restricted to the entrances located on Centinela Avenue and Olympic Boulevard; only employees would be allowed access to the yard via Nebraska Avenue during construction.

Equipment used for the construction of the proposed project would include a minimum of two excavators with thumb attachments, two dozers, one or two drill rigs, two cranes, one backhoe, one forklift, one padfoot compactor, one soil compactor, one loader, one bobcat with broom attachment, one water truck, two dump trucks, and one flatbed truck. The hours of operation for construction equipment are assumed to be 8 hours a day. It is assumed there would be an average of 12 workers present daily during demolition and an average of 30 workers per day during construction.

Construction of the proposed project would require the removal of approximately 100,000 cubic yards of soils, which would be exported from the site via haul trucks. Excavation is anticipated to last approximately five months and would require a total of approximately 5,000 total haul truck trips, assuming each truck would haul 20 cubic yards of soil, which would equate to approximately 65 truck trips per day.

It is assumed that two to four daily vendor trips would be required, on average, during construction of the project. Best management practices (BMPs) such as silt fencing, sand bags, filter fabrics, drain sock, and water trucks for dust control would be implemented during construction of the proposed project.

2.3 Operations

The West Los Angeles service area for this facility is bound to the north by Mulholland Drive, to the south by Imperial Highway, to the east by Robertson Boulevard, and to the west by Vista Del Mar Boulevard. The facility currently accommodates 120 employees; however, upon operation, the proposed project would accommodate approximately 375 employees. The proposed project would operate during the following hours:

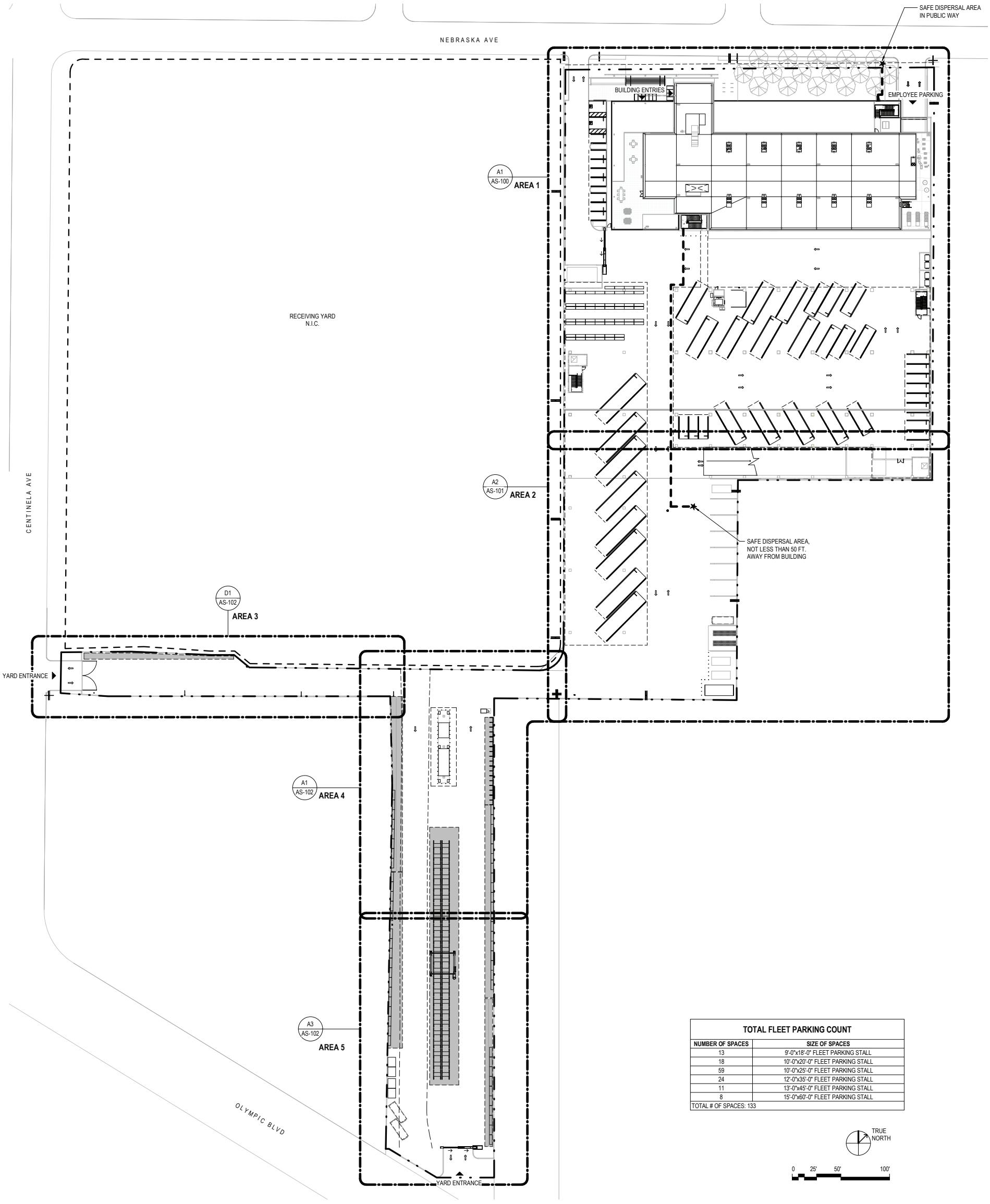
- Monday and Friday: 6:30 a.m. – 4:00 p.m.
  - District/Service Center Personnel: 287
  - Security: 2
  - Supply Chain Services Warehouse: 6
  - Fleet Maintenance: 2
- Monday and Friday: 7:00 p.m. – 3:00 p.m.
  - Electric Trouble: 10
- Monday and Friday: 3:00 p.m. – 11:00 p.m.
  - Electric Trouble: 10
  - Security: 2
  - Fleet Maintenance: 8
- Monday and Friday: 11:00 p.m. – 7:00 a.m.
  - Electric Trouble: 10
  - Security: 2
- Saturday and every other Sunday: 6:30 a.m. – 4:30 p.m.
  - Weekend staffing is on a volunteer basis. On average, there are approximately 150 employees during this shift.
- Saturday and Sunday: 7:00 a.m. – 3:00 p.m.; 3:00 p.m. – 11:00 p.m.; 11:00p.m. – 7:00 a.m.
  - Electric Trouble: 10
  - Security: 2

During project operation, employees would enter the site via a new primary driveway from Nebraska Avenue. Employees that leave the site during shift hours as part of their job (e.g., fleet employees), would exit the project site via the driveway that connects to the project site to Olympic Boulevard. Upon returning to the site, these vehicles would access the site via either Olympic Boulevard or Centinela Avenue.

2.4 Approvals Required for the Project

The following permits and approvals may be required for the proposed project:

- Design drawings approval by Department of Cultural Affairs, City of Los Angeles
- Design drawing and cost estimate approval by Los Angeles Department of Water and Power Board of Commissioners



TOTAL FLEET PARKING COUNT	
NUMBER OF SPACES	**SIZE OF SPACES**
13	9'-0"x18'-0" FLEET PARKING STALL
18	10'-0"x20'-0" FLEET PARKING STALL
59	10'-0"x25'-0" FLEET PARKING STALL
24	12'-0"x35'-0" FLEET PARKING STALL
11	13'-0"x45'-0" FLEET PARKING STALL
8	15'-0"x60'-0" FLEET PARKING STALL
TOTAL # OF SPACES: 133	

TRUE NORTH

0 25' 50' 100'

SOURCE: HDR 2020

LA DWP Los Angeles Department of Water & Power

N 0 100 200 Feet

FIGURE 2-1

Site Plan

West LA District Yard Project

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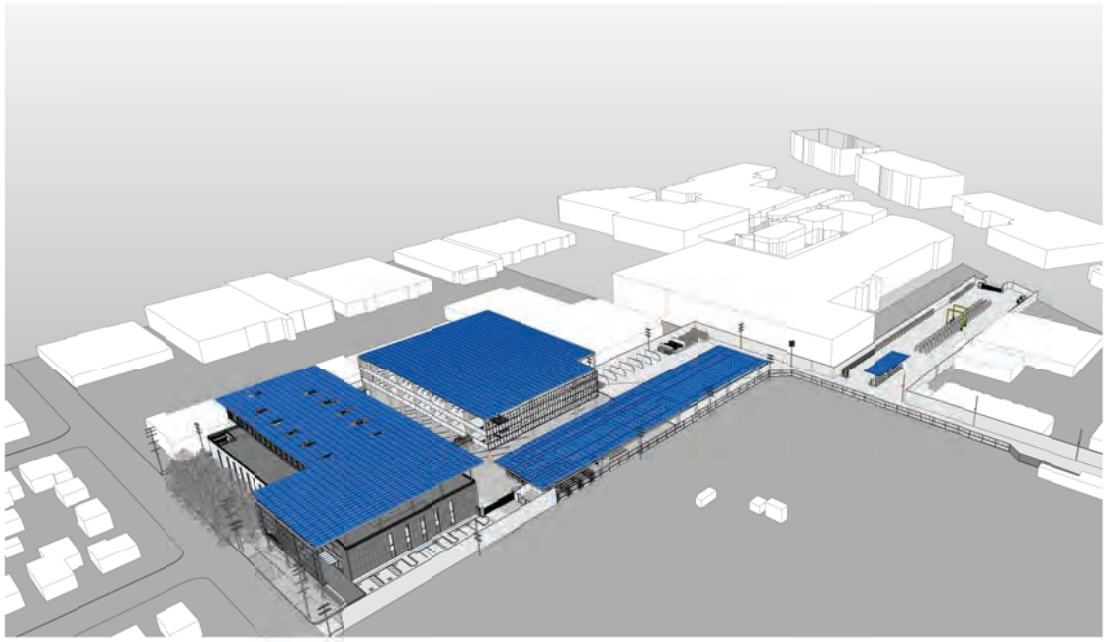
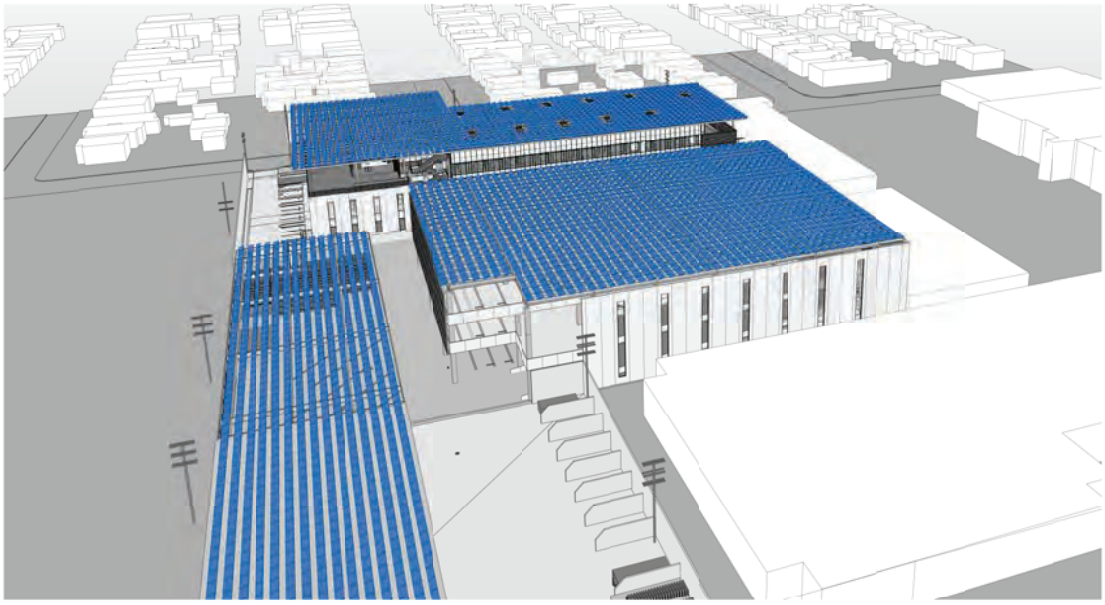


C2 AERIAL VIEW LOOKING SOUTHEAST



A2 AERIAL VIEW LOOKING NORTHEAST

SOURCE: HDR 2020

LA DWP Los Angeles Department of Water & Power

FIGURE 2-2

Concept Plan

West LA District Yard Project

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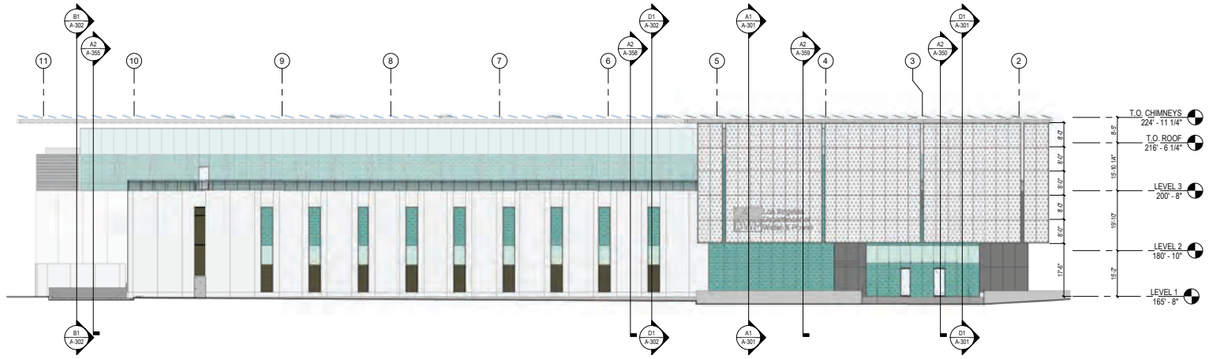
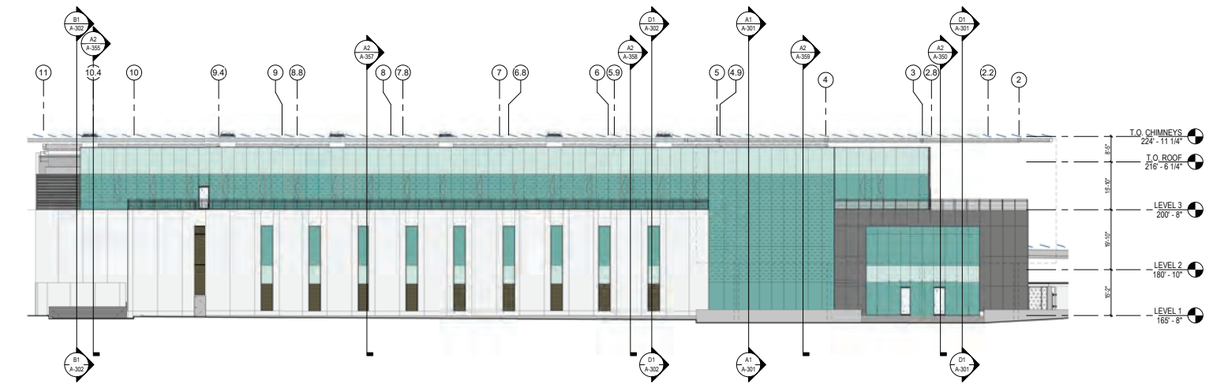
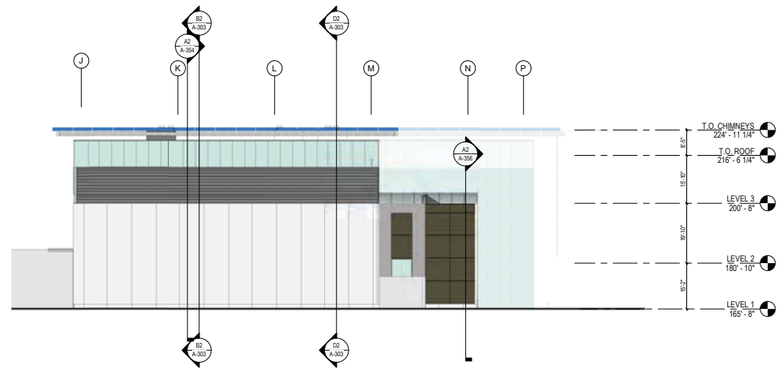


C1 NORTH ELEVATION
1/16" = 1'-0"



B1 NORTH ELEVATION (WITHOUT SCRIM IN FOREGROUND)
1/16" = 1'-0"

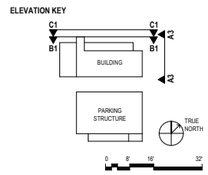


A3 EAST ELEVATION
1/16" = 1'-0"

MATERIAL KEY LEGEND

- VISION SOLAR BAN 70XL
- VISION / ELECTROCHROMIC GLASS
- VISION SOLAR BAN 70XL WITH BACKPAN
- PRECAST COMPOSITE CONCRETE PANEL
- EXPANDED METAL PANEL
- INSULATED CORRUGATED METAL PANEL
- CORRUGATED PERFORATED METAL PANEL
- PORCELAIN TILE
- PV ARRAY
- ARCHITECTURAL LOUVER
- WOVEN WIRE MESH

ELEVATION KEY



SOURCE: HDR 2020

Los Angeles Department of Water & Power

FIGURE 2-3A

Building Elevations

West LA District Yard Project

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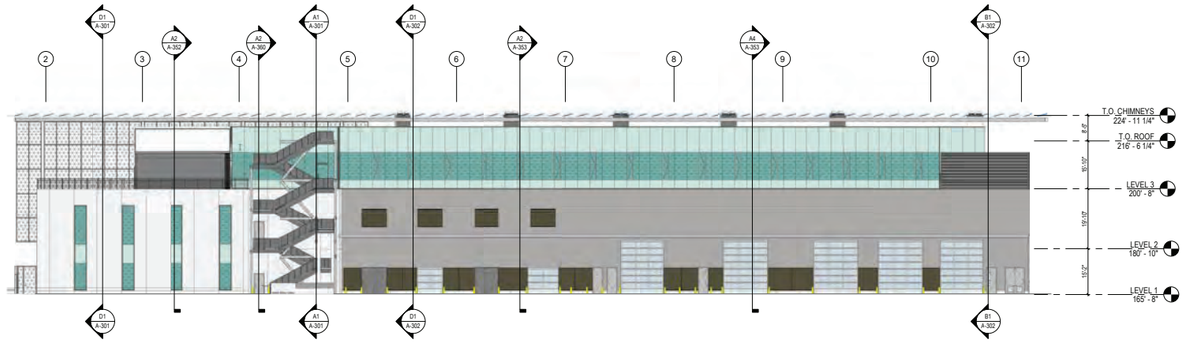
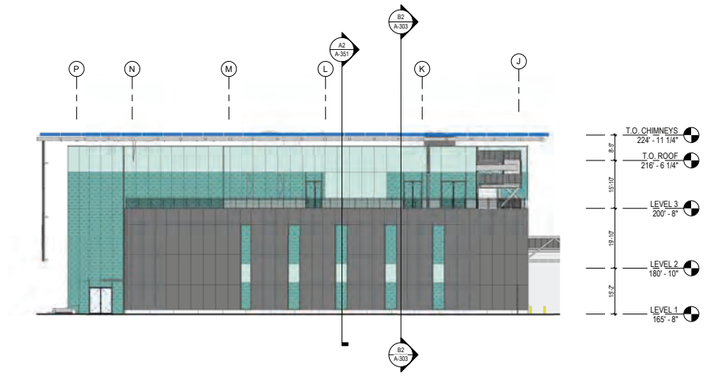


C1 SOUTH ELEVATION

1/16" = 1'-0"

MATERIAL KEY LEGEND

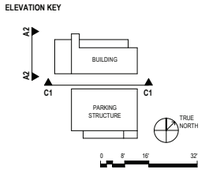
- VISION SOLAR BAN 70XL
- VISION / ELECTROCHROMIC GLASS
- VISION SOLAR BAN 70XL WITH BACKPAN
- PRECAST COMPOSITE CONCRETE PANEL
- EXPANDED METAL PANEL
- INSULATED CORRUGATED METAL PANEL
- CORRUGATED PERFORATED METAL PANEL
- PORCELAIN TILE
- PV ARRAY
- ARCHITECTURAL LOUVER
- WOVEN WIRE MESH



A2 WEST ELEVATION

1/16" = 1'-0"

ELEVATION KEY



SOURCE: HDR 2020

Los Angeles Department of Water & Power

FIGURE 2-3B

Building Elevations

West LA District Yard Project

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3 INITIAL STUDY CHECKLIST

The following discussion of potential environmental effects was completed in accordance with Section 15063(d)(3) of the CEQA Guidelines (2019) to determine if the proposed project may have a significant effect on the environment.

1. Project title:

West Los Angeles District Yard Project

2. Lead agency name and address:

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, California 90012

3. Contact person and phone number:

Aiden Leong
Environmental Planning and Assessment
Los Angeles Department of Water and Power
213.367.0706

4. Project location:

12300 Nebraska Avenue
Los Angeles, California 90025

5. Project sponsor's name and address:

Los Angeles Department of Water and Power
111 North Hope Street
Los Angeles, California 90012

6. City Council District:

District 11

7. Neighborhood Council District

West Los Angeles Neighborhood Council

8. General plan designation:

- Public Facilities

9. Zoning:

- Q(PF)-1XL – Public Facilities Zone
- ZI-2452: Transit Priority Area in the City of Los Angeles

10. Description of project:

Refer to Chapter 2 of this IS/MND

11. Surrounding land uses and setting:

Refer to Section 1.4 of this IS/MND

12. Other public agencies whose approval is required:

Refer to Section 2.4 of this IS/MND

13. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

On September 1, 2017, LADWP submitted a Sacred Lands File & Native American Contacts List Request to the Native American Heritage Commission (NAHC). The NAHC responded on September 7, 2017, indicating that the search did not identify any Native American resources in the vicinity of the project site but that the surrounding area is sensitive for cultural resources. Because the Sacred Lands File (SLF) search does not include an exhaustive list of Native American cultural resources, the NAHC suggested contacting Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the project. The NAHC provided the contact information of the five persons and entities to contact along with the SLF search results. Tribal groups on this list were contacted on September 11, 2017. One response was received by Andrew Salas of the Gabrieleno Band of Mission Indians – Kizh Nation requesting that a Gabrieleno Band of Mission Indians – Kizh Nation Native Monitor be present during all ground disturbances. See Section 3.17 for further details.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklists on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology and Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☐ Transportation and Traffic	☐ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
   a. The significance criteria or threshold, if any, used to evaluate each question; and
   b. The mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a) Would the project have a substantial adverse effect on a scenic vista?

No Impact. Scenic vistas generally refer to views of expansive open space areas or other natural features, such as mountains, undeveloped hillsides, large natural water bodies, or coastlines. Less commonly, certain urban settings or features, such as a striking or renowned skyline, may also represent a scenic vista. Under CEQA, scenic vistas also generally, although not exclusively, refer to views that are publically accessible, rather than those available to a limited number of private entities (such as residences, private property etc.). There are no views of scenic vistas on, or surrounding, the project site.

Views of the Santa Monica Mountains to the northwest would not be considered a scenic vista because, although the mountains are visible from the larger roadways (Bundy Drive and Centinela Avenue) in

proximity to the project site, views are almost completely obscured by prevailing development, urban hardscaping, and ornamental landscaping.

Although not exclusively considered scenic vistas, the Community Plan designates Wilshire Boulevard, Santa Monica Boulevard, and Avenue of the Stars as Scenic Highways and specifically states that the land contiguous to a these scenic highways is considered a constituent part of the community's Scenic Corridors (City of Los Angeles 2013). However, the project site is located approximately 0.79-mile from Wilshire Boulevard; 0.44-mile from Santa Monica Boulevard; and 3 miles from Avenue of the Stars. Thus, the project site is not located along any of the roadways designated as Scenic Highways and thus is not considered to be located within a Scenic Corridor (City of Los Angeles 2013). Furthermore, the project is located in a highly developed are in the City of Los Angeles and is already developed with LADWP facilities. As such, no impacts to scenic vistas would occur.

b) Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The proposed project is located in a highly developed area of the City. No designated State Scenic Highways are present near the project site. The nearest designated State Scenic Highway is State Route (SR) 2, located approximately 21 miles northeast of the project site, where is traverses through the San Gabriel Mountains from La Canada Flintridge to San Bernardino County (USGS 2019). As such, the project would not substantially damage scenic resources including, but not limited to, trees, rock outcropping, and historic buildings within a state scenic highway.

Although Wilshire Boulevard, Santa Monica Boulevard, and Avenue of the Stars are designated as Scenic Highways in the Community Plan, the proposed project is not located along these roadways, and the site is not visible from these locations (City of Los Angeles 2013). As such, the project would not substantially damage scenic resources including, but not limited to, trees, rock outcropping, and historic buildings within a local scenic highway or scenic corridor. Thus, no impact to scenic highways would occur as a result of the proposed project.

c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact. The project site is located in an urbanized area and is already developed with LADWP facilities. The visual quality of the project site is low to moderate under existing conditions due to the aging infrastructure onsite. The purpose of the proposed project is to repair and replace this aging infrastructure, improve safety, provide functional efficiency, integrate sustainability into the project design, and enhance site beautification.

Surrounding land uses consist of one to two story single-family residential units to the west and northwest, one to two story commercial and office structures to the north, and commercial and office two to three story structures of various design to the east. A few eight to ten story commercial structures are also present further to the north of the site. As shown in Figure 2-3, the proposed project would be one to two stories, with neutral (white, beige, and brown) exterior finishes. The building design would be rectangular and geometric (see Figures 2-3A and 2-3B, Building Elevations) and would not include the construction of any infrastructure that would be visually incompatible with the aesthetic of the surrounding development.

The project site is zoned (Q)PF-1XL (Public Facility) (City of Los Angeles 2017). The proposed project would involve improvements to the existing LADWP facilities on-site and would not include any project components that would conflict with the existing zoning. Additionally, the project would be consistent with all City regulations governing scenic quality, including Sections 12.40 of the City of Los Angeles Municipal Code (LAMC), which regulates landscape design. As such, the project would not conflict with applicable zoning and other regulations governing scenic quality. Further, the project would enhance the visual quality of the site by replacing the existing outdated structures with new and improved facilities and landscaping. As such, impacts would be less than significant.

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

Less than Significant Impact. During project construction, the increased presence of construction equipment and materials, including traffic control signage, may result in a slight increase in daytime glare; however, these impacts would be short-term and temporary in nature. Per Section 41.40 of the LAMC, it is expected that construction of the proposed project would only occur during daytime hours, generally between 7:00 am and 9:00 pm, Monday through Friday and between 8:00 am and 6:00 pm on Saturdays with no construction on Sundays and public holidays. As such, no sources of nighttime light or glare are anticipated on or around the site during construction of the proposed project.

During operation of the proposed project, staff is usually present on site Monday and Friday from 6:30 am – 11:00 pm, Tuesday and Thursday from 6:30 am – 7:00 pm, Saturday and every other Sunday from 6:30 am – 4:30 pm. These hours of operation would not change from the hours of operation already existing on the site and, as such, interior building lighting as a result of project operation would not significantly change when compared to existing conditions. The proposed project's design would incorporate some reflective materials, such as metal and glass to the site. However, the project's design would not include large expanses of glass or other highly reflective materials that would generate unusual amounts of light or reflective glare on, or around, the project site when compared to existing operational activities. The proposed project would include photovoltaic solar panels, which can produce significant glare in some scenarios. However, the photovoltaic panels associated with the proposed project would be located on rooftops (out of public viewer

locations) and would be covered with anti-reflective coatings. Additionally, the proposed project would comply with the LAMC Section 93.0117, which specifically regulates the installation of outdoor lighting that has the potential to direct light and glare towards residential property.

As such, new sources of light and glare would not adversely affect day or nighttime views in the area and impacts would be less than significant.

References

City of Los Angeles. 2013. West Los Angeles Community Plan. Accessed, August 26, 2019. https://planning.lacity.org/odocument/f6f2e01c-7383-4e75-8547-7ac98810a917/West_Los_Angeles_Community_Plan.pdf.

USGS (United States Geological Survey). 2019. California Scenic Highways (ArcGIS database). Accessed: August 26, 2019. https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=f0259b1ad0fe4093a5604c9b838a486a.

3.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. According to the California Department of Conservation's (DOC) Important Farmland Finder database, the project site is not located on or near land that is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP; DOC 2019a). As such, the proposed project would not convert Farmland to a non-agricultural use, and no impact would occur.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The project site is Zoned (Q)PF-1XL (Public Facility) and designated as Public Facilities in the General Plan (City of Los Angeles 2017). The Project site is not subject to a Williamson Act contact (DOC 2015). As such, the proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact would occur.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The project site is located in a fully developed, urban area and is not considered forest land, timberland, or a timberland production zone as defined in the California Public Resources Code or Government Code. As such, the proposed project would not conflict with existing zoning for, or cause rezoning for, forest land, timberland, or timberland zoned Timberland Production. No impact would occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As described under Section 3.2(c), the project site does not contain forest land. Thus, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. There is no farmland or forest land within the project site or on adjacent parcels. The project would involve the demolition of existing LADWP facilities and construction of new LADWP buildings in their place in order to be able to accommodate the planned staffing increase at the yard, as well as improve the

working conditions at the project site. Thus, it would not contribute to growth that may lead to the conversion of farmland or forest land. There would be no potential for construction or operation of the proposed project to convert farmland to non-agricultural use or forest land to non-forest use, either directly or indirectly. No impact would occur.

References

DOC (California Department of Conservation). 2019a. California Important Farmland Finder database. Accessed August 11 2017. http://maps.conservation.ca.gov/ciff/

DOC (California Department of Conservation). 2016. Los Angeles County Williamson Act FY. [map]. Accessed August 26, 2019. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/.

City of Los Angeles. 2019. Zimas. "Planning and Zoning." Web Map Application. Accessed August 26, 2019. http://zimas.lacity.org/

3.3 Air Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The project site is located within the South Coast Air Basin (SCAB), which is a 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. It includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The project site is within the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD).

The SCAQMD administers the Air Quality Management Plan (AQMP) for the SCAB, which is a comprehensive document outlining an air pollution control program for attaining all National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The SCAQMD implements control measures included in the AQMP as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment. On March 3, 2017, the SCAQMD approved the 2016 AQMP, which includes strategies to meet the NAAQS for the 8-hour O_3 standard by 2032, the annual $PM_{2.5}$ standard by 2021-2025, the 1-hour O_3 standard by 2023, and the 24-hour $PM_{2.5}$ standard by 2019. In its role as the local air quality regulatory agency, SCAQMD also provides guidance on how environmental analyses should be prepared. This includes recommended thresholds of significance for evaluating air quality impacts. The 2016 AQMP is a regional blueprint for achieving air quality standards and healthful air. The 2016 AQMP represents a new approach, focusing on available, proven, and cost-effective alternatives to traditional strategies while seeking to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gas (GHG) emissions and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017). Because mobile sources are the principal contributor to the SCAB's air quality challenges, the SCAQMD has been and will continue to be closely engaged with the California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (EPA), who have primary responsibility for these sources. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings, and industrial facilities to cleaner technologies in a manner that benefits not only air quality but also local businesses and the regional economy.

On April 7, 2016, the Southern California Association of Governments (SCAG's) Regional Council adopted the *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability, and High Quality of Life* (2016-2040 RTP/SCS). The 2016-2040 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals (SCAG 2016a). The SCAQMD 2016 AQMP applies the updated SCAG growth forecasts assumed in the 2016-2040 RTP/SCS.

The SCAQMD has established criteria for determining consistency with the 2016 AQMP in Chapter 12, Sections 12.2 and 12.3, of the SCAQMD *CEQA Air Quality Handbook* (CEQA Handbook). The criteria are as follows:

- **Consistency Criterion No. 1:** The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards of the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2:** The proposed project will not exceed the assumptions in the AQMP or increments based on the year of project buildout and phase (SCAQMD 1993).

Consistency Criterion No. 1

Section 3.3(b) evaluates the project's potential impacts in regard to CEQA Guidelines, Appendix G, Threshold 2 (the project's potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation impact analysis). As discussed in the following text, the project would not result in a significant and unavoidable impact associated with the violation of an air quality standard. Because the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, the project would not conflict with Consistency Criterion No. 1 of the CEQA Handbook (SCAQMD 1993).

Consistency Criterion No. 2

While striving to achieve the NAAQS for ozone (O_3) and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$; fine particulate matter) and the CAAQS for O_3, and particulate matter with a diameter less than or equal to 10 microns (PM_{10}; coarse particulate matter), and $PM_{2.5}$ through a variety of air quality control measures, the 2016 AQMP also accommodates planned growth in the SCAB. Projects are considered consistent with, and would not conflict with or obstruct implementation of, the AQMP if the growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP (per Consistency Criterion No. 2 of the SCAQMD CEQA Handbook).

The SCAQMD primarily uses demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by the SCAG for its RTP/SCS (SCAG 2016), which is based on general plans for cities and counties in the SCAB, for the development of the AQMP emissions inventory (SCAQMD 2017).[1] The SCAG 2016 RTP/SCS, and associated Regional Growth Forecast, are generally consistent with the local plans; therefore, the 2016 AQMP is generally consistent with local government plans. If a proposed project involves development that is greater than that anticipated in the General Plan and SCAG's growth projections, the project might conflict with the AQMP and may contribute to a potentially significant cumulative impact on air quality.

As discussed in section 3.14, Population and Housing, the project would be consistent with the existing land use and zoning designations. Therefore, the proposed project would not exceed the anticipated level of

[1] Information necessary to produce the emission inventory for the SCAB is obtained from the SCAQMD and other governmental agencies, including CARB, Caltrans, and SCAG. Each of these agencies is responsible for collecting data (e.g., industry growth factors, socio-economic projections, travel activity levels, emission factors, emission speciation profile, and emissions) and developing methodologies (e.g., model and demographic forecast improvements) required to generate a comprehensive emissions inventory. SCAG incorporates these data into their Travel Demand Model for estimating/projecting vehicle miles traveled and driving speeds. SCAG's socio-economic and transportation activities projections in their 2016 RTP/SCS are integrated in the 2016 AQMP (SCAQMD 2017).

development in the City's General Plan for the site and the project would be consistent t at a regional level with the underlying growth forecasts in the AQMP. Accordingly, the project would meet Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook. Therefore, implementation of the project would not result in a conflict with, or obstruct implementation of, the applicable air quality plan (i.e., the 2016 AQMP).

Summary

As described previously, the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, and would not conflict with Consistency Criterion No. 1. Implementation of the project would not exceed the demographic growth forecasts in the SCAG 2016 RTP/SCS; therefore, the project would also be consistent with the SCAQMD 2016 AQMP, which based future emission estimates on the SCAG 2016 RTP/SCS. Thus, the project would not conflict with Consistency Criterion No. 2. Based on these considerations, impacts related to the project's potential to conflict with or obstruct implementation of the applicable air quality plan would be less than significant.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant with Mitigation Incorporated. A quantitative analysis was conducted to determine whether construction and operation of the project would result in emissions of criteria air pollutants from mobile, area, and energy sources that may cause exceedances of the NAAQS or CAAQS or contribute to existing nonattainment of ambient air quality standards. The following discussion identifies potential short- and long-term impacts that would result from implementation of the project.

SCAB Attainment Designation. An area is designated as in attainment when it is in compliance with the NAAQS and/or the CAAQS. These standards are set by the EPA or CARB, respectively, for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. The criteria pollutants of primary concern that are considered in this air quality assessment include O_3, nitrogen dioxide (NO_2), CO, sulfur dioxide (SO_2), PM_{10}, and $PM_{2.5}$. Although there are no ambient standards for volatile organic compounds (VOCs) or oxides of nitrogen (NO_x), they are important as precursors to O_3.

The SCAB is designated as a nonattainment area for federal and state O_3 standards and federal and state $PM_{2.5}$ standards. The SCAB is designated as a nonattainment area for state PM_{10} standards; however, it is designated as an attainment area for federal PM_{10} standards. The SCAB is designated as an attainment area for federal and state CO standards, federal and state NO_2 standards, and federal and state SO_2 standards. While the SCAB has been designated as nonattainment for the federal rolling 3-month average lead standard, it is designated attainment for the state lead standard (EPA 2016a; CARB 2016).

SCAQMD Thresholds. Construction and operation of the project would result in emissions of criteria air pollutants for which CARB and the EPA have adopted ambient air quality standards (i.e., the NAAQS and CAAQS). Projects that emit these pollutants have the potential to cause or contribute to violations of these standards. The SCAQMD has adopted significance thresholds, which, if exceeded, would indicate the potential to contribute to violations of the NAAQS or the CAAQS. The relevant SCAQMD thresholds are shown in Table 3.3-1.

A project would result in a substantial contribution to an existing air quality violation of the federal or state standards for O_3, which is a nonattainment pollutant, if the project's construction or operational emissions would exceed the SCAQMD VOC or NO_x thresholds shown in Table 3.3-1. These emission-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur) because O_3 itself is not emitted directly, and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods.

Table 3.3-1. SCAQMD Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds		
Pollutant	*Construction (pounds per day)*	*Operation (pounds per day)*
VOCs[b]	75	55
NO_x	100	55
CO	550	550
SO_x	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55
Pb[a]	3	3
Toxic Air Contaminants and Odor Thresholds		
Toxic Air Contaminants	Maximum incremental cancer risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic and acute hazard index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Greenhouse Gases	10,000 MT/yr CO_2e for industrial facilities	

Table 3.3-1. SCAQMD Air Quality Significance Thresholds

Ambient Air Quality Standards for Criteria Pollutants[c]	
NO_2 1-hour Average NO_2 Annual Arithmetic Mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.10 ppm (federal)[e] 0.03 ppm (state)
CO 1-hour Average CO 8-hour Average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 25 ppm (federal) 9.0 ppm (state/federal)
PM_{10} 24-hour Average PM_{10} Annual Average	10.4 μg/m^3 (construction)[d] 2.5 μg/m^3 (operation) 1.0 μg/m^3
$PM_{2.5}$ 24-hour Average	10.4 μg/m^3 (construction)[d] 2.5 μg/m^3 (operation)
Sulfate 24-hour Average	25 μg/m^3 (state)

Source: SCAQMD 2015.

Notes: VOC = volatile organic compound; lb/day = pounds per day; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; Pb = lead; NO_2 = nitrogen dioxide; MT/year = metric tons per year; CO_2e = carbon dioxide equivalent; ppm = parts per million; μg/m3 = micrograms per cubic meter; ROG = reactive organic gases; SCAQMD = South Coast Air Quality Management District. GHG thresholds for industrial projects, as added in the March 2015 revision to the SCAQMD Air Quality Significance Thresholds, were not included in Table 3.3-2, as they will be addressed in Section 3.8, Greenhouse Gas Emissions.

[a] The phaseout of leaded gasoline started in 1976. Since gasoline no longer contains lead, the Project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

[b] The definition of VOC includes ROG compounds and additional organic compounds not included in the definition of ROG. However, for the purposes of this evaluation, VOC and ROG will be considered synonymous.

[c] Ambient air quality standards for criteria pollutants based on SCAQMD Rule 1303, Table A-2, unless otherwise stated.

[d] Ambient air quality threshold based on SCAQMD Rule 403.

[e] In January 2010, the EPA proposed a new 1-hour national air quality standard of 0.10 ppm for NO_2, which is more stringent than the state's current 1-hour threshold of 0.18 ppm. For the purposes of conducting a conservative analysis, the more stringent national one-hour standard for NO_2 is used as a threshold in the evaluation of the project's air quality impacts.

Construction Emissions. Construction of the project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity and the specific type of operation, and for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated, with a corresponding uncertainty in precise ambient air quality impacts.

Emissions from the construction phase of the project were estimated using CalEEMod, Version 2016.3.2. CalEEMod input parameters, including the land use type used to represent the project and size, construction schedule, and anticipated construction equipment utilization, were based on information provided by LADWP and default model assumptions. For the purpose of conservatively estimating project emissions, it is assumed

that construction of the project would start in April 2021[2] and would last approximately four years. The construction phasing schedule and duration is as follows:

- Demolition: (April 2021 – August 2021)
- Site Preparation:(April 2021)
- Shoring Phase One: (April 2021 – August 2021)
- Excavation: (August 2021 – December 2021)
- Shoring Phase Two: (August 2021 – September 2021)
- Concrete Foundations: (October 2021 – December 2021)
- Building Construction: (February 2022 – April 2024)
- Architectural Coating (December 2023 – April 2024)
- Concrete Paving (January 2024 – April 2024)

The vehicle trip assumptions and construction equipment mix used for estimating the project-generated emissions are shown in Table 3.3-2, Construction Scenario Assumptions.

Table 3.3-2. Construction Scenario Assumptions

Construction Phase	Average Daily Workers Trips	Average Daily Delivery Truck Trips	Total Haul Truck Trips	Equipment	Quantity	Usage Hours
Demolition	26	0	138	Forklifts	2	6
				Cranes	1	4
				Excavators	1	8
				Skid Steer Loaders	1	8
Site Preparation	10	0	0	Aerial Lifts	1	8
				Cranes	1	8
Shoring One	56	0	0	Air Compressors	2	8
				Generator Sets	2	8
Excavation	28	0	10,000	Crane	1	3
				Excavator	1	3

[2] The analysis assumes a construction start date of April 2021, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions, because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Table 3.3-2. Construction Scenario Assumptions

Construction Phase	Average Daily Workers Trips	Average Daily Delivery Truck Trips	Total Haul Truck Trips	Equipment	Quantity	Usage Hours
				Concrete Saws	1	8
				Forklifts	1	8
				Generator Sets	1	8
Shoring Two	4	0	0	Horizontal Drill Rig	1	8
Concrete Foundations	26	0	0	Cranes	2	8
				Excavators	2	8
				Forklifts	2	8
				Generator Sets	1	8
				Tractors/Loaders/Backhoes	2	8
				Welders	1	8
Trenching	8	0	0	Excavators	1	8
				Tractors/Loaders/Backhoes	2	8
Building Construction	124	52	0	Crane	2	7
				Forklift	3	8
				Generator Sets	1	8
				Rollers	1	8
				Tractors/Loaders/Backhoes	3	7
				Welders	1	8
Concrete Paving	18	0	0	Cement and Mortar Mixers	2	6
				Graders	1	8
				Rollers	2	6
				Rubber Tired Loaders	1	8
				Tractors/Loaders/Backhoes	1	8
Architectural Coating	26	0	0	Air Compressor	1	6

Notes: See Appendix A for details.

Implementation of the project would generate construction-related air pollutant emissions from entrained dust, equipment and vehicle exhaust emissions, and architectural coatings. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in course PM_{10} and $PM_{2.5}$ emissions. Grading would require the export of 100,000 cubic yards of soil over the course of the grading phase. It was conservatively assumed there would be 10,000 haul truck trips during the excavation phase. The project would be required to comply with SCAQMD Rule 403 to control dust emissions generated during construction activities. Standard construction practices required under Rule 403 would be employed to reduce fugitive dust

emissions, including watering of the active sites approximately three times daily depending on weather conditions. Internal combustion engines used by construction equipment and on-road vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, $PM_{2.5}$, and minimal emissions of sulfur oxides (SO_x). The application of architectural coatings, such as exterior application/interior paint and other finishes, would also produce VOC emissions, and the Project shall comply with SCAQMD Rule 1113, which proscribes the sale or application of high-VOC-content architectural coatings. Details of the construction emission assumptions and calculations are included in Appendix A. Table 3.3-3 shows the estimated maximum daily construction emissions associated with the construction of the project.

Table 3.3-3. Estimated Maximum Daily Construction Emissions – Unmitigated

Year	VOCs	NOx	CO	SOx	PM101	PM2.51
	Pounds per Day					
2020	10.17	125.28	78.07	0.23	9.92	4.18
2021	2.82	25.90	25.27	0.06	1.78	0.53
2022	13.24	24.44	27.29	0.07	2.14	0.68
2024	14.27	34.58	36.90	0.09	2.37	0.76
Maximum	*14.27*	*125.28*	*78.07*	*0.23*	*9.92*	*4.18*
SCAQMD Pollutant Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	No	Yes	No	No	No	No

Source: See Appendix A for complete results.
Notes: VOC = volatile organic compound; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = sulfur oxides; PM10 = coarse particulate matter; PM2.5 = fine particulate matter.
1 These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SCAQMD Rule 403 (Fugitive Dust).

As shown in Table 3.3-3, maximum daily construction emissions would not exceed the SCAQMD construction thresholds for VOC, CO, SO_x, PM_{10}, or $PM_{2.5}$. However, the maximum daily construction threshold would be exceeded for NO_x. This is a potentially significant impact.

Implementation of mitigation measure **MM-AQ-1**, which requires Tier 4 Final or better diesel engines, except where Tier 4 Final or better engines are not available for specific construction equipment, would reduce this impact.

MM-AQ-1 To reduce the potential for mass emissions of NO_x as a result of the construction of the project, the applicant shall do the following:

Equip heavy-duty diesel-powered construction equipment with Tier 4 Final or better diesel engines, except where Tier 4 Final or better engines are not available for specific construction equipment. LADWP shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards.

Table 3.3-4 shows the estimated maximum daily construction emissions associated with the construction of the project after the inclusion of MM-AQ-1.

Table 3.3-4. Estimated Maximum Daily Construction Emissions – Mitigated

Year	VOCs[1]	NO_x[1]	CO[1]	SO_x	PM_{10}[1]	$PM_{2.5}$[1]
	Pounds per Day					
2020	2.72	37.06	84.90	0.23	9.92	4.18
2021	1.05	7.57	27.10	0.06	1.78	0.53
2022	11.63	7.77	29.31	0.07	2.14	0.68
2024	11.92	8.81	41.62	0.09	2.37	0.76
Maximum	*11.92*	*37.08*	*84.90*	*0.23*	*9.92*	*4.18*
SCAQMD Pollutant Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	No	No	No	No	No	No

Source: See Appendix A for complete results.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
1 These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SCAQMD Rule 403 (Fugitive Dust) and Tier 4 Final engines in construction equipment.

As shown in Table 3.3-4, maximum daily construction emissions would not exceed the SCAQMD construction thresholds for VOC, NO_x CO, SO_x, PM_{10}, or $PM_{2.5}$ after inclusion of MM-AQ-1. Therefore, impacts would be **less than significant with mitigation incorporated.**

Operational Emissions. Operation of the project would produce VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from stationary sources, area sources, including natural gas combustion and use of consumer products, and mobile sources (motor vehicle trips to and from the project). The project would primarily affect air quality through vehicular traffic generated by LADWP employees. Emissions of criteria air pollutants were estimated using CalEEMod. Project buildout was assumed to occur in 2024. Existing criteria air pollutants emissions from operational activities at the project site were estimated in CalEEMod using default values based on the existing facilities including the fleet shop, warehouse and administrative land uses.

Emissions associated with daily traffic were modeled using trip generation rates provided in the Traffic Impact Analysis prepared for the project (Appendix F). The project was assumed to generate 1,030 daily trips, as discussed in the Traffic Impact Analysis. CalEEMod default trip rates, trip percentages, and trip purpose percentages vary by CalEEMod land use type. CalEEMod default data for temperature, variable start information, and emission factors were conservatively assumed for the model inputs. Project-related traffic was assumed to consist of a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2024 were used to represent project buildout.

CalEEMod was used to estimate emissions from the area sources, which include natural gas appliances, space and water heating, gasoline-powered landscape maintenance equipment, use of consumer products, and architectural coatings for maintenance of buildings. The estimated operational area source emissions were based on land use defaults of the project. CalEEMod was also used to calculate emissions associated with forklift and loader operation. It was assumed that three forklifts and four loaders would operate on site for 6 hours a day.

Table 3.3-5 presents the maximum daily emissions associated with operation of the existing facility and of the proposed project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Complete details of the emissions calculations are provided in Appendix A.

Table 3.3-5. Estimated Daily Maximum Operational Emissions (2026)

Emissions Source	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Existing						
Area	0.68	<0.01	<0.01	<0.01	<0.01	<0.01
Energy	0.01	0.06	0.05	<0.01	<0.01	<0.01
Mobile	1.07	5.48	14.94	0.05	4.08	1.13
Off-road equipment	0.69	6.68	6.90	0.01	0.44	0.41
Total Existing Emissions	*2.44*	*12.22*	*21.90*	*0.06*	*4.53*	*1.54*
Proposed						
Area	2.15	<0.01	0.07	0.00	<0.01	<0.01
Energy	0.03	0.24	0.20	<0.01	0.02	0.02
Mobile	1.68	7.83	24.49	0.10	9.01	2.46
Off-road equipment	0.86	8.43	12.34	0.02	0.42	0.39
Total Proposed Emissions	*4.72*	*16.50*	*37.10*	*0.12*	*9.45*	*2.86*
Net Emissions	*2.28*	*4.28*	*15.20*	*0.06*	*4.92*	*1.32*
SCAQMD Pollutant Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: See Appendix A for complete results.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; a dash (—) represents information that is not available.

As shown in Table 3.3-5, the total net daily operational emissions from operation of the project would not exceed the SCAQMD operational significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ and impacts would be less than significant.

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. In considering cumulative impacts from the project, the analysis must specifically evaluate

a project's contribution to the cumulative increase in pollutants for which the SCAB is designated as nonattainment for the CAAQS and NAAQS. If a project's emissions would exceed the SCAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution to nonattainment status in the SCAB. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003).

The SCAB is a nonattainment area for O_3 and $PM_{2.5}$ under the NAAQS and is a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$ under the CAAQS. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the SCAB including motor vehicles, off-road equipment, and commercial and industrial facilities. Construction and operation of the project would generate VOC and NO_x emissions (which are precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. However, as indicated in Tables 3.3-3 and 3.3-4, project-generated construction and operational emissions (with implementation of MM-AQ-1), respectively, would not exceed the SCAQMD emission-based significance thresholds for VOC, NO_x, PM_{10}, or $PM_{2.5}$; therefore, the project would not cause a cumulatively significant impact.

Cumulative localized impacts could occur if the construction of a project component were to occur concurrently with another project. Construction schedules for potential future projects near the planning area are currently unknown; therefore, potential construction impacts associated with two simultaneous projects are speculative. The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). However, air pollutant emissions associated with construction activity would be reduced through implementation of control measures required by SCAQMD. Cumulative PM_{10} and $PM_{2.5}$ construction emissions would be reduced because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in SCAQMD. The maximum daily PM_{10} and $PM_{2.5}$ emissions would not exceed the significance thresholds during project construction activities, although fugitive dust, as well as vehicle and equipment exhaust, generated during project construction would contribute to the SCAB's nonattainment designation for PM_{10} and $PM_{2.5}$; however, this contribution would not be considered cumulatively considerable.

Furthermore, the project would not conflict with growth assumptions in the SCAQMD 2016 AQMP, which addresses the cumulative emissions in the SCAB. In 2026, upon buildout of the project. Therefore, the project would be consistent at a regional level with the underlying growth forecasts in the AQMP.

Based on the above considerations, the project would not result in a cumulatively considerable contribution to the nonattainment pollutants in the SCAB, and this impact would be less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive receptors include residential land uses, schools, open space and parks, recreational facilities, hospitals, resident care facilities, daycare facilities, or other facilities that may house individuals with health conditions that would be affected by poor air quality.

Localized Significance Thresholds Analysis. The SCAQMD recommends the evaluation of localized NO_2, CO, PM_{10}, and $PM_{2.5}$ construction-related impacts on sensitive receptors in the immediate vicinity of a project site. Residences in the Project area would be located 75 feet from the northwest boundary of the project site. These residents would be considered sensitive receptors that could be affected by construction-generated air pollutant emissions.

The project site is located in Source Receptor Area 2 (Northwest Coastal LA County). The maximum number of acres disturbed on the peak day was estimated using the "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (SCAQMD 2011), which provides estimated acres per 8-hour day for crawler tractors, graders, rubber tired dozers, and scrapers. Based on the SCAQMD guidance, and assuming an excavator can grade 0.5 acres per 8-hour day (similar to graders, dozers, and tractors), it was estimated that the maximum acres on the project site that would be disturbed by off-road equipment would be 3.5 acre per day (three rubber tired dozer, and four tractors/loaders/backhoes). The closest receptors to construction activity would be the residents located 23 meters (75 feet) south of the project site; therefore, the SCAQMD Localized Significance Threshold (LST) thresholds for 25 meters (82 feet) was assumed.

Construction activities associated with the project would result in temporary sources of on-site fugitive dust and construction equipment emissions. Off-site emissions from vendor trucks, haul trucks, and worker vehicle trips are not included in the LST analysis (SCAQMD 2008). The SCAQMD LST Methodology specifies the maximum allowable daily emissions that would satisfy the localized significance criteria. The maximum daily on-site construction emissions are compared to the allowable emission rates for Source Receptor Area 2 in Table 3.3-6. Additional details of the LST analysis are provided in Appendix A.

Table 3.3-6. Localized Significance Threshold Analysis for Construction Emissions

Year	NO_2	CO	PM_{10}	$PM_{2.5}$
	Pounds per day (on-site)			
2020	65.30	39.01	7.04	3.27
2021	20.98	19.86	1.06	0.99
2023	2.64	21.69	0.07	0.07
2024	11.52	9.54	0.46	0.42
Maximum Daily On Site Emissions	65.30	39.01	7.04	3.27
SCAQMD LST Criteria	135	1,179	10	6
Threshold Exceeded?	No	No	No	No

Source: SCAQMD 2008.

Notes: LST = Localized Significance Threshold; lb/day = pounds per day; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Construction emissions estimates are rounded to the nearest pound.
LSTs were determined based on the values for Source Receptor Area 6, a 5-acre site, at a distance of 100 meters from the nearest sensitive receptor.

As shown in Table 3.3-6, construction activities would not generate substantial emissions of pollutants to sensitive receptors. Impacts to sensitive receptors in the vicinity of project construction would be **less than significant**.

Carbon Monoxide Hotspots. Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed CO "hotspots." CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors. Typically, high CO concentrations are associated with severely congested intersections operating at an unacceptable level of service (LOS) (LOS E or worse is unacceptable). Projects contributing to adverse traffic impacts may result in the formation of a CO hotspot. Additional analysis of CO hotspot impacts would be conducted if a project would result in a significant impact or contribute to an adverse traffic impact at a signalized intersection that would potentially subject sensitive receptors to CO hotspots.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. The traffic impact study for the proposed project, which is included in this IS/MND as Appendix F, evaluated whether there would be a decrease in the level of service (LOS) (i.e., increased congestion) at the intersections affected by the project. The potential for CO hotspots was evaluated based on the results of the traffic impact study. The California Department of Transportation Institute of Transportation Studies Transportation Project-Level Carbon Monoxide Protocol (CO Protocol; Caltrans 2010) was followed for this analysis. CO hotspots are typically evaluated when (1) the LOS of an intersection decreases to LOS E or worse; (2) signalization and/or channelization is added to an intersection; and (3) sensitive receptors such as residences, schools, and hospitals are located in the vicinity of the affected intersection or roadway segment. The project's traffic impact study evaluated eight intersections under AM and PM peak hours. As determined by the traffic impact study, LOS at these intersections would not decrease to LOS E or worse as a result of the project; therefore, further analysis is not required. Accordingly, the proposed project would not generate traffic that would contribute to potential adverse traffic impacts that may result in the formation of CO hotspots. In addition, due to continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing. Based on these considerations, the proposed project would result in **a less than significant impact** to air quality with regard to potential CO hotspots.

Toxic Air Contaminants. Toxic air contaminants (TACs) are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. As discussed under the LST analysis, the nearest sensitive receptors to the proposed project are residences located approximately 75 feet to the northwest of the project site.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends an incremental cancer risk threshold of 10 in 1 million. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. The SCAQMD recommends a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) non-carcinogenic effects.[3] TACs that would potentially be emitted during construction activities associated with development of the proposed project would be diesel particulate matter.

Diesel particulate matter emissions would be emitted from heavy equipment operations and heavy-duty trucks. Heavy-duty construction equipment is subject to a California Air Resources Board (CARB) Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions. As described for the LST analysis, PM_{10} (representative of diesel particulate matter) exposure would not exceed the SCAQMD's threshold. According to the OEHHA, health risk assessments (which determine the exposure of sensitive receptors to toxic emissions) should be based on a 30-year exposure period for the maximally exposed individual resident. However, such assessments should also be limited to the period/duration of activities associated with the project. The duration of the proposed construction activities would constitute a small percentage of the total 30-year exposure period. The construction period for the proposed project would be approximately 4 years, after which construction-related TAC emissions would cease. Due to this relatively short period of exposure and minimal particulate emissions on site, TACs generated during construction would not be expected to result in concentrations causing significant health risks.

Following completion of on-site construction activities, the project would not involve new routine operational activities that would generate TAC emissions. Operation of the proposed project would not result in any non-permitted direct emissions. For the reasons described above, the project would not result in substantial TAC exposure to sensitive receptors in the vicinity of the proposed project, and impacts would be less than significant.

[3] Non-cancer adverse health risks are measured against a hazard index, which is defined as the ratio of the predicted incremental exposure concentrations of the various non-carcinogens from the project to published reference exposure levels that can cause adverse health effects.

Health Impacts of Criteria Air Pollutants. Construction of the proposed project would generate criteria air pollutant emissions; however, the project would not exceed the SCAQMD mass-emission thresholds.

The SCAB is designated as nonattainment for O_3 for the NAAQS and CAAQS. Thus, existing O_3 levels in the SCAB are at unhealthy levels during certain periods. The health effects associated with O_3 are generally associated with reduced lung function. Because the proposed project would not involve construction activities that would result in O_3 precursor emissions (VOC or NO_x) in excess of the SCAQMD thresholds, the project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

In addition to O_3, NO_x emissions contribute to potential exceedances of the NAAQS and CAAQS for NO_2. Exposure to NO_2 and NO_x can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Project construction would not exceed the SCAQMD NO_x threshold, and existing ambient NO_2 concentrations are below the NAAQS and CAAQS. Thus, proposed project construction is not expected to exceed the NO_2 standards or contribute to associated health effects.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. CO hotspots were discussed previously as a less than significant impact. Thus, the proposed project's CO emissions would not contribute to the health effects associated with this pollutant.

The SCAB is designated as nonattainment for PM_{10} under the CAAQS and nonattainment for $PM_{2.5}$ under the NAAQS and CAAQS. Particulate matter contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing (EPA 2016b). As with O_3 and NO_x, the proposed project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SCAQMD's thresholds. Accordingly, the proposed project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, the proposed project would not result in a potentially significant contribution to regional concentrations of non-attainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. Impacts would be **less than significant**. No mitigation is required.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. Construction of the project would result in emissions from diesel equipment, gasoline, and asphalt paving material fumes. Odors from these sources would be localized and generally confined to the project site. Construction of the project would use typical construction techniques in compliance with SCAQMD rules. Odors would be highest near the source and would quickly dissipate off site. Any odors associated with construction activities would be temporary and would cease upon completion of construction. As such, project construction would not cause an odor nuisance, and odor impacts would be less than significant.

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding operations (SCAQMD 1993). The project would not result in the implementation of any such land use. The project would include the operation of a spray booth. While architectural coatings can produce odors, project spraying activities would be contained within the spray booth and would not cause an odor nuisance. Therefore, project operations would result in a less-than-significant odor impact.

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3.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact. The proposed project site is fully developed and is located in a highly urbanized area of the City, which precludes the project site from sensitive habitat growth and associated use by sensitive wildlife species. Only small areas of drought-tolerant ornamental landscaping are located along the building frontage of Nebraska Avenue, including 2 on-site trees, which are not considered candidate, sensitive, or special status species. Per City Ordinance 177404, any protected trees proposed for removal would be removed with approval of a permit from the City's Chief Forrester.[4]

Due to the prevailing lack of vegetation that could constitute viable habitat for candidate, sensitive, or special-status species on the project site and in the surrounding area, project implementation is not anticipated to have an adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species. Impacts would be less than significant.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The project site is fully developed with LADWP facilities and surface parking. There are no existing drainages, riparian habitats, or other sensitive natural communities on site or in the surrounding area (USFWS NWI 2019). The nearest recorded sensitive habitat is a Paulstine System (non-tidal wetland) located approximately 0.85-mile northwest of the project site (USFWS NWI 2019). Due to the prevailing distance between the project site and this habitat, project implementation would have no direct or indirect impacts on this habitat or any other riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. No impact would occur.

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. There are no wetlands, including marshes, vernal pools, lakes, or freshwater ponds located on or adjacent to the project site (USFWS NWI 2019). The nearest recorded sensitive habitat is a Paulstine System (non-tidal wetland) located approximately 0.85-mile northwest of the project site (USFWS NWI 2019). Due to

[4] Per City Ordinance 177404, any native Oaks, Southern California Black Walnut trees, Western Sycamore trees, or California Bay trees measuring four inches or more in cumulative diameter approximately four and a half feet above ground level are protected.

the prevailing distance between the project site and this habitat, project implementation would not have a substantial adverse effect on this wetland. Further, the project site is already developed and located in a highly urbanized area of the City. As such, the project would have no impact on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant with Mitigation Incorporated. The project site and surrounding area is fully developed and located within an urban area, which generally precludes the project site from use as a green space within a wildlife corridor or as a native wildlife nursery site. The project site does not reside within any designated wildlife corridors or habitat linkages identified in the South Coast Missing Linkages analysis conducted by South Coast Wildlands (South Coast Wildlands 2008). No wildlife corridor or linkages are identified in the area by the City of Los Angeles (City of Los Angeles 2013). Additionally, as stated above, there are no water bodies, including wetlands and riparian habitats, located within the vicinity of the project site, and, as such, project implementation would not substantially interfere with the movement of any native, migratory fish (USFWS NWI 2019).

Two ornamental trees exist on-site along Nebraska Avenue, and northwest of project site adjacent to the existing parking lot. One of the off-site ornamental street trees along Nebraska Avenue would be removed to accommodate the driveway expansion. Other ornamental trees near the project site have potential to support nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code Section 3500. Construction activities may occur during breeding, reproduction, and juvenile rearing periods for nesting birds (i.e., between March 1–August 31). As such, project construction activities, specifically those that generate noise, have the potential to disturb nesting birds in the project vicinity such that impacts could be potentially significant.

Implementation of mitigation measure **MM-BIO-1** would reduce this impact to a less-than-significant level. Additionally, with implementation of proposed landscaping, the site would continue to provide potential nesting sites in an urban environment, consistent with existing conditions. Therefore, long-term impacts to nesting and migratory birds would be less than significant.

MM-BIO-1 If vegetation removal and/or outdoor construction activities will occur during the breeding/nesting season (i.e., between February 1 and August 31) for native birds, preconstruction surveys for nesting migratory birds shall be conducted by a qualified biologist up to 14 days before initiation of construction activities. The qualified biologist shall survey the construction zone and a 250-foot radius surrounding the construction zone to determine whether the activities taking place have the potential to disturb or otherwise harm nesting

birds. In the event an active nest is found within the survey area, site preparation and construction activities shall stop until the biologist can establish an appropriate setback buffer around the nest. Buffer size will be determined on a case-by-case basis by the biologist based on site conditions, the species' life history and disturbance tolerance, the nest's distance to construction activities, and the type of construction ongoing in the vicinity of the nest. Buffers will be clearly delineated (e.g., using rope, flagging, signage), or they may also be defined by natural or manmade features that are deemed sufficient to prohibit access (e.g., tree rows, fences). Project activities within the buffer shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant Impact. Several ornamental trees are present on, and near, the project site. Specifically, there are two trees located on the northwestern perimeter of the site along Nebraska Avenue, several street trees off site along Nebraska Avenue, and several off-site ornamental trees to the northeast between the project site and the adjacent property. Any trees proposed for removal under the proposed project would be removed per City Ordinance 177404 (Section 12.21 of the LAMC), which requires that a tree removal permit be submitted and approved by the City's Chief Forester. Off-site trees would not be impacted by the proposed project.

Furthermore, approximately 10 Ginkgo Biloba trees would be planted on the project site under the proposed project. As such, the project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance and impacts would be less than significant.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project site is not located within an adopted Habitat Conservation Plan or Natural Community Conservation Plan (CDFW 2019). Additionally, the project does not conflict with the provisions of the West LA Community Plan (City of Los Angeles 2013). Therefore, the proposed project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. No impact would occur.

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3.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

A Cultural Resources Report was prepared for the proposed project by Dudek in November 2017 and included as Appendix B of this IS/MND.

a) Would the project cause a substantial adverse change in the significance of a historical resource as pursuant to §15064.5?

Less Than Significant Impact. A California Historical Resources Information System Records Search (CHRIS) from the South Central Coastal Information Center (SCCIC) was conducted for the proposed project in September 2017. The CHRIS search included all previously recorded cultural resources and investigations within a 0.5-mile radius of the project site. Additional consulted sources included historical maps of the project area; the National Register of Historic Places (NRHP); the California Register of Historical Resources (CRHR); and, the California Historic Property File (see Appendix B). Results of the CHRIS search indicate that 15 previously conducted studies were conducted within the 0.5-mile records search radius between 1977 and 2013. Of these 15 studies, only one (Report No. LA-12500) study overlaps the project site. Report No. LA-12500 documents the results of archaeological monitoring conducted during the installation of 11.4 miles of

underground transmission line located in the western portion of the City of Los Angeles in 2013. However, no cultural resources were identified in the direct project area as a result of Report No. LA-12500.

In addition, nine previously recorded resources were identified within a 0.5-mile radius of the project area. However, none of these previously recorded cultural resources, identified through the SCCIC records search, are located within the project site. The closest cultural resource to the project site, the historic Southern Pacific Railroad right-of-way (P-19-003803) is located approximately 0.1-mile from the project site. However, this resource would not be affected by the proposed project.

The project site includes five LADWP structures that were constructed between 1953 and 1966. As such, extensive archival research was conducted in support of the historical significance evaluation of the existing structures. Research efforts included review of online resources at the Los Angeles Public Library, review of LADWP Photograph Collection, visit to the LADWP Records Center, review of LA City Archives, Los Angeles Department of Building and Safety records search, as well as review of aerial photograph and historic maps. Further, a pedestrian survey of the project site was conducted on October 11, 2017. A discussion of the historic significance of each building is included below.

Building 1, Locker Room, 1953

Building 1 fronts West Nebraska Avenue and is situated at the west corner of the parcel. According to the original City of Los Angeles Building Permit, the building was a one-story concrete block building, intended to function as a locker room, washroom, and office for LADWP employees. The structure is a Mid-Century Modern building and was constructed in 1953. The building is currently used as a restroom, shower, locker room, and exercise area for employees.

Building 2, Warehouse – Tool Room, 1953

Building 2 is located immediately southeast of Building 1 and against the dividing southwest property line separating the headquarters yard from the transformer yard for 1840 Centinela Avenue. According to the original City of Los Angeles Building Permit, the building was a one-story concrete block building, intended to warehouse electrical supplies and hazardous materials.

Building 3, Warehouse – Fleet Shop, 1956

Building 3 is located southeast of and in line with Buildings 1 and 2 and against the dividing southwest property line separating the headquarters yard from the transformer yard for 1840 Centinela Avenue. According to the original City of Los Angeles Building Permit, the building was originally a one-story structure intended as a truck shed.

Building 4, District Office, 1959

Building 4 is located northeast of Building 1, across the exiting parking lot and entry road, and fronts west Nebraska Avenue. According to the original City of Los Angeles Building Permit, the building was originally a

two-story concrete block building, intended to replace the office in Building 1 and operate thereafter as the official office for the site.

Building 5, Break Room, 1966

Building 5 is located southeast of Building 4 and across the exiting parking lot and entry road from Building 2. According to the original City of Los Angeles Building Permit, the building was originally a two-story concrete block building, intended as another warehouse and tool room. Currently, the building is being used as a break room and employee classroom.

SurveyLA Citywide Historic Context Statement for Municipal Water and Power provides guidance for identifying and evaluating potential historical resources related to water and power, and outlines the requirements for various property types. The LADWP West Los Angeles Yard falls under the property type: Administration Buildings and Service Yards, which has a period of significance of 1902–1980. The context statement also includes eligibility standards, character defining/associative features, and integrity consideration for the property type, which were all considered in the evaluation.

NRHP/CRHR Statement of Significance

In consideration of the project site's history and requisite integrity, the Cultural Resources Report found the West Los Angeles Department of Water and Power Yards not eligible for listing in the NRHP or CRHR based on the following significance evaluation and in consideration of national and state eligibility criteria.

1. **Criterion A/1. Associated with events that have made a significant contribution to the broad patterns of our history.** According to the Cultural Resources Report, the site is most strongly related to equipment and vehicle storage and lacks significant associations with events important to California history. Thus, the site does not appear eligible under NRHP/CRHR Criteria A/1.
2. **Criterion B/2. Associated with the lives of persons significant in our past.** . This building has no known associations with any important figures in LADWP or City of Los Angeles history. Archival research failed to indicate any associations with significant persons, including engineer and worker names associated with the buildings. As such, the site does not appear eligible under NRHP/CRHP Criteria B/2.
3. **Criterion C/3. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.** Under the property type "Administrative Buildings and Service Yards," the site does fall within the period of significance (1902–1980) and is associated with water and power administration and maintenance, per the eligibility standards. However, the buildings lack many of the character defining and associative features required such as "retaining a significant lobby" or prominent signage. The site has no significant landscape features. Because no notable architects or engineers designed the site, the site is not related to a significant architectural or engineering theme. The style of the buildings is relatively unremarkable and may be

indistinguishable from other LADWP neighborhood headquarters throughout Los Angeles. As such, the buildings are not the work of a master architect or important creative individual and the project site does not appear eligible as a contributor to a historic district. Thus, the project site does not appear eligible under NRHP/CRHR Criteria C/3.

4. **Criterion D/4: Have yielded, or may be likely to yield, information important in prehistory or history.** There is no evidence to suggest that the project site has the potential to yield information important to state or local history, nor is it associated with a known archaeological resource. Thus, the site is recommended not eligible under NRHP/CRHR Criterion D/4.

City of Los Angeles HCM Criteria

City of Los Angeles Historic-Cultural Monument designation is reserved for those resources that have a special aesthetic, architectural, or engineering interest or value of a historic nature. The Cultural Heritage Ordinance establishes criteria for designation; these criteria are contained in the definition of a Monument in the Ordinance. A historical or cultural monument is any site (including significant trees or other plant life located thereon), building, or structure of particular historical or cultural significance to the City of Los Angeles, such as historic structures or sites:

- in which the broad cultural, political, economic, or social history of the nation, state, or community is reflected or exemplified;
- which are identified with historic personages or with important events in the main currents of national, state, or local history;
- which embody the distinguishing characteristics of an architectural-type specimen, inherently valuable for a study of a period, style, or method of construction;
- which are a notable work of a master builder, designer, or architect whose individual genius influenced his or her age.

A proposed resource may be eligible for designation if it meets at least one of the criteria above. (LAOHR 2017). Because the City of Los Angeles HCM criteria closely follow that of the NRHP and CRHR, the national and state significance evaluation previously presented is also relevant here. The project site is not an example of outstanding craftsmanship, was not created by a "master" architect, builder, or designer, did not influence the design of other architecture in the City of Los Angeles, and does not have a role in the development or history of Los Angeles. It retains a moderate amount of integrity; however, alterations detract from integrity of materials and design. The site is not associated with a person or event important to Los Angeles history. The site is not associated with important movements or trends shaping the development of Los Angeles. Therefore, the project site is recommended not eligible for listing as a City of Los Angeles HCM.

Integrity Discussion

Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics that existed during the resource's period of significance, and the historical resource's ability to convey that significance. Seven aspects or qualities, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association (NPS 1990). To retain historic integrity, a property generally possesses several, if not most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance. The project site's integrity is as follows:

Location: The building is sited on the original location of construction in its original orientation. Therefore, the project site retains integrity of location.

Design: The five buildings were subjected to several alterations over time that have compromised its integrity of design, including reconfiguration of entry points. Therefore, the buildings and grounds at the project site do not maintain integrity of design.

Setting: The site does not maintain its original property boundaries, extending north into the 12272 West Nebraska Avenue lot sometime in the last decade. Areas such as the southern boundary along the 1840 Centinela Avenue have also been alerted overtime. The setting within the larger neighborhood context, such as areas to the northwest, northeast, and southwest of the site are largely unaltered. Therefore, the project site retains diminished integrity of setting, by the reconfiguration of the yards over time.

Materials: Numerous alterations to the buildings on site introduced new materials to that were not part of the original design. Therefore, the project site does not retain integrity of materials.

Workmanship: The physical evidence of a craftsman's skills in constructing the original building was compromised by the exterior alterations of the buildings. Thus, the project side no longer retains its integrity of workmanship.

Feeling: The alterations made to the site do not significantly impact the buildings' ability to correlate to a Mid-Century Modern working yard for the use of LADWP journeymen and their supporting staff. It retains high levels of functionality that it would have had since the site was developed in the 1950s and 1960s. For the most part, buildings retain their original roles, and the feeling of individual buildings has not changed. However, changes to the layout of the property and setting, do affect integrity of feeling. The significant addition of outdoor storage obstructs the original feeling of a working yard. The creation and addition of lots for parking spaces further degrades integrity of feeling. Therefore, the project site retains diminished integrity of feeling.

Association: No important historical associations with events and people were identified for the project site.

Summary

The project site appears not eligible under all NRHP, CRHR, and City of Los Angeles HCM designation criteria. Further, the property exhibits moderate integrity of location, setting, and feeling, and low integrity of design, materials, or workmanship. No important historical associations with events and people were identified. Consequently, the property does not maintain the requisite integrity to warrant listing in the NRHP, CRHR, or as a City of Los Angeles HCM. As such, impacts to historical resources would be less than significant.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant with Mitigation Incorporated. As previously discussed, in order to determine the archaeological sensitivity of the project site, a CHRIS records search from the SCCIC was conducted. The search included any previously recorded cultural resources and investigations within a 0.5-mile radius of the project site. The results of the record search are included as Appendix B of this document. As discussed in Appendix B, the SCCIC records search indicate that 15 previously conducted studies were identified within the 0.5-mile records search radius between 1977 and 2013. Of these studies, one overlaps the current project area (LA-12500). The *Final Archaeological Resources Monitoring Report for the Los Angeles Department of Water and Power Scattergood–Olympic Transmission Line Project, Vault Investigations, Los Angeles County, California* (Vader 2013), documents the results of archaeological monitoring conducted during the installation of 11.4 miles of underground transmission line located in the western portion of the City of Los Angeles. No cultural resources were identified on the project site as a result of the study. Cultural material was recovered at the southern end of the alignment where the proposed right-of-way (ROW) traversed the coast.

No previously recorded cultural resources were identified within the project site as a result of the SCCIC records search. Nine previously recorded resources were identified within a 0.5-mile-radius of the project area. Two of the resources are historic period archaeological deposits, and seven of the resources are built environment resources. All of the previously recorded resources are south of the project site and clustered along resource P-19-003803, the historic Southern Pacific Railroad ROW, which at its closest point, is located approximately 0.1-mile from the project site.

As part of the process of identifying cultural resources within or near the project site, the Native American Heritage Commission (NAHC) was contacted to request a review of the Sacred Lands File (SLF) on September 1, 2017. The NAHC responded on September 7, 2017, indicating that the search did not identify any Native American resources in the vicinity of the project site but that the surrounding area is sensitive for cultural resources. Because the SLF search does not include an exhaustive list of Native American cultural resources, the NAHC suggested contacting Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources on or near the project site. The NAHC provided the contact information of the five persons and entities to contact along with the SLF search results. Tribal groups on this list were contacted on September 11, 2017. One response was

received by Andrew Salas of the Gabrieleno Band of Mission Indians – Kizh Nation requesting that a Gabrieleno Band of Mission Indians – Kizh Nation Native Monitor be present during all ground disturbances.

Although one Native American contact, the Gabrieleno Band of Mission Indians – Kizh Nation, requested the presence of a Native American monitor during all ground-disturbing activities, no specific archaeological resources or sensitivity concerns were identified by any sources consulted such as the CHRIS records search, Native American coordination, or survey. However, there is a possibility of encountering previously undisturbed archaeological resources at subsurface levels during ground-disturbing activities associated with the project such that potentially significant impacts could occur. However, with implementation of mitigation measure **MM-CUL-1**, potential impacts to archeological resources during construction activities would be reduced to a less-than-significant level.

MM-CUL-1 In the event that archaeological resources or tribal cultural resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, evaluates the significance of the find and determines whether or not additional study is warranted. Should it be required, temporary flagging may be installed around a resource to avoid any disturbances from construction equipment. Depending upon the significance of the find under CEQA (14 California Code of Regulations Section 15064.5(f); PRC Section 21082), the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted. In the event that an archaeological resource inadvertently discovered during project construction is determined to be potentially of Native American origin based on the initial assessment of the find by a qualified archaeologist pursuant to California Public Resources Code Section 21083.2(i), the Native American tribes that consulted on the proposed project pursuant to California Assembly Bill 52 shall be notified and be provided information about the find to allow for early input from the tribal representatives with regards to the potential significance and treatment of the resource. Work in the area may resume once evaluation and treatment of the resource is completed or the resource is recovered and removed from the site.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact. There is no indication that human remains are present within the boundaries of the project site. In the unlikely event that excavation activities during construction inadvertently discover buried human remains, the lead agency staff and the County Coroner must be notified of the discovery within 48 hours of discovery, in accordance with Section 7050.5 of the California Health and Safety Code. No further excavation or

disturbance of the identified material, or any area reasonably suspected to overlie additional remains, can occur until a determination has been made. If the County Coroner determines that the remains are, or are believed to be, Native American, the coroner would notify the NAHC within 24 hours. In accordance with PRC Section 5097.98, the NAHC must immediately notify those persons it believes to be the Most Likely Descendants (MLD) of the deceased Native American. Within 48 hours of this notification, the MLD would recommend to the lead agency her/his preferred treatment of the remains and associated grave goods. As such, and with compliance with Section 7050.5 of the California Health and Safety Code, impacts would be less than significant.

References

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3.6 Energy

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in a potentially significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

a) Would the project result in a potentially significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

Less Than Significant Impact. The short-term construction and long-term operation of the proposed project will require the consumption of energy resources in several forms at the project site and within the project area. Construction and operational energy consumption is evaluated in detail below.

Electricity

Construction Use

Temporary electric power for as-necessary lighting and electronic equipment would be provided by LADWP. The amount of electricity used during construction would be minimal, because typical demand would stem from electrically powered hand tools. The electricity used for construction activities would be temporary and minimal; therefore, project construction would not result in wasteful, inefficient, or unnecessary consumption of electricity. Impacts would be less than significant.

Operational Use

Project operation would require electricity for multiple purposes including building heating and cooling, lighting, appliances, electronics, and water and wastewater conveyance. The estimation of operational building energy was based on the applicant-provided forecasted annual electricity consumption estimate of 569,720 kilowatt-hours (kWh). Supply, conveyance, treatment, and distribution of water for the project would also require the use of electricity. Similarly, wastewater generated by the project would require the use of electricity for conveyance and treatment. The water consumption estimate for the project (17,236,917 gallons of water per year) water use were based on defaults values in CalEEMod, and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod. Table 3.6-1, Project Operations – Electricity Demand, presents the electricity demand for the project.

Table 3.6-1. Project Operations – Electricity Demand

Project Facility	kWh/year
Project Buildings	2,170,309.5
Water/Wastewater	15,242.14
Total	584,962.14

Source: Appendix A
Notes: kWh = kilowatt-hour.

For comparison, electricity demand for Los Angeles County in 2018 was 67,856 million kWh (CEC 2018a). The proposed project would result in a minimal increase in electricity consumption and would be inherently energy efficient by implementing measures such as LED lighting, optimizing building envelope thermal properties, managing water usage, and optimizing energy performance and controls. Additionally, solar photovoltaic (PV) panels would be incorporated into the project design, which would offset the majority of electricity that would be consumed by the project. Impacts related to operational electricity use would therefore be less than significant.

Natural Gas

Construction Use

Natural gas is not anticipated to be required during construction of the proposed project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of project construction would have a negligible contribution to the project's overall energy consumption.

Operational Use

Natural gas consumption during operation would be required for various purposes, including building heating and cooling. For building consumption, default natural gas generation rates in CalEEMod for the proposed project land uses and climate zone were used. Table 3.6-2, Project Operations – Natural Gas Demand, presents the natural gas demand for the proposed project

Table 3.6-2. Project Operations – Natural Gas Demand

Project Facility	kBtu/year
Project Buildings	900,278

Source: Appendix A
Notes: kBtu = thousand British thermal units.

As shown in Table 3.6-2, the project would consume approximately 900,277 thousand British thermal units (kBtu) per year. For comparison, in 2018 SoCalGas delivered approximately 2,921 million therms (292.1 billion kBtu) to Los Angeles County (CEC 2018b). The proposed project is subject to statewide mandatory energy requirements as outlined in Title 24, Part 6, of the California Code of Regulations. Title 24, Part 11, contains additional energy measures that are applicable to proposed project under the California Green Building Standards Code (CALGreen). Therefore, the proposed project would not result in a wasteful use of energy. Impacts related to operational natural gas use would be less than significant.

Petroleum

Construction

Heavy-duty construction equipment associated with construction activities would rely on diesel fuel, as would haul and vendor trucks involved in delivery of materials to the project site. Construction workers would travel to and from the project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel to and from the site in gasoline-powered light-duty vehicles.

Heavy-duty construction equipment of various types would be used during each phase of project construction. Appendix A lists the assumed equipment usage for each phase of construction. The project's construction equipment is estimated to operate a total combined 31,576 hours.

Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO_2) emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2019). The estimated diesel fuel usage from construction equipment is shown in Table 3.6-3, Construction Equipment Diesel Demand.

Table 3.6-3. Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)	Kg CO_2/Gallon	Gallons
Demolition	10	257.45	10.21	25,215.40
Site Preparation	4	6.14	10.21	601.49
Grading One - Shoring 1	2	42.66	10.21	4,178.64
Trenching	3	32.99	10.21	3,231.19
Grading Two - Excavation	11	307.48	10.21	30,115.44
Grading Three - Shoring 2	1	12.89	10.21	1,262.39
Paving One - Concrete Foundations	10	97.62	10.21	9,560.78
Building Construction	11	842.90	10.21	82,555.90
Architectural Coating	1	11.23	10.21	1,100.33
Paving Two - Concrete Paving	7	62.85	10.21	6,155.52
			Total	163,977.07

Sources: Pieces of equipment and equipment CO_2 (Appendix F); kg CO_2/Gallon (The Climate Registry 2019).
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Fuel estimates for total worker, vendor, and haul truck fuel consumption are provided in Table 3.6-4, Construction Worker, Vendor, and Haul Truck Petroleum Demand.

Table 3.6-4. Construction Worker, Vendor, and Haul Truck Petroleum Demand

Phase	Trips	Vehicle MT CO_2	Kg CO_2/ Gallon	Gallons
Worker Vehicles (Gasoline)				
Demolition	26	10.93	8.78	1,245.19
Site Preparation	10	0.29	8.78	32.65
Grading One - Shoring 1	6	2.35	8.78	267.76
Trenching	8	2.52	8.78	287.35
Grading Two - Excavation	28	11.64	8.78	1,325.73
Grading Three - Shoring 2	4	0.59	8.78	67.48
Paving One - Concrete Foundations	26	36.49	8.78	4,156.15
Building Construction	124	313.55	8.78	35,711.96
Architectural Coating	26	9.85	8.78	1,121.63

Table 3.6-4. Construction Worker, Vendor, and Haul Truck Petroleum Demand

Phase	Trips	Vehicle MT CO_2	Kg CO_2/ Gallon	Gallons
Paving Two - Concrete Paving	18	5.02	8.78	571.57
			Total	44,787.47
Vendor Trucks (Diesel)				
Demolition	0	0	10.21	0.00
Site Preparation	0	0	10.21	0.00
Grading One - Shoring 1	0	0	10.21	0.00
Trenching	0	0	10.21	0.00
Grading Two - Excavation	0	0	10.21	0.00
Grading Three - Shoring 2	0	0	10.21	0.00
Paving One - Concrete Foundations	0	0	10.21	0.00
Building Construction	51	341.57	10.21	33,454.19
Architectural Coating	0	0	10.21	0.00
Paving Two - Concrete Paving	0	0	10.21	0.00
Demolition	0	0	10.21	0.00
			Total	33,454.19
Haul Trucks (Diesel)				
Demolition	138	5.1522	10.21	504.62
Site Preparation	0	0	10.21	0.00
Grading One - Shoring 1	0	0	10.21	0.00
Trenching	0	0	10.21	0.00
Grading Two - Excavation	10,000	373.35	10.21	36,567.05
Grading Three - Shoring 2	0	0	10.21	0.00
Paving One - Concrete Foundations	0	0	10.21	0.00
Building Construction	0	0	10.21	0.00
Architectural Coating	0	0	10.21	0.00
Paving Two - Concrete Paving	0	0	10.21	0.00
			Total	37,071.67

Sources: Trips and vehicle CO_2 (Appendix A); kg CO_2/Gallon (The Climate Registry 2019).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

In summary, construction of the project is conservatively anticipated to consume 44,787 gallons of gasoline and 234,503 gallons of diesel over a period of approximately 48 months. For comparison, approximately 114 billion gallons of petroleum will likely be consumed in California over the course of the proposed project's construction phase, based on the California daily petroleum consumption estimate of approximately 78.6 million gallons per day (EIA 2019). Overall, because petroleum use during construction would be temporary, and would not be wasteful or inefficient, impacts would be less than significant.

Operation

The fuel consumption resulting from the project's operational phase would be attributable to employees and visitors traveling to and from the project site. Petroleum fuel consumption associated with motor vehicles traveling to and from the project site during operation is a function of vehicle miles traveled (VMT). As shown in Appendix A, the annual VMT attributable to the project is expected to be 4,025,059 VMT per year. Similar to construction worker and truck trips, fuel consumption for operation is estimated by converting the total CO_2 emissions from VMT to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Based on the default CalEEMod vehicle mix and the countywide proportion of gasoline and diesel on-road vehicle VMT, the vehicles associated with project operations would likely be approximately 93% gasoline powered and 7% diesel powered vehicles. The estimated fuel use from vehicles traveling to and from the project site during operation is shown in Table 3.6-5, Project Operations – Petroleum Consumption.

Table 3.6-5. Project Operations – Petroleum Consumption

Fuel	Vehicle MT CO_2	kg CO_2/Gallon	Gallons
Gasoline	1,458.01	8.78	166,060.21
Diesel	113.81	10.21	11,146.89

Source: Appendix A
Notes: CO_2 = carbon dioxide; kg = kilogram; MT = metric ton.

As depicted in Table 3.6-5, project operation would result in approximately 177,207.10 gallons of petroleum fuel usage per year. This is a conservative estimate, since it does not account for usage of electric vehicles (EVs). By comparison, California as a whole consumes approximately 28.7 billion gallons of petroleum per year (EIA 2019).

Over the lifetime of the project, the fuel efficiency of vehicles is expected to increase. As such, the amount of petroleum consumed as a result of vehicular trips to and from the project site during operation is expected to decrease over time. There are numerous regulations in place that require and encourage increased fuel efficiency, such as efforts to accelerate the number of plug-in hybrids and zero-emissions vehicles in California and increasingly stringent emissions standards (CARB 2011). As such, operation of the project is expected to use decreasing amounts of petroleum over time due to advances in fuel economy. Impacts related to operational petroleum use would therefore be less than significant.

In summary, although the project would increase energy use, the use would be a small fraction of the statewide use and, due to efficiency increases, is expected to diminish over time (particularly with respect to petroleum). Given these considerations, energy consumption associated with the project would not be considered inefficient or wasteful and would result in a **less than significant impact.** No mitigation is required.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically (every 3 years) to incorporate and consider new energy efficiency technologies and methodologies. Title 24 also includes Part 11, CALGreen. CALGreen institutes mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The proposed project would meet Title 24 and CALGreen standards to reduce energy demand and increase energy efficiency. Additionally, the project would consolidate and replace the existing LADWP structures with modern facilities with increased energy efficiency, due to more stringent energy conservation regulations. Finally, PV panels would be incorporated into the project design, which would offset the majority of electricity that would be consumed by the project.

Overall, the proposed project would not conflict with existing energy standards and regulations; therefore, impacts during construction and operation of the proposed project would be **less than significant**. No mitigation is required.

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3.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Information in this section is taken, in part, from a Geotechnical Investigation Report prepared by Power Engineering Division Geology and Soils Group in February 2018, as well as a Paleontological records Search, included herein as Appendix C1 and C2, respectively.

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. Surface rupture during a seismic event occurs when movement on a fault results in offset to the ground surface; however, not all earthquakes result in surface rupture. The proposed project site is not located within a known earthquake fault zone as delineated on the most Alquist-Priolo Earthquake Fault Zoning Map and is not traversed by any known active faults (City of Los Angeles 2019a). The nearest active fault to the project site, as identified by the City of Los Angeles, is the Santa Monica fault, located approximately 0.5-mile from the project site (City of Los Angeles 2019a). Because no fault lines are known or mapped on the project site, fault rupture is not expected to occur at the project site during a seismic event. Furthermore, implementation of the proposed project would not exacerbate the potential for fault rupture to occur at the project site. As such, impacts would be less than significant.

ii) Strong seismic ground shaking?

Less Than Significant Impact. As with all areas in Southern California, the project site is located in a seismically active region, within which are numerous known earthquake faults. As stated in Section 3.6(a)(i), the Santa Monica fault approximately 0.5-mile from the project site. As with most areas throughout Southern California, the site could be exposed to strong seismic ground shaking over the course of the project's lifespan. However, the proposed project would be designed and constructed in accordance with the latest version of the California Building Code (CBC) and the City of Los Angeles Building Code (LABC), which is legislated by LAMC Chapter IX. Additionally, the proposed project would be constructed according to the recommendations provided in the Geotechnical Report prepared for the project (see Appendix C). Lastly, implementation of the proposed project would not increase the potential for strong seismic ground shaking. As such, impacts would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction typically occurs when a site is subject to strong seismic shaking in an area underlain by soils with low cohesion and groundwater located near the surface. The factors known to influence liquefaction potential include soil type and grain size, relative density, groundwater level, confining pressures, and both intensity and duration of ground shaking. In general, materials that are susceptible to liquefaction are loose, saturated granular soils having low fines content under low confining pressures.

According to the Geotechnical Report prepared for the proposed project, a portion of the project site (the easternmost parcel as well as the parcels proposed to host the underground parking structure and surface parking lot) is located in an area susceptible to liquefaction (Appendix C); although, the potential for liquefaction to occur at the project site is low. Irrespective, as discussed in Section 3.6(a)(ii), the project site has the potential to be exposed to strong seismic ground shaking and associated hazards, including liquefaction.

The project would be designed and constructed in accordance with the latest version of the CBC and the LABC relative to seismic criteria, which provides a measure of safety for people and structures exposed to potential substantial adverse effects involving seismic-related ground shaking, including liquefaction. Moreover, the proposed project would adhere to the construction recommendations outlined in the Geotechnical Report (Appendix C). Lastly, the proposed project would not increase or exacerbate the potential for liquefaction to occur. As such, impacts would be less than significant.

iv) Landslides?

No Impact. Landslides are generally defined as the rapid downward movement of rocks and debris en masse, often carried and/or exacerbated by water, down a steep slope (i.e., a cliff, mountain, or hill). The project site is located within an urban area on relatively flat topography and has not been mapped as a landslide hazards area (City of Los Angeles 2019a). As such, the potential for landslides in the project area is low. Moreover, implementation of the proposed project would not exacerbate the potential for landsides to occur on site or in the surrounding area. As such, no impact would occur.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The project site is already fully developed with LADWP facilities and surface parking. Construction of the proposed project would involve removal of all existing on-site structures and paving areas and would require grading and excavation of approximately 6.3 acres. During construction activities, the potential for soil erosion to occur would increase due to the exposure of disturbed soils to rains and to construction activities (such as vehicular movement). The project would disturb an area greater than one acre and, as such, would be required to comply with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which requires the implementation of a stormwater pollution prevention plan (SWPPP). The SWPPP would employ various BMPs, which are intended to minimize soil erosion during construction. Upon completion of construction, the project would be fully developed with structures, parking, and landscaped areas that would minimize any long-term erosion potential. As such, impacts would be less than significant.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. As discussed in Section 3.6(a)(iii), a portion of the project site is subject to liquefaction. However, the project site is located in a highly urbanized area and is already developed. Nonetheless, trenches and other excavations would be backfilled with engineered fills, which meets compaction and shear strength requirements. As discussed in Section 3.6(a)(iv), the project site is not located in an area mapped as a landslide hazard area and would be required to comply with the design and construction requirements of the CBC, the LABC, and with the recommendations established in the Geotechnical Report (Appendix C). Additionally, the Geotechnical Report prepared for the project identified the soils underlying the project site as primarily clayey soils underlain by sedimentary bedrock units, which are generally dense and well consolidated and, as such, reduce the likelihood of landslides, seismic settlement, and lateral spreading at the project site. The project would not involve activities (such as the extraction of groundwater, oil drilling etc.) that could result in, or increase the probability of, subsidence occurring. As such, the construction activities proposed would not result in ground surface disturbance that could lead to unstable soils. Thus, impacts would be less than significant.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. The CBC and the LABC outline specific design, engineering, and development standards for structures proposed in areas with unstable soils. The project site is located in a highly urbanized area and is already developed. As such, construction and operation of the project would occur along previously disturbed areas. Poorly consolidated Holocene-age alluvial deposits (sand, silt, clay, and gravel) above sedimentary bedrock units the underlie site (Appendix C). Although there is some potential for expansive soils to be encountered at the project site, appropriate engineering, including compliance with the CBC, LABC, and project-specific Geotechnical Report requirements would ensure that impacts to life or property as a result of expansive soils would be less than significant.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed project would not require the use of septic tanks or other alternative wastewater disposal systems. During project construction, sanitary waste would be handled by temporary portable chemical toilets. The waste from temporary facilities would be removed by a private contractor and disposed of at an approved off-site location. During operation, the project would be connected to the existing wastewater disposal infrastructure. As such, soils beneath the project site would not need to support septic tanks and no impact would occur.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation Incorporated. Although the proposed project site is already developed and located on a relatively flat area of the City, the proposed project would involve significant soil excavation for the underground parking structure. Research conducted by Dudek paleontologists and the paleontological records search from the Natural History Museum of Los Angeles County (LACM; Appendix C2) (McLeod, 2017) indicate that the proposed project is underlain by Holocene (< 12,000 years ago) younger Quaternary alluvium (map unit Qa) (Dibblee and Ehrenspeck, 1991). Younger Quaternary alluvium is generally too young to yield significant paleontological resources; however, with depth, younger Quaternary alluvium can transition into early to middle Holocene (~ 12,000 – 5,000 years ago) and Pleistocene (~ 2.6 million years ago – 12,000 years ago) older Quaternary alluvium that is old enough to yield significant paleontological resources. The Society of Vertebrate Paleontology (SVP, 2010) considers significant paleontological resources to pre-date recorded human history or approximately 5,000 radiocarbon years old.

Quaternary alluvium is not considered a unique geological feature and no unique geological features are anticipated to be impacted by construction; however, it has produced numerous significant "Ice Age" fossil resources throughout Los Angeles County. Fossil specimens include amphibians (frogs, toads, and salamanders), reptiles (turtles, snakes, and lizards), birds, and mammals (rodents, rabbits, weasels, bears, wolves, coyotes, saber-tooth cats, bison, mammoths, and mastodons) (Miller, 1971; Jefferson, 1991).

The paleontological records search at the LACM did not identify any previously recorded localities within the proposed project area; however, they do have localities nearby from similar deposits to those that underlie the proposed project (McLeod, 2017). The closest locality reported by McLeod (2017) is situated just southwest of the proposed project along Pennsylvania Avenue and consists of a fossil American lion (*Felis atrox*) that was collected at a depth of six feet below the ground surface (bgs). The next closest locality includes fossil specimens of horse (*Equus*) and sloth (*Paramylodon*), which were recovered south of the proposed project near the intersection of Rose Avenue and Penmar Avenue at depths greater than 11 feet bgs (McLeod, 2017). Finally, the LACM recommends collecting sediment samples to test for the presence of microvertebrates onsite, when warranted.

Although no previously recorded fossil localities were reported by the LACM, the proposed project is underlain by younger Quaternary alluvium, which is overlain by older Quaternary alluvium at an unknown depth. Older Quaternary alluvium is known to yield scientifically significant paleontological resources at relatively shallow depths near the proposed project (McLeod, 2017). Shallow excavations into younger Quaternary alluvium will not likely yield significant paleontological resources; however, there is a possibility of encountering buried paleontological resources at a relatively shallow depth. Implementation of mitigation measure **MM-GEO-1** would ensure that potential impacts to paleontological resources during construction activities are reduced to below a level of significance. Thus, impacts would be less than significant with mitigation incorporated.

MM-GEO-1 Prior to the commencement of any grading activity, the LADWP shall retain a qualified paleontologist, meeting the Society of Vertebrate Paleontology's qualifications, to ensure the implementation of a paleontological monitoring program.

The qualified paleontologist shall attend any preconstruction meetings and manage the paleontological monitor(s) if he or she is not doing the monitoring. A paleontological monitor, meeting the Society of Vertebrate Paleontology's standards, shall be on site during all excavations below a depth of five feet.

In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find.

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3.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system, and many factors (natural and human) can cause changes in Earth's energy balance. The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature, and it creates a livable environment on Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise. Global climate change is a cumulative impact; a project contributes to this impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Thus, GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008).

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g) for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (see also 14 CCR 15364.5). The three GHGs evaluated herein are CO_2, CH_4, and N_2O.

Gases in the atmosphere can contribute to climate change both directly and indirectly.[5] The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons of CO_2 equivalent (MT CO_2e). Consistent with CalEEMod Version 2016.3.2, this GHG emissions analysis assumed the GWP for CH_4 is 25 (emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC's Fourth Assessment Report (IPCC 2007).

As discussed in Section 3.3 of this IS/MND, the project is located within the jurisdictional boundaries of the SCAQMD. In October 2008, the SCAQMD proposed recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects as presented in its *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (SCAQMD 2008). This document, which builds on the previous guidance prepared by the California Air Pollution Control Officers Association (CAPCOA), explored various approaches for establishing a significance threshold for GHG emissions. The draft interim CEQA thresholds guidance document was not adopted or approved by the Governing Board. However, in December 2008, the SCAQMD adopted an interim 10,000 MT CO_2e per-year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency (see SCAQMD Resolution No. 08-35, December 5, 2008).

The SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. From December 2008 to September 2010, the SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The SCAQMD has continued to consider adoption of significance thresholds for residential and general land use development projects. The most recent proposal, issued in September 2010, uses the following tiered approach to evaluate potential GHG impacts from various uses (SCAQMD 2010):

Tier 1. Determine if CEQA categorical exemptions are applicable. If not, move to Tier 2.

Tier 2. Consider whether or not the proposed project is consistent with a locally adopted GHG reduction plan that has gone through public hearing and CEQA review, that has an approved inventory, includes monitoring, etc. If not, move to Tier 3.

Tier 3. Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 MT CO_2e per-year threshold for industrial uses would be

[5] Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo).

recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e per year), commercial projects (1,400 MT CO_2e per year), and mixed-use projects (3,000 MT CO_2e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO_2e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.

Tier 4. Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of Assembly Bill (AB) 32 to reduce statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 MT CO_2e per-service population for project-level analyses and 6.6 MT CO_2e per-service population for plan-level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

Tier 5. Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, establish specific thresholds of significance, or mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance that are consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009).

To determine the proposed project's potential to generate GHG emissions that would have a significant impact on the environment, the project's GHG emissions were compared to the quantitative threshold of 3,000 MT CO_2e per year for all non-industrial projects. Per the SCAQMD guidance, construction emissions should be amortized over the operational life of the project, which is assumed to be 30 years (SCAQMD 2008). Thus, this impact analysis compares estimated operational emissions plus amortized construction emissions to the proposed SCAQMD threshold of 3,000 MT CO_2e per year.

Construction

Construction of the proposed project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road trucks, and worker vehicles. A depiction of expected construction schedules (including information regarding phasing, equipment used during each phase, truck trips, and worker vehicle trips) assumed for the purposes of emissions estimation is provided in Table 3.3-2 and in Appendix A. Sources of GHG emissions include off-road equipment; off-site sources include trucks and worker vehicles. Table 3.8-1 presents construction GHG emissions for the proposed project from on-site and off-site emissions sources.

Table 3.8-1. Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2021	1,711.01	0.25	0.00	1,177.20
2022	603.58	0.10	0.00	606.05
2023	689.39	0.11	0.00	692.18
2024	293.99	0.05	0.00	295.35
			Total	2,770.78
			Amortized Emissions (over 30 years)	92.36

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.
See Appendix A for complete results.

As shown in Table 3.8-1, the estimated total GHG emissions would be approximately 2,771 MT CO_2e. Amortized over 30 years, construction GHG emissions would be approximately 92 MT CO_2e per year. In addition, as with project-generated construction criteria air pollutant emissions, GHG emissions generated during proposed construction activities would be short term, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. Because there is no separate GHG threshold for construction, the evaluation of significance is discussed in the operational emissions analysis in the following text.

Operations

CalEEMod version 2016.3.2 was used to estimate potential project-generated operational GHG emissions from area sources (landscape maintenance), energy sources (natural gas and electricity), mobile sources, solid waste, and water supply and wastewater treatment. For additional details, see Section 3.3 for a discussion of operational emission calculation methodology and assumptions, specifically for area and energy (natural gas) sources. Year 2024 was assumed as the first year of operations after project construction.

Existing emissions from the project site were calculated based on the existing land uses using CalEEmod defaults for energy, waste, water and off-road equipment. Trip data from the project's TIA was used to calculate mobile emissions. For the existing site, an operational year of 2020 was assumed as this would be the last year before demolition is anticipated to start.

The estimation of operational energy emissions was based on the CalEEmod defaults per the given land use Furthermore, as part of the project design, electricity is anticipated to be generated by on-site solar PV panels on parking canopies and the building rooftop that would meet the on-site electricity demand. Annual electricity emissions were estimated in CalEEMod using the emissions factors for LADWP, which would be the energy source provider for the proposed project.

Supply, conveyance, treatment, and distribution of water for the project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the project requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. Water consumption estimates for both indoor and outdoor water use (15,242.14 gallons per year) were based on CalEEmod defaults per the given land use, and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod default values.

All details for criteria air pollutants discussed in Section 3.3 are also applicable for the estimation of operational mobile source GHG emissions. Regulatory measures related to mobile sources include Assembly Bill (AB) 1493 (Pavley) and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. In addition, the National Highway Traffic Safety Administration and U.S. Environmental Protection Agency have established corporate fuel economy standards and GHG emission standards, respectively, for automobiles and light-, medium-, and heavy-duty vehicles. Implementation of these standards and fleet turnover (replacement of older vehicles with newer ones) will gradually reduce emissions from the proposed project's motor vehicles.

The project would also generate solid waste, and therefore, result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste, with 50% waste diversion assumed consistent with AB 939.

Table 3.8-2 presents the annual GHG emissions associated with operation of the proposed project. Additional details are included in Appendix A.

Table 3.8-2. Estimated Annual Operational GHG Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Existing				
Area	<0.01	0.00	0.00	<0.01
Energy	151.20	<0.01	<0.01	151.56
Mobile	734.12	0.04	0.00	735.04
Off-Road	106.00	0.03	0.00	106.85
Waste	9.37	0.55	0.00	23.21
Water	51.48	0.19	<0.01	57.48
Total	1,052.17	0.81	0.01	1,074.16
Proposed				
Area	0.01	<0.01	0.00	0.02
Energy	48.04	<0.01	<0.01	48.33

Table 3.8-2. Estimated Annual Operational GHG Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Mobile	1,571.82	0.07	0.00	1,573.51
Off-Road	194.41	0.06	0.00	195.98
Waste	6.19	0.37	0.00	15.35
Water	121.95	0.36	0.01	133.75
Total	1,942.44	0.86	0.01	1,966.94
Amortized Construction Emissions				*92.36*
Operation + Amortized Construction Total				2,059.3
Net Total (Existing – Proposed)				958.14

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent
See Appendix A for detailed results.
Values of "<0.01" indicate that the estimated emissions are less than two decimals. Totals may not sum due to rounding.

As shown in Table 3.8-2, the estimated annual project-generated GHG emissions would be approximately 1,997 MT CO_2e per year as a result of project operation. When summed with the amortized project construction emissions, the total annual GHGs would be approximately 2,059 MT CO_2e per year. Finnaly, after existing emissions at the project site were accounted for, net emissions would be approximately 958 MT CO_2e per year. Annual operational GHG emissions with amortized construction emissions would not exceed the SCAQMD threshold of 3,000 MT CO_2e per year. Therefore, the proposed project's GHG contribution would not be cumulatively considerable and is **less than significant**.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Consistency with the City of Los Angeles' Sustainable City Plan

The Sustainable City Plan is not a qualified GHG reduction plan according to CEQA Guidelines Section 15183.5 and thus cannot be used in a cumulative impacts analysis to determine the significance of GHG impacts under CEQA. Therefore, this discussion of consistency is for informational purposes only. Table 3.8-3 provides an overview of the measures and goals within the Sustainable City Plan and the proposed project's consistency with each measure and goal. As shown in Table 3.8-3, the proposed project would not conflict with any of the GHG reduction measures or goals within the Sustainable City Plan and thus is consistent with the plan.

Table 3.8-3. Proposed Project Consistency with the Sustainable City Plan Greenhouse Gas Emission Reduction Strategies

Sustainable City Plan Measure	Proposed Project Consistency
Water	
Reduce LADWP purchases of imported water by 50% by 2025, and source 50% of water locally by 2035.	Does not apply. The proposed project would not inhibit LADWP from reducing imported water purchases or sourcing water locally.
Reduce average per capita water use by 22.5% by 2025 and 25% by 2035.	Does not apply. The proposed project would not inhibit the City of Los Angeles (City) from reducing the per capita water use within the City.
Solar Power	
Increase cumulative total megawatts (MW) of local solar photovoltaic power to 900–1,500 MW by 2025 and 1,500-1,800 MW by 2035.	Consistent. The project would include on-site solar to offset energy use.
Increase cumulative total MW of energy storage capacity to at least 1,654–1,750 MW by 2025.	Does not apply. The proposed project would not inhibit the City from increasing energy storage capacity.
Energy Efficient Buildings	
Reduce energy use per square foot below 2013 baseline for all building types by at least 14% by 2025 and 30% by 2035.	Consistent. The proposed project would include design measures to reduce the energy use per square foot.
Use energy efficiency to deliver 15% of all Los Angeles's projected electricity needs by 2020.	Does not apply. The proposed project would not inhibit the City from increasing energy efficiency within the City.
GHGs	
Reduce GHG emissions below 1990 baseline by at least 45% by 2025, 60% by 2035, and 80% by 2050.	Consistent. While the project would result in criteria GHG emissions during construction, these effects would be temporary.
Improve GHG efficiency of Los Angeles's economy from 2009 levels by 55% by 2025 and 75% by 2035.	Consistent. The proposed project would assist the City in meeting its goals by including on-site solar and EV charging stations.
Influence national and global action through the leadership of Los Angeles and other cities on climate change.	Does not apply. The proposed project would not inhibit the City from influencing action on climate change.
Have no ownership stake in coal-fired power plants by 2025.	Consistent. The proposed project would not inhibit the City from reducing its ownership stake in coal-fired power plants.
Waste	
Increase landfill diversion rate to at least 90% by 2025 and 95% by 2035.	Consistent. The proposed project would divert as much waste during construction as feasible, in accordance with state law. The proposed project would not generate additional waste during operation relative to existing conditions.
Increase proportion of waste production and recyclable commodities productively reused and/or repurposed within Los Angeles County to at least 25% by 2025 and 50% by 2035.	Does not apply. The proposed project would not inhibit the City from increasing the proportion of waste production recused or repurposed..

Source: City of Los Angeles 2015.

Consistency with the Scoping Plan

The CARB Scoping Plan, approved by CARB in 2008 and updated in 2014 and 2017, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[6] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others. The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. To the extent that these regulations are applicable to the project or its uses, the project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent required by law.

Consistency with SCAG's 2016 RTP/SCS

SCAG's 2016 RTP/SCS is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region pursuant to Senate Bill (SB) 375. In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2016 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2016 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. The proposed project would be consistent with the goals of the 2016 RTP/SCS based on the following considerations:

- As discussed in Section 3.3, vehicle trip generation and VMT for the project site are concluded to have been anticipated in the SCAG 2016 RTP/SCS growth projections because the proposed project would not require a zoning change or General Plan amendment.
- The proposed project would be consistent with the increased use of alternative fueled vehicles policy initiative in the 2016 RTP/SCS since it 60% of all parking spaces would be EV charging stations.
- The proposed project would be inherently energy efficient by implementing measures such as LED lighting, optimizing building envelope thermal properties, managing water usage, and by optimizing energy

[6] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

performance and controls while also managing material selections for renewable content and indoor environmental quality. Additionally, PV panels will be incorporated into the project design.

Based on the analysis above, the proposed project would be consistent with the SCAG 2016 RTP/SCS.

Consistency with SB 32 and EO S-3-05

The project would also not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in SB 32 and EO S-3-05, respectively. EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. While there are no established protocols or thresholds of significance for that future year analysis; CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

To begin, CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update states the following (CARB 2014):

This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the Second Update, which states (CARB 2017):

The Proposed Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while also identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Proposed Plan is developed to be consistent with requirements set forth in AB 32, SB 32, and AB 197.

The proposed project would be consistent with the applicable strategies and measures in the Scoping Plan and is consistent with, and would not impede, the state's trajectory toward the above-described statewide GHG reduction goals for 2030 or 2050. In addition, since the specific path to compliance for the state in regards to the long-term goals will likely require development of technology or other changes that are not currently known or available, specific additional mitigation measures for the project would be speculative and cannot be identified at this time. With respect to future GHG targets under SB 32 and EO S-3-05, CARB has also made clear its legal interpretation that it has the requisite authority to adopt whatever regulations are necessary, beyond the AB 32 horizon year of 2020, to meet SB 32's 40% reduction target by 2030 and EO S-3-05's 80% reduction target by 2050; this legal interpretation by an expert agency provides evidence that future regulations will be adopted to continue the state on its trajectory toward meeting these future GHG targets.

Based on the above considerations, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and no mitigation is required. This impact would be **less than significant**.

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3.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

A Phase I Environmental Site Assessment (ESA) was performed for the project site by Dudek in August 2018 and is included in this document as Appendix D.

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. The proposed project involves demolition of all existing buildings on-site. As discussed in the Phase I ESA, a lead-based paint (LBP) and asbestos-containing materials (ACM) survey was conducted at the site in 2017 (Appendix D). At the time of these surveys, the interiors and exteriors of the existing buildings on site were abated for lead-based paint and asbestos-containing materials. Irrespective, in the event that additional suspect ACM, LBP, or other hazardous building materials are found during demolition of the buildings, such materials would be tested and removed from the existing structure in accordance with applicable local, state, and federal regulations, such as SCAQMD Rule 1403.

During construction of the proposed project, commonly used hazardous substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents would be used. However, these materials are not considered acutely hazardous and are used routinely throughout urban environments for both construction projects and structural improvements projects. The project would comply with the City's Construction and Demolition Ordinance, which is legislated by Chapter 20.87 of the LAMC and which requires all haulers and contractors responsible for handling construction and demolition (C&D) waste to obtain a Private Waste Hauler Permit prior to collecting, hauling and transporting the waste from within the City (City of Los Angeles 2019b). Per Sections 20.87.040 and 20.87.050 of the LAMC, at least 50% of all construction and demolition waste removed from a project site must be recycled following the submission, and subsequent approval, of a Recycling and Reuse Plan (RRP) to the LADPW Environmental Programs Division (City of Los Angeles 2019b). Upon compliance with these applicable laws involving safe treatment and disposal of ACM, LBP, or other hazardous building materials at landfills specifically authorized and permitted to accept such hazardous materials, construction activities at the existing structures would not post a significant risk to the public or environment.

The operation of the proposed project would involve transport, storage, use, and disposal of hazardous materials associated with janitorial and maintenance as well as hazardous materials associated with the existing unleaded and diesel fuel tanks. However, the operational use of chemicals associated with these activities is routine, and all activities involving the use of hazardous materials would be regulated and subject to federal, state, and local health and safety requirements. As such, impacts would be less than significant.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant with Mitigation Incorporated. As discussed in Section 3.9(a) above, although small amounts of commonly used hazardous substances would be used during construction, the type of materials would be limited and would not be considered acutely hazardous. According to the Phase I ESA, a LBP and ACM survey were conducted at the site in 2017 (Appendix D). At the time, the interiors and exteriors of the existing buildings were abated for LBP and ACMs. Irrespective, in the event that additional suspect ACM, LBP, or other hazardous building materials are found during demolition of the buildings, such materials would be tested and removed from the existing structure in accordance with applicable local, state, and federal regulations, such as SCAQMD Rule 1403.

The operation of the proposed project would involve transport, storage, use, and disposal of hazardous materials associated with janitorial and maintenance as well as hazardous materials associated with the existing unleaded and diesel fuel tanks. However, the operational use of chemicals associated with these activities is routine and is not anticipated to result in reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment because all activities involving the use of these materials would be regulated and subject to federal, state, and local health and safety requirements.

The Phase I ESA also identified various existing recognized environmental conditions (RECs) at the site and on adjacent properties that could result in impacts to the environmental condition of the site. An overview of these existing potentially contaminated sites and associated potential impacts to the public or the environment is discussed below.

On-Site Soil Contamination

On-site soil contamination was identified on the project site, northeast of the existing office building. Arsenic, vanadium, and various other chemicals such as beryllium, chromium and cadium were detected above regional background concentration thresholds at this location. The presence of these chemicals on-site could result in an impact to the environmental condition of the site. This is a potentially significant impact.

Hudson Element – Adjacent Property

Existing hazards associated with the Hudson Element property, located adjacent to the project site to the southeast, include high concentrations of contaminants that were found in groundwater wells at this site. Because these contaminants are located within approximately 225 feet of the site, groundwater contamination could occur at the project site. This is a potentially significant impact.

12210 ½ Nebraska Avenue – Adjacent Property

Sampling was performed at the 12210 ½ Nebraska Avenue site, adjacent to the project site to the northeast. The sampling identified several volatile organic compounds (VOCs) in soil, soil-gas, and groundwater, including trichloroethylene (TCE) and chloroform. The contamination is reportedly due to historical site activities, and the current operations are not contributing to the environmental condition of the site. A remedial investigation report was completed in 2010, but no other remediation activities have been reported. This site was entered into a voluntary cleanup agreement in 2009, which was later terminated in 2010 due to non-compliance of the agreement. The site was then referred to the Los Angeles Regional Water Quality Control Board (LARWQCB) and no further activities have been reported since then. Based on groundwater studies completed on adjoining properties, groundwater flows that are generally southward, and given that this site is up gradient from the project site, this site could result in impacts to the environmental condition of the project site. This is a potentially significant impact.

CSHV Pen Factory – Nearby Property

The CSHV Pen Factory site, located approximately 0.5-mile west of the project site, was historically used as a clary quarry and brick firing facility (until the -1950s), a landfill, and a pen manufacturing facility (from 1968). Contamination of soil, soil-gas, and groundwater has previously impacted City water supply wells as a result of this site. Although site remediation began in 2009, a No Further Action (NFA) letter has not been issued by the LARWQCB and the site is still an open and ongoing case. As such, the CSHV Pen Factory site could result in impacts in the environmental condition of the project site due to soil, soil-gas, and groundwater contamination. This is a potentially significant impact.

Off-Site Sources – Olympic Well Field

The Olympic Well Field site is located approximately 360 feet southwest of the project site, in an area formerly occupied by a number of industrial facilities, which contributed to elevated levels of VOCs that have previously impacted the City's supply wells located down-gradient of the contamination. The project site is located within the drawdown radius of this site and the closest well is located approximately 360 feet west of the site. Based on the radius of influence and proximity of detected concentrations of VOCs in groundwater, the contamination associated with the Olympic Well Field site could result in an impact to the environmental condition of the project site. This is a potentially significant impact.

Boeing Supercharger – Nearby Property

The Boeing Supercharger site, located in the vicinity of the project site, was formally a part of the Olympic Well Field, discussed above. Groundwater studies revealed VOCs in groundwater beneath and down-gradient from the project site. The City entered a Settlement and Release Agreement with Boeing in 2012, and the City took

over restoration and replacement of groundwater through the Olympic Well Field Management Plan. Thus, this individual site is considered a Controlled REC because it was issued a NFA letter by the LARWQCB, with the assumption that the groundwater contamination would be managed by the City. As such, the Boeing Supercharger site would not result in an impact to the environmental condition of the site.

Data Gaps

The Phase I ESA determined that there are various areas where there are not enough details to determine whether or not an existing feature would result in impacts to the environmental condition on the project site. These data gaps are explained in more detail below.

Unstable Materials Pit and Product Lagoon

Records reviewed during the Phase I ESA indicate that a "product lagoon" was installed on the project site in 1978. Further, a diagram, dated January 18, 2978 was found that indicated that an "unstable materials pit" for a pervious use of the site was also located on the project site. However, there are not enough details regarding these features to determine if they are the same feature, how long they were present on the project site, or if they had a historic environmental impact to the site. This lack of information presents a data gap; thus, there is not enough information to determine if these features would result in an impact to the current environmental condition of the site.

EPA Aerial Photograph Report

During the Phase I ESA, Dudek reviewed the Environmental Protection Agency (EPA) Aerial Photographic Analysis of the Santa Monica Groundwater Area, which included the project site. Clay mining operations were present west of the project site in the 1930s and continued in the northern portion of the area through 1958, followed by dumping in the open pit areas. By 1975, all excavations surrounding the project site had been filled and commercial and industrial buildings had been constructed. Eight of these sites are located within a 1-mile radius of the project site, and were considered potential areas of groundwater contamination by the EPA. Additional information regarding the presence or absence of contamination at these sites was not identified during the Phase I ESA. This lack of information presents a data gap; thus, there is not enough information to determine if these features would result in an impact to the environmental condition of the site.

Vapor Encroachment Condition

A vapor encroachment screen report was prepared for the Phase I ESA using EDR's vapor encroachment worksheet. A "Tier I" Vapor Encroachment Screening (VES) was performed for the site in accordance with ASTM E 2600-10, "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions." The Tier I VES was performed to evaluate whether there is a potential for vapors originating from contaminated soil and/or groundwater to occur in the subsurface below the existing and potential future

on-site structures. For sites where a vapor encroachment condition (VEC) could not be ruled out but where reports of site sampling were available, those reports were used to evaluate the site (Tier 2 screening).

The EDR vapor encroachment worksheet determined that potential for vapor intrusion to the project site exists due to former conditions of the site, adjoining property or nearby property operations or existing conditions, historical uses of adjoining property or nearby properties, and regulatory review of sites identified on federal, state, and local databases. VEC cannot be ruled out at the project site due to previous uses that occurred from at least 1950 until 1989. For adjoining or nearby properties, VEC cannot be ruled out due to the presence of the Olympic Well Field contamination plume, which is potentially located beneath the project site, Hudson Element groundwater contamination adjoining the project site to the east, and 12210½ Nebraska Avenue Property groundwater, soil, and soil-gas contamination adjoining the project site to the north. As such, these potential VECs present a data gap. This is a potentially significant impact and further investigation is required to determine whether or not VECs would result in an impact to the environmental condition of the site.

Summary and Conclusion

As determined in the Phase I ESA, the following environmental hazards of concern pose potentially significant impacts to the proposed project:

- Elevated concentrations of metals in the soils in the area of the proposed new Administration Building.
- Groundwater contamination identified beneath the adjoining property, Hudson Element, to the east.
- Groundwater contamination identified on an up-gradient adjoining site, 12210½ Nebraska Avenue. Contamination, reportedly due to historical site activities, includes TCE and chloroform.
- VOC impacts to local groundwater due to off-site sources - Olympic Well Field and CSHV Pen Factory.
- Records for a "product lagoon" installed on the subject property in 1978. Records for an "unstable materials pit" dated 1978. The details and locations of these features are unknown, and represent a data gap.
- Former nearby landfills were identified in a 1996 US Environmental Protection Agency (EPA) study of historical aerial photographs. EPA identified these as a potential source of groundwater contamination, but no additional information was available.
- Potential vapor encroachment conditions, based on potential VOC contamination in groundwater at adjoining properties.

Given this, earthwork performed during construction of the project could result in a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. These existing environmental conditions could also result in potentially significant impacts from upset and accident conditions during operations. Mitigation measure **MM-**

HAZ-1 would quantify the levels of potential contaminants of concern (PCOC's) (VOCs, TPH, metals, PAHs, or methane) in soil, soil vapor and/or groundwater and compare them to regulatory screening levels to ensure appropriate measures would be taken to protect human health and the environment such that regulatory risk thresholds are not exceeded.

MM-HAZ-1 Prior to issuance of building permit, a Phase II ESA for soil, soil-gas, and groundwater sampling must be completed in accordance with ASTM E1903-19.

The Phase II ESA shall be conducted in order to determine if contamination exists beneath the project site. The subsurface investigation should include, but may not be limited to, areas of the project site where hazardous materials, tanks, and manufacturing areas have been identified, as well as areas potentially impacted by off-site contamination sources. The Phase II ESA shall also include investigation of the area where the former Allied Chemical Company operations took place, to determine the presence or absence of contamination related to the former "product lagoon" and/or "unstable materials pit." Should contaminants of concern be identified above regulatory screening levels which would indicate a potential impact to human health and/or the environment, a remediation plan shall be developed prior to commencement of construction and development activities in these areas. Coordination with the certified unified program agency may be required if contamination is discovered above regulatory screening levels.

With implementation of **MM-HAZ-1**, the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, impacts would be less than significant with mitigation incorporated.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant with Mitigation Incorporated. The proposed project is located within 0.25-mile of two schools; namely, the New Roads School, which is located approximately 0.12-mile southwest of the project site and the New West Charter School, which is located 0.2-mile northeast of the project site. However, as discussed above, although the project would involve the use, transport, and disposal of commonly used hazardous substances and contaminated soils during construction, all activities would be subject to federal, state, and local health and safety requirements and are not anticipated to result in hazards at nearby schools. Additionally, implementation of **MM-HAZ-1** would ensure that the proposed project would not create a significant hazard to the public, including emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. As such, impacts would be less than significant.

d) Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant with Mitigation Incorporated. A regulatory database search gives a listing of sites within a 1-mile radius of the project site that are known to handle hazardous chemicals, are hazardous waste generators, or have confirmed or suspected releases of hazardous materials or petroleum products. Information in these listings includes the location of the site relative to the property, type of hazardous material at the site, and the status of the site. The search performed for this Phase I ESA was conducted in August 2018 by EDR (Appendix D). The project site was listed in seven regulatory database records, as shown in Table 3.9-1. A determination as to whether or not the case would be considered a REC is also included in Table 3.9-2.

Table 3.9-1. Regulatory Database Records for the Project Site

Database Listing	Summary of Listing	REC?
12300 Nebraska		
AST	LADWP has at least one AST registered at the project site. The presence of the ASTs does not appear to be a REC.	No
CA HAZNET	LADWP reported generation and disposal of over 300 various types of hazardous wastes between 1993 and 2016. There are no violations reported with this listing; the type of waste, disposal method, amount, and year are summarized. This listing does not appear to be a REC.	No
RCRA-LQG	LADWP West LA Service Center reported a large quantity of hazardous waste generated in 2010. Wastes included inorganic solids, low pH liquids, ignitable wastes, and lead. A previous generator report (SQG) was also prepared in 1991, the details of which are not available in the EDR report. No violations were reported with this listing. This listing does not appear to be a REC.	No
FINDS	FINDS identified the project site as a biennial hazardous waste reporter (also reported in CA HAZNET), and identified the site in ECHO (see entry below). This listing alone does not appear to be a REC.	No
ECHO	ECHO for the project site includes the RCRA generator status, as described in the CA HAZNET and RCRA-LQG listings above. No violations are reported in this listing. This listing does not appear to be a REC	No
CA SWEEPS UST CA FID UST	These databases track registered underground storage tanks (USTs). The site is registered on both sites, but there are no details regarding the type, age, and contents of the UST. SWEEPS database is no longer updated or maintained. The California FID UST database, which sources from the California State Water Resources Control Board (CWRCB), indicates an "inactive" status, generally referenced when a UST has been decommissioned or removed. Information obtained from the Los Angeles City Fire Department (LACFD) indicates USTs were previously located on the project site. The 1999 Phase I ESA contains records of the removal of three USTs, an oil/water separator, and a fueling island.	No

Table 3.9-1. Regulatory Database Records for the Project Site

Database Listing	Summary of Listing	REC?
12270 Nebraska Avenue (Plaskon Electornic Matl Co Inc.)		
CA SWEEPS UST CA HIST UST CA FID UST	Hazardous Substance Storage Container Information Sheets were downloaded from GeoTracker (GeoTracker 2018). Those sheets, dated June 1988, indicate a 7,500-gallon acetone UST and a "product lagoon" were registered on the project site. The tank was installed in 1959, while the lagoon was installed in 1978. The storage container details state the lagoon was 10-gauge double-walled carbon steel with an industrial enamel lining. The tank details are not known. A copy of the Information Sheets as well as additional information regarding USTs on this site, received from the LACFD ,are provided in Appendix C1. However, information regarding the use and/or decommissioning of the "product lagoon" were not found. An "unstable materials pit" design was provided by LACFD, but the location, type of materials stored, and dates of use were not available. It is unknown if this is the same site feature. This represents a data gap.	Data Gap
RCRA NonGen	The site handled, but did not generate hazardous wastes. There are no violations associated with this listing. This listing does not appear to be a REC.	No
CA EMI	The site held an air quality permit in 1987. This listing does not appear to be a REC.	No
FINDS	FINDS identified the air quality permit reported under Toxics Release Inventory and the NonGen status under RCRA. This listing does not appear to be a REC.	No
ECHO	ECHO for the project site include a Toxics Release Inventory report from 1988, and an inactive RCRA status. There are no violations reported. This listing does not appear to be a REC.	No

Source: Appendix D

Notes: REC = Recognized Environmental Concern; CA = California; AST = Aboveground Petroleum Storage Tank Facilities; RCRA-LQG = Resource Conservation and Recovery Act -- Large Quantity Generator; FINDS = Facility Index System/Facility Registry System; ECHO = Enforcement and compliance history; SWEEPS = California Statewide Environmental Evaluation and Planning System Underground Storage Tank; UST = Undergound storage tank; FID = Facility Inventory Database; HIST = Hazardous Substance Storage Container Database; RCRA NonGen = Resource Conservation and Recovery Act -- Large Quantity Generator ; EMI = Emissions Inventory Data.

As shown in Table 3.9-1, the majority of the regulatory database records do not qualify as RECs. However, as shown in Table 3.9-1, a data gap exists for one of the listings at 12270 Nebraska Avenue. This is because there is not enough information regarding the product lagoon and unstable materials pit currently present on site to determine if they are the same feature, how long they were present on-site, and if they had an environmental impact to the project site. As such, due to this lack of information, it cannot be determined whether or not this site could result in impact to the environmental condition of the site. Thus, in order to address the potential unknown conditions and to reduce potentially significant impacts, **MM-HAZ-1**, which requires further evaluation of this site, is be required.

Further, 205 listings were identified within 1-mile of the project side during the regulatory database search. Based on distance from the project site, known groundwater gradients, and status of the regulatory listing provided, most of the records do not appear to pose a REC to the project site. However, Table 3.9-2 provides an evaluation of nearby potential RECs that could result in a significant hazard to the public or to the environment.

Table 3.9-2. Evaluation of Nearby Potential Environmental Conditions

Site No.	Site Name and/or Address	Database Listings	Relative Location	Case Status	Flow Direction and Relative Gradient to Project Site	REC?
1	Hudson Element LA UNK AGI Properties Teledyne Controls 12333 West Olympic Boulevard	CPS-SLIC CA SWEEPS UST CA FID UST CA CPS-SLIC RCRA-SQG CA EMI	Adjoining to the east	Open – Site Assessment	Down/cross gradient (local gradients vary)	Yes
2	12210 ½ Nebraska Avenue	CA ENVIROSTAR CA VCP	Adjoining to the north	Open – Site Assessment	Cross-gradient	Yes
3	Boeing Co. - Supercharger Medical Chemical Corporation 1909 Centinela	CA CPS-SLIC CA SWEEPS UST CA HIST UST CA FID UST	Approx. 100 feet south	Closed – NFA received	Downgradient	HREC
4	CSHV Pen Factory Sanford/Paper Mate Gillette Co 1681 26th Street	CA ENVIROSTOR CA CPS-SLIC FINDS ECHO CA ENF CA HIST CORTESE	Approximately ½ mile west	Open – Site Assessment	Cross to downgradient	Yes
5	Santa Monica City Landfill II	CA WMUDS/SWAT	Approximately ½ mile west	Closed	Downgradient	No

Source: Appendix D
Notes: REC = Recognized Environmental Condition, HREC = Controlled Recognized Environmental Condition

As shown above, Site 5, Santa Monica City Landfill II is listed as "case closed," indicated that although it may have contained leaks or spills of hazardous materials in the past, the leak or spill has been addressed and resolved, and this site is not expected to have an impact on the proposed project site. Site 3 was closed by the LARWQCB, with the assumption that the groundwater contamination at this site would be managed by the City; as such, this site is considered a controlled REC and would not result in a significant hazard to the public or the environment. However, as described in Section 3.9(b) above, Sites 1, 2 and 4 listed in Table 3.9-2 could

all potentially pose a hazard to the public or the environment. With implementation of **MM-HAZ-1**, described above, which requires a Phase II ESA, impacts would be reduced to a less-than-significant level.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The proposed project is not located within an airport land use plan. The nearest airport is the Santa Monica Airport, located approximately 1 mile south of the project site. According to the Los Angeles County Airport Land Use Commission (ALUC), the project site is not located within the airport's influence area (ALUC 2003). Therefore, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area. No impact would occur.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The City of Los Angeles adopted a multi-hazard emergency response plan in order to respond with maximum feasible speed and efficiency to disaster events (City of Los Angeles 1996). Construction of the proposed project would take place on the project site and would occur in one phase, with half the employees relocated to the Palms Yard and the other half to a LADWP-owned site at Los Angeles World Airports. During operations, the hours of operations of the site would be the same. Although approximately 225 additional employees would be introduced to the site, the operations of the project would not interfere with an adopted emergency response plan or emergency evacuation plan. Department vehicle and emergency vehicle access to and from the site would be provided in both directions from Olympic Boulevard, Centinela Avenue, as well as Nebraska Avenue, to the north of the site. Further, employee vehicle access would be provided in both directions from the southern portion of the site on Nebraska Avenue.

Additionally, the proposed project site is within close proximity to several County-designated disaster routes, which would be utilized for evacuation in a disaster scenario. Namely, Olympic Boulevard is a designated Disaster Route and the I-10 is a designated Freeway Disaster Route (LADPW 2008). Given the above, the project would not interfere with an adopted response plan or emergency evacuation plan. Impacts would be less than significant.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less Than Significant Impact. The project site is located in a highly urbanized area of the City, is fully developed, and surrounded by urban development, all of which precludes the spread of wildland fire (see Section 3.20 for details). The site is not located in a designated Very High Severity Fire Zone (CALFIRE 2011). As such, impacts would be less than significant.

References

ALUC (Los Angeles County Airport Land Use Commission). 2003. Los Angeles County Airport Land Use Plan. Accessed, August 28, 2019. http://planning.lacounty.gov/assets/upl/data/pd_alup.pdf.

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City of Los Angeles. 2019b. Los Angeles Sanitation, Waste Hauler Permit Program [webpage]. Accessed, August 26, 2019. https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-c/s-lsh-wwd-s-c-whp;jsessionid=kAzP0-jPKkvHtUCG4KJjT5qfaIiBE-3Fc8hkfr5u7HC27VeBqt5w!457293000!1698443149?_afrLoop=8101512321186275&_afrWindowMode=0&_afrWindowId=null&_adf.ctrl-state=z5krdmux2_1#!%40%40%3F_afrWindowId%3Dnull%26_afrLoop%3D8101512321186275%26_afrWindowMode%3D0%26_adf.ctrl-state%3Dz5krdmux2_5.

3.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐

Would the project:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 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 off-site?	☐	☐	☒	☐
	(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?	☐	☐	☒	☐
	(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?	☐	☐	☒	☐

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less Than Significant Impact. A significant impact would occur if the proposed project would discharge water that did not meet the water quality standards established by the State Water Resources Control Board (SWRCB) NPDES and waste discharge requirement (WDR) permit programs, and the Los Angeles Regional Water Quality Control Board's (RWQCB) Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan; RWQCB 2019). The proposed project is not anticipated to violate any water quality standard or waste discharge requirement during construction and operation, for the reasons described below.

Construction

Construction activities would be subject to applicable requirements of the SWRCB and RWQCB with respect to control of surface erosion, sedimentation, and runoff quality. LADWP would comply with these requirements. Because construction of the proposed project would result in land disturbance of more than 1

acre, LADWP would be required to obtain coverage under the Construction General Permit (SWRCB Order 2009-0009-DWQ, NPDES No. CAS 000002, as amended), which includes a number of design, management, and monitoring requirements for the protection of water quality and the reduction of construction phase impacts related to stormwater. Coverage under the Construction General Permit requires a qualified individual (as defined by the SWRCB) to prepare a SWPPP to address the potential for construction-related activities to contribute to pollutants within the proposed project's receiving waterways. The SWPPP must be prepared by a Qualified SWPPP Developer (QSD) and must describe the type, location and function of structural measures to alleviate stormwater impacts and must demonstrate that the combination of measures selected are adequate to meet the discharge prohibitions, effluent standards, and receiving water limitations contained in the Construction General Permit. This would ensure that construction activities would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Additionally, dewatering is not anticipated during construction of the proposed project. LADPW maintains two groundwater wells in the vicinity if the project site, one of which lies 100 feet east of the project site and the other which lies 130 feet west of the project site (Appendix C1). Review of these two wells over the past 30-40 years has recorded groundwater levels between 95.8 feet bgs and 240 feet bgs, and the Geotechnical exploratory borings conducted in 2018 did not encounter the groundwater table up 50 feet bgs at the project site (Appendix C1). Based on these considerations, it is unlikely that the static groundwater table would be encountered during project construction (Appendix C1). The proposed project would include subterranean parking and, as such, excavation would occur to approximately 16 feet bgs. Given the approximate depth of groundwater at the project site, it is unlikely that construction of the proposed project would encounter groundwater; therefore, construction dewatering is not anticipated. Additionally, the proposed project would not include the installation of any groundwater wells. For these reasons, the proposed project construction is not expected to affect groundwater quality during construction.

Project construction would be comply with the LAMC, Chapter VI, Sections 64.70.01 and 64.72, which require that each operator of any construction activity prepare a LID Plan in compliance with the requirements of the Standard Urban Stormwater Mitigation Plan (SUSMP; City of Los Angeles 2011). Given the above, the proposed project would have a less than significant impact on water quality standards and waste discharge requirements and would not otherwise substantially degrade surface or ground water quality during construction, and no mitigation is required.

Operation

Once operational, the project site would be improved with new buildings, landscaped areas, and paved parking spaces. The site is already developed and mostly impervious; thus, no significant change would occur in terms of the stormwater infiltration on the site when compared to existing conditions.

Additionally, per the requirements established in the LAMC, Chapter VI, Sections 64.70.01 and 64.72, the proposed project would be required to comply with the latest City LID requirements, per the Development Best Management Practices Handbook (City of Los Angeles 2011). The LID Plan would comply with the requirements of the NPDES Municipal Separate Storm Sewer System (MS4) Permit for stormwater and non-stormwater discharges from the MS4 within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175), referred to as the 2012 MS4 Permit.

Project design, construction, and operation would be completed in accordance with the Development Best Management Practices Handbook, with the goal of reducing the amount of pollutants in stormwater and urban runoff (City of Los Angeles 2011). The project would be required to comply with the LID ordinance, which mandates completion of a LID Plan. This plan would include permanent control measures to reduce the long-term impacts of the project on water quality and the tributary waterways. The LID Plan would use site design and stormwater management in order to maintain the site's pre-development runoff rates and volumes.

Compliance with SWPPP and LID features would ensure that the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. As such, project impacts would be less than significant and no mitigation is required.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. According to the Geotechnical Report prepared for the project, the historically (early 1900s) highest groundwater level beneath the project site was approximately 32 feet below ground surface level (bgs); however, based on current groundwater basin management practices, it is unlikely that groundwater levels will ever reach or exceed historically high levels again (Appendix C1). The LADPW maintains two groundwater wells in the vicinity if the project site, one of which lies 100 feet east of the project site and the other which lies 130 feet west of the project site (Appendix C1). Review of these two wells over the past 30-40 years has recorded groundwater levels between 95.8 feet bgs and 240 feet bgs, and the Geotechnical exploratory borings conducted in 2018 did not encounter the groundwater table up 50 feet bgs at the project site (Appendix C1). Based on these considerations, it is unlikely that the static groundwater table would be encountered during project construction, including construction of the subterranean parking structure (Appendix C1).

Additionally, the project site is located in a highly developed area of the City and would not include the construction or direct use of any wells through which groundwater would be withdrawn from underneath the project site or surrounding area. Although implementation of the proposed project would incrementally increase water consumption at the site, water at the project site would continue to be provided by the LADWP, which receives approximately 12% of its water from groundwater sources (LADWP 2015). As demonstrated

in Section 3.19 below, project water needs would be supplied by LADWP's existing water supplies and, as such, the water demand associated with the proposed project would not substantially deplete groundwater supply.

California Department of Water Resources (DWR) is required to prioritize and update California's groundwater basin prioritization in accordance with the requirements of Sustainable Groundwater Management Act (SGMA) and related laws. SGMA requires that groundwater resources be managed sustainably for long-term reliability and multiple benefits for current and future beneficial uses SGMA applies to all California groundwater basins and requires that high- and medium-priority groundwater basins form Groundwater Sustainability Agencies (GSAs) (DWR 2019). DWR is required to prioritize California's 517 groundwater basins and subbasins as either high, medium, low, or very low. The San Fernando Groundwater Basin, which is the primary groundwater source for the City, was determined by DWR to be "Very Low" priority and is therefore not subject to the requirements to prepare form a Groundwater Sustainability Agency to develop a Groundwater Sustainability Plan. Additionally, according to the LADWP UWMP, LADWP continues to invest in stormwater recharge projects by enhancing and enlarging existing stormwater capture facilities. LADWP is also investing in advanced treatment systems to produce purified recycled water for groundwater replenishment, often referred to as indirect potable reuse. These investments will augment the City's groundwater and help ensure that basin water levels remain sustainable for the foreseeable future (LADWP 2015).

Furthermore, under existing conditions, the project site is developed with impervious surfaces and structures, which impede groundwater recharge under existing conditions. The proposed project would include the addition of more landscaped areas, which would allow for increased infiltration and percolation on site and may contribute to increased groundwater recharge at the project site. Given the above, the proposed project would not substantially deplete groundwater supplies or impede groundwater recharge; however, could slightly enhance groundwater recharge potential at the site through the provision of additional pervious surfaces when compared to existing conditions. As such, impacts would be less than significant.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in:

i) Substantial erosion or siltation on- or off-site?

Less Than Significant Impact. The project site is located in a developed area with no water bodies on-site or in the immediate surroundings. As such, the project would not result in the alteration of a stream or river. Construction of the Project would result in ground surface disruption during grading and excavation and trenching for the underground parking structure. This could create the potential for increased erosion and siltation to occur at the project site. However, the project would comply with the project-specific SWPPP and the LID Plan so as to minimize erosion and sedimentation during construction.

The project site is already developed with LADWP facilities. During operation, the project site would be covered with buildings, hardscape, and landscaping, and would not result in on-site conditions substantially different from those under existing conditions. As such, the proposed project would maintain the general drainage pattern that prevails under existing conditions and runoff would continue to sheet flow towards the public storm drains located in Bundy Drive and Centinela Avenue (LADPW 2019). Thus, the project is not expected to substantially alter the grade or drainage pattern of the project site in a manner that would result in substantial erosion or siltation and impacts would be less than significant.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact. As described in Section 3.10(c)(i), the project site is located in a developed area with no water bodies on-site or in the immediate surroundings. As such, the project would not result in the alteration of a stream or river. During construction, the project would result in ground surface disruption during grading and excavation and trenching for the underground parking structure. However, these temporary alterations would be minimal and would not be expected to increase the rate or amount of surface runoff to the extent that flooding would occur. Rather, increased volumes of disturbed/loose soil during construction would assist rainwater infiltration at the site in the unlikely event of rainfall heavy enough to warrant flooding as a result of increased runoff. Additionally, compliance with the project-specific SWPPP that is required per the Construction General Permit, would ensure that flooding on- or off-site is minimized to the extent practicable during construction.

During operation, the proposed project's landscaping would result in slightly less impervious surfaces when compared to existing conditions, which would encourage infiltration at the project site and could slightly reduce the rate and total amount runoff at the project site. Furthermore, with implementation of the project-specific design standards including a drainage inlet, parkway swale, and drywell system, as well as a LID Plan, development at the project site would not substantially alter drainage patterns onsite, and stormwater would continue to sheet flow towards the public storm drain system located in Bundy Drive and Centinela Avenue (LADPW 2019).

As explained above, project implementation is not anticipated to result in a substantial increase in the rate or amount of surface runoff such that flooding would occur on- or off-site. Impacts would be less than significant.

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?

Less Than Significant Impact. As stated in Section 3.10(c)(i), (ii), and (iii), the proposed project is not anticipated to result in a substantial change in on-site drainage patterns that could create or contribute additional runoff. As such, the proposed project would not exceed the capacity of the existing or planned stormwater drainage system and storm water would continue to sheet flow towards the public storm drain system in Bundy Drive and Centinela Avenue.

During construction of the project, grading and excavation activities, and the use of petroleum and other products, may result in increased polluted runoff at the project site. However, as discussed above, the project would comply with the project-specific SWPPP and LID Plan, which would include BMPs to ensure that impacts from polluted runoff, including stormwater runoff, would be less than significant.

iv) Impede or redirect flood flows?

Less Than Significant Impact. As discussed in 3.10(c)(ii) above, the project is located in Zone X as defined by the FEMA Flood Insurance Rate Map (FEMA 2019). Zone X is considered an area of minimal flooding. As such, the project site is not expected to be subject to flooding in general. Additionally, the proposed project would not include substantial changes to those drainage patterns prevailing under existing conditions, and stormwater would continue to sheet flow to the public stormdrain system located in Bundy Drive and Centineal Avenue in the unlikely event of flooding onsite. As such, impact would be less than significant.

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

Less than Significant Impact. As discussed in 3.10(c)(ii) above, the project is located in Zone X as defined by the FEMA Flood Insurance Rate Map (FEMA 2019). Zone X is considered an area of minimal flooding. As such, the project site is not expected to be subject to flooding in general.

The project site is located within a potential inundation area for the Stone Canyon Dam and, in the event of dam failure (usually due to significant seismic activity), the project site could release pollutants as a result of inundation. However, the Stone Canyon Dam is continually monitored and maintained by various governmental agencies, including the State of California Division of Safety of Dams and the U.S. Army Corps of Engineers. Additionally, current design and construction practices, ongoing program reviews, modifications, and total reconstructions of existing dams are specifically intended to ensure that all dams are capable of withstanding the maximum considered earthquake. Therefore, the potential for project inundation as a result of the Stone Canyon Dam failing is considered low (Appendix C1).

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site and the risk of the project releasing pollutants from a seismically-induced seiche is considered unlikely (Appendix C1). The project site is not located within a tsunami inundation zone (DOC 2019b).

Given the above, the proposed project is not anticipated to risk release of pollutants as a result of inundation from flood, tsunami, or seiche. Impacts would be less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties is the Water Quality Control Plan (WQMP) for the Los Angeles Region, which includes the City. The Basin Plan: (i) identifies beneficial uses for surface and ground waters, (ii) includes the narrative and numerical water quality objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's anti-degradation policy, and (iii) describes implementation programs and other actions that are necessary to achieve the water quality objectives established in the Basin Plan (RWQCB 2014).

With compliance with applicable regulations, including the SWPPP and LID Plan, the proposed project would be consistent with the Federal Clean Water Act, and pursuant to the NPDES Construction General Permit No. 2009-0009-DWQ. Restrictions in this Ordinance are applicable to both construction activities and operations. Additionally, compliance with General Permit issued by the SWRCB would require implementation of BMPs during construction to address the potential for pollutants from entering downstream waters. The project's potential to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality would be less than significant and no mitigation is required.

California DWR is required to prioritize and update California's groundwater basin prioritization in accordance with the requirements of SGMA and related laws. SGMA requires that groundwater resources be managed sustainably for long-term reliability and multiple benefits for current and future beneficial uses SGMA applies to all California groundwater basins and requires that high- and medium-priority groundwater basins form GSAs (DWR 2019). DWR is required to prioritize California's 517 groundwater basins and subbasins as either high, medium, low, or very low. The San Fernando Groundwater Basin, which is the primary groundwater source for the City, was determined by DWR to be "Very Low" priority and is therefore not subject to the requirements to prepare form a Groundwater Sustainability Agency to develop a Groundwater Sustainability Plan. Additionally, according to the LADWP UWMP, LADWP continues to invest in stormwater recharge projects by enhancing and enlarging existing stormwater capture facilities. LADWP is also investing in advanced treatment systems to produce purified recycled water for groundwater replenishment, often referred to as indirect potable reuse. These investments will augment the City's groundwater and help ensure that basin water levels remain sustainable for the foreseeable future (LADWP 2015).

Given the above, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the project's impact would be less than significant and no mitigation is required.

References

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3.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

a) Would the project physically divide an established community?

No Impact. The proposed project would significantly enhance the workplace quality, safety, functional efficiency, sustainability, and beautification of a site that is already owned and utilized by LADWP. The proposed project includes the replacement of existing structures and would not result in any new infrastructure, such as buildings or roads, that would physically divide an established neighborhood when compared to existing conditions. Thus, project implementation would not result in physical division of any established communities. No impact would occur.

b) Would the project cause a significant environmental impact due to a conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact. The project site is zoned (Q)PF-1XL – Public Facilities and designated Public Facilities in the City's General Plan (City of Los Angeles 2019). The project would be consistent with this zoning and designation, and with the site's historic use as an LADWP facility.

The site is also subject to the West Los Angeles Transportation Improvement and Mitigation Specific Plan (Specific Plan). The Specific Plan was adopted as a result of the August 11, 2015 adoption of the new Mobility Element by the Los Angeles City Council and the subsequent adoption of the Street Standard Plan/S-470-1 by the City Planning Commission on August 13, 2015, which put into effect the Mobility Plan 2035. As outlined in the Specific Plan, prior to issuance of any building, grading, or foundation permit, an Applicant for a project shall pay, or guarantee payment of, a Transportation Impact Assessment (TIA) fee to the Los Angeles Department of Transportation (LADOT). The TIA fee shall be for the purpose of funding the transportation improvements outlined in the Specific Plan (City of Los Angeles 2019c). The TIA fee shall be paid or guaranteed before construction of the project. LADWP would ensure compliance with the West Los Angeles Transportation Improvement and Mitigation Specific Plan by payment of the TIA fee.

Because the use of the project site would remain unchanged, and with payment of the required TIA fee, the proposed project would not conflict with a land use or zoning designation. As such, the project would not result in a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation. Impacts would be less than significant.

References

City of Los Angeles. 2019a. Zimas. "Planning and Zoning." Web Map Application. Accessed September 22, 2017. http://zimas.lacity.org/

City of Los Angeles. 2019c. West Los Angeles Transportation Improvement and Mitigation Specific Plan. Accessed, August 27, 2019. https://planning.lacity.org/complan/specplan/pdf/wlatimp.pdf.

3.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The project site is located in an area designated by the DOC as Mineral Resource Zone (MRZ) 1 or MRZ-1. MRZ-1 is defined as an area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (DOC 1994). As such, the proposed project is not designated as a known mineral resources site of significance to the State or region and would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state (DOC 1994).

Similarly, there are no recorded oil/gas wells on the project site. As explained in Section 3.9, Hazards and Hazardous Materials, there is one historic well located approximately 360 feet southwest of the project site. The well was operated by the Occidental Petroleum Corporation; however, records indicate that the well was abandoned in 1966 and is currently listed as "plugged" (DOC 2019c; DOC1966). There are no other oil/gas wells within a mile radius of the project site (DOC 2019c). Additionally, the project site is completely developed and paved under existing conditions, which precludes the extraction of mineral resources. Upon project operation, the project site would be fully developed and paved and would not support mineral, oil, or gas extraction activities.

Given the above, the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. No impact would occur.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The proposed project site is not identified as a locally important mineral resource site delineated on a local general plan, specific plan, or other land use plan (City of Los Angeles 2001). No impact would occur.

References

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City of Los Angeles. 2001. General Plan – Conservation Element. Adopted September 26, 2001. August 27, 2019. https://planning.lacity.org/cwd/gnlpln/consvelt.pdf.

3.13 Noise

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within an the vicinity of a private airstrip or airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Noise Definitions

Sound is mechanical energy transmitted by pressure waves in a compressible medium, such as air. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired. The sound-pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The unit of measurement of sound pressure is a decibel (dB). Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern changes in sound levels of 1 dB when exposed to steady, single-frequency signals in the mid-frequency range. Outside such controlled conditions, the trained ear can detect changes of 2 dB in normal environmental noise. It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dB. A change of 5 dB is readily perceptible, and a change of 10 dB is perceived as twice or half as loud. A doubling of sound energy results in a 3-dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in the sound level.

Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called "A-weighting," the measurement of which is expressed as dBA. Hourly average noise levels are usually expressed as dBA L_{eq} or the equivalent noise level over that period of time. Therefore, all sound levels discussed in this section are A-weighted. Because community receptors are more sensitive to noise intrusion during the evening and at night, state law requires that an artificial dBA increment be added to quiet-time noise levels in 24-hour noise metrics such as the Community Noise Equivalent Level (CNEL) or day-night noise level (L_{dn}).

Existing Noise Conditions

Noise measurements were conducted on and near the project site in October 2017 to characterize the existing noise environment. The daytime, short-term (1 hour or less) attended sound level measurements were taken with a Rion NL-52 sound-level meter. This sound-level meter meets the current American National Standards Institute (ANSI) standard for a Type 1 (precision grade) sound-level meter. The calibration of the sound level meter was verified before and after the measurements were taken, and the measurements were conducted with the microphone positioned approximately five feet above the ground. One long-term measurement was taken with a SoftDB Model Piccolo sound level meter. The Piccolo sound level meter meets the ANSI standard for a Type 2 (general-purpose grade) sound level meter.

Five short-term noise measurement locations (ST1–ST5) and one long-term noise measurement location (LT1) which represent key potential sensitive receptors or sensitive land uses were selected on, adjacent to, or near the project site. The measurement locations are shown in Figure 3.13-1, and the measured average noise levels and measurement locations are provided in Table 3.13-1 and Table 3.13-2. The primary noise sources at the measurement locations consisted of traffic along the adjacent roads. As shown, typical measured daytime noise levels in the project vicinity ranged from approximately 50 dBA L_{eq} (at ST3 and ST4) to approximately 64 dBA L_{eq} (at ST2). Hourly average daytime and nighttime noise levels as measured at site LT1 ranged from approximately 44 dBA L_{eq} during the late-night / early-morning hours to approximately 59 dBA L_{eq} during the afternoon hours.

Table 3.13-1. Short-Term Measured Noise Levels

Receptors	Location/Address	Date	Time	L_{eq}[1] (dBA)	L_{max}[2] (dBA)
ST1	Southwest corner of 1757 Amherst Ave Los Angeles, CA 90025	October 18, 2017	11:54 a.m. – 12:09 p.m.	55.2	71.9
ST2	1761 Wellesley Ave Los Angeles, CA 90025	October 18, 2017	11:12 a.m. – 11:32 a.m.	63.9	90.8
ST3	1752 Wellesley Ave Los Angeles, CA 90025	October 18, 2017	11:35 a.m. – 11:50 a.m.	50.1	65.5
ST4	Western Boundary of Department of Water and Power	October 18, 2017	11:00 a.m. – 11:10 a.m.	50	59.5
ST5	1761 S Carmelina Ave Los Angeles, CA 90025	October 18, 2017	12:13 p.m. – 12:28 p.m.	58.8	75.2

Notes:
1 Equivalent Continuous Sound Level (Time-Average Sound Level)
2 Maximum Noise Level

Table 3.13-2. Long-Term Measured Noise Levels

Date	Time	L_{eq}[1] (dBA)	L_{max}[2] (dBA)
October 18, 2017	11:05 AM	55.4	81.1
October 18, 2017	12:05 PM	56.2	77.3
October 18, 2017	1:05 PM	53.9	75.8
October 18, 2017	2:05 PM	55.2	77.6
October 18, 2017	3:05 PM	59.1	80.4
October 18, 2017	4:05 PM	54.3	74
October 18, 2017	5:05 PM	54.4	78.3
October 18, 2017	6:05 PM	57.8	81.7
October 18, 2017	7:05 PM	52.7	78
October 18, 2017	8:05 PM	50.4	73.8
October 18, 2017	9:05 PM	47.7	61.5
October 18, 2017	10:05 PM	50.7	63
October 18, 2017	11:05 PM	49.2	76.6
October 19, 2017	12:05 AM	43.9	57.4
October 19, 2017	1:05 AM	45.2	57.4
October 19, 2017	2:05 AM	44.4	55.1
October 19, 2017	3:05 AM	45.2	58.1
October 19, 2017	4:05 AM	47	56

Table 3.13-2. Long-Term Measured Noise Levels

Date	Time	L_{eq}[1] (dBA)	L_{max}[2] (dBA)
October 19, 2017	5:05 AM	50.8	65.1

Notes:
1 Equivalent Continuous Sound Level (Time-Average Sound Level)
2 Maximum Noise Level

City of Los Angeles Noise Ordinance

The City of Los Angeles regulates noise through several sections of its Municipal Code (City of Los Angeles 2016): Section 41.40 (Noise Due to Construction, Excavation Work – When Prohibited), which establishes time prohibitions on noise generated by construction activity; Section 112.04 (Powered Equipment Intended for Repetitive Use in Residential Areas and Other Machinery, Equipment and Devices), which prohibits the use of loud machinery and/or equipment within 500 feet of residences and prohibits noise from machinery, equipment, or other devices that would result in an increase of more than 5 decibels (dB) above the ambient noise level at residences; and Section 112.05 (Maximum Noise Level of Powered Equipment or Powered Hand Tools), which establishes maximum noise levels for powered equipment and powered hand tools (i.e., 75 dBA at a distance of 50 feet for construction, industrial, and agricultural equipment between the hours of 7:00 a.m. and 10:00 p.m.). According to Section 41.40, no construction activity that might create loud noises in or near residential areas or buildings shall be conducted between the hours of 9:00 p.m. and 7:00 a.m. on weekdays, before 8:00 a.m. or after 6:00 p.m. on Saturday and national holidays, or at any time on Sunday.

Approach and Methodology

Noise from the construction phase of the proposed project was estimated using the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM; FHWA 2008). Although the model was funded and promulgated by the FHWA, the RCNM is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are also used for other project types. Input variables for the RCNM consist of the receiver/land use types, the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of hours the equipment typically works per day), and the distance from the noise-sensitive receiver. No topographical or structural shielding was assumed in the modeling of construction noise. Construction scenario assumptions, including phasing and equipment mix, were based on information provided by the proposed project applicant and the CalEEMod default values developed for the Air Quality/Greenhouse Gas impacts analysis, when proposed project specifics were not known.

Construction noise levels were assessed at two distances for each construction phase: the distance from the nearest noise-sensitive receivers (i.e., residential land uses) to the closest construction activities, and the more typical distance between the nearest noise-sensitive receivers and the "acoustic center" of construction activities (the average distance between the near and far work areas).

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant with Mitigation Incorporated. Existing residential development abuts the project site to the north and northwest. To the south and southwest of the site is an existing industrial site. Existing commercial development and office spaces abut the site to the west and northeast. Residential uses also exist further to the east and to the south of the project site. Noise from on-site construction activities have the potential to expose nearby sensitive receptors to noise levels above established standards. Additionally, operational traffic could potentially result in noise levels exceeding established standards at nearby noise-sensitive land uses.

Construction

During project construction, activities would include demolition, site preparation, grading, paving, erection of structures and architectural coatings. Construction activities would require the use of standard construction equipment such as loaders, dozers, dump trucks, soil compaction equipment, concrete pumps, and cranes. The anticipated number of workers would range from approximately 6 to 11 per day. Construction equipment with substantially higher noise-generation characteristics (such as pile drivers, rock drills, blasting equipment) would not be necessary for construction of the project.

The range of maximum noise levels for various types of construction equipment at a distance of 50 feet is depicted in Table 3.13-3. The noise values represent maximum noise generation, or full-power operation of the equipment. As an example, a loader and two dozers, all operating at full power and relatively close together, would generate a maximum sound level of approximately 90 dBA at 50 feet from their operating locations. As one increases the distance between equipment, and/or the separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together. In addition, typical operating cycles may involve 2 minutes of full-power operation, followed by 3 or 4 minutes at lower levels. The average noise level during construction activity is generally lower, since maximum noise generation may only occur up to 50% of the time.

Table 3.13-3. Construction Equipment Maximum Noise Emission Levels

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Roller	74
Concrete vibrator	76
Pump	76
Saw	76
Backhoe	80
Air compressor	81

Table 3.13-3. Construction Equipment Maximum Noise Emission Levels

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Generator	81
Compactor	82
Concrete pump	82
Crane, mobile	83
Concrete mixer	85
Dozer	85
Grader	85
Impact wrench	85
Loader	85
Pneumatic tool	85
Jackhammer	88
Truck	88
Paver	89

Source: DOT 2006.

The nearest off-site sensitive receptors to the project boundaries are the residences to the north and northwest. The nearest residences to the project site are located approximately 75 feet from the nearest planned construction; more typically, construction activities would take place approximately 300 feet from adjacent residences[7]. Noise levels from construction activities generally decrease at a rate of 6 dB per doubling of distance away from the activity.

Using the FHWA's RCNM construction noise model and construction information (types and number of construction equipment by phase), the estimated noise levels from construction were calculated for both the relatively brief periods of time during which construction would take place at the nearest source-receiver distances, and during the longer periods of time when construction would take place both near and far from adjacent receivers. The RCNM inputs and outputs are provided in Appendix E.

As presented in Table 3.13-4, the highest noise levels are predicted to occur during demolition activities, when noise levels would be as high as approximately 83 dBA Leq when demolition would take place within approximately 75 feet of residential land uses. More typically, construction activity would range from approximately 57 to 74 dBA Leq. The daytime ambient noise levels for residential locations at these locations as represented by the ST1 and ST2 measurements (see Table 3.13-1), range from approximately 55 to 64 dBA Leq.

[7] Because construction activities would take place both near and far relative to any one noise-sensitive receiver, the concept of the "acoustic center" is used for providing typical construction noise levels. The acoustic center is the idealized point from which the energy sum of all activity noise, near and far, would be centered. The acoustic center is derived by taking the square root of the product of the nearest and the farthest construction noise - receiver distances.

Table 3.13-4. Construction Noise Model Results Summary

Construction Phase	Construction Noise at Representative Receiver Distances (L_{eq} (dBA))	
	Nearest Residence (Approx. 75' Away)	*Typical Residence (Approx. 300' Away)*
Demolition	83	74
Site Preparation	77	71
Shoring 1	71	60
Excavation	81	70
Shoring 2	69	57
Concrete Foundations	75	70
Trenching	75	67
Concrete Paving	77	69
Architectural Coating	70	58

Source: Appendix E

Although nearby off-site residences would be exposed to elevated construction noise levels, the exposure would be short term and would cease upon completion of project construction. It is anticipated that construction activities associated with the proposed project would take place within the allowable hours per Section 41.40 of the LAMC (7:00 a.m. and 9:00 p.m. Monday through Friday, 8:00 a.m. and 6:00 p.m. on Saturday, and would not at any time on Sunday or on national holidays), and thus would not violate City of Los Angeles standards for construction. However, construction noise levels would be substantially higher than existing ambient daytime noise levels, particularly when construction activities take place in proximity to the nearest adjacent noise-sensitive receivers (as shown in Table 3.13-4). Therefore, temporary noise impacts from construction would be considered potentially significant. The implementation of mitigation measures **MM NOI-1** and **MM NOI-2** would reduce construction noise to less-than-significant levels with mitigation incorporated.

Mitigation Measures

MM-NOI-1 Construction Noise Reduction

1. Construction activities shall not occur between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, 6:00 p.m. and 8:00 a.m. on Saturday, or on Sundays or national holidays.
2. Pumps and associated equipment (e.g., portable generators etc.) shall be shielded from sensitive uses using local temporary noise barriers or enclosures, or shall otherwise be designed or configured so as to minimize noise at nearby noise-sensitive receivers.

3. Staging of construction equipment shall not occur within 20 feet of any noise- or vibration-sensitive land uses.
4. All noise-producing equipment and vehicles using internal combustion engines shall be equipped with mufflers; air-inlet silencers where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
5. All mobile or fixed noise-producing equipment used on the project facilities that are regulated for noise output by a local, state, or federal agency shall comply with such regulation while in the course of project activity.
6. Idling equipment shall be kept to a minimum and moved as far as practicable from noise-sensitive land uses.
7. Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where feasible.
8. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
9. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.

Effectiveness of these mitigation measures would vary from several decibels (which in general is a relatively small change) to ten or more decibels (which subjectively would be perceived as a substantial change), depending upon the specific equipment and the original condition of that equipment, the specific locations of the noise sources and the receivers, etc. Installation of a temporary noise barrier, for example, would vary in effectiveness depending upon the degree to which the line-of-sight between the source and receiver is broken, and typically ranges from 5 to 10 dB. Installation of more effective silencers could range from several decibels to well over 10 decibels. Reduction of idling equipment could reduce overall noise levels from barely any reduction to several decibels. Cumulatively, however, these measures would result in substantial decreases in the noise from construction.

MM NOI-2: Notification at Sensitive Receptors

Effective communication with local residents shall be maintained during construction, including keeping them informed of the schedule, duration, and progress of the construction to minimize public complaints regarding noise and vibration levels.

Operations.

On-Site Operational Noise. The proposed project is intended to enhance workplace quality and safety, functional efficacy and efficiency, sustainability, and site beautification. The proposed project would allow for more capacity for housing employees (from 120 currently, to approximately 375 with the proposed project) and more open space for vehicles to prevent congestion of the facility. The project would consolidate the functions currently occupied by six structures on-site (including the district office, warehouse, break room, locker room, and fleet shop) into three new buildings, consisting of a warehouse, district office, and fleet shop. Beneath the proposed new buildings a single-level underground parking structure with a total of 389 parking stalls would be installed. Additionally, the straddle crane located within the existing yard would be relocated toward the southeast section of the District Yard closer to the driveway along Olympic Boulevard. The existing unleaded and diesel fuel tanks would be protected in place in their current location. All fleet vehicle parking (a total of 32 oversized parking spaces), would be located on a surface parking lot. The proposed project operating hours would be unchanged from the current hours.

Although the number of employees assigned to the facility would increase as a result of the proposed project, the employee parking would be relocated to the new underground parking structure; thus, noise from parking lot activities would be reduced compared to existing conditions, in which all parking is at surface level. Similarly, the straddle crane would be relocated approximately 500 feet to the southeast, further from the nearest noise-sensitive land uses (residences to the north). Fleet vehicle parking would be located in the central portion of the project site, where most of the existing larger fleet vehicles are currently located. Furthermore, the proposed District Yard Office building would act as a structural noise barrier for residences to the north, reducing on-site noise at these noise-sensitive receivers. Based upon these project features, permanent noise from on-site operational noise would be **less than significant**. No mitigation is required.

Off-Site Operational (Traffic) Noise. The proposed project would add passenger vehicle and truck trips along local roadways. According the City of Los Angeles CEQA Thresholds Guide (City of Los Angeles 2006) "A project would normally have a significant impact on noise levels from project operation if the project causes the ambient noise level measured at the property line of an affected use to increase by 3 decibels (dBA) or more in community noise equivalency level (CNEL) to or within the "normally unacceptable" or "clearly unacceptable" category of the noise exposure chart prepared by the California Department of Health Services (DHS), or any 5 dBA or greater noise increase."

The results of the traffic modeling for the existing and existing plus project scenarios are summarized in Table 3.13-5, and the traffic noise model input/output files are located in Appendix E. As shown, the project-related traffic would result in a noise level increase of zero (0) dB CNEL when rounded to whole numbers along the studied roads in the vicinity of the project site. None of the modeled receivers would exceed the 65 dBA CNEL City noise standard (City of Los Angeles 1999) for residences as a result of the increase in Project-related traffic.

Additionally, noise increases would be well below the significance threshold of 5 dB. Therefore, traffic related to the proposed project would not exceed any noise standards and would not substantially increase the existing noise levels in the project vicinity, and permanent operational traffic-related noise impacts would be **less than significant**. No mitigation is required.

Table 3.13-5. Traffic Noise (Existing and Existing Plus Project)

Modeled Receptor	Existing Noise Level (dBA CNEL)	Existing Plus Project Noise Level (dBA CNEL)	Noise Level Increase (dB)
ST1	60	60	0
ST2	60	60	0
ST3	48	48	0
ST4	56	56	0
ST5	60	60	0
ST6	53	53	0
ST7	56	56	0
M1	66	66	0
M2	64	64	0
M3	66	66	0
M4	65	65	0

Source: Appendix E.

The noise level increases associated with additional traffic volumes under future without project traffic conditions and future with project traffic conditions are summarized in Table 3.13-6. None of the modeled receivers would exceed the 65 dBA CNEL City noise standard as a result of the increase in project-related traffic. The noise level increases associated with the project under future traffic conditions would be 1 dB or less (rounded to whole numbers). Therefore, traffic related to the proposed project would not exceed any noise standards and would not substantially increase the existing noise levels in the project vicinity. Permanent operational traffic-related noise impacts would be **less than significant**. No mitigation is required.

Table 3.13-6. Traffic Noise (Future and Future Plus Project)

Modeled Receptor	Future without Project Noise Level (dBA CNEL)	Future Plus Project Noise Level (dBA CNEL)	Noise Level Increase (dB)
ST1	60	61	1
ST2	61	61	0
ST3	49	49	0
ST4	57	57	0
ST5	61	61	0
ST6	54	54	0

Table 3.13-6. Traffic Noise (Future and Future Plus Project)

Modeled Receptor	Future without Project Noise Level (dBA CNEL)	Future Plus Project Noise Level (dBA CNEL)	Noise Level Increase (dB)
ST7	58	58	0
M1	67	67	0
M2	66	66	0
M3	67	67	0
M4	66	66	0

Source: Appendix E.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Construction activities that might expose persons to excessive groundborne vibration or groundborne noise could cause a potentially significant impact. Caltrans has collected groundborne vibration information related to construction activities (Caltrans 2013). Information from Caltrans indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inch/second begin to annoy people. The heavier pieces of construction equipment, such as bulldozers, would have peak particle velocities of approximately 0.089 inch/second or less at a distance of 25 feet (DOT 2006). Groundborne vibration is typically attenuated over short distances.

Groundborne vibration is typically attenuated over short distances. At the distance from the nearest residence to the construction area (approximately 65 feet) and with the anticipated construction equipment, the peak particle velocity would be approximately 0.021 inch/second. At the closest sensitive receptors, vibration levels would not exceed the vibration threshold of potential annoyance of 0.1 inch/second. Thus, vibration impacts at sensitive receptor locations to a **less than significant** level. No mitigation measures are necessary.

The major concern with regard to construction vibration is related to building damage. Construction vibration as a result of the proposed project would not result in structural building damage, which typically occurs at vibration levels of 0.5 inch/second or greater for buildings of reinforced-concrete, steel, or timber construction. The heavier pieces of construction equipment used would include typical construction equipment for this type of project such as backhoes, front-end loaders and flat-bed trucks. Pile driving, blasting, or other special construction techniques would not be used for construction of the proposed project; therefore, excessive groundborne vibration and groundborne noise would not be generated. Once operational, the project would not generate significant levels of groundborne vibration. As such, no building damage would be expected to occur as a result of project-related vibration during construction.

c) Would the project be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less Than Significant Impact. The proposed project is not located within an airport land use plan (Los Angeles County 2004). The nearest airport is Santa Monica Municipal Airport, located approximately 1.1 miles to the south of the project site. Based upon the County of Los Angeles Comprehensive Land Use Plan, the project site is not within the Santa Monica Municipal Airport's Influence Area. Further, the proposed project is not located in the vicinity of a private airstrip (Airnav.com 2018). Thus, the proposed project would not expose people residing or working in the project area to excessive noise levels from an airport or a private airstrip. Noise impacts would thus be **less than significant**.

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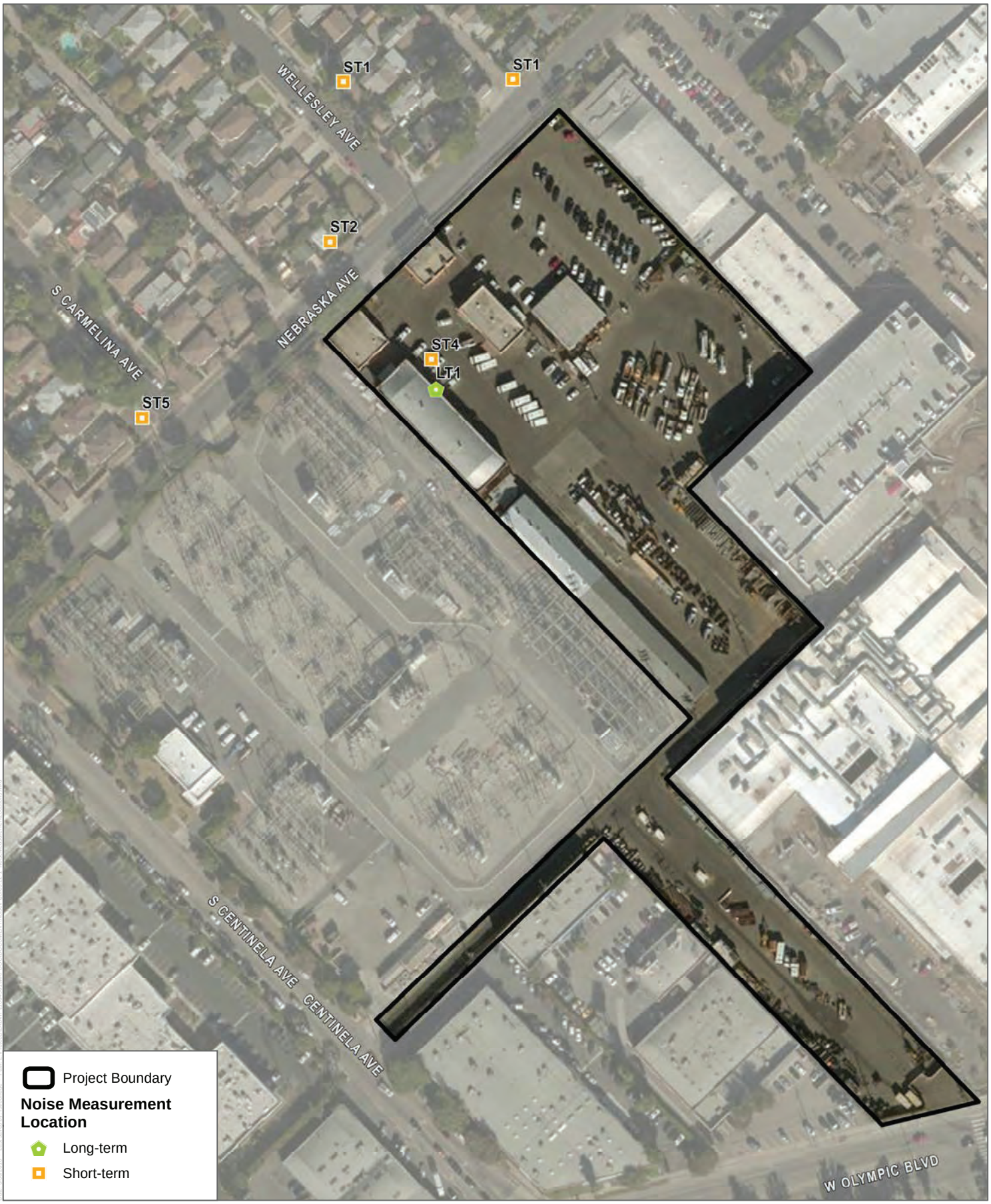

SOURCE: Bing Maps 2018; Los Angeles County 2011

DUDEK

0 75 150 Feet

FIGURE 3.12-1

Noise Measurement Locations

LADWP West LA Yards

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3.14 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. The purpose of this project is to significantly enhance the LADWP West Los Angeles District Yard workplace quality, safety, functional efficiency, sustainability, and site beautification. As such, the project would involve facility improvements at a site that already houses LADWP facilities.

During project construction, construction workers will be present at the site every day. However, the project site is located in the City of Los Angeles and construction workers would most likely come from the surrounding metropolitan area. Therefore, project construction is not anticipated to result in direct or indirect substantial unplanned population growth.

Currently, 120 total employees are assigned to the existing facility. Upon buildout of the project, an additional 225 employees would be assigned to this facility, resulting in a total of 375 employees operating out of the proposed LADWP District Yard. Because the proposed project would be located in the densely populated Los Angeles metropolitan area, it is anticipated that the jobs at the project site would be filled by City residents or by residents of neighboring cities. In the unlikely event that some of the new employees were to relocate to the City upon obtaining a job at the project site, the correlated population growth would be negligible relative to the City's existing and projected population. For the reasons described above, the proposed project is not anticipated to induce substantial unplanned population growth in the area. Additionally, the proposed project would not include the construction of any major infrastructure or other components that would result in unprecedented indirect population growth in the City. Therefore, impacts would be less than significant

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. There is no existing housing within the project site, and the proposed project would not involve the removal of construction of any housing. The project site is currently used as a LADWP facility and would continue to be used as such upon project operation. No impact would occur.

References

None.

3.15 Public Services

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire Protection

Less Than Significant Impact. Fire protection for the proposed project site is provided by the City of Los Angeles Fire Department (City of Los Angeles 2017a). The proposed project would introduce approximately 225 additional employees on site during operations. The project site would be served by Fire Station 59, located approximately 0.9-mile east of the site. From January to July 2019, operational response times for Station 59 averaged from 5 minute and 46 seconds for critical Advanced Life Support (ALS) calls to 6 minutes and 2 seconds for calls to structural fires, and 6 minutes and 28 seconds for calls for emergency medical services (City of Los Angeles 2019d).

Although the project would result in the addition of approximately 225 employees on site, it is expected that new employees would already reside in the surrounding Los Angeles metropolitan area. As, such the project is not expected to induce substantial population such that the need for additional fire protection services or facilities would be required.

Additionally, the proposed project would provide emergency access to the site in accordance with the applicable fire code, which includes requirements for adequate fire flows, width of emergency access routes, turning radii, automatic sprinkler systems, fire alarms, and floor to sky height limits along emergency access routes. Due to the incremental increase of employees on site, the project is not expected to lead to an increase in calls for fire protection services. As such, and with compliance with all applicable fire codes and regulations, impacts to fire services would be less than significant.

Police Protection

Less Than Significant Impact. Police protection for the proposed project site is provided by the City of Los Angeles Police Department, and more specifically by the West LA Community Police Station located at 1663 Butler Avenue, located approximately 0.8-mile northeast of the project site (City of Los Angeles 2019e).

The project proposes the construction of a commercial, office structure, which is not a land use typically associated with the need for police protection. Although the project would result in the addition of approximately 225 employees on site, it is expected that new employees would already reside in the surrounding City of Los Angeles metropolitan area. As, such the project is not expected to induce substantial population such that the need for additional police protection services or facilities would be required.

Additionally, as shown in Figure 2-1, Site Plan, the proposed project would include some Crime Prevention through Environmental Design (CPTED) features, such as security gates, which would be constructed at each access point to the site along Nebraska Avenue. As such, the proposed project is not expected to warrant the need for additional police protection services. Impacts would be less than significant.

Schools

Less Than Significant Impact. The proposed project would not generate increased demand for school services. Although the project would result in an incremental increase in the number of employees on site, new employees are expected to already reside in the surrounding Los Angeles metropolitan area. Thus, the project would not lead to substantial population growth such that the associated increase in student enrollment would result in the need for new or physically altered school facilities. Impacts would be less than significant.

Parks

Less Than Significant Impact. The nearest park to the project site is the Stoner Recreation Center, located approximately 0.3-mile northeast of the project site. During construction, the proposed project would introduce an average of nine daily construction workers to the project site and, as such, no additional use of nearby park facilities is anticipated during project construction.

Upon operation, 225 additional employees would operate out of the new LADWP facility, resulting in a total of 375 on-site employees. The additional 225 employees would most likely reside in the surrounding Los Angeles Metropolitan area, and as such, project operation is not expected to lead to population growth such that an increase in the use of existing neighborhood or regional parks or other recreational facilities would occur. Impacts would be less than significant.

Other Public Facilities

No Impact. The proposed project would not generate a direct demand for other public facilities. Although the project would result in an increased amount of employees on site, this increase would be minimal. Further, it is expected that these additional employees would reside in the surrounding Los Angeles metropolitan area. Thus, the proposed project would not directly or indirectly induce population growth in the area such that new or physically altered governmental facilities would be required to adequately provide services. Impacts would be less than significant.

References

City of Los Angeles. 2019a. Zimas. "Public Safety." Web Map Application. Accessed August 27, 2019. http://zimas.lacity.org/.

City of Los Angeles. 2019d. Los Angeles Fire Department – Fire Stat LA (beta). Web Application. Accessed August 27, 2019. http://www.lafd.org/fsla/stations-map?st=571&year=2019.

City of Los Angeles. 2019e. Los Angeles Police Department [webpage]. Accessed, August 27, 2019. http://www.lapdonline.org/west_la_community_police_station.

3.16 Recreation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less Than Significant Impact. The nearest park to the project site is the Stoner Recreation Center, located approximately 0.3-mile northeast of the project site. During construction, the proposed project would introduce an average of nine daily construction workers to the project site and, as such, no additional use of nearby park facilities is anticipated during project construction.

Upon operation, 225 additional employees would operate out of the new LADWP facility, resulting in a total of 200 on-site employees. The additional 225 employees would most likely reside in the surrounding Los Angeles Metropolitan area, and as such, project operation is not expected to lead to population growth such that an increase in the use of existing neighborhood or regional parks or other recreational facilities would occur. Impacts would be less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less Than Significant Impact. The proposed project would not generate a demand for parks, nor would it lead directly or indirectly to substantial population growth such that the construction or expansion of recreation facilities would be required. The proposed project does not include the construction of any recreational facilities, which might have an adverse physical effect on the environment. As such, impacts would be less than significant.

References

None.

3.17 Transportation and Traffic

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

A traffic impact study was conducted for the proposed project by Linscott, Law, and Greenspan Engineers and is included as Appendix F of this document. The traffic analysis follows the City of Los Angeles traffic study guidelines and is consistent with the traffic impact assessment guidelines set forth in the Los Angeles County Congestion Management Program. The City of Los Angeles Department of Transportation has reviewed and approved the Transportation Impact Study (TIS). A copy of LADOT's Assessment Letter of the TIS is also included in Appendix F.

Eight intersections were defined for analysis in the TIS. They include:

1. Centinela Avenue/Nebraska Avenue
2. Centinela Avenue (West)/Olympic Boulevard
3. Centinela Avenue (East)/Olympic Boulevard
4. Bundy Drive/Nebraska Avenue
5. Bundy Drive/Olympic Boulevard
6. Bundy Drive/Pico Boulevard
7. Bundy Drive/Idaho Avenue
8. Centinela Avenue/Exposition Boulevard

Seven of the study intersections selected are for analysis are currently controlled by traffic signals, with the remaining one study intersection, Bundy Drive/Nebraska Avenue, controlled with a stop sign. The existing roadway configurations and intersection controls at the study intersections are displayed in Figure 3.17-1, Existing Lane Configurations)

Study Scenarios

Traffic impacts at the study intersections were analyzed for the following conditions:

a. Existing conditions
b. Existing with project conditions.
c. Condition (b) with implementation of project mitigation measures, where necessary.
d. Condition (a) plus one percent (1.0%) annual ambient traffic growth through year 2025 and with completion and occupancy of the related projects (i.e., future without project conditions).
e. Condition (d) with completion and occupancy of the proposed project.
f. Condition (e) with implementation of project mitigation measures, where necessary.

Traffic Impact Analysis Methodology

The study intersections were evaluated using the Critical Movement Analysis (CMA) method of analysis which determines Volume-to-Capacity (V/C) ratios on a critical lane basis. The overall intersection V/C ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A, representing free-flow conditions, to LOS F, representing a jammed condition.

Impact Criteria and Thresholds

The relative impact of the added project traffic volumes to be generated by the proposed project during the weekday AM and PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future V/C relationships and service level characteristics at each study intersection.

The significance of the potential impacts of project-generated traffic was identified using the traffic impact criteria set forth in LADOT's Transportation Impact Study Guidelines, from December 2016. According to the City's published traffic study guidelines, the impact is considered significant if the project-related increase in the v/c ratio equals or exceeds the thresholds presented in Table 3.17-1.

Table 3.17-1. City of Los Angeles Intersection Impact Threshold Criteria

Final V/C	Level of Service	Project Related Increase in V/C
0.71 to 0.80	C	equal to or greater than 0.04
0.81 to 0.90	D	equal to or greater than 0.02
0.91 or more	E / F	equal to or greater than 0.01

Source: Appendix F

The City's Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection V/C ratio by an amount equal to or greater than the values shown in Table 3.17-1.

Existing Traffic Volumes

Manual counts of vehicular turning movements were conducted at each of the study intersections during the weekday AM and PM commute periods to determine the peak hour traffic volumes. The weekday peak hour manual counts of vehicle movements at the study intersections are summarized in Table 3.17-2. Figure 3.17-2 and Figure 3.17-3 illustrate the Existing Traffic Volumes for weekday AM and PM peak hours, respectively.

Table 3.17-2. Existing Traffic Volumes

No.	Intersection	Date	DIR	AM Peak Hour		PM Peak Hour	
				Began	*Volume*	*Began*	*Volume*
1	Centinela Avenue/Nebraska Avenue	11/16/2017	NB	8:30	1,122	5:00	750
			SB		557		681
			EB		159		461
			WB		83		142
2	Centinela Avenue (West)/Olympic Boulevard	11/16/2017	NB	8:00	0	5:00	0
			SB		587		1,015
			EB		759		1,169
			WB		2,192		1,540
3	Centinela Avenue (East)/Olympic Boulevard	11/16/2017	NB	8:15	906	4:45	538
			SB		17		35
			EB		1,235		2,142
			WB		1,627		1,129
4	Bundy Drive/Nebraska Avenue	11/16/2017	NB	8:00	1,269	4:00	1,375
			SB		1,370		1,043
			EB		95		197
			WB		0		0

Table 3.17-2. Existing Traffic Volumes

No.	Intersection	Date	DIR	AM Peak Hour		PM Peak Hour	
				Began	*Volume*	*Began*	*Volume*
5	Bundy Drive/Olympic Boulevard	11/16/2017	NB	8:00	1,370	4:30	1,214
			SB		1,171		929
			EB		967		1,496
			WB		1,859		1,694
6	Bundy Drive/Pico Boulevard	11/16/2017	NB	8:00	1,697	4:45	1,480
			SB		1,221		1,359
			EB		1,049		1,284
			WB		1,046		729
7	Bundy Drive/Idaho Avenue	06/26/2019	NB	8:45	1,136	4:30	1,266
			SB		1,385		1,231
			EB		225		447
			WB		315		167
8	Centinela Avenue/Exposition Boulevard	06/26/2019	NB	8:45	811	4:30	486
			SB		506		917
			EB		6		3
			WB		154		54

Source: Appendix F

Future Traffic Volumes

To provide a highly conservative estimate of future pre-project traffic volumes, a forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. Figure 3.17-4 illustrates the location of related projects. Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, are provided in Appendix F. Figure 3.17-5 and Figure 3.17-6 illustrate the Related Projects Traffic Volumes for the AM and PM peak hour, respectively. To account for area-wide regional growth, the existing traffic volumes were increased at an annual rate of one percent (1.0%) to the year 2025. The ambient growth factor was based on general traffic growth factors provided in the *2010 Congestion Management Program for Los Angeles County* and determined in consultation with City staff. The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). Figure 3.17-7 and Figure 3.17-8 illustrate the Future without Project traffic volumes for weekday AM and PM peak hours, respectively.

Existing Conditions

As shown in column [1] of Table 3.16-5, seven of the eight study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours. The intersection of Bundy Drive/Pico Boulevard (intersection 6) is expected to operate at LOS E during both the AM and PM peak hours shown in Table 3.17-4.

- Int. No. 6: Bundy Drive/Pico Boulevard — AM Peak Hour: v/c=0.927, LOS E; PM Peak Hour: v/c=0.948, LOS E

Future Conditions

The V/C ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in Table 6-1 of Appendix F. As presented in column [3] of Table 3.17-4, six of the eight study intersections are expected to continue operating at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The following study intersections are expected to operate at LOS E or F during the peak hours shown below with the addition of ambient growth traffic and traffic due to the related projects:

- Int. No. 5: Bundy Drive/Olympic Boulevard — AM Peak Hour: v/c=0.965, LOS E
- Int. No. 6: Bundy Drive/Pico Boulevard — AM Peak Hour: v/c=1.072, LOS F; PM Peak Hour: v/c=1.099, LOS F

a) ***Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?***

Less-Than-Significant Impact. The following section provides an analysis of project traffic and its impact to the circulation system.

Project Trip Generation

Due to the nature of the project's land use components, operations, and unique hours of operation, it was determined in consultation with City staff that it would be appropriate to forecast the trips generated by the project based on site-specific trip generation rates rather than trip rates published in the ITE Trip Generation Manual. The number of existing vehicle trips arriving and departing the site during the peak hours was determined, and when compared to the existing overall number of LADWP West Los Angeles Yard employees, site-specific trip generation rates (i.e., on a per employee basis) were derived for the site. Appendix F provides further details of project's trip generation rates and forecast that was developed by LLG and approved by LADOT staff.

Table 3.17-3 shows projected traffic generation forecasts. As shown in this table, the proposed project would the proposed project is expected to generate a net increase of 52 vehicle trips (24 inbound trips and 28 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate a net increase of 59 vehicle trips (12 inbound trips and 47 outbound trips). Over a 24-hour period, the proposed project is forecast to generate a net increase of 525 daily trip ends during a typical weekday (approximately 263 inbound trips and 263 outbound trips).

Table 3.17-3. Project Trip Generation

Land Use	Variable/Size	Daily Trip Ends [2] Volumes	AM Peak Hour Volumes [4]			PM Peak Hour Volumes [4]		
			In	*Out*	*Total*	*In*	*Out*	*Total*
Trip Generation Rates[[1]								
Existing West LA District Yard[2]	Per Employee	2.644	22%	78%	0.249	21%	79%	0.283
General Office Building	Per Employee	3.28	83%	17%	0.37	20%	80%	0.40
Project Trip Generation[3]								
Proposed Project								
West LA Yard[2]	315 Employees	833	17	61	78	18	70	88
Service Planning Center	60 Employees	197	18	4	22	5	19	24
Subtotal Proposed Project		1,030	35	65	100	23	89	112
Existing Uses								
West LA District Yard[2]	191 Employees	(505)	(11)	(37)	(48)	(11)	(42)	(53)
Net New Vehicle Trips (Proposed-Existing)		525	24	28	52	12	47	59

Source: Appendix F ___
Notes:
1 Source: ITE "Trip Generation Manual", 10th Edition, 2017, except as noted below
2 The trip generation forecast for the DWP West LA yard operations is based on empirical trip rates derived from observations of the existing DWP yards. Refer to Appendix Table C for derivation of the empirical trip rates.
3 Projected employment totals 375 employees per the LADWP project description (June 2019) which includes 315 West LA Yard employees plus 60 employees that will work in the new 8,531 square-foot Service Planning Center to be constructed on-site.
4 Trips are one-way traffic movements, entering or leaving.

Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the site were distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Santa Monica Boulevard, Olympic Boulevard, Pico Boulevard, Centinela Avenue, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Existing site parcel access ingress/egress schemes;
- Nearby population and employment centers; and
- Input from LADOT staff.

The project traffic volume distribution percentages during weekday AM and PM peak hours at the study intersections are illustrated in Figure 3.17-9. The forecast net new project traffic volumes at the study intersections for the weekday AM and PM peak hours are displayed in Figure 3.17-10 and Figure 3.17-11, respectively.

Existing with Project Conditions

Existing with Project Conditions analysis are presented in column [2] of Table 3.17-4. Figure 3.17-12, and Figure 3.17-13 illustrate the Existing with Project Traffic Volumes for Weekday AM and PM peak hours, respectively. As shown in Table 3.17-4, the project is not expected to create significant impacts at any of the eight study intersections. Impacts at all six intersections during Existing With Project Conditions would be **less than significant i**mpacts. No mitigation would be required.

Future with Project Conditions

Future with Project Conditions are presented in Column [4] of Table 3.17-4. Figure 3.17-14 and Figure 3.17-15 illustrate the Future with Project (existing, ambient growth, related projects and project) Traffic Volumes for Weekday AM and PM peak hours, respectively. As shown in Table 3.17-4, application of the City's threshold criteria to the Future with Proposed Project scenario indicates that the proposed project is not expected to create significant impacts at any of the eight study intersections. As such, impacts would be **less than significant**. No mitigation would be required.

Project Construction traffic

It is assumed that an average of 12 workers would be present daily during demolition activities and an average of 30 workers per day would be present during construction activities. Construction of the proposed project would require the removal of approximately 100,000 cubic yards of soil, which would be exported from the site via haul trucks. Excavation is anticipated to last approximately five months and would require a total of approximately 5,000 total haul truck loads, assuming each truck would haul 20 cubic yards of soil, which would equate to approximately 50 truckloads per day (i.e., 100 truck trips per day). It is assumed that two to four daily vendor trips would be required, on average, during construction of the project. As such, the construction traffic would not exceed the net new project trips estimated in Table 3.17.3. Therefore, construction related project traffic would not create significant impacts at any of the eight study intersections. As such, impacts would be **less than significant**. The proposed project would comply with best management practices and work site traffic control plan per DOT Western District Operations Office requirement for the duration of project's construction.

Congestion Management Program

The applicable congestion management program (CMP) for the project area and the surrounding metropolitan area is the Los Angeles County Metropolitan Transportation Authority's 2010 CMP. This program monitors and sets performance indicators for a transportation network of numerous highway segments, freeways, and key roadway intersections throughout Los Angeles County (called the CMP Highway and Roadway System). The CMP requires analysis of a project's effects on CMP facilities if the project would add 50 or more trips to a CMP intersection or more than 150 trips to a CMP mainline freeway in either direction during the AM or PM weekday peak hours. As discussed in the Traffic Impact Study (Appendix F), the project is not expected to add 50 or more trips during either weekday AM or PM peak hours at CMP monitoring intersections. Further, the project is not expected to add 150 or more trips (in either direction) during either the weekday AM or PM peak periods to CMP mainline freeway monitoring locations. No further analysis of CMP intersections or freeway mainline segments is required per the Los Angeles County CMP guidelines, indicating that the project trip generation falls below the thresholds established in the CMP and is, therefore, not anticipated to result in significant impacts at CMP monitoring locations. As such, impacts to the CMP would be **less than significant**.

Table 3.17-4. Summary of Volume to Capacity Ratios and Levels of Service – Weekday AM and PM Peak Hours

			[1]		[2]				[3]		[4]			
No	Intersection	Peak Hour	*Year 2019 Existing*		*Year 2019 Existing With Project*		*Change V/C or Delay [(2)-(1)]*	*Signif. Impact [a]*	*Year 2025 Future Pre-Project*		*Year 2025 Future w/ Proposed Project*		*Change V/C or Delay [(4)-(3)]*	*Signif. Impact [a]*
			V/C or delay	*LOS*	*V/C or delay*	*LOS*			*V/C or delay*	*LOS*	*V/C or delay*	*LOS*		
1	Centinela Avenue/Nebraska Avenue	AM	0.613	B	0.617	B	0.004	No	0.713	C	0.717	C	0.004	No
		PM	0.743	C	0.748	C	0.005	No	0.891	D	0.895	D	0.004	No
2	Centinela Avenue (West)/ Olympic Boulevard	AM	0.654	B	0.657	B	0.003	No	0.753	C	0.756	C	0.003	No
		PM	0.617	B	0.617	B	0.000	No	0.846	D	0.846	D	0.000	No
3	Centinela Avenue (East)/ Olympic Boulevard	AM	0.582	A	0.600	A	0.018	No	0.772	C	0.788	C	0.016	No
		PM	0.573	A	0.600	A	0.027	No	0.767	C	0.794	C	0.027	No
4	Bundy Drive/Nebraska Avenue	AM	0.748	C	0.758	C	0.010	No	0.877	D	0.886	D	0.009	No
		PM	0.717	C	0.723	C	0.006	No	0.851	D	0.857	D	0.006	No
5	Bundy Drive/Olympic Boulevard	AM	0.803	D	0.804	D	0.001	No	0.965	E	0.968	E	0.003	No
		PM	0.695	B	0.696	B	0.001	No	0.879	D	0.881	D	0.002	No
6	Bundy Drive/Pico Boulevard	AM	0.927	E	0.928	E	0.001	No	1.072	F	1.072	F	0.000	No
		PM	0.948	E	0.949	E	0.001	No	1.099	F	1.101	F	0.002	No
7	Bundy Drive/Idaho Avenue	AM	0.677	B	0.678	B	0.001	No	0.807	D	0.808	D	0.001	No
		PM	0.591	A	0.591	A	0.000	No	0.723	C	0.724	C	0.001	No
8	Centinela Avenue/Exposition	AM	0.546	A	0.549	A	0.003	No	0.723	C	0.727	C	0.004	No
		PM	0.469	A	0.470	A	0.001	No	0.676	B	0.677	B	0.001	No

Source: Appendix F
[a] The City of Los Angeles intersection impact threshold criteria are listed in Table 3.17-1 of this IS/MND

Transit Impact Review

Public bus and rail transit service is provided near the project site is currently provided by Los Angeles County Metropolitan Transit Authority (Metro) and City of Santa Monica Big Blue Bus. The Metro Expo Line is also provided in close proximity to the project site with the nearest station at Bundy Drive/Exposition Boulevard (i.e., Expo/Bundy station). A summary of the existing transit service, including the transit route, destinations, and peak hour headways is shown in Table 3.17-5. Figure 3.17-16 illustrates the Existing Public Transit Routes.

Table 3.17-5. Existing Transit Routes

Route	Destinations	Roadways(s) Near Site	No. of Buses/Trains During Peak Hours		
			DIR	*AM*	*PM*
Big Blue Bus Route 5	Santa Monica to Palms via West Los Angeles, Rancho Park, Century City and Cheviot Hills	Centinela Avenue, Bundy Drive, Olympic Boulevard	EB	3	3
			WB	3	3
Big Blue Bus Route 7	Santa Monica to Koreatown via West Los Angeles, Century City and Mid City	Bundy Drive, Pico Boulevard	EB	4	4
			WB	7	4
Big Blue Bus Rapid 7	Santa Monica to Koreatown via West Los Angeles, Century City and Mid City	Bundy Drive, Pico Boulevard		4	4
				4	4
Big Blue Bus Rapid 10	Santa Monica to Downtown Los Angeles via West Los Angeles	Bundy Drive, Pico Boulevard	EB	2	0
			WB	0	2
Big Blue Bus Route 14	Playa Vista to Brentwood via Culver City, Mar Vista and West Los Angeles	Bundy Drive, Nebraska Avenue, Olympic Boulevard, Pico Boulevard	NB	4	4
			SB	4	4
Big Blue Bus Route 15	West Los Angeles to Brentwood	Bundy Drive, Olympic Boulevard, Pico Boulevard	NB	3	3
			SB	2	3
Metro Expo Line	Downtown Los Angeles to Santa Monica via Exposition Park, Jefferson Park, West Adams, Culver City, Century City, and West Los Angeles	Bundy Drive, Olympic Boulevard	EB	10	10
			WB	10	10
			Total	60	58

Source: Appendix F

The Traffic Impact Study (Appendix F) analyzed potential impacts the project would place on transit service, as required by the 2010 CMP. As outlined Table 3.17-5, these seven transit lines provide services for an average of (i.e., average of the directional number of buses/trains during the peak hours) roughly 60 and 58 buses/trains during the weekday AM and PM peak hours, respectively.

The project trip generation, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed project is forecast to generate demand for 3 transit trips during both the weekday AM and PM peak hours. Over a 24-hour period, the proposed project is forecast to generate demand for 26 daily transit trips. The calculations are as follows:

- Weekday AM Peak Hour = 52 × 1.4 × 0.035 = 3 Transit Trips
- Weekday PM Peak Hour = 59 × 1.4 × 0.035 = 3 Transit Trips
- Weekday Daily Trips = 525 × 1.4 × 0.035 = 26 Transit Trips

Therefore, based on the above calculated weekday AM and PM peak hour this would correspond to less than one additional transit rider per bus. It is anticipated that the existing transit service in the project area will adequately accommodate the increase of project-generated transit trips. Thus, given the number of project-generated transit trips per bus, no impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project. Impacts to transit facilities would be **less than significant**.

Bicycle

Existing or proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, Proposed Bicycle Routes, Bicycle Friendly Streets, etc.) in the City's 2010 Bicycle Plan are located within an approximate one-mile radius from the project site. It is important to note that the 2010 Bicycle Plan goals and policies have been folded into the Mobility 2035 Plan to reflect a commitment to a balanced, multi-modal viewpoint. The location of the City of Los Angeles bicycle enhanced network (low stress network) in close proximity to the project site and in the surrounding area is shown in Figure 3.17-17. The location of the City of Los Angeles bicycle lane network in close proximity to the project site and in the surrounding area is illustrated in Figure 3.17-18. Use of bicycles as a transportation mode to and from the project site should be encouraged by the provision of ample and safe parking. The type of spaces and dimensions will be provided based on City Code requirements (refer to Los Angeles Municipal Code Sections 12.21.A.16 and 12.21 A.4(c)), as well as to meet the needs of a variety of bicycles. As such, the proposed project would encourage bicycle use and incorporate development within close proximity to future, planned bicycle facilities. As such, the project would support the use of these facilities and would not introduce land uses that would compromise the safety or performance of bicycle facilities. Impacts to bicycle facilities would be **less than significant**.

Pedestrian

The project is well-located to encourage pedestrian activity and walking as a transportation mode. The project site is situated within easy walking distance to several established residential areas as well as other retail, restaurant, and other commercial businesses within the area. The site's proximity both to nearby residential areas and amenities on the commercial corridors, as well as the existing public sidewalks throughout the area roadway system, will promote and encourage walking. The project will connect to the adjacent sidewalk network via the Nebraska Avenue and Centinela Avenue property frontages. Additionally, regional and local public bus transit stops are provided nearby on Centinela Avenue, Bundy Drive, Nebraska Avenue, and Olympic Boulevard which will promote pedestrian connectivity with the project site.

For the reasons described above, the proposed project would not conflict with policies or programs for public transit, bicycle, or pedestrian facilities, and the project would not decrease the performance or safety of such facilities. Rather, the proposed project would include pedestrian enhancements and would be located in proximity to existing transit services, numerous planned bicycle facilities, and a variety of services that are within a walkable distance. For the reasons described above, the project would support the use of alternative transportation, consistent with City policies. Impacts would be **less than significant**. No mitigation is required.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. According to CEQA Guidelines section 15064.3, subdivision (b), for land use projects, vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact. According to the TIS, in August 2014, Mike Bonin introduced a motion directing the Department of City Planning (DCP) and LADOT to begin preparation for the shift to VMT analysis. DCP subsequently contracted with an outside consultant to develop the strategy and methodology in order to establish the tools necessary to bring the City into compliance with the state mandate. City staff has presented the CEQA Appendix G environmental checklist update to the City Council, which led to the adoption of new VMT-based significance thresholds and transportation assessment guidelines, as well as its subsequent incorporation into the City's CEQA Threshold Guide. The new transportation assessment guidelines were adopted in late July, 2019, by City Council. With the adoption of the new VMT-based significance thresholds and transportation assessment guidelines, new projects must now comply with the updated transportation evaluation framework. Since this project was initiated prior to formal adoption of the new guidelines, the analysis in this study utilizes existing, long-established protocols in accordance with the City's prior CEQA Thresholds Guide and transportation study guidelines.

Per screening criteria and thresholds of significance used to determine if other types of land uses occasionally reviewed by LADOT would result in significant impacts as it relates to VMT, Public Services land use which includes police, fire stations and public utilities, such as proposed project, do not generally generate substantial VMT. Instead, these land uses are often built in response to development from other land uses (e.g., office and residential). Therefore, land uses such as the proposed project can be presumed to have less-than-significant impacts on VMT.

As such, since the analysis of project-related VMT is not required at this time, the project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts would be **less than significant.**

Although no significant project-related impacts at the study intersections or project-related VMT are expected to occur as a result of the proposed project, LADOT has indicated that Transportation Demand Management (TDM) measures should be implemented and maintained by LADWP in conformance with the City's Trip Reduction Ordinance. TDM measures are aimed at reducing vehicular traffic and parking generated at project sites. TDM measures are employed to decrease the number of vehicular trips generated by persons traveling to and from the site by offering specific facilities, services and actions designed to increase the use of other transportation modes such as transit, walking, and bicycling, as well as by use of ridesharing. Accordingly, TDM measures are focused on establishing an environment that will encourage use of non-motorized modes. A menu of potential measures that could be considered by LADWP include, but may not be limited to, the following:

- On-Site Employee Transportation Coordinator
- TDM Web Site Information
- TDM Promotional Material.
- Transit Welcome Package.
- Los Angeles Metro TAP Employer Program.
- Los Angeles County Guaranteed Ride Home Program
- Carpool Program for Employees.
- Convenient Parking/Amenities for Bicycle Riders.
- Flexible/Alternative Work Schedules.

c) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. As shown in Figure 3.17-19, , the portion of the LADWP West Los Angeles Yard Demolition & Construction project site that is planned to be improved contains a total of five driveways,

including three driveways on Nebraska Avenue, one driveway on Centinela Avenue, and one driveway that essentially forms the north leg of the Centinela Avenue East/Olympic Boulevard intersection. All five driveways are currently controlled by either manual or automatic gates that are operated by LADWP. Similar to current operations, on-site vehicle circulation will require all departmental vehicles to access the site via Olympic Boulevard, Centinela Avenue, and the northernmost driveway on Nebraska Avenue. However, the planned new primary driveway for employees on Nebraska Avenue will require employees to enter past a security gate to access the subterranean parking garage. Public access to the project site will be provided via the southerly driveway on Nebraska Avenue, which will accommodate direct access to the public parking spaces provided adjacent to the Service Planning Center office.

Additionally, traffic signal warrants analysis were prepared for the Bundy Drive/Nebraska Avenue intersection to determine whether traffic signals are warranted at the intersection upon completion of the proposed project. A detailed traffic signal warrants analysis is provided in Appendix F. In summary, Warrant No. 1 (Eight-Hour Vehicular Volume) is not satisfied under future with project conditions for the Bundy Drive/Nebraska Avenue intersection, while Warrant No. 2 (Four-Hour Vehicular Volume) and Warrant No. 3 (Peak Hour) are satisfied under future with project conditions. Warrant No. 7 (Crash Experience) is not satisfied based on a review of existing collision records. It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if a traffic signal warrant is not met, these other factors may be just cause for consideration of a traffic signal installation. The lead agency/agencies must carefully consider all aspects related to installation of traffic controls.

In August 2015, Mayor Eric Garcetti issued Executive Directive No. 10, formally launching the Vision Zero initiative in Los Angeles, a City-wide initiative which prioritizes the safety of pedestrians and bicyclists on public streets, with the understanding that roads which are safe for vulnerable users will be safer for all users, in an effort to eliminate traffic fatalities. The Vision Zero task force, directed by LADOT and the City's Police Department, has identified streets where investments in safety will have the most impact in reducing severe injuries and traffic fatalities in the City. These roads are collectively known as the High Injury Network (HIN). The proposed project is located in the West Los Angeles area where the Vision Zero focus is on major corridors. As shown on Figure 3.17-20, the HIN roadways within immediate vicinity of the proposed project include Bundy Drive, Santa Monica Boulevard (east of Centinela Avenue), and Pico Boulevard (east of Centinela Boulevard). If a proposed project results in significant traffic impacts at intersections located along a designated HIN, the Vision Zero group will review those specific locations and immediate vicinity for potential safety enhancements that are consistent with the City's Vision Zero initiative. As discussed under Threshold a, above, the proposed project would not result in significant impacts at any traffic intersections. Lastly, the proposed project would not modify existing roadways leading to the site and would not involve construction of structures that would cause transportation hazards. As such, impacts would be **less than significant**.

d) Would the project result in inadequate emergency access?

Less Than Significant Impact. Emergency access to the project site is currently provided from the west via Nebraska Avenue, from the south via Centinela Avenue, and from the east via Olympic Boulevard. During construction, vehicle access to the yard would be restricted to the entrances located on Centinela Avenue and Olympic Boulevard. Employee access to the yard would be provided via Nebraska Avenue and construction-vehicle access via Nebraska Avenue would be restricted. Trips generated from construction of the proposed project would be minimal and, with this proposed access and configuration, the project would not result in inadequate emergency access during construction. Once operational, on-site vehicle circulation would be altered from existing conditions to require all departmental vehicles to use access via Olympic Boulevard, Centinela Avenue, and the northernmost driveway from Nebraska Avenue. Employee access would be from the new primary driveway from Nebraska Avenue and be required to enter past the security gate into the subterranean parking garage (see Figure 3.17-19). Public access to the project site would be provided via the southernmost driveway on Nebraska Avenue, and would lead to the public parking spaces outside of the proposed Service Planning Center offices. The project would include emergency access to the site in accordance with the applicable fire code, which includes requirements for width of emergency access routes, and turning radii. Therefore, with compliance with fire code, the project would not result in inadequate emergency access. Impacts would be **less than significant**.

References

Appendix F. LLG 2019. Transportation Impact Study for LADWP West Los Angeles Yard Demolition & Construction Project, City of Los Angeles, CA, September 11, 2019

ITE (Institute of Engineers). 2017. Trip Generation Manual, 10th Edition, September 2017.

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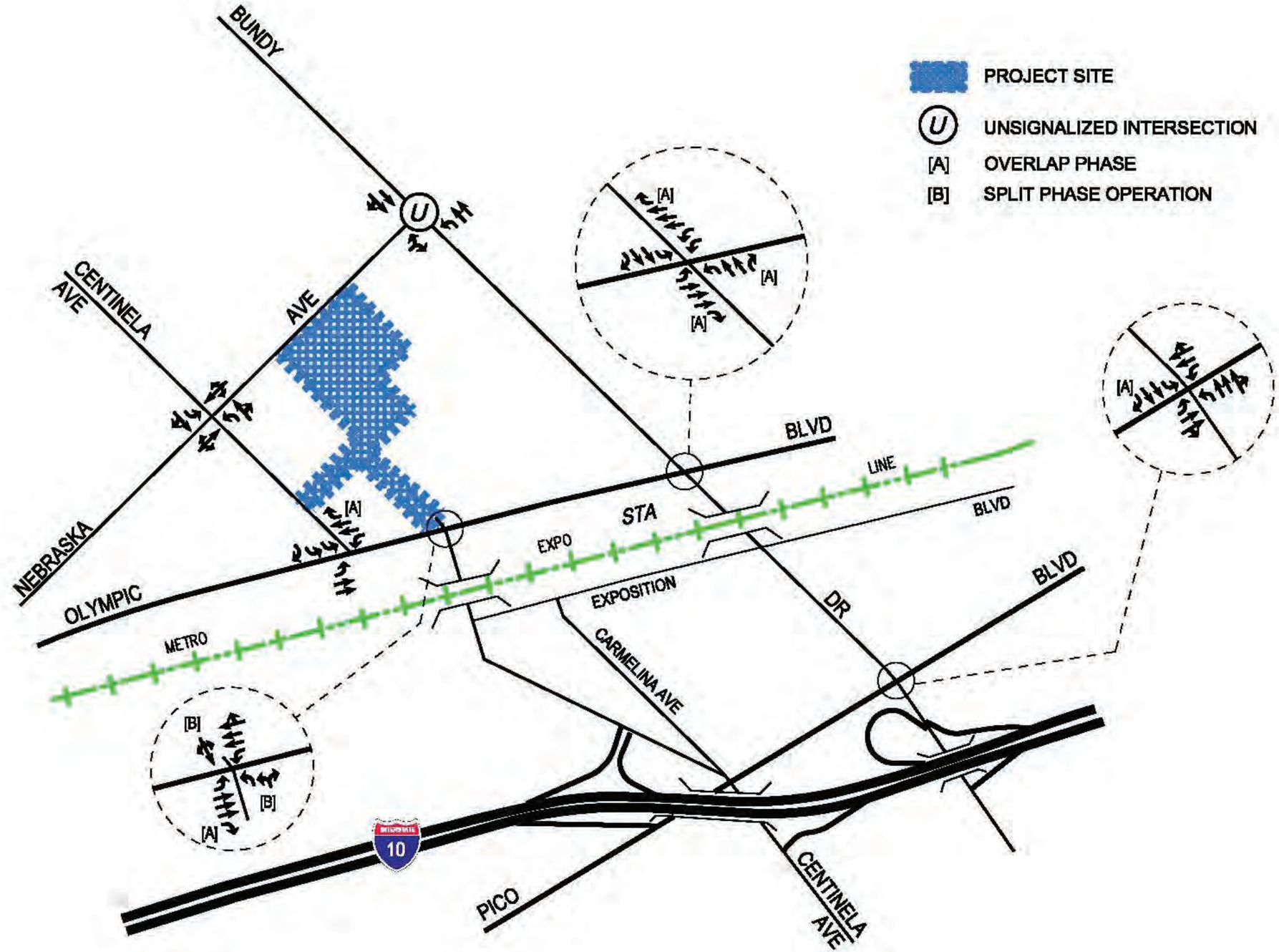
Metro (Los Angeles County Metropolitan Transportation Authority). 2010. 2010 *Congestion Management Program.* Accessed November, 2019. http://media.metro.net/projects_studies/cmp/images/CMP_Final_2010.pdf.



SOURCE: Linscott, Law and Greenspan Engineers

FIGURE 3.16-1

Existing Lane Configurations

West LA District Yard Project

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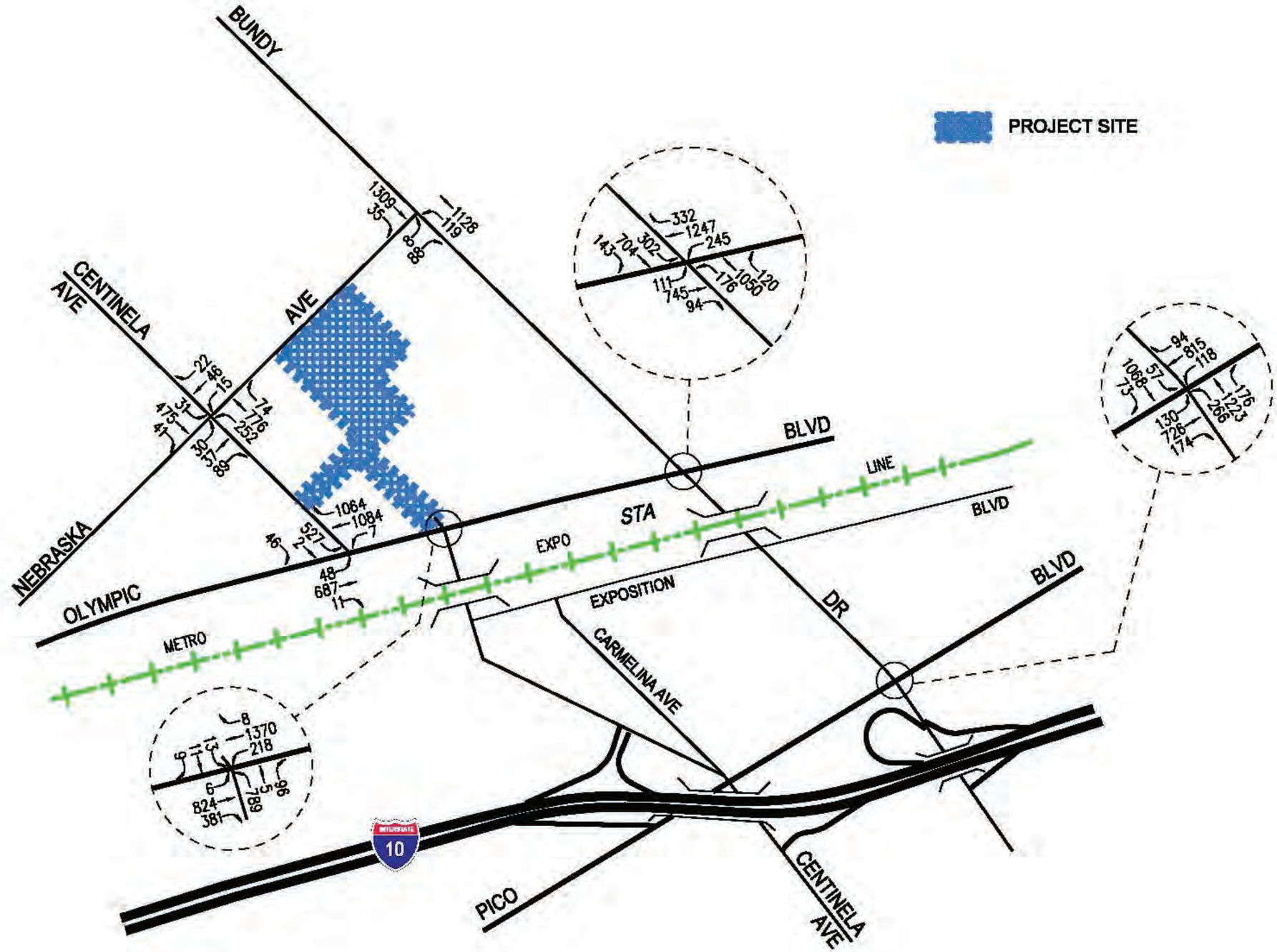

SOURCE: Linscott, Law and Greenspan Engineers

FIGURE 3.16-2

Existing With Project Traffic Volumes – Weekday AM Peak Hours

West LA District Yard Project

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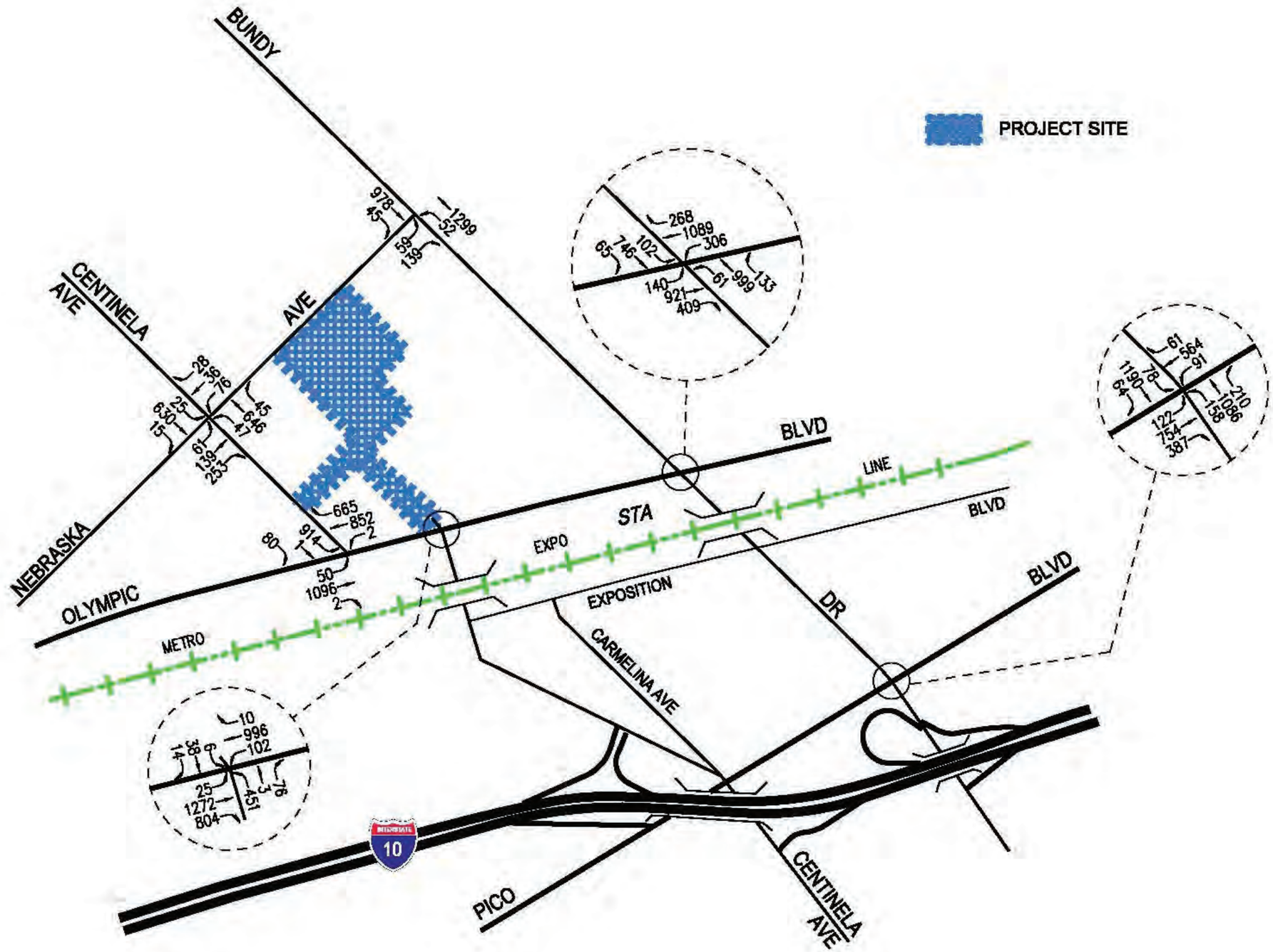

SOURCE: Linscott, Law and Greenspan Engineers

FIGURE 3.16-3

Existing With Project Traffic Volumes – Weekday PM Peak Hours

West LA District Yard Project

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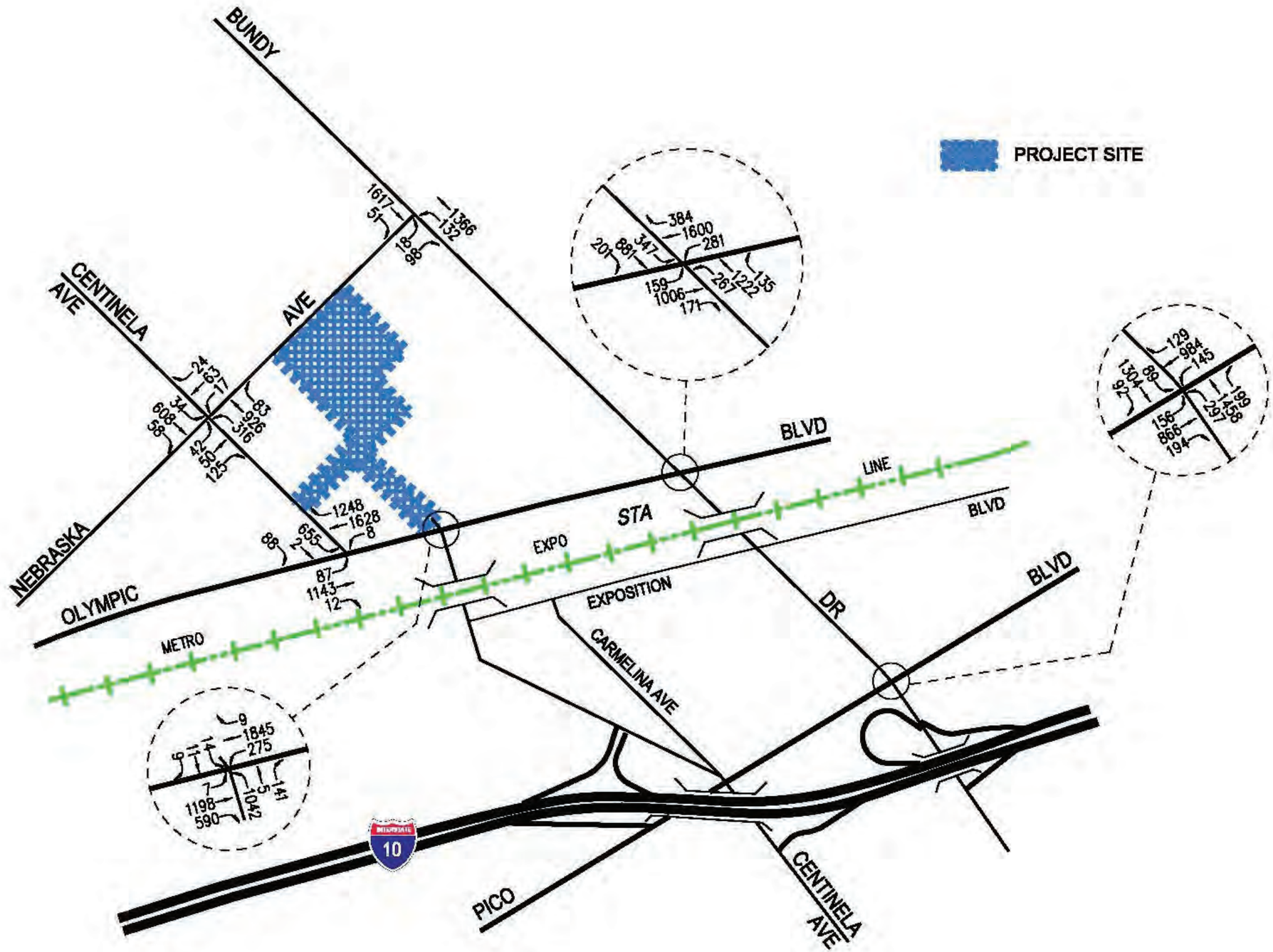

SOURCE: Linscott, Law and Greenspan Engineers

FIGURE 3.16-4

Future With Project Traffic Volumes – Weekday AM Peak Hours

West LA District Yard Project

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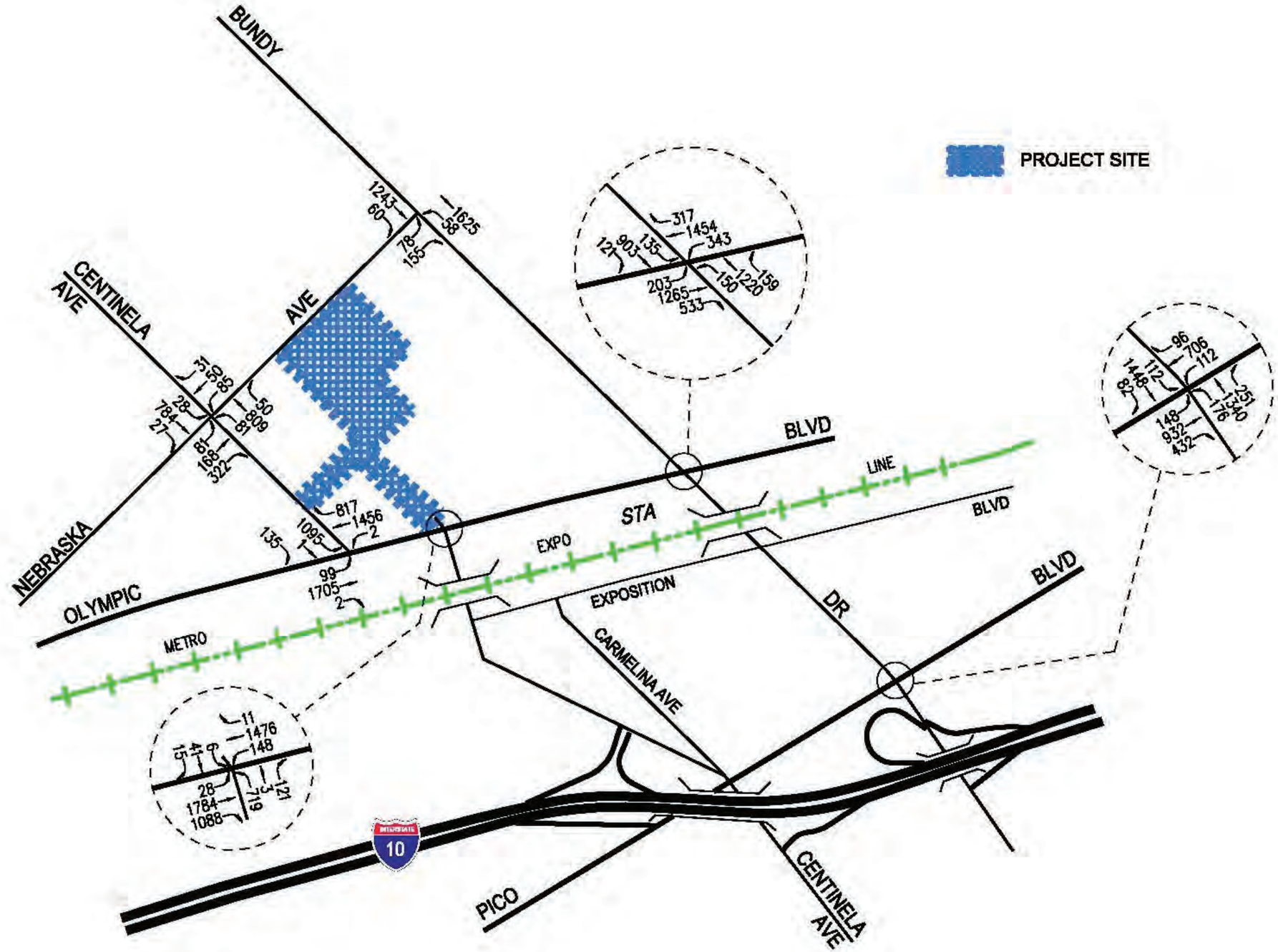

SOURCE: Linscott, Law and Greenspan Engineers

FIGURE 3.16-5

Future With Project Traffic Volumes – Weekday PM Peak Hours

West LA District Yard Project

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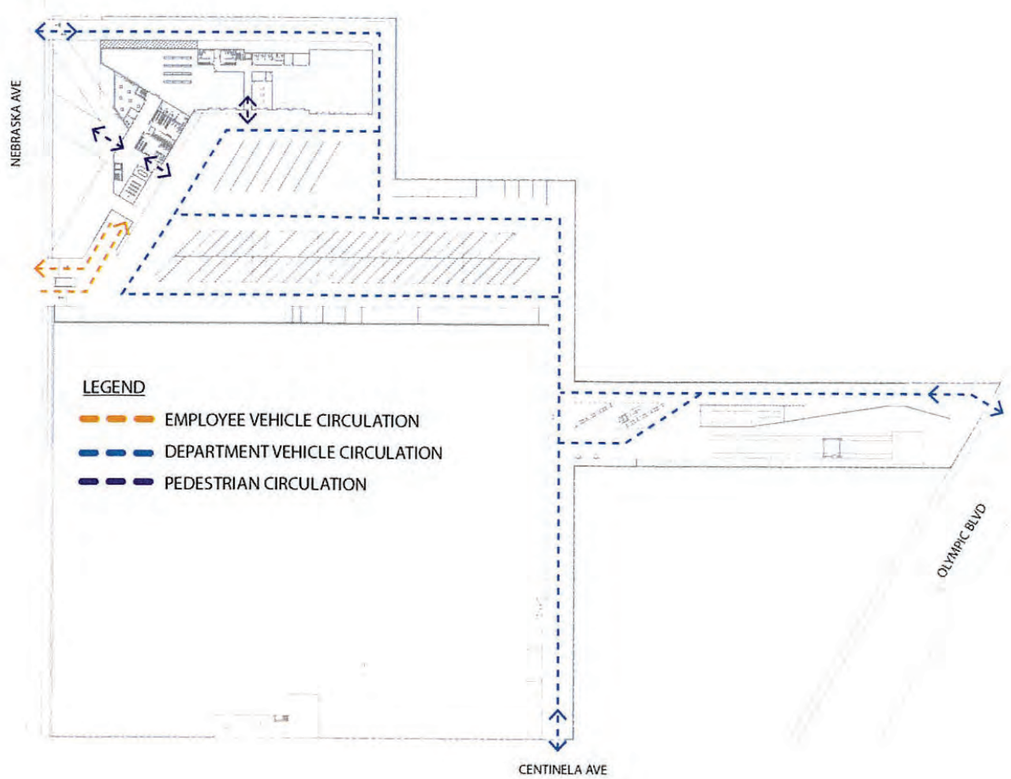
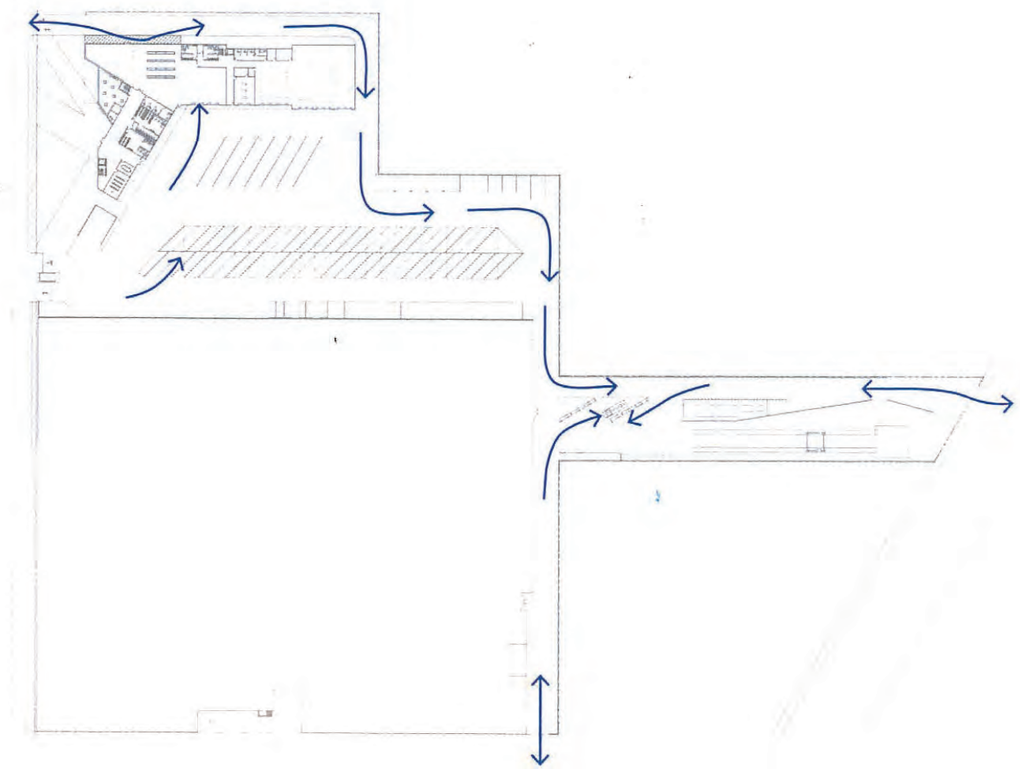


SITE CIRCULATION DIAGRAM



TRUCK MANEUVERING DIAGRAM

SOURCE: Linscott, Law and Greenspan Engineers

FIGURE 3.16-6
Site Circulation
West LA District Yard Project

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3.18 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less Than Significant with Mitigation Incorporated. As discussed in Section 3.5, the Cultural Resources Report prepared for the proposed project, none of the existing structures on site are eligible historic buildings under all NRHP, CRHR, and City of Los Angeles HCM designation criteria. LADWP performed a cultural records search for the proposed project site and surrounding 0.5-mile radius (Appendix B). The records search found that nine previously recorded cultural resources were located within a 0.5-mile radius of the project site. None of these resources overlap with the project site. However, because there is a possibility of encountering previously undiscovered archaeological resources at subsurface levels during ground-disturbing activities associated with the project, mitigation measure **MM-CUL-1**, as described in Section 3.5, would be implemented

to ensure that potential impacts to archeological resources during construction activities are reduced to below a level of significance. As such, impacts would be less than significant with mitigation.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)

Less Than Significant with Mitigation Incorporated. AB 52 established a formal consultation process for California Native American Tribes to identify potential significant impacts to Tribal Cultural Resources, as defined in Public Resources Code Section 21074, as part of CEQA. As specified in AB 52, lead agencies must provide notice, thereby inviting consultation to California Native American Tribes that are traditionally and culturally affiliated with the geographic area of a proposed project. The Tribes must respond in writing within 30 days of the City's AB 52 notice.

On September 1, 2017, LADWP submitted a Sacred Lands File (SLF) and Native American Contacts List Request to the Native American Heritage Commission. The NAHC responded on September 7, 2017, indicating that the search did not identify any Native American resources in the vicinity of the project site but that the surrounding area is sensitive for cultural resources. Because the SLF search does not include an exhaustive list of Native American cultural resources, the NAHC suggested contacting Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the project. The NAHC provided the contact information of the five persons and entities to contact along with the SLF search results. Tribal groups on this list were contacted on September 11, 2017. Although one Native American contact, the Gabrieleno Band of Mission Indians – Kizh Nation, requested the presence of a Native American monitor during all ground-disturbing activities, no specific archaeological resources or sensitivity concerns were identified by any sources consulted such as the CHRIS records search, Native American coordination, or survey. However, there is a possibility of encountering previously undisturbed archaeological resources at subsurface levels during ground-disturbing activities associated with the project. As such, implementation of mitigation measure **MM-CUL-1** would ensure that potential impacts to archeological resources during construction activities are reduced to a less-than-significant level.

Given the above, and with implementation of **MM-CUL-1** as outlined in Section 3.5, impacts would be less than significant.

References

None.

3.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State of local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water Treatment

Less Than Significant Impact. LADWP provides potable water to the City of Los Angeles, along with portions of West Hollywood, Culver City, Universal City, and small parts of the County of Los Angeles (LADWP 2015). As such, potable water for the project would be supplied by LADWP.

Primary sources of water for the LADWP service area are the Los Angeles Aqueducts, local groundwater, and purchased imported water from Metropolitan Water District (MWD). An additional fourth source of water, recycled water, is becoming an increasingly larger source in the overall supply portfolio. Two of the supply

sources, water from the Los Angeles Aqueducts and water purchased from MWD, are classified as imported as they are obtained from outside LADWP's service area. MWD is the regional wholesale water agency, importing water from the Bay-Delta via the State Water Project and from the Colorado River via the Colorado River Aqueduct. Groundwater is local and is obtained from wells within the service area, primarily from the San Fernando Basin. According to the 2015 UWMP, LADWP water supply sources are increasingly under multiple constraints including potential impacts of climate change, groundwater contamination, and reallocation of water for environmental concerns. To mitigate these impacts on supply sources, LADWP is modifying its water supply portfolio through increased water use efficiency programs, water recycling, stormwater capture, and local groundwater development and remediation (LADWP 2015).

Indoor and outdoor water consumption data associated with operation of the proposed project and existing operations on site were provided in the CalEEMod modeling outputs included as Appendix A. During operations, the proposed project would increase water consumption compared to existing uses on site. The project could consume approximately 17.2 million gallons of water per year, or 47,224 gallons per day. Current operations at the project site currently consumes approximately 7.1 million gallons of water per year, or 19,332 gallons per day. As such, the project would increase water consumption by approximately 10 million gallons per year, or 27,671 gallons per day, when compared to existing operations on site. According to the LADWP UWMP, the total annual water demand in LADWP's Service Area in 2015 was over 500,000 acre-feet. This equates to approximately 162 billion gallons per year, or 446 million gallons per day. Thus, the proposed project's demand would equate to approximately 0.011% of the total annual demand generated in LADWP's service area. As such, the increased water use would be minor and incremental in the context of the total water portfolio managed by the LADWP. While the proposed project would involve an intensification of uses on the site, the site is already developed with LADWP facilities. Therefore, the demand associated with operation of the proposed project would be within the capacity of existing water treatment facilities; and impacts would be less than significant.

Wastewater Treatment

According to the CalEEMod estimations for the proposed project (Appendix A), the project would produce approximately 11 million gallons of wastewater per year or 30,435 gallons per day. Wastewater generated by the project site is treated at the Hyperion Water Treatment Plant, which has a capacity of 450 million gallons per day (LASAN 2019). Thus, the proposed Project's wastewater generation would represent a nominal percentage (0.007%) of the Hyperion Water Treatment Plant's permitted treatment capacity. As such, no additional wastewater treatment facilities would be required as a result of the increased wastewater generation at the project site. Therefore, the proposed project would not result in the need for new or expanded wastewater treatment facilities. Impact would be less than significant.

Storm Water Drainage

As discussed in Section 3.10(c), (d), and (e), the project would not increase the impervious area on site. Rather, the project proposes landscaping on site, which would increase the area of impervious surfaces and result in an associated increase in the percolation and infiltration of stormwater. As such, a significant increase in the rate or amount of surface runoff is not expected under the proposed project, and, the project would not result in the need for new storm water drainage facilities or for the expansion of existing facilities. Stormwater would continue to sheet flow towards the public storm drain system located in Bundy Drive and Centinela Avenue. Impacts would be less than significant.

Electric Power

Temporary electric power for as-necessary lighting and electronic equipment would be provided by LADWP. The amount of electricity used during construction would be minimal, because typical demand would stem from electrically powered hand tools. The electricity used for construction activities would be temporary and minimal; therefore, Project construction would not result in electricity demand such that new or expanded electric power generation facilities would be required.

Project operation would require electricity for multiple purposes including building heating and cooling, lighting, appliances, electronics, and water and wastewater conveyance. The estimation of operational building energy was based on the applicant-provided forecasted annual electricity consumption estimate of 569,720 kWh. Supply, conveyance, treatment, and distribution of water for the project would also require the use of electricity. Similarly, wastewater generated by the project would require the use of electricity for conveyance and treatment. The water consumption estimate for the project (17,236,917 gallons of water per year) water use were based on defaults values in CalEEMod, and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod. Approximately 584,962 kWh/year of electricity would be required for project operation.

For comparison, electricity demand for Los Angeles County in 2018 was 67,856 million kWh (CEC 2018a). The proposed project would result in a minimal increase in electricity consumption and would be inherently energy efficient by implementing measures such as LED lighting, optimizing building envelope thermal properties, managing water usage, and optimizing energy performance and controls. Additionally, solar PV panels would be incorporated into the project design, which would offset the majority of electricity that would be consumed by the project. As such, implementation of the proposed project would not require new or expanded electricity generation facilities.

Natural Gas

As explained in Section 3.6, Energy, demand for Natural gas is not anticipated during project construction. As fuels used for construction would primarily consist of diesel and gasoline, which are discussed in Section 3.6, Energy of this IS/MND.

Natural gas consumption during operation would be required for various purposes, including building heating and cooling. For building consumption, default natural gas generation rates in CalEEMod for the proposed project land uses and climate zone were used.

As explained in Section 3.6, Energy, the project would consume approximately 900,277 kBtu per year. For comparison, in 2018 SoCalGas delivered approximately 2,921 million therms (292.1 billion kBtu) to Los Angeles County (CEC 2018b). The proposed project is subject to statewide mandatory energy requirements as outlined in Title 24, Part 6, of the California Code of Regulations. Title 24, Part 11, contains additional energy measures that are applicable to proposed project under CALGreen. Therefore, the proposed project would not result in an increased demand for energy such that new or expanded natural gas facilities would be required.

Telecommunications

The proposed project includes the demolition and reconstruction of an existing LADWP facility. The proposed project would require new or expanded telecommunications facilities. Furthermore, as explained in Section 3.14, the proposed project would not result in substantial population growth and would not require new or expanded telecommunications facilities to accommodate growth. Further, the proposed project is in a largely developed, urban area that has adequate telecommunications facilities to service the proposed project. Therefore, no impacts related to the need for new or expanded telecommunication facilities would occur.

Conclusion

Although the project would result in a slight intensification of land uses at the project site, the proposed project is not anticipated to require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less Than Significant Impact. Potable water for the Project would be supplied by LADWP. LADWP's UWMP, prepared in 2015, outlines a Water Shortage Contingency Plan, developed to provide for a sufficient and continuous supply of water in case of water supply shortage in the LADWP service area, including the project site. Over the last 10 years, groundwater contamination has impacted LADWP's ability to fully utilize

its entitlements. Expanding urbanization, increasing impervious hardscape, and channelization of storm water runoff have reduced natural replenishment. Aging well fields and distribution infrastructure have also inhibited the full utilization of the City's groundwater resources. In response to these issues, LADWP has renewed its focus on protecting and rehabilitating its local groundwater basins, including expanding the remediation efforts for the San Fernando Basin. LADWP continues to invest in storm water and recharge projects by enhancing and enlarging existing storm water planning facilities and investing in advanced treatment systems to produce purified recycled water for groundwater replenishment. These investments will augment the City's groundwater and help ensure that basin water levels remain sustainable in the future. In addition, LADWP is involved in many programs and employs multiple technologies to achieve its water conservation goals, which are implemented with State and local ordinances and plumbing code modifications. Further, in response to dry conditions affecting the City's imported water supplies, the City prepared the Sustainable City Plan (pLAn), calling for a 20% reduction in water use by 2017 and 25% by 2035 (LADWP 2015).

While the proposed project would involve an intensification of uses on the site, the site is already developed with existing LADWP facilities. The UWMP shows that LADWP has sufficient supply to meet expected water demands through 2040 under single dry year, average weather year, and three consecutive dry years. Further, as discussed in the UWMP, the total annual water demand in LADWP's Service Area in 2015 was over 500,000 acre-feet. This equates to approximately 162 billion gallons per year, or 446 million gallons per day. Indoor and outdoor water consumption data associated with operation of the proposed project and existing operations on site were provided in the CalEEMod modeling outputs included as Appendix A. During operations, the proposed project would increase water consumption compared to existing uses on site. The project could consume approximately 17.2 million gallons of water per year, or 47,224 gallons per day. As such, the proposed project's demand would equate to approximately 0.011% of the total annual demand generated in LADWP's service area. Therefore, the anticipated increase in water use would be incremental in the context of the total water portfolio managed by the LADWP, who has the supplies to meet demands for future development during normal, dry, and multiple dry years. Impacts would be less than significant.

c) Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. As previously addressed in Section 3.19(a), according to the CalEEMod estimations for the proposed project (Appendix A), the project would produce approximately 11 million gallons of wastewater per year or 30,435 gallons per day. Wastewater generated by the project site is treated at the Hyperion Water Treatment Plant, which has a capacity of 450 million gallons per day (LASAN 2019). Thus, the proposed Project's wastewater generation would represent a nominal percentage (0.007%) of the Hyperion Water Treatment Plant's permitted treatment capacity. As such, the project would not result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to

serve the project's projected demand in addition to the provider's existing commitments. Impact would be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impact the attainment of solid waste reduction goals?

Less Than Significant Impact. Construction activities would generate construction waste, such as equipment packaging, construction scrap, and debris. In accordance with the City's Construction and Demolition Debris Recycling Ordinance, construction would incorporate source reduction techniques and recycling measures and would maintain a recycling program to divert waste (LASAN 2017). These measures would minimize the amount of construction debris generated by the project that would need to be disposed of in an area landfill. Any non-recyclable and hazardous construction waste generated would be disposed of at a landfill approved to accept such materials.

Operation of the proposed project would include a minimal increase in solid waste generation associated with expanded facilities. Serval landfills throughout the County of Los Angeles serve the City, as listed in Table 3.18-2. The total permitted throughput for all landfills is approximately 29,116 tons per day, and the total remaining capacity is approximately 155 million tons (LADPW 2017).

Table 3.18-1. Existing Landfills

Landfill	Location	Estimated Closing Year	Maximum Permitted Daily Load (tons/day)	Current Remaining Capacity (million tons)
Antelope Valley Landfills I and II	Palmdale	2041	1,800	12.36
Calabasas Landfill	Unincorporated Area	2028	3,500	5.60
Chiquita Canyon Landfill	Unincorporated Area	2047	6,616	59.1
Lancaster Landfill	Unincorporated Area	2041	5,100	10.27
Sunshine Canyon Landfill	Los Angeles/ Unincorporated Area	2037	12,100	68.04
		Total	29,116	155.37

Source: LADPW 2017

Solid waste generation data associated with operation of the project were provided in the CalEEMod modeling outputs (Appendix A). The project could produce up to 30.5 tons of solid waste per year. Note that these estimates represent a conservative, "worst-case" scenario and do not include credit for the diversion requirements set forth by AB 939. Nonetheless, the project's estimated waste generation (without diversion) equates to a nominal percentage of the County landfills serving the City's permitted throughput of 29,116 tons per day. LADWP would also comply with comply with federal, state, and local solid waste diversion, reduction, and recycling mandates during operations.

Therefore, the project would not generate solid waste in excess of state or local standards, or in excess of capacity of local infrastructure. Impacts would be less than significant.

g) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. As described above, the construction waste generated by the proposed project would be properly disposed of in existing solid waste facilities. LADWP would comply with the City's Construction and Demolition Ordinance for construction. LADWP would also comply with comply with federal, state, and local solid waste diversion, reduction, and recycling mandates during operations. No impact would occur.

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3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

a) *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant Impact. As stated in Section 3.9(f), the City of Los Angeles adopted a multi-hazard emergency response plan in order to respond with maximum feasible speed and efficiency to disaster events (City of Los Angeles 1996). Construction of the proposed project would take place on the project site in one phase, with half the employees relocated to the Palms Yard site and the other half relocated to a LADWP-owned site at Los Angeles World Airports. The proposed project would be constructed in adherence to the requirements set forth in Title 24, Part 9 of the CBC (the Fire Code). During construction of the proposed project, emergency access to the project site and surrounding area would be maintained to provide emergency services to construction workers in the event of an emergency. Furthermore, new access routes would be built according to CBC Section 17.124.070, and thus would be approved by the LAFD and would provide efficient ingress/egress for emergency vehicles.

During operations, the hours of operations of the site would be the same. Although approximately 225 additional employees would be introduced to the site, the operations of the project would not interfere with an adopted emergency response plan or emergency evacuation plans. Department vehicle and emergency vehicle access to and from the site would be provided in both directions from Olympic Boulevard, Centinela Avenue, as well as Nebraska Avenue, to the north of the site. Further, employee vehicle access would be provided in both directions from the southern portion of the site on Nebraska Avenue.

Additionally, the proposed project site is within close proximity to several County-designated disaster routes, which would be utilized for evacuation procedures in a disaster scenario. Namely, the project site is located between Santa Monica Boulevard to the north and Olympic Boulevard and the I-10 to the south, all of which are County-designated Disaster Routes (LADPW 2008). Given the above, the project would not interfere with an adopted response plan or emergency evacuation plan. Impacts would be less than significant.

b) Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less Than Significant Impact. The project site is located in a highly urbanized area of the City, is fully developed, and surrounded by urban development, all of which precludes the spread of wildland fire. The site is not located in a designated Very High Severity Fire Zone and the proposed project does not include the construction of any infrastructure or buildings that would exacerbate fire risk (CALFIRE 2011). The proposed project would be constructed in adherence to the requirements set forth in the Fire Code. During construction of the proposed project, emergency access to the project site and surrounding area would be maintained. Furthermore, new access routes would be built according to CBC Section 17.124.070, and thus would be approved by the LAFD and would provide efficient ingress/egress for emergency vehicles. As such, the proposed project would not exacerbate wildfire risks, thereby exposing project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant.

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less Than Significant Impact. As stated above, the proposed project would not include the construction of any buildings or infrastructure that would exacerbate fire risks. The proposed project would be constructed in adherence to the requirements set forth in the Fire Code. During construction of the proposed project, emergency access to the project site and surrounding area would be maintained. Furthermore, new access routes would be built according to CBC Section 17.124.070, and thus would be approved by the City's Fire Department and would provide efficient ingress/egress for emergency vehicles. In the unlikely event of a fire emergency at the project site, the LAFD would respond. Specifically, Fire Station 59 located approximately 0.9-mile east of the site would be the first responder to a structural fire. Given the above, the proposed project would not include the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

An above ground fueling station is also located in the access driveway of the project site. This fueling station includes unleaded and diesel fuel tanks, which would remain above ground as part of the proposed project. Although highly flammable, these tanks are already in place and operational under existing conditions and would continue to operate according to local, state, and federal regulations upon project operation. As such, the proposed project would not include the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Impact would be less than significant and no mitigation is required.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The proposed project is located within a fully developed, urban area and is located on relatively flat terrain. Construction of the proposed project would result in ground surface disruption that could temporarily alter on-site drainage patterns. However, runoff at the project site would be managed through implementation of the BMPs outlined in the project-specific SWPPP and LID Plan as described in Section 3.10, Hydrology and Water Quality. Upon operation, the project site as a whole would maintain the general existing drainage pattern and would remain fully developed. Given the above, the proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur and no mitigation is required.

References

CALFIRE (California Department of Forestry and Fire Protection). 2011. Very High Fire Hazard Severity Zones in the Los Angeles Region [map]. Accessed, August 26, 2019. https://osfm.fire.ca.gov/media/5830/los_angeles.pdf.

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3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant with Mitigation Incorporated. As discussed in Section 3.4, the proposed project would be located in a highly urbanized area of Los Angeles. The project site is already developed with LADWP facilities. As such, no special-status plant or wildlife species, riparian or sensitive habitats or wetlands, are present on site, and the site is not located within an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Several ornamental trees are present on site, while a few additional ornamental trees are located adjacent to the site to the southwest. In the event that a nesting bird were to be nesting in adjacent trees, tree removal and construction activities could adversely affect or kill migratory nesting birds. As such, mitigation measures **MM-BIO-1**, as described in Section 3.4, would be implemented to ensure impacts to nesting birds are less than significant. These trees are not recognized as protected trees by the City of Los Angeles.

As discussed in Section 3.5, although five existing structures are present on site, these structures are not eligible for historic status under all NRHP, CRHR, and City of Los Angeles HCM designation criteria. Potential impacts

regarding inadvertent discovery of cultural or paleontological resources, or human remains could occur during construction of the project. However, implementation of **M-CUL-1** would ensure that impacts would be less than significant. Overall, impacts would be less than significant with the incorporation of mitigation.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant with Mitigation Incorporated. As provided in the analysis in this IS/MND, the proposed project would not result in significant impacts to aesthetics, agriculture and forestry resources, energy, GHG emissions, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, and utilities and service systems. Mitigation measures recommended for air quality, biological resources, cultural, geology and soils, hazards and hazardous materials, noise, transportation, and tribal cultural resources would reduce impacts to below a level of significance. Furthermore, the Air Quality and Transportation analyses presented in Section 3.3 and Section 3.17 of this IS/MND consider cumulative impacts and have determined that cumulative air and traffic impacts would be less than significant. All reasonably foreseeable future development in the City would be subject to the same land use and environmental regulations that have been described throughout this document. Furthermore, all development projects are guided by the policies identified in the City's General Plan and by the regulations established in the LAMC. Therefore, compliance with applicable land use and environmental regulations would ensure that environmental effects associated with the proposed project would not combine with effects from reasonably foreseeable future development in the City to cause cumulatively considerable significant impacts. For these reasons, cumulative impacts would be less than significant with mitigation incorporated. No further mitigation is required.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant with Mitigation Incorporated. As detailed throughout this IS/MND, the proposed project would not exceed any significance thresholds or result in significant impacts in the environmental categories typically associated with indirect or direct effects to human beings, such as aesthetics, geology and soils (specifically seismic hazards) or public services. However, the proposed project could result in potentially significant impacts in the categories of air quality, hazards and hazardous materials, and noise. With implementation of mitigation measures identified in Sections 3.3, 3.9, and 3.13 of this IS/MND, this impact would be reduced to a less than significant level. As such, impacts would be less than significant with mitigation incorporated. No further mitigation is required.

4 REPORT PREPARERS

Lead Agency

Los Angeles Department of Water and Power
Environmental Affairs
111 North Hope Street, Room 1044
Los Angeles, California 90012

Aiden Leong, Project Manager

Technical Assistance Provided By

Dudek
38 North Marengo Avenue
Pasadena, California 91101

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Elizabeth Denniston, Archaeologist
Nicholas Lorenzen, Air Quality Specialist
Sabita Tewani, Transportation Planner
Mike Greene, Environmental Specialist/Acoustician
Glenna McMahon, Environmental Engineer

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5 RESPONSES TO COMMENTS

A Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the proposed project was circulated for public review from June 25, 2020 to July 25, 2020. This chapter of the Final MND includes a copy of each comment letter that was received by the Los Angeles Department of Water and Power (LADWP) during the public review period for the Draft IS/MND. LADWP has prepared responses to the written comments, which are included in this chapter. The comments have each been given a numeric label, and the individual issues within each comment letter are bracketed and numbered. References to responses within comment Letters 3 and 21 were used as opportunities for global responses where similar comments and responses were made.

LADWP's responses to comments on the Draft IS/MND represent a good-faith, reasoned effort to address the environmental issues identified in the comments. Pursuant to State CEQA Guidelines Section 15074(b), the decision makers will consider the Draft IS/MND together with the comment received during the public review process.

Table 5-1. List of Commenters

Comment Letter	Name	Type	Address/E-Mail
1	California Department of Conservation, Geologic Energy Management Division (CalGEM)	State Agency	801 K Street, MS 24-01, Sacramento, CA 95814
2	California Department of Transportation, District 7 – Office of Regional Planning	State Agency	100 South Main Street, MS 16, Los Angeles, CA 90012
3	West Los Angeles Sawtelle Neighborhood Council	Local Neighborhood Council	1645 Corinth Avenue, Los Angeles, CA 90025
4	Victor De la Cruz, Manatt, Phelps, & Phillips, LLP (on behalf of the Salenger Family Trust)	Family Trust	VDelaCruz@Manatt.com
5	Ron Radziner, FAIA (on behalf of Marmol Radziner AIA)	Business	12210 Nebraska Avenue, Los Angeles, CA 90025
6	West Sawtelle Homeowners Association	Homeowners Association (HOA)	1726 Amherst Avenue, Los Angeles, CA 90025
7	Mollie Bowling	Resident	1718 Wellesley Avenue, Los Angeles, CA 90025
8	Austyn Daines	Resident	austyndaines@yahoo.com
9	Kathryn England	Resident	kathryn@kathrynengland.com
10	Krisiti Fiore	Resident	1760 Wellesley Avenue, Los Angeles, CA 90025
11	Mark Fiore	Resident	1760 Wellesley Avenue, Los Angeles, CA 90025
12	Aric Gregson	Resident	N/A

Table 5-1. List of Commenters

Comment Letter	Name	Type	Address/E-Mail
13	Jeff Hahn	Resident	Jeffhahn1@aol.com
14	Tom Hershey	Resident	thershey@mac.com
15	Emily Hirasuna	Resident	ehirasuna@hotmail.com
16	Michael Hobert	Resident	Michaelhobert@gmail.com
17	Karlyne Ikuta	Resident	433 South Spring Street, Suite 750, Los Angeles, CA 90013
18	Raffi Jahilian	Resident	Anitaraffi2012@gmail.com
19	Elaine Kim	Resident	elainemkim@gmail.com
20	Eric Kraft	Resident	ericvkraft@gmail.com
21	John Levine	Resident	N/A
22	Carla Lona	Resident	1662 Wellesley Avenue, Los Angeles, CA 90025
23	Carol MacFarlane	Resident	1724 South Carmelina Avenue, Los Angeles, CA 90025
24	Andrew Major	Resident	1701 Wellesley Avenue, Los Angeles, CA 90025
25	Mike Martin	Resident	Michaelcmartin10@gmail.com
26	Tom Meyer	Resident	1560 South Carmelina Avenue, Los Angeles, CA 90025
27	Sharon Mishima	Resident	sharonmishima@gmail.com
28	Lori Quon	Resident	1714 Wellesley Avenue, Los Angeles, CA 90025
29	Bethany Reilly	Resident	bethanyreilly@gmail.com
30	Jay Ross	Resident	Ross_jay@hotmail.com
31	Andrew Smidt	Resident	Agsspin101@gmail.com
32	Megan Taylor	Resident	meggietay@gmail.com
33	Rebekah VanderStoep	Resident	1752 South Carmelina Avenue, West Los Angeles, CA 90025
34	Marc Vesta	Resident	Marc.vesta@jerseyboyconstruction.com
35	Paul Wedel	Resident	1760 South Carmelina Avenue, Los Angeles, CA 90025

Comment Letter 1

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director

July 24, 2020

VIA EMAIL

Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Attn: Mr. Aiden Leong
Email: Aiden.Leong@ladwp.com

Dear Mr. Leong:

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE WEST LOS ANGELES DISTRICT YARD PROJECT CITY OF LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP) SCH: NO. 2020060439

The Department of Conservation's Geologic Energy Management Division (Division) has reviewed the above-referenced project for impacts with Division jurisdictional authority. The Division supervises the drilling, maintenance, and plugging and abandonment of oil, gas, and geothermal wells in California. The Division offers the following comments for your consideration.

The project area is in Los Angeles County and lies outside of any administrative oil field. Upon review of Division records, it appears that, although the Division's WellFinder program shows it located southwest of the subject property, the abandoned "Centinela EH" 1 well appears to be located within the proposed project boundary. Division information can be found at: www.conservation.ca.gov. Individual well records are also available on the Division's web site, or by emailing CalGEMSouthern@conservation.ca.gov.

1-1

The scope and content of information that is germane to the Division's responsibility are contained in Section 3000 et seq. of the Public Resources Code, and administrative regulations under Title 14, Division 2, Chapters 2, 3 and 4 of the California Code of Regulations.

If any wells, including any plugged, abandoned or unrecorded wells, are damaged or uncovered during excavation or grading, remedial plugging operations may be required. If such damage or discovery occurs, the Division's district office must be contacted to obtain information on the requirements and approval to perform remedial operations.

State of California Natural Resources Agency | Department of Conservation
Southern District, 3780 Kilroy Airport Way, Suite 400, Long Beach, CA 90806
conservation.ca.gov | T: (562) 637-4400 | F: (562) 424-0166

The possibility for future problems from oil and gas wells that have been plugged and abandoned, or reabandoned, to the Division's current specifications are remote. However, the Division recommends that a diligent effort be made to avoid building over any plugged and abandoned well.

Questions regarding the Division's Construction Site Well Review Program can be addressed to the local Division's office in Long Beach by emailing CalGEMSouthern@conservation.ca.gov or by calling (562) 637-4400.

1-1
Cont.

Sincerely,

Curtis M. Welty, PG
Associate Oil and Gas Engineer

cc: The State Clearinghouse in the Office of Planning and Research
Email: state.clearinghouse@opr.ca.gov

Christine Hansen, DOC OLRA
Email: Christine.Hansen@conservation.ca.gov

Vanessa Adame, DOC OLRA
Email: Vanessa.Adame@conservation.ca.gov

Naveen Habib, DOC OLRA
Email: Naveen.Habib@conservation.ca.gov

Tharon Wright, CalGEM CEQA Unit
Email: Tharon.Wright@conservation.ca.gov

Environmental CEQA File

Response to Comment Letter 1

California Department of Conservation
Geologic Energy Management Division (CalGEM)
Curtis M. Welty, PG, Associate Oil and Gas Engineer
July 24, 2020

1-1 This comment states the California Department of Conservation, Geologic Energy Management Division (CalGEM) reviewed the proposed project and determined the project area lies outside of any administrative oil field. However, CalGEM cites an abandoned well, "Centinela EH 1," is located within the proposed project boundary. CalGEM recommends to avoid building over any plugged and abandoned wells, and that if any wells are damaged or uncovered during excavation or grading, remedial plugging operations may be required and CalGEM's district office must be contacted pursuant to Section 3000 et seq. of the Public Resources Code and Title 14, Division 2, Chapters 2, 3, and 4 of the California Code of Regulations. The letter also states "the Division recommends that a diligent effort be made to avoid building over any plugged or abandoned well," and references the Construction Site Well Review Program through the local Division office in Long Beach.

The October 2018 Phase I Environmental Site Assessment (ESA), included as Appendix D to the Draft IS/MND, identifies three oil and gas wells within 1 mile of the subject property. The closest well, a "dry hole," was identified approximately 600 feet west of the project site; the other two are approximately one mile to the northwest (Dudek 2018). Dudek reviewed the CalGEM database (CalGEM 2020) and confirmed the presence of a plugged dry hole, identified as "Centinela EH 1" located approximately 324 feet west of the southwestern-most point of the project site (approximately 600 feet from the main property parcel). As noted in the CalGEM comment above, this well may actually be located within the project site. Therefore, Dudek proposes adding the following language bold, underlined text to Section 3.9, Hazards and Hazardous Materials, of the IS/MND under subsection b):

> ***"Three oil and gas wells were identified in the Phase I ESA (Dudek 2018) and on the California Geologic Energy Management Division's (CalGEM) Well Finder online database within 1 mile of the project site. One of the wells is approximately 324 feet to the west of the southwestern leg of the project site (CalGEM 2020). The well is a plugged dry hole which was both drilled and abandoned in 1966 (DOC 1966). While the CalGEM database identifies the well southwest of Centinela Avenue, the proposed operations report (DOC 1966) notes the well in the following location:***
>
> ***"480' northwest along Centinela from the intersection of the center lines of Centinela and Olympic, thence 100' northeast at right angles thereto."***
>
> ***This description places the well in the substation property adjacent to the west of the project site, approximately 145 feet north/northwest of the southwestern-most portion of the project site. While the exact location of this well is not accurately defined, it still appears, based on available documentation, that the well is not located within the project site boundary. But there is a slight possibility the well may be located on the***

project site. Should the well be damaged or uncovered during excavation and construction activities, this could result in damage to the well and a potential release of methane gas, causing an upset or accident condition. As the project site is located within the City of Los Angeles, it is subject to the City's building codes, including those pertaining to clearance near oil and gas wells (City of Los Angeles, 2020a) and methane mitigation standards (LA DBS 2021). As such, building permit review would include review for abandoned oil and gas wells and, as necessary, would include CalGEM review in accordance with City of Los Angeles Building Permit Clearance Handbook, Section IIC.7 (City of Los Angeles, 2020a).

Should the well, or any other oil or gas well, be discovered during construction of the proposed project, the CalGEM district office must be contacted pursuant to Section 3000 et seq. of the Public Resources Code and Title 14, Division 2, Chapters 2, 3, and 4 of the California Code of Regulations. As construction of the proposed buildings would require excavation for utilities and footings, it is likely an abandoned well would be identified prior to or during construction. Any identified oil or gas well would be properly abandoned in accordance with these regulations.

The project site is not located within a methane zone or methane buffer zone (City of Los Angeles 2020b), therefore methane mitigation is not likely required for construction. However, as stated above, the project site is subject to the City of Los Angeles methane code. With implementation of MM-HAZ-1, and adherence to applicable laws and regulations referenced above, impacts to the proposed project would be less than significant."

Section 3.12, Mineral Resources, of the Draft IS/MND cites the presence of a plugged oil and gas well approximately 360 feet southwest of the project site. Dudek proposes the following edits to Section 3.12, Mineral Resources, of the Draft IS/MND, subsection a), second paragraph:

*"Similarly, there are no recorded oil/gas wells on the project site. ~~As explained in Section 3.9, Hazards and Hazardous Materials, there~~ **There** is one historic**al** well ~~located~~ **mapped** approximately ~~360~~**330** feet ~~south~~west of the project site. The well was operated by the Occidental Petroleum Corporation; however, records indicate that the well was abandoned in 1966 and is currently listed as "plugged" (DOC 2019c; DOC 1966).*

References

CalGEM (California Geologic Energy Management Division) 2020. CalGEM online mapping application, Well Finder. Accessed September 30, 2020. https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx

City of Los Angeles. 2020a. Building Permit Clearance Handbook. September 14, 2020.

City of Los Angeles. 2020b. Department of Public Works, Bureau of Engineering, NavigateLA city mapping database. Accessed September 30, 2020. https://navigatela.lacity.org/navigatela/

DOC (California Department of Conservation), Division of Oil, Gas and Geothermal Resources. 1966. Public Well Records (03705734_2019-08-22_DATA). Accessed, August 27, 2019. ftp://ftp.consrv.ca.gov/pub/oil/WellRecord/037/03705734.

Dudek 2018. *Phase I Environmental Site Assessment, West Los Angeles District Yard.* October 2018.

LA DBS (Los Angeles Department of Building and Safety). Methane Mitigation Standards. Accessed February 24, 2021. https://www.ladbs.org/services/core-services/plan-check-permit/methane-mitigation-standards

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Comment Letter 2

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY | Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7 – Office of Regional Planning
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-9140
FAX (213) 897-1337
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

July 24, 2020

Aiden Leong
Los Angeles Department of Water and Power
111 N Hope St, Room 1044
Los Angeles, CA 90012

RE: West los Angeles District Yard Project –
Mitigated Negative Declaration (MND)
SCH # 2020060439
GTS # 07-LA-2020-03300
Vic. LA-10/PM: R 3.967

Dear Aiden Leong:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for this Mitigated Negative Declaration (MND). The West Los Angeles District Yard Project (proposed project) is a facility improvement project proposed by the Los Angeles Department of Water and Power (LADWP). Under the proposed project, LADWP would demolish six structures on the project site, including the West Los Angeles Distribution Headquarters (i.e., district office), warehouse, break room, locker room, fleet shop, and surface parking. One new building, totaling approximately 92,000 square feet, would be constructed in place of the demolished buildings, which would include a warehouse, administration office, electric trouble office, service planning office, and fleet shop. The new building would consolidate all of the functions of the demolished buildings and house the relocated Service Planning group at the project site. A two level above-ground parking structure with a total of 154 parking stalls for use by fleet vehicles would be constructed adjacent to the new building and would be connected by a horizontal assembly. Beneath the proposed new building, a single-level underground parking structure with a total of 389 parking stalls would also be constructed. An additional 12 public parking spaces would be provided at grade for the Service Planning group, outside of the security gate

2-1

Under Senate Bill 743 (2013), CEQA review of transportation impacts of a proposed development are adapting to eliminate consideration of delay-and capacity-based metrics such as level of service (LOS) and are instead focusing analysis on another metric of impact, "Vehicle Miles Traveled (VMT). Effective July 1st, 2020, Caltrans replaced LOS with VMT when evaluating traffic impacts.

After reviewing the MND, Caltrans does not expect project approval to result in a direct adverse impact to the existing State transportation facilities.

As a reminder, any transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State highways will need a Caltrans transportation permit. We recommend large size truck trips be limited to off-peak commute periods.

2-2

Also, storm water run-off is a sensitive issue for Los Angeles county. Please consider designing the project to discharge clean run-off water. The completed project could incorporate green design elements that can capture storm water. Incorporating measures such as permeable pavement, landscaping, and trees to reduce urban water run-off could be considered.

2-3

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

If you have any questions, please contact Reece Allen, the project coordinator, at reece.allen@dot.ca.gov, and refer to GTS # 07-LA-2020-03300

2-3 Cont.

Sincerely,

MIYA EDMONSON
IGR/CEQA Branch Chief
cc: Scott Morgan, State Clearinghouse

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

Response to Comment Letter 2

California Department of Transportation
District 7 – Office of Regional Planning
Miya Edmonson, IGR/CEQA Branch Chief
July 24, 2020

2-1 This comment acknowledges the receipt of the environmental review notice and provides a summary of the proposed project. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

2-2 This comment provides background on updated State guidelines on evaluating transportation impacts from delay- and capacity-based metrics level of service (LOS) to Vehicle Miles Traveled (VMT), which became effective July 1, 2020. Caltrans determined the project is not expected to create a direct adverse impact to existing State transportation facilities.

Section 3.17, Transportation and Traffic, of the Draft IS/MND and the Transportation Impact Study (TIS) prepared for the proposed project (included as Appendix F) both discuss the history and adoption of VMT thresholds for the City's CEQA Threshold Guide. The Draft IS/MND states, "[s]ince this project was initiated prior to formal adoption of the new guidelines, the analysis in this study [Appendix F] utilizes, long-established protocols in accordance with the City's prior CEQA Thresholds Guide and transportation study guidelines." Per Los Angeles Department of Transportation's Transportation Assessment Guidelines, the project would be classified as a Public Service/Utility land use. The project is a facility improvement project which would facilitate increasing customer demand and relocate existing employees from another site to a more convenient location. As such, both the analysis within the Draft IS/MND and as indicated with this comment letter, the project can be presumed to have a less-than-significant effect on VMT.

Furthermore, this comment recommends large size truck trips to be limited to off-peak commute periods and any transportation of heavy construction equipment and/or materials utilizing State highways would require a Caltrans transportation permit. LADWP understands that oversized transport vehicles on State highways will require a Caltrans transportation permit and will coordinate with Caltrans in the event that such a permit is required.

2-3 This comment recommends consideration of the project's design for stormwater run-off and to "discharge clean run-off water" through "green design elements that can capture storm water" and incorporate "permeable pavement, landscaping, and trees to reduce urban water run-off."

As discussed in Section 3.10, Hydrology and Water Quality, of the Draft IS/MND the project would implement a project-specific Stormwater Pollution Prevention Plan and a Low-Impact Development Plan, which would include Best Management Practices to ensure that impacts from polluted runoff, including stormwater runoff, would be reduced to a less-than-significant level. Project-specific design standards would include a drainage inlet, parkway swale, and drywell system. Finally, the proposed project's landscaping would result in slightly less impervious surfaces when compared to existing conditions, which would encourage infiltration at the project site and could slightly reduce the rate and total amount of runoff at the project site. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

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Comment Letter 3

1645 Corinth Ave.
Los Angeles Calif. 90025
(310) 235-2070

E Mail: Info@WLANC.COM
www.WestLASawtelle.org

Dept. of Water and Power - Deborah Hong, Michael Ventre

Re: *DWP West L.A. office proposal and generation/power station*

To the City,

At the Jul. 29, 2020, meeting of the West Los Angeles Sawtelle N.C., the Board of Directors voted 10-0-0, to oppose the CEQA MND for the proposed DWP Office and Fleet Truck Facility because of the following errors and omissions, and authorize the Chair to submit Community Impact Statements:

1. Project Description lists the height of the building as 3 stories, which is typically considered 35 ft. The actual height is 50 ft. to roofline and 60 ft. with a pavilion, which is much taller than the 1-2-story (13-25 ft. height) houses across the north side of Nebraska Ave.
   a. The height district is HD-1XL, which for most zones limits height to 3 stories or 35 ft. Though PF zone lists no zoning restrictions. 3-1
2. Traffic Study:
   a. It does not examine the capacity of Nebraska Ave. to handle as many as 300 more cars in the hour (for 360 employees) before work starts at 6:30 am and when work ends at 4:00 pm. The morning time is outside the AM peak, but warrants analysis on queueing and blocking traffic on Nebraska Ave. while cars wait to turn into the parking garage driveway, along with the PM. This is already a problem with a smaller workforce of 190 persons.
   b. It does not list any guarantees of the carpool and other TDM programs to reduce traffic. 3-2
3. Public review: During the preparation of the IS/MND, the DWP did not solicit participation of the neighborhood that will be directly impacted by the project. Notice was provided only after completion of design of the project. 3-3

The NC requests with the following specific revisions:

1. The DWP shall form a special liaison committee with the neighborhood to ensure public involvement and reciprocity going forward. 3-4
2. Transportation: All staff vehicle entry via existing driveways that connect to Olympic Blvd. and Centinela Ave.
   a. Visitors may access public parking (12 spaces as designed) via Nebraska Ave. 3-5

b. The staff garage entry shall be removed from Nebraska Ave., unless Fire Dept. requires it.

3. Transportation Demand Plan to limit new employee trips to 250 per day (one-way, 360 employees), with annual, unannounced traffic studies in the future to verify compliance. Failure to comply shall result in suspension of Certificate of Occupancy or a financial penalty. Suggestions to ensure reductions:
   a. No free parking for staff (except carpools).
   b. DWP shall provide annual MTA passes for all staff, and provide a stipend for staff not to drive alone.
   c. Staff parking spaces can be reduced by 100.
   d. Entry fobs to the garage can be limited.
4. Reduction of noise of the west generation site:
   a. Construction of sound wall (height of 30 ft.) along entire north border. This barrier should follow the same aesthetic quality of the project, which means it will be visually appealing and entirely conceal the yard from the residents.
   b. The equipment shall be upgraded to reliable, low-noise products. Existing equipment shall be shielded with noise mitigating enclosures to reduce further disturbances to residents.
   c. The equipment shall be relocated away from the residents along Nebraska Ave. and pushed farther southward/eastward towards Olympic Blvd.
5. Improve aesthetics: Longer setback along Nebraska St. of 60 ft. with landscaped front yard / public parklet open to the neighborhood (2,000 sf minimum).
   a. Ishihara Park in Santa Monica provides a buffer to the Expo Line tracks in Santa Monica, just west of West L.A.
6. Improve walkability and ADA access: Wider sidewalk of 12-15 ft. with street trees along Nebraska Ave. for the full frontage of the project site and the west generating facility.
7. Reduce impact on neighbors:
   a. Longer setback on the east side, to reduce shading and visual impact to east businesses (shorter 1-2-story buildings).
   b. Green roof deck shall be enclosed with a sound barrier and hours of use restricted to 8:00 am to 8:00 pm from Mon.-Fri.
8. Energy efficiency:
   a. Building construction to LEED Platinum certification.
   b. EV chargers for 50% of parking spaces and stubbed for 75% of spaces.
   c. Exterior lights on dimmers, no flood lights, no light trespass to north neighbors.
   d. Interior lights on dimmers or turned off at night, to prevent intensive "glow" of building.
9. Construction:
   a. No truck staging on neighborhood streets to the north.
   b. All truck access via Centinela Ave. and Olympic Blvd. (none via Nebraska Ave.).
   c. No noise or site activity prior to 7:30 am or 8:00 am, and none after 4:00 pm (city hours are 7:00 am to 9:00 pm).

Facts and background:

1. The public comment period was short (only 30 days), and the DWP excluded the community during the year of its design. The DWP presented a finished product that excluded any collaboration with the neighbors.

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West Los Angeles Sawtelle Neighborhood Council
1645 Corinth Avenue, Los Angeles, CA 90025
(310) 235-2670 www.wlasawtelle.org
Making a Difference in Your Neighborhood

Findings and justifications:

1. The short-term mitigations for the noise from the generation facility/ power plant are insufficient long-term solutions. The neighbors are suffering now, and deserve immediate relief.
2. The electrical equipment and minimal landscaping of the generation facility/ power plant is visual blight.
3. A 50-60-ft. office building is much taller than the 1-2-story houses across the street.

3-14

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3-16

Ex parte communications: J.Ross conferred with Deborah Hong and Michael Ventre of DWP about scheduling.
Disclosures and conflicts of interest: None disclosed by any committee members.
To government agencies: Only the Chair and designated Boardmembers may testify to public agencies on behalf of the West L.A. Sawtelle NC. The Board requests that the Council Office and private/non-profit entities do not testify or speculate on behalf of the NC.

3-17

/s/ Jamie L. Keeton

Jamie L. Keeton, Chair WLASNC

cc: Len Nguyen, Ben LaZebnik, Council District #11 (Len.Nguyen@LACity.org, Ben.LaZebnik@LACity.org)

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Making a Difference in Your Neighborhood

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Response to Comment Letter 3

West Los Angeles Sawtelle Neighborhood Council
Jamie L. Keeton, Chair
July 29, 2020

3-1 This comment reflects a vote of opposition for the proposed project by the West Los Angeles Sawtelle Neighborhood Council (Neighborhood Council) Board of Directors. The commenter's general opposition to the project will be provided to the decision makers for their review and consideration as part of this Final MND.

The comment also cites the project's proposed height compared to the zoning standards and expresses concern for compatibility with the surrounding residences by the project site. The construction of the proposed project is exempt from the zoning requirements set forth for the project site. The project is defined as a "Power Asset" under Charter Section 672(b) of the Los Angeles Municipal Code (LAMC), which encompasses "all the electric energy rights, lands, right-of-way, sites, facilities and property used for generation, transportation, distribution, and delivery of power for the benefit of the City, its inhabitants and its customers." As such, the City's Power Assets are under control of the Board of LADWP Commissioners (the Board), and subject to oversight by the Los Angeles City Council under Charter Section 245 of the LAMC. Specifically, the Board has "the power and duty to make and enforce all necessary rules and regulations governing the construction, maintenance, operation, connection to and use of the Water and Power Assets for (LADWP) Purposes." Therefore, the project's proposed height is not in conflict with the LAMC. No changes or additions to the Project Description or environmental analysis are required in response to this comment.

3-2 This comment raises concern for the traffic study prepared, particularly towards potential impacts to the capacity of Nebraska Avenue for potential vehicular trips during AM and PM peak hours. The comment further expresses concern over existing conditions on the roadway capacity. The capacity of Nebraska Avenue has been evaluated in the traffic study by analyzing intersections of Centinela Avenue/Nebraska Avenue and Bundy Drive/Nebraska Avenue with the proposed project trips during the AM and PM peak hours. These intersections were selected due to their proximity to the project site and expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals. Table 9-1 of Appendix F shows study intersections, under existing conditions, along Nebraska Avenue were recorded at LOS A in the AM peak hour (Centinela Avenue/Nebraska Avenue), LOS C in the PM peak hour (Centinela Avenue/Nebraska Avenue), and LOS C for both AM and PM peak hours (Bundy Drive/Nebraska Avenue). As shown in Table 3.17-4, Summary of Volume to Capacity Ratios and Levels of Service – Weekday AM and PM Peak Hours, of the Draft IS/MND, the intersections along Nebraska Avenue in the vicinity of the project operate at acceptable levels of service (Level of Service (LOS) D) or better under Existing, Existing with Project, Year 2025 Future and Year 2025 Future with Project conditions. This represents a maximum projection of potential project impacts. Furthermore, LOS denotes a number of differing combinations of operating conditions such as travel speed, travel time, interruptions, freedom to maneuver, safety, driving comfort and convenience. There are six levels of service ranging from LOS A to LOS F. LOS A describes a condition of free flow, with low traffic volumes and relatively high speeds, while LOS F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases. As described in the traffic study, LOS D encompasses a zone of increasing restriction approaching instability at the intersection.

Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. LOS D is the lower limit of acceptable operation above LOS E which represents road near or at capacity to accommodate vehicular traffic.

The letter states there was not a list of guarantees of carpool and other Transportation Demand Management (TDM) programs to reduce traffic impacts. As noted in the traffic study and the environmental document, TDM measures are currently being implemented and will continue to be implemented at the new facility by LADWP in conformance with the City's Trip Reduction Ordinance. This would include a carpool program for employees which would provide preferential parking within the parking garages for employees who commute to work in registered carpools.

Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

3-3 This comment notes that participation of the neighborhood was not solicited during the preparation of the Draft IS/MND and notification of the project was only after completion of the project's design. It should be noted that the final design for the project is not complete; the preliminary design is all that was evaluated in the CEQA analysis. Details for the project, including details such as wall heights, are still being worked out during the final/detail design phase, which will be done in coordination with the community. Furthermore, CEQA does not require consultation with the neighborhood in the initial development of a project for a Draft IS/MND.

The lead agency provided the specified public review period of 30 days as stated in Section 15073 of the State CEQA Guidelines, in which the Draft IS/MND was submitted to the State Clearinghouse for review by State agencies. In addition, Section 15072 of the State CEQA Guidelines states the lead agency (LADWP) shall provide a Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration by at least one of the following procedures:

> (1) Publication at least one time by the lead agency in a newspaper of general circulation in the area affected by the proposed project. If more than one area is affected, the notice shall be published in the newspaper of largest circulation from among the newspapers of general circulation in those areas.
>
> (2) Posting of notice by the lead agency on and off site in the area where the project is to be located.
>
> (3) Direct mailing to the owners and occupants of property contiguous to the project. Owners of such property shall be identified as shown on the latest equalized assessment roll.

In compliance with Section 15072 of the State CEQA Guidelines, LADWP published the Notice of Intent (NOI) in the Los Angeles Times newspaper and provided direct mail notices of the proposed project to owners and occupants of property within the immediate vicinity of the project location.

3-4 This comment requests specific revisions to the Draft IS/MND, including a suggestion that LADWP shall form a special liaison committee with the neighborhood to ensure public involvement.

LADWP has a dedicated liaison for the proposed project that communicates and provides updates to the public. The liaison will continue to provide updates to the public throughout the duration of the project. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment. The comments associated within Comment Letter 3 will be provided to the decision makers for their review and consideration as part of this Final MND.

3-5 This comment requests specific revisions to the IS/MND related to transportation. The Neighborhood Council asks all staff vehicle entry to utilize the existing driveways on Olympic Boulevard and Centinela Avenue, visitors to access public parking on-site via Nebraska Avenue, and for the staff garage entry to be removed from Nebraska Avenue (unless otherwise required by the Los Angeles Fire Department).

The staff vehicle entry has been planned comprehensively with the design of the new building which includes Administration and Service Planning Area. The design of the subterranean garage would require employees to access the project site from the driveway proposed along Nebraska Avenue for most efficient circulation and access, as is currently the case. The existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

3-6 This comment requests specific revisions to the Draft IS/MND related to transportation and the proposed Transportation Demand Management (TDM) Plan limiting employee vehicular trips to 250 per day (one-way, 360 employees). The comment cites compliance measures such as future traffic studies. The Neighborhood Council has provided suggestions to ensure trip reductions.

As discussed in Section 3.17, Transportation and Traffic, of the Draft IS/MND, the proposed project is anticipated to generate up to 1,030 daily vehicle trips, as shown in Table 3.17-3, Project Trip Generation. This estimate is derived from up to 315 West LA Yard employees and up to 60 Service Planning Center employees. However, when compared to existing conditions of 191 West LA District Yard employees and 505 vehicle trips, the net new daily vehicle trips would result in up to 525 trips per day. The net new trip generation represents a projected maximum of vehicle trips to and from the project site. The comment's request to reduce vehicular trips to 250 would not be feasible for the proposed project. One of the objectives for the proposed project is to accommodate the Service Planning group by relocating the group that services the West Los Angeles area currently located in Lincoln Heights to the District Yard and provide services in a more convenient location. The new District Yard would include services for both residential and commercial customers that would benefit the greater West Los Angeles community by providing convenience, flexibility, and access for customers in the region. The Draft IS/MND includes the following TDM measures, also noted in the traffic study, which are currently being implemented and will continue to be implemented by LADWP and would reduce employee vehicular trips to the proposed project. These TDM measures would be implemented and maintained by LADWP in conformance with the City's Trip Reduction Ordinance. In addition, as described in Comment 2-2, Caltrans has determined the project would not create a

direct adverse impact to existing State transportation facilities. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

- On-Site Employee Transportation Coordinator
- TDM Web Site Information
- TDM Promotional Material.
- Transit Welcome Package.
- Los Angeles Metro TAP Employer Program.
- Los Angeles County Guaranteed Ride Home Program
- Carpool Program for Employees.
- Convenient Parking/Amenities for Bicycle Riders.
- Flexible/Alternative Work Schedules.

3-7 This comment requests specific revisions to the Draft IS/MND related to noise reduction. The Neighborhood Council asks for the construction of a 30-foot sound wall along the north border of the property consisting of the "same aesthetic quality" of the proposed project by being visually appealing and completely conceal the yard from the nearby residences. In addition, the Neighborhood Council proposes upgraded equipment to result in "low-noise products" and for existing equipment within Receiving Station K. Finally, the Neighborhood Council requested the equipment on Receiving Station K to be relocated from Nebraska Avenue to the south/east portions of the project site towards Olympic Boulevard.

Noise impacts are addressed in Section 3.13, Noise, of the Draft IS/MND. Construction noise impacts would be temporary and were determined to be less than significant with mitigation. Specifically, mitigation measure MM-NOI-1 identifies ways in which to reduce construction noise. Mitigation measure MM-NOI-2 is incorporated to effectively notify sensitive receptors, such as the nearby residences during construction activities of potential noise impacts. The following measures are included in MM-NOI-1 to reduce construction noise:

1. Construction activities shall not occur between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, 6:00 p.m. and 8:00 a.m. on Saturday, or on Sundays or national holidays.
2. Pumps and associated equipment (e.g., portable generators etc.) shall be shielded from sensitive uses using local temporary noise barriers or enclosures, or shall otherwise be designed or configured so as to minimize noise at nearby noise-sensitive receivers.
3. Staging of construction equipment shall not occur within 20 feet of any noise- or vibration-sensitive land uses.
4. All noise-producing equipment and vehicles using internal combustion engines shall be equipped with mufflers; air-inlet silencers where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.

5. All mobile or fixed noise-producing equipment used on the project facilities that are regulated for noise output by a local, state, or federal agency shall comply with such regulation while in the course of project activity.
6. Idling equipment shall be kept to a minimum and moved as far as practicable from noise-sensitive land uses.
7. Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where feasible.
8. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
9. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.

The comment also expresses concern for existing operational noise from the LADWP property, specifically from Receiving Station K. The proposed project does not include the upgrade of equipment existing within Receiving Station K. However, the noise impact analysis detailed within the Draft IS/MND, and specifically within Section 3.13, includes noise measurements of existing ambient noise within the project site's vicinity. This includes noise already being generated at Receiving Station K. As shown in Table 3.13-5, Traffic Noise (Existing and Existing Plus Project), of the Draft IS/MND, none of the short-term measurement locations (ST1 through ST5) exceed the 65 dB CNEL City noise standard for residences under existing noise level conditions. In addition, noise modeling found the existing plus the proposed project conditions would result in none of the same receptors exceeding 65 dB CNEL. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the proposed project was found to result in less than significant noise impacts during operations. As such, the comment's requests for upgraded equipment and the relocation of existing equipment are not within the scope of the proposed project, and the comment's request for a sound wall would not be warranted based on the determined impacts. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment. In addition, LADWP is proposing to install sound barrier walls to mitigate noise from the residents along Nebraska Ave. The sound barrier walls will be located within RS-K directly in front of the transformers. The design is expected to reduce noise levels from RS-K, especially when the transformers are operating at peak loads. The sound barrier walls will be installed as a separate action from the West Los Angeles District Yard Project.

3-8 This comment requests specific revisions to the Draft IS/MND related to aesthetics. The Neighborhood Council requests a 60-foot landscaped setback along Nebraska Avenue with a 2,000-square-foot parklet open to the neighborhood. The comment cites Ishihara Park in the City of Santa Monica as an example, which provides a buffer to the Metro Expo Line (E Line).

The proposed project includes a 28-foot setback and landscaping designs that integrate sustainability and enhance site beautification, as discussed in Section 3.1, Aesthetics, of the Draft IS/MND. The project would include an expansion of the existing driveway within the off-site right-of-way along Nebraska Avenue. As described in the Section 2, Project Description, in order to accommodate the driveway expansion, one existing street tree is proposed to be removed and new trees would be added to the project site in landscape designated

areas, including the Nebraska Avenue frontage of the project site. The inclusion of an increased setback to create a new parklet similar to a nearby example is not within the scope of the proposed project and cannot be accommodated on the project site. There is limited facility space in order to maintain efficient circulation for operations and maintenance activities and maintain capacity for the increased staff. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

3-9 This comment requests specific revisions to the Draft IS/MND related to walkability and Americans with Disabilities Act access. The Neighborhood Council requests a 12- to 15-foot sidewalk with trees along the Nebraska Avenue frontage of the project site.

Under existing conditions, the project site is adjacent to an approximately 15-foot setback on Nebraska Avenue, half of which is a landscaped parkway. Section 3.17, Transportation and Traffic, of the Draft IS/MND determines that the proposed project would result in less than significant impacts related to the compatibility with existing programs, plans, ordinances, or policies for pedestrian facilities. The project site is well-located to encourage pedestrian activity and supports connectivity to nearby residential and commercial uses. Additionally, the proposed project would not interfere with the existing pedestrian infrastructure. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

3-10 This comment requests specific revisions to the Draft IS/MND related to impacts to nearby residences and local businesses. The Neighborhood Council requests a longer setback on the east side of the project site in order to reduce shade and visual impacts on nearby businesses. In addition, the comment requested that the green roof deck should be enclosed with a sound barrier and have restricted operational hours of 8:00 a.m. to 8:00 p.m., Monday through Friday.

The proposed roof deck design consists of views from the third-floor exterior window, which is set back a total of 60 feet from property line. The setback includes 28 feet from the property line to the exterior building wall and 32 feet from the edge of the green roof deck to third floor exterior wall. Views of the adjacent residential houses would not be visible from this vantage point. In addition, the green roof deck is proposed to include 6 inches of planting modules to create a living roof system which would not be accessible to employees. In addition, a metal screen is proposed to extend along the exterior third-floor courtyard and partially along the length of the exterior walls. The proposed design is intended as a shading and privacy screen element for the proposed project.

A shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00

a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.

In response to additional requested setbacks, please see Response to Comments 3-8 and 3-9 above. In response to concerns about operational noise onto the nearby residences, see the Response to Comment 3-7.

3-11 This comment requests specific revisions to the Draft IS/MND related to energy. The Neighborhood Council requests the proposed project be built to LEED Platinum standards; include electric vehicle chargers for 50% of the total parking spaces and stubbed for 75% of the spaces; provide dimmers for exterior lights and exclude "flood lights" to limit light trespass to northern residences; and provide dimmers for and/or turn off interior lights at night to prevent intensive "glow."

LADWP would provide project design features such as light emitting diode (LED) lighting, optimized building envelope thermal properties, managed water usage, and optimized energy performance and controls. Overall, the proposed design is seeking LEED Gold level certification with the potential of achieving platinum; the proposed project also has the potential to receive Net Zero Building certification.

As discussed in Section 2, Project Description, the project would include electric vehicle (EV) charging stations on site with all parking spaces equipped with below grade conduit infrastructure for potential future conversion to EV stations. The proposed project anticipates all fleet vehicle parking to include EV charging stations and 60% of the parking for personnel vehicles during the project's initial installation. Other sustainable features include high performance façades with exterior shading and electrochromic glazing, battery-energy storage systems for on-site operational energy storage, reduction of embodied energy and life cycle impacts of materials through materials and system selection, and fundamental and enhanced commission. In addition, solar photovoltaic panels would be incorporated into the project design, which would offset the majority of electricity that would be consumed by the project. As discussed in Section 3.6, Energy, of the Draft IS/MND, the proposed project would result in a minimal increase in electricity consumption and would be inherently energy efficient. As described above, the proposed project's design would include features to reduce operational electrical use and promote energy efficiency.

Additionally, impacts related to lighting and glare are discussed in Section 3.1, Aesthetics, of the Draft IS/MND. As described therein, it is anticipated that staff would be present on-site Monday and Friday from 6:30 a.m. – 11:00 p.m., Tuesday and Thursday from 6:30 a.m. – 7:00 p.m., Saturday and every other Sunday from 6:30 a.m. – 4:30 p.m. When compared to existing conditions, the proposed project would not introduce new interior building lighting not currently present on site. Additionally, the proposed project would comply with the LAMC Section 93.0117, which specifically regulates the installation of outdoor lighting that has the

potential to direct light and glare towards residential property. Therefore, as determined in Section 3.1(d), the proposed project would result in a less than significant impact related to lighting and glare.

3-12 This comment requests specific revisions to the Draft IS/MND related to construction. The Neighborhood Council requests no truck parking on nearby residential streets to the north of the project site; to prohibit truck access via Nebraska Avenue; and to prohibit noise-generating project activities prior to 7:30 a.m. or 8:00 a.m., and after 4:00 p.m.

As discussed in Section 2.2 of the Draft IS/MND, construction vehicle access to the yard would be restricted to the entrances located on Centinela Avenue and Olympic Boulevard and only employees would be allowed access to the yard via Nebraska Avenue during construction. As such, the comment's request related to construction circulation is incorporated into the project's design. However, the comment's request to reduce the number of hours is not feasible.

As discussed in Section 3.13, Noise, of the Draft IS/MND, LAMC Section 41.40 prohibits construction activity that might create loud noises in or near residential areas or buildings between the hours of 9:00 p.m. and 7:00 a.m. on weekdays, before 8:00 a.m. or after 6:00 p.m. on Saturday and national holidays, or at any time on Sunday. The project would comply with existing City's noise ordinances and further incorporates mitigation measure MM-NOI-1 to reduce construction noise and MM-NOI-2, which provides notification to sensitive receptors regarding construction noise. The following measures are included in MM-NOI-1 to reduce construction noise:

1. Construction activities shall not occur between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, 6:00 p.m. and 8:00 a.m. on Saturday, or on Sundays or national holidays.
2. Pumps and associated equipment (e.g., portable generators etc.) shall be shielded from sensitive uses using local temporary noise barriers or enclosures, or shall otherwise be designed or configured so as to minimize noise at nearby noise-sensitive receivers.
3. Staging of construction equipment shall not occur within 20 feet of any noise- or vibration-sensitive land uses.
4. All noise-producing equipment and vehicles using internal combustion engines shall be equipped with mufflers; air-inlet silencers where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
5. All mobile or fixed noise-producing equipment used on the project facilities that are regulated for noise output by a local, state, or federal agency shall comply with such regulation while in the course of project activity.
6. Idling equipment shall be kept to a minimum and moved as far as practicable from noise-sensitive land uses.
7. Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where feasible.
8. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
9. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.

3-13 This comment cites facts and background in regards to the Draft IS/MND noting the public comment period was only 30 days in duration and the community was not included in the design of the project.

In response to noticing and the public review period for the Draft IS/MND, please see Response to Comment 3-3, above.

3-14 This comment cites findings and justifications for the comment letter. The Neighborhood Council expressed concern for short-term noise mitigation within the Draft IS/MND and concern for existing noise conditions.

In response to concerns on potential project-related noise impacts and existing conditions, please see Response to Comment 3-7, above.

3-15 This comment cites findings and justifications for the comment letter. The Neighborhood Council expresses concern for the project site's existing equipment and minimal landscaping as "visual blight."

In response to concerns of visual character, please see Response to Comment 3-8, above. Furthermore, the comment's concern for existing equipment associated with Receiving Station K is not a part of the proposed project, and, therefore, not within the scope of the project.

3-16 This comment cites findings and justifications for the comment letter. The Neighborhood Council expressed concern for the proposed project's height compared to surrounding residences.

In response to concerns of zoning and height, please see Response to Comment 3-1, above.

3-17 This portion of the comment letter outlined ex parte communications, disclosures and conflicts of interest, and requests only designated members of the Neighborhood Council Board to speak on behalf of the organization.

This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. No response is needed.

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Comment Letter 4

manatt

Victor De la Cruz
Manatt, Phelps & Phillips, LLP
Direct Dial: (310) 312-4305
VDelaCruz@Manatt.com

July 22, 2020

VIA E-MAIL

Los Angeles Department of Water and Power
Attn: Mr. Aiden Leong
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Email: Aiden.Leong@ladwp.com

Re: Comments on the Los Angeles Department of Water and Power's West Los Angeles District Yard Project

Dear Mr. Leong:

On behalf of our client, the Salenger Family Trust, which is the owner of the property at 12210 Nebraska Avenue (the "Salenger Property"), the immediately adjacent neighbor to the West Los Angeles District Yard Project (the "Project"), we thank you for the opportunity to provide comments in connection with the Los Angeles Department of Water and Power's ("LADWP") Mitigated Negative Declaration (the "MND") for the proposed Project. 4-1

As a threshold matter, my client would like to make clear that it does not oppose the proposed Project. To that effect, my firm has been asked not to issue any comments on the MND that could jeopardize the Project's compliance with the California Environmental Quality Act and/or provide substantial evidence in support of a potential significant impact that would require preparation of an environmental impact report.

However, the Salenger Family Trust notes that the overwhelming majority of Project impacts would be concentrated at the property line of the Salenger Property without any mitigation whatsoever because the MND does not deem it a sensitive receptor. As a City of Los Angeles proprietary department, however, my client would like to think that LADWP can and should be more respectful of its neighbors, and—out of respect for the Salenger Property's tenant—treat the Salenger Property as a sensitive receptor. The Salenger Property currently houses the Marmol Radziner firm, a unique design-build architecture firm that is an asset to the City on many levels, not least of which is its employment of over 200 people. In light of the sensitive work that takes place in an architectural firm, my client is perplexed that the MND would not provide any mitigation across key areas such as construction noise and traffic as they relate to the Salenger Property, much of which could easily be accomplished by providing a greater setback between the Project and the Salenger Property for one. 4-2

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manatt

Los Angeles Department of Water and Power
July 22, 2020
Page 2

Of note, LADWP's new office building, totaling approximately 92,000 square feet, a two level above-ground parking structure with a total of 154 parking stalls, and a single-level underground parking structure with a total of 389 parking stalls, would all be constructed immediately adjacent to the Salenger Property—apparently ***at the property line*** despite the fact that the LADWP site is very large and there is no shortage of space for the Project's proposed program. The building threatens to block the light into the offices. The driveway for hundreds of employees who would be accessing the Project is also immediately adjacent to the Salenger Property's property line. Despite all this, neither Mitigation Measure NOI-1 nor Mitigation Measure NOI-2 are geared at addressing noise and vibration impacts on the Salenger's tenant. Likewise, there is no mitigation measure addressing light and shade-shadow impacts on the Salenger Property.

Our client believes much of the construction noise and vibration issues could be resolved through the erection of a sound wall during construction, application of MM NOI-1 and MM NOI-2 to the Salenger Property, and a slightly increased setback. From an operational standpoint, landscaping between the new building and the property line would at least offer a green view and the Salenger Family Trust believes construction of a permanent wall at the employee driveway area would better protect the Salenger Property from the Project's operational noise and traffic impacts.

We look forward to hearing from LADWP about what measures it will take to protect its immediately adjacent neighbor and reserve the right to supplement our comments at a later date.

4-2
Cont.

Very truly yours,

Victor De la Cruz
Manatt, Phelps & Phillips, LLP

VSD

Response to Comment Letter 4

The Salenger Family Trust
Victor De la Cruz, Manatt, Phelps, & Phillips, LLP
July 22, 2020

4-1 This comment identifies the Salenger Family Trust as an adjacent neighbor to the project site, located at 12210 Nebraska Avenue (the "Salenger Property"). The comment does not express opposition to the proposed project or desire to issue a comment that could jeopardize the project's compliance with the California Environmental Quality Act and/or provide substantial evidence in support of a potential significant impact that would require the preparation of an environmental impact report.

This comment is introductory in nature and does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment. The comment's letter and responses to the issues raised within Comment Letter 4 will be provided to the decision makers for their and consideration as part of this Final MND.

4-2 This comment states that the Draft IS/MND does not consider the Salenger Property as a sensitive receptor. The commenter requests LADWP to consider the property as a sensitive receptor because the property includes an architectural firm, Marmol Radziner, with over 200 employees. In addition, the comment asks for analysis related to construction noise and traffic to be considered and for mitigation to be incorporated. The comment suggests a larger setback between the project site and the Salenger Property would alleviate concerns of potential project impacts related to shade and shadow.

As indicated in Section 3.13, Noise, of the Draft IS/MND, five short-term noise measurement locations (referred to as ST1 through ST5) and one long-term noise measurement location (LT1) were taken to represent key potential sensitive receptors or sensitive land uses on, adjacent to, or near the project site. As shown in Figure 3.12-1 of the Draft IS/MND, ST1 was measured at the southwest corner of 1757 Amherst Avenue, which is approximately 80 feet to the northwest of the Salenger Property. The Draft IS/MND, shown in Table 3.13-1, indicates typical measured daytime noise levels at ST1 ranged from 55.2 to 71.9 dBA L_{eq}. During construction, Table 3.13-4 details construction noise modeling results at ST1 with noise levels as high as 83 dBA L_{eq}. Temporary noise impacts during construction were considered potentially significant and mitigation measures MM-NOI-1 and MM-NOI-2 are incorporated to reduce construction noise to a less than significant level. Implementation of the mitigation measures would not only reduce impacts to the nearest sensitive receptor (ST1), but also to a typical residence (measured approximately 300 feet away). The analysis within the Draft IS/MND includes other land uses within the project site's vicinity such as the Salenger Property. Mitigation measure MM-NOI-1 reduces construction activities to specified hours, requires barriers and noise-reducing measures for specified equipment, and outlines particular staging requirements to reduce construction noise. Mitigation measure MM-NOI-2 specifies effective communication and notification during construction on schedule, duration, and progress.

In addition, the Draft IS/MND determined construction activities would not result in a significant impact related to groundbourne vibration, as distance attenuation would reduce construction equipment noise

impacts and would not exceed vibration thresholds for the closest sensitive receptor (ST1) to the project site. As such, the comment's request for a sound wall during construction to reduce impacts would not be warranted. However, the measures incorporated under MM-NOI-1 would reduce construction noise for not only the nearest residences, but the project site's vicinity, including the property owned by the Salenger Family Trust.

As discussed in Section 3.17, Transportation and Traffic, construction-related traffic impacts would be temporary and would be less than significant because the number of trips generated from construction workers and vendors would not exceed the net new project trips during operation. Similarly, during operation, the proposed project would result in up to 1,030 daily trips (525 net new trips compared to existing conditions), which would result in less than significant impacts in all traffic scenarios analyzed within Section 3.17. Construction of the project would result in a total of four driveways. Similar to current operations, the driveways would be controlled by either manual or automatic gates that are operated by LADWP. As such, operational circulation would be similar to existing conditions and access to the project site would increase with new driveways on Nebraska Avenue. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

Regarding potential shading on surrounding land uses, a shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows. The existing commercial building, which houses an architectural firm, is not considered a shadow-sensitive use.

Comment Letter 5

MARMOL RADZINER AIA

architecture
construction
landscape
interiors

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310 826 8224 fax

mail@marmol-radziner.com
www.marmol-radziner.com

July 24, 2020

Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Attn: Mr. Aiden Leong

Dear Mr. Leong:

I am writing to you regarding the Mitigated Negative Declaration that has been prepared by the Los Angeles Department of Water and Power for the West Los Angeles District Yard Project. Marmol Radziner is an architectural firm that has been part of the West Los Angeles community since 2001. Our office is a one-story bowstring truss building located at 12210 Nebraska Avenue immediately to the northeast of the DWP property, and is the workplace of more than 100 employees. While we applaud many of the improvements being proposed for the current DWP facilities and the integration of sustainable design features, we have a number of concerns with the new building. 5-1

The southwestern wall of the Marmol Radziner office directly adjacent to the DWP property is primarily made up of windows that offer natural light and ventilation. A narrow landscaped area provides greenery and a screen between our building and the DWP parking area. We are concerned about negative impacts that the proposed project will have on our work environment. The new DWP project would create a 60-foot wall directly beyond our property, obstructing south-facing views and sunlight. The massing of the building is out of scale with its surroundings, and will loom over and overwhelm our office and the work environment. 5-2

The West Los Angeles District Yard Project could provide a more sensitive transition by maintaining a height compatible with the local context of single family homes and adjacent buildings. In order to improve the relationship between structures and to maintain adequate space, light, and a sense of 5-3

openness, a wider transition area and upper-level stepbacks should be incorporated into the design of the facility.

Marmol Radziner was not informed about the new plans for the DWP property until very recently. We would like to have the opportunity to provide input and comment on the design of the proposed project and its impact on our building and the employees who work here. We hope that the city of Los Angeles will work to find creative design solutions that are sensitive to the surrounding neighborhood.

5-3 Cont

5-4

Sincerely,

Ron Radziner, FAIA
Design Partner

Response to Comment Letter 5

Marmol Radziner, AIA
Ron Radziner, FAIA, Design Partner
July 24, 2020

5-1 This comment identifies concern for proposed project. The comment is from an architectural firm located immediately to the north of the project site at 12210 Nebraska Avenue.

This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

5-2 This comment addresses concerns with the 60-foot wall proposed between the Marmol Radziner office and the LADWP project site. The comment describes existing conditions of the office space utilizes natural light and ventilation through windows on its southwestern side as well as an existing narrow landscaped area, which provides greenery and screening between the two properties. Concern for the proposed wall cites obstruction to south-facing views and sunlight as well as the creation an out-of-scale massing compared to the surrounding built environment.

The proposed solid wall is designed to replace the existing chain link fencing and provide the adjacent properties a sound and visual barrier during construction and operation of the proposed project. Regarding potential shading on surrounding land uses, a shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.

5-3 This comment suggests the project reduce the proposed height to be compatible with the surrounding built environment and to incorporate design features which would maintain adequate space, light, and upper-level setbacks into the proposed facility.

For discussion on the proposed project's height, please see Response to Comment 3-1. Additionally, please see Response to Comment 5-2 regarding the proposed project's potential impacts to shade and shadow.

5-4 This comment cites communication concerns with the Draft IS/MND noticing and requests input and comment on the proposed design.

For discussion on noticing for the Draft IS/MND, please see Response to Comment 3-3. The issues raised in Comment Letter 5 will be provided to the decision makers for their review and consideration as part of this Final MND.

Comment Letter 6

WEST SAWTELLE HOMEOWNERS ASSOC.
1726 AMHERST AVENUE
LOS ANGELES, CA 90025

Mr. Aiden Leong
Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA, 90012
aiden.leong@ladwp.com

July 25, 2020

Notice of Intent to Adopt a Mitigated Negative Declaration for the West Los Angeles District Yard Project

Dear Mr. Aiden Leong:

In 2015, Mayor Eric Garcetti launched Vision Zero, a program whose goal is to bring traffic deaths in the City of Los Angeles to zero. As residents of Los Angeles, we lauded an effort to stop all traffic deaths. We want a safe, walkable city for our children, for our elderly; for everyone. But since launching the program, traffic fatalities have gone up by 33%. Instead of reducing deaths, the City of Los Angeles has increased traffic fatalities. Over half the deaths are pedestrians. Hit and runs are also up by 69% in the last five years. Our small neighborhood is bordered on the western edge by Bundy Drive, which is a street identified by the City of Los Angeles High Injury Network as a street with a high concentration of traffic collisions resulting in deaths and severe injuries, particularly those walking or biking. There has been no effort by the City to reduce speeds or otherwise improve pedestrian and bicycle safety on Bundy. Our western border is with Centinela Avenue, which although a residential street, had a speed limit of 30 mph. In the last few years a neighbor returning home was killed by a hit and run. What did the City do? They raised the speed limit from 30 to 35, thereby doubling the likelihood that a vehicle hitting a pedestrian will kill the pedestrian. We also had an elderly neighbor

6-1

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pedestrian killed by a car on Idaho recently, which is reflective of the fact that 30% of the people killed or severely injured as pedestrians in Los Angeles are under 18 or over 64. "The definition of insanity is doing the same thing over and over again and expecting different results." Whoever first said that, we do not know, but it certainty describes the City of Los Angeles' approach to pedestrian death reduction.

After the City's stay-at-home order took effect in late March 2020, there was a steep drop in deaths. "Before the stay-at-home order, the City saw a fatal traffic collision on average of once every 36 hours... After March 19, that rate slowed to once every $2\frac{1}{2}$ days–aided by a record low number of fatalities during the first two weeks of the order..." Every driver "has control of a 5,000-pound missile" (Los Angeles Times, https://www.latimes.com/california/story/2020-05-14/traffic-deaths-speeding-los-angeles-coronavirus-pandemic-vision-zero).

What we know, what is backed by science and reams of studies, is that slowing down traffic and taking cars off the road makes for a safer city, a more livable city, and reduces pollution.

The project proposed by the LADWP is attempting to avoid a full Environmental Impact Report (EIR). We feel that an EIR should be done to ensure that the full impacts of the project are understood. The City of Los Angeles does not require the impacts of a project to be studied in relation to other projects that are approved and under construction. Bordering this LADWP project is the Martin Cadillac Project, currently under construction. The Martin Cadillac Project is taking the area from a single car dealership to a massive, high density development that includes 150,000 sqare feet of office space, over 500 hundred new luxury apartments, a grocery store, additional retail and an outdoor concert area. It is going to bring with it a massive increase in traffic, documented by the project EIR and lawsuits against the project. We demand that the impacts from this LADWP project be studied in conjunction with this Martin Cadillac Project approved by the City and under construction. The DWP project envisions moving the Service Planning group to this site. A new parking structure for 389 spots is requested. This will increase the traffic flow to the DWP site over and above the present traffic.

We ask that the residential streets that empty onto Nebraska be cul-de-sac at Nebraska. These streets are Amherst Ave, Wellesley Ave, and Carmelina Ave. We want to insure that we do not get cut through traffic and that our neighborhood does not pay the price for this project in the form of another pedestrian death.

To further enhance pedestrian safety in our neighborhood, we want Nebraska narrowed, to reduce speeds. We want the speed on Centinela reduced back to 30 mph or lower. On Bundy Drive a landscaped median should be placed to slow down speeding cars and flashing lights for cross walks at Missouri and Idaho are to be placed, thereby creating safe crossings for pedestrians.

6-1 Cont.

6-2

6-3

We want a setback of the project by 35 feet along Nebraska, and use that space to create a community garden. West Los Angeles is considered "high park need." We need parks and community gardens. Measure A, passed in 2016, was intended to provide more open space and parks for all of Los Angeles, but sadly has not been used to prioritize park poor communities. In fact, only 12.7% of funds has been earmarked for park-poor areas containing 52% of the population. This LADWP project provides a wonderful opportunity to create open space and engagement within the community. It can also change the area in front of the current DPW space from dead space, to a green space alive with people and biodiversity; a buffer to help reduce noise and visual pollution. Toward this goal, the sidewalk on the south side of Nebraska should be completed from the LADPW site to Bundy Drive. Currently, pedestrians have no sidewalk for portions of the south side of Nebraska. 6-4

We also want the height of all buildings to be kept at four stories and 50 feet where visible from our neighborhood. Also, the proposed above-ground parking structure must be internal to the project and not facing our single family neighborhood. All public and employee parking access must be from Olympic Blvd and or Centinela Avenue. 6-5

Regards,

Aric Gregson

cc: Deborah Hong (deborah.hong@ladwp.com)
Councilman Bonin's Office:
Mike Bonin (mike@11thdistrict.com)
Ben Lazebnik (ben.lazebnik@lacity.org)
Len Nguyen (len.nguyen@lacity.org)

Page 3

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Response to Comment Letter 6

West Sawtelle Homeowners Association
Aric Gregson
July 25, 2020

6-1 This comment provides statistics and criticism towards the City's Vision Zero program and continuous pedestrian safety concerns and traffic-related deaths within the City of Los Angeles. Specifically, the comment identifies Bundy Drive as a concern for pedestrian-vehicle conflict resulting in death, and the City's designation of the street as a High Injury Network. Additional concern was raised regarding the increase of speed limits of nearby residential streets, such as Centinela Avenue and Idaho Avenue.

As noted by the commenter, the City has designated Bundy Drive within its High Injury Network as part of the Vision Zero program. The City will implement initiatives that include engineering, education, and enforcement measures to improve safety by reducing severe fatalities and traffic fatalities along this roadway. Centinela Avenue and Idaho Avenue are designated as Collector Streets in the City's Circulation Plan that generally have a speed limit higher compared to the local residential streets. Bundy Drive is generally constructed with sidewalks and Americans with Disabilities Act accessible pedestrian ramps at all the intersections in the vicinity of the project. The traffic signal warrant analysis of the Bundy Drive/Nebraska Avenue intersection included a Crash Experience Warrant wherein existing collision history at the intersection was reviewed for the most recent five-year period. The review of traffic volumes and crashes did not satisfy the criteria for installing a signal at the Bundy Drive/Nebraska Avenue intersection.

6-2 This comment requests more analysis of the project's potential impacts through an Environmental Impact Report. The comment discusses potential cumulative impacts associated with the Martin Cadillac Project, currently under construction, which is resulting in the conversion of a car dealership to a high-density development including 150,000 square feet of office space, 500 units of residential, a grocery store, and additional retail and outdoor recreational area. The comment requests further study on potential traffic impacts associated with the related project under construction and the proposed project's 389-space parking structure.

As shown in Appendix A, Traffic Study Memorandum of Understanding, to Appendix F of the Draft IS/MND, as well as Table 6-1 Related Projects List and Trip Generation of the traffic study, the Martin Expo Town Center project was included in the traffic analysis of Future Conditions (representative of year 2025). Therefore, the traffic analysis provides a conservative analysis which includes development of other related projects in the vicinity of the proposed project. The increase in project trips from relocation of up to 60 employees within the Service Planning Center to the proposed project has been included in the trip generation estimates and traffic analysis of the project. The parking structure and parking spaces have been proposed based on the need assessed from the increase in employees at the project site. Similarly, the increase in traffic from the project has been assessed in the study which concluded no significant effects to the capacity of the roadway network near the project. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

6-3 This comment requests the project include infrastructure improvements to the surrounding streets adjacent to the project site. The Homeowners' Association (HOA) would like all residential streets (i.e., Amherst Avenue, Wellesley Avenue, and Carmelina Avenue) which end at Nebraska Avenue to be re-designed with a cul-de-sac to reduce traffic circulation and reduce impacts to pedestrian safety. In addition, the HOA requests Nebraska Avenue to be narrowed, speed limits to be reduced on Centinela Avenue, a landscaped median on Bundy Drive, and flashing beacon cross walks at Missouri Avenue and Idaho Avenue.

The comment's request is not within the scope of the proposed project and the analysis shown within the Draft IS/MND does not demonstrate a need for such roadway redesigns. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

6-4 This comment addresses desire and need for more park space in the project site's vicinity. As such, the HOA requests a 35-foot setback along Nebraska Avenue, and for the space to be used as a community garden. The comment suggests the incorporation of green space would reduce potential noise and visual impacts. In addition, the HOA requests an extension of an existing sidewalk along Nebraska Avenue to be completed between the project site and Bundy Drive in order to facilitate pedestrian circulation and safety.

The project includes proposed design improvements including landscaping along Nebraska Avenue. However, the comment's request for a park is not within the scope of the proposed project. Section 3.15, Public Services and 3.16, Recreation, of the Draft IS/MND discuss the proposed project's potential impacts to parks and recreational facilities within the project site's vicinity. The Draft IS/MND cites Stoner Recreation Center, approximately 0.3-mile northeast of the project site, as the nearest park to the project site. The environmental analysis determined the proposed project would not contribute to an increase in the use of existing neighborhood or regional parks or other recreational facilities and would not generate a demand for new parks. Typically, a project that proposes new residences would directly result in a need for new parks and recreational facilities. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

Under existing conditions, the project site contains an approximately 15-foot setback from Nebraska Avenue to an existing wall, half of which is a landscaped parkway. The proposed project would result in a 28-foot setback from Nebraska to the proposed buildings. The project site is described as well-located to encourage pedestrian activity and supports connectivity to nearby residential and commercial uses. Existing sidewalk infrastructure exists on both Nebraska Avenue and Bundy Drive. As mentioned in the comment letter, an approximately 135-foot gap in the sidewalk is not available for public access on the south side of Nebraska Avenue. However, the north side of Nebraska Avenue maintains publicly accessible sidewalk infrastructure. The proposed project would not interfere with the existing pedestrian infrastructure. As such, Section 3.17, Transportation and Traffic, of the Draft IS/MND determined less than significant impacts would occur to the proposed project's compatibility with existing programs, plans, ordinances, or policies related pedestrian facilities.

6-5 This comment requests the proposed project's height to be at a maximum of four stories or 50 feet from public vantage points. In addition, the HOA requests a relocation of the proposed parking structure away from the single-family neighborhood and for access to the project site to be limited to Olympic Boulevard and/or Centinela Avenue.

For discussion on the proposed project's height, please see Response to Comment 3-1.

The comment's request to relocate the proposed parking structure and access points to the project site does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

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Comment Letter 7

1718 Wellesley Ave.
Los Angeles, CA 90025
June 28, 2020

Aiden Leong
Los Angeles Department of Water and Power
111 North Hope St., Room 1044
Los Angeles, CA 90012

Dear Mr. Leong:

I am writing to comment on the West Los Angeles District Yard Project.

My husband and I have lived on Wellesley Ave., a half block away from the DWP facility, since 1983. The buildings looked old even then, and, having worked in offices myself for 40 years, I am sympathetic to the staff whom I see through the windows on Nebraska Ave., working in cramped and out-of-date quarters. 7-1

I am glad that the buildings will be replaced, I hope with state-of-the-art materials that will make the facilities LEED certified. I look forward to additional interesting xeriscaping. 7-2

The project will certainly produce noise and dust, and I realize that our friends at the south end of Amherst, Wellesley, and Carmelina will be impacted the most. I hope that your plan is for the construction vehicles to use the Centinela and Olympic entrances as much as possible. 7-3

We would welcome further information as the project moves forward.

Sincerely,

Mollie Bowling

Mollie Bowling
msbowling5@gmail.com
213-443-6754

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Response to Comment Letter 7

Mollie Bowling, Resident
June 28, 2020

7-1 This comment introduces themselves as local residents nearby the project site. The comment expresses sympathy for potential shade and shadow impacts to the adjacent office space.

Regarding potential shading on surrounding land uses, a shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.

According to the Draft CEQA Thresholds Guide, "facilities and operations that are sensitive to the effects of shading generally include, but are not limited to, routinely useable outdoor spaces associated with residential, recreational or institutional land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; nurseries; and existing solar collectors." The existing commercial building, which houses an architectural firm, is not considered a shadow-sensitive use.

7-2 This comment expresses support for the project's building replacement objectives and expresses desire for the proposed design to meet LEED certification and additional xeriscaping.

The project proposes sustainable design features which would incorporate best practices and high-performance features to achieve each of the major target areas with Los Angeles Mayor Eric Garcetti's LA's Sustainability City Plan[8]. As such, the proposed project would be consistent with city-wide goals to provide efficient high-performance buildings, create net zero energy facilities, and achieve LEED certifications for new construction. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

[8] City of Los Angeles. 2019. Los Angeles Mayor Eric Garcetti: LA's Green New Deal, Sustainability City pLAn. 2019. Web. https://plan.lamayor.org/sites/default/files/pLAn_2019_final.pdf

7-3 This comment raises concern for potential impacts related to noise and dust onto the residences on Amherst Avenue, Wellesley Avenue, and Carmelina Avenue. As such, the comment requests vehicular circulation to utilize Centinela Avenue and Olympic Boulevard during project construction.

The Draft IS/MND conservatively estimates the duration of the project's construction would start in April 2021 and would last approximately four years. However, since circulation of the Draft IS/MND the construction timeframe has been delayed; the analysis within the Draft IS/MND, however, representative a conservative estimate, as air quality impacts decrease over time as newer engines are introduced to the construction fleet. Construction of the project would result in the temporary addition of pollutants by on-site sources and off-site sources. Based on CalEEMod air quality modeling, the Draft IS/MND determined the maximum daily construction threshold would be exceeded for NOx. Therefore, the proposed project would incorporate mitigation measure MM-AQ-1, which requires heavy-duty diesel-powered construction equipment to use Tier 4 Final or better diesel engines. This would reduce the potential for emissions of NOx to a less than significant level. In response to dust emissions, as discussed in Section 3.3, Air Quality, the project would be required to comply with South Coast Air Quality Management District Rule 403, which is designed to reduce dust emissions by implementing standard construction practices, including watering of the active sites approximately three times daily depending on weather conditions.

Similarly, Section 3.13, Noise, identified mitigation measures to reduce construction noise onto nearby residences. Mitigation measure MM-NOI-1 reduces construction activities to specified hours, requires barriers and noise-reducing measures for specified equipment, and outlines particular staging requirements to reduce construction noise. Mitigation measure MM-NOI-2 specifies effective communication and notification with local residents during construction on schedule, duration, and progress. Implementation of these mitigation measures would reduce construction noise impacts to a less-than-significant level.

Finally, the proposed project would comply with best management practices and a work site traffic control plan per Los Angeles Department of Transportation Western District Operations Office requirement for the duration of project's construction. For example, construction vehicles would only enter and exit off of Olympic Boulevard. All existing entrances to the project site would be closed off, with the exception of emergency use. In addition, during the plan check and permitting process, the proposed project would be required to submit a traffic control plan to LADWP for review and approval prior to the start of construction, thereby, ensuring compliance with best management practices. During operations, the existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities. As such based on the comment received, no changes or addition to the Project Description or environmental document are required in response to this comment.

Comment Letter 8

From: Austyn Daines <austyndaines@yahoo.com>
Sent: Friday, July 24, 2020 2:06 PM
To: Leong, Aiden
Cc: ben.lazebnik@lacity.org; len.nguyen@lacity.org; JRoss@WLANC.com; JHandal@wlanc.com
Subject: [EXTERNAL] Concerns over proposed LADWP project on Nebraska Ave

My name is Austyn Daines, and my wife Allison and I live at 1748 S Carmelina Ave. Although we are not homeowners of our residence, this is our second year in the neighborhood, and wish to stay here for many years to come. 8-1

When we heard about the proposed construction of the new LADWP building on Nebraska Ave, we instantly became concerned. We learned of the height and size of the new building. We realized that once constructed, LADWP employees will be able to look down into our yard and invade our privacy. And not only ours, but the many houses around ours as well. We definitely are concerned with the look-out rooftops for employees, and hearing their conversations. 8-2 This is a great neighborhood with a lot of families, and the amount of traffic to be expected with the increase of staff at the new building is unnerving. 8-3 Also, the biggest gripe about living in this neighborhood currently is the extremely loud transformers and fans from the LADWP property on Nebraska. It gets so loud sometimes that it's difficult to fall asleep at night, and the sound in extremely unpleasant. It's a real problem. It doesn't seem right to start construction on an expensive new building, while the LADWP has failed to fix the current state of the property. I strongly suggest in order to build anything new, LADWP updates their current equipment and adds sound barriers. The sound alone has made us question living in this neighborhood numerous times. 8-4

We hope you take the concerns listed above as seriously as we, and many other families in the neighborhood, do. We are very concerned with the current LADWP property and even more concerned with the proposed project. We hope that the LADWP will respect and respond to our concerns, and the concerns of our neighbors. Thank you for your time. 8-5

Best,
Austyn Daines

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Response to Comment Letter 8

Austyn Daines, Resident
July 24, 2020

8-1 This comment is introductory and expresses concern about the construction related to the proposed project.

As stated in Section 1.2 of the Draft IS/MND, an MND is prepared for a project when an Initial Study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment. As such, the Initial Study determined that the implementation of the proposed project could cause some potentially significant impacts on the environment, but as shown in the environmental analysis contained in the Draft IS/MND, all of the project's potentially significant impacts (e.g., Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, and Noise) would be reduced to less than significant levels through the implementation of mitigation measures. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

8-2 This comment raises concerns about the project's proposed height resulting in privacy concerns for their residence and surrounding neighbors. Concern was also identified with potential noise impacts from employee-use of the rooftop look-out.

For discussion on the project's proposed height, please see the Response to Comment 3-1. For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10.

The noise impact analysis detailed within the Draft IS/MND, and specifically within Section 3.13, includes noise measurements of existing ambient noise within the project site's vicinity. As shown in Table 3.13-5, Traffic Noise (Existing and Existing Plus Project), of the Draft IS/MND, none of the short-term measurement locations (ST1 through ST5) exceed the 65 dB CNEL City noise standard for residences under existing noise level conditions. In addition, noise modeling found the existing plus the proposed project conditions would result in none of the same receptors exceeding 65 dB CNEL. Noise modeling includes any noise generated from employees on-site. Furthermore, all of the modeled receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the proposed project's rooftop design feature is not anticipated to generate significant noise impacts based on less than significant impacts determined by the Draft IS/MND.

8-3 This comment concerns the potential traffic impacts related to the proposed project's increase in staff.

The project's traffic study, included as Appendix F to the Draft IS/MND and summarized within Section 3.17, Transportation and Traffic, within the Draft IS/MND, assessed the increase of vehicle trips as a result of the proposed project. The traffic study concludes there would be no significant impact to the capacity of the intersections along Nebraska Avenue, Olympic Boulevard, Bundy Drive and Centinela Avenue. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

8-4 This comment expresses the concern for existing noise conditions at the LADWP property during night-time hours. The comment requests an upgrade to existing facilities prior to the proposed project and suggestions a sound barrier to reduce potential and existing noise impacts onto nearby residences.

The proposed project does not include the entire LADWP property and would not include upgrades of Receiving Station K. However, the noise impact analysis detailed within the Draft IS/MND includes noise measurements of existing ambient noise within the project site's vicinity. This includes noise generated from Receiving Station K. As shown in Table 3.13-5, Traffic Noise (Existing and Existing Plus Project), of the Draft IS/MND, none of the short-term measurement locations (ST1 through ST5) exceed the 65 dB CNEL City noise standard for residences under existing noise level conditions. In addition, noise modeling found the existing plus the proposed project conditions would result in none of the same receptors exceeding 65 dB CNEL. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the proposed project was found to result in less than significant noise impacts during operations. As such, operational noise generating from Receiving Station K is currently below the City's noise significance thresholds. Given that Receiving Station K is not part of the proposed project, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

8-5 This comment summarizes the concerns for existing conditions of the LADWP property and the proposed project's potential impacts.

As detailed above, the commenter's concerns will be provided to the decision makers for their review and consideration as part of this Final MND.

Comment Letter 9

From: Kathryn England <kathryn@kathrynengland.com>
Sent: Thursday, July 23, 2020 11:37 PM
To: Leong, Aiden
Cc: John Levine
Subject: [EXTERNAL] West LA District Yard, Receiving Station K

Dr. Mr. Aiden Leong,

I am writing to express my concerns regarding the proposed update and expansion of West LA District Yard, Station K. I leave one block away from the noisy station on Carmelina Avenue where the fans can be heard 24/7. Despite the updating of utility posts a couple of years ago which caused disruption to the backyard as I have the easement, our lights still dim whenever our neighbor's air conditioning unit triggers on, which is dozens of times each day. So, despite having the sound and eyesore of the Station, we still get shoddy service, always being the last to be back on whenever there is an outage. 9-1

Given that our neighborhood is set to endure increased traffic and dust from the construction, followed by increased, long-term traffic from a larger facility suited for more employees, I would like to humbly ask that consideration be given to adding a walk garden, dog walk, or dog run along Nebraska Ave., something that will help maintain the neighborhood feeling that is continuously being chipped away. The walking path, dog park or dog run would soften the edge of the proposed industrial Goliath, and help to create more positive, friendly, neighborliness, a small gesture for a quality-of-life return. 9-2

Thank you in advance for your kind consideration.

Regards,

Kathryn England
Kathryn England, MSW, MSG
310/963-7353
kathryn@kathrynengland.com

www.KathrynEngland.com
www.ChoosingTheRightCareer.com
www.LivingWithPurpose.com
www.MendingMindsMindingHearts.com
www.NowIsForAll.com

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Response to Comment Letter 9

Kathryn England, Resident
July 23, 2020

9-1 This comment expresses concern related to the potential noise impacts associated with the "expansion of the West LA District Yard, Station K." Concern was raised over existing noise conditions from the project site.

The proposed project does not include the entire LADWP property and would not result in the expansion of Receiving Station K. However, the noise impact analysis detailed within the Draft IS/MND includes noise measurements of existing ambient noise within the project site's vicinity. This includes noise generated from Receiving Station K. As shown in Table 3.13-5, Traffic Noise (Existing and Existing Plus Project), of the Draft IS/MND, none of the short-term measurement locations (ST1 through ST5) exceed the 65 dB CNEL City noise standard for residences under existing noise level conditions. In addition, noise modeling found the existing plus the proposed project conditions would result in none of the same receptors exceeding 65 dB CNEL. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the proposed project was found to result in less than significant noise impacts during operations. As such, operational noise generating from Receiving Station K is currently below the City's noise significance thresholds. Given that Receiving Station K is not part of the proposed project, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

9-2 This comment cites potential construction impacts related to traffic and dust and long-term traffic impacts from the proposed project's increased staff and facility expansion. The commenter requests the addition of "a walk garden, dog walk, or dog run" along Nebraska Avenue in order to reduce aesthetic impacts.

The proposed project, as detailed in Section 3.17, Transportation and Traffic, of the Draft IS/MND would result in less than significant impacts related to traffic. The project would result in an increase of employee-generated vehicle trips; however, the impacts related to the increase in trips do not exceed significance thresholds for each traffic volume capacity scenario, as shown in Table 3.17-4.

In response to dust emissions, as discussed in Section 3.3, Air Quality, the project would be required to comply with South Coast Air Quality Management District Rule 403, which is designed to reduce dust emissions by implementing standard construction practices, including watering of the active sites approximately three times daily depending on weather conditions.

Finally, the project includes design improvements including landscaping along Nebraska Avenue. However, the comment's request for a walk garden or dog run is not within the scope of the proposed project. The comment will be provided to the decision makers for their review and consideration as part of this Final MND.

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Comment Letter 10

From: Kristi Fiore <kristiafiore@gmail.com>
Sent: Saturday, July 25, 2020 4:56 PM
To: Leong, Aiden
Cc: ben.lazebnik@lacity.org; len.nguyen@lacity.org; JRoss@wlanc.com; JHandal@wlanc.com
Subject: [EXTERNAL] LADWP Initial Study Response

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Dear Mr. Aiden Leong,

I am writing in response to the proposed LADWP project. My husband and I have many concerns as we live directly across the street from the the West Los Angeles Headquarters. As a mother of two small children, my biggest concerns are safety and privacy.We are already exposed to negative impacts from the current activity at the LADWP facility. It is not uncommon for us to hear inappropriate language and loud conversations echoing across Nebraska Ave into our home in the early mornings and late at night. The worst is the loud music with thumping bass that we hear every single morning at 5:30am. The noise from cars arriving early in the morning is already tough on our family as it awakens us regularly. The significant increase in employees will exaggerate these problems. The idea of hundreds of cars arriving between 5am and 6:30am will certainly bring additional unwanted noise and unnecessary traffic. 10-1

The renders of the new building reveal a driveway entrance and exit directly across the street from our garage and driveway. I am very concerned that this will make entering and exiting my garage very dangerous. At times our driveway will be blocked. With children in the car, this is very concerning. Please relocate the employee entrance and exit to Olympic Blvd or Centinela Blvd. 10-2

I am also very concerned of the height of the building and the various vantage point from the building will look directly into our property. With small children this gives me a pit in my stomach. Please reduce the height of this building and increase the setback of the building to increase privacy for the neighborhood. 10-3

I should also say that I was very surprised that the LADWP did not include the neighborhood in this process. It seems reasonable that a project of this size should include the neighbors that will be the recipients of its negative effects. We are not alone when we say that we are feeling "steam rolled." My husband and I are in full support of the neighborhoods concerns and expect the LADWP to be diligent in their response to our valid request. 10-4

Sincerely - Kristi Fiore

1760 Wellesley Ave. Los Angeles, CA 90025

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Response to Comment Letter 10

Kristi Fiore, Resident
July 25, 2020

10-1 This comment addresses concerns of safety and privacy for the surrounding neighborhood and existing noise conditions related to employees' vehicles. The comment is concerned conditions would worsen with an increase in staff as a result of the proposed project.

The proposed project would result in an increase of employees onto the project site. During construction, the project would comply with LAMC Section 41.40, which prohibits construction activity that might create loud noises in or near residential areas or buildings between the hours of 9:00 p.m. and 7:00 a.m. on weekdays, before 8:00 a.m. or after 6:00 p.m. on Saturday and national holidays, or at any time on Sunday. Section 3.13, Noise, of the Draft IS/MND incorporates mitigation measures to further reduce construction noise. Mitigation measure MM-NOI-1 reduces construction activities to specified hours, requires barriers and noise-reducing measures for specified equipment, and outlines particular staging requirements to reduce construction noise. Mitigation measure MM-NOI-2 specifies effective communication and notification with local residents during construction on schedule, duration, and progress. With mitigation incorporated, the Draft IS/MND determined construction noise impacts would be less than significant.

During operations, the project would be open from Monday and Friday from 6:30 a.m. – 11:00 p.m., Tuesday and Thursday from 6:30 a.m. – 7:00 p.m., Saturday and every other Sunday from 6:30 a.m. – 4:30 p.m. These hours of operation would not change from the hours of operation already existing on the site. The project would also add passenger vehicle and truck trips along local roadways. As detailed in Section 3.13, traffic noise modeling resulted in a noise level increase of zero dB CNEL when rounded to whole numbers along studied roads in the vicinity of the project site. In addition, none of the modeled receivers would exceed the 65 dBA CNEL City noise standard for residences as a result of the increase in Project-related traffic. Therefore, traffic related to the proposed project would not exceed any noise standards and would not substantially increase the existing noise levels in the project vicinity, and permanent operational traffic-related noise impacts would be less than significant.

10-2 This comment cites the project's proposed driveway entrance and exit would be located across the street from the commenter's driveway. The commenter requests the relocation of the proposed ingress/egress for the proposed project to Olympic Boulevard or Centinela Boulevard to reduce potential impacts related traffic and safety.

The staff vehicle entry has been planned comprehensively with the design of the new building which includes Administration and Service Planning Area. The subterranean garage which would require employees to access the project site from the driveway proposed along Nebraska Avenue for most efficient circulation and access, as is currently the case. The existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities. All the driveways would be designed/modified per standard design requirements in terms of driveway width, throat length and sight distance and would not cause traffic and safety impacts.

10-3 This comment consists of concern for the proposed project's height and various vantage points which may allow for views into neighboring properties.

For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10.

10-4 This comment states that the development of the proposed project's design did not include the neighborhood's feedback.

For discussion on noticing requirements of the Draft IS/MND, please see Response to Comment 3-3.

Comment Letter 11

From: Mark Fiore <dibovino@gmail.com>
Sent: Saturday, July 25, 2020 4:23 PM
To: Leong, Aiden
Cc: Len Nguyen; ben.lazebnik@lacity.org; JHandal@wlanc.com; JRoss@WLANC.com; John Levine
Subject: [EXTERNAL] West Los Angeles District Yard Project

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Dear Mr. Aiden Leong and the Los Angeles Department of Water and Power:

First, I should start by saying that I live at 1760 Wellesley Ave. My house is on the corner of Wellesley Ave and Nebraska Ave, directly across the street from the LADWP. The negative impacts from this proposed project will clearly have the most significant impact on my family and my home. The location and magnitude of this building, including 3 years of construction, is still difficult for me to digest. Like many others in my neighborhood, I am raising small children. I am invested in this neighborhood as a positive and supportive environment for my children. Privacy, noise, air pollution, traffic, and safety are major concerns to say the least. Some of these concerns are highlighted below.

11-1

BUILDING SIZE & HEIGHT

The LADWP has continued to use the verbiage of 2 and 3 stories in reference to the height the building. I believe this to be misleading, and a misrepresentation of the sincere height and magnitude of this project. When asked at the Neighborhood Council Zoom meeting on July 7th, representatives of the LADWP were unable to, or choose not to directly answer the questions of "height." It is our understanding, after extensive research, that the LADWP is currently zoned as [Q] PF-1XL (filed in 1996) which would limit the structure to 2 story and a maximum of 30ft. However an LADWP representative stated at this Neighborhood Council meeting that the building height was "by right." I disagree.

According to the building measurements on the Initial Study and MND report this building will be almost 60 ft tall which is more accurately compared to a 4 or 5 story building. With a single level at nearly 20' in height, this seems excessive for its intended use. In addition to a building that will overpower our neighborhood comprised of modest 1 and 2 story houses, privacy is a major concern. This building WILL have visual vantage points over neighboring properties, especially my house where my young children play outside daily. Our privacy in our home and backyard will be compromised. The proposal of tall trees intended to block the views of our home from the building are simply not enough. These trees could take decades to mature to the height represented in the renderings. The two story sections of the design include a rooftop balcony, with intent of making them an active outdoor third story. These employee balconies will be invasive as they look down into our yards and into our homes. Noise from these balconies will also be a concern as voices will travel, especially at night, through our quiet neighborhood. All active employee balconies should face south over the LADWP property, away from the neighborhood.

11-2

Shadow casting is an additional concern for those of us that are neighboring properties. A building of this size will cast morning shadows for hundreds of feet for several hours at a time, especially in the winter. There is no evidence that a "shadow casting" was including in the Initial Study. The benefits of sun exposure for our health and welfare, as well as solar energy, and vegetation will be compromised. 11-3

The MND report includes a 28ft setback from Nebraska Ave for only a part of the building. The primary face and entrance of the building has little to no setback from the sidewalk and parkway. For comparison, the homes in the surrounding neighborhood have a minimum setback of 28ft from the sidewalk, and a maximum height limit of 30ft. A building of this magnitude on a residential street should meet at the very least the minimum setback requirements for the homes in the neighborhood. It is imperative that we increase separation beyond the prosed 28ft setback to minimize negative impacts of noise, on privacy, and the excessive visual presence of the project. An increased setback of 60ft for the entire building as a solution will offer an invaluable transition from our neighborhood to the facility and will help mitigate many of the neighborhoods concerns. A green space and "buffer park," similar to Ishihara Park in Santa Monica, it would be a positive transition from the neighborhood to the facility. The buffer park should extend the entire length of the LADWP facilities, including the Station K Power yard on Nebraska Ave. 11-4

TRAFFIC & SAFETY

It is important to note that Nebraska Ave is a residential street. The LADWP property currently has ingress/egress access via Olympic Blvd to the south, and Centinela on the west. During the Neighborhood Council meeting, an LADWP representative stated that "a majority of the employees are likely to exit via Olympic because they commute via the 10 freeway." This being true, then Olympic Blvd as the only entry point for the facility makes the most sense - faster for employees, reduces noise and air pollution in the community, and removes the unnecessary increase of traffic and safety concerns in our residential neighborhood.

In addition, the proposed employee entrance off Nebraska Ave creates a significant safety risk. This driveway will impede access through the alleyway which services neighboring homes, and will block safe access to TWO resident driveways that face the proposed entrance, including my own. This entrance would also stop traffic in both directions as employees wait for the necessary security gates to open and close before pulling in and out of the facility. Nebraska Ave is a very active street for pedestrians and bikers, and this driveway would certainly increase safety risks substatianlly. 11-5

Living directly across the street from the current facilities has presented many challenges for my family. Employees begin to arrive as early as 5am, with a surge of cars by 5:30am. The influx of cars awakens our children. We hear cars "peel out" into the facility driveways. The revving of motorcycle engines and excessively loud music are just part of the constant noise we hear through the walls of our home before dawn every day. Many of the current employees violate the speed limit on Nebraska Ave daily. Unwelcome noise from LADWP commuters and unsafe driving is evident now, and will likely increase drastically with this proposal. 11-6

The Olympic Blvd entrance is more than sufficient. A simple redesign of the driveway and gate at this location would allow safe and seamless ingress and egress for both employee and operation vehicles. Rerouteing employee traffic to Olympic Blvd is a reasonable alternative to keep our neighborhood safe, limit noise, and reduce traffic. 11-7

Our neighborhood streets are filled with older and new families, many with small children. We welcome many new homeowners to this community each year that look to make this neighborhood their "home." We are a 11-8

diverse community. We are working professionals, students, and retirees. We are children, parents, grandparents, and great grandparents. Our diversity represents the very fabric of Los Angeles, the City that you serve. One thing that we all have in common is that we love and care about our neighborhood. By now you have received many comments from friends and neighbors as proof of our commitment to preserve our community.

The LADWP has lacked honesty and integrity throughout this process. I, like my neighbors, felt completely blindsided when we received the Initial Study summary in the mail 30 days ago. Although very extensive, the Initial Study from the LADWP is inadequate. It does not consider nor include the input, experiences, and negative impacts on those families residing in the neighboring community who will be most directly and negatively impacted by the the location and magnitude of the project and the proposed structures. The assumptions made in the Initial Study regarding adequate mitigation of the negative impacts cannot be reasonably and accurately made without the direct involvement and input of those families who will be negatively impacted. If the LADWP rejects our request to address the concerns of the neighboring community, and make reasonable and necessary adjustments to properly mitigate the negative impacts, then we respectfully request that an extensive and non-biased environmental impact study in compliance with CEQA (California Environmental Quality Act) be conducted that includes the concerns and expectations of the neighborhood community.

Our neighborhood is united with our concerns and our requests are reasonable and appropriate. I fully support the Neighborhood MND Response document submitted by John Levine which also addresses many other essential concerns, especially that of the extreme noise and visual blight of Receiving Station K.

Thank you for your courtesy and attention to the above.

Sincerely,

Mark N Fiore

Mark Fiore
1760 Wellesley Ave.
Los Angeles, CA 90025
805 570 618

11-8
Cont.

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Response to Comment Letter 11

Mark Fiore, Resident
July 25, 2020

11-1 This comment raises concerns as a nearby resident to the project site. Concerns include the duration of the construction schedule, privacy, noise, air pollution, traffic, and safety, which are discussed further in the comment letter.

This comment is introductory in nature and does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required. For discussion on the issues raised in this comment, please see the following response below in response to this comment.

11-2 This comment focuses on concerns related to the proposed project's building height and size. Specifically, the comment cites the proposed building height of 2 to 3 stories as misleading and cites to zoning research for [Q] PF-1XL, which "would limit the structure to 2 story and a maximum of 30 feet." The comment determined the approximate height of the building would be 60 feet, which is comparable to a 4 to 5 story building. Furthermore, the comment raises concern for the rooftop balcony impact on privacy and noise and suggests the proposed project re-design the balconies to face south, away from the neighborhood.

For discussion on the proposed project's height, please see Response to Comment 3-1.

For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10.

11-3 This comment states the proposed project has the potential to result in impacts related to shade and shadow onto nearby residences.

A shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.

11-4 This comment states project design includes a 28-foot setback for only part of Nebraska Avenue and suggests an increased setback of 60 feet along the entire length of LADWP facilities (including the Station K Power yard)

shared with Nebraska Avenue to reduce potential impacts related to aesthetics and community character, noise, and privacy. The comment further suggests a "buffer park" similar to Ishihara Park in the City of Santa Monica.

For discussion on the proposed project's setback and the comment's request for a park, please see Response to Comment 3-8.

11-5 This comment focuses on vehicular circulation of the proposed project. The comment states, under existing conditions, the LADWP property utilizes Olympic Boulevard and Centinela Avenue for ingress and egress to the project site. As such, the comment suggests the proposed project remove the proposed access point at Nebraska Avenue and continue with existing conditions to reduce potential traffic and noise impacts to the nearby residential neighborhood. The comment continues to discuss potential impacts to pedestrian safety with the proposed project's proposed entrance on Nebraska Avenue.

The proposed project would result in a total of four driveways, including two driveways on Nebraska Avenue, one driveway on Centinela Avenue, and one driveway that essentially forms the north leg of Centinela Avenue East/Olympic Boulevard intersections. All four driveways already exist and are controlled by either manual or automatic gates that are operated by LADWP. Traffic signal warrants analyses were conducted, including for the intersection at Bundy Drive and Nebraska Avenue. The analysis concluded a traffic signal was not required under future with project conditions. The project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections). Therefore, the project would result in less than significant impacts related to traffic safety and the comment's request to change the proposed circulation is not warranted based on determined impacts.

The Draft IS/MND also determined less than significant impacts would occur related to pedestrian facilities. As discussed, the project site is well-located to encourage pedestrian activity and walking as a transportation mode. The project will connect to the adjacent sidewalk network via the Nebraska Avenue and Centinela Avenue property frontages. Existing sidewalk infrastructure exists on both Nebraska Avenue and Bundy Drive, and the project would not interfere with access and use of these facilities. Therefore, the Draft IS/MND adequately analyzed the proposed project's impacts on pedestrian safety and determined less than significant impacts would occur.

Given the above discussion, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

11-6 This comment discusses the need for the community be considered in the project's design and to preserve the neighborhood from potential impacts. This comment cites only being noticed about the proposed project 30 days prior to this comment's letter and believes the analysis within the Draft IS/MND is inadequate in identifying impacts and mitigation to the nearby residential neighborhood. This comment also echoes Comment Letter 21 by John Levine regarding noise and visual blight of Receiving Station K.

For discussion on the noticing and public review process for the Draft IS/MND, please see Response to Comment 3-3.

For discussion on Receiving Station K, please see the responses to Comment Letter 21, specifically Response to Comment 21-8.

Comment Letter 12

REQUEST REJECTION OF ADOPTION OF MITIGATED NEGATIVE DECLARATION FOR WEST LOS ANGELES DISTRICT YARD PROJECT

Date: June 25, 2020

To: Mr. Aiden Leong
Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA, 90012 / aiden.leong@ladwp.com

Subject: We oppose, and request the rejection of the LADWP's Intent to Adopt a Mitigated Declaration for the West Los Angeles District Yard Project

Dear Mr. Aiden Leong,

We live in the community of west Sawtelle, near the proposed expansion of the West Los Angeles District Yard Project. We urge this agency and the city to deny the proposed Mitigated Negative Declaration for the West Los Angeles District Yard Project until the city completes due diligence in assuring that monies related to corruption investigations sweeping through Los Angeles City Hall are not associated with this proposed project.

As active residents who have attended many City of Los Angeles hearings, votes, open houses, task forces and other public activities involving city land-use decisions, in the Spring of 2017 two FBI officers came to our home to discuss any knowledge we may have of corruption in Los Angeles municipal government. I will explain in more detail later in this document.

We agree with Los Angeles City Budget Advocate Jack Humphreville, the longtime advocate for the citizens of Los Angeles, widely relied upon by the public for a clear view of the LADWP budget and its projects, that place all major city projects under a cloud – this, due to a broad, deep ongoing investigation into corruption in Los Angeles city departments and among elected officials.

We ask that numerous issues be resolved before a major expansion of the West Los Angeles Yard Project can be approved. The project demands an Environmental Impact Report rather than a Mitigated Negative Declaration. We ask for a response to the following major but missing issues in the current IS/MND, which fails to address the federal investigations underway that have resulted in several arrests, including of key officials who approved numerous LADWP projects.

It is incumbent on the LADWP, the city and its agencies to do the following, in completing any MND or DEIR regarding the project:

12-1

- Require the DWP's and the City's labor unions to disclose, in real time, all contributions to elected officials and their favorite charities. This includes independent expenditures.
- Require the DWP's and the City's unions to disclose in real time all meetings with city officials and the purpose and outcome of the meetings involving the West Los Angeles District Yard Project.
- Require DWP and City unions to file audited financial statements with the City, in particular pertaining to all dates during the entire period of the assembling and determining of the IS/MND for the West Los Angeles District Yard Project.

As to the FBI visit to our home, we spent two hours at my dinner table discussing corruption issues related to Los Angeles City Hall decision-making, and in Los Angeles city elections.

I was not surprised, but relieved, when Los Angeles City Councilmember Mitch Englander voluntarily surrendered to the FBI, charged with seven criminal counts, and when Los Angeles City Councilmember Jose Huizar was arrested by federal authorities and charged with racketeering. As you know, city consultants and employees are targets of a broadening investigation and other arrests have already been made.

I spoke to the FBI officials about the money that flies from the developers, lobbyists and city and DWP unions into the war chests of city politicians, and also into the city politicans' own non-profits or their pet non-profits. What is of tremendous concerns is the way in which money can create undue influence in the development of projects.

Recently, City Council members have begun to reject money from the Angeles Police Protective League, the union which represents rank-and-file officers. "Los Angeles City Councilman Mike Bonin vowed on Tuesday [July 7th] to reject was future contributions from the police union, which had donated directly to Councilmember Bonin and whose independent committees spent more than 45,000 backing Councilmember Bonin's candidacy. Bonin, who has raised concerns about police tactics during protests, said he was making a personal donation in the amount he had received directly in the past — more than $4,000 for his campaigns and office holder accounts — to organizations working to oppose racism and reform policing, including Black Lives Matter. He also said he would disavow independent spending by the union. "Angelenos are demanding a new approach to how we keep our neighborhoods safe, and they want to know that their public representatives are accountable to the people," Bonin said." (https://www.latimes.com/california/story/2020-06-10/lapd-union-political-donations)

We see a stark parallel between LAPPL and other widely acknowledged "powerful" city unions — the most influential of those being unions who represent the employees of the DWP, which is owned by the people of Los Angeles. "Public unions are major donors to City Hall political

12-1
Cont.

campaigns, so perhaps it should be no surprise if elected officials are reluctant to drive a hard bargain," the Los Angeles Times wrote in regard to the significant pay bump the City Council gave to the LADWP in 2017. (https://mynewsla.com/government/2017/06/28/youre-not-getting-six-big-raises-but-dwp-union-workers-will-la-city-council-votes-yes-but-outraged-member-fumes-this-process-stunk/)

We request that you acknowledge these extraordinary times, and the numerous arrests anticipated as the FBI and US Attorney continue to probe all aspects of union relationships between employees, managers, appointed boards, city officials and elected officials — and the possibility of undue financial or political influence and corruption between and among these parties.

We, as members of the public expect in our desire for a legal, unsullied and transparent expansion plan at the West Los Angeles District Yard Project, a full Environmental Impact Report that details how the proposed project will address all potential conflicts of interest caused by these monies, favors and common closed-door relationships — including any pay to play or ther forms of corruption in Land-use and project development.

How do we know that the concerns of the neighborhood will be addressed in the above manner, given the complete silence in the Initial Study/Negative Declaration, which appears to have been assembled in a vacuum, unaware of major probes that may or may not sully the LADWP, its political appointees, managers, executives and employees?

We urge you to correct this gaping silence by proceeding with a proper DEIR and rejecting the plan to proceed with an MND.

Yours sincerely,

Aric Gregson, MD

Xochitl Gonzalez, MFA

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Response to Comment Letter 12

Aric Gregson, MD, Resident
Xochitl Gonzalez, MFA, Resident
June 25, 2020

12-1 This comment expresses concern with recent news regarding investigations on land-use decisions within the City of Los Angeles. The comment requests for further analysis of the proposed project through an Environmental Impact Report and disclose LADWP's relationships with various interest groups involved in the proposed project. This comment cites articles and recent news outside of the proposed project's environmental impact analysis adequacy.

As stated in Section 1.2 of the Draft IS/MND, an MND is prepared for a project when an Initial Study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment. As such, the Initial Study determined that the implementation of the proposed project could cause some potentially significant impacts on the environment, but as shown in the environmental analysis contained in the Draft IS/MND, all of the project's potentially significant impacts (e.g., Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, and Noise) would be reduced to less than significant levels through the implementation of mitigation measures.

This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

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Comment Letter 13

From: Jeff Hahn <JeffHahn1@aol.com>
Sent: Tuesday, June 23, 2020 12:06 PM
To: Leong, Aiden
Cc: councilmember.bonin@lacity.org
Subject: [EXTERNAL] Mitigated Neg Declaration - West LA District Yard Project - Suggestions

Follow Up Flag: Flag for follow up
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Dear Mr. Leong:

I writing to provide my input regarding the proposed DWP project at 12300 Nebraska Avenue. As a long term resident, I would like to make the following suggestions:

1. Given that the site has a generous amount of land, 6.3 acres, I suggest that the DWP consider allocating a portion of the property for public benefit in the form of a landscaped park. Open space is hard to come by in Los Angeles. It would serve the needs of the residents and provide a free space for youths and other residents to congregate and escape the asphalt jungle. Basketball, tennis courts, a baseball/soccer fields are sorely needed. 13-1

2. I would suggest that access to the site for work trucks and heavy machinery be limited to Olympic Blvd. and Centinela Avenue to minimize the traffic impact on the low rise residential neighborhoods bordered by Nebraska Avenue. 13-2

Best regards,
Jeff Hahn
(310) 266-4403

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Response to Comment Letter 13

Jeff Hahn, Resident
June 23, 2020

13-1 This comment requested the proposed project incorporate a landscaped park as part of the project's design to address the lack of open space in the City of Los Angeles.

For discussion on the proposed project's setback and the comment's request for a park, please see Response to Comment 3-8.

In addition, Sections 3.15, Public Services, and 3.16, Recreation, of the Draft IS/MND discuss the proposed project's potential impacts to parks and recreational facilities within the project site's vicinity. The Draft IS/MND cites Stoner Recreation Center, approximately 0.3-mile northeast of the project site as the nearest park to the project site. During construction, workers are not anticipated to utilize the nearby park, and during operations, the additional employees are not expected to lead to population growth such that an increase in the use of existing neighborhood or regional parks or other recreational facilities would occur. The new LADWP employees are most likely to reside in the surrounding Los Angeles Metropolitan area. As such, the proposed project would not generate a demand for parks. Typically, a project that proposes new residences would directly result in a need for new parks and recreational facilities. The project includes proposed design improvements including landscaping along Nebraska Avenue. However, the comment's request for a park is not within the scope of the proposed project. This comment will be provided to the decision makers for their review and consideration as part of this Final MND.

13-2 This comment states a desire for construction vehicles to utilize Olympic Boulevard and Centinela Avenue in order to minimize traffic impacts on the residential neighborhood and Nebraska Avenue.

As noted in the traffic study prepared for the proposed project, which is included in Appendix F of the Draft IS/MND and summarized in Section 3.17, Transportation and Traffic in the Draft IS/MND, construction vehicles would use the project access driveways located on Centinela Avenue and Olympic Boulevard. Therefore, impacts due to construction traffic would be minimized to the residential neighborhood on Nebraska Avenue. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

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Comment Letter 14

From: Thomas Hershey <thershey@mac.com>
Sent: Sunday, July 12, 2020 3:07 PM
To: Leong, Aiden; councilmember.bonin@lacity.org
Cc: Thomas Hershey; onlinelevine@gmail.com; ericvkraft@gmail.com; lee@leeziff.com
Subject: [EXTERNAL] West LA District Yard Project

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to all:

we live on the east side of the 1700 block of Centinela Ave, roughly 1/2 block from Nebraska Ave and the DWP District Yard.

i was on the community call on July 7 and remain appalled by the the inadequate and incomplete plan being ramrodded upon our neighborhood by the DWP.

the proposal essentially provides for a nice new building and nothing else. it shows little or no consideration for the 3-fold increase in the number of employees, the traffic impact of both construction vehicles as well as employees and customers, the imposing architectural mass of a 4 story building so close to Nebraska, and most importantly ***no remediation of the existing issues at the yard: ancient, noisy fans, crackling power lines and general eyesore due to inadequate barriers.***

14-1

if this plan is to be approved, it needs to be part of a comprehensive development initiative to finally address all of the issues listed above. in addition, it should eliminate all vehicle access via Nebraska.

please include me in any future discussions on this project.

with respectful thanks,

Tom Hershey
310-663-2343

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Response to Comment Letter 14

Tom Hershey, Resident
July 12, 2020

14-1 This comment expresses concern for the proposed project's design and Draft IS/MND noticing. The comment requests analysis related to the increase of employees on the project site, the potential impacts related to construction and operational traffic, the potential aesthetics impacts related to the proposed building's height and setback from Nebraska Avenue, and discussion regarding existing conditions of the LADWP property. In addition, the commenter requested no vehicle on Nebraska Avenue.

The commenter's opposition to the project's design will be provided to the decision makers for their review and consideration as part of this Final MND. As discussed in Section 3.17, Transportation and Traffic, in the Draft IS/MND, construction-related traffic impacts would be temporary and were determined to be less than significant because the number of trips generated from construction workers and vendors would not exceed the net new project trips during operation. Similarly, during operation, the proposed project would result in up to 1,030 daily trips (up to 525 net new trips compared to existing conditions), which would result in less than significant impacts in all traffic scenarios analyzed within Section 3.17. The comment's request to remove all vehicle access on Nebraska Avenue would conflict with existing conditions and the project's design to increase access and circulation. The comment's request will be provided to the decision makers for their review and consideration as part of this Final MND.

The proposed project would incorporate a landscape design which would enhance the existing visual quality of the site, resulting in the replacement of existing outdated structures with new and improved facilities and landscaping. However, the project site does not include the part of the LADWP property known as Receiving Station K. As such, the analysis related to the existing visual character of the LADWP property only included the defined project site and not Receiving Station K. The comment regarding existing conditions of Receiving Station K will be provided to the decision makers for their review and consideration as part of this Final MND.

For discussion on the proposed project's height, please see Response to Comment 3-1.

Given the discussion above, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

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Comment Letter 15

From: Emily Hirasuna <ehirasuna@hotmail.com>
Sent: Friday, July 24, 2020 4:20 PM
To: ben.lazebnik@lacity.org; Len Nguyen; JRoss@WLANC.com; JHandal@wlanc.com; Leong, Aiden
Cc: John Levine
Subject: [EXTERNAL] WLA-DWP project community input

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July 24, 2020

Greetings,

I am writing in response to the DWPs proposed redevelopment of the West LA yard and request for community input. Although I have only owned a house in this exact neighborhood for 20 years, my husband grew up in our home. He is a 2nd generation local and my family has owned houses on the Westside of Los Angeles going back 3 generations. We hope to be here for many more generations to come. This is our home. We are invested in the long-term quality of life here in our neighborhood.

Unfortunately there were massive shifts in the area during my lifetime. We have rapidly lost green and open space. The greatly increased density of housing and commercial properties in recent years has negatively transformed the area. Although the pandemic has provided a bit of relief to the impacted streets, the once quiet neighborhood is clogged with traffic jams and constant construction projects, severely degrading the enjoyment of our property because of both human and machine noise, dust and congestion. The loud buzz from the power plant is an ongoing additional source of intrusive and unwelcome noise. Now DWP wants to substantially add to the noise, pollution, dust and traffic problems, as well as stripping away privacy and sunlight with the proposed project.

15-1

Locals are part of the DWP in that we contribute to their percentage of green power through solar panels etc. The fact that DWP wants to violate existing building codes to build a tall building that will block the neighbors from receiving enough sunlight to efficiently generate solar power is counter productive!

I found it interesting when we had the group phone conference with DWP, that the spokeswoman emphasized low morale of staff having to work in the old, ugly, outdated facility. I can empathize. Every day I look south from my yard I see the DWP's hideously ugly, outdated and noisy receiving station and ugly tangled mess of wires that blight the streets and alleys. What about the morale of the neighborhood? Neighbors are out walking in the area daily, yet we have NO green public spaces without crossing major streets like Olympic or Bundy. Crossing those streets is particularly dangerous for children and handicapped residents. We need a local, accessible, green space.

15-2

The DWP recently decided to "upgrade" its Nebraska landscaping by putting in some big rocks and sand. I understand the need for water conservation and perhaps the desire to cut back on maintenance costs but it is ugly and depressing to look at. Now you want to fix up the DWP office space and make it a beautiful, uplifting place to work. I absolutely understand that. We want want to have a beautiful, uplifted neighborhood as well.

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The DWP property is big enough to move all the buildings, equipment, etc. closer to Olympic, and leave the neighborhood with some breathing room from the planned noisy, sunlight blocking, privacy invading facility. Additionally DWP should move all traffic to Olympic or Centinella and close off Nebraska entrance. With two other routes in and out it is not necessary to have any vehicle access at all on Nebraska Ave. 15-3

I think the proposals my neighbors put forth about upgrading existing noisy equipment, setting it back further from Nebraska Ave, enclosing equipment with a decorative sound blocking wall and using the space along Nebraska as green park or strip, and some tall, eyesore-blocking trees is a good start. 15-4

I would also propose using one or more self watering, living moss walls. Living moss walls suck up pollution, absorb sound and provide restful, green plant beauty. Instead of a noisy, green party roof, why not make the green strip nice enough that staff would like to use it too? Community and staff can learn to see as others as individuals with mutual interests in keeping the space beautiful. We could all benefit from the space that way. 15-5

Complaints about the noise, electromagnetic radiation, ugliness etc of the receiving station, have been going on for DECADES, and yet DWP chose to address only their own staff morale and not that of those of use who live butted up against the industrial site. Why does DWP leadership believe that it is OK to make their staff happy at the neighborhood's expense without any consideration of the needs and wants of the community? 15-6

Perhaps the reason DWP deliberately did not ask for neighborhood input before making their plans is that they hoped to sneak it past us. In the past, needs and desires of the Japanese American neighborhood were suppressed in large part to systemic racism. Perhaps DWP was counting on the once quiet, cooperative nature of the community and aversion to making a fuss to just steamroller our neighborhood into this new project. Times have changed. Its time to right the wrongs of the past and finally upgrade the facility for ALL the diverse stakeholders, not just DWP staff. 15-7

Sincerely

Emily Hirasuna

Response to Comment Letter 15

Emily Hirasuna, Resident
July 24, 2020

15-1 This comment requests community input on the proposed project. Specifically, the comment addresses a loss of open space in the surrounding area due to development of residential and commercial within the project's vicinity. Concerns include traffic noise, dust, and existing noise from the project site, which would potentially increase with the development of the proposed project.

The project includes proposed design improvements including landscaping along Nebraska Avenue. Sections 3.15, Public Services, and 3.16, Recreation, of the Draft IS/MND discuss the proposed project's potential impacts to parks and recreational facilities within the project site's vicinity. The Draft IS/MND cites Stoner Recreation Center, approximately 0.3-mile northeast of the project site as the nearest park to the project site. The environmental analysis determined the proposed project would not contribute to an increase in the use of existing neighborhood or regional parks or other recreational facilities and would not generate a demand for new parks. Typically, a project that proposes new residences would directly result in a need for new parks and recreational facilities. The comment's request for a park is not warranted based on determined impacts. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

As discussed in Section 3.17, Transportation and Traffic, of the Draft IS/MND, construction traffic would not exceed the net new project trips estimated in Table 3.17.3. Construction-related project traffic would not create significant impacts at any of the eight study intersections, and impacts were found to be less than significant. Additionally, the environmental analysis within the Draft IS/MND determined impacts to be less than significant and less than significant with mitigation incorporated for air quality and noise. Mitigation was incorporated to reduce construction-related air quality emissions and construction-related noise impacts. The Draft IS/MND adequately identified and reduced potentially significant impacts to a less than significant impact. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

15-2 This comment addresses aesthetic and visual blight under existing conditions as well as concerns over existing pedestrian safety and noise. In addition, the comment is concerned about potential shade and shadow impacts from the proposed building's height onto the surrounding residences with solar panels. The comment requests green space within the community in addition to the aesthetic upgrades to the LADWP proposed as part of the project.

For discussion regarding the proposed project's height, please see Response to Comment 3-1. For discussion on existing conditions related to the LADWP property and the comment's request for green space, please see Response to Comment 3-8.

A shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and

Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.

15-3 This comment requests a re-design of the proposed project to be closer to Olympic Boulevard in order to reduce potential impacts related to noise, shade/shadow, and privacy. In addition, the comment requests for project-related vehicular circulation to utilize Olympic Boulevard or Centinela Avenue instead of Nebraska Avenue to reduce potential traffic impacts to the residential neighborhood.

As discussed in Section 3.13, Noise, of the Draft IS/MND, the proposed project incorporates design features and mitigation measures which would reduce on-site noise impacts. For example, the proposed parking structure would reduce noise generated from existing aboveground parking lot activities to underground. In addition, the straddle crane would be relocated to the southeast of the project site, further away from the residences to the north. Fleet vehicle parking would be located in the central portion of the project site and the proposed building would act as a structural noise barrier for residences to the north.

As discussed in Section 3.17, Transportation and Traffic, the proposed project would add vehicle trips to the roadways surrounding the project site; however, the impacts related to the increase in trips do not exceed significance thresholds for each traffic volume capacity scenario, as shown in Table 3.17-4 of the Draft IS/MND. Therefore, a significant impact would not occur and the comment's request to change the project's design is not warranted based on the determined impacts.

In response to concerns raised about potential shade and shadow impacts, please see Response to Comment 15-2 above.

15-4 This comment suggests the proposed project include an increased setback on Nebraska Avenue and to enclose the existing on-site equipment to reduce impacts to aesthetics and noise.

Under existing conditions, the LADWP property maintains an approximately 15-foot setback on Nebraska Avenue. A larger setback, as requested, is not within the scope of the proposed project. As discussed in Section 3.1, Aesthetics, of the Draft IS/MND, the proposed project would result in a less than significant impact on scenic quality and would not conflict with existing zoning regulations. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

Furthermore, Receiving Station K is not part of the proposed project. However, the noise impact analysis detailed within the Draft IS/MND, and specifically within Section 3.13, includes noise measurements of existing ambient noise within the project site's vicinity (including Receiving Station K). As shown in Table 3.13-5, Traffic Noise (Existing and Existing Plus Project), of the Draft IS/MND, none of the short-term measurement locations (ST1 through ST5) exceed the 65 dB CNEL City noise standard for residences under existing noise level conditions. In addition, noise modeling found the existing plus the proposed project conditions would result in none of the same receptors exceeding 65 dB CNEL. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the project was found to result in less than significant noise impacts during operations. As such, operational noise impact analysis including noise generating from Receiving Station K. Therefore, the comment's requests for a sound barrier is not warranted based on the determined impacts.

15-5 This comment states desire for specific landscaping features within an increased setback instead of the proposed rooftop design.

For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10.

15-6 This comment raises concern for existing conditions and requests community benefits to improve the project site for the nearby residential neighborhood.

For discussion on Receiving Station K, please see Response to Comment 15-4 above. Furthermore, this comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

15-7 This comment states concern for the Draft IS/MND's public review process and requests collaboration with the residential neighborhood.

For discussion on the Draft IS/MND's public review process, please see Response to Comment 3-3.

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Comment Letter 16

From: Michael Hobert <michaelhobert@gmail.com>
Sent: Monday, July 13, 2020 12:49 PM
To: Leong, Aiden; ross_jay@hotmail.com; len.nguyen@lacity.org; Ben LaZebnik; Hong, Deborah; mike@11thdistrict.com
Cc: John Levine; Eric Kraft
Subject: [EXTERNAL] DWP Redevelopment on Nebraska Ave. in West Los Angeles

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To whom it may concern,

My name is Michael Hobert. I live at 1706 Wellesley Avenue in Los Angeles. I am a few houses down the street from where the new development for the DWP is set to take place.

16-1

As a member of this very tight-knit community situated between Nebraska and Idaho and Centinela and Bundy, I can say that there is a lot of concern collectively as a neighborhood and I have a lot of concern individually about how the proposed plans will impact the safety and overall well being of both myself and my family. I have two small children (ages 3 and 1) and these plans as proposed are quite concerning.

I would like to request the following:

16-2

1. All access (both employee and otherwise) to the new underground parking structure be from Olympic Blvd and Centinela Ave and that Nebraska Ave remains a residential street. This is an important health and safety issue for us. **This is the biggest issue for me - Nebraska Ave. is already used as a highway more or less by the folks who drive on it from DWP, Riot Games and Roger Dunn. Adding potentially hundreds more cars to that street everyday will be a disaster!**

16-3

2. The noise pollution and visual blight of Receiving Station K be included within the scope of this project. After YEARS of complaints we feel that this is the time to finally address this critical health and wellbeing issue. **As someone who walks past that everyday with my kids, I'm concerned not only for my health but especially for theirs - build a wall or plant massive trees to cover it up - or do both!**

16-4

3. A 30-35' 'green strip' setback be established along the full length of Nebraska Ave to protect the privacy of our residences and to contribute to the overall beautification of our neighbor.

Again we appreciate the opportunity to make our needs known to you and trust that you will seriously consider our requests and work with us to arrive at a satisfactory outcome.

Thank you for your time and consideration,

Michael Hobert

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Response to Comment Letter 16

Michael Hobert, Resident
July 13, 2020

16-1 This comment expresses concern for the residential neighborhood safety with implementation of the proposed project.

The proposed project would include a total of four driveways, including two driveways on Nebraska Avenue, one driveway on Centinela Avenue, and one driveway that essentially forms the north leg of Centinela Avenue East/Olympic Boulevard intersections. As discussed in Section 3.17, Transportation and Traffic, of the Draft IS/MND, the project would include emergency access to the site in accordance with the applicable the fire code, which includes requirements for width of emergency access routes, and turning radii. The project was determined to result in less than significant impacts related to inadequate emergency access. Additionally, the environmental analysis within the Draft IS/MND found less than significant impacts or less than significant impacts with mitigation incorporated to reduce potential concerns of wellbeing for the nearby residences. For example, mitigation was incorporated to reduce construction-related air quality emissions and construction-related noise impacts. Given the discussion above, the project would not result in an increased risk of safety and wellbeing. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

16-2 This comment requests all access to the project site to be changed to Olympic Boulevard and Centinela Avenue in order to reduce potential traffic impacts on Nebraska Avenue. The comment's concern is with existing conditions and the potential impacts as a result of the project implementation.

The staff vehicle entry has been planned comprehensively with the design of the new building which includes Administration and Service Planning Area. The subterranean garage which would require employees to access the project site from the driveway proposed along Nebraska Avenue for most efficient circulation and access, as is currently the case. The existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities.

16-3 This comment expresses concern with existing noise and visual blight of Receiving Station K. The comment requests existing concerns with Receiving Station K should be included in the proposed project. The comment requests to addition of trees or a wall to block potential visual impacts.

The proposed project does not include Receiving Station K and, thus, existing operational noise and visual quality associated with this portion of the LADWP property were not assessed in the Draft IS/MND. However, the noise impact analysis includes noise measurements of existing ambient noise within the project site's vicinity. This includes noise generating from Receiving Station K. The proposed project was found to result in less than significant noise impacts during operations when compared to the City's noise significance threshold. As such, the comment's request for a wall is not warranted.

In addition, the project proposes a new landscape design including trees on the project site. Although not along the frontage shared with Nebraska Avenue and Receiving Station K, the proposed project would enhance the existing visual quality of the site, resulting in the replacement of existing outdated structures with new and improved facilities and landscaping.

Given the discussion above, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

16-4 This comment specifically requests a 30- to 35-foot landscaped setback along the full length of Nebraska Avenue to reduce potential impacts to privacy and aesthetics.

Under existing conditions, the LADWP property maintains an approximately 15-foot setback from Nebraska Avenue to an existing wall. The proposed project would result in a 28-foot setback from Nebraska to the proposed buildings. The Draft IS/MND states the proposed project would not conflict with existing zoning regulations governing scenic quality, and, thus, would result in a less than significant impact. A 30- to 35-foot setback, as requested, is not feasible and not within the scope of the proposed project. No changes or additions to the Project Description or environmental analysis are required in response to this comment.

Comment Letter 17

---------- Forwarded message ---------
From: **Karlyne Ikuta** <kikuta@ktgy.com>
Date: Fri, Jul 24, 2020 at 12:17 PM
Subject: LADWP Facility Project
To: ben.lazebnik@lacity.org <ben.lazebnik@lacity.org>, len.nguyen@lacity.org <len.nguyen@lacity.org>, JRoss@WLANC.com <JRoss@wlanc.com>, JHandal@wlanc.com <JHandal@wlanc.com>, councilmember.bonin@lacity.org <councilmember.bonin@lacity.org>
Cc: onlinelevine@gmail.com <onlinelevine@gmail.com>, erickraft@gmail.com <erickraft@gmail.com>

Dear Gentlemen

I have am a resident of WLA for 64 years, and of the past 46 years have lived in this neighborhood between Bundy/Centinela/Idaho/Olympic.

And if you lived here 24/7, I think you would understand how we feel. I don't know how you logically plan and develop these projects and think it's all right.

Residents here endure, traffic and congestion on a daily basis. We just want to be heard and our suggestions to be implemented so that each side is happy.

You must understand that many of us are multi-generational and continue to love living here, we do remember when there was less traffic and when us kids

Would play in the streets (don't want that now, but you know what I mean), it was safe and a great place to live. This neighborhood has always been mostly

Single family homes of modest incomes.

17-1

1

With the addition of 200 new employees and a morning shift starting at 6:30am, traffic along Nebraska Ave and throughout our neighborhood will increase dramatically.

We ask that you move the entrance to your underground garage to Olympic Blvd. instead of Nebraska Ave. With the completion of construction of the Olympic/Bundy project

which we strongly objected to and voiced our concerns – we can only imagine what our area will be like. With the existing traffic light on Olympic into your property, this would

be a plus for moving your staff in and out of your site. I heard something about charging your employees, which I can't imagine why you would do that when you will own

the underground parking. I would suggest to your employees to use the Bundy Station for "Metro" and give some incentive for Green Transportation.

17-2

On the issue of the height of your 60 foot tall building along Nebraska Ave, this will compromise the privacy of our houses and cover the north side of Nebraska Ave

in shadows for much of the morning. We ask that you comply with local zoning laws (35 foot max), do a shadow study, or increase the building setback to 60 feet.

17-3

In regards to the use at the top of the building for an "extensive green (party) roof", Even casual use of this Feature will project noise across the surrounding area.

We are asking you to include a sound barrier and privacy wall on the north side. Some Time restrictions (limiting hours) for use would be prudent as well,

our neighborhood is quiet and that's how we like it.

17-4

After years of our complaints about the extreme noise and visual blight of Receiving Station K, the DWP has opted to exclude any consideration of improvements to the Station in this plan.

We ask that you reduce noise by upgrading your equipment and building a sound wall around the Station as you have in many other parts of LA.

17-5

Please give back to our neighborhood by increasing the Nebraska Ave setback and include a landscaped and maintained green belt along the full length of the DWP / Nebraska Ave property.

17-6

With regards to the power lines specifically, we believe the EMF readings from the main transmission lines along Nebraska, Bundy and Centinela present a health hazard to our

17-7

2

Neighborhood. We ask that these lines be buried.

17-7 Cont.

Working for an Architectural Firm, I am really a proponent of great developments, but that happens with thoughtful consideration and respect for the residents that the

Projects impact. We put ourselves in the viewpoint of how we can improve the lives and neighborhoods and steer and guide our clients and developers for a

Win/Win. I am only one resident of many and hope I can speak for those who are too timid to speak up or do not have the language skills to write a message to you.

17-8

Respectfully,

Karlyne Ikuta
Studio Coordinator

KTGY Architecture + Planning
433 S. Spring St., Suite 750
Los Angeles, CA 90013

310.439.3900 Direct
310.394.2623 Main

--

Ben LaZebnik
Field & Community Affairs Deputy
Councilmember Mike Bonin
City of Los Angeles
213-444-3508 | www.11thdistrict.com

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Response to Comment Letter 17

Karlyne Ikuta, Resident
July 24, 2020

17-1 This comment expresses concern over existing traffic conditions and safety within the project site's vicinity and the potential impacts associated with the proposed project.

The existing and future traffic conditions for the roadway network within the project site's vicinity have been analyzed in the traffic study, which is included as Appendix F to the Draft IS/MND and summarized in Section 3.17, Transportation and Traffic, in the Draft IS/MND. The traffic study has concluded that there would be no significant effect to the capacity of the intersections along Nebraska Avenue, Olympic Boulevard, Bundy Drive and Centinela Avenue due to addition of the proposed project. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

17-2 This comment cites an increase in employees and potential impacts to traffic during the morning hours on Nebraska Avenue. The comment suggests the project utilize Olympic Boulevard for vehicular circulation. In addition, the comment expresses concern with paid parking for employees and suggests employee utilize the Metro E Line Bundy Station and incentivize "green transportation."

The staff vehicle entry has been planned comprehensively with the design of the new building which includes Administration and Service Planning Area. The subterranean garage which would require employees to access the project site from the driveway proposed along Nebraska Avenue for most efficient circulation and access, as is currently the case. The existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities.

As noted in the traffic study included as Appendix F to the Draft IS/MND and in Section 3.17, Transportation and Traffic, in the Draft IS/MND, Transportation Demand Management (TDM) measures would be implemented and maintained by LADWP in conformance with the City's Trip Reduction Ordinance. The following TDM measures noted in the traffic study and environmental document are currently being implemented and will continue to be implemented by LADWP and would reduce employee vehicular trips to the proposed project:

- On-Site Employee Transportation Coordinator
- TDM Web Site Information
- TDM Promotional Material.
- Transit Welcome Package.
- Los Angeles Metro TAP Employer Program.
- Los Angeles County Guaranteed Ride Home Program
- Carpool Program for Employees.

- Convenient Parking/Amenities for Bicycle Riders.
- Flexible/Alternative Work Schedules.

17-3 This comment states concern for the proposed project's 60-foot maximum height and the potential impacts associated with privacy and shade/shadow.

For discussion on the proposed project's height, please see Response to Comment 3-1.

A shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.

17-4 This comment suggests the incorporation of a sound wall for privacy on the north side of the proposed project and to reduce potential noise impacts associated the rooftop feature. In addition, the comment suggested hours of operation for the rooftop project design feature.

For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10.

17-5 This comment cites concern for existing conditions related to noise and visual blight from Receiving Station K and suggests a sound wall to be constructed as part of the project.

The proposed project does not include the upgrade of existing equipment within Receiving Station K. However, the noise impact analysis detailed within Section 3.13, Noise, of the Draft IS/MND includes noise measurements of existing ambient noise within the project site's vicinity. This includes noise generated by Receiving Station K. As shown in Table 3.13-5, Traffic Noise (Existing and Existing Plus Project), of the Draft IS/MND, none of the short-term measurement locations (ST1 through ST5) exceed the 65 dB CNEL City noise standard for residences under existing noise level conditions. In addition, noise modeling found the existing plus the proposed project conditions would result in none of the same receptors exceeding 65 dB CNEL. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the proposed project was found to result in less than significant noise impacts during operations. The comment's request for a sound wall would not be warranted based on the determined impacts.

17-6 This comment suggests an increased setback on Nebraska Avenue along the full length of the LADWP property.

For discussion on the proposed project's setback, please see Response to Comment 3-8.

17-7 This comment cites health concerns associated with the power lines and requests the main transmission lines along Nebraska Avenue, Bundy Avenue, and Centinela Avenue be replace and installed underground.

The comment's request to remove and replace existing power lines underground is not within the scope of the proposed project. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

17-8 This comment request consideration of neighborhood input in the design of the proposed project.

At the beginning of the public review period is when LADWP finalized the project design and subsequent environmental analysis, subject to public comment. LADWP, as the lead agency, solicited public review period of the Draft IS/MND from June 25, 2020 to July 25, 2020. The period of 30 days for public review complies with Section 15073 of the State CEQA Guidelines, which states a proposed mitigated negative declaration shall not have a public review period less than 30 days when submitted to the State Clearinghouse for review by State agencies.

This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

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Comment Letter 18

From: Raffi Jahilian Jahilian <raffijahilian@hotmail.com>
Sent: Saturday, July 25, 2020 2:01 PM
To: Leong, Aiden; Ben LaZebnik; JRoss@WLANC.com; jay handal; Len.Nguyen@LACity.org
Subject: [EXTERNAL] Re: LADW&P Receiving Station K -Noise/EMF Rays & Pollution

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To :

-LADWP
aiden.leong@ladwp.com

-Councilman Bonin's office
ben.lazebnik@lacity.org
len.nguyen@lacity.org

-West LA/Sawtelle Neighborhood Council
JRoss@WLANC.com
JHandal@wlanc.com

Dear Sirs & Madams

We have been living @1760 S. Centinela Ave, LA, Ca 90025 since March 2004.We just welcomed our newborn a year ago .We moved to this neighborhood because of the nice neighbors we met ,the quietness & closeness to the beach.
The first years were excellent but since the construction has been increasing & the demand for electricity is increasing also the unbearable noise from the engines are increasing as well .We had hundreds of nights that we couldn't sleep from the noise. I have called LADW&P so many times that i am sure you can access the records & find my name .If you can't find it just contact Mr Jerry Gerald Moreno @ Gerald.Moreno@LADW&P.com .He knows me because i contacted him so many times complaining about the noise that we couldn't sleep even though we have double pane windows & he can tell you our sufferings throughout the years.
A) We are paying high property taxes & we deserve to sleep at night.
B) We can't even invite friends to enjoy our backyard or have a BBQ because of the noisy atmosphere created no other than LADW&P ! .
On top of it we're bombarded by the Unhealthy EMF created by no other than LADW&P !

18-1

*****WE DEMAND LADW&P SOUND & PRIVACY WALL ON THE NORTH SIDE OF NEBRASKA AVE *****
THIS WILL STOP THIS UNBEARABLE NOISE & EMF RAYS SO WE CAN LIVE IN PEACE THAT WE DESERVE !

18-2

1

We're demanding the following ....

1) Reduce noise by upgrading LADW&P equipment and building a sound wall around the Station as they have in many other parts of LA.This is a basic right that should be granted to us.
Also LADW&P should beautify our neighborhood by increasing the Nebraska Ave setback and include a landscaped Green belt along the full length of the DWP / Nebraska Ave property.

18-3

18-4

2) LADW&P will erect a new building with 200 new employees and a morning shift starting at 6:30am
Traffic along Nebraska Ave and throughout our neighborhood will increase dramatically.
We're asking LADW&P to move the entrance to their underground garage to Olympic Blvd to avoid the traffic that it will create in our narrow streets plus increasing the pollution where we live,
A 60 foot tall building (similar to the Bed Bath and Beyond building on Olympic Blvd) along Nebraska Ave will compromise the privacy of our houses and cover the north side of Nebraska Ave in shadows for much of the morning.
We ask LADW&P to comply with local zoning laws (35 foot max), do a shadow study, or increase the building setback to 60 feet.

18-5

18-6

3) Plans are showing top of the building is an "extensive green (party) roof". Even casual use of this feature will project noise across the surrounding area.
WE ASK LADW&P TO THINK FOR FEW MINUTES & PUT THEMSELVES IN OUR SHOES & PRETEND THEY ARE LIVING IN OUR HOMES !

18-7

Our demands are very fair & legitimate & all our neighbors share the same feelings & thoughts with my family.

Thanks & Regards
Raffi & Anita Jahilian
anitaraffi2012@gmail.com
818-929-3301

Response to Comment Letter 18

Raffi Jahilian, Resident
July 25, 2020

18-1 This comment expresses concern for existing conditions of the project site and other related projects resulting in noise disturbances to the residential neighborhood. Concern was raised for the potential health impacts related to existing conditions of the LADWP property.

The Draft IS/MND analyzes the proposed project's potential impacts related to noise, hazards, and aesthetics. As discussed in Section 3.14, impacts related to construction noise can be mitigated to a less-than-significant level with the incorporation of mitigation measures MM-NOI-1 and MM-NOI-2. Section 3.9, Hazards and Hazardous Materials, incorporated mitigation to reduce potential impacts related to potentially hazardous materials in the soil, soil-gas, and groundwater. As such, MM-HAZ-1 requires the completion of a Phase II Environmental Site Assessment prior to the issuance of a building permit. The Draft IS/MND did not identify any impacts related to electromagnetic field (EMF) radiation because this is an issue that is not evaluated within the context of CEQA. In addition, the comment's request for a 20-foot barrier to be constructed around the LADWP property is not within the scope of the proposed project nor is such a barrier warranted given the results of the environmental analysis included in the Draft IS/MND. The portion of the LADWP facility, known as Receiving Station K is not included within the project site boundaries. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

18-2 This comment requests a wall along the north side of Nebraska Avenue to reduce potential impacts related to noise and privacy in addition to concern for EMF rays.

For discussion related to existing noise and health concerns related to Receiving Station K, please see Response to Comment 28-1.

18-3 This comment requests for the project to include a sound wall around Receiving Station K.

Receiving Station K is not a part of the proposed project. As such, it is not within the scope of this project to include a sound wall surrounding Receiving Station K.

18-4 This comment requests a setback along the full length of Nebraska Avenue that is shared with the LADWP property.

For discussion related to setbacks, please see Response to Comment 3-8.

18-5 This comment requests the proposed project relocate the entrance to the underground parking garage to Olympic Boulevard to reduce potential impacts to traffic onto the residential neighborhood, including potential air quality related impacts related to traffic.

The staff vehicle entry has been planned comprehensively with the design of the new building which includes Administration and Service Planning Area. The design of the subterranean garage would require

employees to access the project site from the driveway proposed along Nebraska Avenue for most efficient circulation and access, as is currently the case. The existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities. As detailed in Section 3.17, Transportation and Traffic, of the Draft IS/MND, the proposed project would result in less than significant impacts related to traffic. The project would result in an increase of employee-generated vehicle trips; however, the impacts related to the increase in trips do not exceed significance thresholds for each traffic volume capacity scenario, as shown in Table 3.17-4. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

For discussion on traffic-related air quality and noise impacts, please see Response to Comment 21-5. As stated therein, with mitigation, all potentially significant impacts can be reduced to less than significant levels.

18-6 This comment is concerned with the proposed building's height of 60 feet and the potential impact related to shade/shadow on the nearby residences. The comment further requests the building to be reduced in size to comply with local zoning height maximum of 35 feet. If not, the comment requests a shade/shadow study or an increase building setback of 60 feet.

For discussion on the proposed project's height, please see Response to Comment 3-1.

A shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.

18-7 This comment is concerned about the project design including a green rooftop and the potential impacts to noise.

For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10.

Comment Letter 19

From: Elaine Kim <elainemkim@gmail.com>
Sent: Friday, July 24, 2020 9:12 PM
To: Leong, Aiden; ross_jay@hotmail.com; len.nguyen@lacity.org; Ben LaZebnik; Hong, Deborah; mike@11thdistrict.com
Cc: John Levine; Eric Kraft
Subject: [EXTERNAL] DWP Redevelopment on Nebraska Ave. in West Los Angeles

EXTERNAL EMAIL! This email was generated from a non-LADWP address. If any links exist, do not click/open on them unless you are 100% certain of the associated site or source. ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

To whom it may concern,

My name is Elaine Hobert. I live at 1706 Wellesley Avenue in Los Angeles. I am a few houses down the street from where the new development for the DWP is set to take place.

As a member of this very tight-knit community situated between Nebraska and Idaho and Centinela and Bundy, I can say that there is a lot of concern collectively as a neighborhood and I have a lot of concern individually about how the proposed plans will impact the safety and overall well being of both myself and my family. I have two small children (ages 3 and 1) and these plans as proposed are quite concerning. 19-1

I would like to request the following:

1. All access (both employee and otherwise) to the new underground parking structure be from Olympic Blvd and Centinela Ave and that Nebraska Ave remains a residential street. This is an important health and safety issue for us. **This is the biggest issue for me - Nebraska Ave. is already used as a highway more or less by the folks who drive on it from DWP, Riot Games and Roger Dunn. Adding potentially hundreds more cars to that street everyday will be a disaster!** 19-2
2. The noise pollution and visual blight of Receiving Station K be included within the scope of this project. After YEARS of complaints we feel that this is the time to finally address this critical health and wellbeing issue. **As someone who walks past that everyday with my kids, I'm concerned not only for my health but especially for theirs - build a wall or plant massive trees to cover it up - or do both!** 19-3
3. A 30-35' 'green strip' setback be established along the full length of Nebraska Ave to protect the privacy of our residences and to contribute to the overall beautification of our neighbor. 19-4

Again we appreciate the opportunity to make our needs known to you and trust that you will seriously consider our requests and work with us to arrive at a satisfactory outcome.

Thank you for your time and consideration,

Elaine Hobert

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Response to Comment Letter 19

Elaine Kim, Resident
July 24, 2020

19-1 This comment cites concern for the proposed project's impact on safety and overall wellbeing onto the residential neighborhood.

This comment raises the same topics as discussed in Comment Letter 16. For discussion on this comment, please see Response to Comment 16-1.

19-2 This comment requests all access to the project site be relocated to Olympic Boulevard and Centinela Avenue instead of Nebraska Avenue. The comment cites existing traffic conditions on Nebraska Avenue and is concerned with potential impacts from the proposed project.

This comment raises the same topics as discussed in Comment Letter 16. For discussion on this comment, please see Response to Comment 16-2.

19-3 This comment cites concerns for existing noise and visual blight under existing conditions, specifically associated with Receiving Station K. In addition, concern is raised regarding impacts to the residential neighborhood's health.

This comment raises the same topics as discussed in Comment Letter 16. For discussion on this comment, please see Response to Comment 16-3.

19-4 This comment requests a 30- to 35-foot setback along the full length of Nebraska Avenue to reduce potential impacts to privacy and aesthetic impacts to the residential neighborhood.

This comment raises the same topics as discussed in Comment Letter 16. For discussion on this comment, please see Response to Comment 16-4.

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Comment Letter 20

From: Eric Kraft <ericvkraft@gmail.com>
Sent: Thursday, July 2, 2020 9:38 PM
To: Leong, Aiden
Cc: mike@11thdistrict.com; Jay Ross; Adams, Martin; Len Nguyen; Councilmember Bonin; Ben LaZebnik; John Levine; MARK FIORE; Raffi Jahilian Jahilian; Paul Wedel; Lee Ziff; Stephanie Kraft; Pat Gamboa; Nancy; Aric Gregson; Barbara Ige; Brian Raffetto; Carla Lona; Carol Macfarlane; Christopher Christian; Claudia Hinnebusch; Danilo Torro; Dave Watanabe; Deirdre Sena; Emily Del Beccaro; Emily Hirasuna; Eric Kraft; Gina Kalman; Ginette Rixson; Heather Daly; Herley Jim Bowling; Jila Kashef; Julie Urrunaga; Jumme Park; Junie Kikuchi; Karlyne & Dennis; Kate England; Kevin & Denise; Lori Quon; Mercedes Garcia; Michael Chitgar; Michael Hobert; Mollie Bowling; Xochitl Gonzalez; Andrew Smidt; Tom Meyer; Allison Silvers; Rebekah Vanderstoep; Rusty Cena; Sadaf Sardari; Steve Hargrove; Takuya Funakoshi; Kevin and Denise .; Gail & Paul Neflis
Subject: [EXTERNAL] West LA DWP Project - Resident Comments

Hi Aiden -

- this to appear on record -

The other important factor that just occurred to me is that we, the neighborhood, have had practically NO TIME to react to any of these plans.

The only notice we received was a 1-page flyer in your mailboxes. A lame, marginal effort at best to communicate with us.

And now we have less than a month to digest a 300 page document, with no ability to really speak to each other in the area directly and in person, during the height of the COVID epidemic.

Honestly, this feels like we are being steamrolled. It's not fair, and it's very very tricky behavior.

I have attended several West LA community meetings and was assured by DWP staff that upgrades and barriers to the site were in motion. Not once was this project discussed with us, and no one at all was honest in telling us that this project would NOT include ANY resolution on the electric yard that we have been complaining about for YEARS.

The Community response to our very organized effort is overwhelming - a great show of support that cannot be ignored.

That being said, we are scrambling to get our ideas out in a state of duress, conveniently compounded by COVID. This is an unfair process, and we will not get rolled.

Mike Bonin - we need your support here - please represent the community that elected you!! Ben L - please make sure Mike is up to speed on all this.

20-1

1

Sincerely,
Eric Kraft

On Jun 30, 2020, at 4:27 PM, Leong, Aiden <Aiden.Leong@ladwp.com> wrote:

Good Afternoon Eric,

I am acknowledging receipt of your comment. We will take your comment into consideration and will be providing a response letter at a later date. In addition to our response, the letter will also contain information regarding the date of the Board meeting when the IS/MND is on the agenda for Board approval.

20-2

Best,

Aiden Leong

Environmental Planning and Assessment

Los Angeles Department of Water and Power

111 N. Hope Street, Room 1044

Los Angeles, CA 90012

(D) 213.367.0706

aiden.leong@ladwp.com

From: Eric Kraft [mailto:ericvkraft@gmail.com]
Sent: Tuesday, June 30, 2020 4:12 PM
To: Leong, Aiden
Cc: mike@11thdistrict.com; Jay Ross; Adams, Martin; Len Nguyen
Subject: [EXTERNAL] West LA DWP Project - Resident Comments

Hi Aiden,

Thank you again for your time on the phone last week; I appreciate the conversation we shared and look forward to continuing a healthy dialogue between us, as well as with the now-growing number of residents that are showing up to have their voices heard too.

As I explained to you over the phone, I live a block away from the facility, so my family and I are very much vested in this neighborhood.

As such, I have been highly involved in working with my neighbors, the West LA Neighborhood Council, and Mike Bonin's staff to correct many issues with the current facility (specifically the electric yard section of the site, not the DWP office building) that have plagued our neighborhood for years. Unfortunately, and despite the enormous amount of effort we collectively have put into this, nothing has changed at all.

When this project was announced, I was thrilled, because I thought we were FINALLY going to catch a break and see the electric yards section of the property get redeveloped, which would in a fair world, eliminate the intolerable noise that the facility generates, abate harmful EMF radiation and radio waves, and shield the neighborhood from the visual blight of the hideous power section.

Unfortunately, the project plan focuses exclusively on the office section, and entirely neglects the power section that is truly of most concern to the neighborhood.

While I support the redevelopment of the site (with conditions), I DO NOT support the project UNLESS it also incorporates a redevelopment of the power section as well. Both sections of the property need to be addressed at the same time and handled in one fell swoop. It is simply not equitable that the neighborhood has to suffer through 3+ years of construction so that DWP employees can enjoy brand new state of the art office space, while the neighborhood continues to suffer in perpetuity with the power section as-is.

20-3

These are the concepts we all want incorporated into the project before it breaks ground:

1. Site Barrier – A minimum 20-foot wall / structure must be erected around the perimeter of power section, at a minimum along Nebraska Ave., but preferably all around the site. This will: (i) shield the residents from equipment noise, EMF radiation, and conceal the site, thus eliminating the significant eyesore; and (ii) provide much needed security to protect the facility from vagrants and possibly even terrorists that could easily drive a vehicle right through the lose chain link fence.

20-4

2. Buffer Space / Park – In addition to item 1 above, a "green strip" / park along the northern border of the property along Nebraska would go a long way in beautifying the property and offering some space between it and the residents. 20-5

3. Upgrade Equipment – Existing equipment (transformers, generators, cooling fans) need to be replaced with modern technology that is silent, safe, and unobtrusive. Currently, we hear constant, intrusive noise from various pieces of equipment . And during the warmer months, the archaic cooling fans go off, generating so much noise that it is impossible to even sleep. We are certain that the sound emitted from these fans exceeds the legal maximum levels. Again, we have complained about this for YEARS, but the DWP has failed to address any of our complaints in a substantive manner. 20-6

4. Power Lines – Main transmission lines along Nebraska, at a minimum, and also along Bundy and Centinela need to be buried underground to prevent harmful EMF radiation from affecting nearby homes. I purchased a professional-grade EMF measuring device, and the EMF levels near those lines, in front of people's homes, were over 5 times the suggested maximum safe levels (north of 10 mG). 20-7

5. Traffic – The new project will consolidate several DWP offices into this location, which will be nightmare for traffic. All cars going in and out must be redirected to Olympic Blvd. The current plan is to continue using Nebraska, which is unacceptable. 20-8

In conclusion, we have one shot at making this project a success for both the DWP and the neighborhood. Let's come together on this, and make the project a win-win!!

Best regards,

Eric

Response to Comment Letter 20

Eric Kraft, Resident
June 30, 2020 & July 2, 2020

20-1 This comment is concerned about the public review period and noticing procedures conducted for the Draft IS/MND.

For discussion regarding the public review process for the Draft IS/MND, please see Response to Comment 21-6.

20-2 This comment was from the Lead Agency representative indicating receipt of communication. Both e-mails have been submitted for public comment and were received and recorded within this document.

20-3 This comment expresses concern related to existing conditions of Receiving Station K, including noise, health, and aesthetics. The comment requests the project include the redevelopment of Receiving Station K.

Receiving Station K is not part of the proposed project. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment. The commenter's general opposition to the project will be provided to the decision makers for their review and consideration as part of this Final MND.

20-4 This comment requests a site barrier consisting of a 20-foot wall around the perimeter of Receiving Station K, or at a minimum along Nebraska Avenue. The requested site barrier is desired to reduce noise, operational health concerns, visual concerns, and provide security for the property.

Receiving Station K is not a part of the proposed project. As such, it is not within the scope of this project to include a sound wall surrounding Receiving Station K.

20-5 This comment requests a buffer space and/or park along the northern border of the LADWP property with Nebraska Avenue in order to improve aesthetics of the property and project site.

For discussion on the comment's request for a buffer space or park along Nebraska Avenue, please see Response to Comment 21-7.

20-6 This comment requests existing equipment (i.e., transformers, generators, cooling fans) within Receiving Station K to be upgraded. The comment expresses concern over existing noise from Receiving Station K.

For discussion on existing noise generated from Receiving Station K, please see Response to Comment 21-3.

20-7 This comment requests the transmission lines along Nebraska Avenue, Bundy Drive, and Centinela Avenue to be replaced and installed underground to reduce existing concern for potential health concerns related to the close proximity to residences.

The comment's request to remove and replace existing power lines underground is not within the scope of the proposed project. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

20-8 This comment concerns potential impacts related to the project's objective to consolidate LADWP office space at the project site. The comment expresses opposition to the project's plans of utilizing Nebraska Avenue as a point of access to the project site.

The staff vehicle entry has been planned comprehensively with the design of the new building which includes Administration and Service Planning Area. The design of the subterranean garage would require employees to access the project site from the driveway proposed along Nebraska Avenue for most efficient circulation and access, as is currently the case. The existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

Comment Letter 21

Summary

This document is in response to the LADWP's proposed redevelopment of the West Los Angeles District Yard, a facility improvement project that would demolish six structures on the project site, and replace them with a new office building and connected 3 story fleet parking and maintenance garage. There would also be a 1 story underground employee parking lot. The worker population would increase from

In lieu of an Environmental Impact Study (EIS), the DWP has prepared a Mitigated Negative Declaration (MND) which indicates that they believe "there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment."

The chart below was taken from page 21 of the MND. We have taken the liberty of annotating the original chart by adding black circles to indicate areas of concern to our community.

WEST LOS ANGELES DISTRICT YARD PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklists on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology and Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☐ Transportation and Traffic	☐ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

Since the DWP failed to identify ANY troublesome environmental factors, the following declaration was submitted on page 22 of the MND.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

We disagree with this finding.

21-1

1

In the text below, we will identify specific concerns related to each of the environmental factors circled above. We will also highlight a specific area of concern that the District Yard Project totally ignores - DWP's failure to propose a unified study of the entire West Los Angeles facility.

In addition to the District Yard, the West LA location also contains Receiving Station K, a large, noisy, and unsightly industrial complex that has been an ongoing source of discomfort and complaints for our community. We believe that issues related to Station K should be included in the master plan for West LA and that mitigation steps should be prioritized and completed on an expedited basis. In our comments below, we have separated the District Yard from Station K when appropriate.

1) **Aesthetics – District Yard** - We believe that the height of the proposed structure, the inclusion of an "extensive green (party) roof", and its location on a residential street will block sunlight from residences on the south side of Nebraska Avenue, compromise the privacy of residences in the 1700 blocks of Carmelina, Wellesley and Amherst Avenues and overwhelm the character of our neighborhood.
2) **Aesthetics – Receiving Station K** – We believe that Station K is a visual blight on our neighborhood and that a beautification project that is seamlessly integrated into the District Yard project is warranted.
3) **Noise – District Yard** - We believe that the inclusion of the "extensive green (party) roof" on the 4th floor of the new structure will lead to significant increases in casual noise being projected across the neighborhood.
4) **Noise – Receiving Station K** – We believe that sound levels emanating from Station K during periods of peak power demand are extreme and unhealthy. Years of complaints to the LADWP has been ignored.
5) **Transport and Traffic** - We believe that the increase of daily trips to and from the new facility will create traffic hazards on Bundy Drive and on Nebraska Avenue and imperil neighborhood pedestrian and handicapped neighbors dependent on motorized wheelchairs.
6) **Pollution** - We believe the increase employee traffic during morning and evening commute hours will dramatically increase exhaust emissions and noise pollution, especially for homes along Nebraska Ave.

In addition, **we challenge the process** the DWP followed to reach their conclusions.

During the building design and preparation of the IS and subsequent MND, there was a total failure of the proponents of the project to solicit any participation whatsoever by those in the neighborhood who will be directly and negatively impacted by the project. Notification to neighbors consisted of the legally required 30-day notice to comment. Period.

During a July 7th Neighborhood Council Zoom meeting, the LADWP acknowledged that they deliberately chose **NOT** to engage the participation of those affected in the neighborhood prior to the 30-day notice. Engaging the affected members of a community is customary in conjunction over a governmental project of this magnitude.

21-1 Cont.

21-2

21-3

21-4

21-5

21-6

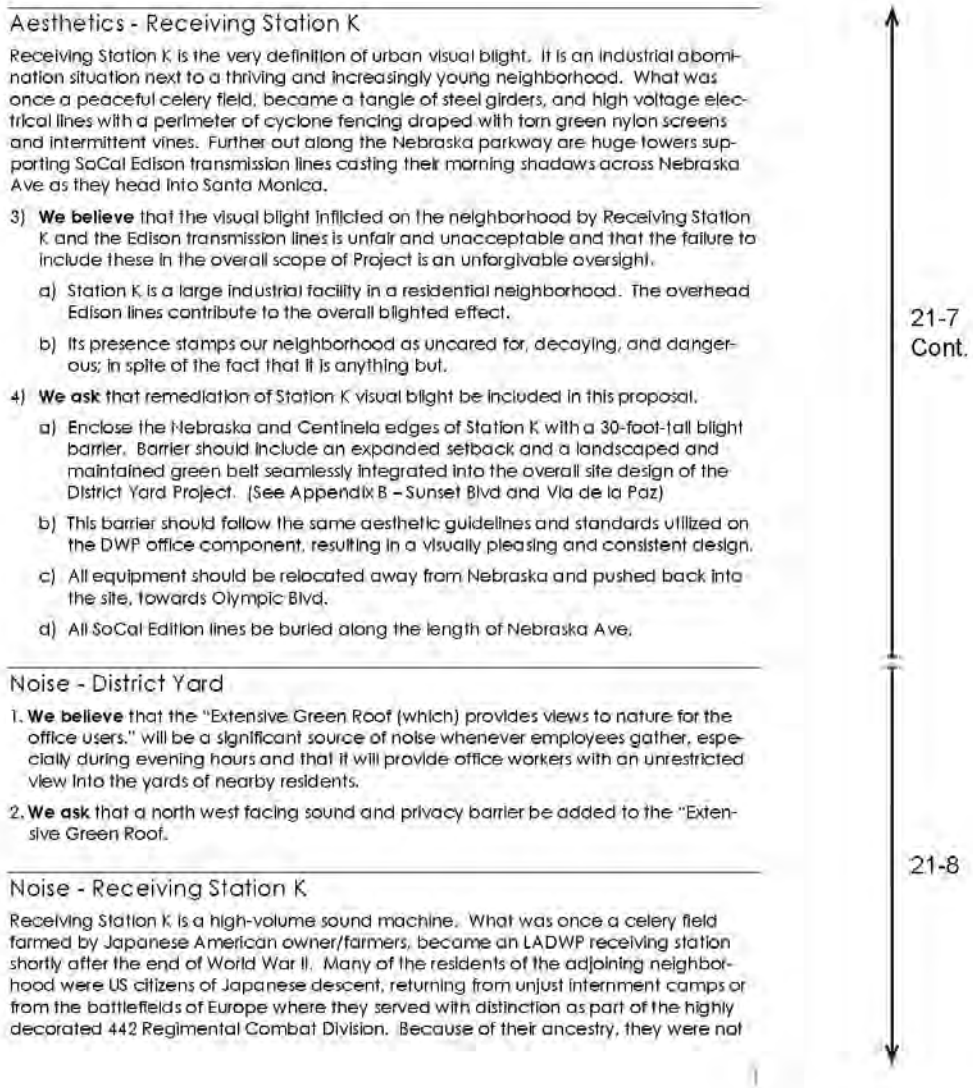
Environmental Factors Potentially Affected

Aesthetics - District Yard

1) **We believe** that a 60' tall office building (Figure 2-3B in the MND) fronting Nebraska Ave with its planned top floor "extensive green roof (which) provides views to nature for the office users" will infringe upon the privacy of our residents and is out of character with our residential neighborhood. We are also concerned that office lights emanating from the tower will cause constant night time illumination of the yards and bedrooms of the residents along Nebraska Ave.
   a) Our understanding of the current zoning (PF-1XL) suggests a maximum allowable height of 30 feet with 2 stories and a 3:1 FAR.
   b) A 60' tall building will have a negative impact on morning sun reaching residences along the north side of Nebraska Ave. In addition to being detrimental to the satisfaction and wellbeing of residents, it will also increase heating cost in the winter and significantly reduce the effectiveness of any existing or planned residential solar system.
      i) The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a Project impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)."
   c) A carefully planned and maintained green belt would be an attractive addition to the neighborhood. (See Appendix A – Ishihara Park.)
   d) The planned 28-foot setback with green belt is insufficient to adequately shield our neighborhood from the overwhelming presence of a 60' tall structure.
2) **We ask:**
   a) that the building height and stories be consistent with existing zoning requirements (2 stories: 30 feet tall)
   b) that a shadow study be completed to ensure that winter sunlight will not be blocked from homes across Nebraska Ave for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April).
   c) that the planned 28-foot setback be increased to 60 feet along the entire Nebraska Avenue frontage of the building with the setback measured from the edge of the sidewalk closest to the new structure. (See what can be done in Appendix A - Ishihara Park)
   d) that night time office lights be managed to minimize the disturbance of our residents.

21-7

3



Aesthetics - Receiving Station K

Receiving Station K is the very definition of urban visual blight. It is an industrial abomination situation next to a thriving and increasingly young neighborhood. What was once a peaceful celery field, became a tangle of steel girders, and high voltage electrical lines with a perimeter of cyclone fencing draped with torn green nylon screens and intermittent vines. Further out along the Nebraska parkway are huge towers supporting SoCal Edison transmission lines casting their morning shadows across Nebraska Ave as they head into Santa Monica.

3) **We believe** that the visual blight inflicted on the neighborhood by Receiving Station K and the Edison transmission lines is unfair and unacceptable and that the failure to include these in the overall scope of Project is an unforgivable oversight.
   a) Station K is a large industrial facility in a residential neighborhood. The overhead Edison lines contribute to the overall blighted effect.
   b) Its presence stamps our neighborhood as uncared for, decaying, and dangerous; in spite of the fact that it is anything but.
4) **We ask** that remediation of Station K visual blight be included in this proposal.
   a) Enclose the Nebraska and Centinela edges of Station K with a 30-foot-tall blight barrier. Barrier should include an expanded setback and a landscaped and maintained green belt seamlessly integrated into the overall site design of the District Yard Project. (See Appendix B – Sunset Blvd and Via de la Paz)
   b) This barrier should follow the same aesthetic guidelines and standards utilized on the DWP office component, resulting in a visually pleasing and consistent design.
   c) All equipment should be relocated away from Nebraska and pushed back into the site, towards Olympic Blvd.
   d) All SoCal Edition lines be buried along the length of Nebraska Ave.

21-7 Cont.

Noise - District Yard

1. **We believe** that the "Extensive Green Roof (which) provides views to nature for the office users." will be a significant source of noise whenever employees gather, especially during evening hours and that it will provide office workers with an unrestricted view into the yards of nearby residents.
2. **We ask** that a north west facing sound and privacy barrier be added to the "Extensive Green Roof.

Noise - Receiving Station K

Receiving Station K is a high-volume sound machine. What was once a celery field farmed by Japanese American owner/farmers, became an LADWP receiving station shortly after the end of World War II. Many of the residents of the adjoining neighborhood were US citizens of Japanese descent, returning from unjust internment camps or from the battlefields of Europe where they served with distinction as part of the highly decorated 442 Regimental Combat Division. Because of their ancestry, they were not

21-8

allowed to live in other parts of the sprawling LA metropolis. They found a home in West LA. These young ambitious Americans were not asked their opinion when the DWP moved in. No one asked them about the impact on their young families. DWP built the station and cranked up the fans.

Now some 70 years later, in spite of multiple mitigation requests from our residents, many of them dependents from the original Japanese American families, we continue to be subjected to even higher levels of noise from the normal operation of the Receiving station; noise intensity that becomes excruciating during warm weather or during periods of shifting winds. Years of complaints have been disregarded by the LADWP. The current plan continues to disregard the health hazard presented by Receiving Station K as the DWP focuses on the consolidation of its workforce and construction of a comfortable, state of the art office building.

1) **We believe** that sounds levels present a significant mental and physical health hazard to residents throughout the neighborhood and that the visual blight of Station K has an adverse effect on our property values and our ability to enjoy our neighborhood.
   a) Numerous studies have linked noise pollution to increased anxiety, depression, high blood pressure, heart disease, and stroke. Even small increases in unwanted ambient sound have significant effects.
   b) Because of our coastal location, most of our residences are not air conditioned. Closing windows to block the sound during high temperature periods can causes excessive heat to buildup leading to serious and immediate health issues – especially for older residents.
   c) Climate change and the increased power requirements of large-scale nearby projects will significantly increase noise levels over time.
2) **We ask** that remediation of Station K noise pollution be included in this proposal with a sound barrier seamlessly integrated into the overall site design
   a) Build a 30-foot-tall sound barrier and green belt fronting Receiving Station K along Nebraska Ave with a setback equal to the office building setback. This wall should follow the same aesthetic guidelines and standards utilized on the DWP office component, resulting in a visually pleasing and consistent design. (See Appendix B – Sunset Blvd and Via de la Paz)
   b) Upgrade aging equipment to eliminate / greatly reduce noise from generators, transformers, fans etc.
   c) Relocate all equipment away from Nebraska Ave towards Olympic Blvd.

21-8 Cont.

Transportation and Traffic

We challenge the finding in Section 3.17 Traffic and Transportation that traffic along Nebraska Ave would not "...substantially increase hazards due to ... dangerous intersections) or incompatible uses..."

21-9

The MND states that "The project would also include a two level above-ground parking structure with a total of 154 parking stalls and a single-level underground parking structure with a total of 389 parking stalls. All fleet vehicle parking, which totals 154 oversized parking spaces, would be located in the above-ground parking structure.

On MND page 129, Table 3.17-3, Project Trip Generation shows an increase in employees from 191 to 375 and a net increase in "Daily Trip Ends" of 525 trips per day. Currently, access to the DWP facility is via Nebraska Ave, Centinela Ave, or Olympic Blvd. In the MND, it is apparent that all employee access to the planned underground parking structure will be via Nebraska Ave, a residential street directly fronting private residences.

1) **We believe** that the increase in daily trips exacerbates an already dangerous intersection at Bundy Drive and Nebraska Ave, where there are no traffic signals.
   a) There will be hazardous ingress backups on Bundy Dr.
   b) There will be hazardous and polluting morning backups along Nebraska Ave as each new arrival awaits their turn through the parking enforcement turnstile.
   c) There will be a general inability to safely make left turns from Nebraska Ave onto Bundy Dr during morning and evening commute hours.

We believe that the increase in daily trips constitutes an incompatible use of Nebraska Ave, a residential street.
a) There will be a potentially dangerous increase in exhaust pollution on Nebraska Ave.
b) There will be increased noise pollution during morning and evening shift turn over (6am and 4pm).
c) There will be increased pedestrian hazard for children walking to school or to Stoner Park, for residents walking to local markets and for neighborhood residents dependent on motorized wheelchairs.
d) There will be increased hazard and inconvenience for residents attempting to back out from garages on Nebraska Ave and onto heavily traveled and increasingly congested roads.

7) **We ask:**
   a) that the entrance to the parking garage be move to the south side of the parking structure building and that all access to the facility be via existing entrances along Centinela Ave and Olympic Blvd.
   b) that an enhanced sidewalk suitable to motorized wheelchair traffic be established along the full length of Nebraska Ave.
   c) that painted bike lanes be established along the full length of Nebraska Ave.

21-9 Cont.

Pollution

Throughout this document, we have touched upon the various forms of pollution that the District Yard Project and Receiving Station K will or currently do inflict

21-10

upon our residents. The auto exhaust and noise pollution that will unavoidable accompany increased car traffic and backups along Nebraska Ave during early morning and afternoon commute hours; the interminable and exhausting sound pollution emanating from Receiving Station K; and the visual pollution related to the daily sun blocking and nightly illumination of the 60' tall District Yard and the industrial disaster of Receiving Station K.

1) **We believe** that this is the time to fix the issues that have vexed this neighborhood for 70 years and to avoid the issues that will surely impact the neighborhood deep into the future.

2) **We ask** that you join us as partners; that we work together will open minds and a determination to find solutions that we can all live with and we can tell our children about with pride.

21-10
Cont.

7

Appendix A - Ishihara Park

60 Foot Setback

The Learning Garden

Bamboo Wall Cover

Picnic Area with Grill

Family Time

21-11

8

Appendix B – Sunset Blvd and Via de la Paz

21-11
Cont.

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Response to Comment Letter 21

John Levine, Resident
July 14, 2020

21-1 This comment cites a summary of the proposed project and indicates areas within the Draft IS/MND for further discussion, including "Aesthetics," "Air Quality," "Noise," and "Transportation and Traffic." The comment disagrees with the finding that a Mitigated Negative Declaration (MND) is the appropriate environmental documentation for the proposed project and requests an Environmental Impact Report. Furthermore, the comment requests the proposed project include the entire LADWP facility (Receiving Station K and the project site).

As stated in Section 1.2 of the Draft IS/MND, an MND is prepared for a project when an Initial Study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment. As such, the Initial Study determined that the implementation of the proposed project could cause some potentially significant impacts on the environment, but as shown in the environmental analysis contained in the Draft IS/MND, all of the project's potentially significant impacts (e.g., Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, and Noise) would be reduced to less than significant levels through the implementation of mitigation measures. Section 3.1, Aesthetics, of the Draft IS/MND determines project impacts would be either less than significant or result in no impact.

Furthermore, Receiving Station K is not a part of the proposed project. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

21-2 This comment summarizes concerns regarding potential aesthetic impacts related to the District Yard and Receiving Station K. Specifically, the comment addresses concern for the proposed height of the new structure and rooftop project design feature for potential impacts related to shade and shadow and privacy to the nearby residences. In addition, the comment cites visual blight related to Receiving Station K's existing conditions.

The construction of the proposed project is exempt from the zoning requirements set forth for the project site. The project is defined as a "Power Asset" under Charter Section 672(b) of the Los Angeles Municipal Code (LAMC), which encompasses "all the electric energy rights, lands, right-of-way, sites, facilities and property used for generation, transportation, distribution, and delivery of power for the benefit of the City, its inhabitants and its customers." As such, the City's Power Assets are under control of the Board of LADWP Commissioners (the Board), and subject to oversight by the Los Angeles City Council under Charter Section 245 of the LAMC. Specifically, the Board has "the power and duty to make and enforce all necessary rules and regulations governing the construction, maintenance, operation, connection to and use of the Water and Power Assets for (LADWP) Purposes." Therefore, the project's proposed height is

not in conflict with the LAMC. No changes or additions to the Project Description or environmental analysis are required in response to this comment.

As discussed in Section 3.1, Aesthetics, of the Draft IS/MND, proposed project impacts were determined to be less than significant or result in no impact. The project site does not include the part of the LADWP property known as Receiving Station K. As such, impacts related to the existing visual character of the LADWP property only included the defined project site and not Receiving Station K.

For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10.

A shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.

21-3 This comment summarizes concerns regarding potential noise impacts related to the District Yard and Receiving Station K. Concerns include potential noise from the proposed rooftop. In addition, the comment cites existing concern for noise levels from the current operations of Receiving Station K.

As discussed in Section 3.13, Noise, of the Draft IS/MND, the proposed project would result in less than significant impacts with mitigation incorporated for the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project site. Specifically, mitigation was incorporated to reduce potential construction-related noise impacts.

For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10.

The comment also expresses concern for existing operational noise, specifically from Receiving Station K. The proposed project does not include the upgrade of equipment within Receiving Station K. However, the noise impact analysis detailed within the Draft IS/MND includes noise measurements of existing ambient noise within the project site's vicinity. This includes noise generating from Receiving Station K. As shown in Table 3.13-5, Traffic Noise (Existing and Existing Plus Project), of the Draft IS/MND, none of the short-term measurement locations (ST1 through ST5) exceed the 65 dB CNEL City noise standard for residences under existing noise level conditions. In addition, noise modeling found the existing plus the

proposed project conditions would result in none of the same receptors exceeding 65 dB CNEL. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the proposed project was determined to result in less than significant noise impacts during operations. As such, operational noise generating from Receiving Station K is currently below the City's noise significance thresholds. Given that Receiving Station K is not part of the proposed project, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

21-4 This comment summarizes concerns regarding transportation and traffic. The comment states the increase in daily vehicle trips to and from the project site would result in a traffic hazard for pedestrians on Bundy Drive and Nebraska Avenue.

Section 3.17, Transportation and Traffic, of the Draft IS/MND, determined less than significant impacts would occur related to pedestrian facilities. As discussed, the project site is well-located to encourage pedestrian activity and walking as a transportation mode. The project site is situated within easy walking distance to several established residential areas as well as other retail, restaurant, and other commercial businesses within the area. The project will connect to the adjacent sidewalk network via the Nebraska Avenue and Centinela Avenue property frontages. Existing sidewalk infrastructure exists on both Nebraska Avenue and Bundy Drive, and the project would not interfere with access and use of these facilities.

Furthermore, it was determined the project would result in less than significant impacts due to an increase hazard from a design feature or an incompatible use. Traffic signal warrants analyses were conducted, including for the intersection at Bundy Drive and Nebraska Avenue. The analysis concluded a traffic signal was not required under future with project conditions. In addition, the City's Vision Zero initiative, which identifies High Injury Network (HIN) roads, only reviewed specific locations and immediate vicinity for potential safety enhancements when a project would result in significant impacts at intersections designated as HIN. As mentioned above, the proposed project would not result in significant impacts at Nebraska Avenue and Bundy Drive. Therefore, the Draft IS/MND adequately analyzed the proposed project's impacts on pedestrian safety and determined less than significant impacts would occur.

21-5 This comment summarizes concerns for increased air quality pollution and noise pollution as a result of the project's increase of employees to the project site.

As discussed in Section 3.17, Transportation and Traffic, of the Draft IS/MND, the proposed project is expected to generate a net increase of up to 52 vehicle trips during the weekday AM peak hour, up to 59 trips during the weekday PM peak hour and a net increase of up to 525 daily trips during a typical weekday. Subsequent analysis for proposed project evaluated the projected increase in traffic within Section 3.3, Air Quality, and Section 3.13, Noise.

Within Section 3.3, the Draft IS/MND determined the operation of the project would produce VOC, NOx, CO, Sox, PM_{10}, and $PM_{2.5}$ emissions from several sources, including mobile sources (from vehicle trips). Based on CalEEMod air quality modeling prepared for the project, the total net daily operational emissions would not exceed the South Coast Air Quality Management District's operational significance

thresholds. Therefore, although emissions would be generated as a result of the project, the impact would be less than significant.

Within Section 3.13, the Draft IS/MND determined the project's off-site operational (traffic) noise impact would not result in an increase in ambient noise level when compared to existing conditions. Therefore, traffic related to the proposed project would not exceed any noise standards and would not substantially increase the existing noise levels in the project vicinity, and permanent operational traffic-related noise impacts would be less than significant.

21-6 This comment expresses opposition to the findings and conclusions within the Draft IS/MND. The comment cites the legal requirements for the 30-day notification of the project, but notes LADWP did not engage the neighborhood prior to this timeline.

The period of 30 days for public review complies with Section 15073 of the State CEQA Guidelines, which states a proposed mitigated negative declaration shall not have a public review period less than 30 days when submitted to the State Clearinghouse for review by State agencies. At the beginning of the public review period is when LADWP finalized project design and subsequent environmental analysis, subject to public comment. As such, LADWP, as the lead agency, solicited public review period of the Draft IS/MND from June 25, 2020 to July 25, 2020.

Section 15072 of the State CEQA Guidelines states the lead agency shall provide a Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration by at least one of the following procedures:

> (1) Publication at least one time by the lead agency in a newspaper of general circulation in the area affected by the proposed project. If more than one area is affected, the notice shall be published in the newspaper of largest circulation from among the newspapers of general circulation in those areas.
>
> (2) Posting of notice by the lead agency on and off site in the area where the project is to be located.
>
> (3) Direct mailing to the owners and occupants of property contiguous to the project. Owners of such property shall be identified as shown on the latest equalized assessment roll.

In compliance with Section 15072 of the State CEQA Guidelines, LADWP published the NOI in the Los Angeles Times newspaper and provided direct mail notices of the proposed project to owners and occupants of property within the immediate vicinity of the project site.

21-7 This comment identifies concerns with aesthetics, specifically toward the height of the proposed building, the rooftop green space, and community character. The comment outlines concern of safety, privacy, and shade and shadow potential impacts onto nearby residential neighborhood. In addition, the comment cites zoning regulations for maximum height and floor-area-ratio. The comment suggests the incorporation of a maintained green belt with a 60-foot setback instead of the proposed 28-foot setback. The comment requests night-time office lights to be managed to minimize the disturbance of the nearby residents.

This comment also states specific requests related to Receiving Station K. Concern includes visual blight with transmission lines casting shadows onto the residential neighborhood. The commenter believes the proposed project should include the entire LADWP property in its analysis and design of the proposed project. The comment requests a 30-foot tall barrier to reduce existing aesthetic impacts. In addition, the comment requests all equipment on the LADWP property be relocated away from Nebraska Avenue and towards Olympic Boulevard.

The construction of the proposed project is exempt from the zoning requirements set forth for the project site (e.g., height and floor-area-ratio). The project is defined as a "Power Asset" under Charter Section 672(b) of the Los Angeles Municipal Code (LAMC), which encompasses "all the electric energy rights, lands, right-of-way, sites, facilities and property used for generation, transportation, distribution, and delivery of power for the benefit of the City, its inhabitants and its customers." As such, the City's Power Assets are under control of the Board of LADWP Commissioners (the Board), and subject to City Council oversight under Charter Section 245 of the LAMC. Specifically, the Board has "the power and duty to make and enforce all necessary rules and regulations governing the construction, maintenance, operation, connection to and use of the Water and Power Assets for (LADWP) Purposes." Therefore, the project's proposed height and floor-area-ratio are not in conflict with the LAMC.

Section 3.1, Aesthetics, of the Draft IS/MND described the project site as within an urbanized area already developed with LADWP facilities. According to the State CEQA Guidelines threshold on community character, a significant impact would occur if a project site within an urbanized area conflicted with applicable zoning governing scenic quality, for example. As mentioned above, the Board maintains the authority to exempt the project site as a Power Asset from zoning regulations on height and floor-area-ratio. However, the proposed project would comply with other regulations within the LAMC, such as landscape design which would enhance the visual quality of the site, resulting in the replacement of outdated structures with new and improved facilities and landscaping.

In addition, under existing conditions, the LADWP property maintains an approximately 15-foot setback on Nebraska Avenue. A 60-foot setback, as requested, is not feasible and not within the scope of the proposed project. As stated, the proposed project would result in a less than significant impact on scenic quality and would not conflict with existing zoning regulations governing scenic quality.

As discussed in Section 3.1, the proposed project's operational hours would be from Monday and Friday from 6:30 a.m. – 11:00 p.m., Tuesday and Thursday from 6:30 a.m. – 7:00 p.m., Saturday and every other Sunday from 6:30 a.m. – 4:30 p.m. These hours of operation would not change from the hours of operation already existing on the site and, as such, interior building lighting as a result of project operation would not significantly change when compared to existing conditions. In addition, the project's design would not include large expanses of glass or other highly reflective materials that would generate unusual amounts of light or reflective glare on, or around, the project site when compared to existing operational activities. The project would comply with LAMC Section 93.0117, which specifically regulates the installation of outdoor lighting that has the potential to direct light and glare towards residential property. Therefore, the Draft IS/MND determined impacts related to lighting and glare would be less than significant.

A shade and shadow analysis was conducted to determine how long surrounding residential uses could be shaded throughout the year. As shown in the new Figures 3.1-1 through 3.1-4, the shade and shadow analysis evaluated shade casted by the proposed building during the Spring and Autumn Equinoxes and Summer and Winter Solstices. The City of Los Angeles Draft CEQA Thresholds Guide provides general guidelines for determining whether a project's impact would be considered significant: "...shadow-sensitive uses would be shaded by Project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October)." Using this as a standard, the project's potential impacts to shade-sensitive uses (i.e., residences across the street from the project site) can be determined. For example, and as shown in Figure 3.1-4, on December 21st (Winter Solstice), the day of the year where sunlight is lowest in the sky and therefore casts the longest shadows, the project's proposed building would result in shadows present at the nearest residential property lines at 9:00 a.m. and leave the property lines exactly at 12:00 noon. As such, these residences would be shaded for no more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Therefore, the proposed project would not result in a significant impact related to shade and shadows.

Finally, the comment's request for a 30-foot barrier to be constructed around the LADWP property is not within the scope of the proposed project nor is the request for surrounding Southern California Edison power lines to be replaced underground. The portion of the LADWP facility, known as Receiving Station K is not included within the project site boundaries. Although the Draft IS/MND did not include impact analysis on visual quality of the entire property, the project proposes new structures with designs to enhance the visual character of surrounding facilities, including those that would be visually compatible with the aesthetic of the project's vicinity (see Figure 2-3A and 2-3B, Building Elevations of the Draft IS/MND).

For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10.

21-8 This comment identified specific concerns related to noise for the District Yard. Concern for the proposed project cites the proposed green rooftop design feature, which the commenter believes potential noise impacts could occur during evening hours. The commenter requests the inclusion of a northwest facing sound and privacy barrier to be added to the project's design.

This comment also cites specific concerns with existing conditions of the Receiving Station K. The comment continues to outline history of this portion of the LADWP property and relationship to the general West Los Angeles community. The comment cites mental and physical health issues related to noise impacts. The comment requests a 30-foot sound barrier and green belt along Nebraska Avenue and for the relocation of equipment towards Olympic Boulevard to reduce existing noise disturbances.

For discussion and a description of the proposed roof deck, please see the Response to Comment 3-10. The proposed project was found to result in less than significant impacts for operational noise.

Receiving Station K is not part of the proposed project. However, the noise impact analysis detailed within the Draft IS/MND includes noise measurements of existing ambient noise within the project site's vicinity (including Receiving Station K). As shown in Table 3.13-1 and 3.13-2 of the Draft IS/MND, noise

measurements determined typical daytime noise levels in the project vicinity ranged from approximately 50 dBA L_{eq} to approximately 64 dBA L_{eq}. Hourly average daytime and nighttime noise levels ranged from approximately 44 dBA L_{eq} during the late-night/early-morning hours to approximately 59 dBA L_{eq} during the afternoon hours. As such, existing noise within the project site's vicinity (including existing noise generated from Receiving Station K) does not exceed the 65 dBA CNEL City noise standard for residences. In addition, Table 3.13-5, Traffic Noise (Existing and Existing Plus Project) shows the existing plus the project noise conditions, which would result in none of the short-term measurement receptors exceeding the 65 dB CNEL noise standard. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the proposed project was found to result in less than significant noise impacts during operations. Therefore, the comment's requests for a 30-foot sound barrier is not warranted based on the determined impacts. No changes or additions to the Project Description or environmental analysis are required in response to this comment.

21-9 This comment identifies concerns with transportation and traffic related to the proposed project. Specifically, the comment challenges the determination of no increase in hazards related to dangerous intersections or incompatible uses. The comment cites portions of the Draft IS/MND related to project design, parking spaces, trip generation analysis, and project operational access via Nebraska Avenue. The comment believes an increase in vehicle trips would result in a hazardous ingress on Bundy Drive, potential impacts to air quality related to increased traffic would occur, and the project would result in the inability to safely make a left turn from Nebraska Avenue onto Bundy Drive during morning and evening peak hours.

In addition, the comment cites an increase in daily trips would result in an incompatible use of Nebraska Avenue as a residential street. An increase in trips would result in an increase in noise pollution, an increase in pedestrian safety hazard, and congestion on neighborhood streets adjacent to Nebraska Avenue. As a result, the comment requests the entrance to the project site to be move to the south side of the parking structure and all access be limited to Centinela Avenue and Olympic Boulevard. The comment requests upgrades to existing sidewalk infrastructure, suitable for motorized wheelchair use along Nebraska Avenue. Finally, the comment requests painted bike lanes along Nebraska Avenue.

As shown in Figure 7-2 included in Appendix F of the Draft IS/MND, the proposed project would add nominal peak hour trips in the AM and PM peak hours to the left turn from Nebraska Avenue onto Bundy Drive. The traffic study also prepared traffic signal warrants for the Bundy Drive/Nebraska Avenue intersection. However, based on vehicular volume (during 8-hour, 4-hour, and peak-hour) and historic crash experience data available for the intersection, the criteria for installation of traffic signal was not met.

The proposed project is an improvement of existing facility along Nebraska Avenue. It is not proposing an incompatible use. Increase in traffic from the proposed increase in employees has been analyzed in the traffic study, included as Appendix F to the Draft IS/MND, and summarized within Section 3.17, Transportation and Traffic, in the Draft IS/MND. The capacity of Nebraska Avenue has been evaluated by analyzing intersections of Centinela Avenue/Nebraska Avenue and Bundy Drive/Nebraska Avenue with the proposed project trips during the AM and PM peak hours. As shown, the intersections along

Nebraska Avenue in the vicinity of the project, operate at acceptable levels of service (LOS D) or better under Existing, Existing with Project, Year 2025 Future and Year 2025 Future with Project conditions.

The staff vehicle entry has been planned comprehensively with the design of the new building which includes Administration and Service Planning Area. The subterranean garage which would require employees to access the project site from the driveway proposed along Nebraska Avenue for most efficient circulation and access, as is currently the case. The existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities. All the driveways would be designed/modified per standard design requirements in terms of driveway width, throat length, and sight distance, and would not cause traffic and safety impacts.

The project would be responsible for any frontage improvements required along Nebraska Avenue. Per Los Angeles Department of Transportation's assessment letter, LADWP will consult with the Department of City Planning for any additional requirements pertaining to walkability and connectivity.

21-10 This comment raises concern for the various forms of pollutions (i.e., air quality, noise, visual/light) that the proposed project as well as the existing Receiving Station K inflicts onto the neighborhood. The comment requests collaboration with the neighborhood on the aforementioned ideas.

The comment's concerns are addressed in Response to Comment 21-5 above. In addition, the commenter's concerns outlined in Comment Letter 21 have been discussed and responded to, as shown above. Furthermore, the Draft IS/MND solicited public comment during a 30-day public review period consistent with Section 15073 of the State CEQA Guidelines. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

21-11 This comment consists of appendices to the comment letter (Appendix A – Ishihara Park, and Appendix B – Sunset Blvd and Via de la Paz) as examples cited within the above comments.

The comment and attachments will be provided to the project decision-makers for review during consideration of the Final MND.

Comment Letter 22

From: c m <cjoy100@yahoo.com>
Sent: Wednesday, July 1, 2020 8:59 AM
To: Leong, Aiden; City of Los Angeles
Cc: John Levine; Eric Kraft
Subject: [EXTERNAL] DWP District Yard Project

Follow Up Flag: Follow up
Flag Status: Flagged

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Hello - I have some questions regarding the upcoming DWP District Yark project. Can you answer the following....

1. What mitigation efforts is the City taking to ensure that employees, visitors and DWP trucks will not be allowed to park in our neighborhood? We recently passed permit parking in most of the surrounding streets around the DWP to preserve our parking for residents. As you can imagine, this was an exhausting yet hugely successful community effort. I understand that DWP will be building an above and underground parking structure, however that doesn't necessarily prevent people from parking on our streets. What additional measures is DWP and/or the city proposing to prohibit parking in our neighborhood? 22-1

2. Can you elaborate on the "campus beautifcation" measures for the site project and long-term maintenance? Are there any measures for tree lined streets on Nebraska, Centinella and Bundy scheduled to keep our neighborhood looking nice and please elaborate on the long-term maintenance program for this landscape. Can you be more specific about the type of structural materials being used along Nebraska and will the materials stand the test of time or erode in a few years and be an eyesore? 22-2

3. Finally - how many employees now work at the DWP site and what is the the current daily traffic versus future projected number of employees and daily traffic numbers after the project is complete? 22-3

Thank you

Carla Lona
1662 Wellesley Ave
310-895-6659

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Response to Comment Letter 22

Carla Lona, Resident
July 1, 2020

22-1 This comment asks if there is mitigation within the IS/MND to prevent employees, visitors, and LADWP trucks from parking their vehicles in the adjacent neighborhood. The comment notes the neighborhood recently adopted a parking-permit system and wants to ensure compliance.

The proposed project would include the demolition of an existing surface parking lot and the construction of a two level above-ground parking structure with a total of up to 154 parking stalls. Beneath the proposed new building, a single-level underground parking structure with a total of up to 389 parking stalls would also be constructed. An additional 12 public parking spaces would be provided at grade for the Service Planning group, outside of the security gate. All fleet vehicle parking, which totals up to 154 oversized parking spaces, would be located in the above-ground parking structure. Employee parking would follow the LADWP Commuter and Reservation Services (CARS) Office fee and policy requirements. As such, LADWP would provide on-site parking to its employees with accommodations increasing the amount of spaces from existing conditions.

During construction, the proposed project would comply with best management practices and work site traffic control plan per Los Angeles Department of Transportation Western District Operations Office requirement for the duration of project's construction. In addition, mitigation measure MM-NOI-1 includes the following provision, "Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors." Therefore, the project is designed to limit construction-related parking away from nearby residences.

22-2 This comment asks for further discussion on "campus beautification" and landscaping design features within the Draft IS/MND, including long-term maintenance. The comment specifically questions if the project would plant trees along Nebraska Avenue, Centinela Avenue, and Bundy Street.

As described in the Section 2, Project Description, in order to accommodate the driveway expansion, one existing street tree is proposed to be removed and new trees would be added to the project site in landscape designated areas, including the Nebraska Avenue frontage of the project site. In addition, the proposed project would incorporate water-conservation landscape design practices while providing an aesthetically pleasing buffer to the surrounding neighborhood. The proposed design would include City-approved accent trees set within the Nebraska Avenue parkway and would be mirrored along the building façade as a visual continuation of the public right-of-way. Landscaping would also feature southern California native and drought-adaptive species. The energy courtyard would be defined by a linear paver system with rows of planting areas and raised seat walls. The living roof system would be a low-profile roof-top planting with 6-inch vegetated modules covering the roof in order to mitigate solar heat gain.

22-3 This comment asks for the existing number of employees on the LADWP project site and for the existing traffic volumes compared to projected trip generation with the proposed project.

As shown in Table 3.17-3, Project Trip Generation, in Section 3.17 of the Draft IS/MND, there are 191 existing employees. The proposed project would increase the number of employees up to 375 (i.e., up to 315 West LA Yard employees and up to 60 Service Planning Center employees). The table also provides the trip generation for proposed and existing employees. The proposed project would add up to 525 net new daily trips, up to 52 AM peak hour trips and up to 59 PM peak hour trips.

Comment Letter 23

From: Carol MacFarlane <carolmacfarlane1@hotmail.com>
Sent: Sunday, July 26, 2020 5:34 PM
To: mike@11thdistrict.com; Len Nguyen; jayr@westlasawtell.org; Leong, Aiden
Cc: jross@WLANC.com; John Levine
Subject: [EXTERNAL] LADWP development on Nebraska Ave

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Dear Mike Bonin and City leaders,

This is to reach out to you regarding the proposed changes to the LADWP. My home is literally ½ block away from the site. The impact on the neighborhood is extremely distressing given the impact on the quality of life in the neighborhood and on my property value. Please note my concerns as well as well as suggested solutions: 23-1

1. With 200 new employees and a morning shift starting at 6:30am, traffic along Nebraska Ave and throughout our neighborhood will increase dramatically. Additionally, the impact of left hand turning from Nebraska to Bundy will cause terrible backing up of cars into our residential neighborhood.
Therefore, please move the entrance to their underground garage to Olympic Blvd or Centinela Blvd. 23-2

2. A 60 foot tall building (similar to the Bed Bath and Beyond building on Olympic Blvd) along Nebraska Ave overlooking residential homes is not only an eyesore, but will compromise the privacy of our houses and cover the north side of Nebraska Ave in shadows for much of the morning. The current zoning laws allow for 35 foot max elevation. Besides being an eyesore**, please increase the building setback to 60 feet. An additional greenbelt separating the office building and parking structures from the street and residences along Nebraska will help to keep our neighborhood feel residential.** 23-3

3. At the top of the building is an "extensive green (party) roof". Even casual use of this Feature will project noise across the surrounding area.
A sound and privacy wall on the north side will help alleviate noise in the neighborhood. 23-4

4. After years of complaints about the extreme noise and visual blight of Receiving Station K, the DWP has opted to exclude any consideration of improvements to the Station in this plan. **I would like to request the city demand the DWP to reduce noise by upgrading their equipment and building a sound wall around the Station as they have in many other parts of LA.** 23-5

Lastly, I am also very concerned that the planning for these structures and revisions to the LADWP with very little concern or communication with property owners in the neighborhood. I will be following your meetings very closely moving forward and I look forward to hearing back from you soon. 23-6

Sincerely,

Carol MacFarlane
1724 So Carmelina Ave.
Los Angeles, CA 90025

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Response to Comment Letter 23

Carol MacFarlane, Resident
July 26, 2020

23-1 This comment expresses opposition to the proposed project as a resident nearby the project site.

The commenter's general opposition to the project will be provided to the decision makers for their review and consideration as part of this Final MND.

23-2 This comment expresses concern for the increase in the number of employees onto the project site and subsequent projected trip generation during the morning peak hours, including the associated impact onto the nearby residential neighborhood and left turn from Nebraska Avenue to Bundy Street. The comment suggests relocating the entrance to the proposed underground garage to Olympic Boulevard or Centinela Avenue.

For discussion related to traffic and access to the project site, please see Response to Comment 21-9.

23-3 This comment is concerned with the aesthetics, privacy, and potential shadow impacts from the proposed building's height. In addition, the comment cites zoning regulations for height and believes the proposed project is out of compliance. The comment requests a 60-foot setback with a greenbelt between the project site and the residential neighborhood.

For discussion related to the project's height and potential impacts to aesthetics, please see Response to Comment 21-7.

23-4 This comment expresses concern for potential noise impacts related to the rooftop design feature. The comment requests a sound and privacy wall on the north side of the project site to reduce potential impacts.

For discussion related to operational noise, including potential noise from the proposed rooftop, please see Response to Comment 21-3.

23-5 This comment states previous complaints regarding existing noise and visual blight with Receiving Station K. The comment requests the proposed project include measures to reduce noise, including upgrades to existing equipment and the construction of a sound wall around the station.

For discussion on existing noise and visual blight with Receiving Station K, which is not a part of this proposed project, please see Response to Comment 21-8.

23-6 This comment expresses concern for the planning of the proposed project and communication with property owners in the residential neighborhood.

For discussion related to the public review process for the Draft IS/MND, please see Response to Comment 21-6.

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Comment Letter 24

From: Andrew Major <andrewmajor1@gmail.com>
Sent: Saturday, July 25, 2020 5:37 PM
To: Leong, Aiden
Cc: ben.lazebnik@lacity.org; len.nguyen@lacity.org; jross@wlanc.com; jhandal@wlanc.com
Subject: [EXTERNAL] Thoughts for LADWP building

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Hello everyone,

I am a resident who lives within one block of the newly proposed LADWP office tower on Nebraska Avenue (Wellesley & Iowa). My wife and I have owned our home here since 2004.

We also have two young girls who are active in the neighborhood. Having 200 new employees raises our concerns over privacy, especially for those families directly across the street from the new building.

We have been following the progress and would love for you to consider the following concerns/requests:

- As you probably have heard from others, we're concerned about the traffic in our neighborhood, especially along Nebraska. This will force 200 new cars to enter through our neighborhood. In your proposal, we'd appreciate if you located the underground parking entrance off Olympic Blvd. Area businesses have accommodated this such as Bed, Bath & Beyond, Tribeca West, Riot Games, and many others. Plus, Olympic can obviously handle traffic better than our small streets.

- A 60 foot tall building along Nebraska Ave will compromise the privacy of our houses and cover the north side of Nebraska Ave in shadows for much of the morning. Please comply with local zoning laws (35 foot max), do a shadow study, and increase the building setback to 60 feet.

- I understand the building will include a large green roof, which will certainly be used for events and gatherings. The noise will undoubtedly disturb our quiet neighborhood, so please include a sound and privacy wall on the north side.

-Since the building of Station K, our neighborhood has suffered from noise and visual blight. While I ultimately support the station, I know that other locations have a sound wall and we'd appreciate having one at Station K. This will help mitigate the noise and "visual" pollution to the neighborhood.

-Most importantly, **the neighborhood will be forever grateful** if you increased the Nebraska Ave. setback and included a landscaped green belt along the full length of the DWP / Nebraska Ave property. And while you're at it, let's build a park! This will certainly help with the visual concerns of my fellow neighbors and, if there is park space included, you will almost certainly enjoy our embrace. Especially as more and more young families move into the area.
If you are willing to accommodate the above concerns, you will likely find the support of my fellow neighbors and we can all embrace this new development together (especially if there's a beautiful park!).

Thanks for your consideration.

Best wishes,

Andrew Major
1701 Wellesley Ave.

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Response to Comment Letter 24

Andrew Major, Resident
July 25, 2020

24-1 This comment expresses concern for the proposed project and the potential impacts to privacy.

For discussion on the project's proposed rooftop design, please see Response to Comment 21-2, Response to Comment 21-3, Response to Comment 21-7, and Response to Comment 21-8.

24-2 This comment states concern for the potential traffic impacts as a result of an increase of employees to the project site.

The staff vehicle entry has been planned comprehensively with the design of the new building which includes Administration and Service Planning Area. The subterranean garage which would require employees to access the project site from the driveway proposed along Nebraska Avenue for most efficient circulation and access, as is currently the case. The existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities. All the driveways would be designed/modified per standard design requirements in terms of driveway width, throat length and sight distance and would not cause traffic and safety impacts.

24-3 This comment states concern for the proposed building height's conflict with zoning regulations and associated potential shadow impacts. The comment suggests the project include a 60-foot setback.

For discussion on the project's height and potential shade and shadow impacts, please see Response to Comment 21-2.

24-4 This comment expresses concern for the project's rooftop design feature and potential associated operational noise impacts. The comment suggests the inclusion of a sound and privacy wall on the north side of the project site to reduce impacts.

For discussion on the project's proposed rooftop design, please see Response to Comment 21-3 and Response to Comment 21-8.

24-5 This comment states existing noise and visual blight complaints with Receiving Station K. The comment requests the proposed project to include measures to reduce noise and visual pollution, including upgrades to existing equipment and the construction of a sound wall around the station.

For discussion on Receiving Station K, which is not a part of this project, and existing conditions, please see Response to Comment 21-8.

24-6 This comment requests the proposed project increase the setback along Nebraska Avenue along the full length of the LADWP property. The comment also expressed interest in the creation of a park along the landscaped setback.

The project includes proposed design improvements including landscaping along Nebraska Avenue. However, the comment's requests for a park and landscaping along the full length of Nebraska Avenue are not within the scope of the proposed project. Sections 3.15, Public Services, and 3.16, Recreation, of the Draft IS/MND discuss the proposed project's potential impacts to parks and recreational facilities within the project site's vicinity. The Draft IS/MND cites Stoner Recreation Center, approximately 0.3-mile northeast of the project site as the nearest park to the project site. The environmental analysis determined the proposed project would not contribute to an increase in the use of existing neighborhood or regional parks or other recreational facilities and would not generate a demand for new parks. Typically, a project that proposes new residences would directly result in a need for new parks and recreational facilities. This comment will be provided to the decision makers for their review and consideration as part of this Final MND.

Comment Letter 25

From: Michael Martin <michaelcmartin10@gmail.com>
Sent: Saturday, July 25, 2020 5:00 PM
To: Leong, Aiden
Cc: ben.lazebnik@lacity.org; len.nguyen@lacity.org; JRoss@wlanc.com; JHandal@wlanc.com
Subject: [EXTERNAL] LADWP Project - Nebraska Ave

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Hello,

My name is Michael Martin and I reside at 1740 Wellesley Ave, Los Angeles, CA 90025. I am writing to make the request to the proposed LADWP project at the station on Nebraska Ave in West Los Angeles. I have rented in the area for several years and as proposed, this project is going to seriously affect my decision to buy in the near future. 25-1

Please consider key points below.

Please move the entrance to their underground garage to Olympic Blvd. 25-2

Please comply with local zoning laws (35 foot max), do a shadow study, or increase the building setback to 60 feet. 25-3

Please include a sound and privacy wall on the north side. 25-4

Please reduce noise by upgrading their equipment and building a sound wall around the Station as they have in many other parts of LA. 25-5

Please give back to our neighborhood by increasing the Nebraska Ave setback and including a landscaped green belt along the full length of the DWP / Nebraska Ave property. 25-6

Thank you for your consideration.

--
Mike Martin
818-314-9742

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Response to Comment Letter 25

Mike Martin, Resident
July 25, 2020

25-1 This comment expresses concern for the proposed project as a renter and potential buyer in the neighborhood.

This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment. The commenter's general opposition to the project will be provided to the decision makers for their review and consideration as part of this Final MND.

25-2 This comment requests the project relocate the entrance to the underground parking garage to Olympic Boulevard.

For discussion related to the project's proposed entrance and circulation, please see Response to Comment 21-9.

25-3 This comment asks for the project to comply with height restrictions of 35 feet and requests a shadow study or an increased building setback to 60 feet.

For discussion related to the project's proposed height, please see Response to Comment 21-7.

25-4 This comment requests the construction of a sound and privacy wall along the north side of the project site.

For discussion related to potential noise impacts, especially during project construction, please see Response to Comment 21-8.

25-5 This comment requests the proposed project include upgrades to Receiving Station K's existing equipment and to construction a sound wall around the equipment.

For discussion related to requests to Receiving Station K, which is not a part of or within this scope of this project, please see Response to Comment 3-7.

25-6 This comment requests the proposed project include an increased setback along Nebraska Avenue and a landscaped greenbelt along the full length of the LADWP property.

For discussion on the comment's request for a landscaped setback, please see Response to Comment 3-8.

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Comment Letter 26

From: Tom Meyer <tommeyer2@me.com>
Sent: Friday, July 24, 2020 9:33 PM
To: Leong, Aiden; ben.lazebnik@lacity.org; len.nguyen@lacity.org
Cc: JRoss@wlanc.com; JHandal@wlanc.com
Subject: [EXTERNAL] West LA District yard redevelopment
Attachments: LADWP MND Response- 071420.pdf; ATT00001.htm

To LADWP and Councilman Mike Bonin:

I am writing to express my displeasure on how the LADWP has handled the redevelopment of the West Los Angeles District yard and to implore you to delay the project to take into account and act upon community concerns.

As a resident of the affected neighborhood since 1997, I realized when I bought my home that the Station was there before me and I have not raised any concerns. But now that a major renovation is about to take place, I feel that I have the right to comment and request changes that can be made to improve the neighborhood at the same time improving the Station itself. 26-1

The process that DWP has followed has been deceitful. To NOT have solicited community input (a well known technique to avoid lawsuits and angry neighborhoods) early in the process, the DWP has moved to rush this project through, barely adhering to the law. That is disgraceful, and as a taxpayer, I feel that those in charge who knew full well what they were doing, should be reprimanded and/or terminated.

While I fully agree with all elements of the neighborhood letter attached, I'd specifically like to call out the following: 26-2

1.
Traffic mitigation - If you have spent any time in the neighborhood during the day and especially in the mornings and afternoons, you would know that Nebraska and the intersection of Nebraska at Bundy Drive are full and often dangerous. To think that you can add 200 new employees without increasing traffic and adding risk is ludicrous. Please move the entrance and all employee and vehicular traffic to Olympic Blvd.

2.
The Buidling - is far too tall as planned to abut a residential neighborhood. Given that you are adding an underground parking garage and eliminating some buildings, please have architects figure out how to use a larger footprint in order to bring the height down by half. And follow local zoning laws and add the appropriate setback. I'd like to see a 60 - 75' setback. 26-3

3. Noise and Visual Aesthetics - As an upgrade to the yard is going to happen, why not deal with some of the existing issues? Please reduce the noise impact by upgrading the equipment and building a sound mitigation wall on Nebraska Ave. at minimum. I'd also like to see a deeper setback and landscape architecture that is inviting and useful to residents similar to what the City of Santa Monica did next to the Metro Expo yard with Ishihara Park. 26-4

Now is the time to make sure this project is done correctly and to do the right thing for the neighborhood.

Thank you for your consideration.

Tom Meyer
1560 S. Carmelina Ave.

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Response to Comment Letter 26

Tom Meyer, Resident
July 24, 2020

26-1 This comment expresses concern for the project as proposed. The comment requests the project include upgrades to Receiving Station K. The comment further expresses frustration for the project's public review process.

The proposed project does not include upgrades to Receiving Station K. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment. For discussion on the Draft IS/MND's noticing process and procedures, please see Response to Comment 21-6. The commenter's general opposition to the project will be provided to the decision makers for their review and consideration as part of this Final MND.

26-2 This comment cites an attached neighborhood letter. This letter is identical to Comment Letter 21. Please see the Response to Comment Letter 21.

Furthermore, the comment addresses traffic concerns related to the increase in employee trips from the project site onto intersections such as Nebraska Avenue and Bundy Street. The comment requests the entrance to the project site be relocated to Olympic Boulevard. For discussion related to traffic impacts and access to and from the project site, please see Response to Comment 21-9.

26-3 This comment cites concern for the project's proposed height and suggests a lower height and a 60- to 75-foot setback.

The construction of the proposed project is exempt from the zoning requirements (e.g., height and floor-area-ratio) set forth for the project site. The project is defined as a "Power Asset" under Charter Section 672(b) of the Los Angeles Municipal Code (LAMC), which encompasses "all the electric energy rights, lands, right-of-way, sites, facilities and property used for generation, transportation, distribution, and delivery of power for the benefit of the City, its inhabitants and its customers." As such, the City's Power Assets are under control of the Board of LADWP Commissioners (the Board), and subject to City Council oversight under Charter Section 245 of the LAMC. Specifically, the Board has "the power and duty to make and enforce all necessary rules and regulations governing the construction, maintenance, operation, connection to and use of the Water and Power Assets for (LADWP) Purposes." Therefore, the project's proposed height and floor-area-ratio are not in conflict with the LAMC.

26-4 This comment cites existing concerns with noise and visual conditions of Receiving Station K. The comment requests a sound wall to mitigate noise concerns on Nebraska Avenue. In addition, the comment expressed an interest in a larger setback such as Ishihara Park in the City of Santa Monica.

The proposed project does not include the upgrade of equipment existing within Receiving Station K. However, the noise impact analysis detailed within the Draft IS/MND includes noise measurements of existing ambient noise within the project site's vicinity. This includes noise generating from Receiving Station K. As shown in Table 3.13-5, Traffic Noise (Existing and Existing Plus Project), of the Draft IS/MND, none of the short-term measurement locations (ST1 through ST5) exceed the 65 dB CNEL City

noise standard for residences under existing noise level conditions. In addition, noise modeling found the existing plus the proposed project conditions would result in none of the same receptors exceeding 65 dB CNEL. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the proposed project was found to result in less than significant noise impacts during operations. As such, the comment's suggestions for upgraded equipment and the relocation of existing equipment are not within the scope of the proposed project. The comment's request for a sound wall would not be warranted based on the determined impacts. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

The project includes proposed design improvements including landscaping along Nebraska Avenue. However, the comment's request for a park is not within the scope of the proposed project. Sections 3.15, Public Services, and 3.16, Recreation, of the Draft IS/MND discuss the proposed project's potential impacts to parks and recreational facilities within the project site's vicinity. The Draft IS/MND cites Stoner Recreation Center, approximately 0.3-mile northeast of the project site as the nearest park to the project site. The environmental analysis determined the proposed project would not contribute to an increase in the use of existing neighborhood or regional parks or other recreational facilities and would not generate a demand for new parks. Typically, a project that proposes new residences would directly result in a need for new parks and recreational facilities. This comment will be provided to the decision makers for their review and consideration as part of this Final MND.

Comment Letter 27

From: Sharon Mishima <sharonmishima@gmail.com>
Sent: Monday, July 13, 2020 11:52 AM
To: Leong, Aiden; ross_jay@hotmail.com; len.nguyen@lacity.org; ben.lazebnik@lacity.org; Hong, Deborah; mike@11thdistrict.com
Subject: [EXTERNAL] LADWP Proposed Construction Nebraska Ave impact on surrounding neighborhood

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Thank you so much for listening to our community during the July 7 neighborhood council meeting regarding the proposed construction at the DWP site on Nebraska Avenue.

I would like to share some family history that might shed some light on the passion my family has for this community, our neighbors and their wellbeing.

Sixty years ago, my parents, US born citizens of Japanese immigrants were hoping to achieve the American Dream of owning a home. They were stopped in their tracks by a racist developer in Mar Vista who would not sell them a house because they were not white. After months of worrying that blatant racism and discrimination were the prevailing sentiments, they were finally able to purchase a lot on the 1700 block of Wellesley Avenue and build the home where we currently reside.

We are very grateful to have recently celebrated my Dad's 100th birthday. My mother is celebrating her 94th birthday today. While we are blessed with their continued good health, it is crushing and devastating to think they may be forced to spend their remaining years with an industrial construction site essentially in our backyard (we are 3 houses from Nebraska Ave.) Having owned a nursery for 65 years, their garden has always been a sanctuary for them; full of fruit trees, flowers and fresh vegetables. The noise and pollution you will create with the demolition, construction and traffic will turn our house into a refuge from what is occurring just outside the doors. The garden will no longer be a peaceful and safe place for them. My parents don't deserve that. It is simply heartbreaking.

27-1

We have many questions and concerns about this project, but I would like to highlight the most important ones:

27-2

1

1. Ingress/egress of any vehicles on Nebraska Avenue is a non-starter. With the birth of the Waze app, our community is being used as a cut through to/from 10 freeway and Santa Monica. Just last week, a vehicle obviously not familiar with the neighborhood blew through a stop sign, nearly broadsiding me. We do not yet know the impact on traffic from the Martin Expo Town Center development on Olympic/Bundy (but the negative environmental impact is already apparent even at this early stage). Clearly DWP has plans for to expand the workforce that will operate from the new building based on the size of the new building and the capacity of the underground garage. We do not accept their claim that all the employees will carpool since this has not been substantiated with any facts or data whatsoever and is unrealistic on its face. Both trucks and passenger vehicles must be rerouted to Centinela and Olympic. There should no longer be any vehicular access on Nebraska.

27-2 Cont.

2. We are very surprised that the extensive and costly renovation of the facility did not address Receiving Station K and the surrounding ivy covered chain link fence which is not only an eyesore that negatively impacts property values, but also a health hazard and nuisance (noise) to all homeowners within a block's range. I suggest a mitigating wall like the one built around Station 39 in Pacific Palisades located at 15345 Sunset Blvd. It must surround Receiving Station K, starting west of the building on Nebraska, then wrapping around southbound on Centinela to the VCA and must completely obscure the unsightliness and block the noise from the fans and transformers. It must be harmonious with and in the same aesthetic as the design of the new building.

27-3

3. The building must be set further back. It is essentially 4 stories and will compromise the privacy of all residents on the 1700 block of Centinela, Carmelina, Wellesley and Amhearst.

27-4

4. Regarding the construction itself: again, any industrial trucks must enter/exit only from Olympic and Centinela. You must provide on site parking during the construction period. We already have permit parking in our neighborhood and even that is not enough and we certainly cannot accommodate any additional vehicles related to the construction. What will be done to mitigate the dust, debris and noise during demolition and construction? As mentioned earlier, we are already suffering from the construction at Bundy/Olympic several blocks away. The DWP project is literally in our back yards!

27-5

My family hopes you will take our community's comments and suggestions to heart as you can see it will affect our daily lives in many ways. To you, it is just a building. To us it is our homes, our neighborhood and our lives for years and generations to come.

We look forward to hearing what actions you will take to directly address these problems and concerns.

27-6

Sincerely,
Sharon Mishima

–
m 310.386.0167
sharonmishima@gmail.com

2

Response to Comment Letter 27

Sharon Mishima, Resident
July 13, 2020

27-1 This comment acknowledges community discussion about the proposed project at a July 7th Neighborhood Council meeting. The comment outlines some personal history and discussion about her connection to the project site' vicinity. Finally, the comment expresses concern for the project construction impacts, such as noise and pollution to the residential neighborhood.

The Draft IS/MND conservatively estimates the duration of the project's construction would start in April 2025 and would last approximately four years. Construction of the project would result in the temporary addition of pollutants by on-site sources and off-site sources. Based on CalEEMod air quality modeling, the Draft IS/MND determined the maximum daily construction threshold would be exceeded for NOx. Therefore, the proposed project would incorporate mitigation measure MM-AQ-1, which requires heavy-duty diesel-powered construction equipment to use Tier 4 Final or better diesel engines. This would reduce the potential for emissions of NOx to a less than significant level.

Similarly, Section 3.13, Noise, identified mitigation measures to reduce construction noise onto nearby residences. Mitigation measure MM-NOI-1 reduces construction activities to specified hours, requires barriers and noise-reducing measures for specified equipment, and outlines particular staging requirements to reduce construction noise. Mitigation measure MM-NOI-2 specifies effective communication and notification with local residents during construction on schedule, duration, and progress. Implementation of these mitigation measures would reduce construction noise impacts to a less-than-significant level.

As discussed in Section 3.17, Transportation and Traffic, construction traffic would not exceed the net new project trips estimated in Table 3.17.3. Therefore, construction-related project traffic would not create significant impacts at any of the eight study intersections, and impacts were found to be less than significant.

Given the above discussion, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

27-2 This comment cites concerns with ingress/egress of the project site at Nebraska Avenue and requests the relocation of the entrance to Olympic Boulevard or Centinela Avenue. The comment states existing transportation concerns and notes related project impacts within the project site's vicinity (i.e., Martin Expo Town Center on Olympic Boulevard and Bundy Street). The comment questions the project's transportation management plan for employees to carpool without data to support the objective.

As shown in Figure 7-2 included in Appendix F of the Draft IS/MND, the proposed project would add nominal peak hour trips in the AM and PM peak hours to the left turn from Nebraska Avenue onto Bundy Drive. The traffic study included a traffic signal warrants analysis for the Bundy Drive/Nebraska Avenue intersection. However, based on vehicular volume (during eight-hour, four-hour, and peak-hour) and historic crash experience data available for the intersection, the criteria for installation of traffic signal was not met.

The proposed project is an improvement of existing facility along Nebraska Avenue. It is not proposing an incompatible use. Increase in traffic from the proposed increase in employees has been analyzed in the traffic study. The capacity of Nebraska Avenue has been evaluated in the traffic study by analyzing intersections of Centinela Avenue/Nebraska Avenue and Bundy Drive/Nebraska Avenue with the proposed project trips during the AM and PM peak hours. As shown on the traffic study, the intersections along Nebraska Avenue in the vicinity of the project, operate at acceptable levels of service (LOS D) or better under Existing, Existing with Project, Year 2025 Future and Year 2025 Future with Project conditions.

The staff vehicle entry has been planned comprehensively with the design of the new building which includes Administration and Service Planning Area. The subterranean garage which would require employees to access the project site from the driveway proposed along Nebraska Avenue for most efficient circulation and access, as is currently the case. The existing driveways on Olympic Boulevard and Centinela Avenue would primarily be used by trucks and fleet vehicles and provide access to the existing fueling station and other yard related activities. All the driveways would be designed/modified per standard design requirements in terms of driveway width, throat length and sight distance and would not cause traffic and safety impacts.

The following Transportation Demand Management (TDM) measures noted in the traffic study and environmental document would be implemented by LADWP and would reduce employee vehicular trips to the proposed project.

- On-Site Employee Transportation Coordinator
- TDM Web Site Information
- TDM Promotional Material.
- Transit Welcome Package.
- Los Angeles Metro TAP Employer Program.
- Los Angeles County Guaranteed Ride Home Program
- Carpool Program for Employees.
- Convenient Parking/Amenities for Bicycle Riders.
- Flexible/Alternative Work Schedules.

TDM measures are currently being implemented and will continue to be implemented and maintained by LADWP in conformance with the City's Trip Reduction Ordinance.

27-3 This comment requests improvements to Receiving Station K to be included in the proposed project. Specifically, the comment cites concern for existing noise and ivy-covered chain link fence. The comment requests the construction of a wall around the LADWP property to block noise.

Receiving Station K is not part of, or included within, the scope of the proposed project. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft

IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment. The comment's request will be provided to the decision makers for their review and consideration as part of this Final MND.

27-4 This comment requests a larger building setback for the proposed project to reduce potential impacts of privacy of residents.

For discussion of the proposed project's height and the comment's request for a larger building setback, please see Response to Comment 21-7.

27-5 This comment requests construction traffic to utilize Olympic Boulevard and Centinela Avenue and for parking to be on-site during construction. The comment asks about mitigation related to dust, debris, and noise during demolition and construction activities of the proposed project.

For discussion related to construction noise, air quality, and traffic impacts, please see Response to Comment 27-1.

27-6 This comment hopes for the comments to be received and included.

Comment Letter 27, and responses to comments raised in the letter, will be provided to the decision makers for their review and consideration as part of this Final MND. This comment does not specifically contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND.

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Comment Letter 28

From: Lori Quon <briousa@verizon.net>
Sent: Wednesday, July 1, 2020 4:12 PM
To: Leong, Aiden
Cc: onlinelevine@gmail.com; ericvkraft@gmail.com
Subject: [EXTERNAL] Upgrade to DWP facility

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Dear Aiden,

As neighbors residing in the vicinity of the LA DWP redevelopment project, we are requesting that the following be incorporated into your project:

1. **Sound, EMF and aesthetics barriers**

   a. Minimum 20 foot barrier around the site to block sound and EMF radiation and also shield the neighborhood from a horrendous eyesore.

   b. Install/upgrade/replace equipment as require so neighborhood doesn't hear generators, transformers, fans etc.

28-1

2. **Traffic mitigation**

   a. Block employee access to the yard from Nebraska Ave. Redirect all office and field worker traffic to Centinela Ave and Olympic Blvd access points.

   b. Block through traffic where Amherst, Wellesley and Carmelina Avenues meet Nebraska Avenue.

   c. Provide detail of the mitigation efforts being taking to ensure that employees, visitors and DWP trucks will not park on residential streets.

   d. Complete a traffic study with mitigation plan that details the anticipated impact of additional office, field worker and visitor traffic generated by the site.

28-2

3. **Buffer Space / Park**

   a. Provide a "green strip" / park along the northern border of the property along Nebraska.

   b. Describe the beautification and long-term maintenance measures planned for the site and surrounding areas.

28-3

1

4. **Power Lines**

   a. Bury main transmission lines along Nebraska, Bundy and Centinela. Current EMF readings on residential properties near those lines were over 5 times the suggested maximum safe levels (north of 10 mG).

28-4

Thank you for your consideration.

Best regards,
Lori Quon & Danilo Torro
1714 Wellesley Ave
310.270.8054

2

Response to Comment Letter 28

Lori Quon, Resident
July 1, 2020

28-1 This comment raises potential noise, electromagnetic field (EMF) radiation, and aesthetic concerns of the proposed project and overall LADWP property. The comment requests the inclusion of a 20-foot barrier around the LADWP property to block sound, EMF radiation, and visual impacts to the nearby neighborhood. In addition, the comment requests the installation, upgrade, or replacement of equipment to reduce existing operational noise impacts from generators, transformers, and fans within Receiving Station K.

The Draft IS/MND analyzes the proposed project's potential impacts related to noise, hazards, and aesthetics. As discussed in Section 3.14, impacts related to construction noise can be mitigated to a less-than-significant level with the incorporation of mitigation measures MM-NOI-1 and MM-NOI-2. Section 3.9, Hazards and Hazardous Materials, incorporated mitigation to reduce potential impacts related to potentially hazardous materials in the soil, soil-gas, and groundwater. As such, MM-HAZ-1 requires the completion of a Phase II Environmental Site Assessment prior to the issuance of a building permit. The Draft IS/MND did not identify any impacts related to electromagnetic field (EMF) radiation because this is an issue that is not evaluated within the context of CEQA. In addition, the comment's request for a 20-foot barrier to be constructed around the LADWP property is not within the scope of the proposed project nor is such a barrier warranted given the results of the environmental analysis included in the Draft IS/MND. The portion of the LADWP facility, known as Receiving Station K is not included within the project site boundaries. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

28-2 This comment raises concern about traffic impacts. The comment requests the project restrict access to the project site from Nebraska Avenue and to instead use Centinela Avenue and Olympic Boulevard. In addition, the comment requests restrictions for through-traffic at the intersections of Amherst Avenue, Wellesley Avenue, and Carmelina Avenue at Nebraska Avenue. The comment requests project conditions to restrict employee parking on residential streets. Finally, the comment requests a traffic study to analyze the potential impacts associated with additional office space and field worker/visitor traffic generated by the proposed project.

For discussion related to traffic impacts and access to the project site, please see Response to Comment 21-9.

28-3 This comment requests a landscaped area or park along the northern border of the LADWP property along Nebraska Avenue. In addition, the comment requests description of landscaping and long-term maintenance planned for the project site.

As described in the Section 2, Project Description, in order to accommodate the driveway expansion, one existing street tree is proposed to be removed and new trees would be added to the project site in landscape designated areas, including the Nebraska Avenue frontage of the project site. In addition, the proposed project would incorporate water-conservation landscape design practices while providing an aesthetically pleasing buffer to the surrounding neighborhood. The proposed design would include City-approved

accent trees set within the Nebraska Avenue parkway and would be mirrored along the building façade as a visual continuation of the public right-of-way. Landscaping would also feature southern California native and drought-adaptive species. The energy courtyard would be defined by a linear paver system with rows of planting areas and raised seat walls. The living roof system would be a low-profile roof-top planting with 6-inch vegetated modules covering the roof in order to mitigate solar heat gain.

28-4 This comment cites health concerns for existing conditions and requests the existing power lines within the project site's vicinity to be replaced and installed underground along Nebraska Avenue, Bundy Drive, and Centinela Avenue.

The comment's request to remove and replace existing power lines underground is not within the scope of the proposed project and is not feasible because LADWP does not own, operate, maintain or control these power lines. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

Comment Letter 29

From: Bethany Reilly <bethanyreilly@gmail.com>
Sent: Saturday, July 25, 2020 10:41 AM
To: Leong, Aiden
Cc: ben.lazebnik@lacity.org; len.nguyen@lacity.org; JRoss@wlanc.com; JHandal@wlanc.com
Subject: [EXTERNAL] WLA DWP - District Yard redevelopment - Comment

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Hello -

I am a property owner in the 11th District of West LA, where I also reside with my husband and 3 children. My property is a couple hundred feet from the proposed WLA DWP District Yard redevelopment which is why I am writing this letter in opposition to the current proposal. My concerns and potential solutions stated below are in efforts to maintain harmony in our neighborhood while also being accepting and tolerant of the expansion needed for the essential services DWP provides us. 29-1

1) **The Safety of our children / Traffic** – at an increasing rate, both Centinela and Bundy (perpendicular to Nebraska) continue to be grid locked throughout the day, for hours at a time. With DWPs Redevelopment plan the traffic from the facility would be entering/exiting Nebraska generating increased gridlock to Bundy, Centinela and traffic throughout our neighborhood streets. By directing traffic through Nebraska, it also increases the danger in a highly family occupied neighborhood where children are playing, and many drivers have proven to be careless. We are anticipating that the entrance will be repositioned to Olympic, creating traffic efficiencies by the proximity it is to the freeway as well as the Olympic throughway possessing the road capacity to handle high volume traffic that will be generated. 29-2

2) **Pollution** – Living in tandem with the powerlines that are facing a residential neighborhood we have been accepting and tolerant of the noise, emissions, and traffic to date. By increasing the size of facility, in turn increased pollution, and having the entrance/exit into our neighborhood unfairly increases the pollution of all kinds right into our doorsteps. We anticipate that the repositioning of that entrance/exit be on Olympic which is a commercial district and helps to redistribute and balance of the unavoidable pollution, to areas other than a residential one. 29-3

I sincerely appreciate the time you have taken to read my comments and hope they are taken into consideration when building a facility that will impact our generation and those to follow.

Bethany Reilly
(310) 351-4816

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Response to Comment Letter 29

Bethany Reilly, Resident
July 25, 2020

29-1 This comment expresses opposition to the proposed project and is introductory in nature.

The commenter's general opposition to the project will be provided to the decision makers for their review and consideration as part of this Final MND.

29-2 This comment cites existing concerns with traffic along the intersections of Centinela Avenue and Bundy Street with Nebraska Avenue. The comment suggests the relocation of the project site's entrance to Olympic Boulevard to reduce potential impacts to Nebraska Avenue.

For discussion related to traffic impacts and access to the project site, please see Response to Comment 21-9.

29-3 This comment cites concerns with the proposed project's impacts in addition to existing adverse conditions related to noise and traffic on the residential neighborhood. The comment requests the relocation of the project site's entrance to Olympic Boulevard to "redistribute and balance … pollution."

For discussion on the project's potential impacts related to traffic and noise, please see Response to Comment 21-5. In addition, the comment's request to relocate project site access points will be provided to the decision makers for their review and consideration as part of this Final MND.

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Comment Letter 30

From: Hong, Deborah
Sent: Thursday, July 23, 2020 8:33 AM
To: Leong, Aiden
Cc: Jay Ross; Ventre, Michael
Subject: FW: [EXTERNAL] West LA DWP proposed office

Hello Jay – thank you.

Hi Aiden – forwarding comments from Jay Ross.

Deborah

30-1

From: Jay Ross [mailto:ross_jay@hotmail.com]
Sent: Wednesday, July 22, 2020 5:52 PM
To: Hong, Deborah; Ventre, Michael
Subject: [EXTERNAL] West LA DWP proposed office

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To DWP:

Please accept these comments from me as an individual neighbor for inclusion in the CEQA/MND.

1. Project Description lists the height of the building as 3 stories, which is typically considered 35 ft. The actual proposed height is 50 ft. to roofline and 60 ft. with a pavilion, which is much taller than the 1-2-story (13-25 ft. height) houses across the north side of Nebraska Ave.
    a. The height district is HD-1XL, which for most zones limits height to 3 stories or 35 ft. Though PF zone lists no zoning restrictions.

30-2

2. Traffic Study:
    a. It does not examine the capacity of Nebraska Ave. to handle as many as 300 more cars in the hour (for 360 employees) before work starts at 6:30 am and when work ends at 4:00 pm. The morning time is outside the AM peak, but warrants analysis on queueing and blocking traffic on Nebraska Ave. (only a 2-way street - 1 lane in each direction with no center turn lane) while cars wait to turn into the parking garage driveway, along with the PM. This is already a problem with a smaller workforce of 190 persons.
    b. It does not list any guarantees of the carpool and other TDM programs to reduce traffic.

30-3

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Response to Comment Letter 30

Jay Ross, Resident
July 22, 2020

30-1 This comment notes previous e-mail communication received and forwarded to the appropriate Lead Agency representatives. This comment does not express any environmental comments or concerns; no further response is required.

30-2 This comment cites concern with the proposed project's height and cites comparisons with typical building height compared to number of stories and adjacent height of the residential neighborhood. Furthermore, the comment cites zoning regulations on building height for the project site's designated land use zone.

For discussion on the project's proposed height, please see Response to Comment 21-7.

30-3 This comment cites concern with the traffic study prepared for the IS/MND. Concern is raised with the capacity of Nebraska Avenue during morning and evening peak hours under existing conditions. Furthermore, the comment questions compliance with project carpool and other Transportation Demand Management programs.

For discussion related to traffic impacts, please see Response to Comment 21-9.

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Comment Letter 31

From: Andrew Smidt <agsspin101@gmail.com>
Sent: Friday, July 24, 2020 10:18 AM
To: Leong, Aiden; councilmember.bonin@lacity.org
Cc: ericvkraft@gmail.com; John Levine
Subject: [EXTERNAL] WestLA LADWP

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Aiden, Per your email dated Jul 23, 2020, 1:41 PM I am compiling my comments with the email comments I sent on Tuesday, July 21, 2020 at 4:53 PM and Thursday, July 23, 2020 12:25 PM and providing them to you in this consolidated email. 31-1

I am a resident of the West LA neighborhood that will be directly impacted by the proposed DWP yard. I live on the corner of Centinela and Iowa. Living on Centinela I have experienced first hand the negative impact of increased traffic over the years, The idea of additional traffic on Centinela and the other roads boarding the neighborhood is concerning, but more alarming is the idea that Nebraska, one of our current, quiet, neighborhood streets will be negatively impacted. Not only by increased traffic as employees and trucks enter and leave the new yard and parking lots, but also by the increase in staff working at the location with the rooftop deck, other exterior gathering areas and employee walkways that will further erode the livability of our nice quiet neighborhood. Additionally, my review of the plans for the power plant (Receiving Station K) raises concerns around noise and the visual impact the plant has on our neighborhood. I do not see anything in the plans to address either noise and the visual impact the plant has on the neighborhood even with the years of complaints about those two issues, both of which will inevitably get worse if not addressed when constructing the new plant. The residences of the neighborhood have put together a strong proposal to reduce the impact of the new yard on noise and traffic and lessen the inevitable impact on the livability of our neighborhood. I support the neighborhood proposal regarding yard entrance/exits be located on Olympic and other traffic mitigation efforts, as well as, for a 30 foot wall fronted with a landscaped and maintained green belt that covers the site and fits the aesthetics of the plant to address the visual impact and provide some noise protection. Additionally we are ecommending an upgrade all equipment, fans, etc to more efficient equipment to further reduce the constant noise, not to mention protect our planet, from this archaic equipment. 31-2 31-3 31-4

I strongly encourage you to work with our neighborhood by adopting the neighborhood recommendations. 31-5

Thank you for your attention to our concerns. I look forward to your response.

Andrew Smidt

agsspin101@gmail.com

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Response to Comment Letter 31

Andrew Smidt, Resident
July 24, 2020

31-1 This comment informs the recipient that the comment letter is a compilation of previous comments sent to LADWP on July 21 and July 23, 2020.

The comment is introductory in nature and does not express any environmental comments or concerns; no further response is required.

31-2 This comment expresses existing concern with traffic onto the nearby residential neighborhood and potential impacts related to construction and operational traffic impacts due to an increase in employees.

For discussion related to construction and operational traffic impacts, please see Response to Comment 21-5.

31-3 This comment asks why Receiving Station K is not included in the proposed project. The comment cites existing noise and visual concerns for the LADWP property onto the neighborhood.

For discussion related to existing noise and visual concerns for Receiving Station K, please see Response to Comment 21-2 and Response to Comment 21-3.

31-4 The comment supports neighborhood requests for project site access changes, a 30-foot wall, and a landscaped setback to reduce potential noise and visual impacts onto the neighborhood.

For discussion related to noise and aesthetic impacts, please see Response to Comment 21-3 and Response to Comment 21-7.

31-5 This comment requests the project include upgrades to all equipment located on the LADWP property to reduce existing noise conditions.

The proposed project does not include upgrades to existing equipment within Receiving Station K. The noise impact analysis detailed within the Draft IS/MND includes noise measurements of existing ambient noise within the project site's vicinity. This includes noise generating from Receiving Station K. The proposed project was found to result in less than significant noise impacts during operations. As such, the comment's suggestions for upgraded equipment would not be warranted based on the determined impacts.

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Comment Letter 32

From: Meg Taylor <meggietay@gmail.com>
Sent: Saturday, July 25, 2020 3:34 PM
To: Leong, Aiden
Cc: ben.lazebnik@lacity.org; len.nguyen@lacity.org
Subject: [EXTERNAL] Response to the LADWP's proposed redevelopment of the WLA District Yard

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Hello,

My name is Megan Taylor and my husband and I live on Amherst Ave near the proposed LADWP building. We are concerned about many issues, specifically increased traffic congestion and general disturbances that come with construction. This is a quiet family neighborhood and we believe this project will change that. We take walks regularly and this project will certainly raise traffic and safety concerns. We are in full support of maintaining the peaceful nature of our neighborhood and hope that LADWP will consider our concerns. Thank you for your time. 32-1

Megan Taylor

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Response to Comment Letter 32

Megan Taylor, Resident
July 25, 2020

32-1 This comment is concerned with an increase in traffic congestion and other construction-related impacts as a result of the proposed project.

As discussed in Section 3.17, Transportation and Traffic, of the Draft IS/MND, construction traffic would not exceed the net new project trips estimated in Table 3.17.3. Therefore, construction-related project traffic would not create significant impacts at any of the eight study intersections, and impacts were found to be less than significant. Additionally, the environmental analysis within the Draft IS/MND found less than significant impacts and less than significant impacts with mitigation incorporated on impacts related to concerns of wellbeing and safety. For example, mitigation was incorporated to reduce construction-related air quality emissions and construction-related noise impacts. Given the discussion above, the project would not result in an increased risk of safety and wellbeing. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

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Comment Letter 33

From: Rebekah <rvanderstoep@hotmail.com>
Sent: Friday, July 24, 2020 6:09 PM
To: Leong, Aiden
Cc: ben.lazebnik@lacity.org; Len Nguyen; JRoss@WLANC.com; JHandal@wlanc.com; Hong, Deborah; mike@11thdistrict.com; John Levine; Iradj Vokhshoori
Subject: [EXTERNAL] LADWP - West Los Angeles District Yard Project: Neighborhood Feedback
Attachments: LADWP MND Response- 071420.pdf

Iradj Vokhshoori
Rebekah VanderStoep
1752 S. Carmelina Ave
WLA CA 90025

Dear Mr. Leong,

My husband, Iradj Vokhshoori and I, Rebekah VanderStoep have lived at 1752 S. Carmelina Ave since October of 1983. With regard to the receiving station adjacent to the proposed LADWP improvement project that is bordered by Nebraska and Centinela, we know of ongoing efforts to have some sort of cosmetic and acoustic mitigation that go back even further than before we became residents of this lovely, sleepy neighborhood. Some sort of improvement is long overdue.

Our home was originally built in 1926 and as such was one of the first structures in this area. Lots of development is going on around us. Older homes are being raised and larger structures erected. Lots more homes are being freshened up while keeping their cozy single-story footprint. That said, ours is a family neighborhood that is very well maintained.

33-1

We have seen the presentation for the planned development project as well as read through the Mitigated Negative Declaration. The new building planned to replace the several existing structures on the site and accommodate several other LADWP offices has all the appearances of a very well thought out workspace that should meet the needs of LADWP for years to come.

I am attaching the neighborhood statement that encompasses our suggestions and compromises we'd like to see you incorporate into your overall plans.

From our perspective, everything hinges on Nebraska. No employee or entrance or exit through Nebraska, the multitude of reasons for which are detailed in the attachment. (A minimal number of LADWP customers using Nebraska to access their parking is acceptable.) There needs to be an increase in the setback of the new structure.

33-2

And although it is not included in your current plans, PLEASE PLEASE PLEASE do something about the noise, lights and appearance of the receiving station. Now is the perfect time while big plans for such a lovely new building are being made. Just think of how it will improve things overall!

33-3

Please do partner with us on the issues so well put forth in the attachment.

Thank you kindly,
Rebekah & Iradj

Rebekah VanderStoep
Iradj Vokhshoori
1752 S. Carmelina Ave.
West Los Angeles, CA 90025
Voice Mail: 310-207-2043

Response to Comment Letter 33

Rebekah & Iradj VanderStoep, Residents
July 24, 2020

33-1 The commenter states that they have reviewed the Draft IS/MND and cites existing concern with the LADWP property related to noise and aesthetic conditions. The commenter also attached the neighborhood letter (Comment Letter 21).

The project site does not include the part of the LADWP property known as Receiving Station K. As such, impacts related to the existing visual character of the LADWP property only included the defined project site and not Receiving Station K. Similarly, noise impacts did not include Receiving Station K. This comment does not contain any specific concerns related to the adequacy of the project's environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

For responses to the attached letter referenced in this comment, please see Responses to Comment Letter 21.

33-2 This comment requests no employee access at Nebraska Avenue, but suggest a limited number of customers to utilize the proposed Nebraska Avenue entrance to the project site. In addition, the comment requests an increased building setback.

For discussion related to the proposed project's access and circulation, please see Response to Comment 21-9. For discussion related to setbacks, please see Response to Comment 21-7.

33-3 This comment requests updates to Receiving Station K to reduce existing adverse noise and visual conditions.

The project site does not include the part of the LADWP property known as Receiving Station K. Please see Response to Comment 33-1, above.

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Comment Letter 34

From: JerseyBoy <marc.vesta@jerseyboyconstruction.com>
Sent: Friday, July 24, 2020 6:34 PM
To: Leong, Aiden
Cc: len.nguyen@lacity.org; ben.lazebnik@lacity.org; JRoss@wlanc.com; JHandal@wlanc.com
Subject: [EXTERNAL] West LA LADWP District Yard

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Dear Aiden,

My wife and I live near the proposed LADWP project at 12203 Idaho Avenue. We have been anticipating something like this to happen to the yard for some time because we've lived in the neighborhood for 12 years and had a feeling something big was going to happen. It wasn't until about 3 weeks ago did we actually become aware of the plans for a new building to be constructed as headquarters for the region's LADWP employees. Although we currently live on Idaho Avenue, in December of 2019 we purchased a home at 1639 Carmelina Avenue and are in the process of building our "forever home" on that site. I am a builder and have been building homes on the west side for many years. We picked this neighborhood to live for many years to come because it's a diamond in the rough; there are these three amazing streets between Ohio and Nebraska (Amherst, Wellesley and Carmelina) that nobody really knows about. It's a community that has deep roots, some of which have owned the same home for over 80 years! 34-1

With that being said, we would like to voice our concerns regarding LADWP's proposed project:

- I am building a new home at 1639 Carmelina Ave and the required city setback from the sidewalk is 27'8" 34-2
  - Your proposed 28' setback for a 60' tall building is the same setback for my residential home which cannot exceed 30' in height. This doesn't make sense to me and doesn't seem fair, especially for those that live on Nebraska Avenue, where the shadow-casting will greatly impact those homes given the direction of the sun through all seasons (especially winter!)
- LADWP's initial study that we read through carefully was, simply put, inadequate. I took this as a direct insult to my integrity as a homeowner and a taxpayer. My wife and I converse regularly with many of the residents in this community and we are all in agreement that the term "railroading" seems adequate to describe this inadequate "study"; how can you create a study like this without including the residents it affects? It makes no sense and is not fair. 34-3
  - The action the LADWP is taking with this project can be related to my career as a homebuilder where, for example, there is a tree in the way of a proposed new addition to a home that I am building and without asking the homeowner, I take down the tree. While it made sense to me as the builder because the tree was in the way of the proposed addition, perhaps the homeowner would have changed their plans for the addition if they understood the tree was in the way. My client needed to be educated to then make an informed decision. Taking down the tree without consulting the homeowner would be very poor judgment on my part and may get me fired from the job.
- My wife and I are concerned about our home value due to the massive impact this project will have on our neighborhood. While we will not speculate, we can say for certain that construction of this magnitude will cause more traffic, noise, and pollution; all of which will have a negative affect on our home value of the new home we just bought on Carmelina for many years to come. 34-4

1

We hope you see our point of view and work with the community to change the current proposed plans you have for the project.

Thank you for your time and consideration,
Marc & Joanne Vesta

Response to Comment Letter 34

Marc & Joanne Vesta, Residents
July 24, 2020

34-1 This comment states ties to neighborhood community and notes they learned about the proposed project only recently.

This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

34-2 This comment requests a larger setback for the proposed building to reduce potential shadow and shade impacts.

For discussion on aesthetic impacts and building setbacks, please see Response to Comment 21-2.

34-3 This comment expresses frustration for the public review process and states the analysis within the Draft IS/MND is inadequate without community input.

For discussion on the Draft IS/MND's public review process, please see Response to Comment 21-6. No specific environmental comments or concerns are raised herein, as such, no further response is provided.

34-4 This comment expresses concern for the project's potential impacts to the residential neighborhood's property values due to the potential noise, traffic, and pollution impacts as a result of the proposed project.

The Draft IS/MND conservatively estimates the duration of the project's construction would start in April 2025 and would last approximately four years. Construction of the project would result in the temporary addition of pollutants. Based on the results of CalEEMod air quality modeling, mitigation measure MM-AQ-1 is incorporated to require heavy-duty diesel-powered construction equipment to use Tier 4 Final or better diesel engines. This would reduce construction emissions to a less than significant level.

Similarly, Section 3.13, Noise, identified mitigation measures to reduce construction noise onto nearby residences. Mitigation measure MM-NOI-1 reduces construction activities to specified hours, requires barriers and noise-reducing measures for specified equipment, and outlines particular staging requirements to reduce construction noise. Mitigation measure MM-NOI-2 specifies effective communication and notification with local residents during construction on schedule, duration, and progress. Implementation of these mitigation measures would reduce construction noise impacts to a less-than-significant level.

Finally, as discussed in Section 3.17, Transportation and Traffic, construction traffic would not exceed the net new project trips estimated in Table 3.17.3. Therefore, construction-related project traffic would not create significant impacts at any of the eight study intersections, and impacts were found to be less than significant.

According to the State CEQA Guidelines, Section 15064(e) "economic and social changes resulting from a project shall not be treated as significant effects on the environment." The guidelines further state "If the physical change causes adverse economic or social effects on people, those adverse effects may be used as

a factor in determining whether the physical change is significant. For example, if a project would cause overcrowding of a public facility and the overcrowding causes an adverse effect on people, the overcrowding would be regarded as a significant effect." Based on the project's construction impacts discussed above, the comment's concern for the residential neighborhood's property values is not within the scope of required environmental analysis. Therefore, this comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. No changes or addition to the Project Description or environmental document are required in response to this comment.

Comment Letter 35

Paul J Wedel (Paul@pwedelgc.com)
1760 S Carmelina Ave, Los Angeles, CA 90025 **July 18, 2020**

Att: LADWP and Councilman Bonin

Regarding: West Los Angeles District Yard Project

Dear Sirs:

It has come to my attention that you currently have plans to move ahead with the West Los Angeles District Yard Project. First let me say I am in concurrence with the letter sent out by Nebraska (Sawtelle) Neighbors, see attached. Please find following my personal comments regarding said project.

I currently live at 1760 S Carmelina Ave, directly across from LADWP Receiving Station K. This Station and its workers have caused some already identified NOISE issues over the last 4 years, since I moved in. I previously wrote to LADWP and Councilman Bonin regarding these NOISE issues, but was not notified of a study that was to be done during and or after. This Study was done without my understanding and or the ability for me to have a qualified Engineer to engage in the study along with the participants to insure all findings were corroborated. After receiving the Study from neighbors (who had engaged the LADWP), my Engineer did review and found the study to not be a valid study, and that many data points were not taken in a prescribed manner and the current laws regarding Noise generated by LADWP were overlooked. Myself, along with other local residents were in the process of responding to the study when the Plan for the WLADYP came up. After my experience, of not being contacted re the study before and or after, given the LADWP had my phone and email, I

35-1

Paul J Wedel (Paul@pwedelgc.com)
1760 S Carmelina Ave, Los Angeles, CA 90025 **July 18, 2020**

am not trusting of the Means and Methods of the LADWP to make good choices (without oversite) in the planning and implementation of the West Los Angeles District Yard Project. I propose that an oversite committee be set up that incorporates the desires of the local neighborhood, in regard to this project. 35-1 Cont.

My personal thoughts that would help the entire neighborhood to be better by the addition of this project: 35-2

1 Remove overhead Edison and cable TV and Telephone lines along Nebraska avenue from Bundy to Centinela
2 Re-rout **all** Dwp Traffic to either Centinela or Olympic entrances. 35-3
3 Redesign structure to code residential street height, add an additional building as mechanical truck shop within center of site not incorporated into office building (so height added and additional cost and issues of having the Mechanical truck shop within office building) 35-4
4 Setback the proposed building(s) and the Receiving Station K equipment so that neighborhood blight is lessened 35-5
5 Add a beautiful 10' height sound barrier around entire property for sound and security incorporating landscaping into design 35-6

Sincerely,

Paul J Wedel

Response to Comment Letter 35

Paul J. Wedel, Resident
July 18, 2020

35-1 This comment expresses support for the letter sent by other residents within the project site's vicinity (Comment Letter 21). The comment further cites concern for existing noise conditions and frustration for the Draft IS/MND's adequacy. The commenter notes that he requested the support of a "qualified engineer" who concluded the noise analysis within the Draft IS/MND was not adequate. For example, the comment cites lack of noise measurements for existing operations of the LADWP property. Furthermore, the comment requests oversight of the planning and implementation of the project to incorporate local residents' desires.

For responses to the letter referenced in this comment, please see Responses to Comment Letter 21.

The noise impact analysis detailed within Section 3.13, Noise, of the Draft IS/MND includes noise measurements of existing ambient noise within the project site's vicinity (including Receiving Station K). As shown in Table 3.13-1 and 3.13-2 of the Draft IS/MND, noise measurements determined typical daytime noise levels in the project vicinity ranged from approximately 50 dBA L_{eq} to approximately 64 dBA L_{eq}. Hourly average daytime and nighttime noise levels ranged from approximately 44 dBA L_{eq} during the late-night / early-morning hours to approximately 59 dBA L_{eq} during the afternoon hours. As such, existing noise within the project site's vicinity (including existing noise generated from Receiving Station K) does not exceed 65 dBA CNEL City noise standard for residences. In addition, Table 3.13-5, Traffic Noise (Existing and Existing Plus Project) shows the existing plus the project noise conditions, which would result in none of the short-term measurement receptors exceeding the 65 dB CNEL noise standard. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. Therefore, the proposed project was found to result in less than significant noise impacts during operations. Therefore, the comment's requests for a 30-foot sound barrier is not warranted based on the determined impacts. No changes or additions to the Project Description or environmental analysis are required in response to this comment.

For discussion on the public review and noticing process for the Draft IS/MND, please see Response to Comment 21-6.

35-2 This comment requests the project include the removal of overhead power lines along Nebraska Avenue between Bundy Street and Centinela Avenue.

The comment's request to remove and replace existing power lines underground is not within the scope of the proposed project and is not feasible because LADWP does not own, operate, maintain or control these power lines. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

35-3 This comment requests all traffic circulation to be re-routed to either Centinela Avenue or Olympic Boulevard.

As noted in the traffic study, included as Appendix F to the Draft IS/MND, and summarized within Section 3.17, Transportation and Traffic, in the Draft IS/MND, construction vehicles would use the project access driveways located on Centinela Avenue and Olympic Boulevard. Therefore, impacts due to construction traffic would be minimized to the residential neighborhood on Nebraska Avenue.

Operational traffic impacts due to increase in employees have been analyzed in the traffic study for existing and future conditions. The traffic study has noted that there would be no significant effect to the capacity of the intersections along Nebraska Avenue, Olympic Boulevard, Bundy Drive and Centinela Avenue due to addition of the proposed project.

35-4 This comment requests a redesign of the proposed project to reduce the building height comparable to residential structures and to add a mechanical truck shop on site.

The construction of the proposed project is exempt from the zoning requirements set forth for the project site (e.g., height and floor-area-ratio). The project is defined as a "Power Asset" under Charter Section 672(b) of the Los Angeles Municipal Code (LAMC), which encompasses "all the electric energy rights, lands, right-of-way, sites, facilities and property used for generation, transportation, distribution, and delivery of power for the benefit of the City, its inhabitants and its customers." As such, the City's Power Assets are under control of the Board of LADWP Commissioners (the Board), and subject to City Council oversight under Charter Section 245 of the LAMC. Specifically, the Board has "the power and duty to make and enforce all necessary rules and regulations governing the construction, maintenance, operation, connection to and use of the Water and Power Assets for (LADWP) Purposes." Therefore, the project's proposed height and floor-area-ratio are not in conflict with the LAMC.

Furthermore, the comment's request to a mechanical truck shop on the project site is not within the scope of the proposed project. This comment does not contain any specific concerns related to the adequacy of the environmental analysis in the Draft IS/MND. Therefore, no changes or addition to the Project Description or environmental document are required in response to this comment.

35-5 This comment requests a building setback along the proposed project and Receiving Station K to reduce visual blight concerns.

Under existing conditions, the LADWP property maintains an approximately 15-foot setback on Nebraska Avenue. A larger setback, as requested, is not within the scope of the proposed project. As discussed in Section 3.1, Aesthetics, of the Draft IS/MND, the proposed project would not conflict with existing zoning regulations governing scenic quality, and, thus would result in a less than significant impact. Therefore, no changes or additions to the Project Description or environmental analysis are required in response to this comment.

35-6 This comment requests the construction of a 10-foot high landscaped sound barrier around the entire LADWP property to reduce noise and increase security.

Receiving Station K is not part of or within the scope of the proposed project. The noise impact analysis detailed within the Draft IS/MND includes noise measurements of existing ambient noise within the project site's vicinity (including Receiving Station K). As shown in Table 3.13-5, Traffic Noise (Existing

and Existing Plus Project), of the Draft IS/MND, none of the short-term measurement locations (ST1 through ST5) exceed the 65 dB CNEL City noise standard for residences under existing noise level conditions. In addition, noise modeling found the existing plus the proposed project conditions would result in none of the same receptors exceeding 65 dB CNEL. Furthermore, all of the receptors would result in a zero dB CNEL noise level increase when rounded to whole numbers. This represents a noise increase well below the significance threshold of 5 dB. The proposed project was found to result in less than significant noise impacts during operations. As such, operational noise impact analysis included existing conditions, including noise generating from Receiving Station K. Therefore, the comment's requests for a 10-foot sound barrier is not warranted based on the determined impacts.

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6 MITIGATION MONITORING AND REPORTING PROGRAM

CEQA requires that public agencies adopting MNDs take affirmative steps to determine that approved mitigation measures are implemented subsequent to project approval. The lead agency must adopt a reporting and monitoring program for the mitigation measures incorporated into a project or included as conditions of approval. The program must be designed to ensure compliance with the MND during project implementation (California Public Resources Code, Section 21081.6(a)(1)).

The Mitigation Monitoring and Reporting Program (MMRP) will be used by LADWP as lead agency to ensure compliance with adopted mitigation measures identified in this MND. LADWP, as lead agency pursuant to the CEQA Guidelines, will ensure that all mitigation measures are carried out.

Implementation of the mitigation measures would reduce impacts to below a level of significance for air quality, biological resource, cultural resources, geology and soils, hazards and hazardous materials, noise, and tribal cultural resources.

The remainder of this MMRP consists of a table that identifies the mitigation measures by resource area. Table 6-1 identifies the mitigation monitoring and reporting requirements, including the timing of verification (prior to, during, or after construction) and the responsible party. Space is provided for sign-off following completion/implementation of the mitigation measure.

Table 6-1. Mitigation Monitoring and Reporting Program

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	*Date*	*Remarks*
			Air Quality			
MM-AQ-1	To reduce the potential for mass emissions of NOx as a result of the construction of the project, the applicant shall do the following: Equip heavy-duty diesel-powered construction equipment with Tier 4 Final or better diesel engines, except where Tier 4 Final or better engines are not available for specific construction equipment. LADWP shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards.	During construction	Los Angeles Department of Water and Power (LADWP)			
			Biological Resources			
MM-BIO-1	If vegetation removal and/or outdoor construction activities will occur during the breeding/nesting season (i.e., between February 1 and August 31) for native birds, preconstruction surveys for nesting migratory birds shall be conducted by a qualified biologist up to 14 days before initiation of construction activities. The qualified biologist shall survey the construction zone and a 250-foot radius surrounding the construction zone to determine whether the activities taking place have the potential to disturb or otherwise harm nesting birds. In the event an active nest is found within the survey area, site preparation and construction activities shall stop until the biologist can establish an appropriate setback buffer around the nest. Buffer size will be determined on a case-by-case basis by the biologist based on site conditions, the species' life history and disturbance tolerance, the nest's distance to construction activities, and the type of construction ongoing in the vicinity of the nest. Buffers will be clearly delineated (e.g., using rope, flagging,	Prior to the start of construction; during construction (if an active nest is found)	LADWP			

Table 6-1. Mitigation Monitoring and Reporting Program

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	*Date*	*Remarks*
	signage), or they may also be defined by natural or manmade features that are deemed sufficient to prohibit access (e.g., tree rows, fences). Project activities within the buffer shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting.					
		Cultural Resources				
MM-CUL-1	In the event that archaeological resources or tribal cultural resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, evaluates the significance of the find and determines whether or not additional study is warranted. Should it be required, temporary flagging may be installed around a resource to avoid any disturbances from construction equipment. Depending upon the significance of the find under CEQA (14 California Code of Regulations Section 15064.5(f); PRC Section 21082), the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted. In the event that an archaeological resource inadvertently discovered during project construction is determined to be potentially of Native American origin based on the initial assessment of the find	During construction	LADWP			

Table 6-1. Mitigation Monitoring and Reporting Program

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	*Date*	*Remarks*
	by a qualified archaeologist pursuant to California Public Resources Code Section 21083.2(i), the Native American tribes that consulted on the proposed project pursuant to California Assembly Bill 52 shall be notified and be provided information about the find to allow for early input from the tribal representatives with regards to the potential significance and treatment of the resource. Work in the area may resume once evaluation and treatment of the resource is completed or the resource is recovered and removed from the site.					
		Geology and Soils				
MM-GEO-1	Prior to the commencement of any grading activity, the LADWP shall retain a qualified paleontologist, meeting the Society of Vertebrate Paleontology's qualifications, to ensure the implementation of a paleontological monitoring program. The qualified paleontologist shall attend any preconstruction meetings and manage the paleontological monitor(s) if he or she is not doing the monitoring. A paleontological monitor, meeting the Society of Vertebrate Paleontology's standards, shall be on site during all excavations below a depth of five feet. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will	During construction	LADWP			

Table 6-1. Mitigation Monitoring and Reporting Program

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	*Date*	*Remarks*
	remove the rope and allow grading to recommence in the area of the find.					
			Hazards and Hazardous Materials			
MM-HAZ-1	Prior to issuance of building permit, a Phase II ESA for soil, soil-gas, and groundwater sampling must be completed in accordance with ASTM E1903-19. The Phase II ESA shall be conducted in order to determine if contamination exists beneath the project site. The subsurface investigation should include, but may not be limited to, areas of the project site where hazardous materials, tanks, and manufacturing areas have been identified, as well as areas potentially impacted by off-site contamination sources. The Phase II ESA shall also include investigation of the area where the former Allied Chemical Company operations took place, to determine the presence or absence of contamination related to the former "product lagoon" and/or "unstable materials pit." Should contaminants of concern be identified above regulatory screening levels which would indicate a potential impact to human health and/or the environment, a remediation plan shall be developed prior to commencement of construction and development activities in these areas. Coordination with the certified unified program agency may be required if contamination is discovered above regulatory screening levels.	Prior to and during construction	LADWP			
			Noise			
MM-NOI-1	Construction Noise Reduction 1. Construction activities shall not occur between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, 6:00	During construction	LADWP			

Table 6-1. Mitigation Monitoring and Reporting Program

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	*Date*	*Remarks*
	p.m. and 8:00 a.m. on Saturday, or on Sundays or national holidays. 2. Pumps and associated equipment (e.g., portable generators etc.) shall be shielded from sensitive uses using local temporary noise barriers or enclosures, or shall otherwise be designed or configured so as to minimize noise at nearby noise-sensitive receivers. 3. Staging of construction equipment shall not occur within 20 feet of any noise- or vibration-sensitive land uses. 4. All noise-producing equipment and vehicles using internal combustion engines shall be equipped with mufflers; air-inlet silencers where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment. 5. All mobile or fixed noise-producing equipment used on the project facilities that are regulated for noise output by a local, state, or federal agency shall comply with such regulation while in the course of project activity. 6. Idling equipment shall be kept to a minimum and moved as far as practicable from noise-sensitive land uses. 7. Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where feasible. 8. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.					

Table 6-1. Mitigation Monitoring and Reporting Program

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	*Date*	*Remarks*
	9. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.					
MM-NOI-2	Notification at Sensitive Receptors Effective communication with local residents shall be maintained during construction, including keeping them informed of the schedule, duration, and progress of the construction to minimize public complaints regarding noise and vibration levels.	Prior to and during construction	LADWP			
Tribal Cultural Resources						
See MM-CUL-1, above						

APPENDIX A

Air Quality Greenhouse Gas and Energy Calculations

Proposed Project CalEEMod Emissions Calculations

LADWP - West LA District Yard Project

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	53.69	1000sqft	1.23	53,690.00	0
Unrefrigerated Warehouse-No Rail	15.89	1000sqft	0.36	15,885.00	0
Automobile Care Center	12.68	1000sqft	0.29	12,678.00	0
Enclosed Parking with Elevator	543.00	Space	4.89	217,200.00	0
Parking Lot	12.00	Space	0.11	4,800.00	0
Government Office Building	9.42	1000sqft	0.22	9,421.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operational year 2024.

Land Use - Project specific square footage and acreage provided by LADWP

Construction Phase - Construction phasing provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

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Off-road Equipment - Construction equipment information provided by LADWP.

Grading - 100,000 CY of export is anticipated.

Trips and VMT - Trips were rounded up to the highest even value.

Vehicle Trips - Trip generation rates were modified to be consistent with the trip generation assumptions in the TIA for the project.

Operational Off-Road Equipment - Equipment information provided by LADWP.

Stationary Sources - Emergency Generators and Fire Pumps - NA

Construction Off-road Equipment Mitigation - Compliance with SCAQMD Rule 403 and Mitigation Measure AQ-1: use of Tier 4 final engines in construction equipment.

Energy Mitigation - Onsite Electricity generation from on-site solar is anticipated to meet the project's electricity demand per LADWP.

Water Mitigation - Per LADWP grey water use and water reduction measures were assumed as design features.

Waste Mitigation - Consistent with AB 939 a 50% waste diversion rate was assumed.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	13.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	230.00	564.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	20.00	82.00
tblConstructionPhase	NumDays	20.00	56.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	20.00	87.00

tblConstructionPhase	NumDays	20.00	31.00
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	PhaseEndDate	3/24/2021	4/18/2024
tblConstructionPhase	PhaseEndDate	1/27/2021	4/18/2024
tblConstructionPhase	PhaseEndDate	1/29/2020	8/18/2021
tblConstructionPhase	PhaseEndDate	3/11/2020	8/18/2021
tblConstructionPhase	PhaseEndDate	2/24/2021	12/17/2021
tblConstructionPhase	PhaseEndDate	2/12/2020	4/26/2021
tblConstructionPhase	PhaseStartDate	2/25/2021	12/19/2023
tblConstructionPhase	PhaseStartDate	3/12/2020	2/21/2022
tblConstructionPhase	PhaseStartDate	1/2/2020	4/19/2021
tblConstructionPhase	PhaseStartDate	2/13/2020	4/27/2021
tblConstructionPhase	PhaseStartDate	1/28/2021	10/1/2021
tblConstructionPhase	PhaseStartDate	1/30/2020	4/19/2021
tblGrading	MaterialExported	0.00	100,000.00
tblOffRoadEquipment	HorsePower	158.00	0.00
tblOffRoadEquipment	HorsePower	130.00	0.00
tblOffRoadEquipment	HorsePower	80.00	0.00
tblOffRoadEquipment	HorsePower	247.00	0.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	HorsePower	97.00	0.00
tblOffRoadEquipment	HorsePower	132.00	0.00
tblOffRoadEquipment	HorsePower	158.00	0.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	HorsePower	130.00	0.00
tblOffRoadEquipment	HorsePower	132.00	0.00
tblOffRoadEquipment	HorsePower	247.00	0.00
tblOffRoadEquipment	HorsePower	97.00	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.00
tblOffRoadEquipment	LoadFactor	0.42	0.00

tblOffRoadEquipment	LoadFactor	0.38	0.00
tblOffRoadEquipment	LoadFactor	0.40	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	LoadFactor	0.37	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	LoadFactor	0.42	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.00
tblOffRoadEquipment	LoadFactor	0.40	0.00
tblOffRoadEquipment	LoadFactor	0.37	0.00
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators

tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.37	0.37
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblStationaryGeneratorsPumpsEF	CO_EF	2.60	0.44
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	4.08
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.03
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.03
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	600.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	4.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	30.00
tblStationaryGeneratorsPumpsUse	Load_Factor	0.73	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	12,500.00	10,000.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00

tblTripsAndVMT	WorkerTripNumber	25.00	26.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00
tblTripsAndVMT	WorkerTripNumber	3.00	4.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.68	52.50
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.68	52.50
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	11.03	3.65
tblVehicleTrips	WD_TR	68.93	0.00
tblVehicleTrips	WD_TR	1.68	52.50

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.6676	7.8248	4.8018	0.0129	0.8467	0.3015	1.1482	0.3606	0.2799	0.6405	0.0000	1,171.0128	1,171.0128	0.2476	0.0000	1,177.2029
2022	0.3171	2.9256	2.8128	6.7400e-003	0.1892	0.1213	0.3105	0.0511	0.1135	0.1646	0.0000	603.5814	603.5814	0.0986	0.0000	606.0472
2023	0.3847	3.0152	3.1824	7.7100e-003	0.2199	0.1226	0.3425	0.0594	0.1147	0.1741	0.0000	689.3859	689.3859	0.1119	0.0000	692.1840
2024	0.5552	1.2880	1.3736	3.3100e-003	0.0841	0.0505	0.1346	0.0226	0.0472	0.0698	0.0000	293.9861	293.9861	0.0544	0.0000	295.3471
Maximum	**0.6676**	**7.8248**	**4.8018**	**0.0129**	**0.8467**	**0.3015**	**1.1482**	**0.3606**	**0.2799**	**0.6405**	**0.0000**	**1,171.0128**	**1,171.0128**	**0.2476**	**0.0000**	**1,177.2029**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1570	1.8071	5.3209	0.0129	0.4512	0.0181	0.4693	0.1813	0.0179	0.1993	0.0000	1,171.0119	1,171.0119	0.2476	0.0000	1,177.2020
2022	0.1173	0.8624	3.0195	6.7400e-003	0.1892	8.0800e-003	0.1973	0.0511	7.9500e-003	0.0590	0.0000	603.5810	603.5810	0.0986	0.0000	606.0468
2023	0.1753	0.8478	3.4444	7.7100e-003	0.2199	9.0300e-003	0.2290	0.0594	8.9100e-003	0.0683	0.0000	689.3854	689.3854	0.1119	0.0000	692.1835
2024	0.4682	0.3429	1.5419	3.3100e-003	0.0841	6.3000e-003	0.0904	0.0226	6.2500e-003	0.0289	0.0000	293.9859	293.9859	0.0544	0.0000	295.3468
Maximum	**0.4682**	**1.8071**	**5.3209**	**0.0129**	**0.4512**	**0.0181**	**0.4693**	**0.1813**	**0.0179**	**0.1993**	**0.0000**	**1,171.0119**	**1,171.0119**	**0.2476**	**0.0000**	**1,177.2020**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**52.30**	**74.36**	**-9.50**	**0.00**	**29.51**	**93.03**	**49.06**	**36.31**	**92.61**	**66.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
6	**4-2-2021**	**7-1-2021**	1.8243	0.1494
7	**7-2-2021**	**10-1-2021**	2.9061	0.6754
8	**10-2-2021**	**1-1-2022**	3.6675	1.0973
9	**1-2-2022**	**4-1-2022**	0.4113	0.1239
10	**4-2-2022**	**7-1-2022**	0.9336	0.2798
11	**7-2-2022**	**10-1-2022**	0.9439	0.2829
12	**10-2-2022**	**1-1-2023**	0.9449	0.2846
13	**1-2-2023**	**4-1-2023**	0.8270	0.2393
14	**4-2-2023**	**7-1-2023**	0.8344	0.2402
15	**7-2-2023**	**10-1-2023**	0.8436	0.2429
16	**10-2-2023**	**1-1-2024**	0.9049	0.3047

17	**1-2-2024**	**4-1-2024**	1.5127	0.6670
18	**4-2-2024**	**7-1-2024**	0.2966	0.1259
		Highest	3.6675	1.0973

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3920	7.0000e-005	8.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
Energy	4.8500e-003	0.0441	0.0371	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	1,327.3613	1,327.3613	0.0311	7.1300e-003	1,330.2650
Mobile	0.2718	1.3790	4.0135	0.0170	1.5293	0.0121	1.5414	0.4098	0.0112	0.4210	0.0000	1,571.8212	1,571.8212	0.0676	0.0000	1,573.5117
Offroad	0.1115	1.0963	1.6044	2.2100e-003		0.0544	0.0544		0.0501	0.0501	0.0000	194.4126	194.4126	0.0629	0.0000	195.9846
Waste						0.0000	0.0000		0.0000	0.0000	24.7771	0.0000	24.7771	1.4643	0.0000	61.3842
Water						0.0000	0.0000		0.0000	0.0000	5.1646	165.8713	171.0359	0.5344	0.0133	188.3692
Total	**0.7800**	**2.5195**	**5.6632**	**0.0195**	**1.5293**	**0.0699**	**1.5992**	**0.4098**	**0.0647**	**0.4744**	**29.9417**	**3,259.4824**	**3,289.4241**	**2.1603**	**0.0205**	**3,349.5317**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3920	7.0000e-005	8.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
Energy	4.8500e-003	0.0441	0.0371	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	48.0422	48.0422	9.2000e-004	8.8000e-004	48.3277

Mobile	0.2718	1.3790	4.0135	0.0170	1.5293	0.0121	1.5414	0.4098	0.0112	0.4210	0.0000	1,571.8212	1,571.8212	0.0676	0.0000	1,573.5117
Offroad	0.1115	1.0963	1.6044	2.2100e-003		0.0544	0.0544		0.0501	0.0501	0.0000	194.4126	194.4126	0.0629	0.0000	195.9846
Waste						0.0000	0.0000		0.0000	0.0000	6.1943	0.0000	6.1943	0.3661	0.0000	15.3460
Water						0.0000	0.0000		0.0000	0.0000	3.5119	118.4415	121.9534	0.3635	9.1000e-003	133.7516
Total	**0.7800**	**2.5195**	**5.6632**	**0.0195**	**1.5293**	**0.0699**	**1.5992**	**0.4098**	**0.0647**	**0.4744**	**9.7062**	**1,932.7336**	**1,942.4398**	**0.8610**	**9.9800e-003**	**1,966.9387**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**67.58**	**40.70**	**40.95**	**60.14**	**51.25**	**41.28**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/19/2021	8/18/2021	5	88	
2	Site Preparation	Site Preparation	4/19/2021	4/26/2021	5	6	
3	Grading One - Shoring 1	Grading	4/27/2021	8/18/2021	5	82	
4	Trenching	Trenching	8/19/2021	11/18/2021	5	66	
5	Grading Two - Excavation	Grading	8/19/2021	12/17/2021	5	87	
6	Grading Three - Shoring 2	Grading	8/19/2021	9/30/2021	5	31	
7	Paving One - Concrete Foundations	Paving	10/1/2021	12/17/2021	5	56	
8	Building Construction	Building Construction	2/21/2022	4/18/2024	5	564	
9	Architectural Coating	Architectural Coating	12/19/2023	4/18/2024	5	88	
10	Paving Two - Concrete Paving	Paving	1/19/2024	4/18/2024	5	65	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 137,511; Non-Residential Outdoor: 45,837; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Demolition	Concrete/Industrial Saws	3	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38
Grading One - Shoring 1	Excavators	0	0.00	0	0.00
Grading One - Shoring 1	Rubber Tired Dozers	0	0.00	0	0.00
Grading One - Shoring 1	Tractors/Loaders/Backhoes	0	0.00	0	0.00
Building Construction	Generator Sets	1	8.00	84	0.74
Paving One - Concrete Foundations	Pavers	0	0.00	0	0.00
Paving One - Concrete Foundations	Rollers	0	0.00	0	0.00
Grading One - Shoring 1	Graders	0	0.00	0	0.00
Paving One - Concrete Foundations	Paving Equipment	0	0.00	0	0.00
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45
Grading Two - Excavation	Excavators	2	8.00	158	0.38
Grading Three - Shoring 2	Excavators	0	0.00	0	0.00
Grading Two - Excavation	Graders	2	8.00	187	0.41
Grading Three - Shoring 2	Graders	0	0.00	0	0.00
Paving Two - Concrete Paving	Pavers	0	0.00	0	0.00
Paving Two - Concrete Paving	Paving Equipment	0	0.00	0	0.00
Paving Two - Concrete Paving	Rollers	2	8.00	80	0.38
Grading Two - Excavation	Rubber Tired Dozers	2	8.00	247	0.40
Grading Three - Shoring 2	Rubber Tired Dozers	0	0.00	0	0.00
Grading Two - Excavation	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Grading Three - Shoring 2	Tractors/Loaders/Backhoes	0	0.00	0	0.00
Demolition	Crawler Tractors	2	8.00	212	0.43
Grading One - Shoring 1	Cranes	1	8.00	231	0.29
Grading One - Shoring 1	Other Construction Equipment	1	8.00	172	0.42
Building Construction	Rollers	1	8.00	80	0.38
Paving One - Concrete Foundations	Cranes	2	8.00	231	0.29
Paving One - Concrete Foundations	Excavators	2	8.00	158	0.38
Paving One - Concrete Foundations	Forklifts	2	8.00	89	0.20
Paving One - Concrete Foundations	Generator Sets	1	8.00	84	0.74
Paving One - Concrete Foundations	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving One - Concrete Foundations	Welders	1	8.00	46	0.45
Grading Two - Excavation	Scrapers	2	8.00	367	0.48
Grading Three - Shoring 2	Bore/Drill Rigs	1	8.00	221	0.50
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving Two - Concrete Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving Two - Concrete Paving	Graders	1	8.00	187	0.41
Paving Two - Concrete Paving	Rubber Tired Loaders	1	8.00	203	0.36
Paving Two - Concrete Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	124.00	51.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	10	26.00	0.00	138.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading One - Shoring 1	2	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving One - Concrete Foundations	10	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Two - Excavation	11	28.00	0.00	10,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Grading Three - Shoring 2	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving Two - Concrete Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0149	0.0000	0.0149	2.2600e-003	0.0000	2.2600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2215	2.2622	1.4859	2.9500e-003		0.1065	0.1065		0.0998	0.0998	0.0000	257.4492	257.4492	0.0644	0.0000	259.0600
Total	**0.2215**	**2.2622**	**1.4859**	**2.9500e-003**	**0.0149**	**0.1065**	**0.1214**	**2.2600e-003**	**0.0998**	**0.1021**	**0.0000**	**257.4492**	**257.4492**	**0.0644**	**0.0000**	**259.0600**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.1000e-004	0.0180	3.8100e-003	5.0000e-005	1.1900e-003	5.0000e-005	1.2400e-003	3.3000e-004	5.0000e-005	3.8000e-004	0.0000	5.1522	5.1522	3.5000e-004	0.0000	5.1610
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	4.7700e-003	3.5200e-003	0.0399	1.2000e-004	0.0126	9.0000e-005	0.0127	3.3300e-003	9.0000e-005	3.4200e-003	0.0000	10.9328	10.9328	2.9000e-004	0.0000	10.9401
Total	**5.2800e-003**	**0.0215**	**0.0437**	**1.7000e-004**	**0.0137**	**1.4000e-004**	**0.0139**	**3.6600e-003**	**1.4000e-004**	**3.8000e-003**	**0.0000**	**16.0850**	**16.0850**	**6.4000e-004**	**0.0000**	**16.1011**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.7100e-003	0.0000	6.7100e-003	1.0200e-003	0.0000	1.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0343	0.1487	1.6743	2.9500e-003		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003	0.0000	257.4489	257.4489	0.0644	0.0000	259.0597
Total	**0.0343**	**0.1487**	**1.6743**	**2.9500e-003**	**6.7100e-003**	**4.5700e-003**	**0.0113**	**1.0200e-003**	**4.5700e-003**	**5.5900e-003**	**0.0000**	**257.4489**	**257.4489**	**0.0644**	**0.0000**	**259.0597**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.1000e-004	0.0180	3.8100e-003	5.0000e-005	1.1900e-003	5.0000e-005	1.2400e-003	3.3000e-004	5.0000e-005	3.8000e-004	0.0000	5.1522	5.1522	3.5000e-004	0.0000	5.1610
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7700e-003	3.5200e-003	0.0399	1.2000e-004	0.0126	9.0000e-005	0.0127	3.3300e-003	9.0000e-005	3.4200e-003	0.0000	10.9328	10.9328	2.9000e-004	0.0000	10.9401
Total	**5.2800e-003**	**0.0215**	**0.0437**	**1.7000e-004**	**0.0137**	**1.4000e-004**	**0.0139**	**3.6600e-003**	**1.4000e-004**	**3.8000e-003**	**0.0000**	**16.0850**	**16.0850**	**6.4000e-004**	**0.0000**	**16.1011**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0361	0.0000	0.0361	0.0199	0.0000	0.0199	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4000e-003	0.0772	0.0378	7.0000e-005		3.8700e-003	3.8700e-003		3.5600e-003	3.5600e-003	0.0000	6.1412	6.1412	1.9900e-003	0.0000	6.1909
Total	**7.4000e-003**	**0.0772**	**0.0378**	**7.0000e-005**	**0.0361**	**3.8700e-003**	**0.0400**	**0.0199**	**3.5600e-003**	**0.0234**	**0.0000**	**6.1412**	**6.1412**	**1.9900e-003**	**0.0000**	**6.1909**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	9.0000e-005	1.0500e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2867	0.2867	1.0000e-005	0.0000	0.2869
Total	**1.3000e-004**	**9.0000e-005**	**1.0500e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2867**	**0.2867**	**1.0000e-005**	**0.0000**	**0.2869**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					0.0163	0.0000	0.0163	8.9400e-003	0.0000	8.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	3.7100e-003	0.0371	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	6.1412	6.1412	1.9900e-003	0.0000	6.1909
Total	**8.6000e-004**	**3.7100e-003**	**0.0371**	**7.0000e-005**	**0.0163**	**1.1000e-004**	**0.0164**	**8.9400e-003**	**1.1000e-004**	**9.0500e-003**	**0.0000**	**6.1412**	**6.1412**	**1.9900e-003**	**0.0000**	**6.1909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	9.0000e-005	1.0500e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2867	0.2867	1.0000e-005	0.0000	0.2869
Total	**1.3000e-004**	**9.0000e-005**	**1.0500e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2867**	**0.2867**	**1.0000e-005**	**0.0000**	**0.2869**

3.4 Grading One - Shoring 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0338	0.3752	0.2452	4.9000e-004		0.0173	0.0173		0.0159	0.0159	0.0000	42.6639	42.6639	0.0138	0.0000	43.0089
Total	**0.0338**	**0.3752**	**0.2452**	**4.9000e-004**	**0.0000**	**0.0173**	**0.0173**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**42.6639**	**42.6639**	**0.0138**	**0.0000**	**43.0089**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0300e-003	7.6000e-004	8.5700e-003	3.0000e-005	2.7000e-003	2.0000e-005	2.7200e-003	7.2000e-004	2.0000e-005	7.4000e-004	0.0000	2.3509	2.3509	6.0000e-005	0.0000	2.3525
Total	**1.0300e-003**	**7.6000e-004**	**8.5700e-003**	**3.0000e-005**	**2.7000e-003**	**2.0000e-005**	**2.7200e-003**	**7.2000e-004**	**2.0000e-005**	**7.4000e-004**	**0.0000**	**2.3509**	**2.3509**	**6.0000e-005**	**0.0000**	**2.3525**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9900e-003	0.0260	0.2970	4.9000e-004		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	42.6639	42.6639	0.0138	0.0000	43.0088
Total	**5.9900e-003**	**0.0260**	**0.2970**	**4.9000e-004**	**0.0000**	**8.0000e-004**	**8.0000e-004**	**0.0000**	**8.0000e-004**	**8.0000e-004**	**0.0000**	**42.6639**	**42.6639**	**0.0138**	**0.0000**	**43.0088**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0300e-003	7.6000e-004	8.5700e-003	3.0000e-005	2.7000e-003	2.0000e-005	2.7200e-003	7.2000e-004	2.0000e-005	7.4000e-004	0.0000	2.3509	2.3509	6.0000e-005	0.0000	2.3525
Total	**1.0300e-003**	**7.6000e-004**	**8.5700e-003**	**3.0000e-005**	**2.7000e-003**	**2.0000e-005**	**2.7200e-003**	**7.2000e-004**	**2.0000e-005**	**7.4000e-004**	**0.0000**	**2.3509**	**2.3509**	**6.0000e-005**	**0.0000**	**2.3525**

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0199	0.1962	0.2572	3.8000e-004		0.0108	0.0108		9.9600e-003	9.9600e-003	0.0000	32.9904	32.9904	0.0107	0.0000	33.2572
Total	**0.0199**	**0.1962**	**0.2572**	**3.8000e-004**		**0.0108**	**0.0108**		**9.9600e-003**	**9.9600e-003**	**0.0000**	**32.9904**	**32.9904**	**0.0107**	**0.0000**	**33.2572**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-003	8.1000e-004	9.2000e-003	3.0000e-005	2.9000e-003	2.0000e-005	2.9200e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5229	2.5229	7.0000e-005	0.0000	2.5246

Total	**1.1000e-003**	**8.1000e-004**	**9.2000e-003**	**3.0000e-005**	**2.9000e-003**	**2.0000e-005**	**2.9200e-003**	**7.7000e-004**	**2.0000e-005**	**7.9000e-004**	**0.0000**	**2.5229**	**2.5229**	**7.0000e-005**	**0.0000**	**2.5246**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.6000e-003	0.0200	0.2839	3.8000e-004		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	32.9904	32.9904	0.0107	0.0000	33.2572
Total	**4.6000e-003**	**0.0200**	**0.2839**	**3.8000e-004**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**32.9904**	**32.9904**	**0.0107**	**0.0000**	**33.2572**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-003	8.1000e-004	9.2000e-003	3.0000e-005	2.9000e-003	2.0000e-005	2.9200e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5229	2.5229	7.0000e-005	0.0000	2.5246
Total	**1.1000e-003**	**8.1000e-004**	**9.2000e-003**	**3.0000e-005**	**2.9000e-003**	**2.0000e-005**	**2.9200e-003**	**7.7000e-004**	**2.0000e-005**	**7.9000e-004**	**0.0000**	**2.5229**	**2.5229**	**7.0000e-005**	**0.0000**	**2.5246**

3.6 Grading Two - Excavation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6680	0.0000	0.6680	0.3038	0.0000	0.3038	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2561	2.8405	1.6971	3.5000e-003		0.1227	0.1227		0.1129	0.1129	0.0000	307.4786	307.4786	0.0994	0.0000	309.9647
Total	**0.2561**	**2.8405**	**1.6971**	**3.5000e-003**	**0.6680**	**0.1227**	**0.7907**	**0.3038**	**0.1129**	**0.4167**	**0.0000**	**307.4786**	**307.4786**	**0.0994**	**0.0000**	**309.9647**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0367	1.3031	0.2764	3.8000e-003	0.0860	3.9500e-003	0.0899	0.0236	3.7800e-003	0.0274	0.0000	373.3496	373.3496	0.0256	0.0000	373.9887
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0800e-003	3.7500e-003	0.0425	1.3000e-004	0.0134	1.0000e-004	0.0135	3.5500e-003	9.0000e-005	3.6400e-003	0.0000	11.6399	11.6399	3.1000e-004	0.0000	11.6477
Total	**0.0418**	**1.3068**	**0.3188**	**3.9300e-003**	**0.0993**	**4.0500e-003**	**0.1034**	**0.0272**	**3.8700e-003**	**0.0310**	**0.0000**	**384.9895**	**384.9895**	**0.0259**	**0.0000**	**385.6364**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					0.3006	0.0000	0.3006	0.1367	0.0000	0.1367	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.1861	1.8365	3.5000e-003		5.7300e-003	5.7300e-003		5.7300e-003	5.7300e-003	0.0000	307.4783	307.4783	0.0994	0.0000	309.9644
Total	**0.0429**	**0.1861**	**1.8365**	**3.5000e-003**	**0.3006**	**5.7300e-003**	**0.3063**	**0.1367**	**5.7300e-003**	**0.1424**	**0.0000**	**307.4783**	**307.4783**	**0.0994**	**0.0000**	**309.9644**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0367	1.3031	0.2764	3.8000e-003	0.0860	3.9500e-003	0.0899	0.0236	3.7800e-003	0.0274	0.0000	373.3496	373.3496	0.0256	0.0000	373.9887
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0800e-003	3.7500e-003	0.0425	1.3000e-004	0.0134	1.0000e-004	0.0135	3.5500e-003	9.0000e-005	3.6400e-003	0.0000	11.6399	11.6399	3.1000e-004	0.0000	11.6477
Total	**0.0418**	**1.3068**	**0.3188**	**3.9300e-003**	**0.0993**	**4.0500e-003**	**0.1034**	**0.0272**	**3.8700e-003**	**0.0310**	**0.0000**	**384.9895**	**384.9895**	**0.0259**	**0.0000**	**385.6364**

3.7 Grading Three - Shoring 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0200e-003	0.0471	0.0323	1.5000e-004		1.4300e-003	1.4300e-003		1.3100e-003	1.3100e-003	0.0000	12.8890	12.8890	4.1700e-003	0.0000	12.9932
Total	**4.0200e-003**	**0.0471**	**0.0323**	**1.5000e-004**	**0.0000**	**1.4300e-003**	**1.4300e-003**	**0.0000**	**1.3100e-003**	**1.3100e-003**	**0.0000**	**12.8890**	**12.8890**	**4.1700e-003**	**0.0000**	**12.9932**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.9000e-004	2.1600e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.5925	0.5925	2.0000e-005	0.0000	0.5929
Total	**2.6000e-004**	**1.9000e-004**	**2.1600e-003**	**1.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5925**	**0.5925**	**2.0000e-005**	**0.0000**	**0.5929**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8200e-003	7.8900e-003	0.0668	1.5000e-004		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	12.8890	12.8890	4.1700e-003	0.0000	12.9932
Total	**1.8200e-003**	**7.8900e-003**	**0.0668**	**1.5000e-004**	**0.0000**	**2.4000e-004**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**2.4000e-004**	**0.0000**	**12.8890**	**12.8890**	**4.1700e-003**	**0.0000**	**12.9932**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.9000e-004	2.1600e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.5925	0.5925	2.0000e-005	0.0000	0.5929
Total	**2.6000e-004**	**1.9000e-004**	**2.1600e-003**	**1.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5925**	**0.5925**	**2.0000e-005**	**0.0000**	**0.5929**

3.8 Paving One - Concrete Foundations - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0721	0.6940	0.6375	1.1300e-003		0.0346	0.0346		0.0323	0.0323	0.0000	97.6156	97.6156	0.0262	0.0000	98.2717
Paving	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0722**	**0.6940**	**0.6375**	**1.1300e-003**		**0.0346**	**0.0346**		**0.0323**	**0.0323**	**0.0000**	**97.6156**	**97.6156**	**0.0262**	**0.0000**	**98.2717**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0300e-003	2.2400e-003	0.0254	8.0000e-005	7.9900e-003	6.0000e-005	8.0500e-003	2.1200e-003	6.0000e-005	2.1800e-003	0.0000	6.9572	6.9572	1.9000e-004	0.0000	6.9619

Total	**3.0300e-003**	**2.2400e-003**	**0.0254**	**8.0000e-005**	**7.9900e-003**	**6.0000e-005**	**8.0500e-003**	**2.1200e-003**	**6.0000e-005**	**2.1800e-003**	**0.0000**	**6.9572**	**6.9572**	**1.9000e-004**	**0.0000**	**6.9619**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0138	0.0825	0.7166	1.1300e-003		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	97.6155	97.6155	0.0262	0.0000	98.2715
Paving	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0139**	**0.0825**	**0.7166**	**1.1300e-003**		**1.7500e-003**	**1.7500e-003**		**1.7500e-003**	**1.7500e-003**	**0.0000**	**97.6155**	**97.6155**	**0.0262**	**0.0000**	**98.2715**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0300e-003	2.2400e-003	0.0254	8.0000e-005	7.9900e-003	6.0000e-005	8.0500e-003	2.1200e-003	6.0000e-005	2.1800e-003	0.0000	6.9572	6.9572	1.9000e-004	0.0000	6.9619
Total	**3.0300e-003**	**2.2400e-003**	**0.0254**	**8.0000e-005**	**7.9900e-003**	**6.0000e-005**	**8.0500e-003**	**2.1200e-003**	**6.0000e-005**	**2.1800e-003**	**0.0000**	**6.9572**	**6.9572**	**1.9000e-004**	**0.0000**	**6.9619**

3.9 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2471	2.3604	2.2338	3.8900e-003		0.1192	0.1192		0.1115	0.1115	0.0000	336.2008	336.2008	0.0869	0.0000	338.3727
Total	**0.2471**	**2.3604**	**2.2338**	**3.8900e-003**		**0.1192**	**0.1192**		**0.1115**	**0.1115**	**0.0000**	**336.2008**	**336.2008**	**0.0869**	**0.0000**	**338.3727**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0153	0.5264	0.1301	1.4300e-003	0.0362	9.7000e-004	0.0371	0.0104	9.3000e-004	0.0114	0.0000	138.8457	138.8457	8.5200e-003	0.0000	139.0589
Worker	0.0546	0.0388	0.4489	1.4200e-003	0.1531	1.1100e-003	0.1542	0.0407	1.0300e-003	0.0417	0.0000	128.5349	128.5349	3.2300e-003	0.0000	128.6156
Total	**0.0699**	**0.5652**	**0.5790**	**2.8500e-003**	**0.1892**	**2.0800e-003**	**0.1913**	**0.0511**	**1.9600e-003**	**0.0530**	**0.0000**	**267.3806**	**267.3806**	**0.0118**	**0.0000**	**267.6745**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.0474	0.2971	2.4405	3.8900e-003		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	336.2004	336.2004	0.0869	0.0000	338.3723
Total	**0.0474**	**0.2971**	**2.4405**	**3.8900e-003**		**6.0000e-003**	**6.0000e-003**		**6.0000e-003**	**6.0000e-003**	**0.0000**	**336.2004**	**336.2004**	**0.0869**	**0.0000**	**338.3723**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0153	0.5264	0.1301	1.4300e-003	0.0362	9.7000e-004	0.0371	0.0104	9.3000e-004	0.0114	0.0000	138.8457	138.8457	8.5200e-003	0.0000	139.0589
Worker	0.0546	0.0388	0.4489	1.4200e-003	0.1531	1.1100e-003	0.1542	0.0407	1.0300e-003	0.0417	0.0000	128.5349	128.5349	3.2300e-003	0.0000	128.6156
Total	**0.0699**	**0.5652**	**0.5790**	**2.8500e-003**	**0.1892**	**2.0800e-003**	**0.1913**	**0.0511**	**1.9600e-003**	**0.0530**	**0.0000**	**267.3806**	**267.3806**	**0.0118**	**0.0000**	**267.6745**

3.9 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2642	2.5107	2.5581	4.5000e-003		0.1205	0.1205		0.1127	0.1127	0.0000	388.6014	388.6014	0.0999	0.0000	391.0990
Total	**0.2642**	**2.5107**	**2.5581**	**4.5000e-003**		**0.1205**	**0.1205**		**0.1127**	**0.1127**	**0.0000**	**388.6014**	**388.6014**	**0.0999**	**0.0000**	**391.0990**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0132	0.4577	0.1344	1.6000e-003	0.0418	5.2000e-004	0.0423	0.0121	5.0000e-004	0.0126	0.0000	155.6078	155.6078	8.5600e-003	0.0000	155.8219
Worker	0.0594	0.0406	0.4783	1.5800e-003	0.1769	1.2500e-003	0.1781	0.0470	1.1600e-003	0.0481	0.0000	142.9899	142.9899	3.3600e-003	0.0000	143.0740
Total	**0.0726**	**0.4983**	**0.6127**	**3.1800e-003**	**0.2187**	**1.7700e-003**	**0.2204**	**0.0590**	**1.6600e-003**	**0.0607**	**0.0000**	**298.5977**	**298.5977**	**0.0119**	**0.0000**	**298.8958**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0548	0.3434	2.8201	4.5000e-003		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003	0.0000	388.6009	388.6009	0.0999	0.0000	391.0986
Total	**0.0548**	**0.3434**	**2.8201**	**4.5000e-003**		**6.9300e-003**	**6.9300e-003**		**6.9300e-003**	**6.9300e-003**	**0.0000**	**388.6009**	**388.6009**	**0.0999**	**0.0000**	**391.0986**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0132	0.4577	0.1344	1.6000e-003	0.0418	5.2000e-004	0.0423	0.0121	5.0000e-004	0.0126	0.0000	155.6078	155.6078	8.5600e-003	0.0000	155.8219
Worker	0.0594	0.0406	0.4783	1.5800e-003	0.1769	1.2500e-003	0.1781	0.0470	1.1600e-003	0.0481	0.0000	142.9899	142.9899	3.3600e-003	0.0000	143.0740
Total	**0.0726**	**0.4983**	**0.6127**	**3.1800e-003**	**0.2187**	**1.7700e-003**	**0.2204**	**0.0590**	**1.6600e-003**	**0.0607**	**0.0000**	**298.5977**	**298.5977**	**0.0119**	**0.0000**	**298.8958**

3.9 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0753	0.7116	0.7721	1.3700e-003		0.0324	0.0324		0.0303	0.0303	0.0000	118.0935	118.0935	0.0302	0.0000	118.8493
Total	**0.0753**	**0.7116**	**0.7721**	**1.3700e-003**		**0.0324**	**0.0324**		**0.0303**	**0.0303**	**0.0000**	**118.0935**	**118.0935**	**0.0302**	**0.0000**	**118.8493**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9300e-003	0.1387	0.0397	4.9000e-004	0.0127	1.6000e-004	0.0129	3.6600e-003	1.5000e-004	3.8100e-003	0.0000	47.1138	47.1138	2.5600e-003	0.0000	47.1778
Worker	0.0171	0.0112	0.1355	4.6000e-004	0.0537	3.8000e-004	0.0541	0.0143	3.5000e-004	0.0146	0.0000	42.0172	42.0172	9.4000e-004	0.0000	42.0406

Total	**0.0210**	**0.1500**	**0.1752**	**9.5000e-004**	**0.0664**	**5.4000e-004**	**0.0670**	**0.0179**	**5.0000e-004**	**0.0184**	**0.0000**	**89.1309**	**89.1309**	**3.5000e-003**	**0.0000**	**89.2183**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0167	0.1043	0.8569	1.3700e-003		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	118.0934	118.0934	0.0302	0.0000	118.8492
Total	**0.0167**	**0.1043**	**0.8569**	**1.3700e-003**		**2.1100e-003**	**2.1100e-003**		**2.1100e-003**	**2.1100e-003**	**0.0000**	**118.0934**	**118.0934**	**0.0302**	**0.0000**	**118.8492**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9300e-003	0.1387	0.0397	4.9000e-004	0.0127	1.6000e-004	0.0129	3.6600e-003	1.5000e-004	3.8100e-003	0.0000	47.1138	47.1138	2.5600e-003	0.0000	47.1778
Worker	0.0171	0.0112	0.1355	4.6000e-004	0.0537	3.8000e-004	0.0541	0.0143	3.5000e-004	0.0146	0.0000	42.0172	42.0172	9.4000e-004	0.0000	42.0406
Total	**0.0210**	**0.1500**	**0.1752**	**9.5000e-004**	**0.0664**	**5.4000e-004**	**0.0670**	**0.0179**	**5.0000e-004**	**0.0184**	**0.0000**	**89.1309**	**89.1309**	**3.5000e-003**	**0.0000**	**89.2183**

3.10 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0466					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.0475**	**5.8600e-003**	**8.1500e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.9000e-004	3.4700e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0378	1.0378	2.0000e-005	0.0000	1.0384
Total	**4.3000e-004**	**2.9000e-004**	**3.4700e-003**	**1.0000e-005**	**1.2800e-003**	**1.0000e-005**	**1.2900e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0378**	**1.0378**	**2.0000e-005**	**0.0000**	**1.0384**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Archit. Coating	0.0466					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.0475**	**5.8600e-003**	**8.1500e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.9000e-004	3.4700e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0378	1.0378	2.0000e-005	0.0000	1.0384
Total	**4.3000e-004**	**2.9000e-004**	**3.4700e-003**	**1.0000e-005**	**1.2800e-003**	**1.0000e-005**	**1.2900e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0378**	**1.0378**	**2.0000e-005**	**0.0000**	**1.0384**

3.10 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4092					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1400e-003	0.0481	0.0715	1.2000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	10.0854	10.0854	5.7000e-004	0.0000	10.0996
Total	**0.4163**	**0.0481**	**0.0715**	**1.2000e-004**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**	**0.0000**	**10.0854**	**10.0854**	**5.7000e-004**	**0.0000**	**10.0996**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5900e-003	2.3600e-003	0.0284	1.0000e-004	0.0113	8.0000e-005	0.0114	2.9900e-003	7.0000e-005	3.0700e-003	0.0000	8.8101	8.8101	2.0000e-004	0.0000	8.8150
Total	**3.5900e-003**	**2.3600e-003**	**0.0284**	**1.0000e-004**	**0.0113**	**8.0000e-005**	**0.0114**	**2.9900e-003**	**7.0000e-005**	**3.0700e-003**	**0.0000**	**8.8101**	**8.8101**	**2.0000e-004**	**0.0000**	**8.8150**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4092					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1400e-003	0.0481	0.0715	1.2000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	10.0853	10.0853	5.7000e-004	0.0000	10.0995
Total	**0.4163**	**0.0481**	**0.0715**	**1.2000e-004**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**	**0.0000**	**10.0853**	**10.0853**	**5.7000e-004**	**0.0000**	**10.0995**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5900e-003	2.3600e-003	0.0284	1.0000e-004	0.0113	8.0000e-005	0.0114	2.9900e-003	7.0000e-005	3.0700e-003	0.0000	8.8101	8.8101	2.0000e-004	0.0000	8.8150
Total	**3.5900e-003**	**2.3600e-003**	**0.0284**	**1.0000e-004**	**0.0113**	**8.0000e-005**	**0.0114**	**2.9900e-003**	**7.0000e-005**	**3.0700e-003**	**0.0000**	**8.8101**	**8.8101**	**2.0000e-004**	**0.0000**	**8.8150**

3.11 Paving Two - Concrete Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0368	0.3746	0.3102	7.2000e-004		0.0150	0.0150		0.0139	0.0139	0.0000	62.8479	62.8479	0.0198	0.0000	63.3437
Paving	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0369**	**0.3746**	**0.3102**	**7.2000e-004**		**0.0150**	**0.0150**		**0.0139**	**0.0139**	**0.0000**	**62.8479**	**62.8479**	**0.0198**	**0.0000**	**63.3437**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	1.3400e-003	0.0162	6.0000e-005	6.4200e-003	4.0000e-005	6.4600e-003	1.7000e-003	4.0000e-005	1.7500e-003	0.0000	5.0184	5.0184	1.1000e-004	0.0000	5.0212

Total	**2.0400e-003**	**1.3400e-003**	**0.0162**	**6.0000e-005**	**6.4200e-003**	**4.0000e-005**	**6.4600e-003**	**1.7000e-003**	**4.0000e-005**	**1.7500e-003**	**0.0000**	**5.0184**	**5.0184**	**1.1000e-004**	**0.0000**	**5.0212**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.4700e-003	0.0367	0.3938	7.2000e-004		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	62.8478	62.8478	0.0198	0.0000	63.3437
Paving	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.6100e-003**	**0.0367**	**0.3938**	**7.2000e-004**		**1.1300e-003**	**1.1300e-003**		**1.1300e-003**	**1.1300e-003**	**0.0000**	**62.8478**	**62.8478**	**0.0198**	**0.0000**	**63.3437**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	1.3400e-003	0.0162	6.0000e-005	6.4200e-003	4.0000e-005	6.4600e-003	1.7000e-003	4.0000e-005	1.7500e-003	0.0000	5.0184	5.0184	1.1000e-004	0.0000	5.0212
Total	**2.0400e-003**	**1.3400e-003**	**0.0162**	**6.0000e-005**	**6.4200e-003**	**4.0000e-005**	**6.4600e-003**	**1.7000e-003**	**4.0000e-005**	**1.7500e-003**	**0.0000**	**5.0184**	**5.0184**	**1.1000e-004**	**0.0000**	**5.0212**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2718	1.3790	4.0135	0.0170	1.5293	0.0121	1.5414	0.4098	0.0112	0.4210	0.0000	1,571.8212	1,571.8212	0.0676	0.0000	1,573.5117
Unmitigated	0.2718	1.3790	4.0135	0.0170	1.5293	0.0121	1.5414	0.4098	0.0112	0.4210	0.0000	1,571.8212	1,571.8212	0.0676	0.0000	1,573.5117

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	195.97	0.00	0.00	450,932	450,932
Government Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	833.96	833.96	833.96	3,574,127	3,574,127
Total	1,029.93	833.96	833.96	4,025,059	4,025,059

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Government Office Building	16.60	8.40	6.90	33.00	62.00	5.00	50	34	16
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Enclosed Parking with Elevator	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
General Office Building	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Government Office Building	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Parking Lot	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Unrefrigerated Warehouse-No Rail	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,279.3190	1,279.3190	0.0302	6.2500e-003	1,281.9373
NaturalGas Mitigated	4.8500e-003	0.0441	0.0371	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	48.0422	48.0422	9.2000e-004	8.8000e-004	48.3277
NaturalGas Unmitigated	4.8500e-003	0.0441	0.0371	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	48.0422	48.0422	9.2000e-004	8.8000e-004	48.3277

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	229472	1.2400e-003	0.0113	9.4500e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2455	12.2455	2.3000e-004	2.2000e-004	12.3183
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	558913	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.8257	29.8257	5.7000e-004	5.5000e-004	30.0030
Government Office Building	98072.6	5.3000e-004	4.8100e-003	4.0400e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.2335	5.2335	1.0000e-004	1.0000e-004	5.2646
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	13820	7.0000e-005	6.8000e-004	5.7000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7375	0.7375	1.0000e-005	1.0000e-005	0.7419
Total		**4.8500e-003**	**0.0441**	**0.0371**	**2.6000e-004**		**3.3500e-003**	**3.3500e-003**		**3.3500e-003**	**3.3500e-003**	**0.0000**	**48.0422**	**48.0422**	**9.1000e-004**	**8.8000e-004**	**48.3277**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	229472	1.2400e-003	0.0113	9.4500e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2455	12.2455	2.3000e-004	2.2000e-004	12.3183
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	558913	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.8257	29.8257	5.7000e-004	5.5000e-004	30.0030
Government Office Building	98072.6	5.3000e-004	4.8100e-003	4.0400e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.2335	5.2335	1.0000e-004	1.0000e-004	5.2646
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	13820	7.0000e-005	6.8000e-004	5.7000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7375	0.7375	1.0000e-005	1.0000e-005	0.7419

Total		**4.8500e-003**	**0.0441**	**0.0371**	**2.6000e-004**		**3.3500e-003**	**3.3500e-003**		**3.3500e-003**	**3.3500e-003**	**0.0000**	**48.0422**	**48.0422**	**9.1000e-004**	**8.8000e-004**	**48.3277**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	140726	78.3789	1.8500e-003	3.8000e-004	78.5393
Enclosed Parking with Elevator	1.27279e+006	708.8962	0.0167	3.4600e-003	710.3470
General Office Building	697433	388.4434	9.1700e-003	1.9000e-003	389.2384
Government Office Building	122379	68.1603	1.6100e-003	3.3000e-004	68.2998
Parking Lot	1680	0.9357	2.0000e-005	0.0000	0.9376
Unrefrigerated Warehouse-No	61951.5	34.5046	8.1000e-004	1.7000e-004	34.5752
Total		**1,279.3190**	**0.0302**	**6.2400e-003**	**1,281.9373**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000

Government Office Building	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3920	7.0000e-005	8.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
Unmitigated	0.3920	7.0000e-005	8.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0456					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	0.3456					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.6000e-004	7.0000e-005	8.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
Total	**0.3920**	**7.0000e-005**	**8.2400e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0161**	**0.0161**	**4.0000e-005**	**0.0000**	**0.0171**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0456					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3456					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.6000e-004	7.0000e-005	8.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
Total	**0.3920**	**7.0000e-005**	**8.2400e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0161**	**0.0161**	**4.0000e-005**	**0.0000**	**0.0171**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Grey Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	121.9534	0.3635	9.1000e-003	133.7516
Unmitigated	171.0359	0.5344	0.0133	188.3692

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.19295 / 0.731162	13.5543	0.0392	9.8000e-004	14.8266
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	9.54252 / 5.84864	108.4222	0.3134	7.8600e-003	118.5994
Government Office Building	1.87137 / 1.14697	21.2626	0.0615	1.5400e-003	23.2584
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3.67225 / 0	27.7969	0.1203	2.9600e-003	31.6849
Total		**171.0359**	**0.5344**	**0.0133**	**188.3692**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Automobile Care Center	0.811205 / 0.583577	9.7515	0.0267	6.7000e-004	10.6177
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	6.48892 / 4.6681	78.0030	0.2132	5.3600e-003	84.9322
Government Office Building	1.27253 / 0.915455	15.2971	0.0418	1.0500e-003	16.6560
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.49713 / 0	18.9019	0.0818	2.0100e-003	21.5457
Total		**121.9534**	**0.3635**	**9.0900e-003**	**133.7517**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.1943	0.3661	0.0000	15.3460
Unmitigated	24.7771	1.4643	0.0000	61.3842

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	48.44	9.8329	0.5811	0.0000	24.3606
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	49.93	10.1353	0.5990	0.0000	25.1099
Government Office Building	8.76	1.7782	0.1051	0.0000	4.4054
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	14.93	3.0307	0.1791	0.0000	7.5083
Total		**24.7771**	**1.4643**	**0.0000**	**61.3842**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	12.11	2.4582	0.1453	0.0000	6.0901
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	12.4825	2.5338	0.1498	0.0000	6.2775
Government Office Building	2.19	0.4446	0.0263	0.0000	1.1014
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3.7325	0.7577	0.0448	0.0000	1.8771

Total		**6.1943**	**0.3661**	**0.0000**	**15.3460**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	4	8.00	260	97	0.37	Diesel
Forklifts	3	8.00	260	89	0.20	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Forklifts	0.0369	0.3463	0.4466	6.0000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	52.6355	52.6355	0.0170	0.0000	53.0611
Tractors/Loaders/Backhoes	0.0745	0.7500	1.1578	1.6100e-003		0.0344	0.0344		0.0317	0.0317	0.0000	141.7771	141.7771	0.0459	0.0000	142.9235
Total	**0.1115**	**1.0963**	**1.6044**	**2.2100e-003**		**0.0544**	**0.0544**		**0.0501**	**0.0501**	**0.0000**	**194.4126**	**194.4126**	**0.0629**	**0.0000**	**195.9845**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	4	30	600	1	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LADWP - West LA District Yard Project

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	53.69	1000sqft	1.23	53,690.00	0
Unrefrigerated Warehouse-No Rail	15.89	1000sqft	0.36	15,885.00	0
Automobile Care Center	12.68	1000sqft	0.29	12,678.00	0
Enclosed Parking with Elevator	543.00	Space	4.89	217,200.00	0
Parking Lot	12.00	Space	0.11	4,800.00	0
Government Office Building	9.42	1000sqft	0.22	9,421.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operational year 2024.

Land Use - Project specific square footage and acreage provided by LADWP

Construction Phase - Construction phasing provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

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Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Grading - 100,000 CY of export is anticipated.

Trips and VMT - Trips were rounded up to the highest even value.

Vehicle Trips - Trip generation rates were modified to be consistent with the trip generation assumptions in the TIA for the project.

Operational Off-Road Equipment - Equipment information provided by LADWP.

Stationary Sources - Emergency Generators and Fire Pumps - NA

Construction Off-road Equipment Mitigation - Compliance with SCAQMD Rule 403 and Mitigation Measure AQ-1: use of Tier 4 final engines in construction equipment

Energy Mitigation - Onsite Electricity generation from on-site solar is anticipated to meet the project's electricity demand per LADWP.

Water Mitigation - Per LADWP grey water use and water reduction measures were assumed as design features.

Waste Mitigation - Consistent with AB 939 a 50% waste diversion rate was assumed.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	20.00	82.00
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tblConstructionPhase	NumDays	20.00	87.00
tblConstructionPhase	NumDays	20.00	31.00

tblConstructionPhase	NumDays	20.00	65.00
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tblConstructionPhase	PhaseEndDate	1/29/2020	8/18/2021
tblConstructionPhase	PhaseEndDate	3/11/2020	8/18/2021
tblConstructionPhase	PhaseEndDate	2/24/2021	12/17/2021
tblConstructionPhase	PhaseEndDate	2/12/2020	4/26/2021
tblConstructionPhase	PhaseStartDate	2/25/2021	12/19/2023
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tblConstructionPhase	PhaseStartDate	1/2/2020	4/19/2021
tblConstructionPhase	PhaseStartDate	2/13/2020	4/27/2021
tblConstructionPhase	PhaseStartDate	1/28/2021	10/1/2021
tblConstructionPhase	PhaseStartDate	1/30/2020	4/19/2021
tblGrading	MaterialExported	0.00	100,000.00
tblOffRoadEquipment	HorsePower	158.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts

tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.37	0.37
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblStationaryGeneratorsPumpsEF	CO_EF	2.60	0.44
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	4.08
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.03
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.03
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	600.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	4.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	30.00
tblStationaryGeneratorsPumpsUse	Load_Factor	0.73	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	12,500.00	10,000.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00

tblTripsAndVMT	WorkerTripNumber	5.00	6.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00
tblTripsAndVMT	WorkerTripNumber	3.00	4.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.68	52.50
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.68	52.50
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	11.03	3.65
tblVehicleTrips	WD_TR	68.93	0.00
tblVehicleTrips	WD_TR	1.68	52.50

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	10.1658	125.2773	78.0662	0.2270	18.0572	4.4785	22.5357	7.7179	4.1429	11.8607	0.0000	22,958.1353	22,958.1353	4.5641	0.0000	23,072.2369
2022	2.8208	25.9048	25.2665	0.0607	1.7124	1.0776	2.7901	0.4616	1.0086	1.4702	0.0000	5,995.4834	5,995.4834	0.9655	0.0000	6,019.6214
2023	13.2400	24.4425	27.2974	0.0655	2.0031	1.0130	3.0161	0.5386	0.9525	1.4911	0.0000	6,453.9433	6,453.9433	0.9709	0.0000	6,478.2167
2024	14.2703	34.5836	36.9035	0.0890	2.2043	1.3599	3.5641	0.5920	1.2705	1.8624	0.0000	8,709.6206	8,709.6206	1.6391	0.0000	8,750.5983
Maximum	**14.2703**	**125.2773**	**78.0662**	**0.2270**	**18.0572**	**4.4785**	**22.5357**	**7.7179**	**4.1429**	**11.8607**	**0.0000**	**22,958.1353**	**22,958.1353**	**4.5641**	**0.0000**	**23,072.2369**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.7191	37.0754	84.9042	0.2270	9.6116	0.3081	9.9196	3.8769	0.3038	4.1806	0.0000	22,958.1353	22,958.1353	4.5641	0.0000	23,072.2369
2022	1.0457	7.5650	27.1039	0.0607	1.7124	0.0717	1.7841	0.4616	0.0705	0.5321	0.0000	5,995.4834	5,995.4834	0.9655	0.0000	6,019.6214
2023	11.6296	7.7704	29.3128	0.0655	2.0031	0.1397	2.1428	0.5386	0.1386	0.6772	0.0000	6,453.9433	6,453.9433	0.9709	0.0000	6,478.2167
2024	11.9153	8.8145	41.6220	0.0890	2.2043	0.1658	2.3700	0.5920	0.1646	0.7566	0.0000	8,709.6206	8,709.6206	1.6391	0.0000	8,750.5983
Maximum	**11.9153**	**37.0754**	**84.9042**	**0.2270**	**9.6116**	**0.3081**	**9.9196**	**3.8769**	**0.3038**	**4.1806**	**0.0000**	**22,958.1353**	**22,958.1353**	**4.5641**	**0.0000**	**23,072.2369**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**32.56**	**70.87**	**-9.20**	**0.00**	**35.22**	**91.36**	**49.17**	**41.26**	**90.81**	**63.16**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.1496	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Energy	0.0266	0.2418	0.2031	1.4500e-003		0.0184	0.0184		0.0184	0.0184		290.1780	290.1780	5.5600e-003	5.3200e-003	291.9024
Mobile	1.6844	7.6568	24.4939	0.1016	8.9416	0.0692	9.0108	2.3922	0.0643	2.4565		10,350.8970	10,350.8970	0.4329		10,361.7202
Offroad	0.8574	8.4333	12.3412	0.0170		0.4186	0.4186		0.3851	0.3851		1,648.4864	1,648.4864	0.5332		1,661.8152

Total	**4.7180**	**16.3326**	**37.1041**	**0.1200**	**8.9416**	**0.5064**	**9.4480**	**2.3922**	**0.4681**	**2.8602**		**12,289.7029**	**12,289.7029**	**0.9720**	**5.3200e-003**	**12,315.5886**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.1496	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Energy	0.0266	0.2418	0.2031	1.4500e-003		0.0184	0.0184		0.0184	0.0184		290.1780	290.1780	5.5600e-003	5.3200e-003	291.9024
Mobile	1.6844	7.6568	24.4939	0.1016	8.9416	0.0692	9.0108	2.3922	0.0643	2.4565		10,350.8970	10,350.8970	0.4329		10,361.7202
Offroad	0.8574	8.4333	12.3412	0.0170		0.4186	0.4186		0.3851	0.3851		1,648.4864	1,648.4864	0.5332		1,661.8152
Total	**4.7180**	**16.3326**	**37.1041**	**0.1200**	**8.9416**	**0.5064**	**9.4480**	**2.3922**	**0.4681**	**2.8602**		**12,289.7029**	**12,289.7029**	**0.9720**	**5.3200e-003**	**12,315.5886**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/19/2021	8/18/2021	5	88	
2	Site Preparation	Site Preparation	4/19/2021	4/26/2021	5	6	
3	Grading One - Shoring 1	Grading	4/27/2021	8/18/2021	5	82	
4	Trenching	Trenching	8/19/2021	11/18/2021	5	66	
5	Grading Two - Excavation	Grading	8/19/2021	12/17/2021	5	87	
6	Grading Three - Shoring 2	Grading	8/19/2021	9/30/2021	5	31	

7	Paving One - Concrete Foundations	Paving	10/1/2021	12/17/2021	5	56	
8	Building Construction	Building Construction	2/21/2022	4/18/2024	5	564	
9	Architectural Coating	Architectural Coating	12/19/2023	4/18/2024	5	88	
10	Paving Two - Concrete Paving	Paving	1/19/2024	4/18/2024	5	65	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 137,511; Non-Residential Outdoor: 45,837; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Demolition	Concrete/Industrial Saws	3	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38
Grading One - Shoring 1	Excavators	0	0.00	0	0.00
Grading One - Shoring 1	Rubber Tired Dozers	0	0.00	0	0.00
Grading One - Shoring 1	Tractors/Loaders/Backhoes	0	0.00	0	0.00
Building Construction	Generator Sets	1	8.00	84	0.74
Paving One - Concrete Foundations	Pavers	0	0.00	0	0.00
Paving One - Concrete Foundations	Rollers	0	0.00	0	0.00
Grading One - Shoring 1	Graders	0	0.00	0	0.00
Paving One - Concrete Foundations	Paving Equipment	0	0.00	0	0.00
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Grading Two - Excavation	Excavators	2	8.00	158	0.38
Grading Three - Shoring 2	Excavators	0	0.00	0	0.00
Grading Two - Excavation	Graders	2	8.00	187	0.41
Grading Three - Shoring 2	Graders	0	0.00	0	0.00
Paving Two - Concrete Paving	Pavers	0	0.00	0	0.00
Paving Two - Concrete Paving	Paving Equipment	0	0.00	0	0.00
Paving Two - Concrete Paving	Rollers	2	8.00	80	0.38
Grading Two - Excavation	Rubber Tired Dozers	2	8.00	247	0.40
Grading Three - Shoring 2	Rubber Tired Dozers	0	0.00	0	0.00
Grading Two - Excavation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Three - Shoring 2	Tractors/Loaders/Backhoes	0	0.00	0	0.00
Demolition	Crawler Tractors	2	8.00	212	0.43
Grading One - Shoring 1	Cranes	1	8.00	231	0.29
Grading One - Shoring 1	Other Construction Equipment	1	8.00	172	0.42
Building Construction	Rollers	1	8.00	80	0.38
Paving One - Concrete Foundations	Cranes	2	8.00	231	0.29
Paving One - Concrete Foundations	Excavators	2	8.00	158	0.38
Paving One - Concrete Foundations	Forklifts	2	8.00	89	0.20
Paving One - Concrete Foundations	Generator Sets	1	8.00	84	0.74
Paving One - Concrete Foundations	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving One - Concrete Foundations	Welders	1	8.00	46	0.45
Grading Two - Excavation	Scrapers	2	8.00	367	0.48
Grading Three - Shoring 2	Bore/Drill Rigs	1	8.00	221	0.50
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving Two - Concrete Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving Two - Concrete Paving	Graders	1	8.00	187	0.41
Paving Two - Concrete Paving	Rubber Tired Loaders	1	8.00	203	0.36
Paving Two - Concrete Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	124.00	51.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	10	26.00	0.00	138.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading One - Shoring 1	2	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving One - Concrete Foundations	10	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Two - Excavation	11	28.00	0.00	10,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Three - Shoring 2	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving Two - Concrete Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3390	0.0000	0.3390	0.0513	0.0000	0.0513			0.0000			0.0000
Off-Road	5.0335	51.4137	33.7697	0.0670		2.4204	2.4204		2.2684	2.2684		6,449.7544	6,449.7544	1.6142		6,490.1091
Total	**5.0335**	**51.4137**	**33.7697**	**0.0670**	**0.3390**	**2.4204**	**2.7595**	**0.0513**	**2.2684**	**2.3197**		**6,449.7544**	**6,449.7544**	**1.6142**		**6,490.1091**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0114	0.3967	0.0840	1.2000e-003	0.0274	1.2300e-003	0.0286	7.5100e-003	1.1800e-003	8.6900e-003		130.0869	130.0869	8.6800e-003		130.3039
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1098	0.0712	0.9795	2.8900e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		287.9249	287.9249	7.7400e-003		288.1184
Total	**0.1211**	**0.4679**	**1.0635**	**4.0900e-003**	**0.3180**	**3.3700e-003**	**0.3214**	**0.0846**	**3.1500e-003**	**0.0877**		**418.0118**	**418.0118**	**0.0164**		**418.4223**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1526	0.0000	0.1526	0.0231	0.0000	0.0231			0.0000			0.0000
Off-Road	0.7798	3.3792	38.0516	0.0670		0.1040	0.1040		0.1040	0.1040	0.0000	6,449.7544	6,449.7544	1.6142		6,490.1091
Total	**0.7798**	**3.3792**	**38.0516**	**0.0670**	**0.1526**	**0.1040**	**0.2565**	**0.0231**	**0.1040**	**0.1271**	**0.0000**	**6,449.7544**	**6,449.7544**	**1.6142**		**6,490.1091**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0114	0.3967	0.0840	1.2000e-003	0.0274	1.2300e-003	0.0286	7.5100e-003	1.1800e-003	8.6900e-003		130.0869	130.0869	8.6800e-003		130.3039
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1098	0.0712	0.9795	2.8900e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		287.9249	287.9249	7.7400e-003		288.1184
Total	**0.1211**	**0.4679**	**1.0635**	**4.0900e-003**	**0.3180**	**3.3700e-003**	**0.3214**	**0.0846**	**3.1500e-003**	**0.0877**		**418.0118**	**418.0118**	**0.0164**		**418.4223**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Fugitive Dust					12.0442	0.0000	12.0442	6.6205	0.0000	6.6205			0.0000			0.0000
Off-Road	2.4673	25.7342	12.5960	0.0233		1.2885	1.2885		1.1854	1.1854		2,256.5045	2,256.5045	0.7298		2,274.7495
Total	**2.4673**	**25.7342**	**12.5960**	**0.0233**	**12.0442**	**1.2885**	**13.3326**	**6.6205**	**1.1854**	**7.8058**		**2,256.5045**	**2,256.5045**	**0.7298**		**2,274.7495**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148

Total	**0.0422**	**0.0274**	**0.3767**	**1.1100e-003**	**0.1118**	**8.2000e-004**	**0.1126**	**0.0296**	**7.6000e-004**	**0.0304**		**110.7403**	**110.7403**	**2.9800e-003**		**110.8148**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4199	0.0000	5.4199	2.9792	0.0000	2.9792			0.0000			0.0000
Off-Road	0.2851	1.2353	12.3513	0.0233		0.0380	0.0380		0.0380	0.0380	0.0000	2,256.5045	2,256.5045	0.7298		2,274.7495
Total	**0.2851**	**1.2353**	**12.3513**	**0.0233**	**5.4199**	**0.0380**	**5.4579**	**2.9792**	**0.0380**	**3.0172**	**0.0000**	**2,256.5045**	**2,256.5045**	**0.7298**		**2,274.7495**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	**0.0422**	**0.0274**	**0.3767**	**1.1100e-003**	**0.1118**	**8.2000e-004**	**0.1126**	**0.0296**	**7.6000e-004**	**0.0304**		**110.7403**	**110.7403**	**2.9800e-003**		**110.8148**

3.4 Grading One - Shoring 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8255	9.1505	5.9806	0.0118		0.4222	0.4222		0.3884	0.3884		1,147.0473	1,147.0473	0.3710		1,156.3217
Total	**0.8255**	**9.1505**	**5.9806**	**0.0118**	**0.0000**	**0.4222**	**0.4222**	**0.0000**	**0.3884**	**0.3884**		**1,147.0473**	**1,147.0473**	**0.3710**		**1,156.3217**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0253	0.0164	0.2260	6.7000e-004	0.0671	4.9000e-004	0.0676	0.0178	4.5000e-004	0.0182		66.4442	66.4442	1.7900e-003		66.4889
Total	**0.0253**	**0.0164**	**0.2260**	**6.7000e-004**	**0.0671**	**4.9000e-004**	**0.0676**	**0.0178**	**4.5000e-004**	**0.0182**		**66.4442**	**66.4442**	**1.7900e-003**		**66.4889**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1460	0.6328	7.2448	0.0118		0.0195	0.0195		0.0195	0.0195	0.0000	1,147.0473	1,147.0473	0.3710		1,156.3217
Total	**0.1460**	**0.6328**	**7.2448**	**0.0118**	**0.0000**	**0.0195**	**0.0195**	**0.0000**	**0.0195**	**0.0195**	**0.0000**	**1,147.0473**	**1,147.0473**	**0.3710**		**1,156.3217**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0253	0.0164	0.2260	6.7000e-004	0.0671	4.9000e-004	0.0676	0.0178	4.5000e-004	0.0182		66.4442	66.4442	1.7900e-003		66.4889
Total	**0.0253**	**0.0164**	**0.2260**	**6.7000e-004**	**0.0671**	**4.9000e-004**	**0.0676**	**0.0178**	**4.5000e-004**	**0.0182**		**66.4442**	**66.4442**	**1.7900e-003**		**66.4889**

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6037	5.9450	7.7923	0.0114		0.3280	0.3280		0.3018	0.3018		1,101.9921	1,101.9921	0.3564		1,110.9023
Total	**0.6037**	**5.9450**	**7.7923**	**0.0114**		**0.3280**	**0.3280**		**0.3018**	**0.3018**		**1,101.9921**	**1,101.9921**	**0.3564**		**1,110.9023**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0338	0.0219	0.3014	8.9000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.1000e-004	0.0243		88.5923	88.5923	2.3800e-003		88.6518
Total	**0.0338**	**0.0219**	**0.3014**	**8.9000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.1000e-004**	**0.0243**		**88.5923**	**88.5923**	**2.3800e-003**		**88.6518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1395	0.6045	8.6022	0.0114		0.0186	0.0186		0.0186	0.0186	0.0000	1,101.9921	1,101.9921	0.3564		1,110.9023
Total	**0.1395**	**0.6045**	**8.6022**	**0.0114**		**0.0186**	**0.0186**		**0.0186**	**0.0186**	**0.0000**	**1,101.9921**	**1,101.9921**	**0.3564**		**1,110.9023**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0338	0.0219	0.3014	8.9000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.1000e-004	0.0243		88.5923	88.5923	2.3800e-003		88.6518
Total	**0.0338**	**0.0219**	**0.3014**	**8.9000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.1000e-004**	**0.0243**		**88.5923**	**88.5923**	**2.3800e-003**		**88.6518**

3.6 Grading Two - Excavation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Fugitive Dust					15.3557	0.0000	15.3557	6.9837	0.0000	6.9837			0.0000			0.0000
Off-Road	5.8871	65.2985	39.0137	0.0804		2.8214	2.8214		2.5957	2.5957		7,791.6589	7,791.6589	2.5200		7,854.6584
Total	**5.8871**	**65.2985**	**39.0137**	**0.0804**	**15.3557**	**2.8214**	**18.1771**	**6.9837**	**2.5957**	**9.5794**		**7,791.6589**	**7,791.6589**	**2.5200**		**7,854.6584**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.8340	29.0792	6.1555	0.0881	2.0085	0.0901	2.0986	0.5504	0.0862	0.6367		9,534.9375	9,534.9375	0.6361		9,550.8405
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1182	0.0767	1.0548	3.1100e-003	0.3130	2.3000e-003	0.3153	0.0830	2.1200e-003	0.0851		310.0729	310.0729	8.3400e-003		310.2814

Total	**0.9522**	**29.1558**	**7.2103**	**0.0912**	**2.3215**	**0.0924**	**2.4139**	**0.6334**	**0.0884**	**0.7218**		**9,845.0105**	**9,845.0105**	**0.6445**		**9,861.1219**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.9101	0.0000	6.9101	3.1427	0.0000	3.1427			0.0000			0.0000
Off-Road	0.9871	4.2773	42.2180	0.0804		0.1316	0.1316		0.1316	0.1316	0.0000	7,791.6589	7,791.6589	2.5200		7,854.6584
Total	**0.9871**	**4.2773**	**42.2180**	**0.0804**	**6.9101**	**0.1316**	**7.0417**	**3.1427**	**0.1316**	**3.2743**	**0.0000**	**7,791.6589**	**7,791.6589**	**2.5200**		**7,854.6584**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8340	29.0792	6.1555	0.0881	2.0085	0.0901	2.0986	0.5504	0.0862	0.6367		9,534.9375	9,534.9375	0.6361		9,550.8405
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1182	0.0767	1.0548	3.1100e-003	0.3130	2.3000e-003	0.3153	0.0830	2.1200e-003	0.0851		310.0729	310.0729	8.3400e-003		310.2814
Total	**0.9522**	**29.1558**	**7.2103**	**0.0912**	**2.3215**	**0.0924**	**2.4139**	**0.6334**	**0.0884**	**0.7218**		**9,845.0105**	**9,845.0105**	**0.6445**		**9,861.1219**

3.7 Grading Three - Shoring 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2595	3.0379	2.0843	9.4700e-003		0.0921	0.0921		0.0847	0.0847		916.6227	916.6227	0.2965		924.0341
Total	**0.2595**	**3.0379**	**2.0843**	**9.4700e-003**	**0.0000**	**0.0921**	**0.0921**	**0.0000**	**0.0847**	**0.0847**		**916.6227**	**916.6227**	**0.2965**		**924.0341**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0169	0.0110	0.1507	4.4000e-004	0.0447	3.3000e-004	0.0450	0.0119	3.0000e-004	0.0122		44.2961	44.2961	1.1900e-003		44.3259
Total	**0.0169**	**0.0110**	**0.1507**	**4.4000e-004**	**0.0447**	**3.3000e-004**	**0.0450**	**0.0119**	**3.0000e-004**	**0.0122**		**44.2961**	**44.2961**	**1.1900e-003**		**44.3259**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1175	0.5092	4.3090	9.4700e-003		0.0157	0.0157		0.0157	0.0157	0.0000	916.6227	916.6227	0.2965		924.0341
Total	**0.1175**	**0.5092**	**4.3090**	**9.4700e-003**	**0.0000**	**0.0157**	**0.0157**	**0.0000**	**0.0157**	**0.0157**	**0.0000**	**916.6227**	**916.6227**	**0.2965**		**924.0341**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0169	0.0110	0.1507	4.4000e-004	0.0447	3.3000e-004	0.0450	0.0119	3.0000e-004	0.0122		44.2961	44.2961	1.1900e-003		44.3259
Total	**0.0169**	**0.0110**	**0.1507**	**4.4000e-004**	**0.0447**	**3.3000e-004**	**0.0450**	**0.0119**	**3.0000e-004**	**0.0122**		**44.2961**	**44.2961**	**1.1900e-003**		**44.3259**

3.8 Paving One - Concrete Foundations - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5741	24.7848	22.7691	0.0402		1.2338	1.2338		1.1545	1.1545		3,842.9567	3,842.9567	1.0331		3,868.7840
Paving	5.1500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5793**	**24.7848**	**22.7691**	**0.0402**		**1.2338**	**1.2338**		**1.1545**	**1.1545**		**3,842.9567**	**3,842.9567**	**1.0331**		**3,868.7840**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1098	0.0712	0.9795	2.8900e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		287.9249	287.9249	7.7400e-003		288.1184
Total	**0.1098**	**0.0712**	**0.9795**	**2.8900e-003**	**0.2906**	**2.1400e-003**	**0.2928**	**0.0771**	**1.9700e-003**	**0.0790**		**287.9249**	**287.9249**	**7.7400e-003**		**288.1184**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4917	2.9447	25.5929	0.0402		0.0626	0.0626		0.0626	0.0626	0.0000	3,842.9567	3,842.9567	1.0331		3,868.7840
Paving	5.1500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4968**	**2.9447**	**25.5929**	**0.0402**		**0.0626**	**0.0626**		**0.0626**	**0.0626**	**0.0000**	**3,842.9567**	**3,842.9567**	**1.0331**		**3,868.7840**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1098	0.0712	0.9795	2.8900e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		287.9249	287.9249	7.7400e-003		288.1184
Total	**0.1098**	**0.0712**	**0.9795**	**2.8900e-003**	**0.2906**	**2.1400e-003**	**0.2928**	**0.0771**	**1.9700e-003**	**0.0790**		**287.9249**	**287.9249**	**7.7400e-003**		**288.1184**

3.9 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	2.1968	20.9810	19.8560	0.0346		1.0592	1.0592		0.9914	0.9914		3,294.2042	3,294.2042	0.8512		3,315.4851
Total	**2.1968**	**20.9810**	**19.8560**	**0.0346**		**1.0592**	**1.0592**		**0.9914**	**0.9914**		**3,294.2042**	**3,294.2042**	**0.8512**		**3,315.4851**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1331	4.6172	1.0909	0.0129	0.3264	8.4900e-003	0.3349	0.0940	8.1200e-003	0.1021		1,377.3015	1,377.3015	0.0809		1,379.3244
Worker	0.4910	0.3067	4.3196	0.0133	1.3860	9.9100e-003	1.3959	0.3676	9.1300e-003	0.3767		1,323.9777	1,323.9777	0.0334		1,324.8120

Total	**0.6241**	**4.9238**	**5.4105**	**0.0262**	**1.7124**	**0.0184**	**1.7308**	**0.4616**	**0.0173**	**0.4788**		**2,701.2792**	**2,701.2792**	**0.1143**		**2,704.1364**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4216	2.6411	21.6934	0.0346		0.0533	0.0533		0.0533	0.0533	0.0000	3,294.2042	3,294.2042	0.8512		3,315.4851
Total	**0.4216**	**2.6411**	**21.6934**	**0.0346**		**0.0533**	**0.0533**		**0.0533**	**0.0533**	**0.0000**	**3,294.2042**	**3,294.2042**	**0.8512**		**3,315.4851**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1331	4.6172	1.0909	0.0129	0.3264	8.4900e-003	0.3349	0.0940	8.1200e-003	0.1021		1,377.3015	1,377.3015	0.0809		1,379.3244
Worker	0.4910	0.3067	4.3196	0.0133	1.3860	9.9100e-003	1.3959	0.3676	9.1300e-003	0.3767		1,323.9777	1,323.9777	0.0334		1,324.8120
Total	**0.6241**	**4.9238**	**5.4105**	**0.0262**	**1.7124**	**0.0184**	**1.7308**	**0.4616**	**0.0173**	**0.4788**		**2,701.2792**	**2,701.2792**	**0.1143**		**2,704.1364**

3.9 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0320	19.3132	19.6780	0.0346		0.9266	0.9266		0.8672	0.8672		3,295.0747	3,295.0747	0.8471		3,316.2530
Total	**2.0320**	**19.3132**	**19.6780**	**0.0346**		**0.9266**	**0.9266**		**0.8672**	**0.8672**		**3,295.0747**	**3,295.0747**	**0.8471**		**3,316.2530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0993	3.4906	0.9829	0.0125	0.3264	3.9200e-003	0.3303	0.0940	3.7500e-003	0.0977		1,335.5254	1,335.5254	0.0706		1,337.2892
Worker	0.4616	0.2775	3.9890	0.0128	1.3860	9.6500e-003	1.3957	0.3676	8.8900e-003	0.3765		1,274.6334	1,274.6334	0.0301		1,275.3859
Total	**0.5609**	**3.7681**	**4.9719**	**0.0253**	**1.7124**	**0.0136**	**1.7260**	**0.4616**	**0.0126**	**0.4742**		**2,610.1588**	**2,610.1588**	**0.1007**		**2,612.6751**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.4216	2.6411	21.6934	0.0346		0.0533	0.0533		0.0533	0.0533	0.0000	3,295.0747	3,295.0747	0.8471		3,316.2530
Total	**0.4216**	**2.6411**	**21.6934**	**0.0346**		**0.0533**	**0.0533**		**0.0533**	**0.0533**	**0.0000**	**3,295.0747**	**3,295.0747**	**0.8471**		**3,316.2530**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0993	3.4906	0.9829	0.0125	0.3264	3.9200e-003	0.3303	0.0940	3.7500e-003	0.0977		1,335.5254	1,335.5254	0.0706		1,337.2892
Worker	0.4616	0.2775	3.9890	0.0128	1.3860	9.6500e-003	1.3957	0.3676	8.8900e-003	0.3765		1,274.6334	1,274.6334	0.0301		1,275.3859
Total	**0.5609**	**3.7681**	**4.9719**	**0.0253**	**1.7124**	**0.0136**	**1.7260**	**0.4616**	**0.0126**	**0.4742**		**2,610.1588**	**2,610.1588**	**0.1007**		**2,612.6751**

3.9 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9057	18.0151	19.5464	0.0346		0.8205	0.8205		0.7676	0.7676		3,295.5908	3,295.5908	0.8437		3,316.6819
Total	**1.9057**	**18.0151**	**19.5464**	**0.0346**		**0.8205**	**0.8205**		**0.7676**	**0.7676**		**3,295.5908**	**3,295.5908**	**0.8437**		**3,316.6819**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0972	3.4820	0.9546	0.0124	0.3264	3.8800e-003	0.3303	0.0940	3.7100e-003	0.0977		1,330.6832	1,330.6832	0.0695		1,332.4197
Worker	0.4369	0.2529	3.7263	0.0124	1.3860	9.5200e-003	1.3956	0.3676	8.7700e-003	0.3764		1,232.8191	1,232.8191	0.0276		1,233.5089
Total	**0.5341**	**3.7348**	**4.6808**	**0.0248**	**1.7124**	**0.0134**	**1.7258**	**0.4616**	**0.0125**	**0.4740**		**2,563.5023**	**2,563.5023**	**0.0971**		**2,565.9286**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4216	2.6411	21.6934	0.0346		0.0533	0.0533		0.0533	0.0533	0.0000	3,295.5908	3,295.5908	0.8437		3,316.6819
Total	**0.4216**	**2.6411**	**21.6934**	**0.0346**		**0.0533**	**0.0533**		**0.0533**	**0.0533**	**0.0000**	**3,295.5908**	**3,295.5908**	**0.8437**		**3,316.6819**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0972	3.4820	0.9546	0.0124	0.3264	3.8800e-003	0.3303	0.0940	3.7100e-003	0.0977		1,330.6832	1,330.6832	0.0695		1,332.4197
Worker	0.4369	0.2529	3.7263	0.0124	1.3860	9.5200e-003	1.3956	0.3676	8.7700e-003	0.3764		1,232.8191	1,232.8191	0.0276		1,233.5089
Total	**0.5341**	**3.7348**	**4.6808**	**0.0248**	**1.7124**	**0.0134**	**1.7258**	**0.4616**	**0.0125**	**0.4740**		**2,563.5023**	**2,563.5023**	**0.0971**		**2,565.9286**

3.10 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Archit. Coating	10.3586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**10.5503**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0968	0.0582	0.8364	2.6800e-003	0.2906	2.0200e-003	0.2926	0.0771	1.8600e-003	0.0789		267.2618	267.2618	6.3100e-003		267.4196

Total	**0.0968**	**0.0582**	**0.8364**	**2.6800e-003**	**0.2906**	**2.0200e-003**	**0.2926**	**0.0771**	**1.8600e-003**	**0.0789**		**267.2618**	**267.2618**	**6.3100e-003**		**267.4196**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.3586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**10.5503**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0968	0.0582	0.8364	2.6800e-003	0.2906	2.0200e-003	0.2926	0.0771	1.8600e-003	0.0789		267.2618	267.2618	6.3100e-003		267.4196
Total	**0.0968**	**0.0582**	**0.8364**	**2.6800e-003**	**0.2906**	**2.0200e-003**	**0.2926**	**0.0771**	**1.8600e-003**	**0.0789**		**267.2618**	**267.2618**	**6.3100e-003**		**267.4196**

3.10 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.3586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**10.5394**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.0530	0.7813	2.5900e-003	0.2906	2.0000e-003	0.2926	0.0771	1.8400e-003	0.0789		258.4943	258.4943	5.7900e-003		258.6390
Total	**0.0916**	**0.0530**	**0.7813**	**2.5900e-003**	**0.2906**	**2.0000e-003**	**0.2926**	**0.0771**	**1.8400e-003**	**0.0789**		**258.4943**	**258.4943**	**5.7900e-003**		**258.6390**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	10.3586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**10.5394**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.0530	0.7813	2.5900e-003	0.2906	2.0000e-003	0.2926	0.0771	1.8400e-003	0.0789		258.4943	258.4943	5.7900e-003		258.6390
Total	**0.0916**	**0.0530**	**0.7813**	**2.5900e-003**	**0.2906**	**2.0000e-003**	**0.2926**	**0.0771**	**1.8400e-003**	**0.0789**		**258.4943**	**258.4943**	**5.7900e-003**		**258.6390**

3.11 Paving Two - Concrete Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1316	11.5252	9.5439	0.0223		0.4616	0.4616		0.4264	0.4264		2,131.6275	2,131.6275	0.6728		2,148.4468
Paving	4.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1361**	**11.5252**	**9.5439**	**0.0223**		**0.4616**	**0.4616**		**0.4264**	**0.4264**		**2,131.6275**	**2,131.6275**	**0.6728**		**2,148.4468**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0634	0.0367	0.5409	1.7900e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2700e-003	0.0546		178.9576	178.9576	4.0100e-003		179.0577
Total	**0.0634**	**0.0367**	**0.5409**	**1.7900e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**178.9576**	**178.9576**	**4.0100e-003**		**179.0577**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2608	1.1300	12.1154	0.0223		0.0348	0.0348		0.0348	0.0348	0.0000	2,131.6275	2,131.6275	0.6728		2,148.4468
Paving	4.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2652**	**1.1300**	**12.1154**	**0.0223**		**0.0348**	**0.0348**		**0.0348**	**0.0348**	**0.0000**	**2,131.6275**	**2,131.6275**	**0.6728**		**2,148.4468**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0634	0.0367	0.5409	1.7900e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2700e-003	0.0546		178.9576	178.9576	4.0100e-003		179.0577
Total	**0.0634**	**0.0367**	**0.5409**	**1.7900e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**178.9576**	**178.9576**	**4.0100e-003**		**179.0577**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Mitigated	1.6844	7.6568	24.4939	0.1016	8.9416	0.0692	9.0108	2.3922	0.0643	2.4565		10,350.8970	10,350.8970	0.4329		10,361.7202
Unmitigated	1.6844	7.6568	24.4939	0.1016	8.9416	0.0692	9.0108	2.3922	0.0643	2.4565		10,350.8970	10,350.8970	0.4329		10,361.7202

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	195.97	0.00	0.00	450,932	450,932
Government Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	833.96	833.96	833.96	3,574,127	3,574,127

Total	1,029.93	833.96	833.96	4,025,059	4,025,059

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Government Office Building	16.60	8.40	6.90	33.00	62.00	5.00	50	34	16
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Enclosed Parking with Elevator	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
General Office Building	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Government Office Building	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Parking Lot	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Unrefrigerated Warehouse-No Rail	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
NaturalGas Mitigated	0.0266	0.2418	0.2031	1.4500e-003		0.0184	0.0184		0.0184	0.0184		290.1780	290.1780	5.5600e-003	5.3200e-003	291.9024
NaturalGas Unmitigated	0.0266	0.2418	0.2031	1.4500e-003		0.0184	0.0184		0.0184	0.0184		290.1780	290.1780	5.5600e-003	5.3200e-003	291.9024

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	628.69	6.7800e-003	0.0616	0.0518	3.7000e-004		4.6800e-003	4.6800e-003		4.6800e-003	4.6800e-003		73.9635	73.9635	1.4200e-003	1.3600e-003	74.4030
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1531.27	0.0165	0.1501	0.1261	9.0000e-004		0.0114	0.0114		0.0114	0.0114		180.1492	180.1492	3.4500e-003	3.3000e-003	181.2197
Government Office Building	268.692	2.9000e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003		31.6108	31.6108	6.1000e-004	5.8000e-004	31.7987
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	37.8629	4.1000e-004	3.7100e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4545	4.4545	9.0000e-005	8.0000e-005	4.4809
Total		**0.0266**	**0.2418**	**0.2031**	**1.4500e-003**		**0.0184**	**0.0184**		**0.0184**	**0.0184**		**290.1780**	**290.1780**	**5.5700e-003**	**5.3200e-003**	**291.9024**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Automobile Care Center	0.62869	6.7800e-003	0.0616	0.0518	3.7000e-004		4.6800e-003	4.6800e-003		4.6800e-003	4.6800e-003		73.9635	73.9635	1.4200e-003	1.3600e-003	74.4030
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.53127	0.0165	0.1501	0.1261	9.0000e-004		0.0114	0.0114		0.0114	0.0114		180.1492	180.1492	3.4500e-003	3.3000e-003	181.2197
Government Office Building	0.268692	2.9000e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003		31.6108	31.6108	6.1000e-004	5.8000e-004	31.7987
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.0378629	4.1000e-004	3.7100e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4545	4.4545	9.0000e-005	8.0000e-005	4.4809
Total		**0.0266**	**0.2418**	**0.2031**	**1.4500e-003**		**0.0184**	**0.0184**		**0.0184**	**0.0184**		**290.1780**	**290.1780**	**5.5700e-003**	**5.3200e-003**	**291.9024**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.1496	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Unmitigated	2.1496	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

SubCategory	lb/day										lb/day					
Architectural Coating	0.2497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0900e-003	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Total	**2.1496**	**6.0000e-004**	**0.0659**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**		**0.1415**	**0.1415**	**3.7000e-004**		**0.1508**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0900e-003	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Total	**2.1496**	**6.0000e-004**	**0.0659**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**		**0.1415**	**0.1415**	**3.7000e-004**		**0.1508**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Grey Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	4	8.00	260	97	0.37	Diesel
Forklifts	3	8.00	260	89	0.20	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.2840	2.6638	3.4350	4.6100e-003		0.1538	0.1538		0.1415	0.1415		446.3130	446.3130	0.1444		449.9216
Tractors/Loaders/Backhoes	0.5734	5.7695	8.9062	0.0124		0.2648	0.2648		0.2436	0.2436		1,202.1734	1,202.1734	0.3888		1,211.8936
Total	**0.8574**	**8.4333**	**12.3412**	**0.0170**		**0.4186**	**0.4186**		**0.3851**	**0.3851**		**1,648.4864**	**1,648.4864**	**0.5332**		**1,661.8152**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	4	30	600	1	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LADWP - West LA District Yard Project

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	53.69	1000sqft	1.23	53,690.00	0
Unrefrigerated Warehouse-No Rail	15.89	1000sqft	0.36	15,885.00	0
Automobile Care Center	12.68	1000sqft	0.29	12,678.00	0
Enclosed Parking with Elevator	543.00	Space	4.89	217,200.00	0
Parking Lot	12.00	Space	0.11	4,800.00	0
Government Office Building	9.42	1000sqft	0.22	9,421.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operational year 2024.

Land Use - Project specific square footage and acreage provided by LADWP

Construction Phase - Construction phasing provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

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Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Off-road Equipment - Construction equipment information provided by LADWP.

Grading - 100,000 CY of export is anticipated.

Trips and VMT - Trips were rounded up to the highest even value.

Vehicle Trips - Trip generation rates were modified to be consistent with the trip generation assumptions in the TIA for the project.

Operational Off-Road Equipment - Equipment information provided by LADWP.

Stationary Sources - Emergency Generators and Fire Pumps - NA

Construction Off-road Equipment Mitigation - Compliance with SCAQMD Rule 403 and Mitigation Measure AQ-1: use of Tier 4 final engines in construction equipment

Energy Mitigation - Onsite Electricity generation from on-site solar is anticipated to meet the project's electricity demand per LADWP.

Water Mitigation - Per LADWP grey water use and water reduction measures were assumed as design features.

Waste Mitigation - Consistent with AB 939 a 50% waste diversion rate was assumed.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	13.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	230.00	564.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	20.00	82.00
tblConstructionPhase	NumDays	20.00	56.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	20.00	87.00
tblConstructionPhase	NumDays	20.00	31.00

tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	PhaseEndDate	3/24/2021	4/18/2024
tblConstructionPhase	PhaseEndDate	1/27/2021	4/18/2024
tblConstructionPhase	PhaseEndDate	1/29/2020	8/18/2021
tblConstructionPhase	PhaseEndDate	3/11/2020	8/18/2021
tblConstructionPhase	PhaseEndDate	2/24/2021	12/17/2021
tblConstructionPhase	PhaseEndDate	2/12/2020	4/26/2021
tblConstructionPhase	PhaseStartDate	2/25/2021	12/19/2023
tblConstructionPhase	PhaseStartDate	3/12/2020	2/21/2022
tblConstructionPhase	PhaseStartDate	1/2/2020	4/19/2021
tblConstructionPhase	PhaseStartDate	2/13/2020	4/27/2021
tblConstructionPhase	PhaseStartDate	1/28/2021	10/1/2021
tblConstructionPhase	PhaseStartDate	1/30/2020	4/19/2021
tblGrading	MaterialExported	0.00	100,000.00
tblOffRoadEquipment	HorsePower	158.00	0.00
tblOffRoadEquipment	HorsePower	130.00	0.00
tblOffRoadEquipment	HorsePower	80.00	0.00
tblOffRoadEquipment	HorsePower	247.00	0.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	HorsePower	97.00	0.00
tblOffRoadEquipment	HorsePower	132.00	0.00
tblOffRoadEquipment	HorsePower	158.00	0.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	HorsePower	130.00	0.00
tblOffRoadEquipment	HorsePower	132.00	0.00
tblOffRoadEquipment	HorsePower	247.00	0.00
tblOffRoadEquipment	HorsePower	97.00	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.00
tblOffRoadEquipment	LoadFactor	0.42	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.00

tblOffRoadEquipment	LoadFactor	0.40	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	LoadFactor	0.37	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	LoadFactor	0.42	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.00
tblOffRoadEquipment	LoadFactor	0.40	0.00
tblOffRoadEquipment	LoadFactor	0.37	0.00
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts

tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.37	0.37
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblStationaryGeneratorsPumpsEF	CO_EF	2.60	0.44
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	4.08
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.03
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.03
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	600.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	4.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	30.00
tblStationaryGeneratorsPumpsUse	Load_Factor	0.73	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	12,500.00	10,000.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00

tblTripsAndVMT	WorkerTripNumber	5.00	6.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00
tblTripsAndVMT	WorkerTripNumber	3.00	4.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.68	52.50
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.68	52.50
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	11.03	3.65
tblVehicleTrips	WD_TR	68.93	0.00
tblVehicleTrips	WD_TR	1.68	52.50

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	10.2138	125.6391	78.2820	0.2250	18.0572	4.4799	22.5370	7.7179	4.1442	11.8621	0.0000	22,737.2887	22,737.2887	4.5897	0.0000	22,852.0306
2022	2.8747	25.9153	24.9521	0.0595	1.7124	1.0779	2.7904	0.4616	1.0089	1.4704	0.0000	5,869.5801	5,869.5801	0.9692	0.0000	5,893.8090
2023	13.3005	24.4517	26.8890	0.0642	2.0031	1.0132	3.0163	0.5386	0.9527	1.4913	0.0000	6,315.7118	6,315.7118	0.9730	0.0000	6,340.0376
2024	14.3358	34.5944	36.4605	0.0876	2.2043	1.3600	3.5643	0.5920	1.2706	1.8626	0.0000	8,563.2645	8,563.2645	1.6410	0.0000	8,604.2882
Maximum	**14.3358**	**125.6391**	**78.2820**	**0.2250**	**18.0572**	**4.4799**	**22.5370**	**7.7179**	**4.1442**	**11.8621**	**0.0000**	**22,737.2887**	**22,737.2887**	**4.5897**	**0.0000**	**22,852.0306**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.7671	37.4372	85.1200	0.2250	9.6116	0.3095	9.9210	3.8769	0.3051	4.1819	0.0000	22,737.2887	22,737.2887	4.5897	0.0000	22,852.0306
2022	1.0996	7.5755	26.7895	0.0595	1.7124	0.0720	1.7844	0.4616	0.0708	0.5324	0.0000	5,869.5801	5,869.5801	0.9692	0.0000	5,893.8090
2023	11.6901	7.7796	28.9045	0.0642	2.0031	0.1399	2.1430	0.5386	0.1388	0.6774	0.0000	6,315.7118	6,315.7118	0.9730	0.0000	6,340.0376
2024	11.9808	8.8252	41.1790	0.0876	2.2043	0.1659	2.3702	0.5920	0.1647	0.7567	0.0000	8,563.2645	8,563.2645	1.6410	0.0000	8,604.2882
Maximum	**11.9808**	**37.4372**	**85.1200**	**0.2250**	**9.6116**	**0.3095**	**9.9210**	**3.8769**	**0.3051**	**4.1819**	**0.0000**	**22,737.2887**	**22,737.2887**	**4.5897**	**0.0000**	**22,852.0306**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**32.38**	**70.74**	**-9.25**	**0.00**	**35.22**	**91.33**	**49.17**	**41.26**	**90.79**	**63.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.1496	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Energy	0.0266	0.2418	0.2031	1.4500e-003		0.0184	0.0184		0.0184	0.0184		290.1780	290.1780	5.5600e-003	5.3200e-003	291.9024
Mobile	1.5983	7.8260	22.6432	0.0962	8.9416	0.0694	9.0110	2.3922	0.0646	2.4567		9,814.4915	9,814.4915	0.4305		9,825.2535
Offroad	0.8574	8.4333	12.3412	0.0170		0.4186	0.4186		0.3851	0.3851		1,648.4864	1,648.4864	0.5332		1,661.8152

Total	**4.6319**	**16.5018**	**35.2534**	**0.1147**	**8.9416**	**0.5067**	**9.4483**	**2.3922**	**0.4683**	**2.8605**		**11,753.2974**	**11,753.2974**	**0.9696**	**5.3200e-003**	**11,779.1218**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.1496	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Energy	0.0266	0.2418	0.2031	1.4500e-003		0.0184	0.0184		0.0184	0.0184		290.1780	290.1780	5.5600e-003	5.3200e-003	291.9024
Mobile	1.5983	7.8260	22.6432	0.0962	8.9416	0.0694	9.0110	2.3922	0.0646	2.4567		9,814.4915	9,814.4915	0.4305		9,825.2535
Offroad	0.8574	8.4333	12.3412	0.0170		0.4186	0.4186		0.3851	0.3851		1,648.4864	1,648.4864	0.5332		1,661.8152
Total	**4.6319**	**16.5018**	**35.2534**	**0.1147**	**8.9416**	**0.5067**	**9.4483**	**2.3922**	**0.4683**	**2.8605**		**11,753.2974**	**11,753.2974**	**0.9696**	**5.3200e-003**	**11,779.1218**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/19/2021	8/18/2021	5	88	
2	Site Preparation	Site Preparation	4/19/2021	4/26/2021	5	6	
3	Grading One - Shoring 1	Grading	4/27/2021	8/18/2021	5	82	
4	Trenching	Trenching	8/19/2021	11/18/2021	5	66	
5	Grading Two - Excavation	Grading	8/19/2021	12/17/2021	5	87	
6	Grading Three - Shoring 2	Grading	8/19/2021	9/30/2021	5	31	

7	Paving One - Concrete Foundations	Paving	10/1/2021	12/17/2021	5	56	
8	Building Construction	Building Construction	2/21/2022	4/18/2024	5	564	
9	Architectural Coating	Architectural Coating	12/19/2023	4/18/2024	5	88	
10	Paving Two - Concrete Paving	Paving	1/19/2024	4/18/2024	5	65	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 137,511; Non-Residential Outdoor: 45,837; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Demolition	Concrete/Industrial Saws	3	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38
Grading One - Shoring 1	Excavators	0	0.00	0	0.00
Grading One - Shoring 1	Rubber Tired Dozers	0	0.00	0	0.00
Grading One - Shoring 1	Tractors/Loaders/Backhoes	0	0.00	0	0.00
Building Construction	Generator Sets	1	8.00	84	0.74
Paving One - Concrete Foundations	Pavers	0	0.00	0	0.00
Paving One - Concrete Foundations	Rollers	0	0.00	0	0.00
Grading One - Shoring 1	Graders	0	0.00	0	0.00
Paving One - Concrete Foundations	Paving Equipment	0	0.00	0	0.00
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Grading Two - Excavation	Excavators	2	8.00	158	0.38
Grading Three - Shoring 2	Excavators	0	0.00	0	0.00
Grading Two - Excavation	Graders	2	8.00	187	0.41
Grading Three - Shoring 2	Graders	0	0.00	0	0.00
Paving Two - Concrete Paving	Pavers	0	0.00	0	0.00
Paving Two - Concrete Paving	Paving Equipment	0	0.00	0	0.00
Paving Two - Concrete Paving	Rollers	2	8.00	80	0.38
Grading Two - Excavation	Rubber Tired Dozers	2	8.00	247	0.40
Grading Three - Shoring 2	Rubber Tired Dozers	0	0.00	0	0.00
Grading Two - Excavation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Three - Shoring 2	Tractors/Loaders/Backhoes	0	0.00	0	0.00
Demolition	Crawler Tractors	2	8.00	212	0.43
Grading One - Shoring 1	Cranes	1	8.00	231	0.29
Grading One - Shoring 1	Other Construction Equipment	1	8.00	172	0.42
Building Construction	Rollers	1	8.00	80	0.38
Paving One - Concrete Foundations	Cranes	2	8.00	231	0.29
Paving One - Concrete Foundations	Excavators	2	8.00	158	0.38
Paving One - Concrete Foundations	Forklifts	2	8.00	89	0.20
Paving One - Concrete Foundations	Generator Sets	1	8.00	84	0.74
Paving One - Concrete Foundations	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving One - Concrete Foundations	Welders	1	8.00	46	0.45
Grading Two - Excavation	Scrapers	2	8.00	367	0.48
Grading Three - Shoring 2	Bore/Drill Rigs	1	8.00	221	0.50
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving Two - Concrete Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving Two - Concrete Paving	Graders	1	8.00	187	0.41
Paving Two - Concrete Paving	Rubber Tired Loaders	1	8.00	203	0.36
Paving Two - Concrete Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	124.00	51.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	10	26.00	0.00	138.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading One - Shoring 1	2	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving One - Concrete Foundations	10	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Two - Excavation	11	28.00	0.00	10,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Three - Shoring 2	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving Two - Concrete Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3390	0.0000	0.3390	0.0513	0.0000	0.0513			0.0000			0.0000
Off-Road	5.0335	51.4137	33.7697	0.0670		2.4204	2.4204		2.2684	2.2684		6,449.7544	6,449.7544	1.6142		6,490.1091
Total	**5.0335**	**51.4137**	**33.7697**	**0.0670**	**0.3390**	**2.4204**	**2.7595**	**0.0513**	**2.2684**	**2.3197**		**6,449.7544**	**6,449.7544**	**1.6142**		**6,490.1091**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0117	0.4015	0.0902	1.1800e-003	0.0274	1.2500e-003	0.0287	7.5100e-003	1.1900e-003	8.7000e-003		127.6806	127.6806	9.0500e-003		127.9068
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1199	0.0779	0.8802	2.7000e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		269.2737	269.2737	7.2200e-003		269.4541
Total	**0.1316**	**0.4794**	**0.9704**	**3.8800e-003**	**0.3180**	**3.3900e-003**	**0.3214**	**0.0846**	**3.1600e-003**	**0.0877**		**396.9543**	**396.9543**	**0.0163**		**397.3608**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1526	0.0000	0.1526	0.0231	0.0000	0.0231			0.0000			0.0000
Off-Road	0.7798	3.3792	38.0516	0.0670		0.1040	0.1040		0.1040	0.1040	0.0000	6,449.7544	6,449.7544	1.6142		6,490.1091
Total	**0.7798**	**3.3792**	**38.0516**	**0.0670**	**0.1526**	**0.1040**	**0.2565**	**0.0231**	**0.1040**	**0.1271**	**0.0000**	**6,449.7544**	**6,449.7544**	**1.6142**		**6,490.1091**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0117	0.4015	0.0902	1.1800e-003	0.0274	1.2500e-003	0.0287	7.5100e-003	1.1900e-003	8.7000e-003		127.6806	127.6806	9.0500e-003		127.9068
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1199	0.0779	0.8802	2.7000e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		269.2737	269.2737	7.2200e-003		269.4541
Total	**0.1316**	**0.4794**	**0.9704**	**3.8800e-003**	**0.3180**	**3.3900e-003**	**0.3214**	**0.0846**	**3.1600e-003**	**0.0877**		**396.9543**	**396.9543**	**0.0163**		**397.3608**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Fugitive Dust					12.0442	0.0000	12.0442	6.6205	0.0000	6.6205			0.0000			0.0000
Off-Road	2.4673	25.7342	12.5960	0.0233		1.2885	1.2885		1.1854	1.1854		2,256.5045	2,256.5045	0.7298		2,274.7495
Total	**2.4673**	**25.7342**	**12.5960**	**0.0233**	**12.0442**	**1.2885**	**13.3326**	**6.6205**	**1.1854**	**7.8058**		**2,256.5045**	**2,256.5045**	**0.7298**		**2,274.7495**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362

Total	**0.0461**	**0.0300**	**0.3385**	**1.0400e-003**	**0.1118**	**8.2000e-004**	**0.1126**	**0.0296**	**7.6000e-004**	**0.0304**		**103.5668**	**103.5668**	**2.7800e-003**		**103.6362**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4199	0.0000	5.4199	2.9792	0.0000	2.9792			0.0000			0.0000
Off-Road	0.2851	1.2353	12.3513	0.0233		0.0380	0.0380		0.0380	0.0380	0.0000	2,256.5045	2,256.5045	0.7298		2,274.7495
Total	**0.2851**	**1.2353**	**12.3513**	**0.0233**	**5.4199**	**0.0380**	**5.4579**	**2.9792**	**0.0380**	**3.0172**	**0.0000**	**2,256.5045**	**2,256.5045**	**0.7298**		**2,274.7495**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0461	0.0300	0.3385	1.0400e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.5668	103.5668	2.7800e-003		103.6362
Total	**0.0461**	**0.0300**	**0.3385**	**1.0400e-003**	**0.1118**	**8.2000e-004**	**0.1126**	**0.0296**	**7.6000e-004**	**0.0304**		**103.5668**	**103.5668**	**2.7800e-003**		**103.6362**

3.4 Grading One - Shoring 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8255	9.1505	5.9806	0.0118		0.4222	0.4222		0.3884	0.3884		1,147.0473	1,147.0473	0.3710		1,156.3217
Total	**0.8255**	**9.1505**	**5.9806**	**0.0118**	**0.0000**	**0.4222**	**0.4222**	**0.0000**	**0.3884**	**0.3884**		**1,147.0473**	**1,147.0473**	**0.3710**		**1,156.3217**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0180	0.2031	6.2000e-004	0.0671	4.9000e-004	0.0676	0.0178	4.5000e-004	0.0182		62.1401	62.1401	1.6700e-003		62.1817
Total	**0.0277**	**0.0180**	**0.2031**	**6.2000e-004**	**0.0671**	**4.9000e-004**	**0.0676**	**0.0178**	**4.5000e-004**	**0.0182**		**62.1401**	**62.1401**	**1.6700e-003**		**62.1817**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1460	0.6328	7.2448	0.0118		0.0195	0.0195		0.0195	0.0195	0.0000	1,147.0473	1,147.0473	0.3710		1,156.3217
Total	**0.1460**	**0.6328**	**7.2448**	**0.0118**	**0.0000**	**0.0195**	**0.0195**	**0.0000**	**0.0195**	**0.0195**	**0.0000**	**1,147.0473**	**1,147.0473**	**0.3710**		**1,156.3217**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0180	0.2031	6.2000e-004	0.0671	4.9000e-004	0.0676	0.0178	4.5000e-004	0.0182		62.1401	62.1401	1.6700e-003		62.1817
Total	**0.0277**	**0.0180**	**0.2031**	**6.2000e-004**	**0.0671**	**4.9000e-004**	**0.0676**	**0.0178**	**4.5000e-004**	**0.0182**		**62.1401**	**62.1401**	**1.6700e-003**		**62.1817**

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6037	5.9450	7.7923	0.0114		0.3280	0.3280		0.3018	0.3018		1,101.9921	1,101.9921	0.3564		1,110.9023
Total	**0.6037**	**5.9450**	**7.7923**	**0.0114**		**0.3280**	**0.3280**		**0.3018**	**0.3018**		**1,101.9921**	**1,101.9921**	**0.3564**		**1,110.9023**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0369	0.0240	0.2708	8.3000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.1000e-004	0.0243		82.8534	82.8534	2.2200e-003		82.9089
Total	**0.0369**	**0.0240**	**0.2708**	**8.3000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.1000e-004**	**0.0243**		**82.8534**	**82.8534**	**2.2200e-003**		**82.9089**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1395	0.6045	8.6022	0.0114		0.0186	0.0186		0.0186	0.0186	0.0000	1,101.9921	1,101.9921	0.3564		1,110.9023
Total	**0.1395**	**0.6045**	**8.6022**	**0.0114**		**0.0186**	**0.0186**		**0.0186**	**0.0186**	**0.0000**	**1,101.9921**	**1,101.9921**	**0.3564**		**1,110.9023**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0369	0.0240	0.2708	8.3000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.1000e-004	0.0243		82.8534	82.8534	2.2200e-003		82.9089
Total	**0.0369**	**0.0240**	**0.2708**	**8.3000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.1000e-004**	**0.0243**		**82.8534**	**82.8534**	**2.2200e-003**		**82.9089**

3.6 Grading Two - Excavation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Fugitive Dust					15.3557	0.0000	15.3557	6.9837	0.0000	6.9837			0.0000			0.0000
Off-Road	5.8871	65.2985	39.0137	0.0804		2.8214	2.8214		2.5957	2.5957		7,791.6589	7,791.6589	2.5200		7,854.6584
Total	**5.8871**	**65.2985**	**39.0137**	**0.0804**	**15.3557**	**2.8214**	**18.1771**	**6.9837**	**2.5957**	**9.5794**		**7,791.6589**	**7,791.6589**	**2.5200**		**7,854.6584**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.8578	29.4249	6.6080	0.0865	2.0085	0.0915	2.1000	0.5504	0.0876	0.6380		9,358.5669	9,358.5669	0.6630		9,375.1415
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1291	0.0839	0.9479	2.9100e-003	0.3130	2.3000e-003	0.3153	0.0830	2.1200e-003	0.0851		289.9870	289.9870	7.7700e-003		290.1813

Total	**0.9869**	**29.5089**	**7.5559**	**0.0894**	**2.3215**	**0.0938**	**2.4153**	**0.6334**	**0.0897**	**0.7231**		**9,648.5539**	**9,648.5539**	**0.6708**		**9,665.3228**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.9101	0.0000	6.9101	3.1427	0.0000	3.1427			0.0000			0.0000
Off-Road	0.9871	4.2773	42.2180	0.0804		0.1316	0.1316		0.1316	0.1316	0.0000	7,791.6589	7,791.6589	2.5200		7,854.6584
Total	**0.9871**	**4.2773**	**42.2180**	**0.0804**	**6.9101**	**0.1316**	**7.0417**	**3.1427**	**0.1316**	**3.2743**	**0.0000**	**7,791.6589**	**7,791.6589**	**2.5200**		**7,854.6584**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8578	29.4249	6.6080	0.0865	2.0085	0.0915	2.1000	0.5504	0.0876	0.6380		9,358.5669	9,358.5669	0.6630		9,375.1415
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1291	0.0839	0.9479	2.9100e-003	0.3130	2.3000e-003	0.3153	0.0830	2.1200e-003	0.0851		289.9870	289.9870	7.7700e-003		290.1813
Total	**0.9869**	**29.5089**	**7.5559**	**0.0894**	**2.3215**	**0.0938**	**2.4153**	**0.6334**	**0.0897**	**0.7231**		**9,648.5539**	**9,648.5539**	**0.6708**		**9,665.3228**

3.7 Grading Three - Shoring 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2595	3.0379	2.0843	9.4700e-003		0.0921	0.0921		0.0847	0.0847		916.6227	916.6227	0.2965		924.0341
Total	**0.2595**	**3.0379**	**2.0843**	**9.4700e-003**	**0.0000**	**0.0921**	**0.0921**	**0.0000**	**0.0847**	**0.0847**		**916.6227**	**916.6227**	**0.2965**		**924.0341**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0185	0.0120	0.1354	4.2000e-004	0.0447	3.3000e-004	0.0450	0.0119	3.0000e-004	0.0122		41.4267	41.4267	1.1100e-003		41.4545
Total	**0.0185**	**0.0120**	**0.1354**	**4.2000e-004**	**0.0447**	**3.3000e-004**	**0.0450**	**0.0119**	**3.0000e-004**	**0.0122**		**41.4267**	**41.4267**	**1.1100e-003**		**41.4545**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1175	0.5092	4.3090	9.4700e-003		0.0157	0.0157		0.0157	0.0157	0.0000	916.6227	916.6227	0.2965		924.0341
Total	**0.1175**	**0.5092**	**4.3090**	**9.4700e-003**	**0.0000**	**0.0157**	**0.0157**	**0.0000**	**0.0157**	**0.0157**	**0.0000**	**916.6227**	**916.6227**	**0.2965**		**924.0341**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0185	0.0120	0.1354	4.2000e-004	0.0447	3.3000e-004	0.0450	0.0119	3.0000e-004	0.0122		41.4267	41.4267	1.1100e-003		41.4545
Total	**0.0185**	**0.0120**	**0.1354**	**4.2000e-004**	**0.0447**	**3.3000e-004**	**0.0450**	**0.0119**	**3.0000e-004**	**0.0122**		**41.4267**	**41.4267**	**1.1100e-003**		**41.4545**

3.8 Paving One - Concrete Foundations - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5741	24.7848	22.7691	0.0402		1.2338	1.2338		1.1545	1.1545		3,842.9567	3,842.9567	1.0331		3,868.7840
Paving	5.1500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5793**	**24.7848**	**22.7691**	**0.0402**		**1.2338**	**1.2338**		**1.1545**	**1.1545**		**3,842.9567**	**3,842.9567**	**1.0331**		**3,868.7840**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1199	0.0779	0.8802	2.7000e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		269.2737	269.2737	7.2200e-003		269.4541
Total	**0.1199**	**0.0779**	**0.8802**	**2.7000e-003**	**0.2906**	**2.1400e-003**	**0.2928**	**0.0771**	**1.9700e-003**	**0.0790**		**269.2737**	**269.2737**	**7.2200e-003**		**269.4541**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4917	2.9447	25.5929	0.0402		0.0626	0.0626		0.0626	0.0626	0.0000	3,842.9567	3,842.9567	1.0331		3,868.7840
Paving	5.1500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4968**	**2.9447**	**25.5929**	**0.0402**		**0.0626**	**0.0626**		**0.0626**	**0.0626**	**0.0000**	**3,842.9567**	**3,842.9567**	**1.0331**		**3,868.7840**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1199	0.0779	0.8802	2.7000e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		269.2737	269.2737	7.2200e-003		269.4541
Total	**0.1199**	**0.0779**	**0.8802**	**2.7000e-003**	**0.2906**	**2.1400e-003**	**0.2928**	**0.0771**	**1.9700e-003**	**0.0790**		**269.2737**	**269.2737**	**7.2200e-003**		**269.4541**

3.9 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	2.1968	20.9810	19.8560	0.0346		1.0592	1.0592		0.9914	0.9914		3,294.2042	3,294.2042	0.8512		3,315.4851
Total	**2.1968**	**20.9810**	**19.8560**	**0.0346**		**1.0592**	**1.0592**		**0.9914**	**0.9914**		**3,294.2042**	**3,294.2042**	**0.8512**		**3,315.4851**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1401	4.5988	1.2214	0.0125	0.3264	8.7700e-003	0.3352	0.0940	8.3800e-003	0.1024		1,337.1905	1,337.1905	0.0868		1,339.3616
Worker	0.5378	0.3356	3.8747	0.0124	1.3860	9.9100e-003	1.3959	0.3676	9.1300e-003	0.3767		1,238.1853	1,238.1853	0.0311		1,238.9623

Total	**0.6780**	**4.9343**	**5.0961**	**0.0249**	**1.7124**	**0.0187**	**1.7311**	**0.4616**	**0.0175**	**0.4791**		**2,575.3758**	**2,575.3758**	**0.1179**		**2,578.3239**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4216	2.6411	21.6934	0.0346		0.0533	0.0533		0.0533	0.0533	0.0000	3,294.2042	3,294.2042	0.8512		3,315.4851
Total	**0.4216**	**2.6411**	**21.6934**	**0.0346**		**0.0533**	**0.0533**		**0.0533**	**0.0533**	**0.0000**	**3,294.2042**	**3,294.2042**	**0.8512**		**3,315.4851**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1401	4.5988	1.2214	0.0125	0.3264	8.7700e-003	0.3352	0.0940	8.3800e-003	0.1024		1,337.1905	1,337.1905	0.0868		1,339.3616
Worker	0.5378	0.3356	3.8747	0.0124	1.3860	9.9100e-003	1.3959	0.3676	9.1300e-003	0.3767		1,238.1853	1,238.1853	0.0311		1,238.9623
Total	**0.6780**	**4.9343**	**5.0961**	**0.0249**	**1.7124**	**0.0187**	**1.7311**	**0.4616**	**0.0175**	**0.4791**		**2,575.3758**	**2,575.3758**	**0.1179**		**2,578.3239**

3.9 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0320	19.3132	19.6780	0.0346		0.9266	0.9266		0.8672	0.8672		3,295.0747	3,295.0747	0.8471		3,316.2530
Total	**2.0320**	**19.3132**	**19.6780**	**0.0346**		**0.9266**	**0.9266**		**0.8672**	**0.8672**		**3,295.0747**	**3,295.0747**	**0.8471**		**3,316.2530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1046	3.4682	1.0800	0.0121	0.3264	4.1200e-003	0.3305	0.0940	3.9300e-003	0.0979		1,297.2445	1,297.2445	0.0752		1,299.1241
Worker	0.5072	0.3035	3.5711	0.0120	1.3860	9.6500e-003	1.3957	0.3676	8.8900e-003	0.3765		1,192.0076	1,192.0076	0.0280		1,192.7076
Total	**0.6118**	**3.7718**	**4.6512**	**0.0241**	**1.7124**	**0.0138**	**1.7262**	**0.4616**	**0.0128**	**0.4744**		**2,489.2520**	**2,489.2520**	**0.1032**		**2,491.8318**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.4216	2.6411	21.6934	0.0346		0.0533	0.0533		0.0533	0.0533	0.0000	3,295.0747	3,295.0747	0.8471		3,316.2530
Total	**0.4216**	**2.6411**	**21.6934**	**0.0346**		**0.0533**	**0.0533**		**0.0533**	**0.0533**	**0.0000**	**3,295.0747**	**3,295.0747**	**0.8471**		**3,316.2530**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1046	3.4682	1.0800	0.0121	0.3264	4.1200e-003	0.3305	0.0940	3.9300e-003	0.0979		1,297.2445	1,297.2445	0.0752		1,299.1241
Worker	0.5072	0.3035	3.5711	0.0120	1.3860	9.6500e-003	1.3957	0.3676	8.8900e-003	0.3765		1,192.0076	1,192.0076	0.0280		1,192.7076
Total	**0.6118**	**3.7718**	**4.6512**	**0.0241**	**1.7124**	**0.0138**	**1.7262**	**0.4616**	**0.0128**	**0.4744**		**2,489.2520**	**2,489.2520**	**0.1032**		**2,491.8318**

3.9 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9057	18.0151	19.5464	0.0346		0.8205	0.8205		0.7676	0.7676		3,295.5908	3,295.5908	0.8437		3,316.6819
Total	**1.9057**	**18.0151**	**19.5464**	**0.0346**		**0.8205**	**0.8205**		**0.7676**	**0.7676**		**3,295.5908**	**3,295.5908**	**0.8437**		**3,316.6819**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1023	3.4607	1.0491	0.0121	0.3264	4.0600e-003	0.3305	0.0940	3.8800e-003	0.0978		1,292.8323	1,292.8323	0.0740		1,294.6810
Worker	0.4815	0.2765	3.3295	0.0116	1.3860	9.5200e-003	1.3956	0.3676	8.7700e-003	0.3764		1,152.7319	1,152.7319	0.0256		1,153.3729
Total	**0.5838**	**3.7372**	**4.3786**	**0.0236**	**1.7124**	**0.0136**	**1.7260**	**0.4616**	**0.0127**	**0.4742**		**2,445.5643**	**2,445.5643**	**0.0996**		**2,448.0539**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4216	2.6411	21.6934	0.0346		0.0533	0.0533		0.0533	0.0533	0.0000	3,295.5908	3,295.5908	0.8437		3,316.6819
Total	**0.4216**	**2.6411**	**21.6934**	**0.0346**		**0.0533**	**0.0533**		**0.0533**	**0.0533**	**0.0000**	**3,295.5908**	**3,295.5908**	**0.8437**		**3,316.6819**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1023	3.4607	1.0491	0.0121	0.3264	4.0600e-003	0.3305	0.0940	3.8800e-003	0.0978		1,292.8323	1,292.8323	0.0740		1,294.6810
Worker	0.4815	0.2765	3.3295	0.0116	1.3860	9.5200e-003	1.3956	0.3676	8.7700e-003	0.3764		1,152.7319	1,152.7319	0.0256		1,153.3729
Total	**0.5838**	**3.7372**	**4.3786**	**0.0236**	**1.7124**	**0.0136**	**1.7260**	**0.4616**	**0.0127**	**0.4742**		**2,445.5643**	**2,445.5643**	**0.0996**		**2,448.0539**

3.10 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Archit. Coating	10.3586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**10.5503**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1064	0.0636	0.7488	2.5100e-003	0.2906	2.0200e-003	0.2926	0.0771	1.8600e-003	0.0789		249.9371	249.9371	5.8700e-003		250.0839

Total	**0.1064**	**0.0636**	**0.7488**	**2.5100e-003**	**0.2906**	**2.0200e-003**	**0.2926**	**0.0771**	**1.8600e-003**	**0.0789**		**249.9371**	**249.9371**	**5.8700e-003**		**250.0839**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.3586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**10.5503**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1064	0.0636	0.7488	2.5100e-003	0.2906	2.0200e-003	0.2926	0.0771	1.8600e-003	0.0789		249.9371	249.9371	5.8700e-003		250.0839
Total	**0.1064**	**0.0636**	**0.7488**	**2.5100e-003**	**0.2906**	**2.0200e-003**	**0.2926**	**0.0771**	**1.8600e-003**	**0.0789**		**249.9371**	**249.9371**	**5.8700e-003**		**250.0839**

3.10 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.3586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**10.5394**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1010	0.0580	0.6981	2.4200e-003	0.2906	2.0000e-003	0.2926	0.0771	1.8400e-003	0.0789		241.7019	241.7019	5.3800e-003		241.8363
Total	**0.1010**	**0.0580**	**0.6981**	**2.4200e-003**	**0.2906**	**2.0000e-003**	**0.2926**	**0.0771**	**1.8400e-003**	**0.0789**		**241.7019**	**241.7019**	**5.3800e-003**		**241.8363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	10.3586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**10.5394**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1010	0.0580	0.6981	2.4200e-003	0.2906	2.0000e-003	0.2926	0.0771	1.8400e-003	0.0789		241.7019	241.7019	5.3800e-003		241.8363
Total	**0.1010**	**0.0580**	**0.6981**	**2.4200e-003**	**0.2906**	**2.0000e-003**	**0.2926**	**0.0771**	**1.8400e-003**	**0.0789**		**241.7019**	**241.7019**	**5.3800e-003**		**241.8363**

3.11 Paving Two - Concrete Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1316	11.5252	9.5439	0.0223		0.4616	0.4616		0.4264	0.4264		2,131.6275	2,131.6275	0.6728		2,148.4468
Paving	4.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1361**	**11.5252**	**9.5439**	**0.0223**		**0.4616**	**0.4616**		**0.4264**	**0.4264**		**2,131.6275**	**2,131.6275**	**0.6728**		**2,148.4468**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0699	0.0401	0.4833	1.6800e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2700e-003	0.0546		167.3321	167.3321	3.7200e-003		167.4251
Total	**0.0699**	**0.0401**	**0.4833**	**1.6800e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**167.3321**	**167.3321**	**3.7200e-003**		**167.4251**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2608	1.1300	12.1154	0.0223		0.0348	0.0348		0.0348	0.0348	0.0000	2,131.6275	2,131.6275	0.6728		2,148.4468
Paving	4.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2652**	**1.1300**	**12.1154**	**0.0223**		**0.0348**	**0.0348**		**0.0348**	**0.0348**	**0.0000**	**2,131.6275**	**2,131.6275**	**0.6728**		**2,148.4468**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0699	0.0401	0.4833	1.6800e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2700e-003	0.0546		167.3321	167.3321	3.7200e-003		167.4251
Total	**0.0699**	**0.0401**	**0.4833**	**1.6800e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**167.3321**	**167.3321**	**3.7200e-003**		**167.4251**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Mitigated	1.5983	7.8260	22.6432	0.0962	8.9416	0.0694	9.0110	2.3922	0.0646	2.4567		9,814.4915	9,814.4915	0.4305		9,825.2535
Unmitigated	1.5983	7.8260	22.6432	0.0962	8.9416	0.0694	9.0110	2.3922	0.0646	2.4567		9,814.4915	9,814.4915	0.4305		9,825.2535

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	195.97	0.00	0.00	450,932	450,932
Government Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	833.96	833.96	833.96	3,574,127	3,574,127

Total	1,029.93	833.96	833.96	4,025,059	4,025,059

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Government Office Building	16.60	8.40	6.90	33.00	62.00	5.00	50	34	16
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Enclosed Parking with Elevator	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
General Office Building	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Government Office Building	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Parking Lot	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Unrefrigerated Warehouse-No Rail	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
NaturalGas Mitigated	0.0266	0.2418	0.2031	1.4500e-003		0.0184	0.0184		0.0184	0.0184		290.1780	290.1780	5.5600e-003	5.3200e-003	291.9024
NaturalGas Unmitigated	0.0266	0.2418	0.2031	1.4500e-003		0.0184	0.0184		0.0184	0.0184		290.1780	290.1780	5.5600e-003	5.3200e-003	291.9024

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	628.69	6.7800e-003	0.0616	0.0518	3.7000e-004		4.6800e-003	4.6800e-003		4.6800e-003	4.6800e-003		73.9635	73.9635	1.4200e-003	1.3600e-003	74.4030
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1531.27	0.0165	0.1501	0.1261	9.0000e-004		0.0114	0.0114		0.0114	0.0114		180.1492	180.1492	3.4500e-003	3.3000e-003	181.2197
Government Office Building	268.692	2.9000e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003		31.6108	31.6108	6.1000e-004	5.8000e-004	31.7987
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	37.8629	4.1000e-004	3.7100e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4545	4.4545	9.0000e-005	8.0000e-005	4.4809
Total		**0.0266**	**0.2418**	**0.2031**	**1.4500e-003**		**0.0184**	**0.0184**		**0.0184**	**0.0184**		**290.1780**	**290.1780**	**5.5700e-003**	**5.3200e-003**	**291.9024**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Automobile Care Center	0.62869	6.7800e-003	0.0616	0.0518	3.7000e-004		4.6800e-003	4.6800e-003		4.6800e-003	4.6800e-003		73.9635	73.9635	1.4200e-003	1.3600e-003	74.4030
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.53127	0.0165	0.1501	0.1261	9.0000e-004		0.0114	0.0114		0.0114	0.0114		180.1492	180.1492	3.4500e-003	3.3000e-003	181.2197
Government Office Building	0.268692	2.9000e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003		31.6108	31.6108	6.1000e-004	5.8000e-004	31.7987
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.0378629	4.1000e-004	3.7100e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4545	4.4545	9.0000e-005	8.0000e-005	4.4809
Total		**0.0266**	**0.2418**	**0.2031**	**1.4500e-003**		**0.0184**	**0.0184**		**0.0184**	**0.0184**		**290.1780**	**290.1780**	**5.5700e-003**	**5.3200e-003**	**291.9024**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.1496	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Unmitigated	2.1496	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

SubCategory	lb/day										lb/day					
Architectural Coating	0.2497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0900e-003	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Total	**2.1496**	**6.0000e-004**	**0.0659**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**		**0.1415**	**0.1415**	**3.7000e-004**		**0.1508**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0900e-003	6.0000e-004	0.0659	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004		0.1415	0.1415	3.7000e-004		0.1508
Total	**2.1496**	**6.0000e-004**	**0.0659**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**		**0.1415**	**0.1415**	**3.7000e-004**		**0.1508**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Grey Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	4	8.00	260	97	0.37	Diesel
Forklifts	3	8.00	260	89	0.20	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.2840	2.6638	3.4350	4.6100e-003		0.1538	0.1538		0.1415	0.1415		446.3130	446.3130	0.1444		449.9216
Tractors/Loaders/Backhoes	0.5734	5.7695	8.9062	0.0124		0.2648	0.2648		0.2436	0.2436		1,202.1734	1,202.1734	0.3888		1,211.8936
Total	**0.8574**	**8.4333**	**12.3412**	**0.0170**		**0.4186**	**0.4186**		**0.3851**	**0.3851**		**1,648.4864**	**1,648.4864**	**0.5332**		**1,661.8152**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	4	30	600	1	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Existing Site CalEEMod Emissions Calculations

LADWP - West LA District Yard Project - South Coast AQMD Air District, Annual

LADWP - West LA District Yard Project Existing Setting

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.61	1000sqft	0.22	9,610.00	0
Unrefrigerated Warehouse-No Rail	14.56	1000sqft	0.33	14,560.00	0
Automobile Care Center	6.16	1000sqft	0.14	6,161.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operational year 2020.

Land Use - Land Use Statistics provided by LADWP.

Construction Phase - No construction.

Trips and VMT - No construction.

Demolition - No construction.

Grading - No construction.

Vehicle Trips - No construction.

Construction Off-road Equipment Mitigation - No construction.

Operational Off-Road Equipment - Equipment information provided by LADWP.

Fleet Mix - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	1.00	0.00
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LandUseSquareFeet	6,160.00	6,161.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	6.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	6.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	1.68	17.31
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	1.68	17.31
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	11.03	26.25
tblVehicleTrips	WD_TR	1.68	17.36

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	1.4100e-003	0.0000	1.4100e-003	3.5000e-004	0.0000	3.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.4100e-003**	**0.0000**	**1.4100e-003**	**3.5000e-004**	**0.0000**	**3.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	1.4100e-003	0.0000	1.4100e-003	3.5000e-004	0.0000	3.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.4100e-003**	**0.0000**	**1.4100e-003**	**3.5000e-004**	**0.0000**	**3.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

		Highest	

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1237	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.5000e-004	7.5000e-004	0.0000	0.0000	8.0000e-004
Energy	1.2100e-003	0.0110	9.2300e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	151.2085	151.2085	3.5200e-003	9.0000e-004	151.5646
Mobile	0.1589	0.9142	2.2751	7.9600e-003	0.6377	8.0900e-003	0.6458	0.1709	7.5900e-003	0.1785	0.0000	734.1216	734.1216	0.0369	0.0000	735.0442
Offroad	0.0894	0.8688	0.8970	1.2100e-003		0.0578	0.0578		0.0532	0.0532	0.0000	105.9962	105.9962	0.0343	0.0000	106.8532
Waste						0.0000	0.0000		0.0000	0.0000	9.3701	0.0000	9.3701	0.5538	0.0000	23.2139
Water						0.0000	0.0000		0.0000	0.0000	1.7939	49.6837	51.4776	0.1854	4.5900e-003	57.4821
Total	**0.3732**	**1.7940**	**3.1817**	**9.2400e-003**	**0.6377**	**0.0667**	**0.7044**	**0.1709**	**0.0616**	**0.2325**	**11.1640**	**1,041.0107**	**1,052.1747**	**0.8139**	**5.4900e-003**	**1,074.1589**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1237	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.5000e-004	7.5000e-004	0.0000	0.0000	8.0000e-004
Energy	1.2100e-003	0.0110	9.2300e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	151.2085	151.2085	3.5200e-003	9.0000e-004	151.5646
Mobile	0.1589	0.9142	2.2751	7.9600e-003	0.6377	8.0900e-003	0.6458	0.1709	7.5900e-003	0.1785	0.0000	734.1216	734.1216	0.0369	0.0000	735.0442

Offroad	0.0894	0.8688	0.8970	1.2100e-003		0.0578	0.0578		0.0532	0.0532	0.0000	105.9962	105.9962	0.0343	0.0000	106.8532
Waste						0.0000	0.0000		0.0000	0.0000	9.3701	0.0000	9.3701	0.5538	0.0000	23.2139
Water						0.0000	0.0000		0.0000	0.0000	1.7939	49.6837	51.4776	0.1854	4.5900e-003	57.4821
Total	**0.3732**	**1.7940**	**3.1817**	**9.2400e-003**	**0.6377**	**0.0667**	**0.7044**	**0.1709**	**0.0616**	**0.2325**	**11.1640**	**1,041.0107**	**1,052.1747**	**0.8139**	**5.4900e-003**	**1,074.1589**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2020	1/1/2020	5	0	
2	Site Preparation	Site Preparation	1/16/2020	1/15/2020	5	0	
3	Grading	Grading	1/17/2020	1/16/2020	5	0	
4	Building Construction	Building Construction	1/21/2020	1/20/2020	5	0	
5	Paving	Paving	6/9/2020	6/8/2020	5	0	
6	Architectural Coating	Architectural Coating	6/16/2020	6/15/2020	5	0	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 45,497; Non-Residential Outdoor: 15,166; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40

Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	138.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	40.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	40.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	11.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1589	0.9142	2.2751	7.9600e-003	0.6377	8.0900e-003	0.6458	0.1709	7.5900e-003	0.1785	0.0000	734.1216	734.1216	0.0369	0.0000	735.0442
Unmitigated	0.1589	0.9142	2.2751	7.9600e-003	0.6377	8.0900e-003	0.6458	0.1709	7.5900e-003	0.1785	0.0000	734.1216	734.1216	0.0369	0.0000	735.0442

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
General Office Building	252.26	23.64	10.09	595,990	595,990
Unrefrigerated Warehouse-No Rail	252.76	252.03	252.03	1,082,373	1,082,373
Total	505.02	275.67	262.12	1,678,364	1,678,364

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956
General Office Building	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956
Unrefrigerated Warehouse-No Rail	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	139.2432	139.2432	3.2900e-003	6.8000e-004	139.5281
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	139.2432	139.2432	3.2900e-003	6.8000e-004	139.5281
NaturalGas Mitigated	1.2100e-003	0.0110	9.2300e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	11.9653	11.9653	2.3000e-004	2.2000e-004	12.0364
NaturalGas Unmitigated	1.2100e-003	0.0110	9.2300e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	11.9653	11.9653	2.3000e-004	2.2000e-004	12.0364

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	111514	6.0000e-004	5.4700e-003	4.5900e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	5.9508	5.9508	1.1000e-004	1.1000e-004	5.9862

General Office Building	100040	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3385	5.3385	1.0000e-004	1.0000e-004	5.3702
Unrefrigerated Warehouse-No	12667.2	7.0000e-005	6.2000e-004	5.2000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6760	0.6760	1.0000e-005	1.0000e-005	0.6800
Total		**1.2100e-003**	**0.0110**	**9.2300e-003**	**6.0000e-005**		**8.4000e-004**	**8.4000e-004**		**8.4000e-004**	**8.4000e-004**	**0.0000**	**11.9653**	**11.9653**	**2.2000e-004**	**2.2000e-004**	**12.0364**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	111514	6.0000e-004	5.4700e-003	4.5900e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	5.9508	5.9508	1.1000e-004	1.1000e-004	5.9862
General Office Building	100040	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3385	5.3385	1.0000e-004	1.0000e-004	5.3702
Unrefrigerated Warehouse-No	12667.2	7.0000e-005	6.2000e-004	5.2000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6760	0.6760	1.0000e-005	1.0000e-005	0.6800
Total		**1.2100e-003**	**0.0110**	**9.2300e-003**	**6.0000e-005**		**8.4000e-004**	**8.4000e-004**		**8.4000e-004**	**8.4000e-004**	**0.0000**	**11.9653**	**11.9653**	**2.2000e-004**	**2.2000e-004**	**12.0364**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	68387.1	38.0890	9.0000e-004	1.9000e-004	38.1669
General Office Building	124834	69.5277	1.6400e-003	3.4000e-004	69.6700
Unrefrigerated Warehouse-No	56784	31.6265	7.5000e-004	1.5000e-004	31.6912
Total		**139.2432**	**3.2900e-003**	**6.8000e-004**	**139.5282**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	68387.1	38.0890	9.0000e-004	1.9000e-004	38.1669
General Office Building	124834	69.5277	1.6400e-003	3.4000e-004	69.6700
Unrefrigerated Warehouse-No Rail	56784	31.6265	7.5000e-004	1.5000e-004	31.6912
Total		**139.2432**	**3.2900e-003**	**6.8000e-004**	**139.5282**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1237	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.5000e-004	7.5000e-004	0.0000	0.0000	8.0000e-004
Unmitigated	0.1237	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.5000e-004	7.5000e-004	0.0000	0.0000	8.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1096					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.5000e-004	7.5000e-004	0.0000	0.0000	8.0000e-004
Total	**0.1237**	**0.0000**	**3.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.5000e-004**	**7.5000e-004**	**0.0000**	**0.0000**	**8.0000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1096					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.5000e-004	7.5000e-004	0.0000	0.0000	8.0000e-004
Total	**0.1237**	**0.0000**	**3.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.5000e-004**	**7.5000e-004**	**0.0000**	**0.0000**	**8.0000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	51.4776	0.1854	4.5900e-003	57.4821
Unmitigated	51.4776	0.1854	4.5900e-003	57.4821

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.57954 / 0.355202	6.5847	0.0190	4.8000e-004	7.2028
General Office Building	1.70802 / 1.04685	19.4065	0.0561	1.4100e-003	21.2282
Unrefrigerated Warehouse-No Rail	3.367 / 0	25.4863	0.1103	2.7100e-003	29.0512
Total		**51.4776**	**0.1854**	**4.6000e-003**	**57.4821**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Automobile Care Center	0.57954 / 0.355202	6.5847	0.0190	4.8000e-004	7.2028
General Office Building	1.70802 / 1.04685	19.4065	0.0561	1.4100e-003	21.2282
Unrefrigerated Warehouse-No	3.367 / 0	25.4863	0.1103	2.7100e-003	29.0512
Total		**51.4776**	**0.1854**	**4.6000e-003**	**57.4821**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.3701	0.5538	0.0000	23.2139
Unmitigated	9.3701	0.5538	0.0000	23.2139

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Automobile Care Center	23.53	4.7764	0.2823	0.0000	11.8333
General Office Building	8.94	1.8147	0.1073	0.0000	4.4959
Unrefrigerated Warehouse-No Rail	13.69	2.7790	0.1642	0.0000	6.8847
Total		**9.3701**	**0.5538**	**0.0000**	**23.2139**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	23.53	4.7764	0.2823	0.0000	11.8333
General Office Building	8.94	1.8147	0.1073	0.0000	4.4959
Unrefrigerated Warehouse-No Rail	13.69	2.7790	0.1642	0.0000	6.8847
Total		**9.3701**	**0.5538**	**0.0000**	**23.2139**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	6.00	260	89	0.20	Diesel
Tractors/Loaders/Backhoes	3	6.00	260	97	0.37	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Equipment Type	tons/yr										MT/yr					
Forklifts	0.0281	0.2530	0.2302	3.0000e-004		0.0189	0.0189		0.0173	0.0173	0.0000	26.1868	26.1868	8.4700e-003	0.0000	26.3985
Tractors/Loaders/ Backhoes	0.0613	0.6158	0.6668	9.1000e-004		0.0389	0.0389		0.0358	0.0358	0.0000	79.8094	79.8094	0.0258	0.0000	80.4547
Total	**0.0894**	**0.8688**	**0.8970**	**1.2100e-003**		**0.0578**	**0.0578**		**0.0532**	**0.0532**	**0.0000**	**105.9962**	**105.9962**	**0.0343**	**0.0000**	**106.8532**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LADWP - West LA District Yard Project

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.61	1000sqft	0.22	9,610.00	0
Unrefrigerated Warehouse-No Rail	14.56	1000sqft	0.33	14,560.00	0
Automobile Care Center	6.16	1000sqft	0.14	6,161.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operational year 2020.

Land Use - Land Use Statistics provided by LADWP.

Construction Phase - No construction.

Trips and VMT - No construction.

Demolition - No construction.

Grading - No construction.

Vehicle Trips - No construction.

Construction Off-road Equipment Mitigation - No construction.

Operational Off-Road Equipment - Equipment information provided by LADWP.

Fleet Mix - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	1.00	0.00
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LandUseSquareFeet	6,160.00	6,161.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	6.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	6.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	1.68	17.31
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	1.68	17.31
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	11.03	26.25
tblVehicleTrips	WD_TR	1.68	17.36

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	2.4967	0.0000	0.0000	2.3481	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.4967**	**0.0000**	**0.0000**	**2.3481**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	2.4967	0.0000	0.0000	2.3481	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.4967**	**0.0000**	**0.0000**	**2.3481**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6779	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Energy	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2712	72.2712	1.3900e-003	1.3200e-003	72.7007
Mobile	1.0665	5.4772	14.9358	0.0515	4.0313	0.0502	4.0815	1.0787	0.0472	1.1259		5,234.8708	5,234.8708	0.2561		5,241.2722
Offroad	0.6874	6.6828	6.8997	9.2800e-003		0.4445	0.4445		0.4090	0.4090		898.7754	898.7754	0.2907		906.0424
Total	**2.4384**	**12.2203**	**21.8892**	**0.0612**	**4.0313**	**0.4993**	**4.5306**	**1.0787**	**0.4607**	**1.5394**		**6,205.9241**	**6,205.9241**	**0.5482**	**1.3200e-003**	**6,220.0224**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6779	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Energy	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2712	72.2712	1.3900e-003	1.3200e-003	72.7007
Mobile	1.0665	5.4772	14.9358	0.0515	4.0313	0.0502	4.0815	1.0787	0.0472	1.1259		5,234.8708	5,234.8708	0.2561		5,241.2722
Offroad	0.6874	6.6828	6.8997	9.2800e-003		0.4445	0.4445		0.4090	0.4090		898.7754	898.7754	0.2907		906.0424
Total	**2.4384**	**12.2203**	**21.8892**	**0.0612**	**4.0313**	**0.4993**	**4.5306**	**1.0787**	**0.4607**	**1.5394**		**6,205.9241**	**6,205.9241**	**0.5482**	**1.3200e-003**	**6,220.0224**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2020	1/1/2020	5	0	
2	Site Preparation	Site Preparation	1/16/2020	1/15/2020	5	0	
3	Grading	Grading	1/17/2020	1/16/2020	5	0	
4	Building Construction	Building Construction	1/21/2020	1/20/2020	5	0	
5	Paving	Paving	6/9/2020	6/8/2020	5	0	
6	Architectural Coating	Architectural Coating	6/16/2020	6/15/2020	5	0	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 45,497; Non-Residential Outdoor: 15,166; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	138.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	40.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	40.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	11.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day				
Mitigated	1.0665	5.4772	14.9358	0.0515	4.0313	0.0502	4.0815	1.0787	0.0472	1.1259	5,234.8708	5,234.8708	0.2561		5,241.2722
Unmitigated	1.0665	5.4772	14.9358	0.0515	4.0313	0.0502	4.0815	1.0787	0.0472	1.1259	5,234.8708	5,234.8708	0.2561		5,241.2722

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
General Office Building	252.26	23.64	10.09	595,990	595,990
Unrefrigerated Warehouse-No Rail	252.76	252.03	252.03	1,082,373	1,082,373
Total	505.02	275.67	262.12	1,678,364	1,678,364

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956
General Office Building	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956
Unrefrigerated Warehouse-No Rail	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2712	72.2712	1.3900e-003	1.3200e-003	72.7007
NaturalGas Unmitigated	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2712	72.2712	1.3900e-003	1.3200e-003	72.7007

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	305.518	3.2900e-003	0.0300	0.0252	1.8000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		35.9433	35.9433	6.9000e-004	6.6000e-004	36.1569
General Office Building	274.082	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		32.2450	32.2450	6.2000e-004	5.9000e-004	32.4366
Unrefrigerated Warehouse-No	34.7047	3.7000e-004	3.4000e-003	2.8600e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		4.0829	4.0829	8.0000e-005	7.0000e-005	4.1072
Total		**6.6200e-003**	**0.0602**	**0.0506**	**3.6000e-004**		**4.5800e-003**	**4.5800e-003**		**4.5800e-003**	**4.5800e-003**		**72.2712**	**72.2712**	**1.3900e-003**	**1.3200e-003**	**72.7007**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.305518	3.2900e-003	0.0300	0.0252	1.8000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		35.9433	35.9433	6.9000e-004	6.6000e-004	36.1569
General Office Building	0.274082	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		32.2450	32.2450	6.2000e-004	5.9000e-004	32.4366
Unrefrigerated Warehouse-No	0.0347047	3.7000e-004	3.4000e-003	2.8600e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		4.0829	4.0829	8.0000e-005	7.0000e-005	4.1072
Total		**6.6200e-003**	**0.0602**	**0.0506**	**3.6000e-004**		**4.5800e-003**	**4.5800e-003**		**4.5800e-003**	**4.5800e-003**		**72.2712**	**72.2712**	**1.3900e-003**	**1.3200e-003**	**72.7007**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6779	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Unmitigated	0.6779	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.0770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6006					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Total	**0.6779**	**3.0000e-005**	**3.1200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.6400e-003**	**6.6400e-003**	**2.0000e-005**		**7.0800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6006					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Total	**0.6779**	**3.0000e-005**	**3.1200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.6400e-003**	**6.6400e-003**	**2.0000e-005**		**7.0800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	6.00	260	89	0.20	Diesel

Tractors/Loaders/Backhoes	3	6.00	260	97	0.37	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.2160	1.9463	1.7704	2.2900e-003		0.1450	0.1450		0.1334	0.1334		222.0463	222.0463	0.0718		223.8416
Tractors/Loaders/Backhoes	0.4714	4.7366	5.1293	6.9900e-003		0.2995	0.2995		0.2756	0.2756		676.7291	676.7291	0.2189		682.2008
Total	**0.6874**	**6.6828**	**6.8997**	**9.2800e-003**		**0.4445**	**0.4445**		**0.4090**	**0.4090**		**898.7754**	**898.7754**	**0.2907**		**906.0424**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LADWP - West LA District Yard Project

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.61	1000sqft	0.22	9,610.00	0
Unrefrigerated Warehouse-No Rail	14.56	1000sqft	0.33	14,560.00	0
Automobile Care Center	6.16	1000sqft	0.14	6,161.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operational year 2020.

Land Use - Land Use Statistics provided by LADWP.

Construction Phase - No construction.

Trips and VMT - No construction.

Demolition - No construction.

Grading - No construction.

Vehicle Trips - No construction.

Construction Off-road Equipment Mitigation - No construction.

Operational Off-Road Equipment - Equipment information provided by LADWP.

Fleet Mix - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	1.00	0.00
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LandUseSquareFeet	6,160.00	6,161.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	6.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	6.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	1.68	17.31
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	1.68	17.31
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	11.03	26.25
tblVehicleTrips	WD_TR	1.68	17.36

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	2.4997	0.0000	0.0000	2.3509	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.4997**	**0.0000**	**0.0000**	**2.3509**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	2.4997	0.0000	0.0000	2.3509	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.4997**	**0.0000**	**0.0000**	**2.3509**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6779	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Energy	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2712	72.2712	1.3900e-003	1.3200e-003	72.7007
Mobile	1.0173	5.6156	13.9318	0.0488	4.0313	0.0505	4.0818	1.0787	0.0474	1.1261		4,956.9829	4,956.9829	0.2546		4,963.3482
Offroad	0.6874	6.6828	6.8997	9.2800e-003		0.4445	0.4445		0.4090	0.4090		898.7754	898.7754	0.2907		906.0424
Total	**2.3892**	**12.3587**	**20.8852**	**0.0584**	**4.0313**	**0.4996**	**4.5309**	**1.0787**	**0.4609**	**1.5396**		**5,928.0361**	**5,928.0361**	**0.5467**	**1.3200e-003**	**5,942.0984**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6779	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Energy	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2712	72.2712	1.3900e-003	1.3200e-003	72.7007
Mobile	1.0173	5.6156	13.9318	0.0488	4.0313	0.0505	4.0818	1.0787	0.0474	1.1261		4,956.9829	4,956.9829	0.2546		4,963.3482
Offroad	0.6874	6.6828	6.8997	9.2800e-003		0.4445	0.4445		0.4090	0.4090		898.7754	898.7754	0.2907		906.0424
Total	**2.3892**	**12.3587**	**20.8852**	**0.0584**	**4.0313**	**0.4996**	**4.5309**	**1.0787**	**0.4609**	**1.5396**		**5,928.0361**	**5,928.0361**	**0.5467**	**1.3200e-003**	**5,942.0984**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2020	1/1/2020	5	0	
2	Site Preparation	Site Preparation	1/16/2020	1/15/2020	5	0	
3	Grading	Grading	1/17/2020	1/16/2020	5	0	
4	Building Construction	Building Construction	1/21/2020	1/20/2020	5	0	
5	Paving	Paving	6/9/2020	6/8/2020	5	0	
6	Architectural Coating	Architectural Coating	6/16/2020	6/15/2020	5	0	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 45,497; Non-Residential Outdoor: 15,166; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	138.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	40.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	40.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	11.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Mitigated	1.0173	5.6156	13.9318	0.0488	4.0313	0.0505	4.0818	1.0787	0.0474	1.1261		4,956.9829	4,956.9829	0.2546		4,963.3482
Unmitigated	1.0173	5.6156	13.9318	0.0488	4.0313	0.0505	4.0818	1.0787	0.0474	1.1261		4,956.9829	4,956.9829	0.2546		4,963.3482

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
General Office Building	252.26	23.64	10.09	595,990	595,990
Unrefrigerated Warehouse-No Rail	252.76	252.03	252.03	1,082,373	1,082,373
Total	505.02	275.67	262.12	1,678,364	1,678,364

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956
General Office Building	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956
Unrefrigerated Warehouse-No Rail	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2712	72.2712	1.3900e-003	1.3200e-003	72.7007
NaturalGas Unmitigated	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2712	72.2712	1.3900e-003	1.3200e-003	72.7007

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	305.518	3.2900e-003	0.0300	0.0252	1.8000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		35.9433	35.9433	6.9000e-004	6.6000e-004	36.1569
General Office Building	274.082	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		32.2450	32.2450	6.2000e-004	5.9000e-004	32.4366
Unrefrigerated Warehouse-No	34.7047	3.7000e-004	3.4000e-003	2.8600e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		4.0829	4.0829	8.0000e-005	7.0000e-005	4.1072
Total		**6.6200e-003**	**0.0602**	**0.0506**	**3.6000e-004**		**4.5800e-003**	**4.5800e-003**		**4.5800e-003**	**4.5800e-003**		**72.2712**	**72.2712**	**1.3900e-003**	**1.3200e-003**	**72.7007**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.305518	3.2900e-003	0.0300	0.0252	1.8000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		35.9433	35.9433	6.9000e-004	6.6000e-004	36.1569
General Office Building	0.274082	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		32.2450	32.2450	6.2000e-004	5.9000e-004	32.4366
Unrefrigerated Warehouse-No	0.0347047	3.7000e-004	3.4000e-003	2.8600e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		4.0829	4.0829	8.0000e-005	7.0000e-005	4.1072
Total		**6.6200e-003**	**0.0602**	**0.0506**	**3.6000e-004**		**4.5800e-003**	**4.5800e-003**		**4.5800e-003**	**4.5800e-003**		**72.2712**	**72.2712**	**1.3900e-003**	**1.3200e-003**	**72.7007**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6779	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Unmitigated	0.6779	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.0770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6006					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Total	**0.6779**	**3.0000e-005**	**3.1200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.6400e-003**	**6.6400e-003**	**2.0000e-005**		**7.0800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6006					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.1200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6400e-003	6.6400e-003	2.0000e-005		7.0800e-003
Total	**0.6779**	**3.0000e-005**	**3.1200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.6400e-003**	**6.6400e-003**	**2.0000e-005**		**7.0800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	6.00	260	89	0.20	Diesel

Tractors/Loaders/Backhoes	3	6.00	260	97	0.37	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.2160	1.9463	1.7704	2.2900e-003		0.1450	0.1450		0.1334	0.1334		222.0463	222.0463	0.0718		223.8416
Tractors/Loaders/Backhoes	0.4714	4.7366	5.1293	6.9900e-003		0.2995	0.2995		0.2756	0.2756		676.7291	676.7291	0.2189		682.2008
Total	**0.6874**	**6.6828**	**6.8997**	**9.2800e-003**		**0.4445**	**0.4445**		**0.4090**	**0.4090**		**898.7754**	**898.7754**	**0.2907**		**906.0424**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Proposed Project Energy Demand Calculations

LADWP West Yard

Project Operational Energy Demand

Mobile Source Gasoline Demand

Project Facility	Vehicle MT CO_2	Kg CO2/Gallon	Gallons
Corporate Yard	1,458.01	8.78	166,060.21

Mobile Source Diesel Demand

Project Facility	Vehicle MT CO_2	Kg CO2/Gallon	Gallons
Corporate Yard	113.81	10.21	11,146.89

Electricity Demand

Project Consumption	kWh/Year
Project Buildings	569,720.00
Water/Wastewater	15,242.14
Total	**584,962.14**

Natural Gas Demand

Project Facility	kBTu/Year
Corporate Yard	624,600.00
Total	**624,600.00**

LADWP West Yard Project

Project Construction Energy Demand

Construction Worker Gasoline Demand

Phase	Trips	Vehicle CO_2 (MT)	Kg CO2/Gallon	Gallons
Demolition	26	10.93	8.78	1,245.19
Site Preparation	10	0.29	8.78	32.65
Grading One - Shoring 1	6	2.35	8.78	267.76
Trenching	8	2.52	8.78	287.35
Grading Two - Excavation	28	11.64	8.78	1,325.73
Grading Three - Shoring 2	4	0.59	8.78	67.48
Paving One - Concrete Foundations	26	36.49	8.78	4,156.15
Building Construction	124	313.55	8.78	35,711.96
Architectural Coating	26	9.85	8.78	1,121.63
Paving Two - Concrete Paving	18	5.02	8.78	571.57
Total				**44,787.47**

Construction Vendor Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)	Kg CO2/Gallon	Gallons
Demolition	0	0	10.21	0.00
Site Preparation	0	0	10.21	0.00
Grading One - Shoring 1	0	0	10.21	0.00
Trenching	0	0	10.21	0.00
Grading Two - Excavation	0	0	10.21	0.00
Grading Three - Shoring 2	0	0	10.21	0.00
Paving One - Concrete Foundations	0	0	10.21	0.00
Building Construction	51	341.57	10.21	33,454.19
Architectural Coating	0	0	10.21	0.00
Paving Two - Concrete Paving	0	0	10.21	0.00
Total				**33,454.19**

Construction Haul Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)	Kg CO2/Gallon	Gallons
Demolition	138	5.1522	10.21	504.62
Site Preparation	0	0	10.21	0.00
Grading One - Shoring 1	0	0	10.21	0.00
Trenching	0	0	10.21	0.00
Grading Two - Excavation	10,000	373.35	10.21	36,567.05
Grading Three - Shoring 2	0	0	10.21	0.00
Paving One - Concrete Foundations	0	0	10.21	0.00
Building Construction	0	0	10.21	0.00
Architectural Coating	0	0	10.21	0.00
Paving Two - Concrete Paving	0	0	10.21	0.00
Total				**37,071.67**

Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)	Kg CO2/Gallon	Gallons
Demolition	10	257.45	10.21	25,215.40
Site Preparation	4	6.14	10.21	601.49
Grading One - Shoring 1	2	42.66	10.21	4,178.64
Trenching	3	32.99	10.21	3,231.19
Grading Two - Excavation	11	307.48	10.21	30,115.44
Grading Three - Shoring 2	1	12.89	10.21	1,262.39
Paving One - Concrete Foundations	10	97.62	10.21	9,560.78
Building Construction	11	842.90	10.21	82,555.90
Architectural Coating	1	11.23	10.21	1,100.33
Paving Two - Concrete Paving	7	62.85	10.21	6,155.52
Total				**163,977.07**

Construction Equipment Usage

Phase	Hours of Use
Grading Two - Excavation	192
Grading Three - Shoring 2	656
Paving One - Concrete Foundations	0
Building Construction	0
Architectural Coating	0
Paving Two - Concrete Paving	0
Total	**848**

APPENDIX B

Cultural Report

CULTURAL RESOURCES REPORT FOR THE LOS ANGELES DEPARTMENT OF WATER AND POWER WEST LOS ANGELES DISTRICT YARD PROJECT

City of Los Angeles, Los Angeles County, California

PREPARED FOR:

LOS ANGELES DEPARTMENT OF WATER AND POWER

Environmental Services

111 North Hope Street, Room 1044

Los Angeles, California 90012

PREPARED BY:

Kate Kaiser, MSHP and Samantha Murray, MA

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Pasadena, California 91101

NOVEMBER 2017

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ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DPR	Department of Parks and Recreation
HCM	Historic-Cultural Monument
HPOZ	Historic Preservation Overlay Zone
LACHS	Los Angeles City Historical Society
LADBS	Los Angeles Department of Buildings and Safety
LADWP	Los Angeles Department of Water and Power
MLD	most likely descendant
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
SCCIC	South Central Coastal Information Center
SLF	Sacred Lands File
WWII	World War II

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EXECUTIVE SUMMARY

Dudek was retained by Los Angeles Department of Water and Power (LADWP) to complete a cultural resources study for a project that proposes to demolish five buildings on the West Los Angeles District Yard Headquarters property in the City of Los Angeles, Los Angeles County, California (project site). The study involved completion of a California Historical Resources Information System (CHRIS) records search, outreach with the Native American Heritage Commission (NAHC) and local tribes/groups, a pedestrian survey of the project area for built environment resources, and recordation and evaluation of the property for historical significance. The significance evaluation included conducting archival and building development research for each building on the property; outreach with local libraries, historical societies, and advocacy groups; and completion of a historic context.

This study was conducted in accordance with Section 15064.5(a)(2)-(3) of the California Environmental Quality Act (CEQA) Guidelines, and the project site was evaluated in consideration of National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and City of Los Angeles Historical-Cultural Monument eligibility and integrity requirements.

No archaeological resources were identified within the project site as a result of the CHRIS records search, Native American coordination, or survey. One Native American contact requested the presence of a Native American monitor during all ground-disturbing activities. No specific archaeological resources or sensitivity concerns were identified by any sources consulted. However, it is always possible that intact archaeological deposits are present at subsurface levels. For these reasons, the project site should be treated as potentially sensitive for archaeological resources. Management recommendations to reduce potential impacts to unanticipated archaeological resources and human remains during campus construction activities are provided in Section 6.2 (Management Recommendations).

The LADWP yard buildings located at 12300 Nebraska Avenue were evaluated for historical significance and do not appear eligible for inclusion in the NRHP, CRHR, or local register (6Z) due to a lack of significant historical associations. These properties are not considered historical resources for the purposes CEQA. Therefore, the proposed project would have a less-than-significant impact on historical resources for the purposes of CEQA.

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1 INTRODUCTION

Dudek was retained by Los Angeles Department of Water and Power (LADWP) to complete a cultural resources study for a project that proposes demolition of five LADWP-owned administrative buildings and warehouses at the West Los Angeles District Headquarters located at 12300 West Nebraska Avenue, Los Angeles, Los Angeles County, California (project site) (Figure 1, Regional Map and Figure 2, Project Location). The study involved completion of a CHRIS records search, outreach with the NAHC and local tribes/groups, a pedestrian survey of the project area, and evaluation of the property for historical significance. The significance evaluation included conducting archival and building development research for each property; outreach with local libraries, historical societies, and advocacy groups; and completion of a historic context.

This study was conducted in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, and the project site was evaluated in consideration of NRHP, CRHR, and City of Los Angeles Historical-Cultural Monument eligibility and integrity requirements.

1.1 Project Description

The West Los Angeles District Yard Project (proposed project) is a facility improvement project proposed by LADWP. The project would demolish five structures on site, including the district office, warehouse, break room, locker room, and fleet shop. Three new buildings would be constructed in their place: a warehouse, district office, and fleet shop. These new buildings would consolidate all of the functions of the demolished buildings. Beneath the proposed new buildings would be a single-level underground parking structure with a total of 204 parking stalls. Additionally, the existing straddle crane located within the yard would be relocated toward the southeast section of the district yard closer to the driveway along Olympic Boulevard. At the existing on-site fueling station, also in along the access driveway connecting the project site to Olympic Boulevard, the existing unleaded and diesel fuel tanks would remain above ground, and a new compressed natural gas (CNG) tank would be installed aboveground. All fleet vehicle parking, a total of 32 oversized parking spaces, would be relocated on a surface parking lot.

1.2 Project Location

The 6.3-acre project site is located at 12300 Nebraska Avenue, in the City of Los Angeles. The project site is generally bounded by Nebraska Avenue to the northwest, Bundy Drive to the northeast, Centinela Avenue to the southwest, and Olympic Boulevard to the southeast (Figure 3, Site Map). The project is located in Council District No. 11 and in the West Los Angeles Community Planning Area.

1.3 Project Personnel

All cultural resources technical work in support of this report was completed by Dudek staff. This report was authored by Dudek Architectural Historians Kate Kaiser, MSHP and Samantha Murray, MA. The

cultural resources fieldwork was completed by Ms. Kaiser and Sarah Corder, MFA. Ms. Kaiser also completed the archival research the Department of Parks and Recreation (DPR) forms, and prepared the associated significance evaluation. Dudek Archaeologist Adriane Dorrler contributed to archaeological components of this report, including review and summary of CHRIS records search results. All project staff meet or exceed the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) in architectural history and archaeology.

1.4 Regulatory Setting

This section includes a discussion of the applicable state and local laws, ordinances, regulations, and standards governing cultural resources, which must be adhered to before and during construction of the proposed project.

Federal

Although there is no federal nexus for this project, resources were evaluated in consideration of NRHP designation criteria.

The NRHP is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service under the U.S. Department of the Interior, the NRHP was authorized under the National Historic Preservation Act, as amended. Its listings encompass all National Historic Landmarks and historic areas administered by the National Park Service.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may be likely to yield, information important in prehistory or history.

SOURCE: Esri Basemaps

FIGURE 1

Regional Map

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LADWP West LA Yards

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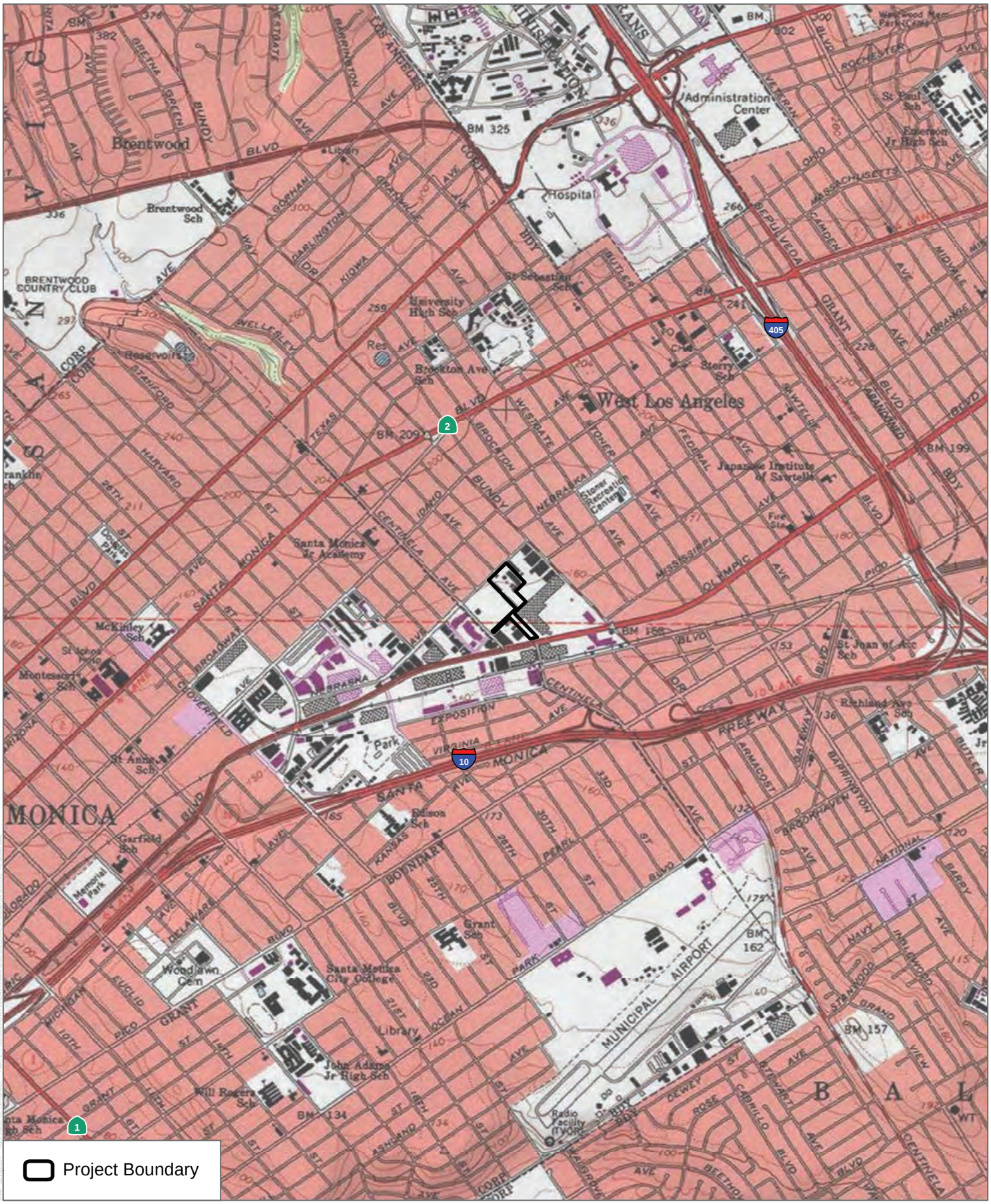

SOURCE: Esri Basemaps

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0 1,000 2,000 Feet

FIGURE 2

Project Location Map

LADWP West LA Yards

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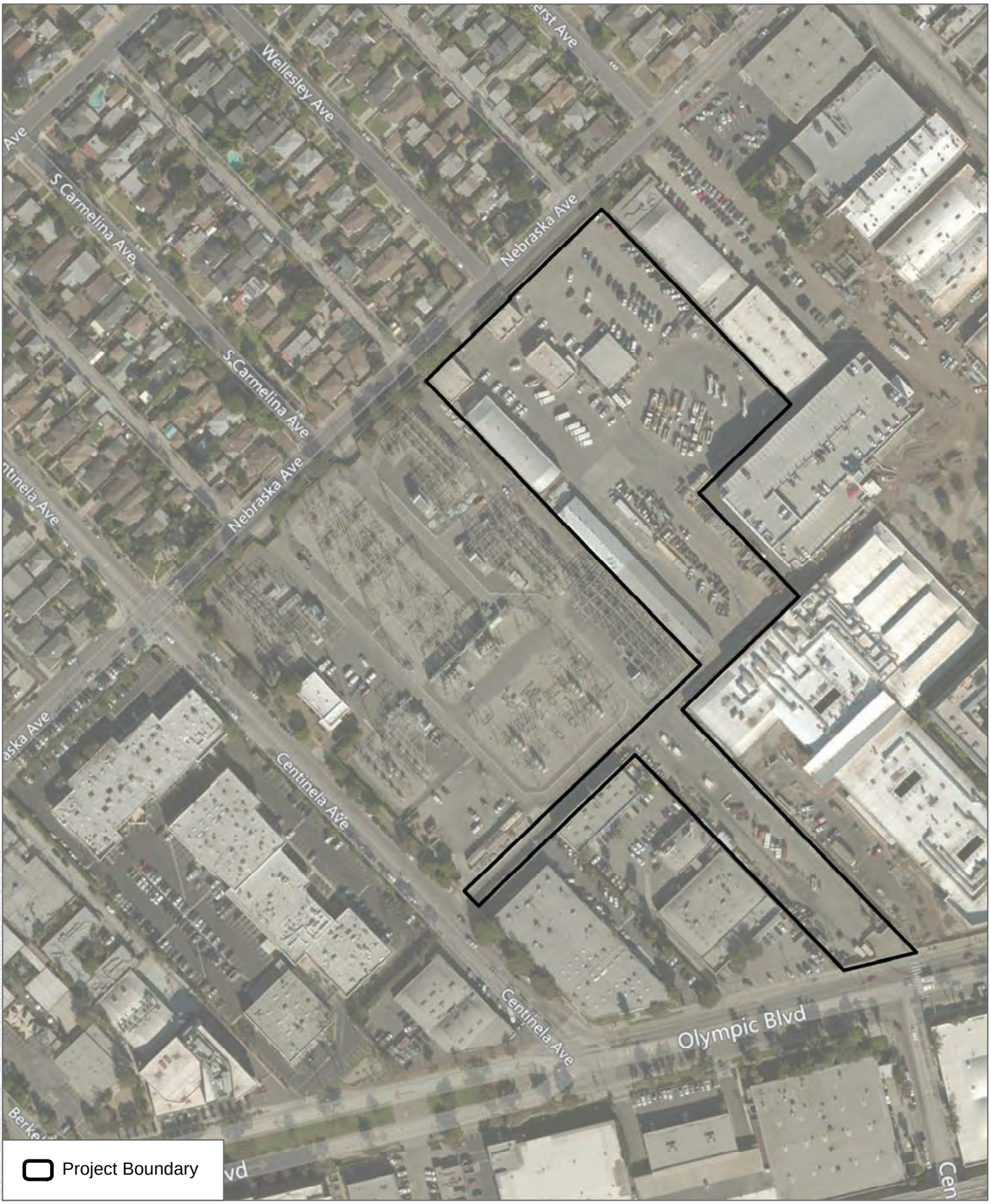

SOURCE: Bing Maps (Accessed 2017)

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0 100 200 Feet

FIGURE 2

Site Map

LADWP West LA Yards

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Integrity is defined in NRHP guidance, How to Apply the National Register Criteria, as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1990). NRHP guidance further asserts that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration G) to be considered for listing.

A historic property is defined as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria" (36 Code of Federal Regulations (CFR) Sections 800.16(i)(1)).

Effects on historic properties under Section 106 of the National Historic Preservation Act are defined in the assessment of adverse effects in 36 CFR Sections 800.5(a)(1).

State

CRHR (California Public Resources Code Section 5020 et seq.)

In California, the term "historical resource" includes "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code (PRC), Section 5020.1(j)). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 California Code of Regulations Section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed in or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

CEQA

As described further, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of an historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b) and 21083.2(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant impact on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; CEQA Guidelines Section 15064.5(b)). If a site is either listed in or eligible for listing in the CRHR, included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for the purposes of CEQA (PRC Section 21084.1; CEQA Guidelines Section

15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource"—indicating a significant effect under CEQA—means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project does any of the following (CEQA Guidelines Section 15064.5(b)(2)):

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project would cause a substantial adverse change in the significance of an historical resource such that the resource's historical significance would be materially impaired.

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

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

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

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2(a); CEQA Guidelines Section 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as a tribal cultural resource (PRC Section 21074(c); 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures, described as follows, are detailed in PRC Section 5097.98.

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County Coroner has examined the remains (Health and Safety Code Section 7050.5b). PRC Section 5097.98 outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Health and Safety Code Section 7050.5c). The NAHC would notify the most likely descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

Los Angeles Historic-Cultural Monuments

Local landmarks in the City of Los Angeles are known as Historic-Cultural Monuments (HCMs) and are under the aegis of the Planning Department, Office of Historic Resources. They are defined in the Cultural Heritage Ordinance as follows (Los Angeles Municipal Code Section 22.171.7, added by Ordinance No. 178,402, effective April 2, 2007):

> Historic-Cultural Monument (Monument) is any site (including significant trees or other plant life located on the site), building or structure of particular historic or cultural significance to the City of Los Angeles, including historic structures or sites in which the broad cultural, economic or social history of the nation, State or community is reflected or exemplified; or which is identified with historic personages or with important events in the main currents of national, State or local history; or which embodies the distinguishing characteristics of an architectural type specimen, inherently valuable for a study of a period,

> style or method of construction; or a notable work of a master builder, designer, or architect whose individual genius influenced his or her age.

For the purposes of SurveyLA, this definition has been broken down into the following four HCM designation criteria that closely parallel the existing NRHP and CRHR criteria:

1. Is identified with important events in the main currents of national, State or local history, or exemplifies significant contributions to the broad cultural, political, economic or social history of the nation, state, city, or community; or
2. Is associated with the lives of Historic Personages important to national, state, city, or local history; or
3. Embodies the distinctive characteristics of a style, type, period, or method of construction; or represents a notable work of a master designer, builder or architect whose genius influenced his or her age; or possesses high artistic values; or
4. Has yielded, or has the potential to yield, information important to the pre-history or history of the nation, state, city or community.

Historic Preservation Overlay Zones

As described by the City of Los Angeles Office of Historic Resources, the Historic Preservation Overlay Zone (HPOZ) Ordinance was adopted in 1979 and amended in 2004 to identify and protect neighborhoods with distinct architectural and cultural resources. HPOZs, commonly known as historic districts, provide for review of proposed exterior alterations and additions to historic properties within designated districts.

Regarding HPOZ eligibility, City of Los Angeles Ordinance Number 175891 states (Los Angeles Municipal Code, Section 12.20.3):

> Features designated as contributing shall meet one or more of the following criteria:
>
> 1. adds to the Historic architectural qualities or Historic associations for which a property is significant because it was present during the period of significance, and possesses Historic integrity reflecting its character at that time; or
> 2. owing to its unique location or singular physical characteristics, represents an established feature of the neighborhood, community or city; or
> 3. retaining the building, structure, Landscaping, or Natural Feature, would contribute to the preservation and protection of an Historic place or area of Historic interest in the City.

Regarding effects on federal and locally significant properties, Los Angeles Municipal Code states the following (Section 91.106.4.5, Permits for Historical and Cultural Buildings):

> The department shall not issue a permit to demolish, alter or remove a building or structure of historical, archaeological or architectural consequence if such building or structure has been officially designated, or has been determined by state or federal action to be eligible for designation, on the National Register of Historic Places, or has been included on the City of Los Angeles list of historic cultural monuments, without the department having first determined whether the demolition, alteration or removal may result in the loss of or serious damage to a significant historical or cultural asset. If the department determines that such loss or damage may occur, the applicant shall file an application and pay all fees for the California Environmental Quality Act Initial Study and Check List, as specified in Section 19.05 of the Los Angeles Municipal Code. If the Initial Study and Check List identifies the historical or cultural asset as significant, the permit shall not be issued without the department first finding that specific economic, social or other considerations make infeasible the preservation of the building or structure.

2 HISTORIC CONTEXT

2.1 Historical Overview of Los Angeles

Settlement in the Los Angeles area began in the 18th century. In 1781, a group of 11 Mexican families traveled from Mission San Gabriel Arcángel to establish a new pueblo called El Pueblo de la Reyna de Los Angeles (The Pueblo of the Queen of the Angels). This settlement consisted of a small group of adobe-brick houses and streets and would eventually be known as the Ciudad de Los Angeles (City of Angels), which incorporated on April 4, 1850, only 2 years after the Mexican–American War and 5 months prior to California achieving statehood. Settlement of the Los Angeles region continued in the early American Period. The County of Los Angeles was established on February 18, 1850, one of 27 counties established in the months prior to California acquiring official statehood in the United States. Many of the ranchos in the area now known as Los Angeles County remained intact after the United States took possession of California; however, a severe drought in the 1860s resulted in many of the ranchos being sold or otherwise acquired by Americans. Most of these ranchos were subdivided into agricultural parcels or towns. Nonetheless, ranching retained its importance, and by the late 1860s, Los Angeles was one of the top dairy production centers in the country. By 1876, Los Angeles County reportedly had a population of 30,000 persons (Dumke 1944; Caughy 1977; Dudek 2016).

Los Angeles maintained its role as a regional business center, and the development of citriculture in the late 1800s and early 1900s further strengthened this status. These factors, combined with the expansion of port facilities and railroads throughout the region, contributed to the impact of the real estate boom of the 1880s on Los Angeles. By the late 1800s, government leaders recognized the need for water to sustain the growing population in the Los Angeles area. Irish immigrant William Mulholland personified the city's efforts for a stable water supply. By 1913, the City of Los Angeles had purchased large tracts of land in the Owens Valley, and Mr. Mulholland planned and completed the construction of the 240-mile aqueduct that brought the valley's water to the city (Dumke 1944; Caughey and Caughey 1977; Fogelson 1993; Nadeau 1997). Power utilities followed on the heels of water utilities. At the beginning of the 20th century, the Progressive movement provided reform that allowed water and power utilities to thrive and gain municipal ownership. The City of Los Angeles' population grew and subsequently demanded water and power in their homes and businesses. The first power plant at Alameda and Banning Streets, built in 1882, powered the city's first electric streetlights. Private power utilities provided power to individual customers as the century drew to a close, gaining more and more business (Fogelson 1993; Prosser 2017).

Los Angeles' population and urban boundaries continued to grow in the 20th century, in part due to the discovery of oil in the area and its strategic location as a wartime port. The county's mild climate and successful economy continued to draw new residents in the late 1900s, with much of the county transformed from ranches and farms into residential subdivisions surrounding commercial and industrial centers. Hollywood's development into the entertainment capital of the world and Southern California's

booming aerospace industry were key factors in the county's growth in the 20th century. The City of Los Angeles also incorporated many formerly independent, self-governing cities in the 20th century. These include Wilmington (consolidated 1909), San Pedro (1909), Hollywood (1910), Sawtelle (1918), Eagle Rock (1923), Hyde Park (1923), Venice (1925), Watts (1926), and Tujunga (1932) (Prosser 2016). Many of these independent cities saw incorporation as a way to gain access to the City of Los Angeles' existing power and water utilities without paying excessive prices (Fogelson 1993; Prosser 2016).

2.2 The Sawtelle Neighborhood and West Los Angeles

The Los Angeles Neighborhood of Sawtelle is located in the western portion of the City of Los Angeles. Beginning as land of the Rancho San Jose de Buenos Ayres, the Land and Water Company acquired the parcel that would become Sawtelle in 1896 and subdivided an area called the Artesian Tract of Barrett Villa. Barrett Villa was incorporated as the town of Sawtelle in 1899. By 1901, the town had a post office, 150 houses, and a trolley station meant to service the nearby Pacific Branch of the National Home for Disabled Veteran Soldiers. The Soldier's Home veterans were key to developing early Sawtelle, as the community originally consisted of veteran's families, Soldier's Home staff, and veterans living independently of the Home. Later, it served surrounding agricultural landowners and neighboring Santa Monica (Figure 4) (LAT 1899, 1900, 1901, 1911, 1978; NPS 2017; Prosser 2016).

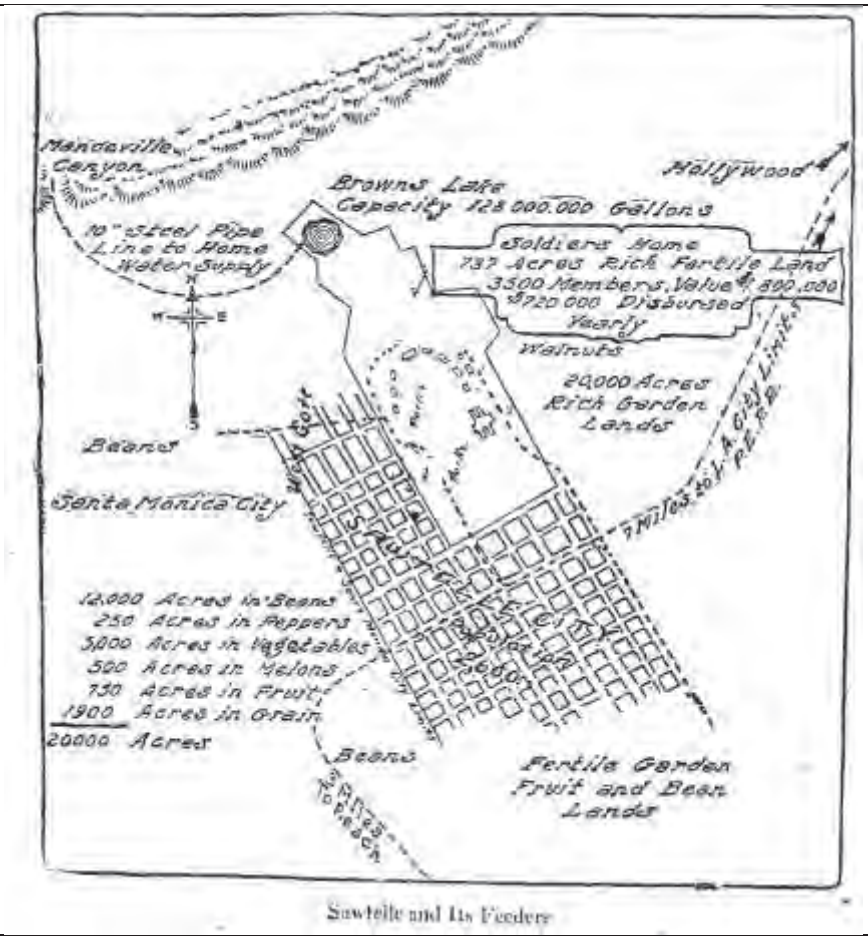

Figure 4. Sawtelle in 1911 (LAT 1911)

By the turn of the 20th century, Sawtelle had a modest commercial core along Sawtelle and Santa Monica Boulevards, government and religious establishments, and residential areas, but no business except for the Soldier's Home took precedence over Sawtelle's agricultural businesses. As the town's population grew and urbanized, the interurban rail became a key factor in the survival of the agricultural industry by shipping staple crops such as potatoes, barley, strawberries, and lima beans. Canneries in Sawtelle, particularly lima bean canneries, produced crops in the 1910s until 1920. Sawtelle also contained plant nurseries, with larger nurseries spanning several acres. These nurseries provided employment for Japanese immigrants, and eventually led to the establishment of a large Japanese community and accompanying commercial district in Sawtelle (Sanborn 1907, 1912; Prosser 2016).

In 1917, Sawtelle citizens voted in favor of annexation by the City of Los Angeles. However, due to poor execution and legal challenges, the State Supreme Court at San Francisco ruled the annexation was illegal in 1921. Voters immediately applied for annexation again in 1922 and were successful in the second round.

Between annexation in 1922 and 1925, the total population of the Sawtelle neighborhood ballooned from 3,500 to 10,770 (Huang et. al. 2015; LAT 1917, 1919, 1921, 1922, 1978, 2016).

Sawtelle saw its fair share of residential neighborhood development between the 1928 and 1944 Sanborn Fire Insurance maps. Frame dwellings with shingle roofs are sparse but present in the neighborhoods bordering the subject property in 1928. More notable are the many greenhouses throughout the surrounding blocks. By 1944, the residential neighborhood north of Nebraska Avenue has been subdivided, and nearly all lots contain a single-story, framed dwelling with shingle roof (Sanborn 1928, 1944).

The Sawtelle neighborhood also saw an increase in industrial zones replacing former agricultural tracts and threatening the residential sector. Shipping of goods along railroad lines and increased access through streetcars in the early 20th century made industrial development profitable, particularly along the Southern Pacific Railroad line (now a Metro Line along Exposition Boulevard). By the 1950s, the Sawtelle neighborhood in West Los Angeles saw increased development, with many light industrial businesses established and operating in both industrial and commercial areas. No single industry dominated the industrial zones—West Los Angeles intermingled a variety of industries, including machine shops, garment factories, tool and die, furniture manufacturers, oil and petroleum manufacturers, warehouse, utilities, shipping and distribution centers, and building material manufacturers (ARG 2015; Prosser 2016).

In the latter half of the 20th century, the Sawtelle neighborhood became less distinguishable from its neighbors, sharing infrastructure, government buildings, and businesses that still characterize the area today. West Los Angeles City Hall (1961) and the West Los Angeles Civic Center (1965) further solidified the increasing influence of the City of Los Angeles. Other cultural groups established enclaves in the area, including the Jewish community, and Mexican–Americans community. Development of the West Los Angeles area grew to include Mid-Century Modern homes and commercial centers, Googie-themed automobile establishments, Corporate International-style high-rise office buildings, New Formalist hotels, Late Modern residential high-rise towers (including one designed by I.M. Pei and Welton Becket and Associates), high-tech (Structural Expressionism) commercial high-rise towers, Brutalist buildings, and entertainment industry studios that became typical building types throughout the Los Angeles region. The area known as Japantown, or Little Osaka, along Sawtelle Boulevard was formally recognized by the Los Angeles City Council in 2015 (Sapphos 2012; LAT 2015; Los Angeles City Council 2015).

2.3 LADWP and the Development of Municipal Power

Municipal power in Los Angeles came as a direct product of hydroelectric power created by the Los Angeles- Owens River Aqueduct, bringing water from Owens Valley to reservoirs in the San Fernando Valley at the beginning of the 20th century. Mr. Mullholland, engineer of the aqueduct and superintendent of the Los Angeles City Water Company, successfully alleviated drought conditions in Los Angeles and brought secondary water sources to the Los Angeles area by 1913. This act enabled the explosive population

and industrial growth of Los Angeles, which was previously limited by the amount of water available in the local Los Angeles River (LADWP 2002).

With the water came the promise of hydroelectric power, and at Mullholland's recommendation. Ezra F. Scattergood was hired as a consulting electrical engineer for the Los Angeles City Water Company. By 1908, Mr. Scattergood was supervising the construction of the city's first hydroelectric plant at San Francisquito Canyon. Los Angeles had electrical power and power plants since the late 19th century. The first power plant in the city was built by then-private company California Electric Light Company in 1882, with the Los Angeles Electric Company right on their heels in 1883. In 1896, West Side Lighting Company began serving the western side of Los Angeles (Sawtelle, Venice, and Santa Monica). In 1902, West Side Lighting Company merged with Los Angeles Edison Company (later Southern California Edison). In 1911, city bonds allowed the Bureau of Power and Light to become the first city-owned power utility, distributing power from the San Francisquito hydroelectric power plant. The Bureau of Power and Light, as well as the Bureau of Water Works and Supply, worked under the city's Department of Public Services and often held offices in the same location (LADWP 2002; Prosser 2017).

Between the 1920s and 1930s, most privately owned water and power utilities in Los Angeles were incorporated into the municipally owned system. Notably, the Bureau of Power and Light absorbed Southern California Edison-owned generating and delivery facilities and the Los Angeles Gas and Electric Company facilities at the end of the 1930s. As it bought out private competitors, the Bureau of Power and Light also expanded its systems, adding administrative buildings, transformer facilities, and distribution stations. In the 1920s, the architecture of these distribution stations took on Classical Revival and other historical revival architectural designs and in the 1930s to more modern Art Deco and Moderne styles. Use of these grandiose styles was intended to establish and make visible the presence of a benevolent government service, in keeping with Progressive attitudes and politics of the era. Notable architects used by the Bureau of Power and Light were Frederick Roehrig and S. Charles Lee (Figure 5). In 1937, the Bureau of Power and Light officially combined with the Bureau of Water Works and Supply to create the LADWP (Prosser 2017; LADWP 1990).

Figure 5. Monumental Art Deco-style municipal water and power building, Hollywood, designed by S. Charles Lee. September 1932. (LAPL Barcode 1001788)

The post-World War II (WWII) decade was characterized by LADWP power acquisition and neighborhood expansion. With the water and power utilities combined, the City of Los Angeles pursued far-reaching projects to bring water and hydroelectric power from the Colorado River and Owens Valley. Acquiring these properties took nearly 20 years to finance, build, and deliver to Los Angeles. Between 1940 and 1950, the Los Angeles population grew by over 400,000 people, meaning a substantial increase in demand for power. In 1945, the LADWP announced the launch of a 10-year building program, expanding service to underserved areas, particularly on the West Side and San Fernando Valley. Samuel B. Morris, then-general manager of LADWP cites the "demands of the constantly growing city" to initiate the project and hire between 2000 and 4000 workers (LAT 1945). Unlike previous building campaigns, LADWP relied on internal engineers and construction staff to design and build new facilities. They created modestly scaled structures that fit seamlessly into their neighborhoods, rather than rely on the benevolent-government architecture or the 1920s and 1930s (Figure 5). From 1945–1955, LADWP dedicated 22 distribution

stations, 5 receiving stations, 1 high voltage switching station, 3 power plants, and 2 hydroelectric plants (Figure 6). The first buildings at West Los Angeles District Office were built in this period, and it opened for service in 1954 (LAT 1945; LADWP 1978, 1990; Prosser 2017).

Figure 6. Receiving Station G, at 2625 Fletcher Drive, built 1954. November 24, 1969. Modestly scaled and landscaped like other LADWP buildings built between 1945-1955. (LAPL Barcode 1005626)

After the decade of growth promised by Morris, the construction of new facilities continues, adding more distribution stations, receiving stations, high voltage stations, power plants, hydroelectric plants, steam plants, solar, and thermal plants. LADWP also focused on acquiring property rights to existing facilities or private utilities that leased, rented, or sold power to LADWP. While this was occurring, the LADWP slowly began building and acquiring steam generation plants, to add to the existing group of hydroelectric plants far from Los Angeles. LADWP's first steam plant was at Seal Beach electricity station in 1928, but four new

steam powered generating stations were built between 1943 and 1961. LADWP continued in the 1950s and 1960s to build new dams (Pleasant Valley Dam), new hydroelectric facilities for the Owens Gorge Project and the Castaic Power Plant, and the Pacific Intertie, which sent electricity produced in Oregon to Los Angeles (LADWP 1990, 2002; Dudek 2017; Soifer 2017).

In 1965, the Department of Water and Power completed construction on the General Office Building (John Ferraro Building) in the Bunker Hill area of downtown Los Angeles. This notable project was designed by architecture firm A.C. Martin and Associates and is an impressive, 17 story, corporate internationalist style office building with subterranean parking lot, reflecting pool and fountains on its grounds. In 2012, the General Office Building was accepted by City Council as a Los Angeles HCM (Prosser 2017; LACMC 2012) (Figure 7).

Figure 7. Bird's eye view of the General Office Building (John Ferraro Building), designed by A.C. Martin and Associates. January 28, 1969. (LAPL Barcode 1006127)

2.4 LADWP West Los Angeles District Headquarters

Acquiring and Planning the Site

The LADWP acquired several parcels of land in the West Los Angeles/Sawtelle neighborhood in the 1940s. These lots had once belonged to Anthony Frabisilio and Michael Frabisilio, who kept agricultural fields and some outbuildings on the property, moving a barn from a property along West Pico Boulevard and erecting a new house on the lot. Since aerial photographs of the area only go back as far as 1947, Sanborn insurance maps do not picture the property, and there are no other permits on file at City of Los Angeles, it was not possible to reconstruct the property chronology or establish a pattern of ownership beyond the 1940s (Los Angeles Department of Buildings and Safety (LADBS) permits 1943LA03992, 1944WL70482; Ancestry 2017).

LADWP began acquiring land for a Distribution Station at 11700 Nebraska Avenue, several blocks away from the subject property. Distribution Station 28 was completed in 1947 and was an imposing Art Moderne-style structure. Distribution stations are used to transfer power from the transmission system to a specific service area. Distribution Station 28 served the industrial and residential areas in West Long Angeles, where locally owned and distributed city utilities were in high demand. Before the West Los Angeles District Office was built, Distribution Station 28 acted as the West Los Angeles headquarters (LADWP 1954).

Figure 8. Bird's eye view of the Olympic Drive-In Theater with the Department of Water and Power headquarters highlighted, and the Receiving Station K and transformer yard to the left. Note that Building 5 had not yet been built. Photographer: Howard D. Kelly. January 15, 1962. (LAPL 00103040)

In 1953, LADWP acquired the property at 12300 West Nebraska Avenue, the subject property. Prior to its acquisition, the lot held an agricultural field, adjacent to many other fields around it. A drive-in movie theater named the Olympic Drive-in Theater was located east of the property. West of the property was a residential neighborhood (Figure 8). The site's original plan included five buildings that faced each other along a corridor of vehicle parking. The first two buildings built on the lot were a locker room for employees and a warehouse completed in 1953 (Figure 9). In 1954, Department of Water and Power began construction on Receiving Station K at 1840 Centinela Avenue (located south of the project site) and its transformer yard. These were adjacent to the subject property and likely planned, built, and opened at the same time. Receiving Station K went into service in 1955 (Figure 10) (Permit 1954LA02220). In 1956, a third structure was constructed on the site, this time a fleet shop for vehicle storage. In 1959, the main

office building was finished. In 1966, a fifth building, then characterized as a tool room, was added. According to each building permit, all buildings were designed and built by engineers and journeymen already employed by the LADWP (LADWP 1954; NETR 2017).

Figure 9. View to Building 1 (Locker Room) construction progress. July 23, 1953. (LADWP Record Center, Box WP24-24, File 13, Title "Underground Headquarters & Overhead Districts, 1953–1954 (Book 118)", Photo Number 34585

Figure 10. Receiving Station K at 1840 Centinela Avenue, built 1954, energized 1955. No date. (LAPL Barcode 1005633)

The Engineers

Though the engineers listed on the Department of Water and Power permits were employees, they were responsible for several buildings on site. Very little career information could be found for the engineers. Because they were not contracted, there is no engineering or architecture firm associated with their work. No architects, licensed or not, were associated with the five buildings at the West Los Angeles District Headquarters. The following four LADWP engineers are responsible for the design of the buildings at the West Los Angeles District Headquarters.

- J.S. Dorfman, CA License 6948, Locker Room (Building 1) and Warehouse (Building 2), 1953

- J. Case, CA License 5249, Fleet Shop (Building 3), 1956
- R.L. White, MA License, 4-4211, Office Building (Building 4), 1959
- James H. Anthony, CE 15318, Break Room (Building 5), 1966

The Original Planned Buildings

Based on review of the permit drawings provided by the LADBS and archival research, the following detailed information was found about the original period of construction. The 1966 Building No. 5 permit map (Figure 11) shows the layout of the site at the close of the original period of construction. Archival research and permits provided by the City of Los Angeles indicate that the original 1953 construction period included two buildings within the project site (Buildings 1 and 2). This construction period also included development of the adjacent site at Receiving Station K and the transformer yard at 1840 Centinela Avenue. Construction details for the original Department of Water and Power Headquarters buildings are provided below.

Building 1

Building 1 fronts West Nebraska Avenue and is situated at the west corner of the parcel. According to the original City of Los Angeles Building Permit, the building was a one-story concrete block building, originally measuring 50 feet by 56 feet with concrete foundation and a composition roof. The permit shows that Building 1 was intended to function as a locker room for Department of Water and Power employees as well as a washroom and office (LADBS Permit 1953LA53732).

Building 2

Building 2 is located immediately southeast of Building 1 and against the dividing southwest property line separating the headquarters yard from the transformer yard for 1840 Centinela Avenue. According to the original City of Los Angeles Building Permit, the building was a one-story concrete block building, originally measuring 171 feet by 51 feet with concrete foundation and a composition roof. The one-story warehouse reaches a height of 21 feet from ground level and features a bowstring truss on the interior. The permit shows that Building 2 was intended to warehouse electrical supplies and hazardous materials (LADBS Permit 1953LA64593).

Building 3

Building 3 is located southeast of and in line with Buildings 1 and 2 and against the dividing southwest property line separating the headquarters yard from the transformer yard for 1840 Centinela Avenue. According to the original City of Los Angeles Building Permit, the building was a one-story steel-framed shed clad in metal sheets with a concrete foundation, originally measuring 310 feet by 40 feet. The permit shows that Building 3 was intended as a truck shed (LADBS Permit 1956WL18771).

Building 4

Building 4 is located northeast of Building 1, across a parking area and entry road, and fronts west Nebraska Avenue. According to the original City of Los Angeles Building Permit, the building was a two-story concrete block building, originally measuring 40 feet by 48 feet with concrete foundation and a composition roof. The permit shows that Building 4 was intended to replace the office in Building 1 and operate thereafter as the official office (LADBS Permit 1959LA47000).

Building 5

Building 5 is located southeast of Building 4 and across a parking area and entry road from Building 2. According to the original City of Los Angeles Building Permit, the building was a two-story concrete block building, originally measuring 40 feet by 72 feet with a concrete foundation and a composition roof. The permit shows that Building 5 was intended as another warehouse and tool room. Today it is used as a break room and employee classroom (LADBS Permit 1966LA33644).

Figure 11 shows the original Buildings 1, 2, 3, and 4 as they stood in 1966, preparing for the construction of Building 5. Figure 12 shows the site according to a scaled site plan published in 1984.

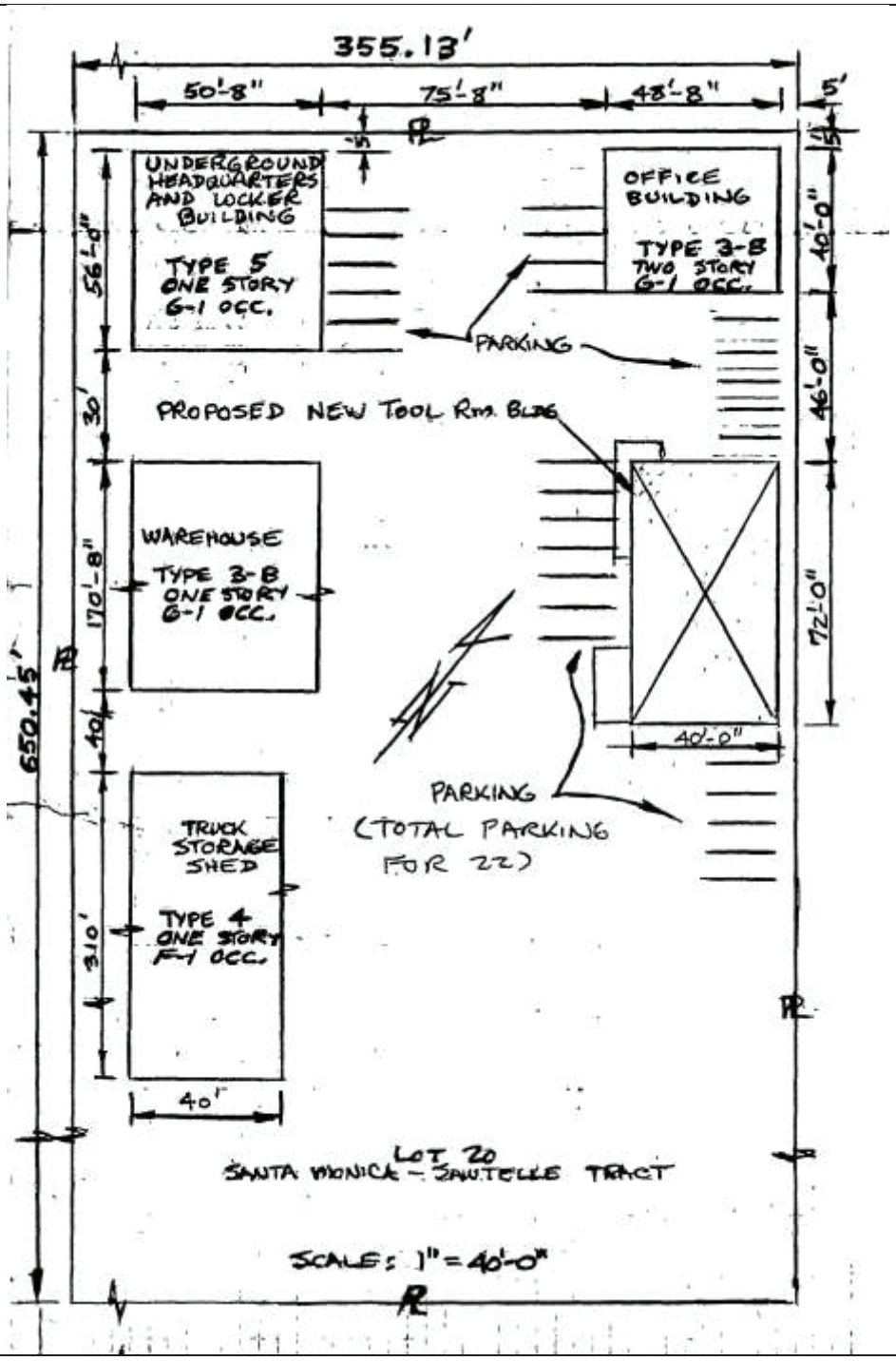

Figure 11. Plan map for subject property, 1966. (LADBS permit 1966LA33644)

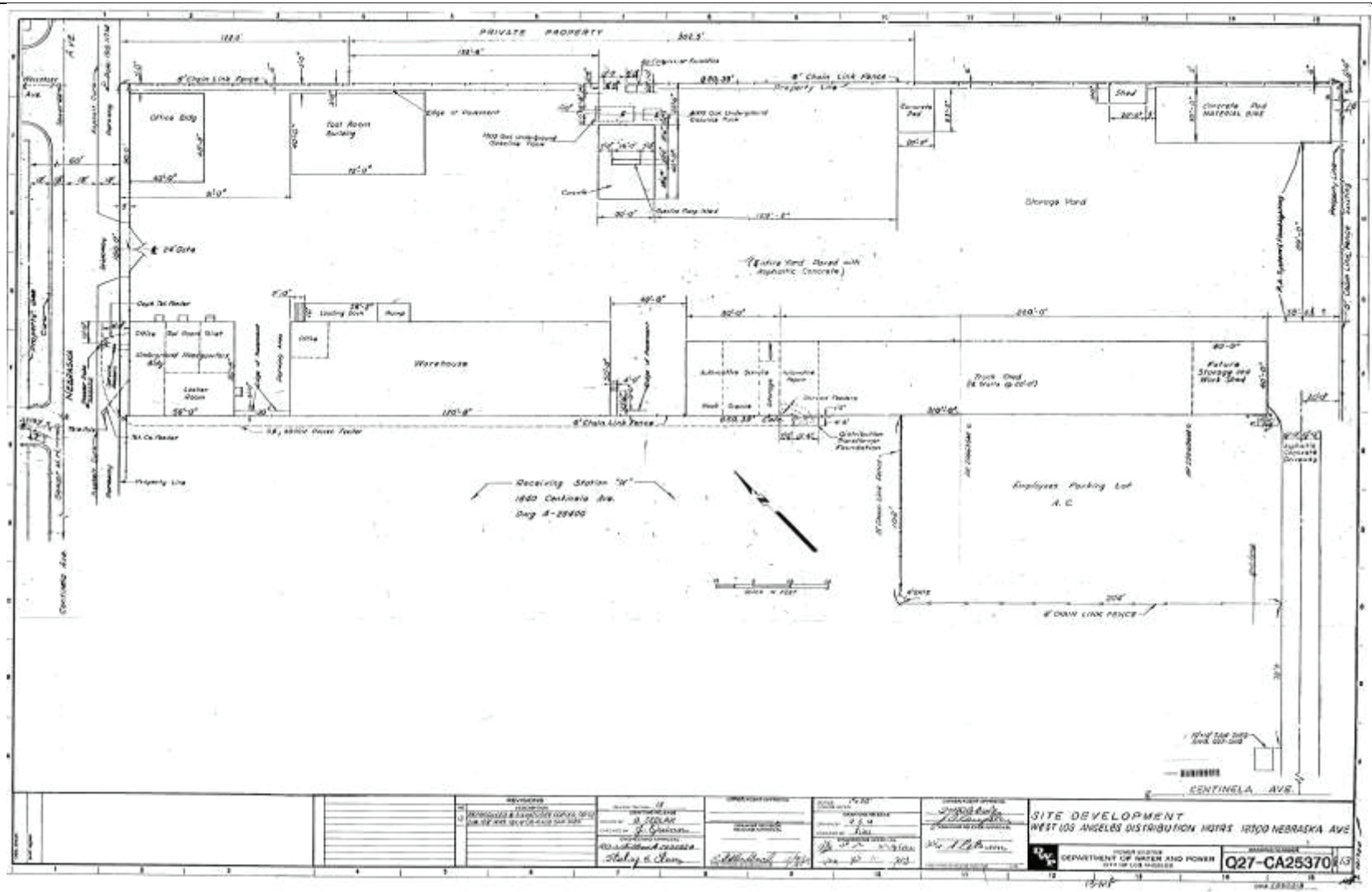

Figure 12. Scaled plan map for subject property, 1984. Drawn by O. Sedlak, LADWP drafting office (LADWP Drawing No. Q27-CA25370)

Buildings No Longer Extant

Cement Storage

The Cement Storage building was located southeast of Building 5 and northeast east of Building 3, at the east most corner of the lot. The original building permit describes it as a one-story building with metal walls, metal roof, and a concrete slab floor; it originally measured 12 feet by 20 feet. This building was constructed in 1968. It was moved or demolished between 2006 and 2011 (LADBS Permit 1968LA78376; NETR 2017).

Saw Shed

The saw shed was located along the road extending south from the southernmost corner of the parcel, south of Building 3 and east of the transformer yard at 1840 Centinela Avenue. The original building permit describes the saw shed as a one-story building with concrete block walls, a wood roof, and concrete slab floor; it originally measured 12 feet by 10 feet. This building was constructed in 1984. It was moved between 2006 and 2011 to its current location, further southwest. (LADBS Permit 1984LA80157).

Modern Development at the City Yards (1972–Present)

Construction of new buildings and modifications to existing buildings within the subject property continued throughout the remaining decades of the 20th century and to the present. The aerial photographs show that there were numerous portable structures and parking areas also created in the last 45 years to support the storage needs of the Department of Water and Power. One of the most significant areas for parking and staging appears in the 2012 aerial photograph when the Department of Water and Power acquires the lot to the northeast, demolishes all buildings and expands storage and staff parking into the lot. In addition to the temporary buildings and the parking areas, there were numerous permanent buildings and structures constructed on the site during this period of development (LADBS permits; NETR 2017). The following provides a list of City Yards buildings and structures that were constructed less than 45 years ago:

- Fence wall and mechanical gate, 2000 (LADBS Permit 00020-10000-00533)
- Gasoline and diesel tank foundations, 1995 (LADBS Permit 1995LA35484)
- Guard/Entrance Building, circa 1995 (NETR 2017, no permit available)
- Prefabricated trailer building, circa 1995 (NETR 2017, no permit available)
- Oil Storage Shed, 1992 (LADBS Permit 1992WL02099)
- Oil Storage Shed, 1992 (LADBS Permit 1992WL02100)
- Concrete Material Bins, 1982 (LADBS Permit 1982WL54417)
- Movable crane, Mi-Jack Travelift model, circa 1976 (NETR 2017)
- Temporary perimeter storage shelving, circa 1976 (NETR 2017)

Architectural Style of the Project Area

Mid-Century Modern (1933–1965)

Mid-Century Modern style is reflective of International and Bauhaus styles popular in Europe in the early 20th century. This style and its living designers (e.g., Mies Van der Rohe and Gropius) were disrupted by WWII and moved to the United States. During WWII, the United States established itself as a burgeoning manufacturing and industrial leader, with incredible demand for modern buildings to reflect modern products in the mid-20th century. As a result, many industrial buildings are often "decorated boxes"—plain buildings with applied ornament to suit the era and appear more modern without detracting from the importance of the activity *inside* the building. Following WWII, the United States had a focus on forward thinking, which sparked architectural movements like Mid-Century Modern. Practitioners of the style were focused on the most cutting-edge materials and techniques. Architects throughout Southern California implemented the design aesthetics made famous by early Modernists like Richard Neutra and Frank Lloyd Wright, who created a variety of modern architectural forms throughout Southern California. Like other buildings of this era, Mid-Century Modern buildings had to be quickly assembled, and use modern materials that could be mass-produced (McAlester 2014; Morgan 2004).

Key characteristics of the Mid-Century Modern style of architecture are the following (McAlester 2014; Morgan 2004; Gebhard and Winter 2003):

- Low, boxy, horizontal proportions
- Mass-produced materials
- Flat, smooth sheathing
- Flat roofed without coping at roof line; flat roofs hidden behind parapets
- Lack of exterior decoration or abstract geometrical motif
- Simple windows (metal or wood)
- Industrially plain doors
- Large window groupings
- Commonly asymmetrical
- Whites, buffs and pale pastel colors

3 BACKGROUND RESEARCH

3.1 California Historical Resources Information Systems Records Search

Dudek requested a CHRIS records search from the South Central Coastal Information Center (SCCIC), which houses cultural resources records for Los Angeles County. Dudek received the results on September 14, 2017. The CHRIS search included any previously recorded cultural resources and investigations within a 0.5-mile radius of the project site. Additional consulted sources included historical maps of the project area; the NRHP; the CRHR; the California Historic Property Data File; and the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility. Confidential Appendix A provides the confidential results of the records search and a bibliography of prior cultural resources studies.

Previous Technical Studies

Results of the CHRIS search indicate that 15 previously conducted studies were identified within the 0.5-mile records search radius between 1977 and 2013. Of these studies, one overlaps the current project area: LA-12500 (Table 1). The following paragraph provides a brief summary of the study.

Report No. LA-12500

Final Archaeological Resources Monitoring Report for the Los Angeles Department of Water and Power Scattergood–Olympic Transmission Line Project, Vault Investigations, Los Angeles County, California (Vader 2013), documents the results of archaeological monitoring conducted during the installation of 11.4 miles of underground transmission line located in the western portion of the City of Los Angeles. The study's northernmost terminus originated within the southeastern portion of the project area. Archaeological monitoring was conducted during potholing investigations to identify areas of cultural sensitivity along the alignment. No cultural resources were identified in the direct project area as a result of the study. Cultural material was recovered at the southern end of the alignment where the proposed right-of-way (ROW) traversed the coast.

Table 1. Previously Conducted Cultural Resources Studies Within 0.5 Miles of Project Area

SCCIC Report No.	Title of Study	Date	Author(s)	In Project Area?
LA-03729	Historic Property Survey Bundy Drive–North of Wilshire Boulevard to South of La Grange Avenue	1977	Department of Public Works	No
LA-05031	Cultural Resource Assessment for Pacific Bell Wireless Facility LA 910-01, County of Los Angeles, California	2000	Lapin, Philippe	No
LA-05036	Cultural Resource Assessment for AT&T Wireless Facility Number R328, County of Los Angeles, California	2000	Lapin, Philippe	No
LA-05732	1517 Franklin Street Housing Project, Santa Monica	2002	Maki, Mary K.	No

Table 1. Previously Conducted Cultural Resources Studies Within 0.5 Miles of Project Area

SCCIC Report No.	Title of Study	Date	Author(s)	In Project Area?
LA-06498	Highway Project Involving Upgrading of Intersection within the City of Santa Monica Located Between San Vicente Boulevard (north); Ocean Park (south); 9th Street (west); and 30th Street (east)	2002	McKenna, Jeanette A.	No
LA-06505	Highway Project of Replacing the Existing Overhead Reflective Sign Panels In-kind with Retro-reflective Panels	2000	Smith, Philomene C.	No
LA-07119	Cultural Resource Assessment for Cingular Wireless Facility SM171-01, City of Los Angeles, California	2002	Kyle, Carolyn E.	No
LA-09414	2320 34th Street Renovation Project, City of Santa Monica	2008	Maki, Mary K.	No
LA-09453	Exposition Corridor Transit Project Phase 2 Archaeological Survey Report	2009	Ehringer, Candice and Monica Strauss	No
LA-11114	Archaeological Investigation, Partial Inventory Secondary Sewer Renewal Program Bundy and San Vicente Project	2011	Foster, John M.	No
LA-11184	Exposition Corridor Project Phase 2 (FTA 070320A), Request for Concurrence–Detailed Reconnaissance Survey	2008	Born, Monica	No
LA-11305	Historical Resources Evaluation Report for the Exposition Corridor Transit Project Phase 2, Los Angeles County, California	2009	Meiser, M.K.	No
LA-11793	Addendum to the Historical Resources Evaluation Report and Archeological Survey Report for Project Changes and Design Options the Exposition Corridor Transit Project Phase 2, Los Angeles County, California	2009	Meiser, M.K.	No
LA-12500	Final Archaeological Resources Monitoring Report for the LADWP Scattergood-Olympic Transmission Line Project, Vault Investigations, Los Angeles County, California	2013	Vader, Michael	Yes
LA-12796	Cultural Resources Assessment Mountain View Mobile Home Park, Santa Monica, Los Angeles County, California	2010	Brunzell, David	No

Previously Recorded Cultural Resources

No previously recorded cultural resources were identified within the project area as a result of the SCCIC records search. Nine previously recorded resources were identified within a 0.5-mile-radius of the project area (Table 2). All of the previously recorded resources are south of the project site and clustered along

resource P-19-003803, the historic Southern Pacific Railroad right-of-way, which at its closest point, is located approximately 0.1 miles from the project area.

All of the previously recorded resources are historic period with the exception of a prehistoric handstone identified as the prehistoric component of P-19-004669, located approximately 0.1 miles from the project area. Two of the resources are historic period archaeological deposits: P-19-004668 and P-19-004669. The mean date of occupation at these sites ranges from the early to mid-20th century to the 1960s.

There are also seven previously recorded built environment resources within the 0.5-mile radius of the project area, including the previously mentioned Southern Pacific Railroad segment (P-19-003803), two single-family properties from the early 1900s (P-19-189757 and P-19-189768), two industrial properties (P-19-189767 and P-19-190027), and the Mountain View Mobile Home Park (P-19-190932). There are an additional 35 unmapped built environment resources within 0.5 miles of the project site listed in the Office of Historic Properties Directory.

Table 2. Previously Recorded Cultural Resources Within 0.5 Miles of the Project Area

Primary No.	Trinomial	Age	Resource Name/Description	Resource Type	Date (Recorder: Firm)
P-19-003803	CA-LAN-003803H	Historic	Six-mile segment of the historic Southern Pacific Railroad/Santa Monica Air Line right-of-way	Structure	2008 (Strauss, Monica et al.: EDAW)
P-19-004668	CA-LAN-004668H	Historic	Historic deposit consisting primarily of glass and metal cosmetic-related containers dating from the 1940s to the 1960s. Historic research indicates that five cosmetic companies occupied the property until the early 1960s.	Site	2012 (Mort, Janell Mort: Cogstone)
P-19-004669	CA-LAN-004669H	Prehistoric, Historic	The historic component of the site consists of brick-lined well and a large diffuse refuse scatter with artifacts dating from the 1910s to the 1960s. Many of the artifacts suggest refuse from an Asian restaurant from the mid-20th century. A prehistoric bifacial handstone was also recovered at the site.	Site	2014 (Knight, Al: Cogstone)
P-19-189757	—	Historic	2200 Wellesley Avenue is a single-family property constructed in 1925. The property is not eligible for NRHP, CRHR, or Local designation.	Building	2008 (Meiser, M.K.: EDAW)

Table 2. Previously Recorded Cultural Resources Within 0.5 Miles of the Project Area

Primary No.	Trinomial	Age	Resource Name/Description	Resource Type	Date (Recorder: Firm)
P-19-189767	—	Historic	12414 Exposition Boulevard is an industrial warehouse building constructed in 1927. The property is not eligible for NRHP, CRHR, or Local designation.	Building	2008 (Meiser, M.K.: EDAW)
P-19-189768	—	Historic	11928 Exposition Boulevard is a single-family property constructed in 1939. The property is not eligible for NRHP, CRHR, or Local designation.	Building	2008 (Meiser, M.K.: EDAW)
P-19-190027	—	Historic	3401 Exposition Boulevard is an industrial warehouse and office building constructed in 1961. The property is not eligible for NRHP, CRHR, or Local designation.	Building	2009 (Meiser, M.K.: EDAW)
P-19-190932	—	Historic	Mountain View Mobile Home Park/Mountain View Trailer Inn was constructed in 1948. The property is not eligible for NRHP, CRHR, or Local designation.	Building	2010 (Brunzell, David: BCR Consultants)

3.2 NAHC and Native American Correspondence

Dudek contacted the NAHC on September 1, 2017, to request a search of its Sacred Lands File (SLF) for the proposed project site and surrounding area. The NAHC responded on September 7, 2017, indicating that the search did not identify any Native American resources in the vicinity of the project site but that the surrounding area is sensitive for cultural resources. Because the SLF search does not include an exhaustive list of Native American cultural resources, the NAHC suggested contacting Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the project. The NAHC provided the contact information of the five persons and entities to contact along with the SLF search results.

Dudek prepared and sent letters to each of the individuals on the contact list requesting information about cultural sites and resources in or near the project site. These letters, mailed on September 11, 2017, provided a brief description of the proposed project, a summary of the SLF search results, and reference maps. Recipients were asked to reply within 15 days of receipt of the letter should they have any knowledge of cultural resources in the area.

Dudek has received one response to date. On October 11, 2017, Andrew Salas of the Gabrieleno Band of Mission Indians – Kizh Nation emailed the following comment/request: "The project location is within our

Ancestral territory which may have potential for discoveries of our cultural resources. Therefore, we would like to request that one of our Native Monitors be present during any and all ground disturbances."

The complete Record of Dudek's Coordination with NAHC and Tribes (located in Appendix B, Tribal Outreach).

3.3 Building Development Research

Extensive archival research was conducted in support of the historical significance evaluation of the West Los Angeles Department of Water and Power Yards. Short descriptions of all research efforts are provided as follows.

Los Angeles Public Library

Dudek staff reviewed a number of online resources available through the Los Angeles Public Library. These tools include accessing online Sanborn Maps, online LADWP photo collections, online historical photograph collections, and online historical newspaper collections, which were all used in the preparation of the historic context (Section 2).

LADWP Photograph Collection

Dudek contacted Angela Tatum, archivist for the Department of Water and Power Photograph Collection, hosted online by the Los Angeles Public Library on October 23, 2017. Ms. Tatum forwarded Dudek's research request to Paul Soifer, PhD, the Consulting Historian for the Department of Water and Power. On November 1, 2017, Ms. Tatum procured copies of official LADWP line drawings and site plans.

LADWP Records Center

Dudek visited the Department of Water and Power Records Center in person on November 1, 2017, and met with Dr. Soifer. Dr. Soifer procured pages from LADWP internal publications pertaining to the utility's history in the 1950s, 1960s, and 1970s that were used in the preparation of the historical context (Section 2). The collection included photographs, department directories, annual reports, independent survey notes, and articles from the employee magazine *Intake*, which were all used in the preparation of the historic context (Section 2). Select photographs are included in Appendix C

Los Angeles City Historical Society

Dudek contacted the Los Angeles City Historical Society (LACHS) via email and inquired about the subject properties on October 24, 2017. LACHS responded that they did not locate any information related to the subject properties, but recommended a request be made to the Los Angeles City Archivist Michael Holland.

Los Angeles City Archives

Dudek visited the Los Angeles City Archives on November 1, 2017, after contacting the City Archivist Mr. Holland (at the suggestion of LACHS) on October 24, 2017, and again on October 27, 2017. Mr. Holland

procured requested items from the LADWP collection, including internally published histories, articles from employee magazine *Intake,* and reports of the Los Angeles City Engineer on Water and Power properties, which were used in the preparation of the historic context (Section 2).

Los Angeles Department of Building and Safety

Dudek used the Los Angeles Department of Building and Safety online building records search on October 9, 2017, to obtain building permits and establish a building chronology and alteration chronology that were used in the preparation of the historical context (Section 2), field survey (Section 4), and significance evaluations (Section 5).

Aerial Photograph and Historic Map Review

Sanborn Fire Insurance Company maps for the City of West Los Angeles were prepared in 1944. Sanborn maps for the City of Sawtelle were also prepared for the following years: 1905, 1907, 1912, 1921, 1924, and 1928. The Sanborn maps reviewed did not include the project area, which is likely due to later development in this area. Historic aerial photographs for the project area were available for the following years: 1947, 1952, 1964, 1967, 1972, 1980, 1989, 1994, 2002, 2003, 2004, 2005, 2006, 2009, 2010, 2011, 2012, and 2014 (NETR 2017; CSM 2017). The 1947 aerial photograph shows the project area prior to development. In 1947, the property appears to be undeveloped land or an agricultural field, surrounded by other undeveloped lots, and bounded to the northwest by a residential neighborhood, and the Olympic Drive-In movie theater is visible southeast of the site. The 1952 aerial photograph also shows the site prior to development; however, the 12270-72 lot immediately northeast was being used as a light industrial area and contained three structures. Residential areas still surround the site to the northwest and southwest.

The first historic aerial photograph in which the LADWP West Los Angeles District Headquarters appears is the 1964 aerial photograph. This aerial has four buildings visible in their current locations: the locker room, warehouse/tool room, warehouse/fleet shop, and district office. Immediately southwest is the LADWP transformer yard. The 12270-72 lot immediately northeast gains one new building and a designated parking lot. In the 1967 aerial photograph, the break room (then recorded as another tool room) appears southeast of the district office and north of the warehouse/tool room.

There are few notable additions to the site after the 1967 aerial photograph. Various small storage structures appear on the 1972 aerial photograph, including four storage structures in the southeast locus of the site and small structures between the five other buildings. Between the 1972 and 1980 aerial photographs, the crane feature northeast of the warehouse/fleet shop appears. Between the 1980 aerial photograph and the 1989 aerial photograph, all buildings in the 12270-72 lot are demolished. This is supported by demolition permits recorded at the Los Angeles Building and Safety online database. One new building does appear on the 12270-72 lot in the 1994 aerial photograph, but there are no discernable changes to the 12300 lot or transformer yard. The building on the 12270-72 lot is demolished sometime after 2014 (the most recent available aerial photograph for the area); the building was not present during the site visit (NETR 2017; CSM 2017).

4 FIELD SURVEY

Dudek Architectural Historians Ms. Corder, MFA, and Ms. Kaiser, MSHP, conducted a pedestrian survey of the project site on October 11, 2017. The project site includes two tax lots with five LADWP buildings, outdoor storage, and parking, which are adjacent to an LADWP electrical substation located in a mixed-residential neighborhood and light industry area. All buildings were photographed, researched, and evaluated in consideration of NRHP, CRHR, and local designation criteria and integrity requirements and in consideration of potential impacts to historical resources under CEQA. The survey entailed walking all sides of the buildings and the surrounding site.

Dudek documented the subject property using field notes, digital photography, and close-scale field maps. Photographs of the project area were taken with a Canon Power Shot ELPH180 digital camera with 20 megapixels and 8x optical zoom. All field notes, photographs, and records related to the current study are on file at Dudek's Pasadena, California office.

4.1 Description of Surveyed Resources

The project site is located at 12300 Nebraska Avenue on Assessor's Identification Number 4259018902. The property contains five LADWP buildings that were constructed more than 50 years ago between 1953 and 1966. Figure 13 numbers each building on the site. These buildings numbers are referenced in the discussion of individual buildings that follows.

Building 1, Locker Room, 1953

The subject property is a Mid-Century Modern building constructed in 1953, facing northeast towards a central, paved corridor road that runs the length of the tax lot (Figure 14). The one-story building is currently used as a restroom, shower, locker room, and exercise area for employees. The building features a flat roof hidden by a parapet wall topped with a rounded coping; however, the roof structure was not visible. The walls are constructed of painted concrete masonry units arranged in running bond, with a decorative stringer course and water table course that protrude from the wall surface of the building a few inches, and rounded concrete masonry units at the building corners, window openings, and door openings. The walls meet the surrounding pavement without any special decorative or visually distinguished foundation element. Reading from left to right, there are three doors are regularly spaced along the main (northeast) elevation and metal two-panel doors, with the upper panel split into a 2-lite, fixed window with frosted glass divided by a metal muntin, within a metal frame. The southeast-most door has two shallow steps leading to the entry, the middle door has a concrete stoop accessed by a steep ramp extending straight to the northeast for three feet, and the northwest-most door has an Americans with Disabilities Act (ADA)-compliant 6-foot-long ramp with a metal railing running perpendicular to the building entry. Along the main elevation, the fenestration is regular, with four 12-lite windows alternating with the three doors (i.e., ABABABA). Each 12-lite window has the middle two rows (six lites) forming an awning window with a row of three fixed

lites above and below. The window panes contain a variety of different types: frosted, stippled, pebbled, wired, and textured privacy glass. Individual panes appear to have been replaced as needed.

The northwest elevation, facing onto West Nebraska Avenue, features the concrete masonry unit in running bond wall construction and decorative rounded edges of the northeast and southeast elevations. It has four, evenly spaced 12-lite windows arranged three wide by four high, with the middle six lites forming an awning window. The three lites below and above the awning are fixed.

The southwest elevation was not readily visible due to access restrictions and vegetation. However, the elevation appears to have regular fenestration consisting of a single multi-pane window and two pairs of two multi-paned windows separated by mullions.

On the southeast elevation, the building features the concrete masonry units in running bond wall construction and decorative rounded edges. From left to right the elevation features a modern, metal fire door with a blue fabric awning over it. To the right of this are two 12-lite windows of which the middle two rows (six lites) form an awning window with a row of three fixed lites above. Leading to the fire door is an ADA-compliant ramp (approximately 10 feet long) and railing. Two more 6-lite awning windows are present to the right (west) of the doors and 12-lite windows (i.e., ABACC). Further right, nearest the west building corner, is a metal gutter and modern floodlight.

SOURCE: Bing Maps (Accessed 2017)

DUDEK

0 75 150 Feet

FIGURE 13

Properties Evaluated

LADWP West LA Yards

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Figure 14. View of the northeast (main) and southeast elevations, looking west. 10/11/2017 (IMG 4050)

Building 1 was constructed in 1953 based on the LADBS Permit filed in that year. According to the original building permit, the building was constructed as a 56 × 50 × 13-foot one-story, concrete block building with a composition roof. The original use for the building listed on the permit was as a locker and washroom building with four rooms (LADBS No. 1953LA53732). A permit was found for one set of alterations in 1967 that included the addition of new plumbing facilities and the removal and addition of one wall (LADBS No. 1967LA45064). Observed alterations to the building include panes in some of the windows and ADA-compliant ramps for the building.

A review of historic maps and aerial photographs was conducted as part of the archival research effort for this property. The 1944 Sanborn map does not show a building located on the parcel, which is consistent with a 1953 date of construction provided by the building permit. The following historic aerial photographs were reviewed for the property: 1947, 1952, 1964, 1967, 1972, 1980, 1989, 1994, 2002, 2003, 2004, 2005,

2006, 2009, 2010, 2011, 2012, and 2014 (NETR 2017; CSM 2017). The 1964 aerial photograph shows the building as a one-story building with a rectangular plan. The building appears to retain the scale and massing of the original plan, as shown in the 1964 aerial photograph and all subsequent aerial photographs (NETR 2017; CSM 2017).

Building 2, Warehouse – Tool Room, 1953

The subject property is a Mid-Century Modern building constructed in 1953, facing northeast towards a central, paved corridor road that runs the length of the tax lot (Figure 15). The one-story building is currently used as a warehouse for electrical equipment, employee personal protective equipment, and tools. The building features a shallow arched roof with seven wood-and-steel I-beam bowstring trusses supporting diagonally laid wood board sheathing beneath composite roofing material. According to LADWP archival photographs, the roof was sealed with Pioneer C-13-C4 Asphalt emulsion (Appendix C). The walls are painted concrete masonry units laid in running bond and extend above the roof to form a tall parapet wall. At the base of the wall is a smooth, concrete course roughly 3 feet in height that is flush with the rest of the concrete masonry units wall. The warehouse has loading bays, doors, and windows on all its elevations.

The main (northeast) elevation features irregular fenestration with the opening sites above grade to facilitate truck access. Fenestration, from left to right, consists of three loading bay doors; a metal single-leaf entrance door with a blue awning overhead and a loading bay door, both accessed via an elevated concrete stoop reached by short flights of open concrete steps at either end; a single loading bay door; and a metal single-leaf entrance door, a loading bay door, a metal half-lite door with frosted glass divided by a horizontal metal muntin, and a pair of 12-lite metal-framed windows separated by a metal mullion. A tall concrete platform (roughly 25 × 8 feet), with a shallow ramp to the southeast by a shallow ramp and a short flight of integral concrete steps to the northwest, grants access to the three doors on the northwestern end. Each 12-lite window is two lites wide by six lites high. The second and third rows from the top operate as a 4-lite awning window. The bottom is a 2-lite row. The first, fourth, and fifth 2-lite rows are fixed. Miscellaneous modern flood lights, loud speakers, and lamps are affixed to the building at roof height.

The northwest elevation has one pair of 12-lite metal-framed windows separated by a metal mullion. The 12-lite windows are each two lites wide by six lites high. For the northeastern 12-lite window, the second and third rows from the top operate as a 4-lite hopper window, as does the bottom 2-lite row. The first, fourth, and fifth 2-lite rows are fixed. The southwestern 12-lite window is similar but was modified at some point to accommodate a window air conditioning (AC) unit in the bottom four lites. There is also a large metal awning to the right (west) of this window that currently serves as covered parking for employee-owned motorcycles. An in-wall gutter is visible along this elevation from the smooth concrete water table a few inches above ground height. Similar gutters are likely on the other elevations but are visually obstructed.

Fenestration on the southwest elevation is regular, with eight equally spaced pairs of 12-lite windows separated by metal mullions. Each window correlates to a bay between the bowstring trusses. The visible 12-lite windows are each two lites wide by six lites high. The second and third rows from the top operate as a 4-

lite hopper window, as does the bottom row. From the top of the window the first, fourth, and fifth rows are fixed. Not all of these windows were fully visible, so it is possible that some windows were modified to accommodate ventilation systems.

The southeast elevation has a modern, metal fire door at its southern-most end, with a concrete stair and platform leading to it. To the right (east) of this door is a single modern roll-up door loading bay. This elevation also has lamps, floodlights, and a loudspeaker attached at roof level.

Figure 15. Building 2, view of the northeast (main) and northwest elevations, looking south. 10/11/2017 (IMG 4077)

Building 2 was constructed in 1953 based on the LADBS Permit filed in that year. According to the original building permit the building was constructed as a 171 × 51 × 121-foot one-story, concrete block building with a composition roof supported by 2 × 12-inch rafters and concrete floors. The original use for the building listed on the permit is a "warehouse (for general electrical supplies; no hazardous materials" (LADBS No. 1953LA64593). A permit was found for one set of alterations in 1982 that added a loading platform, access door, interior partitions, and interior ceilings, as well as to

comply with Title 24, which refers to California energy efficiency compliance laws passed in 1977 (LADBS No. 1982WL54416). Observed alterations to the building include the following: replacement panes in some of the windows, modification of windows to accommodate ventilation units, and updating loading bay doors to modern standards.

A review of historic maps and aerial photographs was conducted as part of the archival research effort for this property. The 1944 Sanborn map does not show a building located on the parcel, which is consistent with a 1953 date of construction provided by the building permit. The following historic aerial photographs were reviewed for the property: 1947, 1952, 1964, 1967, 1972, 1980, 1989, 1994, 2002, 2003, 2004, 2005, 2006, 2009, 2010, 2011, 2012, and 2014 (NETR 2017; CSM 2017). The 1964 aerial photograph shows a one-story building with a rectangular plan. The building appears to retain the scale and massing of the original plan, as shown in the 1964 aerial photograph and all subsequent aerial photographs (Google Earth 2016; NETR 2017; CSM 2017).

Building 3, Warehouse – Fleet Shop, 1956

The subject property is a Mid-Century Modern building constructed in 1956, facing northeast towards a central, paved corridor road that runs the length of the tax lot (Figure 16). The one-story building is currently used as a warehouse for storing fleet vehicles, electrical equipment storage, a wash bay, and as a machine shop for equipment repairs. The building features a low-pitched, side-gabled roof supported by steel I-beam rafters and purlins. There is no sheathing, and the roof is clad in corrugated galvanized steel sheets with no eaves. The roofline is occasionally interrupted by regularly spaced rotating metal roof vents. The walls are clad in vertically oriented, corrugated galvanized steel sheets and attached to a steel I-beam frame system with metal bolts and screws. The structural framing is arranged around I-beam posts that attach to I-beam principal rafters at the roof, effectively dividing the building into 16 bays. Each of these I-beam bents have horizontal metal studs bracing and connecting them, as well as I-beam purlins bracing the structure in the roof. The I-beam bents are attached to the ground at small concrete plinths.

On the northeast (main) elevation, the building is divided into three sections: a central open area with five bays, flanked on either end by a closed section with multiple doors. From left to right, the first section contains a corrugated metal up-and-over garage door; a metal two-panel doors with the upper panel split into a 2-lite, fixed window with frosted glass divided by a metal muntin; a corrugated metal up-and-over garage door with a centered wicket gate; and a corrugated metal up-and-over garage door with a wicket gate on the left side. The middle open section comprises six bays separated by I-beam bents. The third section has seven bays with the following fenestration arrangement: four corrugated metal roll-up garage doors; an 8-lite metal-framed window with the middle four lites forming an operable awning window and a full-bay-width metal shed roof attached on a level with the lower window muntin (directly below the awning window); and two corrugated metal roll-up garage doors. The garage door on the last bay was open, and an LADWP employee confirmed that this bay was used for washing vehicles.

The northwest elevation is gable ended and clad entirely in corrugated metal sheets. It has a single metal door as fenestration near the north side. This elevation also has floodlights and a utility box attached to the exterior wall.

The southwest elevation was not readily visible due to access restrictions and vegetation. However, the elevation appears to have irregular fenestration (from left to right): two square 16-lite windows with central operable sections, a rectangular multi-paned window, four multiple-paned windows (possibly a 4 × 3 grid), an expanse of corrugated metal-clad wall roughly corresponding to one bay-width, an opening of some sort (window or door is unclear), an expanse of corrugated metal-clad wall roughly corresponding to five bay widths, a square 16-lite window with central operable section adapted to house a fan, and a square 16-lite window with a central 4-lite horizontal pivot section.

The southeast elevation is gable ended and lacks fenestration, presenting as an expanse of corrugated metal cladding. The southern part has a low shed-roofed wood-framed addition, while the eastern part sports six vertical metal posts with regularly spaced horizontal arms that serve as open-air shelving.

Figure 16. Building 3, view of the northeast (main) and southeast elevations, looking west. 10/11/2017 (IMG 0014)

Building 3 was constructed in 1956 based on the LADBS Permit filed in that year. According to the original building permit, the building was constructed as a 310 × 40 × 14-foot one-story building. The original use

for the building listed on the permit is a "truck shed" (LADBS No. 1956WL18771). Several permits were found for alterations, and the first of these was dated 1959 that added an interior partition measuring 40 feet by 16 feet at the southeast end of the building (LADBS No. 1959LA44642). This partition closed off the southeastern most 40 feet of the 310-foot-long building, likely creating the three closed bays at that side of the building. The next permit was dated 1965 and included enclosing an unknown 20 × 40-foot area with sheet metal and steel framing (LADBS No. 1965LA91336). The next permit was dated 1970 and included updating an existing shed roof, enclosing a truck stall at the north end of the building with corrugated metal siding, and the construction of a new concrete floor at the north end of the building (LADBS No. 1970LA08254). The final recorded permit for alterations was in 2010, and based on the attached work map, the intent was grading and pouring concrete within the footprint of Building 3 (LADBS No. 10016-30000-06428). Observed alterations to the building include the following: modified windows, updated roll-up garage doors, and replacement corrugated metal roofing and siding at the north end of the building.

A review of historic maps and aerial photographs was conducted as part of the archival research effort for this property. The 1944 Sanborn map does not show a building located on the parcel, which is consistent with a 1956 date of construction provided by the building permit. The following historic aerial photographs were reviewed for the property: 1947, 1952, 1964, 1967, 1972, 1980, 1989, 1994, 2002, 2003, 2004, 2005, 2006, 2009, 2010, 2011, 2012, and 2014 (NETR 2017; CSM 2017). The 1964 aerial photograph shows a one-story building with a rectangular plan. The building appears to retain the scale and massing of the original plan, as shown in the 1964 aerial photograph and all subsequent aerial photographs (Google Earth 2016; NETR 2017; CSM 2017).

Building 4, District Office, 1959

The subject property is a Mid-Century Modern building constructed in 1959, facing southwest towards a central, paved corridor road that runs the length of the tax lot (Figure 17). The two-story building is currently used as an office and record storage area. The building features a flat roof behind a low parapet wall, but the roof structure was not visible. The walls are painted concrete masonry units laid in uniform running bonds from roof to foundation. The building foundation is a concrete pad. Building 4 has several distinctive modernistic decorative character-defining features: modern sans-serif metal lettering on the northwest elevation, horizontal metal awning screens running the length of buildings over the tops of windows as a screen on three of four elevations, and a pierced concrete block privacy wall on the southwest elevation.

On the main (southwest) elevation, there is a variety of fenestration. From left to right, on the first floor, there are three 2 wide × 3 tall, have the bottom two lites fixed, and have the top four operating as an awning window. To the right (south) of the windows is the main entry, which consists of a modern metal fire door with a thin, vertical fixed window with wire glass. Projecting from the south corner, perpendicular to the southeast elevation, is the pierced concrete block privacy wall. The wall extends out about 5 feet and runs from ground level to the flat metal awning over the first floor windows. The pattern on the pierced privacy

shade is simple alternating a square pierced block with a solid block every other course of the wall. There is a flat metal awning above the first floor windows and door. The flat metal awning on the first floor projects outward a few extra feet in front of the door to encompass the width of the privacy screen. The windows on the upper floor are spaced evenly with the first floor. From left to right, there are two 6-lite metal windows, which are arranged 2 wide × 3 tall, have the bottom two lites fixed, and have the top four operating as an awning window. Right of this, there is a 2-lite window in a metal frame. The opening style of the window is unknown. Then there is another two 6-lite windows, which are arranged 2 wide × 3 tall, have the bottom two lites fixed, and have the top four operating as a an awning window.

On the northwest elevation, which faces West Nebraska Avenue, from left to right, there are three 3-lite metal windows arranged 1 wide × 3 high in a ribbon on the first floor and identically spaced windows and identical window types on the second floor. Each floor has a flat metal awning shade running the length of the building immediately over the tops of the windows. Between the first and second floor, in sans-serif, all-capitals, metal lettering reads: "Department of Water and Power / City of Los Angeles / West Los Angeles Distribution Headquarters."

Along the southeast elevation, the window and door schedule becomes irregular. From left to right, on the first level, there is an ADA-compliant 10-foot concrete ramp with a railing, leading to a modern metal fire door. There is a shed-roof metal awning over the door. To the right (east) of the door are two windows: first is a 3-lite metal window, which is arranged 1 wide × 3 high with a fixed bottom lite and the top two lites operating together as an awning window; further right is a 2-lite (vertically arranged), metal awning window. There is a short, flat metal awning over these two windows, but unlike awnings on the northwest and southwest elevations, the awning does not extend the length of the building. On the upper floor, from left to right, there is a ribbon of three 3-lite windows in metal frames, a second ribbon of three 3-lite windows in metal frames, a painted metal fire escape ladder and metal guard, and an offset 2-lite metal awning window at the left-most side. Over the two window ribbons is a short, flat metal awning that does not extend the length of the building. The 2-lite window has no awning.

The northeast elevation also has an irregular window and door schedule. From left to right, the left side of the building on both levels is devoid of windows, doors, awnings, railings, or any decorative element. Windows are grouped at the right (north) side of the building. On the lower floor, from left (east) to right (north), there is a 2-lite (vertically arranged) metal awning window; a 3-lite window, which is arranged 1 wide × 3 high with a fixed bottom lite and the top two lites operating together as an awning window; and a ribbon of three 3-lite, metal windows where the top two lites operate as an awning window and the bottom lite is fixed. On the upper floor are three 6-lite metal window, which are arranged 2 wide × 3 high where the top four lites operate as an awning window, and the bottom two lites are fixed.

Figure 17. Building 4, view of the southwest (main) and southeast elevations, looking north. 10/11/2017 (IMG 4138)

Building 4 was constructed in 1959 based on the LADBS Permit filed in that year. According to the original building permit, the building was constructed as a 40 × 48 × 22-foot two-story building. The original use for the building listed on the permit is an "office" (LADBS No. 1959LA47000). Only two permits were found for alterations, and the first of these was dated 1982 and called for a remodeling of the office, new ceilings, and the addition of AC and bathrooms (LADBS No. 1982WL54413). The next permit was dated 1988 and called for external storage structures to be attached to the building (LADBS No. 1988WL77658). These structures were not extant in the 2017 survey. Observed alterations to the building include the following: replacing windows along the southwest (main) elevation, replacing doors, and adding an ADA-compliant ramp.

A review of historic maps and aerial photographs was conducted as part of the archival research effort for this property. The 1944 Sanborn map does not show a building located on the parcel, which is consistent with a 1959 date of construction provided by the building permit. The following historic aerial photographs

were reviewed for the property: 1947, 1952, 1964, 1967, 1972, 1980, 1989, 1994, 2002, 2003, 2004, 2005, 2006, 2009, 2010, 2011, 2012, and 2014 (NETR 2017; CSM 2017). The 1964 aerial photograph shows a two-story building with a nearly square plan. The building appears to retain the scale and massing of the original plan, as shown in the 1964 aerial photograph and all subsequent aerial photographs (Google Earth 2016; NETR 2017; CSM 2017).

Building 5, Break Room, 1966

The subject property is a Mid-Century Modern building constructed in 1966, facing southwest towards a central, paved corridor road that runs the length of the tax lot (Figure 18). The one-story building is currently used as a break room, kitchen, vehicle storage, and employee classroom. The building features a flat roof behind a low parapet wall, but the roof structure was not visible. The walls are painted concrete masonry units blocks laid in uniform running bonds from roof to foundation. The building foundation is a concrete pad. Each elevation features a different window and door schedule, as well as some flat, metal awnings that recall the design of the horizontal metal window awnings at Building 4, District Office.

On the southwest (main) elevation, from left to right, is a metal, unpainted 3-lite window with the top two lites operating as an awning window and the bottom lite is fixed. Over the window is a flat-roofed metal awning that wraps the corner of the building and extends slightly into the northwest elevation. Right of the window and awning is a modern, metal fire door. There is a single concrete stoop, one step high, leading to the fire door. Above the level of the 3-lite window is another window just to the right of the door. This is a ribbon of three metal, unpainted, 3-lite windows with the top two lites operating as an awning window and the bottom lite fixed. Beside this window ribbon is a roll-up metal garage door, wide enough for one standard-sized vehicle. Over the garage door is a wide, flat, metal awning that shades only the door and does not wrap around the corner. A shallow ramp, about 6 feet in length and rising no more than 6 inches, leads to the garage door.

Along the northwest elevation, from left the right, there is a metal fire door. Right of this is a metal, unpainted, 3-lite window, which is arrange one wide by three high and has been modified to fit an exhaust fan for the stove on the interior, which fits out of the awning window opening. Right of this window is an observed alteration where an original window has been removed and infilled with concrete masonry units. Right of this are two utility lines and boxes. Further right of this is a 3-lite window that has all lites fixed. Over this right-most window is the awning that wrapped the corner extending from the main elevation.

The northeast elevation, from left to right, has three ribbons of three 3-lite windows, evenly spaced along the elevation. Each 3-lite window has a fixed lower lite, and the top two lites operate as an awning window. There are several utility pipes and boxes running from box to roof along the northeast elevation. Two in-wall AC units are also attached to the northeast elevation and have utility wire pipes running away from them. There is an electric car charging station attached to the right-most side of the building as well.

On the southeast elevation, from left to right is a basketball hoop, attached directly to the masonry. Right of this is an in-wall, AC unit. Right of this is a vinyl, sliding, 2-lite window. Right of this is a modern, metal fire door with a blue fabric and metal shed-roof awning over it. Leading to the door parallel to the elevation wall is an ADA-compliant ramp and railing.

Figure 18. View to northwest (left) and southwest (right) elevations, looking east. 10/11/2017 (IMG 4013)

Building 5 was constructed in 1966 based on the LADBS Permit filed in that year. According to the original building permit, the building was constructed as a 40 × 72 × 20-foot one-story building. The original use for the building listed on the permit is a "(tool room) warehouse" (LADBS No. 1966LA33644), indicating that the current use for the building was not intended by its builders. Only one permit was found for alterations, in 1982, that called for AC and the addition of partitions (LADBS No. 1982WL54414). Observed alterations to the building include the following: infilling and altering windows along the northwest elevation, replacing doors, adding an ADA-compliant ramp, and adding utilities, including the electric car charging station.

A review of historic maps and aerial photographs was conducted as part of the archival research effort for this property. The 1944 Sanborn map does not show a building located on the parcel, which is consistent with a 1966 date of construction provided by the building permit. The building does not appear on the 1964 aerial with the other four main buildings on the lot. The following historic aerial photographs were reviewed for the property: 1947, 1952, 1964, 1967, 1972, 1980, 1989, 1994, 2002, 2003, 2004, 2005, 2006, 2009, 2010, 2011, 2012, and 2014 (NETR 2017; CSM 2017). The 1967 aerial photograph shows a one-story building with a nearly square plan. The building appears to retain the scale and massing of the original plan, as shown in the 1964 aerial photograph and all subsequent aerial photographs (Google Earth 2016; NETR 2017; CSM 2017).

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5 SIGNIFICANCE EVALUATION

5.1 LADWP West Los Angeles District Headquarters

This significance evaluation considers the eligibility requirements presented in the SurveyLA Citywide Historic Context Statement for Municipal Water and Power (Prosser 2017). The context provides guidance for identifying and evaluating potential historical resources related to water and power, and outlines the requirements for various property types. The LADWP West Los Angeles Yard falls under the property type: Administration Buildings and Service Yards. This property type has a period of significance of 1902–1980. The context statement also includes eligibility standards, character defining/associative features, and integrity consideration for the property type, which were all considered in the evaluation.

NRHP/CRHR Statement of Significance

In consideration of the project site's history and requisite integrity, Dudek finds the West Los Angeles Department of Water and Power Yards not eligible for listing in the NRHP or CRHR based on the following significance evaluation and in consideration of national and state eligibility criteria.

Criterion A/1: Associated with events that have made a significant contribution to the broad patterns of our history.

Archival research did not identify any associations with events that have made a significant contribution to the broad patterns of local or regional history. The subject property is one of at least 33 LADWP buildings from approximately the same period of construction (1945-1955) and lacks "a direct association with the physical growth of the City of Los Angeles during the 1902–1980 period" (Prosser 2017). These buildings are unrelated to major events in Los Angeles or LADWP history and do not clearly reflect the transition from architect-designed, monumental public utility buildings, to the more simplified and scaled down public utility buildings. The buildings are not associated with any locally important events in the Sawtelle neighborhood history. Although the increase in LADWP facilities does correlate with the post-WWII population boom that occurred in the mid-century, the headquarters themselves did not provide power for the West Los Angeles area, and appear to have played a supporting role for the nearby Distribution Center and for workers and journeymen stationed in the area. The site is most strongly related to equipment and vehicle storage. Due to a lack of significant associations with events important to history, the subject property does not appear eligible under NRHP/CRHR Criteria A/1.

Criterion B/2: Associated with the lives of persons significant in our past.

All engineers and worker names identified with the subject property were researched for possible significance. Archival research failed to indicate any associations with significant persons. This building has no known associations with any important figures in LADWP or City of Los Angeles history. For these reasons, the subject property does not appear eligible under NRHP/CRHR Criteria B/2.

Criterion C/3: Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

There is a corresponding Los Angeles Citywide Historic Context statement available for Municipal Water and Power Buildings against which this site was evaluated. Under the property type "Administrative Buildings and Service Yards," the subject property does fall within the period of significance (1902–1980) and is associated with water and power administration and maintenance, per the eligibility standards. However, the buildings lack many of the character defining and associative features required. This includes "retaining a significant lobby," which no building on this property has. This building also lacks prominent signage. Although Building 4 does have signage that faces out onto West Nebraska Avenue, this signage is unobtrusive, sans-serif all-capitals lettering made of unadorned metal and attached directly to the side of the building. The site has no significant landscape features and a wall obscures most of the buildings from the street. The site is not related to a significant architectural or engineering theme because notable architects or engineers did not design the site. There are other public utility buildings built during the 1953–1966 period of construction that better suit the criteria laid out in the Los Angeles Citywide Historic Context for Water and Power (Prosser 2017).

In broader terms, during the mid-20th century, the simple aesthetic of Modern-style architecture began to overshadow the more ornate revival styles, signaling a shift in focus from art to function. Affordable, mass-produced materials, simple, boxy forms, and an emphasis on sleekness over applied ornament are hallmarks of the Mid-Century Modern style. The subject property is a collection of buildings built between 1953 and 1966, at a time when the LADWP was expanding to meet the demands of a rapidly growing Los Angeles population that was expanding westward. The LADWP would have keenly felt the appeal of buildings that could be built cheaply, quickly, and remain functional. Nearly all LADWP buildings built between 1945 and 1965 have modernism references or embody the simple and functional elements of the Mid-Century Modern style.

Each building on the subject property has experienced little alteration in plan or function and retains moderate levels of integrity in location, setting, feeling, and association. Integrity of design, materials, and workmanship is partially diminished due to changes in some original materials and use changes in the buildings. All buildings retain their original locations and orientations, and all buildings remain associated with the LADWP as they are set within an operational and active LADWP Yard. Buildings 1, 2, 4, and 5 have no major changes to the design/intention of the buildings, with only minor material and workmanship compromises for changes to windows or doors. Building 3 exhibits the most alterations and retains lower integrity of materials, design, and workmanship and has visibly distinguished new metal cladding materials. Integrity of design is also compromised on Building 3, as interior alterations have closed some bays and changed their intended function. The style is relatively unremarkable and may be indistinguishable from other LADWP neighborhood headquarters throughout Los Angeles. The buildings are not the work of a master architect or important creative individual, and the subject property does not appear eligible as a

contributor to a historic district. For all of these reasons, the subject property does not appear eligible under NRHP/CRHR Criteria C/3.

Criterion D/4: Have yielded, or may be likely to yield, information important in prehistory or history.

There is no evidence to suggest that this property has the potential to yield information important to state or local history, nor is it associated with a known archaeological resource. Therefore, the property is recommended not eligible under NRHP/CRHR Criterion D/4.

City of Los Angeles HCM Criteria

Per the City of Los Angeles Office of Heritage Resources website:

> Historic-Cultural Monument designation is reserved for those resources that have a special aesthetic, architectural, or engineering interest or value of a historic nature. The Cultural Heritage Ordinance establishes criteria for designation; these criteria are contained in the definition of a Monument in the Ordinance. A historical or cultural monument is any site (including significant trees or other plant life located thereon), building, or structure of particular historical or cultural significance to the City of Los Angeles, such as historic structures or sites:
>
> - in which the broad cultural, political, economic, or social history of the nation, state, or community is reflected or exemplified; OR
> - which are identified with historic personages or with important events in the main currents of national, state, or local history; OR
> - which embody the distinguishing characteristics of an architectural-type specimen, inherently valuable for a study of a period, style, or method of construction; OR
> - which are a notable work of a master builder, designer, or architect whose individual genius influenced his or her age.
>
> A proposed resource may be eligible for designation if it meets at least one of the criteria above. (LAOHR 2017)

Because the City of Los Angeles HCM criteria closely follow that of the NRHP and CRHR, the national and state significance evaluation previously presented is also relevant here. The subject property is not an example of outstanding craftsmanship, was not created by a "master" architect, builder, or designer, did not influence the design of other architecture in the City of Los Angeles, and does not have a role in the development or history of Los Angeles. It retains a moderate amount of integrity; however, alterations detract from integrity of materials and design. The site is not associated with a person or event important to Los Angeles history. The site is not associated with important movements or trends shaping the development of Los Angeles. Therefore, the subject property is recommended not eligible for listing as a City of Los Angeles HCM.

Integrity Discussion

Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics that existed during the resource's period of significance, and the historical resource's ability to convey that significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity. Similar stipulations apply to listing at the state level, but the threshold is lower for the CRHR, particularly if the site has potential to yield significant scientific or historic information. The evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property's physical features and how they relate to its significance. In consideration of the NRHP, historic properties either retain integrity or they do not. Seven aspects or qualities, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association (NPS 1990). To retain historic integrity, a property generally possesses several, if not most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance. The subject property's integrity is as follows:

Location: The building is sited on the original location of construction in its original orientation. Therefore, the subject property retains integrity of location.

Design: The five buildings were subjected to several alterations over time that have compromised its integrity of design, including reconfiguration of entry points; accessibility additions such as ramps and larger compliant entry points; reconfiguration of interior spaces (most apparent and well documented at Building 3); removal of windows (most apparent at Building 5); and additions of lights, speakers, basketball hoops, awnings, HVAC, and modern utility boxes, to the building exteriors. Exterior spaces fluidly transition from parking areas to roads, roads to material storage spaces, and storage areas to parking areas again with little regard for original intention or design. Therefore, the buildings and grounds at the subject property do not maintain integrity of design.

Setting: The subject property does not maintain its original property boundaries, extending north into the 12272 West Nebraska Avenue lot sometime in the last decade. This area, now an employee vehicle parking lot, is not well documented. The southern boundary along the 1840 Centinela Avenue transformer yard is also historically fluid and changed to include parking spaces, storage buildings, and even roads before reverting to two separate distinct spaces. The setting within the larger neighborhood context is largely unaltered. The area to the northwest is still a predominantly single-family residential neighborhood. The area to the northeast and southeast is still light industrial. The area to the southwest is still occupied by the LADWP transformer yard. Therefore, the property's retains diminished integrity of setting, by the reconfiguration of the yards over time.

Materials: Numerous alterations to the buildings have compromised the property's material integrity, including the addition of metal replacement windows, addition of metal awnings, addition of fire-compliant and ADA-compliant doors, and replacement metal doors for loading bays. All of these alterations introduced new materials to the subject property that were not part of the original design. Therefore, the property does not retain integrity of materials.

Workmanship: Similar to the issue with materials, the physical evidence of a craftsman's skills in constructing the original building was compromised by the exterior alterations to the buildings. Therefore, the property no longer retains its integrity of workmanship.

Feeling: The alterations made to the subject property do not significantly impact the buildings' ability to correlate to a Mid-Century Modern working yard for the use of LADWP journeymen and their supporting staff. It retains high levels of functionality that it would have had since the site was developed in the 1950s and 1960s. For the most part, buildings retain their original roles, and the feeling of individual buildings has not changed. Changes to the layout of the property and setting, however do affect integrity of feeling. The significant addition of outdoor storage obstructs the original feeling of a working yard. The creation and addition of lots for parking spaces further degrades integrity of feeling. Therefore, the subject property retains diminished integrity of feeling.

Association: No important historical associations with events and people were identified for the subject property.

In summary, the subject property appears not eligible under all NRHP, CRHR, and City of Los Angeles HCM designation criteria. Further, the property exhibits moderate integrity of location, setting, and feeling, and low integrity of design, materials, or workmanship. No important historical associations with events and people were identified. Consequently, the property does not maintain the requisite integrity to warrant listing in the NRHP, CRHR, or as a City of Los Angeles HCM.

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6 FINDINGS AND RECOMMENDATIONS

6.1 Summary of Findings

Built Environment Resources

Dudek surveyed one LADWP utility yard property built over 50 years ago and containing five buildings, numerous outdoor storage structures, gas and fuel pads, and equipment/vehicle parking. Each building/structure on the site was photographed, researched, and recorded on the appropriate set of DPR forms (Appendix D). The entire West Los Angeles LADWP Yard was evaluated for historical significance in consideration of NRHP, CRHR, and City of Los Angeles HCM designation criteria and integrity requirements. Table 3 presents a summary of each building within the yard. As a result of the significance evaluation, the West Los Angeles LADWP Yard appears not eligible for inclusion in the NRHP, CRHR, or local register (status code 6Z) due to a lack of significant historical associations and compromised integrity. Therefore, the buildings located within the proposed project site are not considered historical resources for the purposes of CEQA.

Table 3. Summary of Property Significance Evaluations

Map No.*	Street Address	City	Assessor's Parcel Number	Year Built (per County Assessor)	Evaluation Findings**
1	12300 West Nebraska Avenue	Los Angeles	4259018902	1953	6Z
2	12300 West Nebraska Avenue	Los Angeles	4259018902	1953	6Z
3	12300 West Nebraska Avenue	Los Angeles	4259018902	1956	6Z
4	12300 West Nebraska Avenue	Los Angeles	4259018902	1959	6Z
5	12300 West Nebraska Avenue	Los Angeles	4259018902	1966	6Z

* Corresponds to Figure 13
** Status Code 6Z = not eligible for inclusion in the NRHP, CRHR, or local designation.

Archaeological Resources

No archaeological resources were identified within the project site as a result of the CHRIS records search, Native American coordination, or survey. One Native American contact requested the presence of a Native American monitor during all ground-disturbing activities. However, no specific archaeological resources or sensitivity concerns were identified by any sources consulted. However, it is always possible that intact archaeological deposits are present at subsurface levels. For these reasons, the project site should be treated as potentially sensitive for archaeological resources. Management recommendations to reduce potential impacts to unanticipated archaeological resources and human remains during campus construction activities are provided below.

The findings of this cultural resources study indicate that the proposed project will have a less-than-significant impact on historical resources under CEQA.

6.2 Management Recommendations

Unanticipated Discovery of Archaeological Resources

In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Should it be required, temporary flagging may be installed around a resource to avoid any disturbances from construction equipment. Depending upon the significance of the find under CEQA (14 California Code of Regulations Section 15064.5(f); PRC Section 21082), the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA, additional treatment may be required.

Unanticipated Discovery of Human Remains

In accordance with Section 7050.5 of the California Health and Safety Code, if potential human remains are found, the lead agency staff and the County Coroner must be immediately notified of the discovery. The coroner would provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, can occur until a determination has been made. If the County Coroner determines that the remains are, or are believed to be, Native American, the coroner would notify the NAHC within 24 hours. In accordance with PRC Section 5097.98, the NAHC must immediately notify those persons it believes to be the MLD from the deceased Native American. Within 48 hours of this notification, the MLD would recommend to the lead agency her/his preferred treatment of the remains and associated grave goods.

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APPENDIX A

CONFIDENTIAL Records Search Results

APPENDIX B

NAHC and Tribal Outreach

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

September 7, 2017

Samantha Murray
Dudek

Sent by E-mail: smurray@dudek.com

RE: Proposed LADWP West LA Yard (#8584-50) Project, City of Los Angeles; Beverly Hills USGS Quadrangle, Los Angeles County, California

Dear Ms. Murray:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results however the area is sensitive for cultural resources. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

Attached is a list of tribes culturally affiliated to the project area. I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

Native American Heritage Commission
Native American Contact List
Los Angeles County
9/7/2017

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Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed LADWP West LA Yard (#8584-50) Project, Los Angeles County.

DUDEK
3544 UNIVERSITY AVENUE
RIVERSIDE, CALIFORNIA 92501
T 951.300.2100 F 951.300.2105

September 11, 2017 8584-50

Mr. Charles Alvarez, Councilman
Gabrielino Tongva Tribe
23454 Vanowen St.
West Hills, CA 91307

Subject: ***West Los Angeles District Yard Demolition and Construction Project, City of Los Angeles, Los Angeles County, California***

Dear Mr. Alvarez:

The Los Angeles Department of Water and Power (LADWP) retained Dudek to conduct a cultural resources study in support of the proposed West Los Angeles District Yard Demolition and Construction Project (project) located in the City of Los Angeles, Los Angeles County, California. The project proposes the demolition of all existing structures at the West Los Angeles District Yard and construction of three new buildings in their place, as well as an underground and surface parking lot. The West Los Angeles District Yard is located at 12300 Nebraska Avenue, Los Angeles, CA 90025. The project falls within Section 33 of Township 1 South, Range 15 West of the *Beverly Hills* U.S. Geological Service 7.5-minute series topographic Quadrangle map (see attached map).

As part of the cultural resources study prepared for the proposed project, Dudek contacted the California Native American Heritage Commission (NAHC) to request a Sacred Lands File (SLF) search and a list of Native American individuals and/or tribal organizations who may have knowledge of cultural resources in or near the proposed project area. The SLF search failed to indicate the presence of Native American cultural resources in the immediate project area; however, the NAHC noted that the area is sensitive for cultural resources.

The NAHC recommended that we contact you regarding your knowledge of the presence of cultural resources that may be impacted by this project. If you have any knowledge of cultural resources that may exist within or near the proposed project area, please contact me directly at (760) 840-7556, adorrler@dudek.com, or at 3544 University Avenue, Riverside, CA 92501 within 15 days of receipt of this letter.

Please note that this letter does not constitute Assembly Bill (AB) 52 notification or initiation of consultation. AB 52 is a process between the lead agency and California Native American Tribes concerning potential impacts to tribal cultural resources. Tribes that wish to be notified of

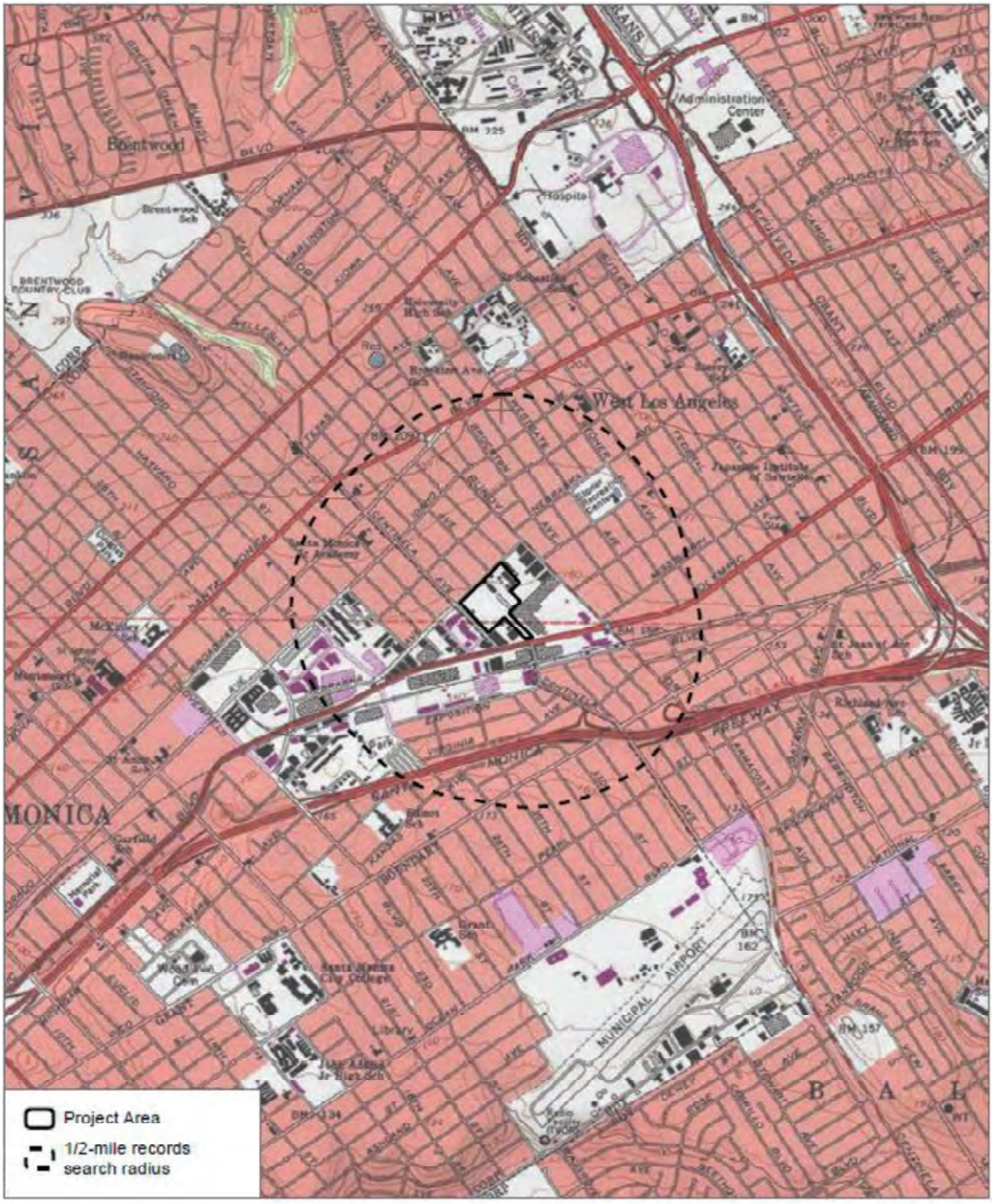
projects for the purposes of AB 52 must contact the lead agency, the LADWP, in writing (pursuant to Public Resources Code Section 21080.3.1 (b)).

Thank you for your assistance.

Sincerely,

Adriane Dorrler
Archaeologist

Attachment: Records Search Map



SOURCE: USGS USA Topo 7.5 Series Quadrangle Beverly Hills, Township 1S / Range 15W / Section 33

DUDEK

Cultural Records Search Map

LADWP West LA District Yard

DUDEK
3544 UNIVERSITY AVENUE
RIVERSIDE, CALIFORNIA 92501
T 951.300.2100 F 951.300.2105

September 11, 2017 8584-50

Mr. Robert F. Dorame, Tribal Chair/Cultural Resources
Gabrieleno Tongva Indians of California Tribal Council
P.O. Box 490
Bellflower, CA 90707

Subject: ***West Los Angeles District Yard Demolition and Construction Project, City of Los Angeles, Los Angeles County, California***

Dear Mr. Dorame:

The Los Angeles Department of Water and Power (LADWP) retained Dudek to conduct a cultural resources study in support of the proposed West Los Angeles District Yard Demolition and Construction Project (project) located in the City of Los Angeles, Los Angeles County, California. The project proposes the demolition of all existing structures at the West Los Angeles District Yard and construction of three new buildings in their place, as well as an underground and surface parking lot. The West Los Angeles District Yard is located at 12300 Nebraska Avenue, Los Angeles, CA 90025. The project falls within Section 33 of Township 1 South, Range 15 West of the *Beverly Hills* U.S. Geological Service 7.5-minute series topographic Quadrangle map (see attached map).

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Adriane Dorrler
Archaeologist

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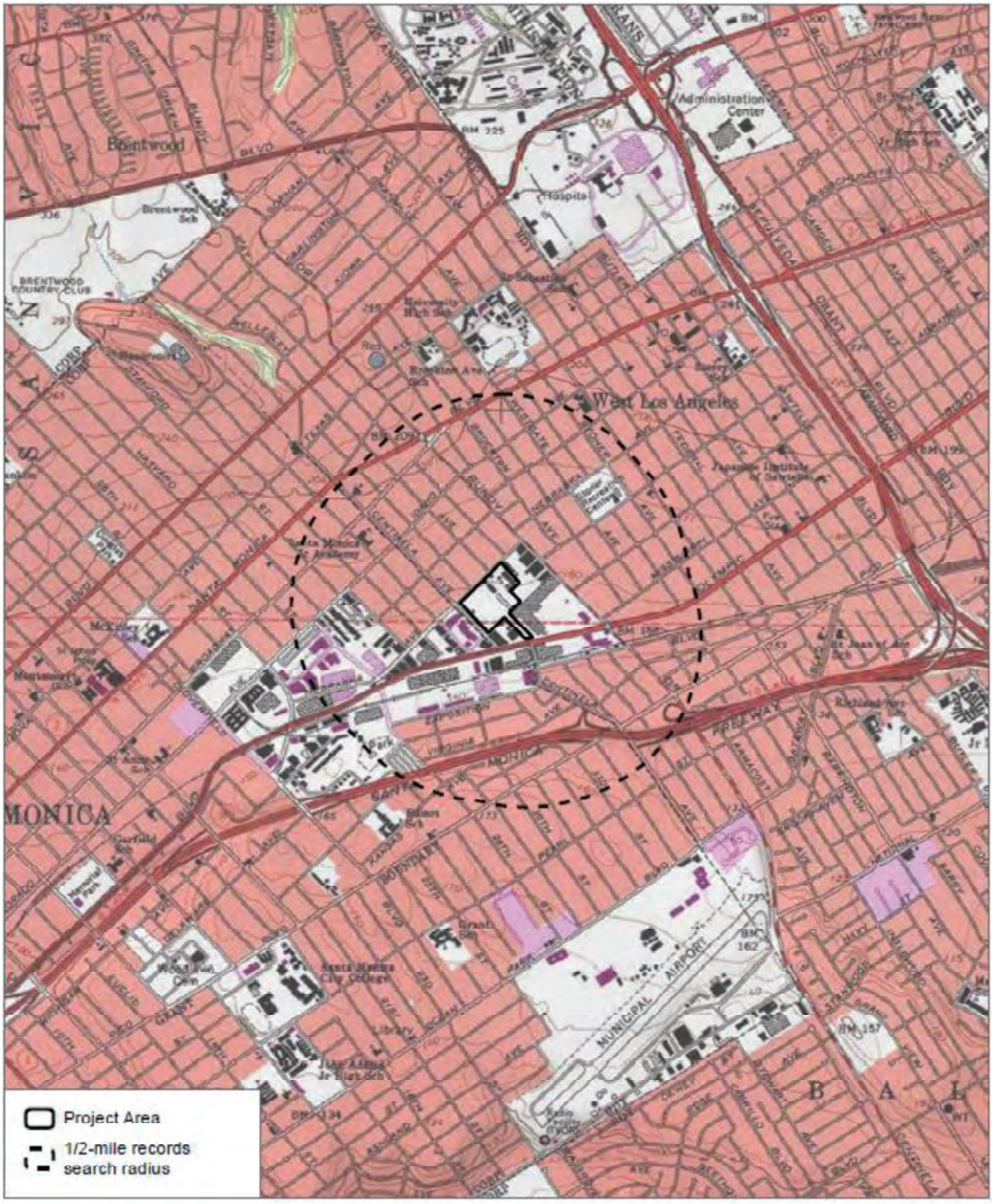
Mr. Dorame:

Subject: West Los Angeles District Yard Demolition and Construction Project, City of Los Angeles, Los Angeles County, California



SOURCE: USGS USA Topo 7.5 Series Quadrangle Beverly Hills, Township 1S / Range 15W / Section 33

DUDEK 0 1,000 2,000 Feet

Cultural Records Search Map

LADWP West LA District Yard

DUDEK
3544 UNIVERSITY AVENUE
RIVERSIDE, CALIFORNIA 92501
T 951.300.2100 F 951.300.2105

September 11, 2017 8584-50

Ms. Sandonne Goad, Chairperson
Gabrielino-Tongva Nation
106 1/2 Judge John Also St.
Los Angeles, CA 90012

Subject: ***West Los Angeles District Yard Demolition and Construction Project, City of Los Angeles, Los Angeles County, California***

Dear Ms. Goad:

The Los Angeles Department of Water and Power (LADWP) retained Dudek to conduct a cultural resources study in support of the proposed West Los Angeles District Yard Demolition and Construction Project (project) located in the City of Los Angeles, Los Angeles County, California. The project proposes the demolition of all existing structures at the West Los Angeles District Yard and construction of three new buildings in their place, as well as an underground and surface parking lot. The West Los Angeles District Yard is located at 12300 Nebraska Avenue, Los Angeles, CA 90025. The project falls within Section 33 of Township 1 South, Range 15 West of the *Beverly Hills* U.S. Geological Service 7.5-minute series topographic Quadrangle map (see attached map).

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Sincerely,

Adriane Dorrler
Archaeologist

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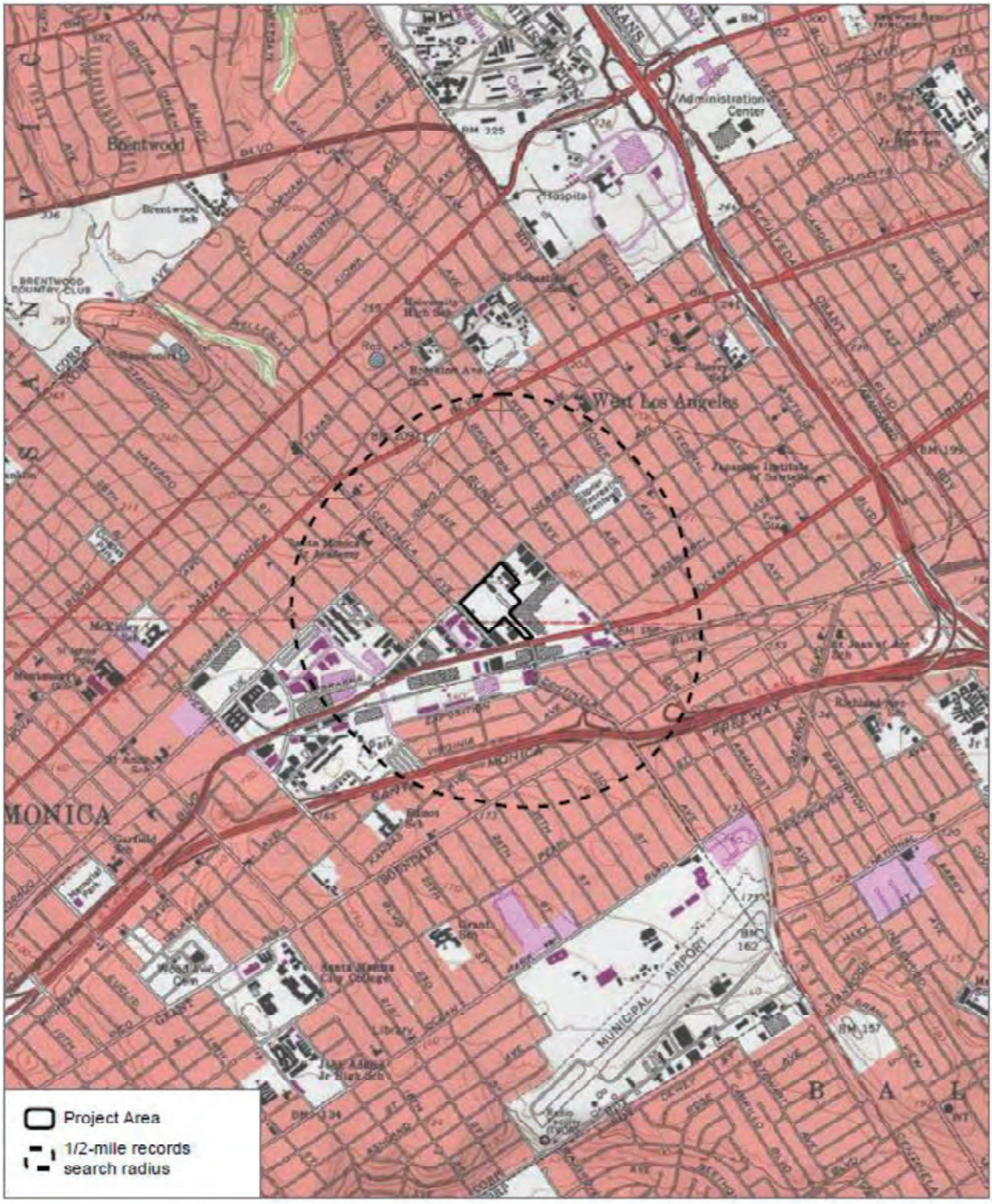
Ms. Goad:

Subject: West Los Angeles District Yard Demolition and Construction Project, City of Los Angeles, Los Angeles County, California



SOURCE: USGS USA Topo 7.5 Series Quadrangle Beverly Hills, Township 1S / Range 15W / Section 33

DUDEK 0 1,000 2,000 Feet

Cultural Records Search Map

LADWP West LA District Yard

DUDEK
3544 UNIVERSITY AVENUE
RIVERSIDE, CALIFORNIA 92501
T 951.300.2100 F 951.300.2105

September 11, 2017 8584-50

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

Subject: ***West Los Angeles District Yard Demolition and Construction Project, City of Los Angeles, Los Angeles County, California***

Dear Mr. Morales:

The Los Angeles Department of Water and Power (LADWP) retained Dudek to conduct a cultural resources study in support of the proposed West Los Angeles District Yard Demolition and Construction Project (project) located in the City of Los Angeles, Los Angeles County, California. The project proposes the demolition of all existing structures at the West Los Angeles District Yard and construction of three new buildings in their place, as well as an underground and surface parking lot. The West Los Angeles District Yard is located at 12300 Nebraska Avenue, Los Angeles, CA 90025. The project falls within Section 33 of Township 1 South, Range 15 West of the *Beverly Hills* U.S. Geological Service 7.5-minute series topographic Quadrangle map (see attached map).

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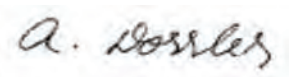
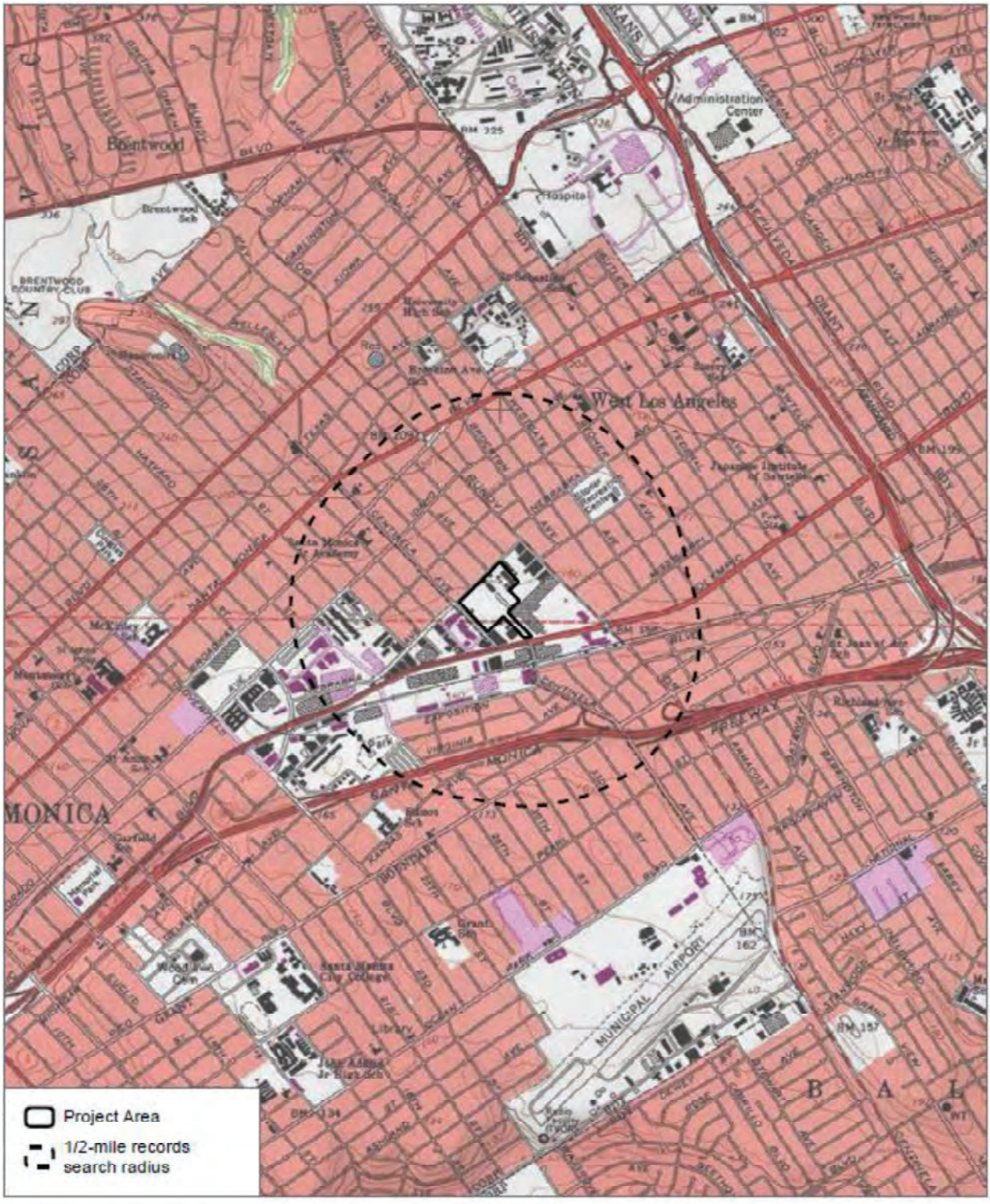


Adriane Dorrler
Archaeologist

Attachment: Records Search Map



SOURCE: USGS USA Topo 7.5 Series Quadrangle Beverly Hills, Township 1S / Range 15W / Section 33

DUDEK

Cultural Records Search Map

LADWP West LA District Yard

DUDEK
3544 UNIVERSITY AVENUE
RIVERSIDE, CALIFORNIA 92501
T 951.300.2100 F 951.300.2105

September 11, 2017 8584-50

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

Subject: ***West Los Angeles District Yard Demolition and Construction Project, City of Los Angeles, Los Angeles County, California***

Dear Mr. Salas:

The Los Angeles Department of Water and Power (LADWP) retained Dudek to conduct a cultural resources study in support of the proposed West Los Angeles District Yard Demolition and Construction Project (project) located in the City of Los Angeles, Los Angeles County, California. The project proposes the demolition of all existing structures at the West Los Angeles District Yard and construction of three new buildings in their place, as well as an underground and surface parking lot. The West Los Angeles District Yard is located at 12300 Nebraska Avenue, Los Angeles, CA 90025. The project falls within Section 33 of Township 1 South, Range 15 West of the *Beverly Hills* U.S. Geological Service 7.5-minute series topographic Quadrangle map (see attached map).

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Thank you for your assistance.

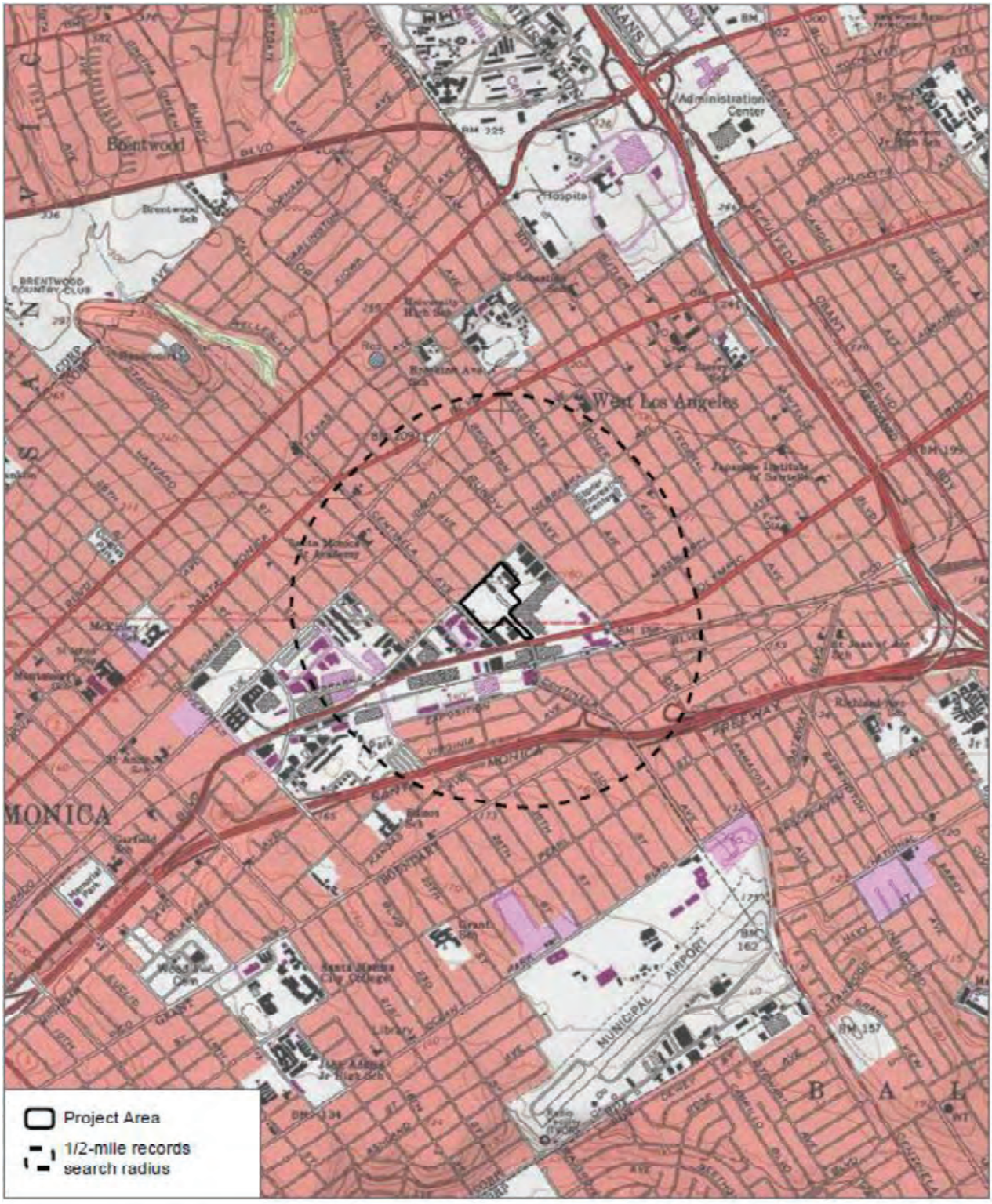
Sincerely,

Adriane Dorrler
Archaeologist

Attachment: Records Search Map

Mr. Salas:

Subject: West Los Angeles District Yard Demolition and Construction Project, City of Los Angeles, Los Angeles County, California



SOURCE: USGS USA Topo 7.5 Series Quadrangle Beverly Hills, Township 1S / Range 15W / Section 33

DUDEK

Cultural Records Search Map

LADWP West LA District Yard

Gabrieleno Band of Mission Indians – Kizh Nation
Historically known as The San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

October 11, 2017

Regarding: West Los Angeles District Yard Demolition and Construction Project City of Los Angeles

Dear Adriane Dorrler,

This email is in response to the above referenced project located at 12300 Nebraska Ave Los Angeles . The project location is within our Ancestral territory which may have potential for discoveries of our cultural resources . Therefore, we would like to request that one of our Native Monitors be present during any and all ground disturbances.

Should you have any questions or concerns, please contact our office at 844-390-0787.

Thank you,

Andrew Salas
Chairman, Gabreileno Band of Mission Indians-Kizh Nation

APPENDIX C

Select Historical Photographs from the LADWP Archives

Clearing site at LADWP West Los Angeles Headquarters, May 8, 1953. (LADWP No. 34562)

West Los Angeles Headquarters, Building 1, foundation; May 22, 1953 (LADWP No. 34566)

West Los Angeles Headquarters, Building 1, foundation; May 22, 1953 (LADWP No. 34566)

West Los Angeles Headquarters, Building 1, compacting backfill; June 1, 1953 (LADWP No. 34576)

West Los Angeles Headquarters, Building 1, roofless; June 8, 1953 (LADWP No. 34576)

West Los Angeles Headquarters, Building 1 (locker room) in background, clearing foundation for Building 2 (warehouse); October 21, 1953 (LADWP No. 34654)

West Los Angeles Headquarters, Building 2 (warehouse), north end of fill showing footing and reinforced steel for foundation wall ; November 4, 1953 (LADWP No. 34662)

West Los Angeles Headquarters, Building 2 (warehouse), exterior form for west foundation wall; November 4, 1953 (LADWP No. 34664)

West Los Angeles Headquarters, Building 2 (warehouse), setting of roof truss – Arch Rib Truss Co; December 17, 1953 (LADWP No. 38818)

West Los Angeles Headquarters, Building 2 (warehouse), brushing on Wesco X-tite Coater on west wall; February 10, 1954 (LADWP No. 38835)

West Los Angeles Headquarters, Building 2 (warehouse), placing of floor slab; February 10, 1954 (LADWP No. 38837A)

West Los Angeles Headquarters, Building 2 (warehouse), mopping roof with Pioneer C-13-C4 Asphalt emulsion (Pioneer); February 17, 1954 (LADWP No. 38842)

APPENDIX D

DPR Forms

State of California ◆ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code Reviewer Date

Page 1 **of** 13 ***Resource Name or #:** (Assigned by recorder) 12300 West Nebraska Avenue.
P1. Other Identifier: West Los Angeles Department of Water and Power Yards
***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted**
***a. County** Los Angeles **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Beverly Hills **Date** 2015 **T** 1S ; **R** 16W ; SE ¼ **of** SE 1/4 **of Sec** 0 ; SB **B.M.**
c. Address 12300 West Nebraska Avenue City Los Angeles Zip 90025
d. UTM: (Give more than one for large and/or linear resources) Zone 11S, 365257 mE/ 3766921 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)
AINs: 4259018902. The subject property is bound by Nebraska Avenue to the northwest; a light industrial property to the northeast; a light industrial property and parking garage to the southeast; and the LADWP 1840 Centinela Avenue transformer yard to the southwest. The subject property is located at 12300 West Nebraska Avenue, in the City of West Los Angeles.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The subject property is located on the southwest side of West Nebraska Avenue on a large, industrial parcel. The site contains five buildings and structures, outdoor storage, several temporary structures, a crane, and parking areas. The northwestern portion of the property contains five buildings/structures that date from the 1953 to 1966 (Figure 1, see Continuation Sheet): 1) the locker room (1953); 2) the warehouse (1953); 3) the fleet shop (1956); 4) the district office building (1959); 5) the break room (1966). **See Continuation Sheet.**

***P3b. Resource Attributes:** (List attributes and codes) HP8 Industrial Building; HP9 Public Utility Building
***P4. Resources Present:** ■ Building ■ Structure ☐ Object ■ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

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

P5b. Description of Photo: (view, date, accession #) View of property from west Nebraska Avenue; looking southeast (10-11-2017; IMG 3881)

***P6. Date Constructed/Age and Source:** ■ Historic ☐ Prehistoric ☐ Both
1953-1966

***P7. Owner and Address:**
Los Angeles Department of Water and Power
12300 West Nebraska Avenue
Los Angeles, CA 90025

***P8. Recorded by:**
Kate Kaiser and Sarah Corder, Dudek
38 N Marengo Ave.
Pasadena, CA 91101

***P9. Date Recorded:** 10/11/17

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

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Cultural Resources Report for the Los Angeles Department of Water and Power West Los Angeles District Yard Project, Los Angeles, California. Dudek 2017.

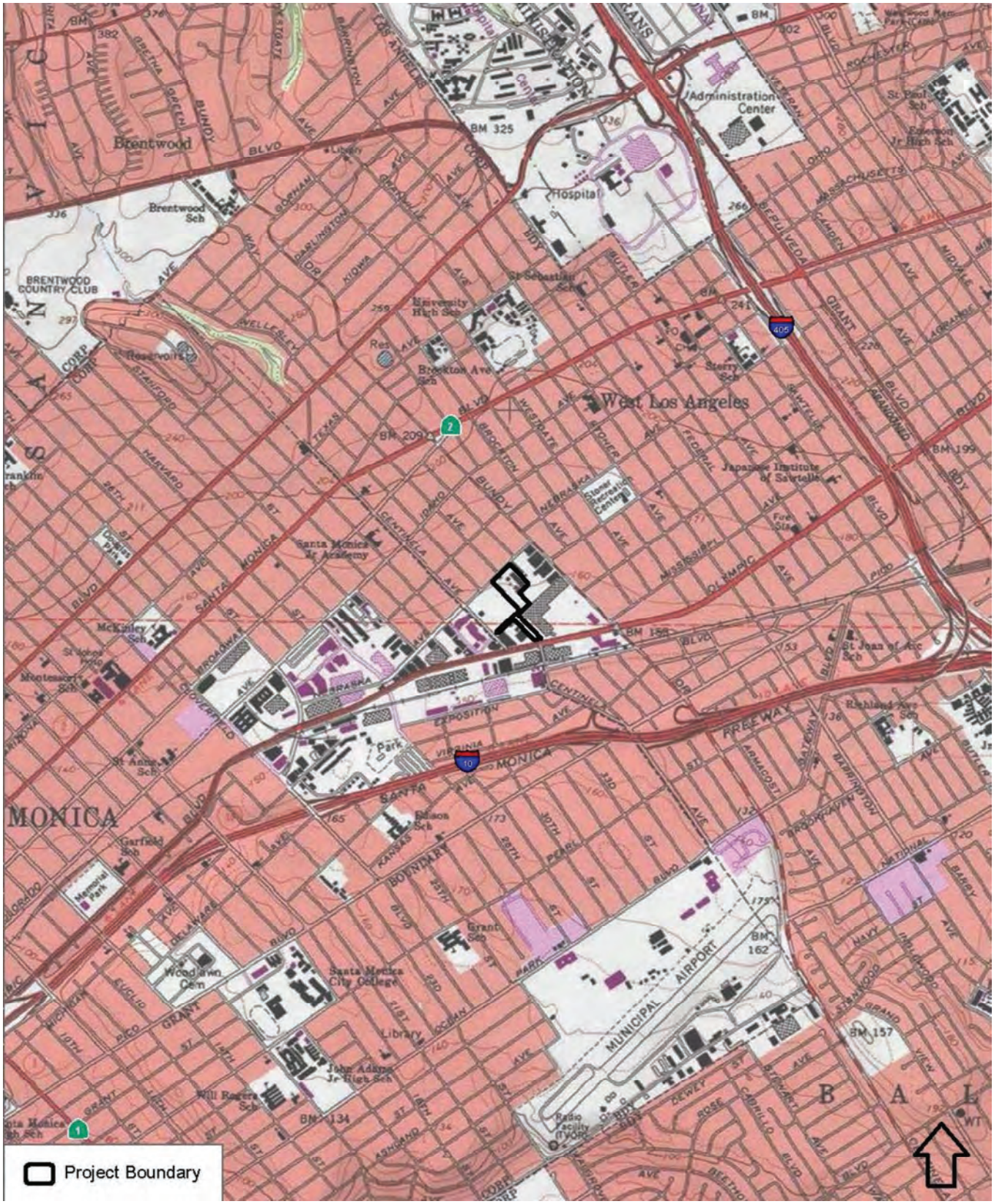
***Attachments:** ☐NONE ■Location Map ■Continuation Sheet ■Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record
☐Photograph Record ☐ Other (List): _____

State of California ♘ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Page 2 **of** 13 ***Resource Name or #** 12300 West Nebraska Avenue
***Map Name:** Beverly Hills, California ***Scale:** 1:24,000 ***Date of map:** 1995



State of California ♦ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) 12300 West Nebraska Avenue ***NRHP Status Code** 6Z
Page 3 **of** 13

B1. Historic Name: West Los Angeles Underground Headquarters
B2. Common Name: West Los Angeles Department of Water and Power Yards
B3. Original Use: Office operations, equipment storage, vehicle storage and maintenance
B4. Present Use: Office operations, equipment storage, vehicle storage and maintenance
***B5. Architectural Style:** Industrial; Mid-Century Modern
***B6. Construction History:** (Construction date, alterations, and date of alterations)
Original construction began on the property circa 1953 and continued through present. (see continuation sheets for detailed information pertaining to construction history)

***B7. Moved?** ■No □Yes □Unknown **Date:** _____ **Original Location:** _____
***B8. Related Features:**
B9a. Architect: _____
b. Builder: _____
***B10. Significance: Theme** n/a **Area** n/a

Period of Significance n/a **Property Type** Industrial **Applicable Criteria** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Historic aerial photographs for the project area were available for the following years: 1947, 1952, 1964, 1967, 1972, 1980, 1989, 1994, 2002, 2003, 2004, 2005, 2006, 2009, 2010, 2011, 2012, and 2014 (NETR 2017; CSM 2017). The 1947 aerial photograph shows the project area prior to development. In 1947, the property appears to be undeveloped land or an agricultural field, surrounded by other undeveloped lots, and bounded to the northwest by a residential neighborhood, and the Olympic Drive-In movie theater is visible southeast of the site. The 1952 aerial photograph also shows the site prior to development; however, the 12270-72 lot immediately northeast was being used as a light industrial area and contained three structures. Residential areas still surround the site to the northwest and southwest.

The first historic aerial photograph in which the LADWP West Los Angeles District Headquarters appears is the 1964 aerial photograph. This aerial has four buildings visible in their current locations: the locker room, warehouse/tool room, warehouse/fleet shop, and district office. Immediately southwest is the LADWP transformer yard. The 12270-72 lot immediately northeast gains one new building and a (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes) _____
B12. References: See Continuation Sheet
B13. Remarks:
***B14. Evaluator:** Kate Kaiser
***Date of Evaluation:** November 13, 2017

(This space reserved for official comments.)

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

Figure 1. Overview of Site Showing Buildings 1 through 5 and other structures

Building 1, Locker Room, 1953

The subject property is a Mid-Century Modern building constructed in 1953, facing northeast towards a central, paved corridor road that runs the length of the tax lot (Figure 2). The one-story building is currently used as a restroom, shower, locker room, and exercise area for employees. The building features a flat roof hidden by a parapet wall topped with a rounded coping; however, the roof structure was not visible. The walls are constructed of painted concrete masonry units arranged in running bond, with a decorative stringer course and water table course that protrude from the wall surface of the building a few inches, and rounded concrete masonry units at the building corners, window openings, and door openings. The walls meet the surrounding pavement without any special decorative or visually distinguished foundation element.

Figure 2. Building 1, Locker Room. View to west. 10/11/2017 (IMG 4050)

Building 2, Warehouse – Tool Room, 1953

The subject property is a Mid-Century Modern building constructed in 1953, facing northeast towards a central, paved corridor road that runs the length of the tax lot (Figure 3). The one-story building is currently used as a warehouse for electrical equipment, employee personal protective equipment, and tools. The building features a shallow arched roof with seven wood-and-steel I-beam bowstring trusses supporting diagonally laid wood board sheathing beneath composite roofing material. According to LADWP archival photographs, the roof was sealed with Pioneer C-13-C4 Asphalt emulsion (Appendix C). The walls are painted concrete masonry units laid in running bond and extend above the roof to form a tall parapet wall. At the base of the wall is a

smooth, concrete course roughly 3 feet in height that is flush with the rest of the concrete masonry units wall. The warehouse has loading bays, doors, and windows on all its elevations.

Figure 3. Building 2. View to south. 10/11/2017 (IMG 4077)

Building 3, Warehouse – Fleet Shop, 1956

The subject property is a Mid-Century Modern building constructed in 1956, facing northeast towards a central, paved corridor road that runs the length of the tax lot (Figure 4). The one-story building is currently used as a warehouse for storing fleet vehicles, electrical equipment storage, a wash bay, and as a machine shop for equipment repairs. The building features a low-pitched, side-gabled roof supported by steel I-beam rafters and purlins. There is no sheathing, and the roof is clad in corrugated galvanized steel sheets with no eaves. The roofline is occasionally interrupted by regularly spaced rotating metal roof vents. The walls are clad in vertically oriented, corrugated galvanized steel sheets and attached to a steel I-beam frame system with metal bolts and screws. The structural framing is arranged around I-beam posts that attach to I-beam principal rafters at the roof, effectively dividing the building into 16 bays. Each of these I-beam bents have horizontal metal studs bracing and connecting them, as well as I-beam purlins bracing the structure in the roof. The I-beam bents are attached to the ground at small concrete plinths.

Figure 4. Building 3. View to west. 10/11/2017 (IMG 0014)

Building 4, District Office, 1959

The subject property is a Mid-Century Modern building constructed in 1959, facing southwest towards a central, paved corridor road that runs the length of the tax lot (Figure 5). The two-story building is currently used as an office and record storage area. The building features a flat roof behind a low parapet wall, but the roof structure was not visible. The walls are painted concrete masonry units laid in uniform running bonds from roof to foundation. The building foundation is a concrete pad. Building 4 has several distinctive modernistic decorative character-defining features: modern sans-serif metal lettering on the northwest elevation, horizontal metal awning screens running the length of buildings over the tops of windows as a screen on three of four elevations, and a pierced concrete block privacy wall on the southwest elevation.

Figure 5. Overview of Building 4. View to North. 10/11/2017 (IMG 4138)

Building 5, Break Room, 1966

The subject property is a Mid-Century Modern building constructed in 1966, facing southwest towards a central, paved corridor road that runs the length of the tax lot (Figure 6). The one-story building is currently used as a break room, kitchen, vehicle storage, and employee classroom. The building features a flat roof behind a low parapet wall, but the roof structure was not visible. The walls are painted concrete masonry units blocks laid in uniform running bonds from roof to foundation. The building foundation is a concrete pad. Each elevation features a different window and door schedule, as well as some flat, metal awnings that recall the design of the horizontal metal window awnings at Building 4, District Office.

Figure 6. Building 5. View to east. 10/11/2017 (IMG 4013)

***B10. Significance (Continued):**

designated parking lot. In the 1967 aerial photograph, the break room (then recorded as another tool room) appears southeast of the district office and north of the warehouse/tool room.

There are few notable additions to the site after the 1967 aerial photograph. Various small storage structures appear on the 1972 aerial photograph, including four storage structures in the southeast locus of the site and small structures between the five other buildings. Between the 1972 and 1980 aerial photographs, the crane feature northeast of the warehouse/fleet shop appears. Between the 1980 aerial photograph and the 1989 aerial photograph, all buildings in the 12270-72 lot are demolished. This is supported by demolition permits recorded at the Los Angeles Building and Safety online database. One new building does appear on the 12270-72 lot in the 1994 aerial photograph, but there are no discernable changes to the 12300 lot or transformer yard. The building on the 12270-72 lot is demolished sometime after 2014 (the most recent available aerial photograph for the area); the building was not present during the site visit (NETR 2017; CSM 2017).

Construction and Ownership History

The LADWP acquired several parcels of land in the West Los Angeles/Sawtelle neighborhood in the 1940s. These lots had once belonged to Anthony Frabisilio and Michael Frabisilio, who kept agricultural fields and some outbuildings on the property, moving a barn from a property along West Pico Boulevard and erecting a new house on the lot. Since aerial photographs of the area only go back as far as 1947,

Sanborn insurance maps do not picture the property, and there are no other permits on file at City of Los Angeles, it was not possible to reconstruct the property chronology or establish a pattern of ownership beyond the 1940s (Los Angeles Department of Buildings and Safety (LADBS) permits 1943LA03992, 1944WL70482; Ancestry 2017).

LADWP began acquiring land for a Distribution Station at 11700 Nebraska Avenue, several blocks away from the subject property. Distribution Station 28 was completed in 1947 and was an imposing Art Moderne-style structure. Distribution stations are used to transfer power from the transmission system to a specific service area. Distribution Station 28 served the industrial and residential areas in West Long Angeles, where locally owned and distributed city utilities were in high demand. Before the West Los Angeles District Office was built, Distribution Station 28 acted as the West Los Angeles headquarters (LADWP 1954).

In 1953, LADWP acquired the property at 12300 West Nebraska Avenue, the subject property. Prior to its acquisition, the lot held an agricultural field, adjacent to many other fields around it. A drive-in movie theater named the Olympic Drive-in Theater was located east of the property. West of the property was a residential neighborhood. The site's original plan included five buildings that faced each other along a corridor of vehicle parking. The first two buildings built on the lot were a locker room for employees and a warehouse completed in 1953. In 1954, Department of Water and Power began construction on Receiving Station K at 1840 Centinela Avenue (located south of the project site) and its transformer yard. These were adjacent to the subject property and likely planned, built, and opened at the same time. Receiving Station K went into service in 1955 (Permit 1954LA02220). In 1956, a third structure was constructed on the site, this time a fleet shop for vehicle storage. In 1959, the main office building was finished. In 1966, a fifth building, then characterized as a tool room, was added. According to each building permit, all buildings were designed and built by engineers and journeymen already employed by the LADWP (LADWP 1954; NETR 2017).

Though the engineers listed on the Department of Water and Power permits were employees, they were responsible for several buildings on site. Very little career information could be found for the engineers. Because they were not contracted, there is no engineering or architecture firm associated with their work. No architects, licensed or not, were associated with the five buildings at the West Los Angeles District Headquarters. The following four LADWP engineers are responsible for the design of the buildings at the West Los Angeles District Headquarters.

- J.S. Dorfman, CA License 6948, Locker Room (Building 1) and Warehouse (Building 2), 1953
- J. Case, CA License 5249, Fleet Shop (Building 3), 1956
- R.L. White, MA License, 4-4211, Office Building (Building 4), 1959
- James H. Anthony, CE 15318, Break Room (Building 5), 1966

Significance Evaluations

NRHP/CRHR Criteria

The development of the West Los Angeles Department of Water and Power Yards site began in the early 1953 and has historically operated as LADWP yard since. The property continued to develop, grow, and change throughout its history, with the addition of numerous buildings, temporary structures, parking areas, and storage areas to support the use of the property as a working LADWP yard. The following provides an evaluation of the concrete batch plant at 12300 West Nebraska Avenue in consideration of NRHP/CRHR designation criteria and integrity requirements.

Criterion A/1: Associated with events that have made a significant contribution to the broad patterns of our history.

Archival research did not identify any associations with events that have made a significant contribution to the broad patterns of local or regional history. The subject property is one of at least 33 LADWP buildings from approximately the same period of construction (1945-1955) and lacks "a direct association with the physical growth of the City of Los Angeles during the 1902–1980 period" (Prosser 2017). These buildings are unrelated to major events in Los Angeles or LADWP history and do not clearly reflect the transition from architect-designed, monumental public utility buildings, to reducing the scale to make less impressive buildings. The buildings are not associated with any locally important events in the Sawtelle neighborhood history. Although the increase in LADWP facilities does correlate with the post-WWII population boom that occurred in the mid-century, the headquarters themselves did not provide power for the West Los Angeles area, and appear to have played a supporting role for the nearby Distribution center and for workers and journeymen stationed in the area. The role the site plays is strongly related to equipment and vehicle storage. Due to a lack of significant associations with events important to history, the subject property does not appear eligible under NRHP/CRHR Criteria A/1.

Criterion B/2: Associated with the lives of persons significant in our past.

All engineers and worker names identified with the subject property were researched for possible significance. Archival research failed to indicate any associations with significant persons. This building has no known associations with any important figures in LADWP or City of Los Angeles history. For these reasons, the subject property does not appear eligible under NRHP/CRHR Criteria B/2.

Criterion C/3: Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

There is a corresponding Los Angeles Citywide Historic Context statement available for Municipal Water and Power Buildings against which this site was evaluated. Under the property type "Administrative Buildings and Service Yards," the subject property does fall within the period of significance (1902–1980) and is associated with water and power administration and maintenance, per the eligibility standards. However, the

buildings lack many of the character defining and associative features required. This includes "retaining a significant lobby," which no building on this property has. This building also lacks prominent signage. Though Building 4 does have signage that faces out onto West Nebraska Avenue but this signage is unobtrusive, sans-serif all-capitals lettering made of unadorned metal and attached directly to the side of the building. The site has no significant landscape features and a wall obscured most buildings from the street. The site is not related to a significant architectural or engineering theme because notable architects or engineers did not design the site. There are other buildings built by LADWP during the 1953–1966 period of construction that better suit the criteria laid out in the Los Angeles Citywide Historic Context for Water and Power (Prosser 2017).

In broader terms, during the mid-20th century, the simple aesthetic of Modern-style architecture began to overshadow the more ornate revival styles, signaling a shift in focus from art to function. Affordable, mass-produced materials, simple, boxy forms, and an emphasis on sleekness over applied ornament are hallmarks of the Mid-Century Modern style. The subject property is a collection of buildings built between 1953 and 1966, at a time when the LADWP was expanding to meet the demands of a rapidly growing Los Angeles population that was expanding westward. The LADWP would have keenly felt the appeal of buildings that could be built cheaply, quickly, and remain functional. Nearly all LADWP buildings built between 1945 and 1965 have modernism references or embody the simple and functional elements of the Mid-Century Modern style.

Each building on the subject property has experienced little alteration in plan or function and retains moderate levels of integrity in location, setting, feeling, and association. Integrity of design, material, and workmanship is lower due to material changes and use changes in these buildings. All buildings retain their original locations and orientations, and all buildings remain associated with the LADWP as they are set within an operational and active LADWP Yard. Buildings 1, 2, 4, and 5 have no major changes to the design/intention of the buildings, with only minor material and workmanship compromises for changes to windows or doors. Building 3 exhibits the most alterations and retains lower integrity of materials, design, and workmanship and has visibly distinguished new metal cladding materials. Integrity of design is also compromised on Building 3, as interior alterations have closed some bays and changed their intended function. The style is relatively unremarkable and may be indistinguishable from other Department of Water and Power neighborhood headquarters throughout Los Angeles. The buildings are not the work of a master architect or important creative individual, and the subject property does not appear eligible as a contributor to a historic district. For all of these reasons, the subject property does not appear eligible under NRHP/CRHR Criteria C/3.

Criterion D/4: Have yielded, or may be likely to yield, information important in prehistory or history.

There is no evidence to suggest that this property has the potential to yield information important to state or local history, nor is it associated with a known archaeological resource. Therefore, the property is recommended not eligible under NRHP/CRHR Criterion D/4.

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APPENDIX C

Geotechnical Investigation Report and Paleontological Records Search

Appendix C1

Geotechnical Investigation Report

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City of Los Angeles
Department of Water and Power
Power Engineering Division
Geology and Soils Group

GEOTECHNICAL INVESTIGATION REPORT

West Los Angeles District Yard Improvement Project
12300 West Nebraska Avenue
Los Angeles, California 90025

February 28, 2018

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1.0 INTRODUCTION

1.1 PURPOSE

This report presents the results of a geotechnical investigation for the design and construction of the West Los Angeles District Yard Improvement Project, which will replace the existing facility in the Los Angeles Department of Water and Power (LADWP) West Los Angeles District Yard with three new buildings, an underground parking structure, and an underground gas tank. The purpose of this investigation was to evaluate the subsurface soil and geologic conditions underlying the site, and provide conclusions and recommendations pertaining to the geotechnical aspects of the proposed structures based on the conditions encountered.

1.2 SITE AND PROJECT DESCRIPTION

The West Los Angles District Yard is located at 12300 West Nebraska Avenue in the Sawtelle District of the City of Los Angeles, California (see Location Map, Figure 1). The property information is as follows:

- Parcel Tract Santa Monica-Sawtelle, Lots 20 (east half), 21 and 25; and
- Assessor's Parcel Number (APN) 4259-018-901, 4259-018-902 (east half) and 4259-019-900.

The yard consists of a 6.34-acre irregular shaped parcel and is bounded by West Nebraska Avenue to the northwest, LADWP Receiving Station "K" and 3 single-story commercial/industrial structures to the southwest, West Olympic Boulevard and a two-story commercial/industrial structure to the southeast, and 2 single-story commercial/industrial structures and a three-story parking structure to the northeast.

The yard is currently occupied by the following structures: 1) a two-story office structure, 2) a single-story office structure, 3) a single-story locker structure, 4) 2 single-story warehouse structures, 5) a single-story garage (fleet) structure, 6) a loading crane and control room, 7) 3 fuel stations, and 8) various asphalt or concrete paved parking lots, driveways and storage areas. All the existing structures appear to be at or near present grade. The site is relatively level to gently sloping to the south with 10 feet of total vertical relief across the site. Surface water drainage appears to be by sheet flow along the ground surface toward storm drains and the city streets. Vegetation at the site is non-existent due to the paved nature of the site.

Based on a review of preliminary architectural plans provided by the LADWP Power Engineering Division (PED) Architectural Engineering Design Group, the purpose of this project is to enhance the workplace quality, improve safety, provide functional efficacy and efficiency, integrate sustainability into the project design, and enhance site aesthetics. The current structures on site are aging and will be unable to support the planned increase in staff at the facility. Furthermore, the current site layout does not allow for much room for fleet vehicles to maneuver. The proposed project will provide additional capacity for employees and more room for vehicles, thereby reducing congestion at the facility and improving overall operating conditions.

This project will involve the demolition of all existing structures and construction of new structures on the same site as the existing West Los Angeles District Yard.

The structures to be demolished are the existing district office, warehouse, break room, locker room, and fleet shop. Three new buildings will be constructed in their place: 1) a warehouse and fleet shop (22,915 square feet), 2) a district yard office (19,900 square feet), and 3) an exterior storage area (18,500 square feet). These new buildings will consolidate all of the functions of the demolished buildings. Additionally, the existing straddle crane will be relocated closer to the entrance along Olympic Boulevard. The proposed structures will be one to two stories in height. All buildings will include photovoltaic solar panels on rooftops.

One existing fueling station is present at the yard site. It will be removed. New unleaded and diesel fuel tanks will be placed underground, and a new compressed natural gas (CNG) tank will be placed aboveground. Additionally, an approximate 75,284-square foot underground parking structure will be constructed. The one story underground parking lot will contain a total of 204 parking spaces to be used by employee vehicles. The lot will also include new electric vehicle charging stations. A surface parking lot will also be constructed and will contain 61 parking spaces for a variety of LADWP service vehicles. All fleet vehicle parking, consisting of a total of 32 oversized parking spaces, will be located in the surface parking lot.

1.3 SCOPE OF WORK

The geotechnical scope of work for this project included the following tasks:

- Review and interpretation of available relevant information;
- Site reconnaissance;
- Field investigation consisting of drilling, sampling, and logging 7 exploratory borings;
- Laboratory testing of selected bulk and relatively undisturbed soil samples;
- Engineering analyses to develop design and construction recommendations; and
- Preparation of this report presenting our findings, conclusions, and recommendations.

2.0 FIELD INVESTIGATION AND LABORATORY TESTING

2.1 PREVIOUSLY AVAILABLE GEOTECHNICAL INFORMATION

In 2004 for a proposed new administration building in the yard, the LADWP PED Geology and Soils Group performed a field investigation that consisted of three hollow-stem auger (HSA) boreholes (HSA-1 through HSA-3) and six cone penetrometer test (CPT) soundings (CPT-1 through CPT-6). Laboratory testing was conducted on the samples obtained from the three boreholes. The results of the field investigation and laboratory testing were presented in an unpublished report prepared by the LADWP PED Geology and Soils Group.

The logs of the boreholes and CPTs and results of the laboratory testing are included in Appendix A.

2.2 FIELD INVESTIGATION

Existing soil data was deemed insufficient for design of the proposed project. Therefore, a field investigation program was performed under the supervision of the LADWP PED Geology and Soils Group. This program consisted of drilling and sampling seven exploratory borings (B-1 through B-7) on July 6, 10, and 11, 2017 by the Los Angeles Department of General Services – Standards Division (General Services) with a truck-mounted Central Mine Equipment (CME) Model-75HT drill rig using 7-inch diameter hollow stem augers.

The borings were located throughout the West Los Angeles District Yard and advanced to depths between 20½ and 50½ feet below the existing ground surface (bgs). The approximate locations of the exploratory borings are shown on the Site Plan, Figure 2. Boring information (including boring number, date drilled, ground surface elevation, depth and approximate location) is summarized in Table 1.

TABLE 1. EXPLORATORY BORING INFORMATION

Boring No.	Date of Drilling	GSE (feet)	Depth bgs (feet)	Approximate Location of Boring	
				Latitude (°)	Longitude (°)
B-1	7/10/17	165	40.5	34° 2' 5.5788"	-118° 27' 33.199"
B-2	7/10/17	162	50.5	34° 2' 3.0696"	-118° 27' 30.294"
B-3	7/6/17	163	40.5	34° 2' 3.2964"	-118° 27' 35.327"
B-4	7/6/17	161	40.5	34° 2' 2.8284"	-118° 27' 33.138"
B-5	7/11/17	160	50.5	34° 2' 0.7764"	-118° 27' 32.148"
B-6	7/11/17	159	25.5	34° 2' 0.4488"	-118° 27' 30.737"
B-7	7/11/17	158	20.5	34° 1' 57.054"	-118° 27' 30.852"

Notes:
(1) GSE = Ground Surface Elevation.
(2) bgs = below ground surface.

Representative and relatively "undisturbed" samples were obtained from the test borings at various intervals utilizing a 3½-inch outside diameter (O.D.) by 3-inch inside diameter (I.D.) California Modified Split Spoon sampler (Cal-Mod) lined with 2⅞-inch I.D. by 1-inch high brass rings. The sampler was driven into the soil with the weight of a 140-pound automatic trip hammer falling approximately 30 inches. Standard Penetration Tests (SPTs), per the American Society for Testing and Materials (ASTM) D1586 standard, were also performed at various intervals utilizing a 2-inch O.D. by 1⅜-inch I.D. split spoon sampler driven 18 inches. The driving energy was provided by a 140-pound automatic trip hammer dropped 30 inches. The Cal-Mod and SPT blow counts were recorded and bulk samples were obtained.

The soil conditions encountered in the borings were visually examined, classified, and logged in general accordance with the Unified Soil Classification System (USCS). The boring logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. All samples were then sealed, labeled, and transported to the LADWP Water System Soil & Materials Test Lab (SMTL) for testing. The boring logs are included in Appendix B.

2.3 LABORATORY TESTING

The Water System SMTL performed laboratory tests on selected samples from the field investigation. Laboratory tests were conducted in accordance with current ASTM standards. The following laboratory tests were conducted:

- Soil Classification (ASTM D-2487)
- Moisture Content (ASTM D-2216)
- In-Place Density (ASTM D-2937)
- Grain Size Distribution (ASTM D-422)
- Atterberg Limits (ATM D-4318)
- No. 200 Wash (ASTM D-1140)
- Direct Shear (ASTM D-3080)
- Soil Corrosivity (ASTM G-57)
- One-dimensional Consolidation (ASTM-D2435)
- Compaction (ASTM-D1557)
- Permeability (ASTM-D5084)

The test results are presented in Appendix C. In-situ moisture content and dry density test results are also shown on the boring logs.

3.0 GEOLOGICAL AND GEOTECHNICAL FINDINGS

3.1 REGIONAL GEOLOGIC AND SEISMIC SETTING

The site is located along the northwestern portion of the Los Angeles Basin within an area known as the Santa Monica Plain. The Los Angeles Basin is a coastal plain between the Santa Monica Mountains to the north, the Puente Hills and Whittier fault to the east, the Palos Verdes Peninsula and Pacific Ocean on the west, and the Santa Ana Mountains and San Joaquin Hills on the south. The Los Angeles Basin is located in the northern portion of the Peninsular Ranges geomorphic province and is northwest-trending alluviated lowland plain, sometimes called the Coastal Plain of Los Angeles. The basin is underlain by a deep structural depression, which has been filled by both marine and continental sedimentary deposits, which rest on a basement complex of presumably igneous and metamorphic composition (Yerkes et al., 1965). The basement surface within the central portion of the basin extends to a maximum depth of 32,000 feet below sea level. The prominent structural features within the Los Angeles Basin include the central lowland plain, the uplifted Palos Verdes Hills, and the northwest trending line of low hills and mesas (underlain by the Newport-Inglewood fault zone).

The late Pleistocene age Santa Monica Plain extends from the Pacific Ocean inland to the Newport-Inglewood belt of hills (Cheviot Hills) and from the Santa Monica Mountains on the north to the Ballona escarpment on the south. The Santa Monica Plain is underlain by upper Pleistocene age Lakewood Formation, which consists of older alluvial fan material deposited as a result of uplift of the Santa Monica Mountains and dissected by various channels draining from the Santa Monica Mountains. Renewed uplift has caused erosion of these materials, leaving an incised Lakewood surface locally blanketed with younger alluvium.

Topography at the LADWP West Los Angeles District Yard is relatively flat to gently sloping down to the south. Topographic elevations across the subject site ranges from a topographic high of 166 feet above mean sea level (MSL) along the northern corner of the site to a topographic low of 156 feet MSL along the southern most corner of the site (LADPW, 2017). A topographic map of the site is presented in Figure 3.

3.2 SITE GEOLOGY AND GEOLOGIC MATERIALS

Based on our field exploration and published geologic maps of the area, the yard site is underlain by a thin layer of artificial fill over Holocene age alluvial deposits consisting of poorly consolidated sand, silt, clay and gravel extending approximately 60 feet below the existing ground surface (CDWR, 1961). The Holocene sediments are underlain by marine and continental sediments of the Pleistocene Age Lakewood Formation (CDWR, 1961). The Pleistocene age sediments were not encountered during our field exploration. The site is shown with respect to local geologic features in Figures 4 through 7, Local Geologic Maps. The soil and geologic units encountered are discussed hereon. Stratigraphic profiles are provided on the Boring Logs in Appendix B.

3.2.1 Artificial Fill

A thin layer of artificial fill was observed in all of our field explorations to a maximum depth of 2 feet bgs. The artificial fill generally consists of a mix of dark brown to dark reddish brown sandy silt and sandy clay with various amounts of gravel and construction debris. The fill is generally characterized as soft to firm and slightly moist to moist. The fill is likely the result of past grading, construction and/or demolition activities at the site. Deeper fill may exist in other portions of the site that were not directly explored.

3.2.2 Alluvium

The artificial fill is underlain by poorly consolidated Holocene age alluvial deposits (CDWR, 1961; Dibblee, 1991). As observed during our field investigation the alluvium generally consists of interbedded dark brown to dark olive brown to dark reddish brown poorly graded sand, silty sand, sandy silt, silt, sandy clay and clay with varied amounts of gravel. The soils are primarily slightly moist to wet and soft to hard or loose to dense and become denser with increased depth. The soils consist primarily of sediments and fragments derived from the Santa Monica Slate in the nearby Santa Monica Mountains and other sediments from associated drainages.

3.3 GROUNDWATER

Based on a review of the California Division of Mines and Geology (CDMG) Seismic Hazard Evaluation of the Beverly Hills 7.5 Minute Quadrangle, Los Angeles County, California (CDMG, 1998), the historically highest groundwater level beneath the site is approximately 32 feet bgs. Groundwater information presented in this document is generated from data collected in the early 1900s to the present. However, based on current groundwater basin management practices, it is unlikely that groundwater levels will ever reach or exceed the historically highest levels. In 2001, the California Division of Mines and Geology changed its official name to the California Geological Survey (CGS).

The Los Angeles County Department of Public Works (LACDPW) maintains various wells in the vicinity of the subject site. The closest active wells to the site are Well No. 2546K and 2546L located approximately 100 feet east and 130 feet west of the site, respectively (LACDPW, 2017).

Review of the monitoring data over the past 42 years for Well No. 2546K indicates that the depth to groundwater has fluctuated between 95.8 and 239.8 feet bgs. The most recent groundwater level measurement for Well No. 2546K was taken in April 2009 at a depth of 175.8 feet bgs (LACDPW, 2017).

Review of the monitoring data over the past 33 years for Well No. 2546L indicates that the depth to groundwater has fluctuated between 114.0 and 173.0 feet bgs. The most recent groundwater level measurement for Well No. 2546L was measured in April 2009 at a depth of 115.0 feet bgs (LACDPW, 2017).

A static groundwater table was not encountered in any our exploratory borings, drilled to a maximum depth of 50½ feet bgs. However, minor seepage was encountered in borings B-2 and

B-5 at depths of 45 feet and 40 feet bgs, respectively.

Based on these considerations and current groundwater management practices, the static groundwater table is expected to be encountered below a depth of 90 feet bgs. Therefore, groundwater is not expected to be encountered during construction or to have a detrimental effect on the project. However, it is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils that are subjected to excessive irrigation or heavy precipitation. Proper surface drainage of irrigation and precipitation will be critical to future performance of the proposed facility.

4.0 GEOLOGIC HAZARDS

4.1 FAULTING AND SURFACE FAULT RUPTURE

Faults in Southern California include active, potentially active, and inactive faults. The determination for these major groups is based on the criteria developed by the CGS for the Alquist-Priolo Earthquake Fault Zone Program (Bryant and Hart, 2007). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years), but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a currently established Alquist-Priolo Earthquake Fault Zone for surface fault rupture hazards. No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. The site, however, is located in the seismically active Southern California region, and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. Active and potentially active faults in the vicinity of the site are shown in Figures 8 through 10, Regional Fault Map.

The closest surface trace of an active fault to the site is the north strand of the Santa Monica Fault Zone located approximately 2,260 feet (0.428 miles) north of the site (LADPW, 2017). The Santa Monica Fault is an east-west trending, north-dipping fault located along the southern edge of the Santa Monica Mountains extending from the Santa Monica coastline on the west to the west Beverly Hills escarpment on the east. Current research by Dolan et al. (1992, 1997, and 2000), Pratt et al. (1998), Catchings et al. (2008) and other investigators indicate that the Santa Monica fault is separated into a northern strand and a southern strand, which dip to the north and merge at a depth of approximately 2 kilometers. The northern strand of the Santa Monica fault is a steeply dipping fault (60º-70º) exhibiting a prominent south facing scarp and Holocene activity (Dolan et al., 2000). The north strand of the Santa Monica fault is considered active by the State Geologist and there is documented Holocene activity at several locations including the nearby VA Hospital and University High School. The southern strand of the Santa Monica fault, located 6,000 feet (1.14 miles) west of the site (LADPW, 2017), is a moderately dipping fault with activity calculated between late Miocene to late Pliocene with the southern strand terminating at a depth of about 1 km below the ground surface. No known Quaternary activity has been documented along the south strand of the Santa Monica fault, therefore the fault is not considered “active” by the State Geologist.

Other nearby active faults are the Newport-Inglewood fault zone, the Hollywood fault, the Palos Verdes fault and an “unnamed” fault located approximately 3.5 miles east, 4.4 miles northeast, 9.5 miles southwest and 9.5 miles southwest of the site, respectively (Jennings et al., 2010). The active San Andreas fault zone is located approximately 41 miles northeast of the site (Jennings et al., 2010).

The closest potentially active fault to the site is the Overland fault located approximately 2.3 miles east of the site (Jennings et al., 2010). Other nearby potentially active faults are the Charnock fault, the Anacapa fault, and the MacArthur Park fault located approximately 4.0 miles south-southeast, 5.0 miles west (Jennings et al., 2010) and 9.1 miles northeast (Dolan, 1997) of the site, respectively.

Several buried thrust faults, commonly referred to as “blind" thrusts, underlie the Los Angeles Basin and the Orange County Coastal Plain, at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than three kilometers. The October 1, 1987 moment magnitude (Mw) 5.9 Whittier Narrows earthquake and the January 17, 1994 Mw 6.7 Northridge earthquake were a result of movement on buried thrust faults. These thrust faults are not exposed at the surface and do not present a potential surface fault rupture hazard; however, these features are considered active and are capable of generating future earthquakes.

4.2 STRONG GROUND MOTION

Located within Southern California with its well-known history of seismic activity, the West Los Angles District Yard is subject to the effects of moderate to large seismic events. An internet database search of the historical seismic record and United States Geological Survey data (USGS, 2017) indicates that between 1900 and 2017, approximately 34 earthquakes of Richter scale magnitude 5.0 or greater occurred along faults within 62 miles (100 km) of the site. A partial list of the most significant moderate to major earthquakes that have occurred in Southern California within the last 100 years is provided in Table 2 (USGS, 2017; SCEDC, 2017).

TABLE 2. HISTORICAL EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
Lake Elsinore area	May 15, 1910	6.0	61	ESE
San Jacinto-Hemet area	April 21, 1918	6.8	93	ESE
Near Redlands	July 23, 1923	6.3	70	E
Long Beach	March 10, 1933	6.4	44	SE
Tehachapi	July 21, 1952	7.5	74	NNW
San Fernando	February 9, 1971	6.6	26	N
Whittier Narrows	October 1, 1987	5.9	22	E
Sierra Madre	June 28, 1991	5.8	22	NE
Landers	June 28, 1992	7.3	118	E
Big Bear	June 28, 1992	6.4	91	E
Northridge	January 17, 1994	6.7	13	NNW

Each of these earthquakes caused significant property damage and resulted in fatalities. In terms of property damage, the Northridge earthquake was one of the worst natural disasters in U.S. history. The earthquake produced unusually strong ground accelerations as large as 1.8g.

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated

if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

4.3 LIQUEFACTION POTENTIAL

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

According to the State of California Earthquake Zones of Required Investigation, Beverly Hills Quadrangle Map (CGS, 2017) (see Figures 11 and 12), the southernmost portion of the subject site is located within a liquefaction hazard zone. In addition, according to the County of Los Angeles Seismic Safety Element (Leighton, 1990) and the City of Los Angeles Safety Element (1996), the southernmost portion of the site is located within an area identified as having a potential for liquefaction.

The current standard of practice, as outlined in the "Recommended Procedures for implementation of DMG Special Publication 117A, Guidelines for Analyzing and Mitigating Liquefaction in California" requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

As previously discussed in the "Groundwater" section, various LACDPW wells situated near the subject site indicates that the static groundwater table will likely be encountered below a depth of 90 feet bgs. Based on these considerations, the potential for liquefaction of the site soils is low and no surface manifestations of liquefaction are expected at the subject site.

4.4 LATERAL SPREAD

Lateral spread is large lateral displacement of soil mass parallel to a sloping ground surface due to liquefaction of underlying soil layers. Lateral spread results in damage of structures or other improvements due to lateral soil movement and the settlement resulting from such movement. As previously indicated, liquefaction is not expected to occur at the site and the site is not on or near an existing slope. Therefore, the potential for lateral spreading is considered low.

4.5 EARTHQUAKE INDUCED FLOODING

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. Based on a review of the Los Angeles County Seismic Safety Element (Leighton, 1990), the site is located within a potential inundation area for an

earthquake-induced dam failure from the Stone Canyon Dam. However, this dam, as well as others in California, are continually monitored by various governmental agencies (such as the State of California Division of Safety of Dams and the U.S. Army Corps of Engineers) to guard against the threat of dam failure. Current design and construction practices and ongoing programs of review, modification, or total reconstruction of existing dams are intended to ensure that all dams are capable of withstanding the maximum considered earthquake (MCE) for the site. Therefore, the potential for inundation at the site as a result of an earthquake-induced dam failure is considered low.

4.6 SEISMIC SETTLEMENT

Dynamic compaction of dry and loose cohesionless sands may occur during a major earthquake. Typically, settlements occur in thick beds of such soils. The soils underlying the site consist of clayey soils and are underlain by sedimentary bedrock units that are generally dense and well consolidated. Based on these conditions, appreciable seismically induced settlements are not anticipated at the site.

4.7 GROUND LURCHING

Ground lurching is the forming of cracks and ridges on the ground surface in response to strong ground shaking. Areas underlain by thick alluvium with loose granular soils or clay soils with high moisture are susceptible to ground lurching. Since the site is underlain by generally compacted fill and soft to stiff alluvium, ground lurching is not likely to develop at the site.

4.8 SEICHES

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically-induced seiche is considered unlikely.

4.9 TSUNAMIS

The site is not located within a coastal area. Therefore, tsunamis, or seismic sea waves, are not considered a significant hazard at the site.

4.10 FLOODING

The site is in an area of minimal flooding potential (Zone X) as defined by the Federal Emergency Management Agency (FEMA, 2008). FEMA defines Zone X as an area determined to be outside the 500-year flood. A map of the FEMA Flood Insurance Rate Map is presented in Figure 13.

4.11 SUBSIDENCE

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site. There appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the site.

4.12 OIL FIELDS

Based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Oil and Gas Well Location Map W1-5 Sheet 117 (DOGGR, 2006), the site is not located within the boundaries of a known oilfield. No oil wells are located in the immediate vicinity of the site. However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map. Other wells could be encountered during construction. Any wells encountered will need to be properly abandoned in accordance with the current requirements of the DOGGR.

4.13 METHANE

The site is not located within the boundaries of a methane or methane buffer zone, as defined by the City of Los Angeles (Los Angeles, 2004); therefore, the potential for the presence of methane is considered low.

5.0 GEOTECHNICAL ANALYSES AND DESIGN RECOMMENDATIONS

5.1 SUMMARY

Based on results of the investigation, the development of the site for the proposed project is feasible from a geotechnical standpoint. There are no significant geologic or geotechnical constraints that could preclude using conventional design and construction methods to develop the site. Presented below are conclusions resulting from our analyses and recommendations for the geotechnical aspects of the project for incorporating into the project design, plan, specifications, and construction.

5.2 SOIL PROFILE AND DESIGN STRENGTH PARAMETERS

5.2.1 Soil Classification

Based on the laboratory results in Appendix B and published geologic maps of the area, the existing subsurface soil consists of a layer of undocumented fill over Holocene age alluvial deposits. The borings indicate that the fill layer extends to a depth of approximately 2 feet bgs. The fill consists of sandy clay (CL) and sandy silt (ML). The alluvial deposits consists of silty sand (SM), clayey sand (SC), clayey gravel (GC), sandy clay (CL), clay with sand (CL) and clay (CL) as classified by the lab.

5.2.2 Moisture Content and In-place Unit Weight

The moisture contents for the material encountered were taken from the laboratory results in the Soil Classification data and are presented in the boring logs in Appendix A. The test results indicate that for the different layers, the moisture content varied between 4.5% and 28.6%.

The in-place unit weight for the soil ranged from 109.4 pounds per cubic foot (pcf) to 145.0 pcf. The dry density varied from 85.1 pcf to 132.4 pcf.

5.2.3 Idealized Soil Profile

Table 3 lists the idealized soil profile with pertinent material strength parameters based on the data obtained from the field investigation and laboratory testing and typical values for the geologic units.

TABLE 3. SOIL PROFILE AND DESIGN STRENGTH PARAMETERS

Depth (feet)	Geologic Unit	Predominant Soil/Rock Type	USCS Classification	Total Unit Weight (lb/ft^3)	Drained Friction Angle (degrees)	Drained Cohesion (psf)	Undrained Shear Strength (psf)
0-15	Artificial Fill / Alluvium	Clay/Silt	CL/ML	110	26	400	600
15-20	Alluvium	Clayey Sand	SC	125	30	150	-
20-25	Alluvium	Clay	CL	125	30	500	1500
25-40	Alluvium	Clay	CL	120	28	400	1250
40-50	Alluvium	Clayey Sand/ Clayey Gravel	SC/GC	130	36	150	-

5.3 SEISMIC DESIGN PARAMETERS

The West Los Angles District Yard is likely to experience strong ground motions from earthquakes on local and regional faults. To better account for many of the uncertainties associated with predicting earthquake occurrence, a probabilistic approach was used to estimate the ground motion hazard at the site. The current building code (LABC, 2014) requires all structures be designed to resist the earthquake effects of two-thirds of the corresponding Risk-Targeted Maximum Considered Earthquake (MCE_R) effects. MCE_R is defined as an earthquake that targets a 1% risk of structural collapse in 50 years. Based on the location of the site and the site classification, the code-based design spectral acceleration parameters were developed using the current USGS Seismic Design Maps per the procedures of ASCE/SEI 7-10 (USGS, 2014b).

Based on review and analysis of the available soil properties and information obtained, the site is characterized as **Site Class D**. This is based on Table 20.3-1 of the ASCE 7-10. The mapped acceleration parameters S_S and S_1 were determined from the 0.2 and 1-second spectral response accelerations shown on Figures 1613.3.1(1) and 1613.3.1(2) of the 2014 Los Angeles Building Code (LABC). As a check, the United States Geologic Survey's (USGS) web-based interactive probabilistic seismic hazard program was also used (USGS, 2017; ASCE 7-10) in which similar values were obtained (see Appendix C).

- **S_S = 2.116** (0.2 spectral response acceleration)
- **S_1 = 0.784** (1-second spectral response acceleration)

Based on the 2014 LABC, the maximum considered earthquake spectral response accelerations for short periods, S_{MS} and at 1-second period, S_{M1} adjusted for site class effects were determined by equations 16-37 and 16-38 where:

- $\mathbf{S_{MS} = F_a S_S}$
- $\mathbf{S_{M1} = F_V S_1}$

Given:

- **Fa = 1.0** [from Table 1613.3.3(1)]
- **Fv = 1.5** [from Table 1613.3.3(2)]

Then:

- $\mathbf{S_{MS} = 2.116}$
- $\mathbf{S_{M1} = 1.176}$

The design spectral response acceleration parameters for the five-percent damped design spectral response acceleration at short periods, S_{DS}, and at 1-second period, S_{D1} were then determined using equations 16-39 and 16-40 from the 2014 LABC.

Given:

- $\mathbf{S_{DS} = 2/3\ S_{MS}}$
- $\mathbf{S_{D1} = 2/3\ S_{M1}}$

Then:

- $\mathbf{S_{DS} = 1.410}$
- $\mathbf{S_{D1} = 0.784}$

These parameters are presented in Table 4.

TABLE 4. CODE-BASED SEISMIC DESIGN PARAMETERS

Site Latitude (^{o})	34.034420
Site Longitude (^{o})	-118.459142
Site Class	D
Mapped MCE_R Spectral Response Acceleration Parameter at Short Periods (g), S_S	2.116
Mapped MCE_R Spectral Response Acceleration Parameter at 1-sec Period (g), S_1	0.784
Short-Period Site Coefficient, *Fa*	1.0
Long-Period Site Coefficient, *Fv*	1.5
Design Spectral Response Acceleration Parameter at Short Periods (g), S_{DS}	1.410
Design Spectral Response Acceleration Parameter at 1-sec Period (g), S_{D1}	0.784
Long-Period Transition Period (sec.), T_L	8
MCE_G Peak Ground Acceleration Adjusted for Site Effects (g), PGA_M	0.808
Design Spectral Response Acceleration Parameter at 0 Period (g), S_0	0.564
Note: MCE_G = Maximum Considered Earthquake Geometric Mean.	

5.4 FOUNDATION DESIGN

Based on the proposed structural types, all the buildings can be supported either on reinforced concrete spread footings (shallow foundations) or with Cast-in-Drilled-Hole (CIDH) reinforced concrete piers with a pile cap/grade beam (deep foundations).

5.4.1 Shallow Foundations

Bearing Capacity: The spread footings should have a minimum embedment of 2 feet below surrounding lowest finish grade and a minimum width of 2 feet. The spread footings with the recommended minimum sizes may be designed for an allowable vertical bearing capacity of 1,500 psf for dead-plus-live loads. This allowable bearing capacity may be increased by 1/3 for wind or earthquake loads. A safety factor of 3 has been incorporated in the bearing capacity calculations.

Settlement: The total settlement of a typical spread footing under the anticipated maximum bearing pressure was estimated to be less than 1.0 inch. The differential settlement was estimated to be less than 0.5 inch.

Lateral Load Resistance: Resistance to lateral loads may be assumed to be provided by friction acting on the base of the footing or by passive earth pressure on the side of the footing. A frictional coefficient of 0.35 may be used for interface between concrete on undisturbed native soils or compacted subgrade soil. An allowable passive earth pressure of 180 psf per foot of depth up to a maximum of 1,800 psf may be used for the sides of footings poured against undisturbed native soils or properly compacted subgrade soil. The value of the allowable passive earth pressure includes a factor of safety of 1.5.

The total lateral resistance can be either 100% of the frictional resistance or 100% of the passive resistance or the combination of 50% of the frictional resistance and 50% of the passive resistance. The passive earth pressure may be increased by 1/3 for wind or earthquake loads.

5.4.2 Deep Foundations

All CIDH piers shall be designed to be axially supported by skin friction only. End bearing shall not be considered. The CIDH piers shall also be designed as straight shafts (no belled-bottomed). A minimum shaft diameter of 30 inches shall be used. The piers should be spaced at least 3 pier diameters on center. The minimum aspect ratio (depth: diameter) shall be 4:1 and the maximum shall be 10:1.

Settlement shall be no greater than 1 inch. Resistance to lateral loads may be resisted by the piers and the lateral resistance of the soils. The lateral capacity of the piers will depend on the permissible deflection. The total pier head deflection shall be less than ½ -inch.

Lateral response of a single pier can be analyzed with the program LPILE using the soil strength parameters listed in Table 3.

5.5 RETAINING WALL DESIGN

5.5.1 Foundation Type, Bearing Capacity and Settlement

Type: Retaining walls may be supported on spread footings.

Bearing Capacity: The spread footings should have a minimum embedment of 2 feet below surrounding lowest finish grade and a minimum width of 2 feet. The spread footings with the recommended minimum sizes may be designed for an allowable vertical bearing capacity of 2,000 psf for dead-plus-live loads. This allowable bearing capacity may be increased by 1/3 for wind or earthquake loads. A safety factor of 3 has been incorporated in the bearing capacity calculations.

Settlement: The total settlement of a typical spread footing under the anticipated maximum bearing pressure was estimated to be less than 1.0 inch. The differential settlement was estimated to be less than 0.5 inch.

5.5.2 Lateral Earth Loading

Static Condition: Under static condition, active earth pressure may be used for designing the retaining walls if outward movement at the top of the wall exceeds approximately 0.1% of its height (i.e., non-restrained condition). Otherwise, the walls should be designed using at-rest earth pressure (i.e., restrained condition). Recommended static lateral earth loading for retaining walls is presented in Table 5.

TABLE 5. STATIC LATERAL EARTH LOADING FOR RETAINING WALLS

Back Slope (Horizontal: Vertical)	Active Earth Pressure in Terms of Equivalent Fluid Pressure (psf)	At-Rest Earth Pressure in Terms of Equivalent Fluid Pressure (psf)
Level	43*H*	62*H*
Note: *H* is the wall height in feet.		

Seismic Condition: Under seismic condition, the uniform earth pressure for a level backfill restrained retaining wall was calculated using the method of Mononobe and Okabe (Das, 2006). The horizontal component of the earthquake acceleration was taken as 50% of the PGA_M from Table 4. The lateral earth pressure from seismic loading was assumed to have a uniform distribution against the wall. The resultant of the lateral earth pressure from seismic loading is applied at (1/2)*H* feet above the bottom of the wall (*H* is the wall height in feet). Recommended seismic earth pressures are listed in Table 6.

TABLE 6. SEISMIC LATERAL EARTH LOADING FOR RETAINING WALLS

Back Slope (Horizontal:Vertical)	Uniform Earth Pressure for Non-restrained Condition (psf)	Uniform Earth Pressure for Restrained Condition (psf)
Level	48*H*	96*H*
Note: *H* is the wall height in feet.		

The above pressures do not include any hydrostatic pressures. For retaining walls without drainage provisions, water pressure of 62.4 psf per foot depth must be added, but the equivalent fluid earth pressures for materials below the groundwater table may be reduced by 50 percent for the portion of the wall below groundwater table.

5.5.3 Lateral Pressure Due to Surcharge

The West Los Angeles District Yard is surrounded by various buildings, parking structures, and city streets. Surcharge loading from these various facilities will exert an additional lateral earth pressure on the retaining wall.

The lateral earth pressure from surcharge loading is based on the theory of elasticity (Das, 2006). For this analysis, an excavation of 20 feet deep and an offset of 20 feet away from any surrounding building, parking structures, or city street are assumed. A uniform pressure of 250 psf is assumed as the surcharge load from the surrounding facilities. The additional lateral earth pressure acting on the retaining wall was calculated to be 125 psf in a uniform distribution.

Once the final retaining wall plans are complete, LADWP Geology and Soils Group shall be contacted to review the final retaining wall plans to verify the depth and offset of the retaining walls.

5.5.4 Resistance to Lateral Loads

Resistance to lateral loads may be assumed to be provided by friction acting on the base of the footing and by passive earth pressure against the sides of the footing or walls. A frictional coefficient of 0.4 may be used for interface between concrete on undisturbed native soils or compacted subgrade soil. An allowable passive earth pressure of 240 psf per foot of depth up to a maximum of 2,400 psf may be used for the sides of footings or walls poured against undisturbed native soils or properly compacted subgrade soil. The value of the allowable passive earth pressure includes a factor of safety of 1.5.

The frictional resistance and the passive resistance may be used in combination without reduction. The passive earth pressure may be increased by 1/3 for wind or earthquake loads.

5.5.5 Drainage behind Walls

The retaining walls are not designed for hydrostatic pressures. The retaining walls shall be provided with adequate drainage to prevent hydrostatic build-up behind the walls. Backfill behind the walls should be free draining and should satisfy the material requirements of Section 300-3.5.2 of Standard Specification for Public Works Construction (SSPWC) (Greenbook, 2015). Lateral drainage should be provided by installing a perforated drainage pipe behind the base of the walls, or weepholes at 8 feet on-center maximum spacing. If a perforated pipe is used, the pipe should be a Schedule-40 PVC with a minimum diameter of 4 inches, surrounded with at least 1 square foot per linear foot of wall (1 cubic foot) of free draining ¾-inch crushed rock or gravel. A non-woven geofabric (Mirafi 140NC or better) should be used to prevent fines loss into the drainage material.

Pre-fabricated drainage composites such as Miradrain 5000 or similar products should be placed

behind subterranean walls cast in front of any shoring to provide adequate drainage. Drainage water should be controlled and directed to proper drainage devices in an acceptable manner.

5.6 PAVEMENT DESIGN

Pavement design recommendations have been made for rigid and flexible pavements using the design procedure of Caltrans Highway Design Manual (HDM) (Caltrans, 2017). The surficial soils at the project site consist of clay, which usually has low R values. Based on a typical R-value for clay soils from the Caltrans HDM Chapter 610, an R-value of 5 was used to determine preliminary pavement structural sections. A Traffic Index (TI) of 6 was chosen from Caltrans HDM Chapter 610 Table 613.5B.

The pavement designs for this report are only for pavements that rest on in-situ soil. The pavement that is resting on the parking structure will need to be designed by the parking structure engineer.

5.6.1 Rigid Pavement

Rigid Pavement consisting of Portland Cement Concrete (PCC) is recommended for the areas of the yard encompassed by the subterranean parking. The rigid pavement was designed using the Caltrans HDM Chapter 620 for Type II subgrade soil. The recommended rigid pavement structure sections are presented in Table 7.

TABLE 7. RECOMMENDED RIGID PAVEMENT STRUCTURAL SECTIONS

Traffic Index	Rigid Pavement Section Thickness
6.0	9-inches JPCP over 12-inches AB
Notes: (1) JPCP = Jointed Plain Concrete Pavement. (2) AB= Class II Aggregate Base, as outlined in the Caltrans 2015 Standard Specification, Section 26 (Caltrans, 2015)	

5.6.2 Flexible Pavement

The flexible pavement was designed using the Caltrans HDM Chapter 630. Using the empirical method outlined in Topic 633.1, the Gravel Equivalent (GE) for the site is 22 inches. Table 8 presents the recommended flexible pavement structural sections.

TABLE 8. RECOMMENDED FLEXIBLE PAVEMENT STRUCTURAL SECTIONS

Traffic Index	Flexible Pavement Section Thickness
6.0	6-inches HMA over 10-inches CAB
Notes: (1) HMA = Hot Mix Asphalt. (2) CAB = Crushed Aggregate Base.	

6.0 CONSTRUCTION RECOMMENDATIONS

6.1 EARTHWORK

Earthwork should be performed in accordance with the applicable sections of the Los Angeles City grading codes, the latest edition of the SSPWC (Greenbook, 2015), and the recommendations of this report. The more stringent requirements of the mentioned documents should prevail.

6.1.1 Site Preparation and Grading

Prior to construction, the areas planned for new construction should be cleared of existing improvements and any other deleterious materials. Vegetation, trash, and debris, should be properly disposed offsite. Underground Service Alert (USA) of Southern California, also known as Dig Alert, shall be contacted to locate and verify any existing or abandoned utility lines in the area planned for construction. Existing utilities should be either properly abandoned and removed or rerouted around the development area to preserve their function. Excavations that result from the removal of utilities and other existing site improvements should be properly backfilled and compacted.

Based on the current site plan, an excavation on the order of 20 feet is required to achieve the finish grade of the proposed subterranean parking structure. For construction of the proposed fueling station, an excavation on the order of 18 feet is anticipated if the fuel tanks are being stored underground.

LADWP Corporate Environmental Services Group shall be contacted immediately if soil of a questionable environmental quality is encountered during construction. The questionable soil shall then be placed in plastic and labeled as soil not to be used for backfill.

If unsuitable soils are encountered during excavation, additional excavation to remove the unsuitable materials to expose a firm and unyielding surface will be required.

Prior to placing fill, the subgrade should be scarified to a depth of 6 inches, moisture-conditioned to approximately 2 percent above optimum and compacted to at least 90 percent relative compaction. The finish subgrade should be maintained moist at all time prior to placing fill or other improvements.

6.1.2 Fill Material and Placement

All fill materials should be inorganic soils free of vegetation, debris, and cobbles larger than 3 inches in diameter.

Onsite subsurface soils are not considered suitable for use as engineered fill beneath the structures.

Imported materials shall consist of low expansive soils. The materials should have no more than

35 percent by weight passing the #200 sieve and an Expansion Index no greater than 35. The materials should be tested by the project geotechnical engineer for conformance with the recommendations before transporting to the site.

Engineered fill should be placed in loose lifts not to exceed 8 inches, moisture-conditioned to 2 percent above its optimum moisture, and compacted to at least 90 percent relative compaction in accordance with ASTM D1557 or as specified as in the following sections.

6.1.3 Temporary Excavations

Temporary excavations must be properly sloped or shored in accordance with OSHA standards.

Based on the earth materials encountered in our borings, temporary excavation of 5 feet or less in depth may be performed with vertical sidewalls with some potential for sloughing for prolonged durations. Deeper temporary excavation up to a depth of 20 feet can be accomplished at a 1.5 horizontal to 1 vertical (i.e., 1.5H:1V) temporary slope. Excavated soil should not be stockpiled immediately adjacent to excavations. Stockpiled soil should be set back a distance at least equal to the height of the excavation.

Where space is limited or excavations deeper than 20 feet, shoring may be required.

The contractor is responsible for worker safety in the field during construction. The contractor shall conform to all applicable occupational safety and health standards, rules, regulations, and orders established by the State of California. In addition, other State, County, or Municipal regulations may supersede the recommendations presented in this section.

6.2 FOUNDATION CONSTRUCTION

6.2.1 Shallow Foundations

The soil for the proposed shallow foundation, including the soil extending three feet beyond the extent of the foundation, shall be excavated to one foot below the bottom of foundation. The subgrade should then be scarified to a depth of 6 inches and recompacted. Crushed Aggregate Base (CAB) shall be placed, where necessary, on the recompacted subgrade to establish the new required elevation. CAB shall be placed in 6-inch lifts and compacted to a minimum of 95% of its maximum dry density in accordance to ASTM D1557.

6.2.2 Deep Foundations

Based on the onsite subsurface soil types, drilling for the CIDH reinforced concrete piers should be made possible with a conventional flight power auger. Potential for caving in is low. The CIDH reinforced concrete piers shall be immediately placed after completion of drilling and cleaning of the hole. Concrete shall not be permitted to fall more than six feet without the use of pipes or tremies.

6.3 RETAINING WALL CONSTRUCTION

The method and sequence of construction are crucial in the performance of a retaining wall. The LADWP Geology and Soils Group shall be consulted once the method and sequence of construction as well as the type of retaining wall are selected.

6.4 PAVEMENT CONSTRUCTION

The subgrade soils should be inspected and tested by qualified geotechnical engineer during grading of the road to verify the design R-value, the required relative compaction, and recommended pavement structural sections. The subgrade soils should have R-values at least equal to 5. If subgrade soils are determined to have R-values less than the design value, the soil should be overexcavated to a minimum depth of 1.5 feet below the finish subgrade and replaced with soil having at least the required design value.

Prior to placement of AB or CAB, the subgrade soils should be excavated to a minimum depth of 6 inches below proposed depth and recompacted to a minimum of 90 percent relative compaction based on the maximum dry density determined by ASTM D1557.

AB or CAB should satisfy the specifications contained in the SSPWC (Greenbook, 2015) for gradation and should have a minimum R-value of 78. All gradation and R-value should be confirmed by the geotechnical engineer during construction. All base materials should be compacted to a minimum of 95 percent of the maximum dry density per ASTM D1557.

6.5 UTILITY TRENCH BEDDING AND BACKFILL

Bedding materials consist of sand, gravel, crushed aggregate, or free draining granular material having a Sand Equivalent (SE) of at least 30 should be used to backfill around utility pipe to approximately 1 foot above the top of the pipe. The subgrade of the pipe trench should be firm and unyielding. If the subgrade is loose or unstable, the unsuitable subgrade soil must be excavated and replaced with bedding material. Bedding must be placed uniformly on each side of the pipe and mechanically compacted.

The onsite material provided it is free of debris, organic material, and oversized material (greater than 4 inches in diameter), can be used to backfill the remaining depth of the utility trench to the planned finish subgrade. The fill should be placed in loose lifts not to exceed 8 inches, moisture-conditioned to 2 percent above optimum, and mechanically compacted to at least 90 percent relative compaction or 95 percent relative compaction if located in a future roadway in accordance with ASTM D1557.

Utility trenches should be properly sealed at the entrance points to building pads or improved subgrade to avoid the potential for water entering the areas.

6.6 PERMANENT CUT AND FILL SLOPES

All permanent cut and fill slopes should be constructed at 2H:1V or flatter. During placement of fill slopes, the new engineering fill should be benched into existing native or fill soils if exiting ground surfaces have a gradient of 5H:1V or steeper. Fill slopes should be compacted to at least of 90 percent of the maximum dry density.

6.7 SURFACE DRAINAGE AND EROSION CONTROL

The ground surface of the site should be sloped at least 2% to divert water away from the retaining walls and other structures towards suitable, non-erosive drainage devices. Areas where water could pond adjacent to the structures, or depression in walk and drive ways, should be eliminated by the use of area drains. Area drains should not be placed next to, or in contact with, the structures.

The slope should be planted with approved deep-rooted groundcover to assist in stabilization of the surface fills as soon as practical after completion.

For future maintenance of the slope, no irrigation resulting in over-watering and subsequent saturation of the slope surface should be allowed.

6.8 SOIL CORROSIVITY AND CEMENT TYPES

Several samples of the onsite soils were tested for corrosion potential (resistivity). Test results (see Appendix C) indicate that the resistivity ranges from 1,800 to 3,500 ohm/cm. Therefore, the onsite soils have a moderate to severe degree of corrosivity for buried ferrous metals. Based on the onsite soil types, sulfate resistant cement is required for concrete in contact with onsite soils. Type II or Type V Portland cement may be used.

6.9 TEMPORARY SHORING

Temporary shoring systems consisting of cantilever or internally braced soldier piles and steel plates or treated-timber lagging may be used to support temporary excavation and trenching. Typical soldier piles consist of steel H-sections installed in pre-drilled holes and backfilled with structural concrete or gravel below the planned bottom of the excavation. Center-to-center horizontal spacing between soldier piles should be limited to a maximum of 8 feet.

6.9.1 Lateral Earth Loading

Temporary shoring should be designed to resist the lateral earth pressures presented in Table 9.

TABLE 9. LATERAL EARTH PRESSURES FOR TEMPORARY SHORING

Cantilever	Braced
A triangular distribution: • 0 at the top of excavation; • 43*H* at the bottom of excavation.	A trapezoidal distribution: • 0 at the top of excavation • 36*H* at a depth of 0.25*H*; • 36*H* at a depth of 0.75*H*; • 0 at the bottom of excavation.
Notes: (1) Pressure is in psf. (2) *H* is the excavation height in feet.	

A uniform surcharge placed on the soil supported by the shoring causes an equal increase in lateral pressure in addition to the lateral earth pressure listed in Table 9. The increase may be assumed a uniformly distributed lateral pressure equal to 0.39 times the surcharge and must be considered in shoring design. In no case shall the pressure due to surcharge be less than 72 psf, which is a prescribed minimum intended to provide for typical construction loads induced by vehicles, equipment, and materials (Caltrans, 2011).

The above pressures do not include any hydrostatic pressures since it is assumed that groundwater will be maintained at least two feet below the bottom of excavation by dewatering and drainage of possibly perched groundwater pockets by providing weep-holes or cracks in the lagging. It is important to install lagging immediately upon excavation to minimize sloughing or movement of the soils behind the shoring. For any portion of the shoring structure below groundwater table, the shoring design shall include the hydrostatic pressure. Furthermore, soil arching should not be considered for the lagging below the groundwater table.

6.9.2 Lateral Resistance

Soldier piles must extend below the excavation bottom to provide lateral resistance by passive earth pressure. Allowable passive pressures for the native soils and the bedrock may be taken as equivalent to the pressure exerted by a fluid weighing 240 psf per foot of depth, up to a maximum of 2,400 psf . The passive earth pressure incorporates a factor of safety of 1.5. To account for soil arching effects, the lateral passive earth pressure may be assumed to act on over a width of either 2.4 times the drilled-hole diameter for soldier piles backfilled with structural concrete or 2.4 times the flange-width of the beam for soldier piles backfilled with compacted sand or gravel.

6.10 REVIEW OF CONSTRUCTION PLANS

Recommendations contained in this report are based on preliminary conceptual plans. The geotechnical engineer shall review the final design and construction plans and specifications in order to confirm that the general intent of the recommendations contained in this report has been incorporated into the final construction documents. Recommendations contained in this report may require modification or additional recommendations may be necessary based on the final design.

6.11 GEOTECHNICAL OBSERVATION AND TESTING

Qualified geotechnical personnel should perform inspection and testing during the following stages of construction:

- Grading operations, including excavations and placement of compacted fill;
- Footing excavations and/or pad excavations, prior to placement of steel reinforcement;
- Drilling and installation of CIDH reinforced concrete piers;
- Excavations for utility trenches and drainage structures;
- Removal or support of buried utilities or structures;
- Shoring installation;
- Backfilling retaining walls; and subdrain installation; and
- When any unusual conditions are encountered.

7.0 LIMITATIONS

This report was prepared using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical engineers and geologists practicing in this or similar locations. No other warranty, express or implied, is made about the professional advice included in this report. This report has been prepared for the Los Angeles Department of Water and Power to be used solely in the design and construction of the proposed West Los Angeles District Yard Project. This report has not been prepared for use by other parties, and may not contain sufficient information for the purposes of other parties or other uses.

Steve Kehrmeyer 2/28/18

Steven Kehrmeyer — Date
California CE 46686

02/28/2018

Liping Yan — Date
California GE 2554

2/28/18

César H. Larios — Date
California GEG 2578

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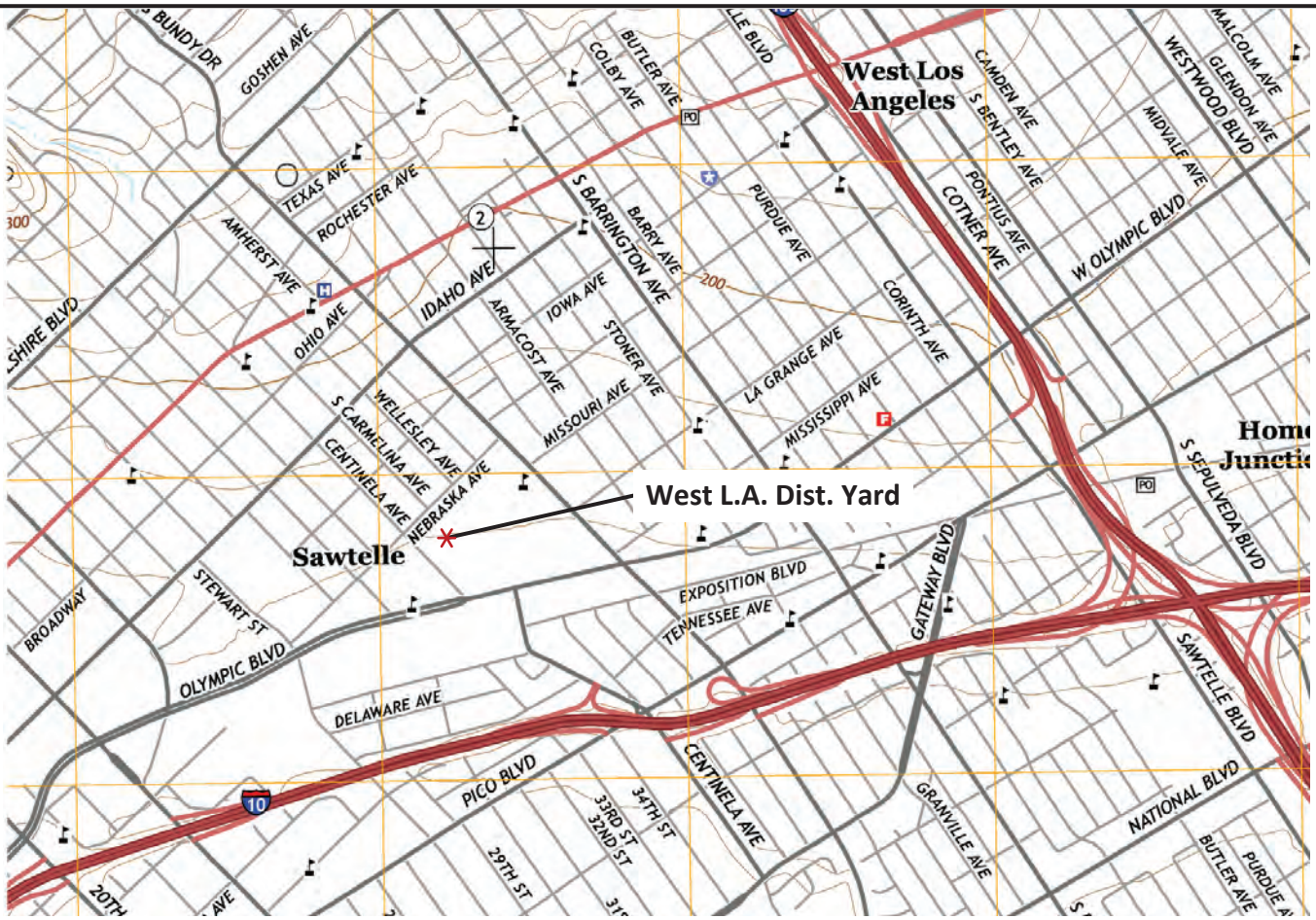
FIGURES



BASE MAP: U.S. Geologic Survey
7.5 Minute Series
Beverly Hills, CA Quadrangle 2015

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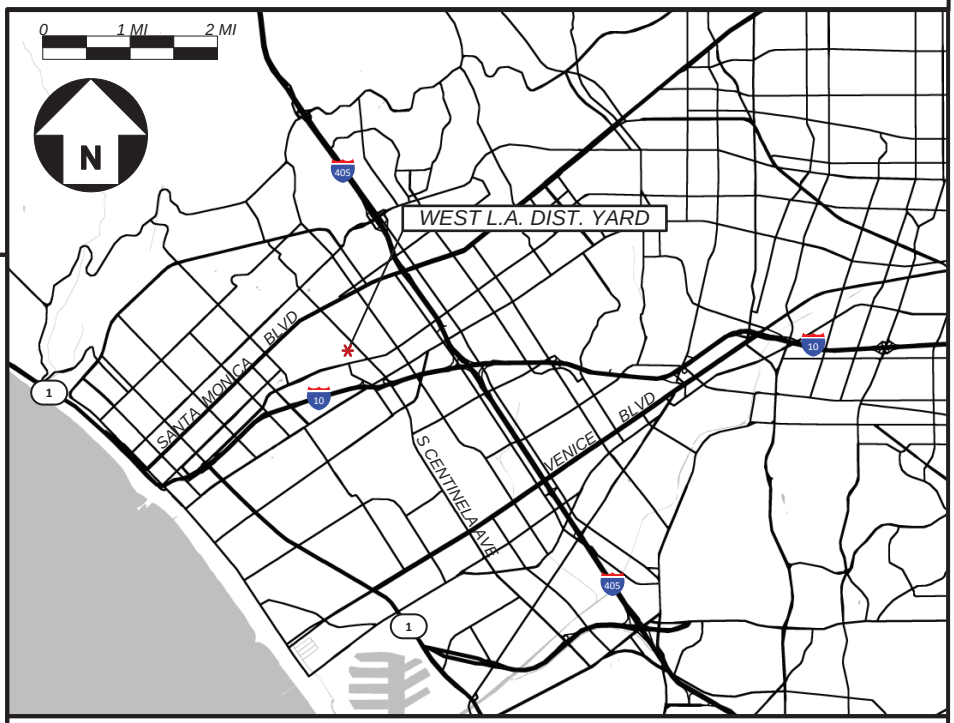
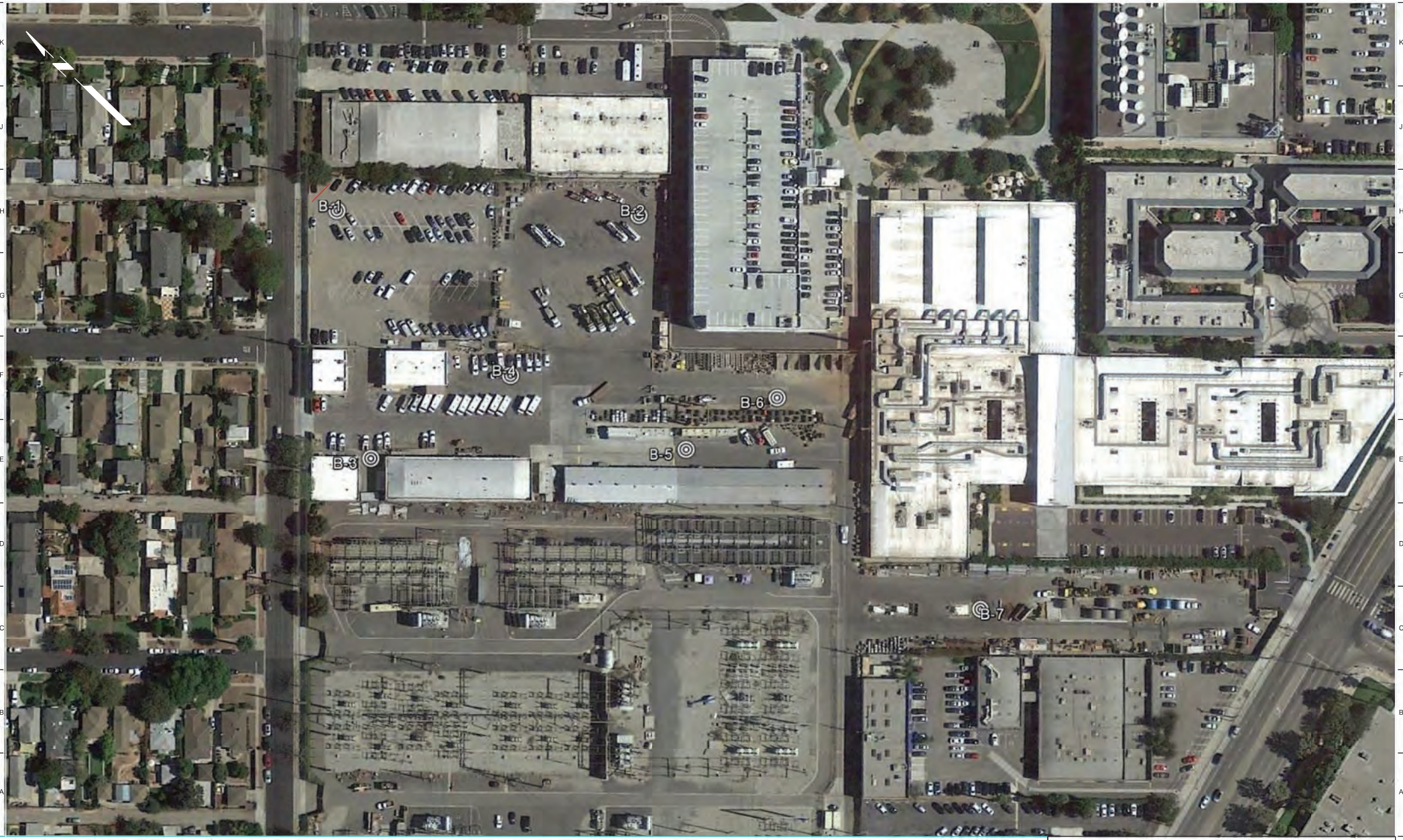


West Los Angeles District Yard

FIGURE 1 - LOCATION MAP



WEST LOS ANGELES DISTRICT YARD
12300 W. NEBRASKA AVENUE, LOS ANGELES, CA 90025
FIGURE 2 - SITE PLAN

POWER SYSTEM
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

DRAWING NUMBER

REV.

Base Map: United States Geological Survey 2015, Topographic Map of the Beverly Hills Quadrangle, Scale 1:24,000

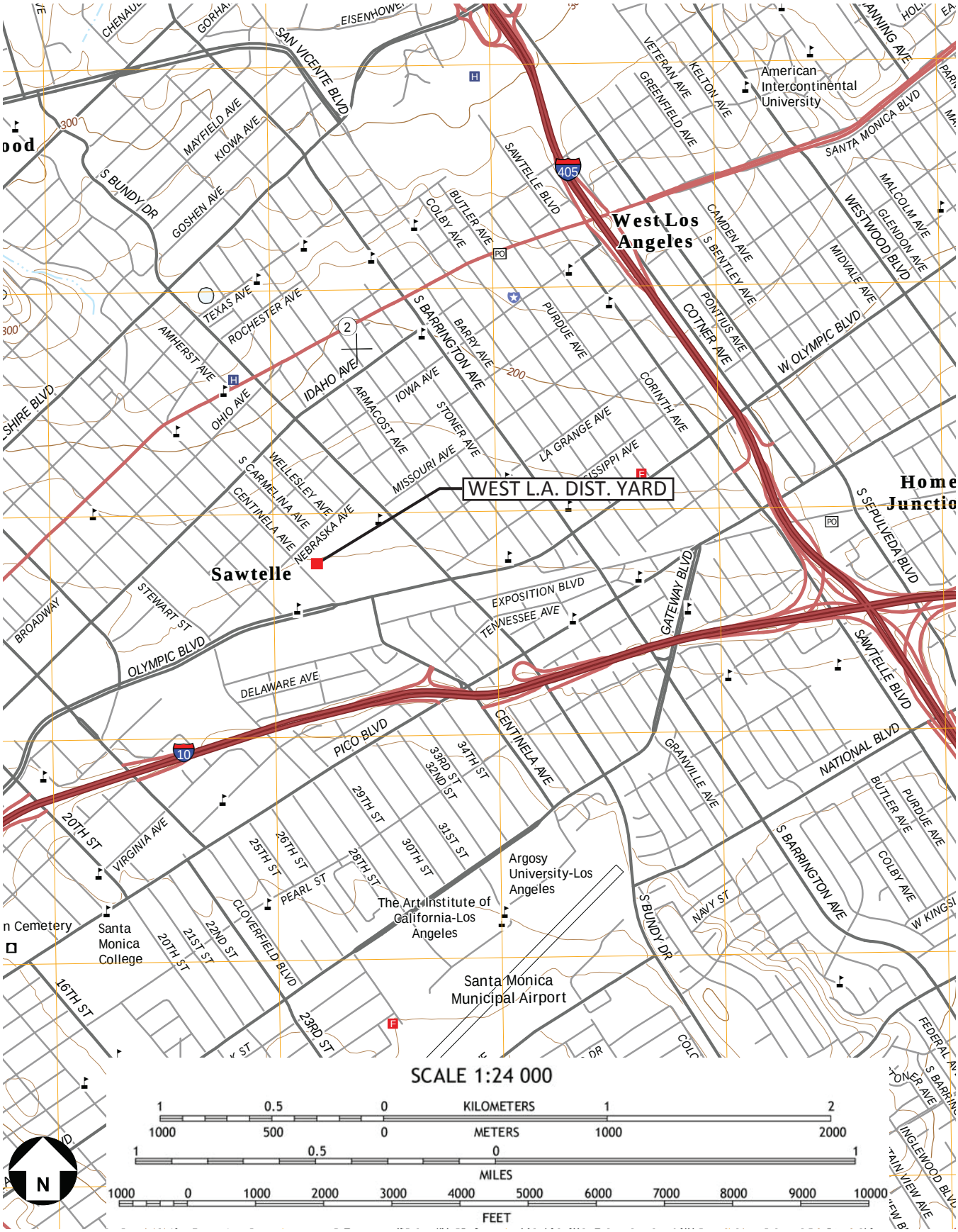


Figure 3 - Topographic Site Location Map for West Los Angeles District Yard, 12300 W Nebraska Ave, Los Angeles, CA. LADWP, September 2017

Base Map: Department of Water Resources 1961, Groundwater Geology of the Coastal Plain of Los Angeles County, Scale Shown.

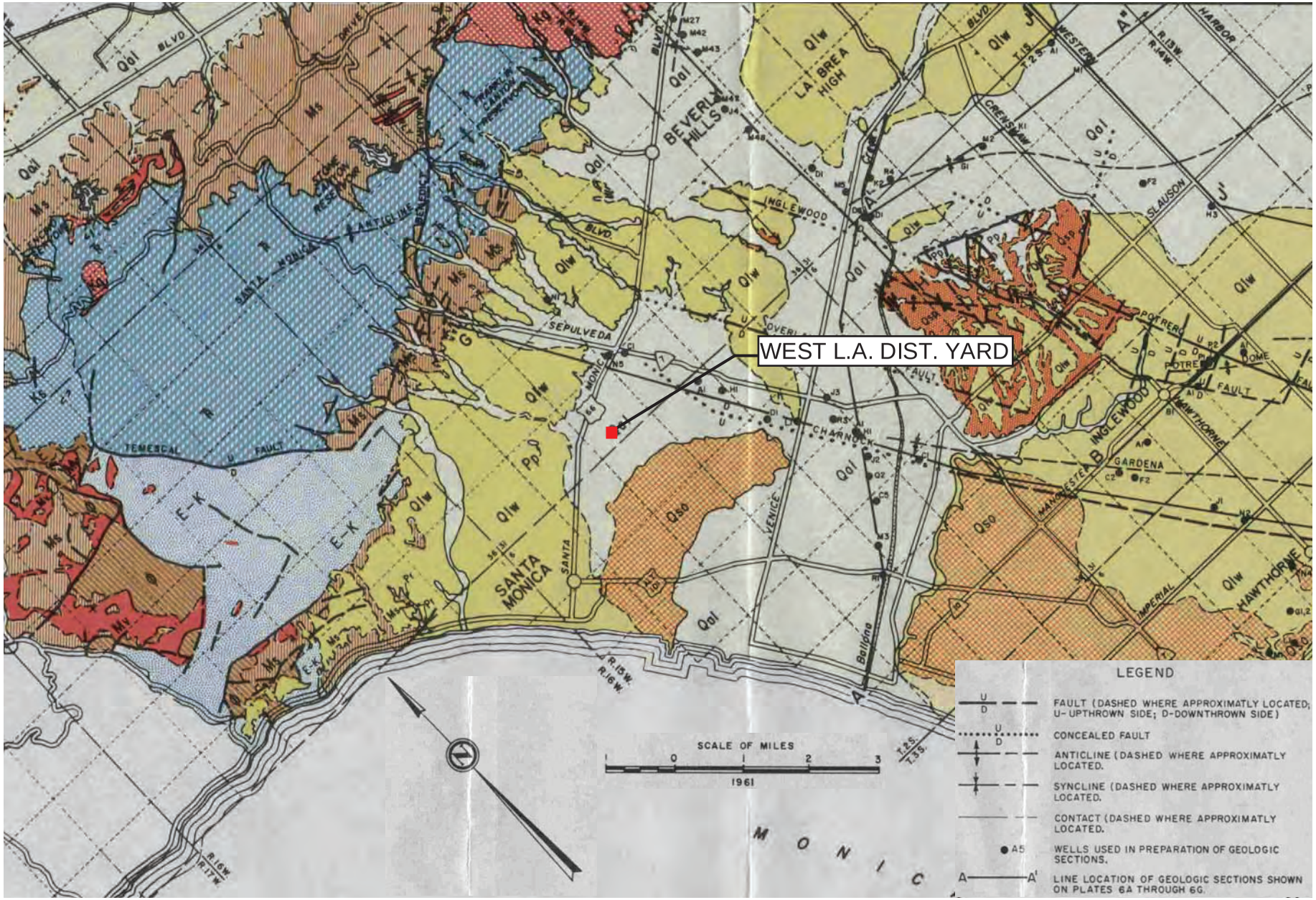


Figure 4 - Aerial Geology Map for West Los Angeles District Yard, 12300 W Nebraska Ave, Los Angeles, CA.
LADWP, September 2017

Base Map: Department of Water Resources 1961, Groundwater Geology of the Coastal Plain of Los Angeles County, Scale Shown.

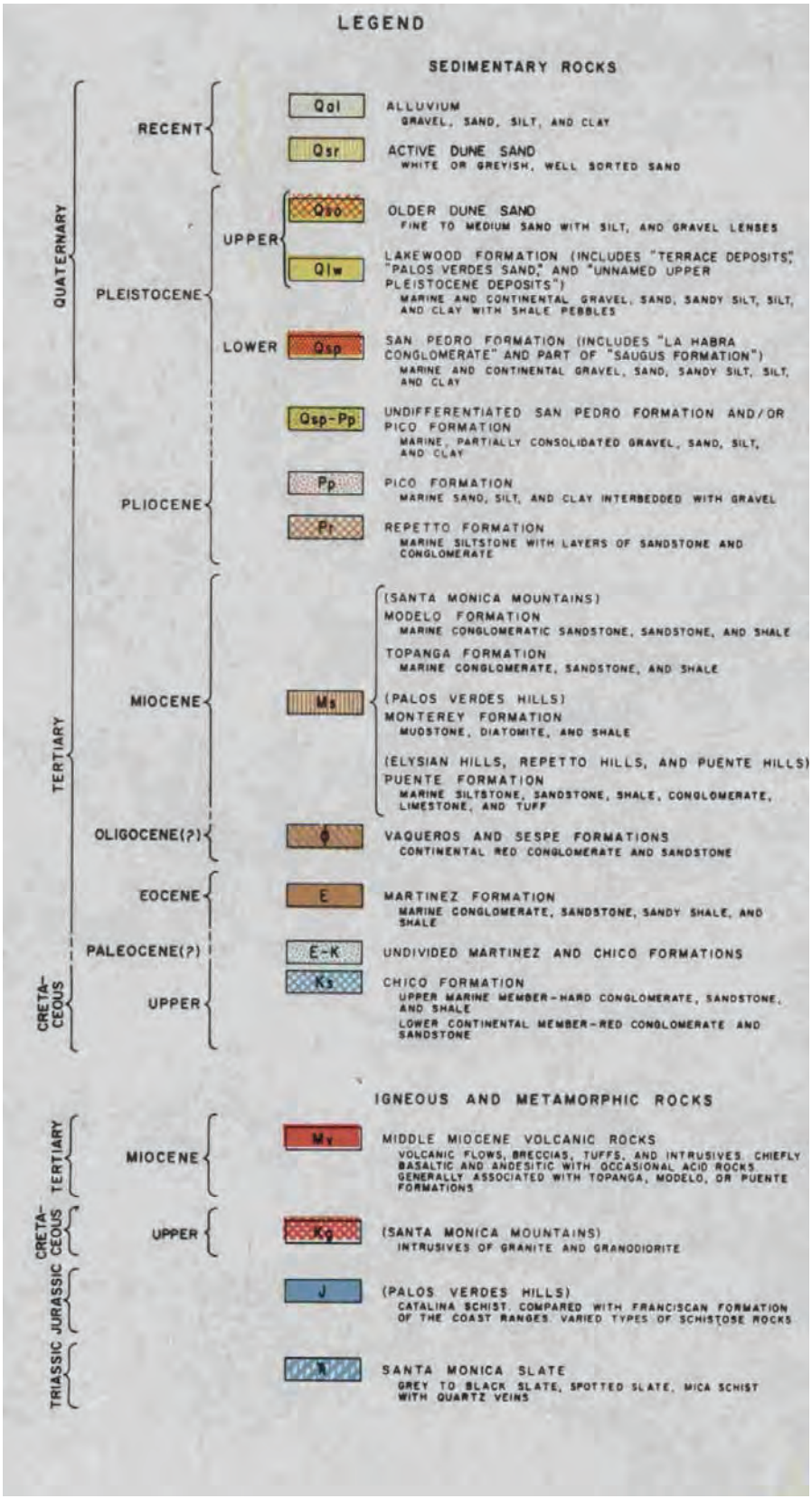


Figure 5 - Aerial Geology Map Legend for West Los Angeles District Yard, 12300 W Nebraska Ave, Los Angeles, CA. LADWP, September 2017

Base Map: Dibblee Geological Foundation, Geologic Map of the Beverly Hills and Van Nuys (South 1/2) Quadrangles, Los Angeles County, CA 1991.

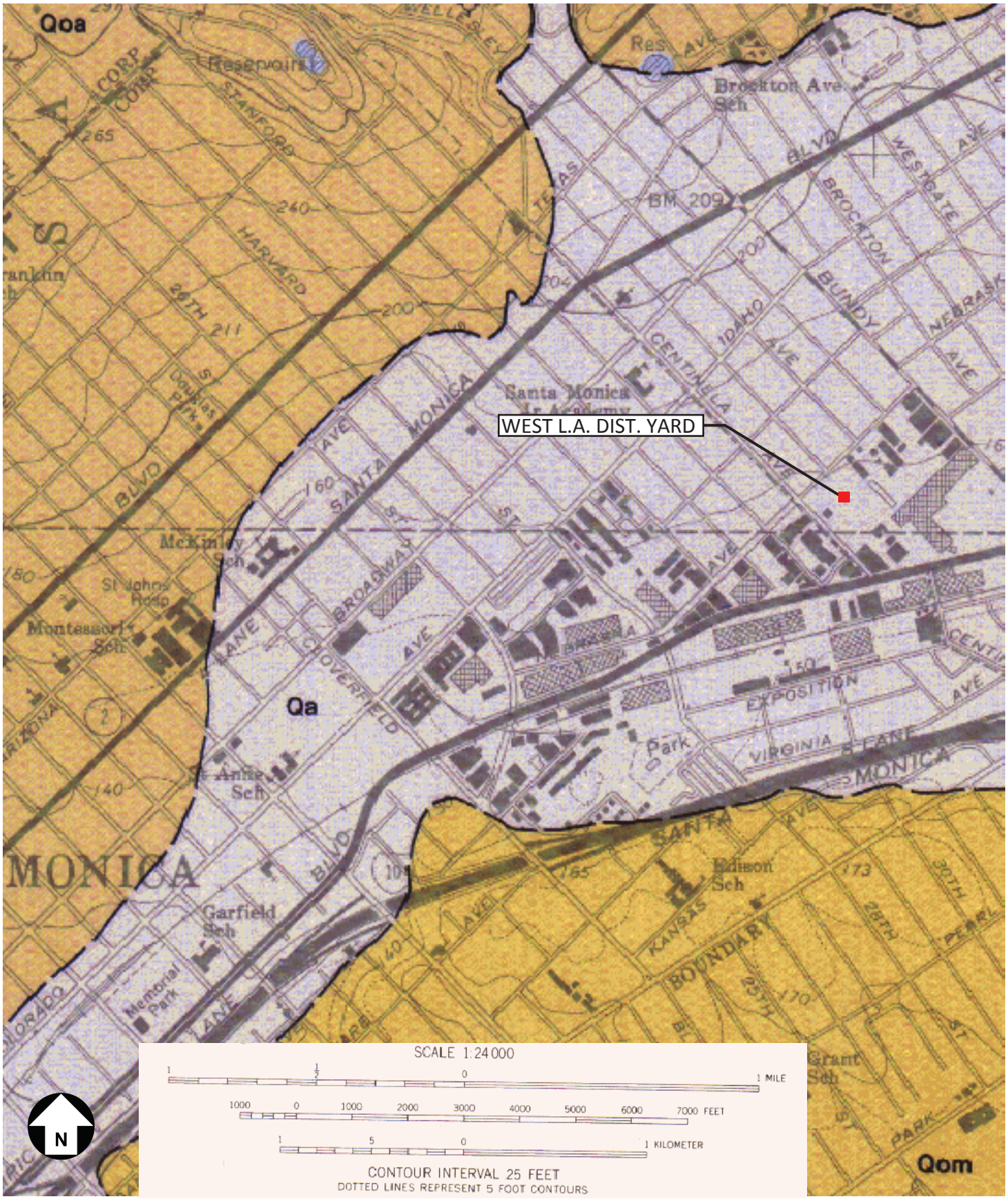


Figure 6 - Local Geologic Map for West Los Angeles District Yard, 12300 W. Nebraska Ave. Los Angeles, CA. LADWP, September 2017

Base Map: Dibblee Geological Foundation, Geologic Map of the Beverly Hills and Van Nuys (South 1/2) Quadrangles, Los Angeles County, CA 1991.

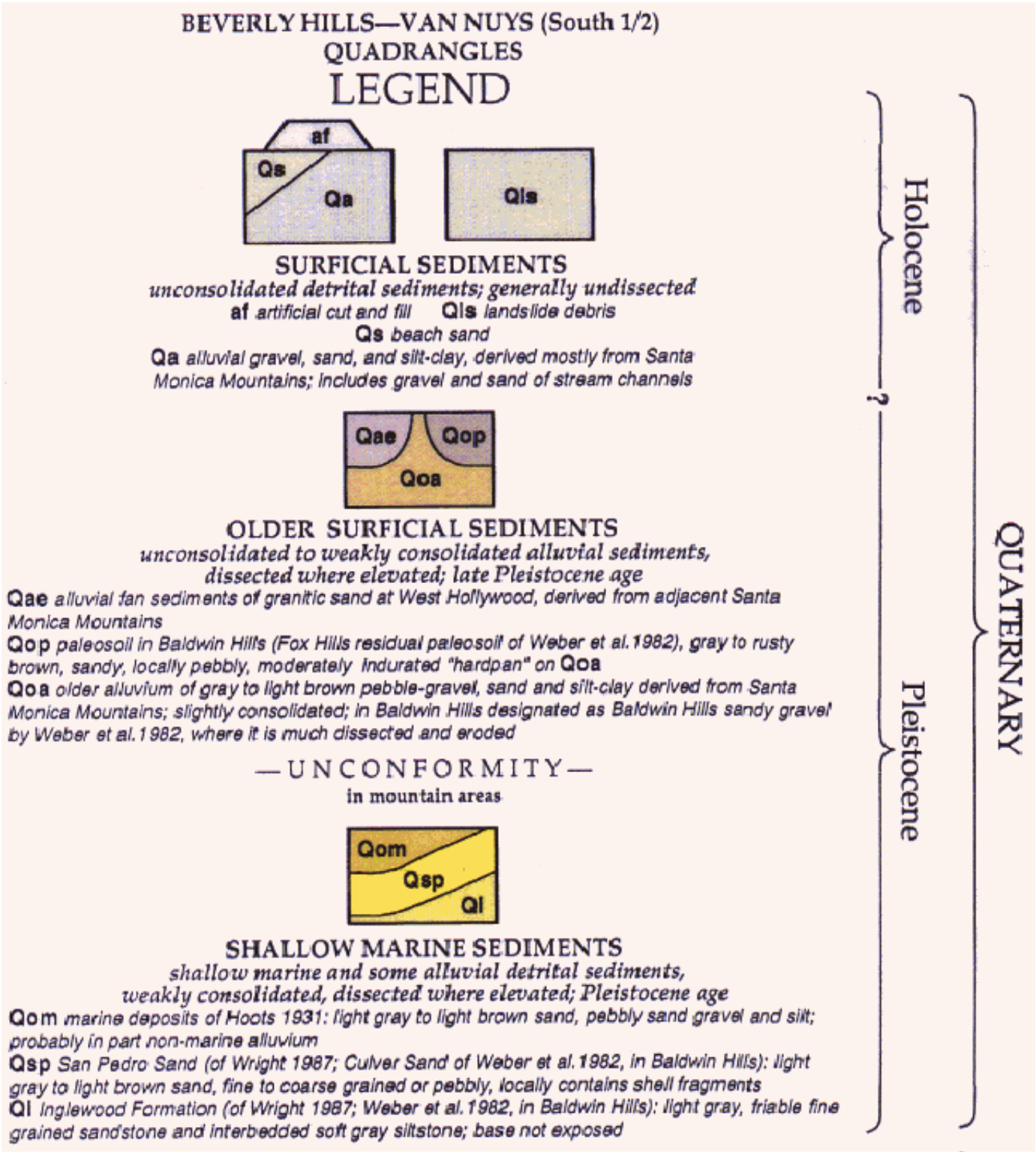
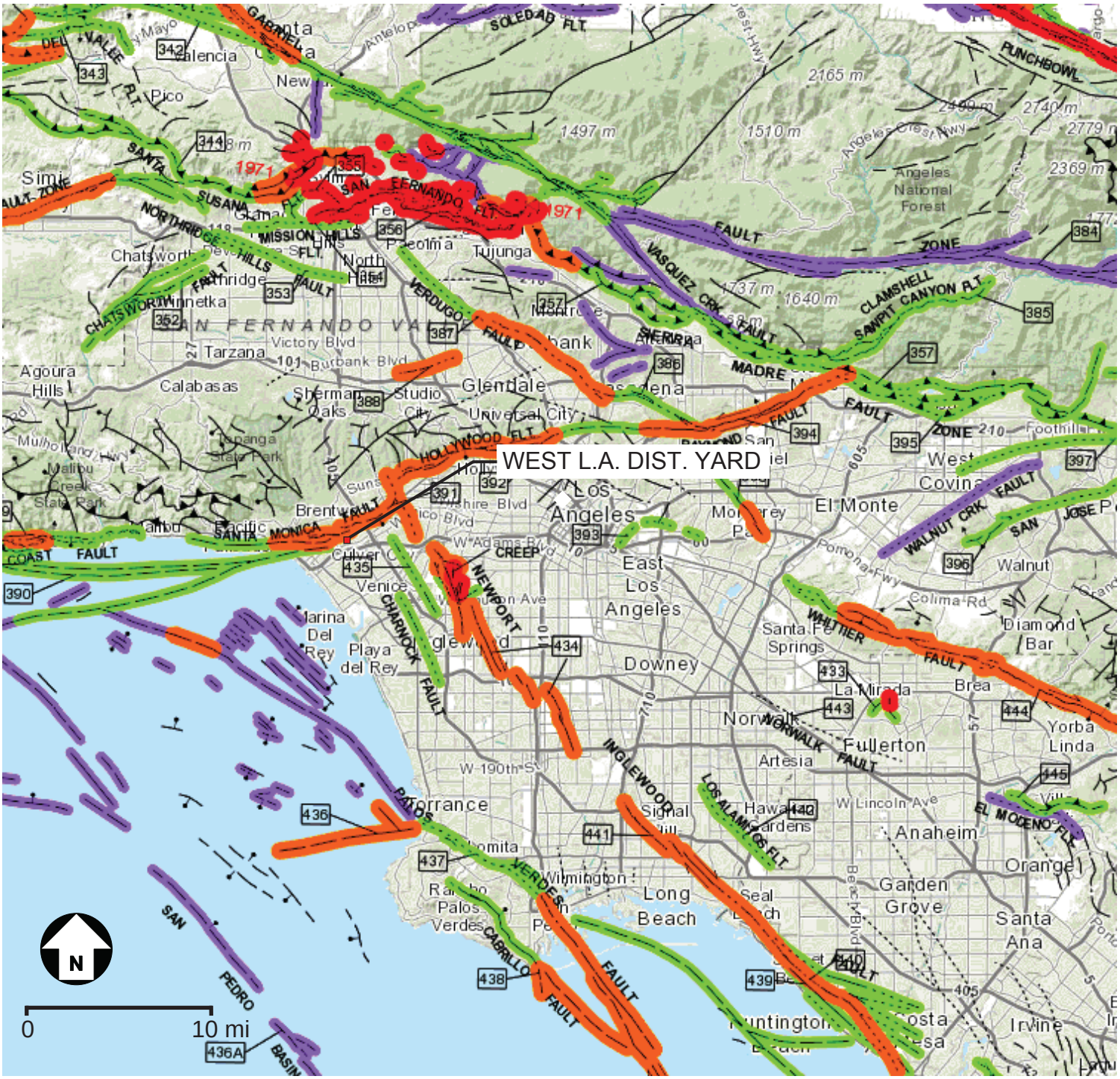


Figure 7 - Local Geologic Map Legend for West Los Angeles District Yard, 12300 W. Nebraska Ave. Los Angeles, CA. LADWP, September 2017



Base Map: California Geologic Survey, Department of Conservation, Interactive Website Fault Activity Map of California, 2010, scale shown.

Figure 8 - Regional Fault Map for West Los Angeles District Yard, 12300 W. Nebraska Ave. Los Angeles, CA. LADWP, September 2017

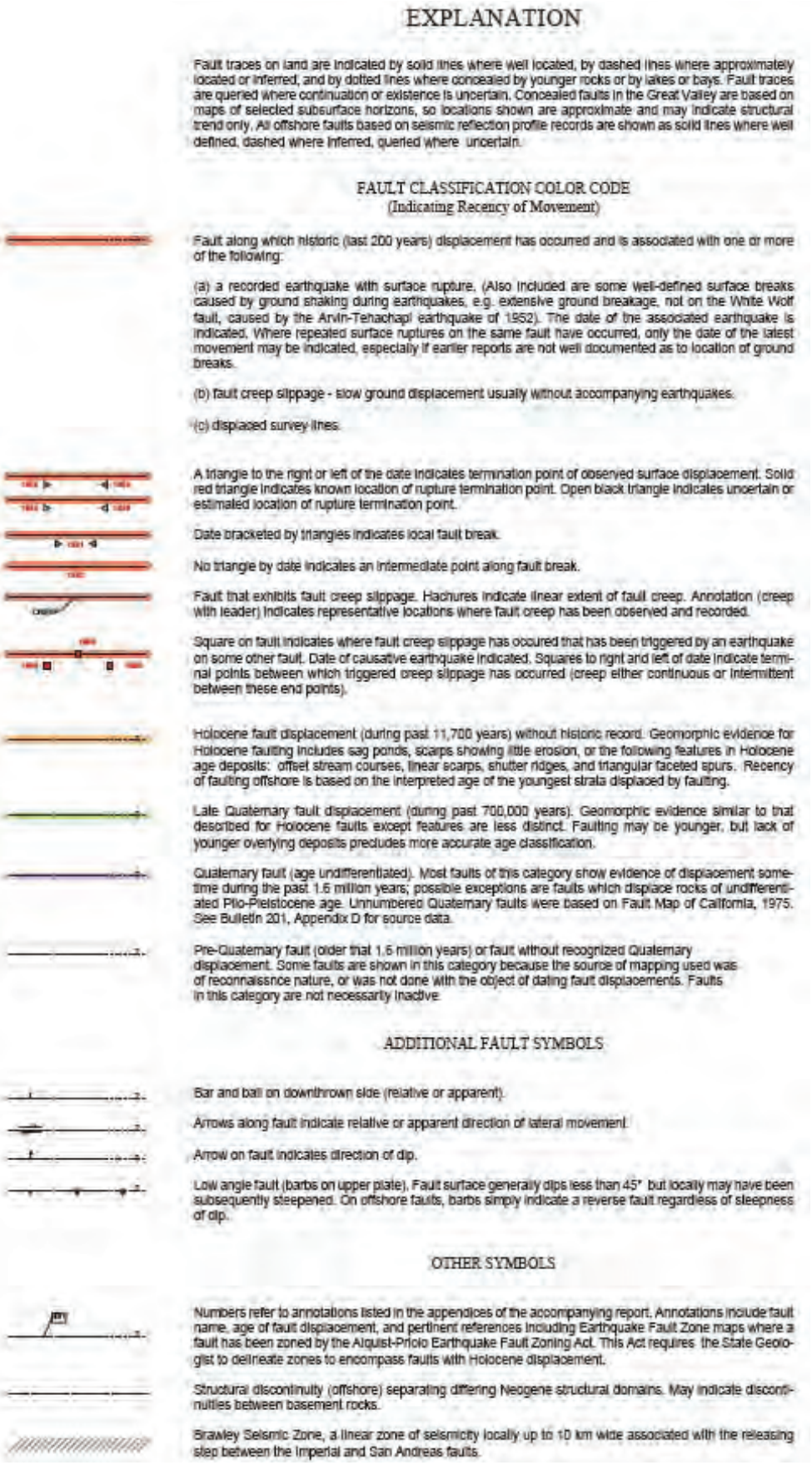
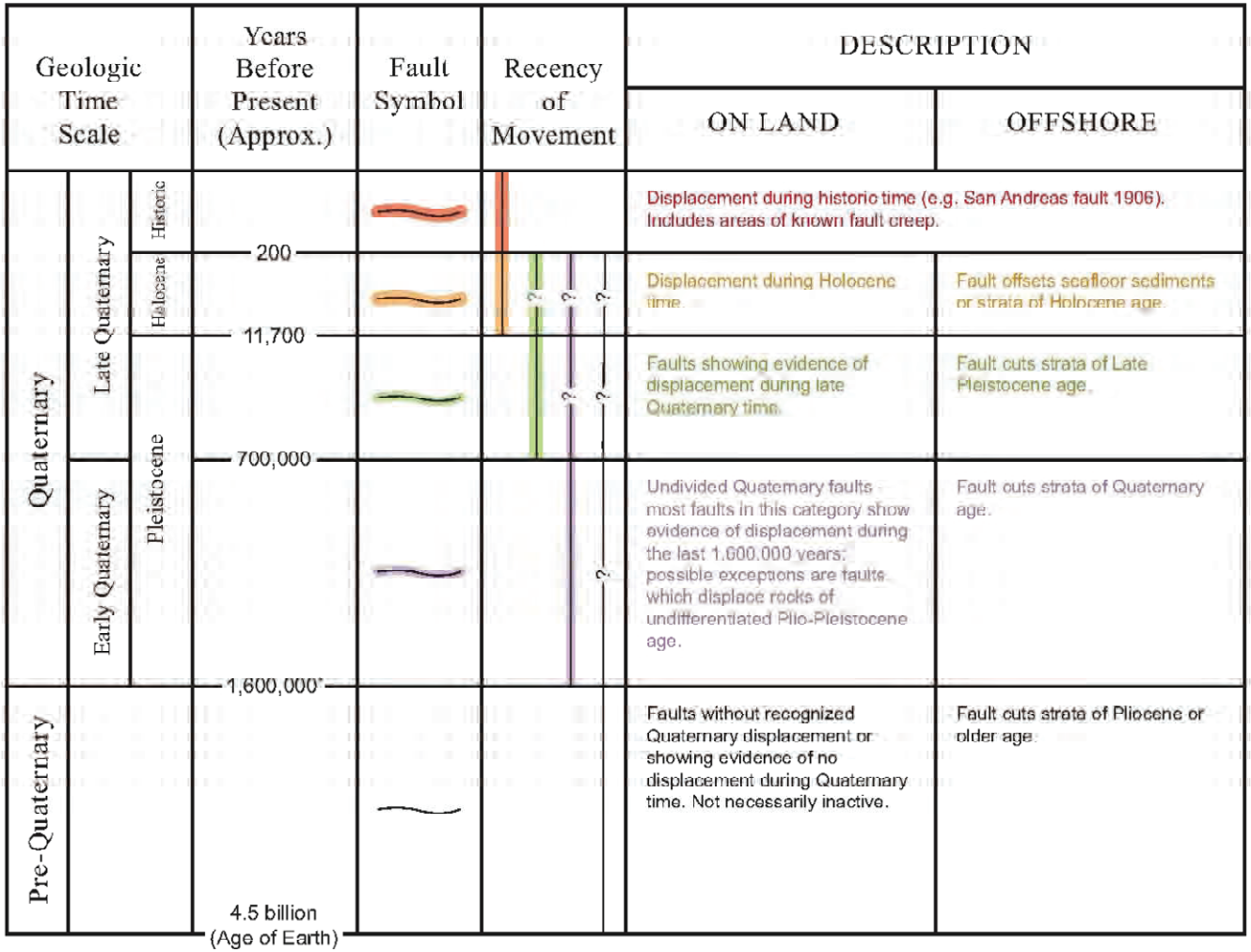


Figure 9 - Regional Fault Map Legend for West Los Angeles District Yard, 12300 W. Nebraska Ave. Los Angeles, CA. LADWP, September 2017



* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

Figure 10 - Regional Fault Map Legend for West Los Angeles District Yard, 12300 W. Nebraska Ave. Los Angeles, CA. LADWP, September 2017

Base Map: California Geological Survey 1999, Eqarthquake Zones of required Investigation, Beverly Hills Quadrangle. Scale 1:24,000.

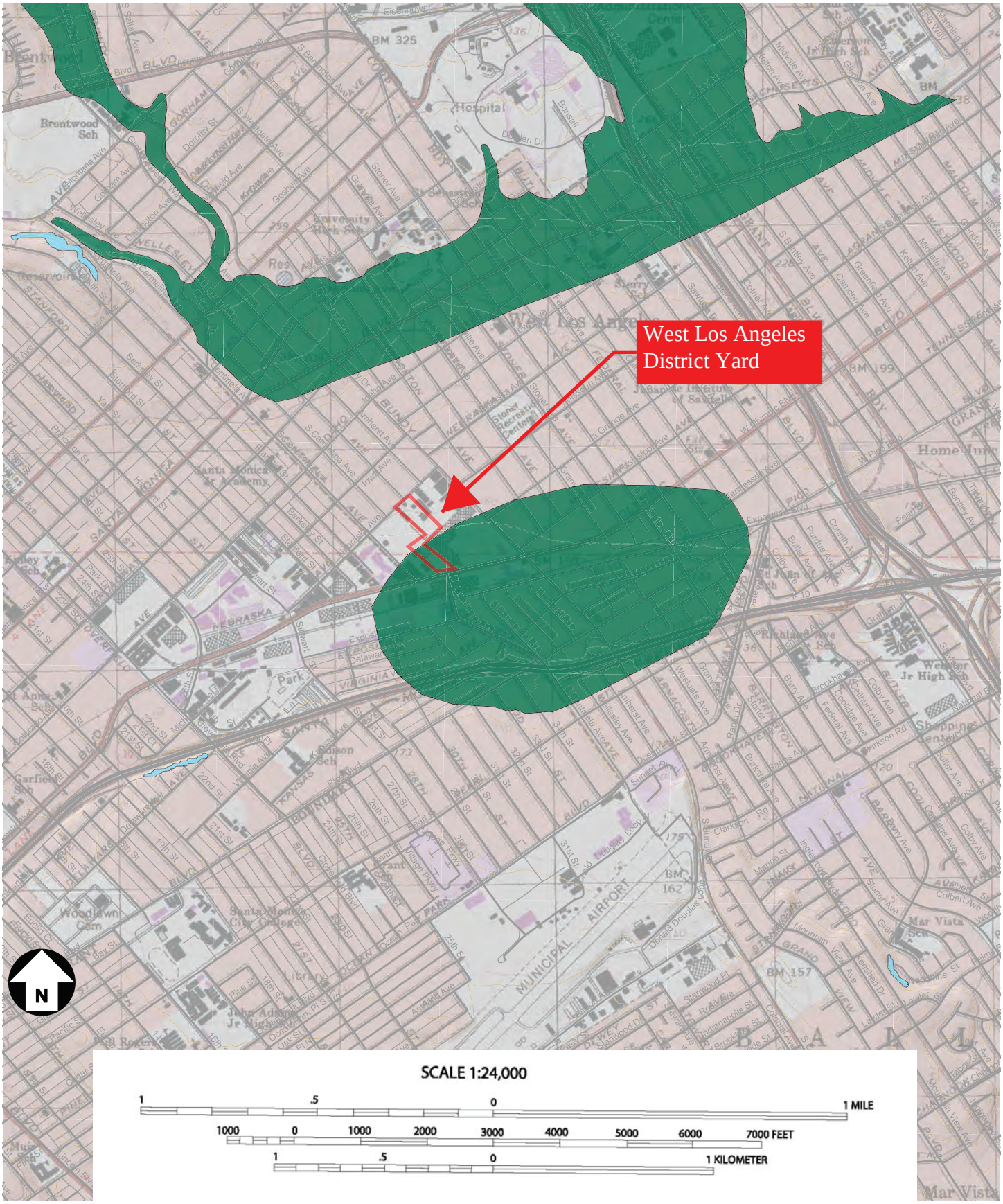
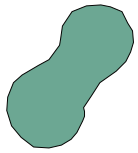
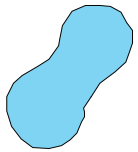


Figure 11 - Seismic Hazard Zones for West Los Angeles District Yard, 12300 W. Nebraska Ave. Los Angeles, CA. LADWP, September 2017

SEISMIC HAZARD ZONES



Liquefaction Zones
Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.



Earthquake-Induced Landslide Zones
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Figure 12 - Seismic Hazard Zones Map Legend for West Los Angeles District Yard, 12300 W. Nebraska Ave. Los Angeles, CA. LADWP, September 2017

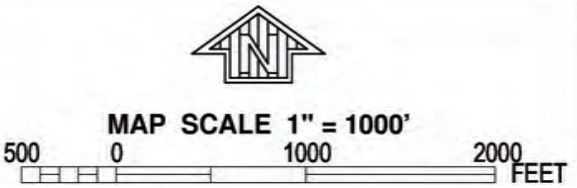


Figure 13-Flood Insurance Rate Map

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1590F

FIRM

FLOOD INSURANCE RATE MAP

LOS ANGELES COUNTY, CALIFORNIA

AND INCORPORATED AREAS

PANEL 1590 OF 2350

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LOS ANGELES COUNTY	065043	1590	F
LOS ANGELES, CITY OF	060137	1590	F
SANTA MONICA, CITY OF	060159	1590	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
06037C1590F

EFFECTIVE DATE
SEPTEMBER 26, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

APPENDIX A. PREVIOUS BORING LOGS AND LAB TESTING RESULTS

BOREHOLE LOG: HSA-1 (CPT-6

Project:
Drilling Method: Hollow-stem Auger
Date Began: 10-13-04
Date Completed: 10-14-04
Elevation (ft.): 161.7
North Coordinate: 4905
East Coordinate: 10061

Logged by: JLTO
Driller: Paul
Drill Rig: City of LA CME 75
Borehole Depth (ft.): 43.5
Groundwater Depth (ft.): None

City of Los Angeles
Department of Water & Power

Depth (ft)	N Value	Sample Number	Recovery (in)	Sample Type	USCS Symbol	Graphic Log	Soil Description
							Ground Surface
0							**Asphalt and CAB**
	na	1	na	Grab	SC/CL		**Sandy Clay to Clayey Sand:** Dark grey brown, sl damp, sl plastic, soft. **Notes:** SH = Shelby Tube (2 ft) SPT = Standard Penetration Test w/o liners.
5	na	2	22	SH	CL		**Silty Clay w. Sand:** Dark brown, sl damp, plastic, soft, tr gravel up to 1 inch, tip of Shelby tube is bent.
	3,4,5	3	16	SS	CL		**Silty Clay:** Medium brown, v sl damp, sl plastic, soft. Bag sample 5 - 10 ft.
10	na	4	28	SH	CL SC		**Gravelly Silty Clay w Sand:** Medium brown, v sl damp, sl plastic, soft, cont. 10% Santa Monica Slate (SM) gravel to 1/4 inch. Changes to a Clayey Sand @ 11 ft. **Clayey Sand:**
	3,3,4	5	16	SS	CL		**Silty Sandy Clay:** Medium brown, v sl damp, sl plastic soft, cont. vf gr sand, cont. 5-10% SM slate gravel to 1/8 inch. Bag Sample 10-15 ft.
15	na	6	26	SH	CL SC-SM		**Sandy Clay:** Changes to Silty clayey sand w gravel (SC) @ 15.25 ft. **Silty Clayey Sand w Gravel:** Med brown,v sl damp, vf gr p grded, subrnd, loose, cont. 10% SM slate to 1/8 inch.
	3,5,8	7	17	SS	SC-SM		**Clayey Sand w. Gravel:** Medium brown, v sl damp, vf gr, p grded, cont. tr SM slate gravel to 1/8 inch. Bag Sample15-20 ft.
20							

BOREHOLE LOG: HSA-1 (CPT-6

Project:
Drilling Method: Hollow-stem Auger
Date Began: 10-13-04
Date Completed: 10-14-04
Elevation (ft.): 161.7
North Coordinate: 4905
East Coordinate: 10061

Logged by: JLTO
Driller: Paul
Drill Rig: City of LA CME 75
Borehole Depth (ft.): 43.5
Groundwater Depth (ft.): None

City of Los Angeles
Department of Water & Power

Depth (ft)	N Value	Sample Number	Recovery (in)	Sample Type	USCS Symbol	Graphic Log	Soil Description
	na	8	10	SH	SC		**Clayey Sand w. Gravel:** As above.
					GP-GC		**Gravel w. Clay and Sand:**
	5,6,7	9	15	SS	GP-GC		**Gravel w. Clay and Sand:** Medium brown, v sl damp, firm, cont. vf gr sand, SM slate to 1/4 inch..
							Silty Clay:
25							
	na	10	26	SH	CL		**Clay:**
					SW-SC		**Sand w. Clay and Gravel:** Medium to dark brown, sl damp, vf gr, p grded, subrnd, cont. 20-30% S slate to 3/4 inch.
	6,5,5	11	18	SS	CL		**Silty Clay:** Medium brown, damp, plastic, soft.
30							
	na	12	27	SH	CL		**Silty Clay w. Sand:** As above.
					SP-SM		**Sand w. Silt and Gravel:** Dark brown,v sl damp, vf gr p grded, subrnd,
	23,14,16	13	18	SS	SP-SM		**Sand w. Clay and Gravel:** As above..
35							
	na	14	27	SH	SM		**Silty Sand w. Gravel:** Medium grey brown, sl damp, plastic, soft.
					CL		**Sandy Clay:** .
	5,5,9	15	18	SS	CL		**Silty Clay w. Gravel:** Medium brown, damp, plastic, soft, cont. 5% SM slate to 1 1/4 inch, hard drilling.
40							

BOREHOLE LOG: HSA-1 (CPT-6

Project:
Drilling Method: Hollow-stem Auger
Date Began: 10-13-04
Date Completed: 10-14-04
Elevation (ft.): 161.7
North Coordinate: 4905
East Coordinate: 10061

Logged by: JLTO
Driller: Paul
Drill Rig: City of LA CME 75
Borehole Depth (ft.): 43.5
Groundwater Depth (ft.): None

City of Los Angeles
Department of Water & Power

Depth (ft)	N Value	Sample Number	Recovery (in)	Sample Type	USCS Symbol	Graphic Log	Soil Description
	na	16	15	SH	GP-GC		**Gravel w. Clay and Sand:** Dark grey brown, sl damp, sand is vf-m gr, p graded, subang, dense, SM Slate to 1 inch, hard drilling.
	20,29,32	17	18	SS	GP-GC		**Gravel w. Clay and Sand:** As above.
							TD Hole @ 43.5 ft. Backfilled wth native material, sand, and bentonite. Patched asphalt with cold patch.
45							
50							
55							
60							

BOREHOLE LOG: HSA-2 (CPT-5

Project:
Drilling Method: Hollow-stem Auger
Date Began: 10-13-04
Date Completed: 10-14-04
Elevation (ft.): 160.7
North Coordinate: 4857
East Coordinate: 10019

Logged by: JLTO
Driller: Paul
Drill Rig: City of LA CME 75
Borehole Depth (ft.): 52
Groundwater Depth (ft.): 44

City of Los Angeles
Department of Water & Power

Depth (ft)	N Value	Sample Number	Recovery (in)	Sample Type	USCS Symbol	Graphic Log	Soil Description
							Ground Surface
0							**Asphalt and CAB:**
	na	1	na	Grab	SC/CL		**Clayey Sand to Sandy Clay:** Dark grey brown, sl damp, sl plastic, soft. **Notes:** SH = Shelby Tube (2 ft) SPT = Standard Penetration Test w/o liners. CM = Calif. Mod Split Spoon (2 ft) Bag Sample 0 - 5 ft.
5	na	2	22	SH	SC		**Silty Clayey Sand:** Dark brown,sl damp, plastic, soft, tr gravel up to 1 inch, tip of Shelby tube bent.
	4,3,5	3	18	SS	CL		**Silty Clay:** Medium brown, v sl damp, sl plastic soft. Bag Sample 5 - 10 ft.
10	na	4	25	SH	CL SC		**Gravelly Silty Clay w. Sand:** Medium brown, v sl damp, sl plastic, soft, cont. 10% Santa Monica (SM) slate gravel to 1/4 inch. **Clayey Sand:**
	3,2,4	5	15	SS	CL		**Silty Sandy Clay w. Gravel:** Medium brown, v sl damp, sl plastic, soft, cont. vf gr sand and 5-10% SM slate gravel to 1/8 inch. Bag Sample 10-15 ft.
15	na	6	26	SH	CL SC-SM		**Sandy Clay:** **Silty Clayey Sand w. Gravel:** Medium brown, v sl damp, vf gr, p grded, subrnd, loose, cont. 10% SM slate to 1/8 inch.
	4,3,5	7	17	SS	SC		**Clayey Sand w. Gravel:** Medium brown, v sl damp, vf gr cont. tr SM slate gravel to 1/8 inch. Bag Sample 15-20 ft.
20							

BOREHOLE LOG: HSA-2 (CPT-5

Project:
Drilling Method: Hollow-stem Auger
Date Began: 10-13-04
Date Completed: 10-14-04
Elevation (ft.): 160.7
North Coordinate: 4857
East Coordinate: 10019

Logged by: JLTO
Driller: Paul
Drill Rig: City of LA CME 75
Borehole Depth (ft.): 52
Groundwater Depth (ft.): 44

City of Los Angeles
Department of Water & Power

Depth (ft)	N Value	Sample Number	Recovery (in)	Sample Type	USCS Symbol	Graphic Log	Soil Description
	na	8	25	SH	SC		**Clayey Sand w. Gravel:** As above.
	5,4,13	9	16	SS	SC		**Clayey Sand w. Gravel:** As above.
25	na	10	26	SH	GP-GC		**Gravel w. Clay and Sand:** Medium brown, sl damp, sand is very fine grain.
	5,7,5	11	18	SS	CL		**Silty Clay:** Mottled grey and medium brown, sl damp, sl plastic soft.
30	na	12	27	SH	GP-GC		**Gravel w. Clay and Sand:** Medium brown, v sl damp, vf gr p grded, subrnd, loose.
					CL-ML		**Sandy Silty Clay:**
	6,5,8	13	20	SS	CL-ML		**Silty Clay:** Mottled grey and medium brown, sl damp, sl plastic, soft.
35	na	14	26	SH	CL		**Clay w. Sand:** Medium grey brown, sl damp, plastic, soft.
					CL-ML		**Silty Clay w. Sand:**
	10,6,7	15	16	SS	CL-ML		**Silty Clay w. Sand:**
					SM		**Gravelly Silty Sand:** Vf grain, cont. SM slate to 1/8 inch.
40							

BOREHOLE LOG: HSA-2 (CPT-5

Project:
Drilling Method: Hollow-stem Auger
Date Began: 10-13-04
Date Completed: 10-14-04
Elevation (ft.): 160.7
North Coordinate: 4857
East Coordinate: 10019

Logged by: JLTO
Driller: Paul
Drill Rig: City of LA CME 75
Borehole Depth (ft.): 52
Groundwater Depth (ft.): 44

City of Los Angeles
Department of Water & Power

Depth (ft)	N Value	Sample Number	Recovery (in)	Sample Type	USCS Symbol	Graphic Log	Soil Description
	na	16	26	SH	CL		**Sandy Clay:** Medium brown, sl damp, plastic,stiff, cont. vf gr sand, tr SM slate gravel to 1/8 inch.
	8,12,21	17	22	SS	CL		**Sandy Clay:** As above.
					SC		**Clayey Sand w. Gravel:** SM slate gravel to 1 inch, damp, hard drilling.
45	na	18	15	CM	SC		**Clayey Sand w. Gravel:** As above, wet, Groundwater at 44 ft.
	20,25,36	19	12	SS	SC		**Clayey Sand w. Gravel:** As above.
50	na	20	4	CM	SC		**Clayey Sand w. Gravel:** Sample fell out of sampler during recovery, probably a clayey sand as above.
							TD Hole @ 52 ft. Backfilled with native material, sand and bentonite. Patched asphalt with cold patch.
55							
60							

BOREHOLE LOG: HSA-3 (CPT-2

Project:
Drilling Method: Hollow-stem Auger
Date Began: 10-14-04
Date Completed: 10-14-04
Elevation (ft.): 162.8
North Coordinate: 4964
East Coordinate: 10090

Logged by: JLTO
Driller: Paul
Drill Rig: City of LA CME 75
Borehole Depth (ft.): 48.5
Groundwater Depth (ft.): 44

City of Los Angeles
Department of Water & Power

Depth (ft)	N Value	Sample Number	Recovery (in)	Sample Type	USCS Symbol	Graphic Log	Soil Description
							Ground Surface
0							**Asphalt and CAB:**
	na	1	na	Grab	SC/CL		**Silty Clay to Clayey Sand:** Dark brown, sl damp, non-sl plastic, soft. **Notes:** SH = Shelby Tube (2 ft). SPT = Standard Penetration Test w/o liners. CM = Calif. Mod Split-spoon (2 ft).
5	na	2	26	SH	CL		**Silty Clay w. Sand:** Dark brown, sl damp, sl plastic, soft.
	3,3,5	3	14	SS	CL		**Silty Clay:** Medium dark brown, v sl damp, sl plastic soft, contains a trace of Santa Monica (SM) slate. Bag Sample 3 - 10 ft.
10	na	4	27	SH	CL		**Gravelly Sandy Clay:** Dark brown, v sl damp, soft, cont. 20% SM slate to 3/4 inch.
					SC		**Clayey Sand:**
	4,3,7	5	16	SS	CL		**Gravelly Sandy Clay:** As above.
					SM		**Gravelly Silty Sand:** Vf - m gr, p grded, subrnd, loose, cont. 20% SM slate to 1/2 inch. Bag Sample 10 - 15 ft.
15	na	6	27	SH	CL		**Sandy Clay:** Dark brown to black, v sl damp.
					SC-SM		**Clayey Sand w. Gravel:** Dark brown to black, v sl damp, sand is vf grain, SM slate to 1/4 inch. Gravel is angular and platy in shape.
	18,20,18	7	16	SS	SP		**Gravelly Sand:** Dark brown, to dark grey brown, v sl damp, vf-f gr, p grded subang, dense, cont 30% SM slate to 1 inch.
20							

BOREHOLE LOG: HSA-3 (CPT-2

Project:
Drilling Method: Hollow-stem Auger
Date Began: 10-14-04
Date Completed: 10-14-04
Elevation (ft.): 162.8
North Coordinate: 4964
East Coordinate: 10090

Logged by: JLTO
Driller: Paul
Drill Rig: City of LA CME 75
Borehole Depth (ft.): 48.5
Groundwater Depth (ft.): 44

City of Los Angeles
Department of Water & Power

Depth (ft)	N Value	Sample Number	Recovery (in)	Sample Type	USCS Symbol	Graphic Log	Soil Description
	na	8	26	SH	SC		**Clayey Sand:**
					SC-SM		**Silty Clayey Sand w. Gravel:** Medium brown, v sl damp, sl platic, firm, cont. 10% SM slate to 1/4 inch.
	6,5,8	9	16	SS	CL		**Gravelly Silty Clay:** Medium grey brown, v sl damp, sl plastic to plastic, soft, cont tr of vf gr sand and 5 - 10% SM slate gravel to 1 inch.
25	na	10	27	SH	SC		**Gravelly Clayey Sand:** Dark grey brown, v sl damp, vf-m gr, p grded, subang, loose, cont. 20% SM slate to 1/2 inch.
	6,7,6	11	18	SS	SC		**Gravelly Clayey Sand:** As above.
					CL		**Clay:** Medium grey brown, v sl damp,sl plastic, soft, contains a 1 inch sand lense.
30	na	12	26	SH	CL		**Sandy Clay w. Gravel:** Medium grey brown, v sl damp, cont vf gr sand.
	16,5,19	13	18	SS	CL		**Sandy Clay w. Gravel:** As above.
35	na	14	26	SH	CL		**Clay w. Sand:**
					SC-SM		**Silty Clayey Sand w. Gravel:** Grey brown, v sl damp, vf - m gr, p grded, subang, dense, cont SM slate to 1/8 inch, tip of Shelby damaged.
	13,13,19	15	23	SS	SC-SM		**Silty Clayey Sand w. Gravel:** As above.
					CL		**Gravelly Silty Clay:** Grey brown, damp, sl plastic, cont 20% gravel, tr m gr golden sand.
40							

BOREHOLE LOG: HSA-3 (CPT-2

Project:
Drilling Method: Hollow-stem Auger
Date Began: 10-14-04
Date Completed: 10-14-04
Elevation (ft.): 162.8
North Coordinate: 4964
East Coordinate: 10090

Logged by: JLTO
Driller: Paul
Drill Rig: City of LA CME 75
Borehole Depth (ft.): 48.5
Groundwater Depth (ft.): 44

City of Los Angeles
Department of Water & Power

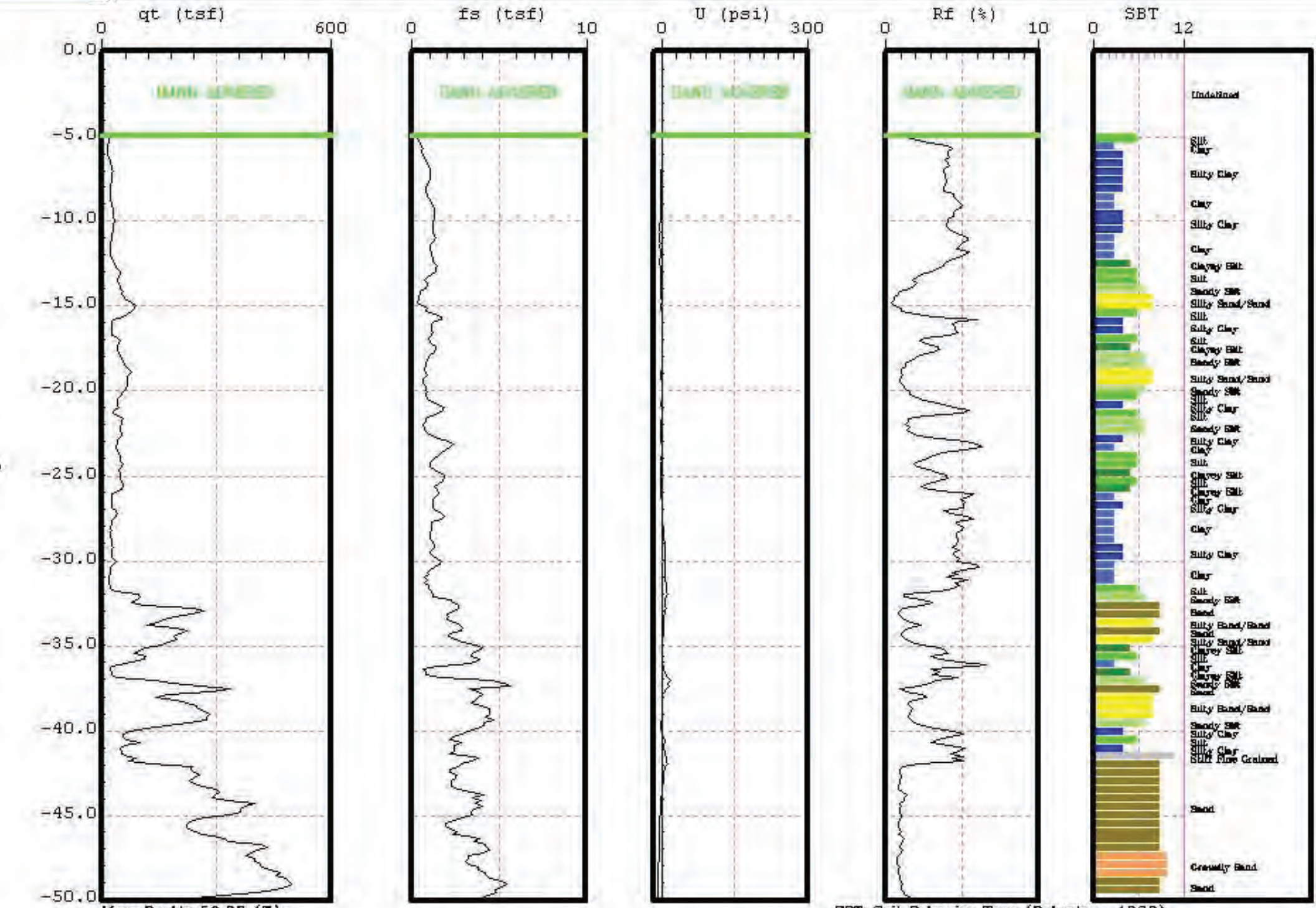
Depth (ft)	N Value	Sample Number	Recovery (in)	Sample Type	USCS Symbol	Graphic Log	Soil Description
	na	16	22	SH	CL		**Sandy Clay:**
					SC-SM		**Silty Clayey Sand w. Gravel:** Dark grey to black, v sl damp, vf - m gr, cont SM slate gravel to 1/2 inch.
	20,30,27	17	18	SS	SC-SM		**Silty Clayey Sand w. Gravel:** As above.
45	na	18	15	CM	SW-SC		**Sand w. Clay and Gravel:** Dark grey to black, wet, (GW @ 44 ft), gravel is SM slate, planer shaped w rounded edges, size is up to 1 inch. Sand is vf - m gr, dense, hard drilling.
	15,14,17	19	15	SS	SW-SC		**Sand w. Clay and Gravel:** As above, decreasing silt content.
							TD Hole @ 48.5 ft. Backfilled with native material, sand, and bentonite. Patched asphalt with cold patch.
50							
55							
60							

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-01

Engineer: J. OWEN
Date: 09:28:04 10:06



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

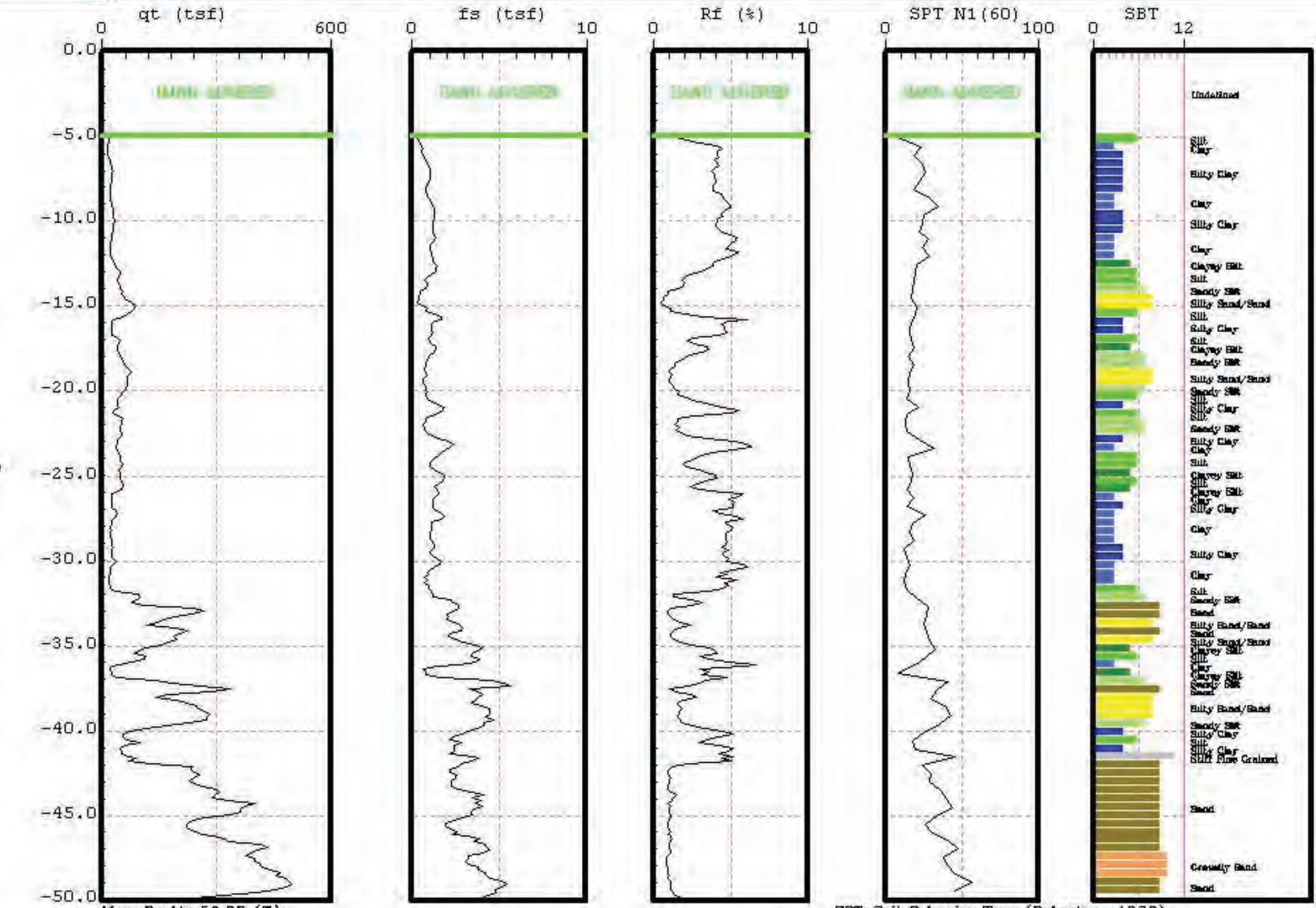
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-01

Engineer: J. OWEN
Date: 09:28:04 10:06



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

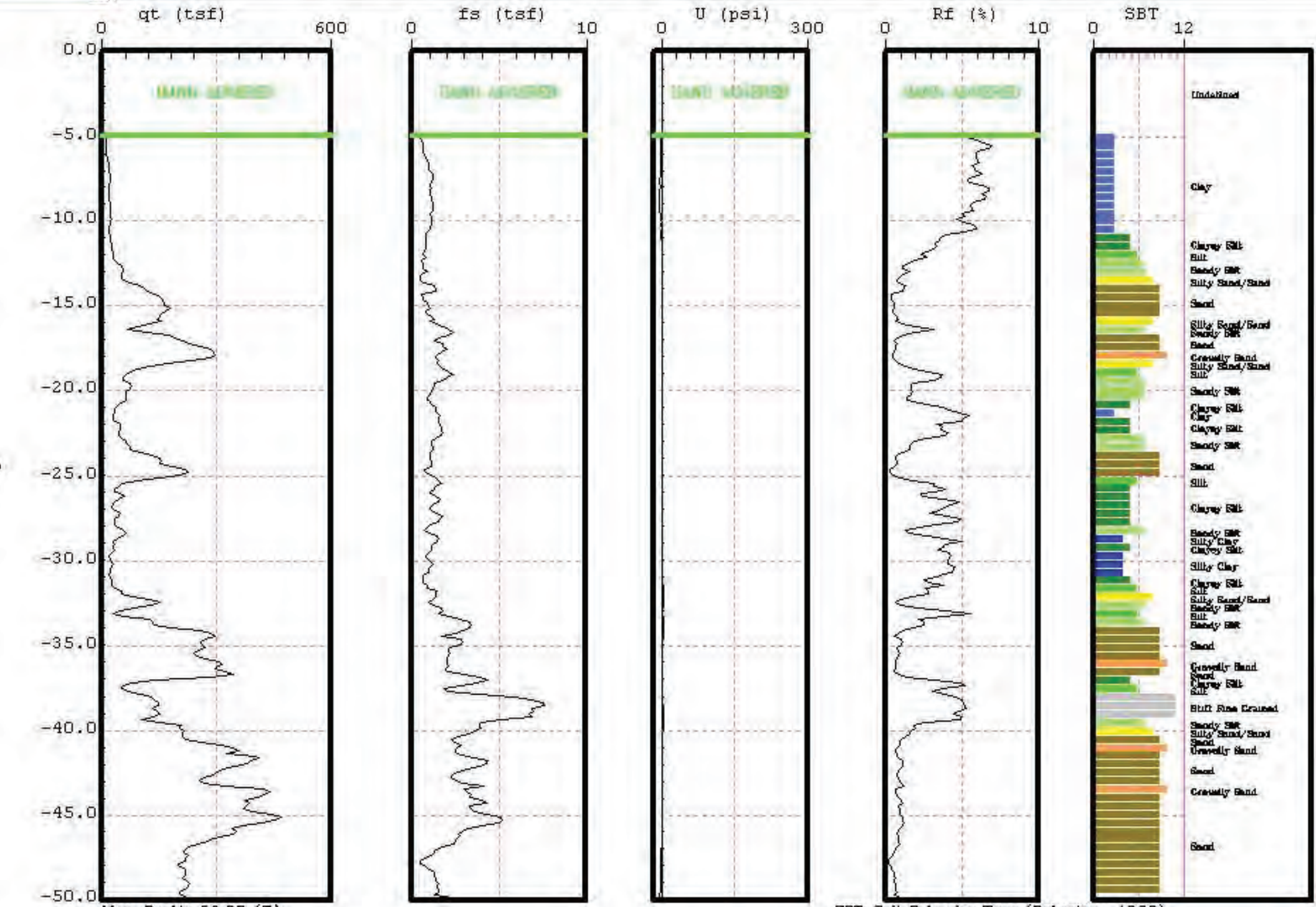
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-02

Engineer: J. OWEN
Date: 09:28:04 10:36



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

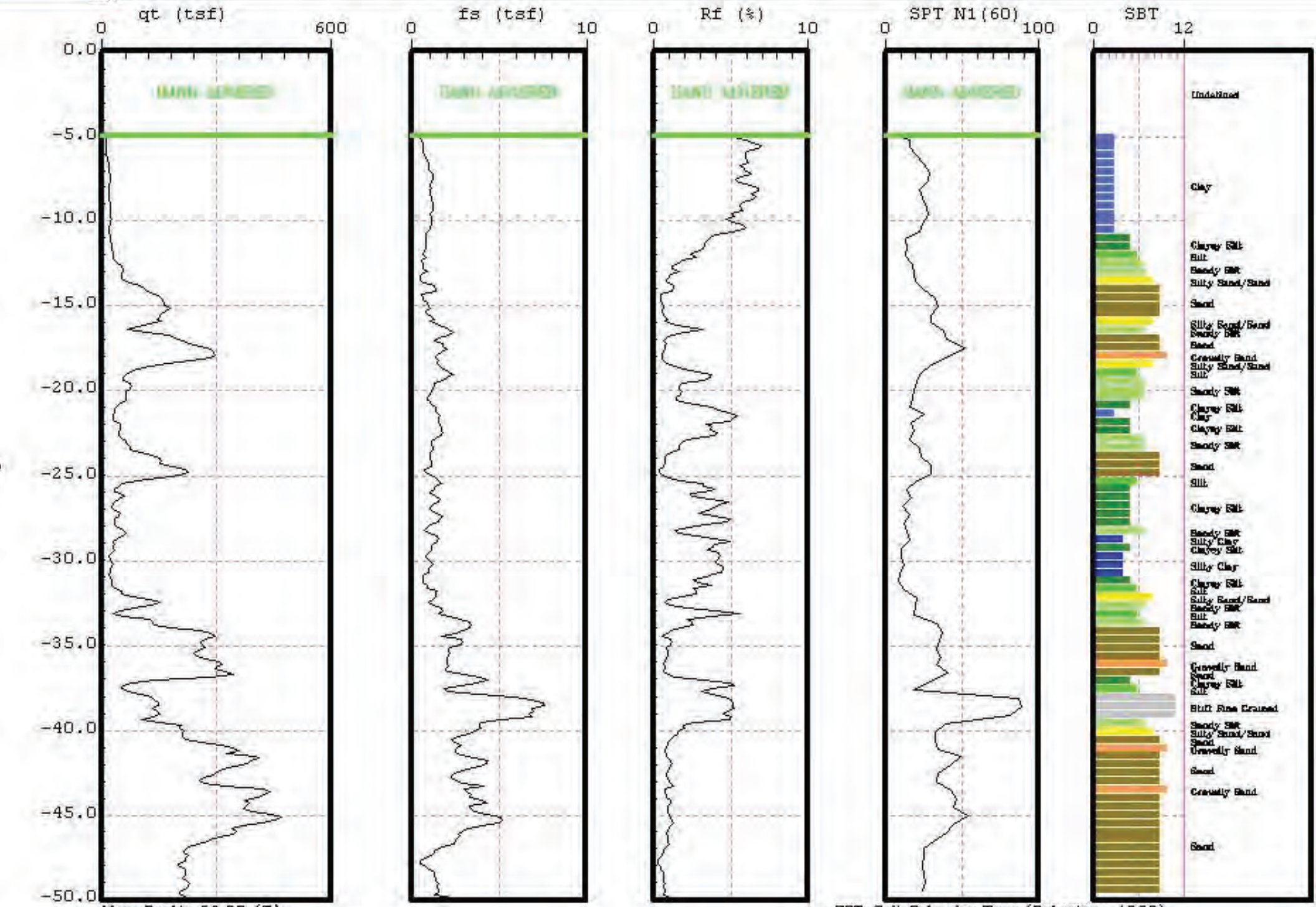
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-02

Engineer: J. OWEN
Date: 09:28:04 10:36



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

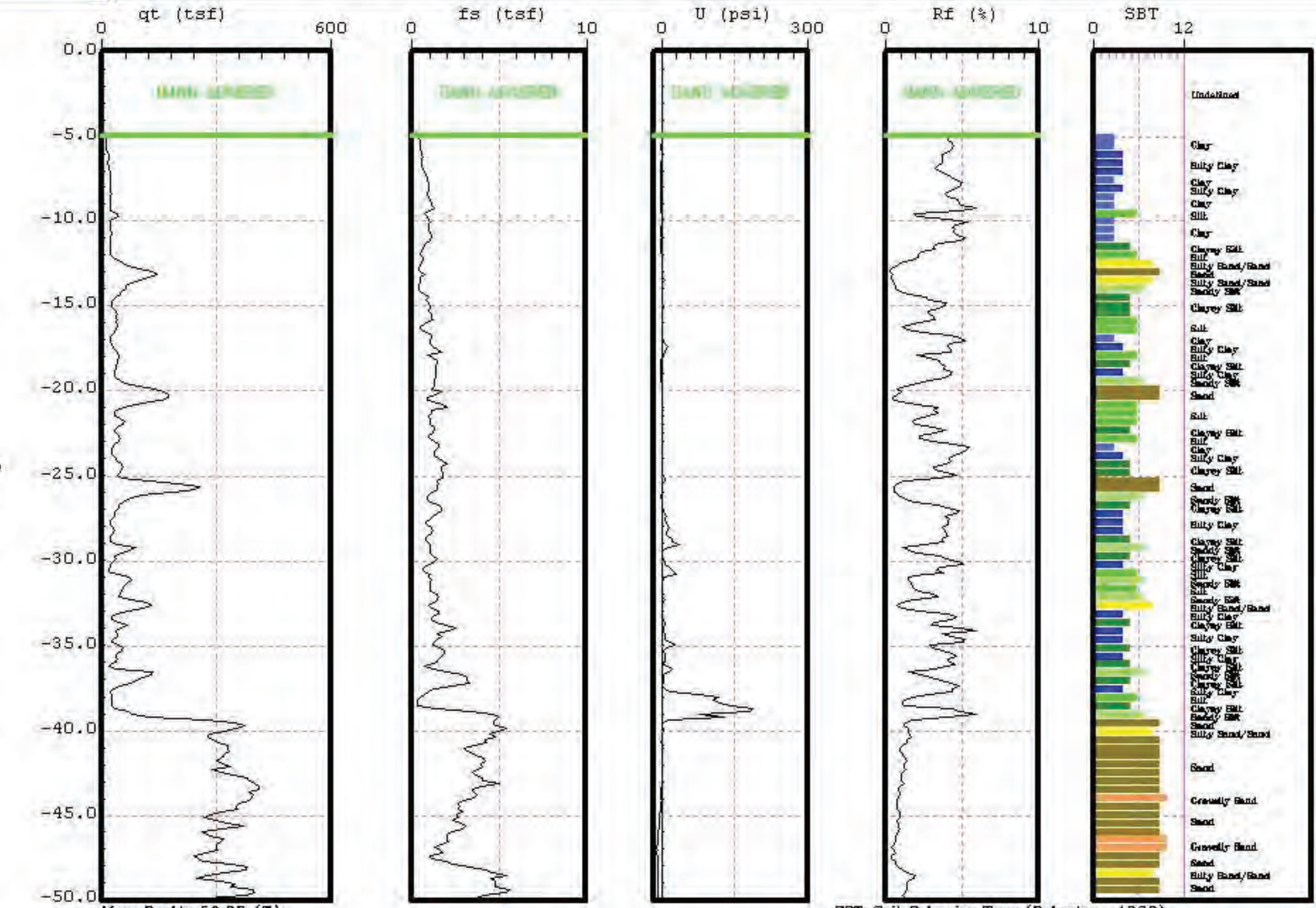
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-03

Engineer: J. OWEN
Date: 09:28:04 11:00



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

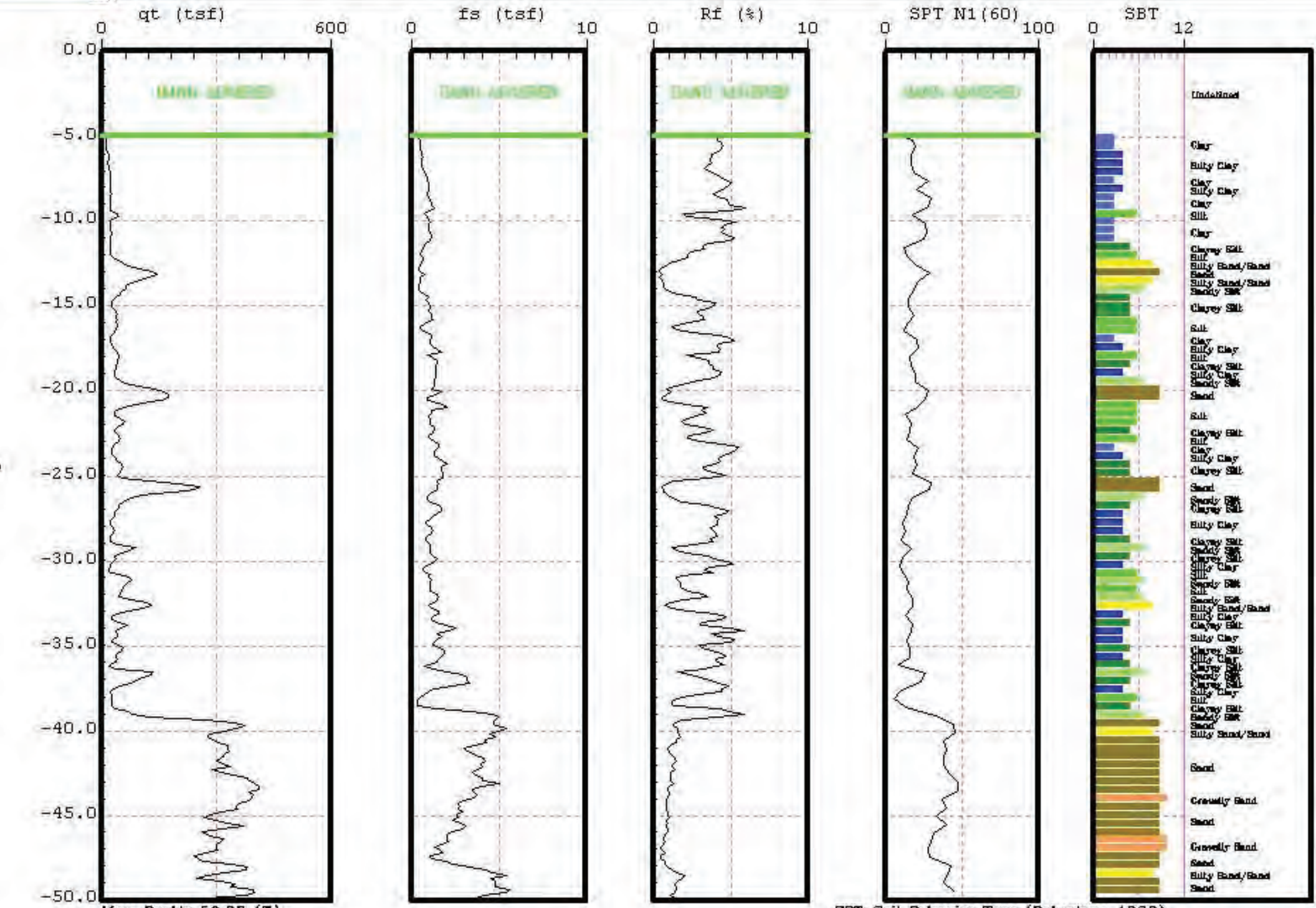
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-03

Engineer: J. OWEN
Date: 09:28:04 11:00



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

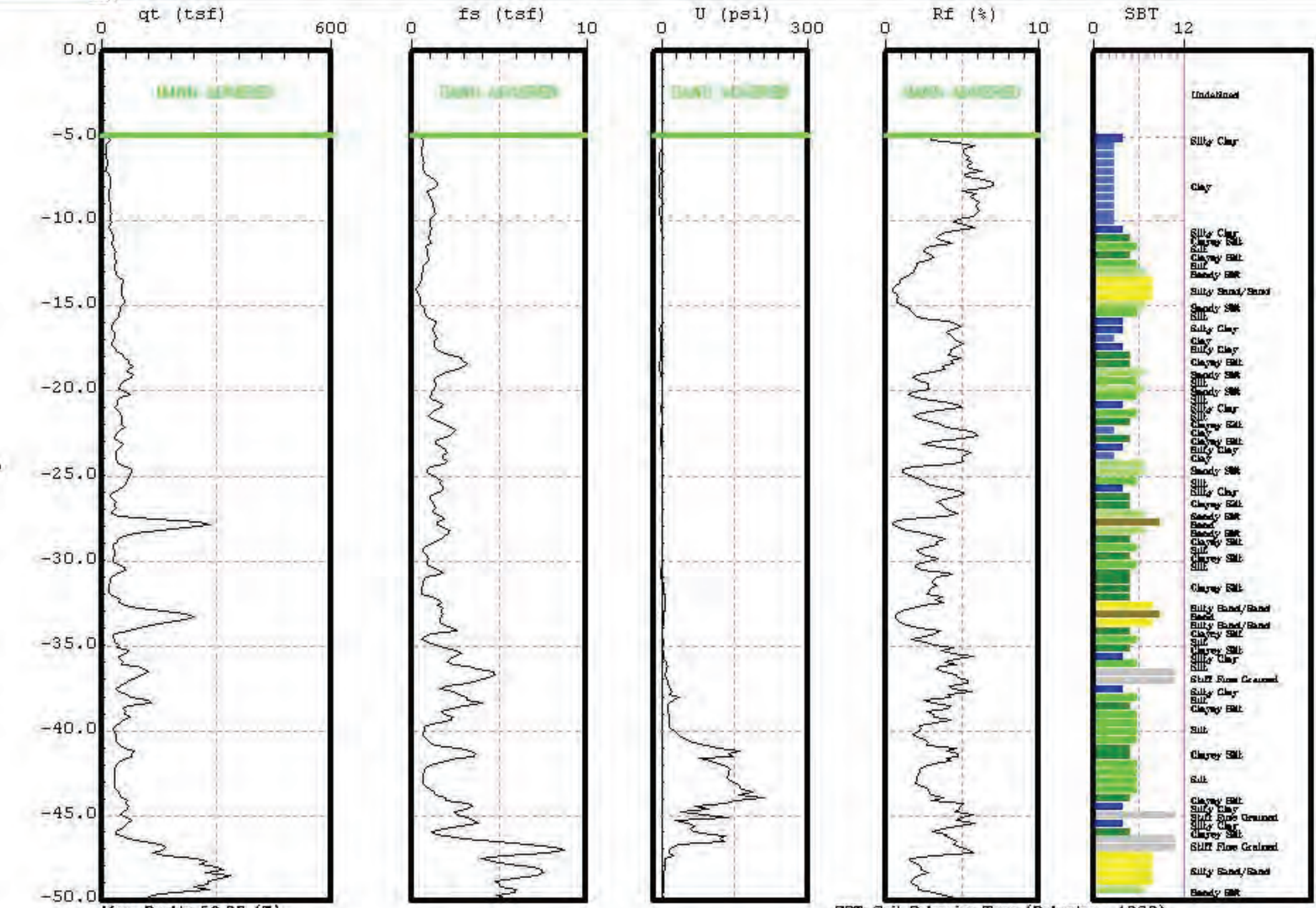
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-04

Engineer: J. OWEN
Date: 09:28:04 11:27



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

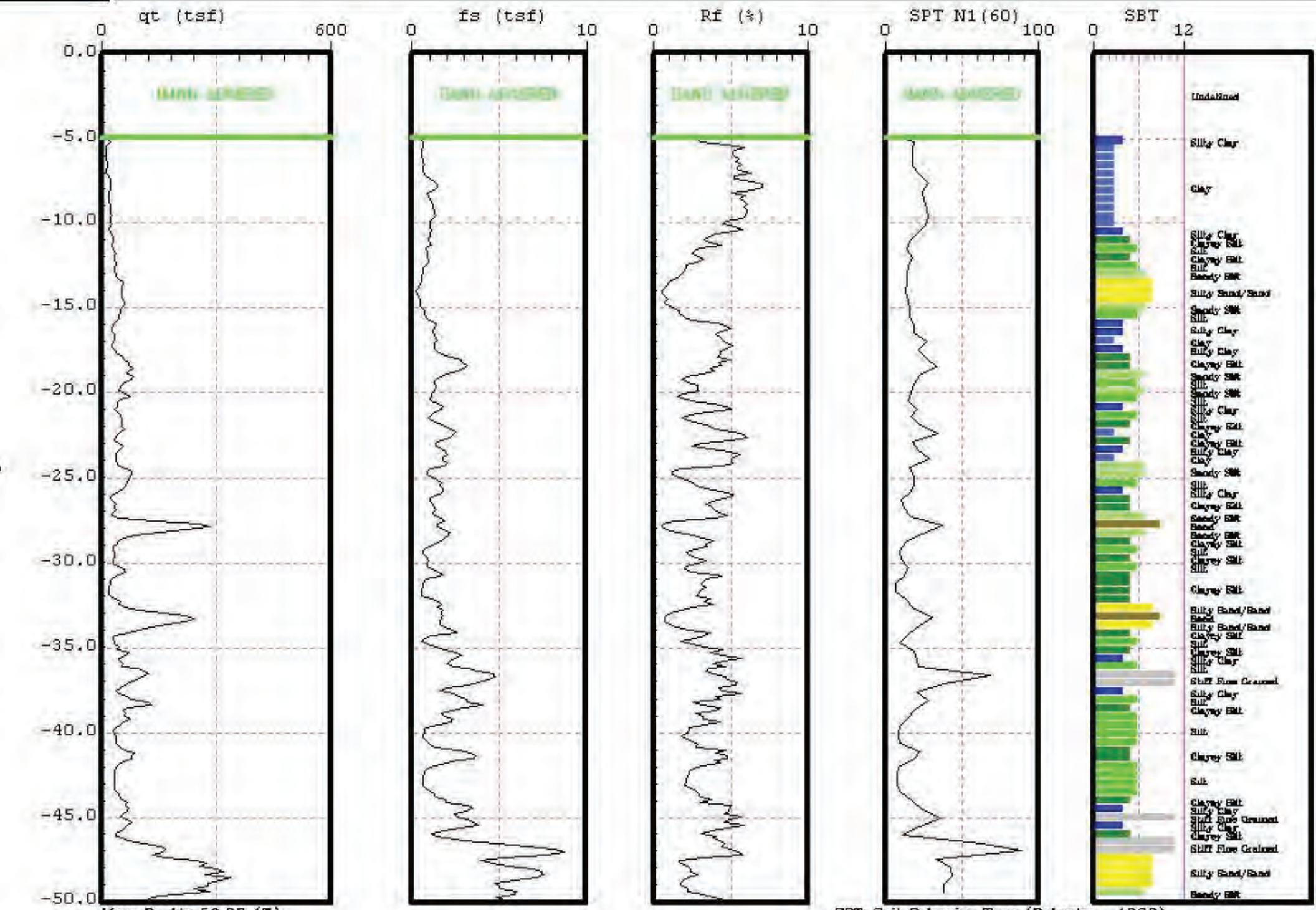
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-04

Engineer: J. OWEN
Date: 09:28:04 11:27



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

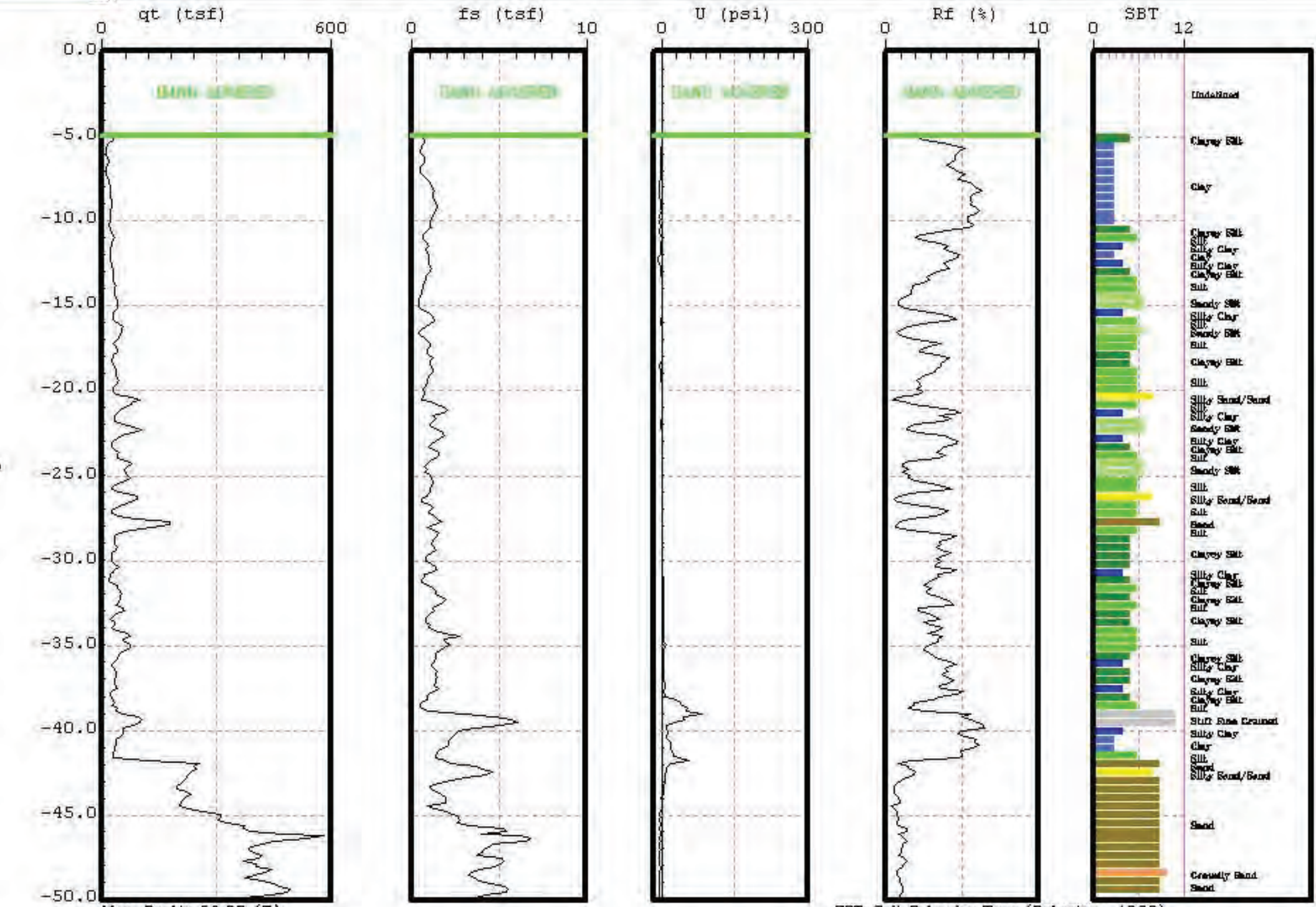
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-05

Engineer: J. OWEN
Date: 09:28:04 12:33



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

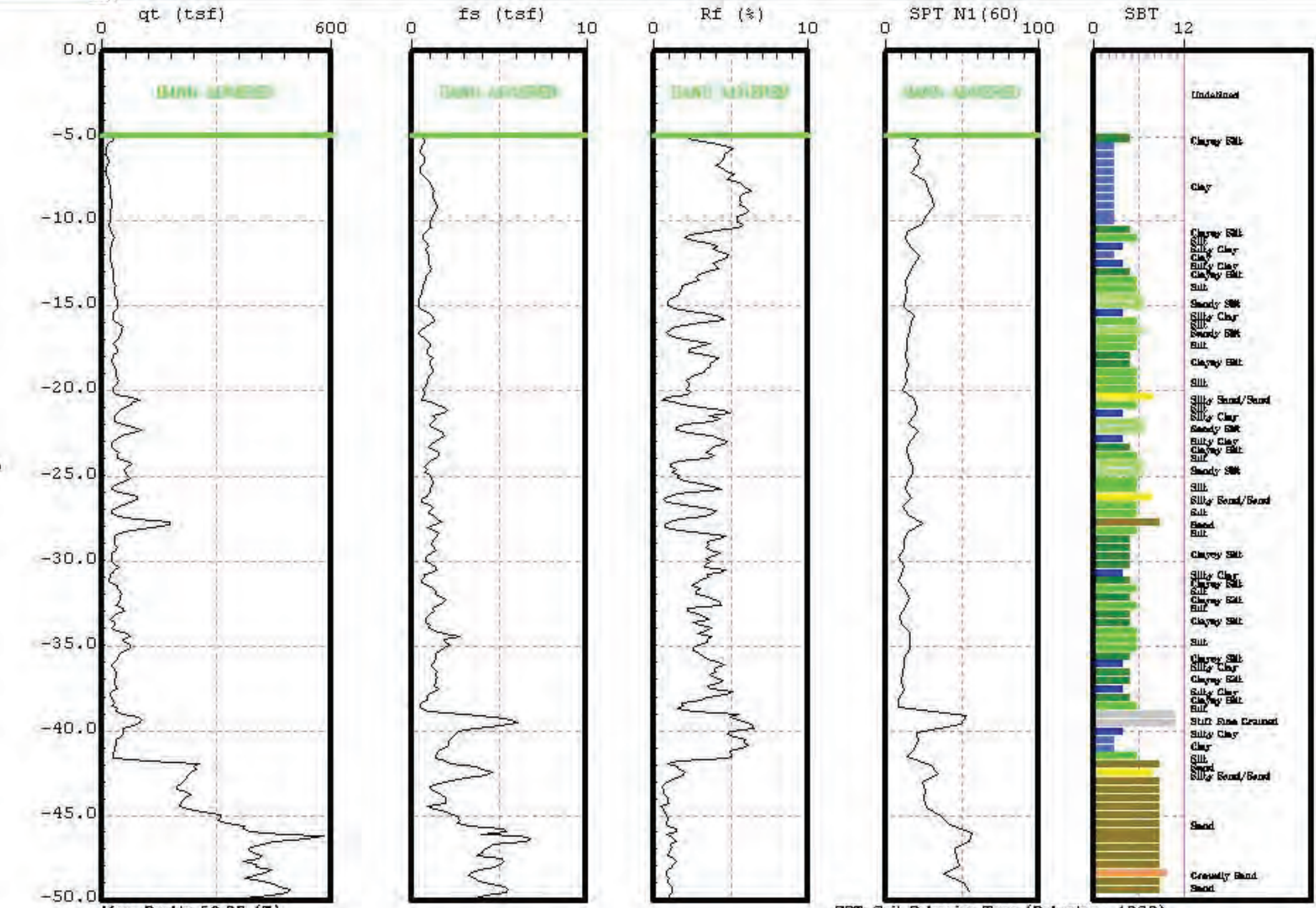
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-05

Engineer: J. OWEN
Date: 09:28:04 12:33



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

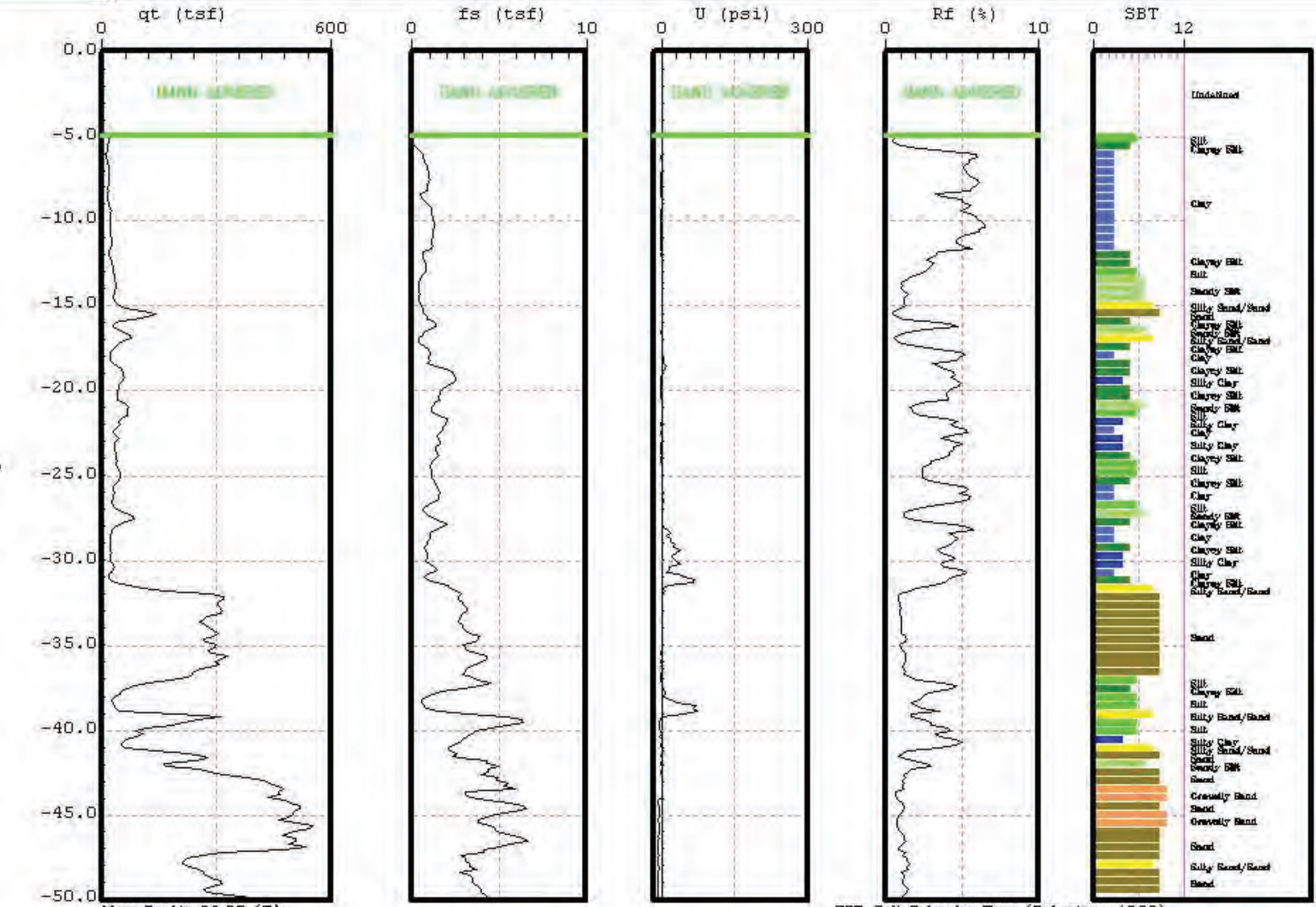
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-06

Engineer: J. OWEN
Date: 09:28:04 11:55



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

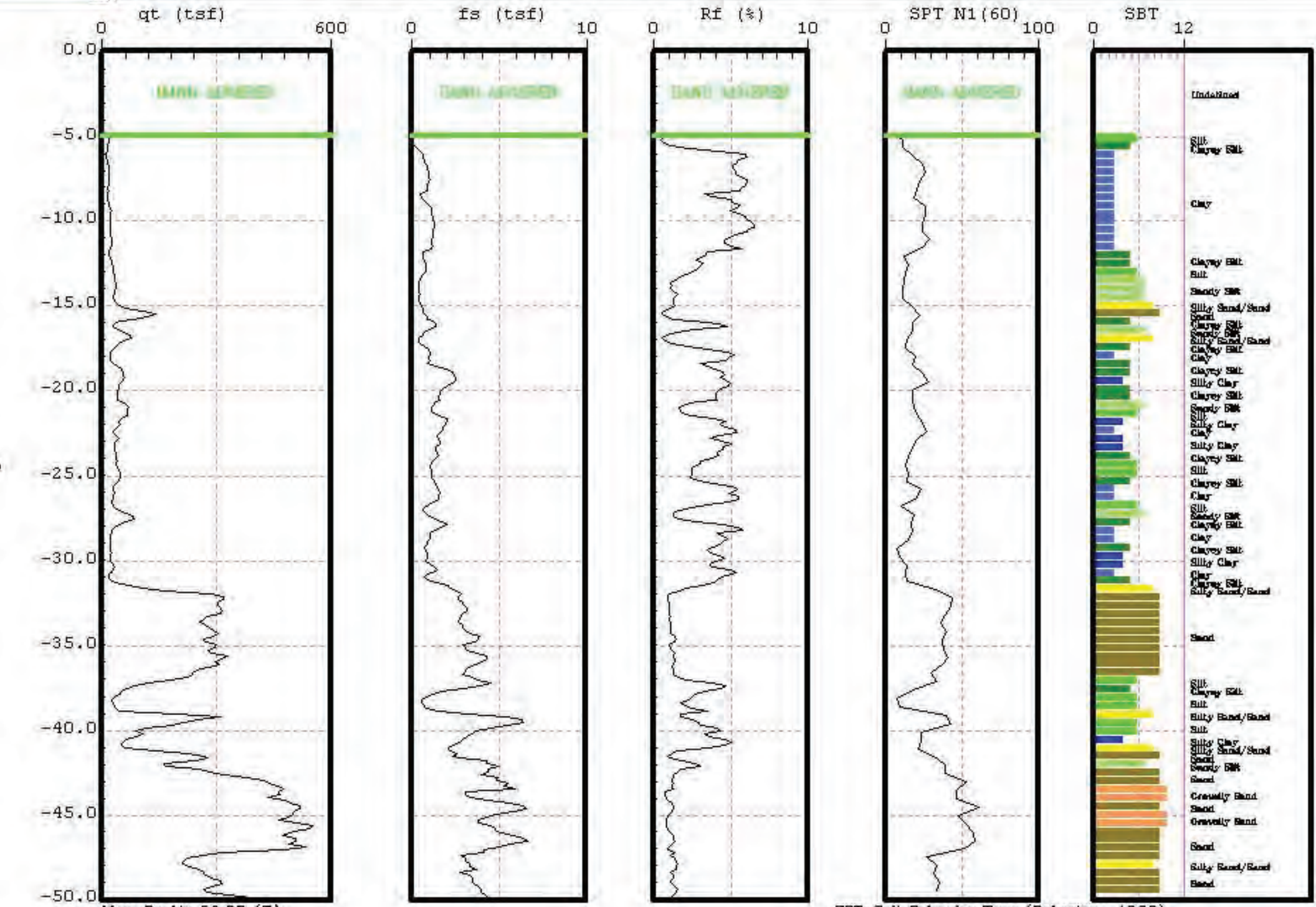
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LAWDP

Site: WEST LA DIST HQ
Location: CPT-06

Engineer: J. OWEN
Date: 09:28:04 11:55



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

WEST L.A. DISTRIBUTION HEAD QUARTERS
SITE INVESTIGATION TESTING - SELECTIVE PRIMARY TESTING PROCEDURE (SIT-SPTP).
UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487-00), VISUAL-MANUAL PROCEDURE (ASTM D2488-00), WATER CONTENT (ASTM D2216-98), AND IN-PLACE UNIT WEIGHT (ASTM D2937-00).

Sample Type[1]	Hole No.	Depth (ft.)[2]	Classification of Soils for Engineering Purposes (Unified Soil Classification System)[4]											Water Content	In-Place Dry Unit Weight
			Maximum Particle Size[3]	Sieve Analysis-Percent Passing (%) (US Standard Sieve Size)					Coefficients[5]		Atterberg Limits[6]		Soil Classification[7]	Reference[8]	
				3/4 in.	No. 4	No. 10	No. 40	No. 200	Uniformity (Cu)	Curvature (Cc)	Liquid Limit (LL)	Plasticity Index (PI)			(%)	(pcf)
B	HSA-1	0.0-5.0	No. 4	100.0	96.3	92.8	85.1	62.4	ND	ND	33	15	CL, SANDY LEAN CLAY			
S	HSA-1	5.0	No. 4	100.0	98.1	96.3	92.6	77.1	ND	ND	34	14	CL, LEAN CLAY W/SAND		17.0	110.0
B	HSA-1	5.0-10.0	No. 4	100.0	98.7	96.9	93.0	76.3	ND	ND	34	18	CL, LEAN CLAY W/SAND			
S	HSA-1	10.0 (T)	No. 4	100.0	98.8	96.7	92.1	72.8	ND	ND	37	20	CL, LEAN CLAY W/SAND	REFERENCE	17.4	102.2
S	HSA-1	10.0 (B)	3/8-in.	100.0	87.9	79.6	65.9	42.8	ND	ND	25	9	SC, CLAYEY SAND	REFERENCE	10.7	108.4
B	HSA-1	10.0-15.0	No. 4	100.0	93.2	88.3	82.2	63.2	ND	ND	31	17	CL, SANDY LEAN CLAY			
S	HSA-1	15.0 (T)	No. 4	100.0	96.1	92.4	85.4	63.6	ND	ND	31	14	CL, SANDY LEAN CLAY	REFERENCE	14.2	100.7
S	HSA-1	15.0 (B)	3/4-in.	96.9	80.6	68.1	45.7	27.7	ND	ND	26	7	SC-SM, SILTY CLAYEY SAND W/GRAVEL	REFERENCE	9.2	105.2
B	HSA-1	15.0-20.0	No. 4	100.0	91.5	81.9	68.9	52.6	ND	ND	30	13	CL, SANDY LEAN CLAY			
S	HSA-1	20.0 (T)	3/8-in.	100.0	94.6	89.2	75.4	47.6	ND	ND	27	11	SC, CLAYEY SAND		9.8	(9)
S	HSA-1	20.0 (B)	3/4-in.	84.9	52.7	36.0	23.4	11.4	ND	ND	23	6	GP-GC, POORLY GRADED GRAVEL W/CLAY & SAND	REFERENCE	5.0	(9)
S	HSA-1	25.0 (T)	No. 10	100.0	100.0	99.6	97.8	86.3	ND	ND	33	11	CL, LEAN CLAY		18.5	106.7
S	HSA-1	25.0 (B)	3/8-in.	100.0	77.1	60.5	29.3	11.3	33.3	1.6	23	7	SW-SC, WELL GRADED SAND W/CLAY & GRAVEL		5.2	120.1
S	HSA-1	30.0 (T)	No. 4	100.0	99.1	97.2	91.6	76.4	ND	ND	31	15	CL, LEAN CLAY W/SAND		16.0	103.2
S	HSA-1	30.0 (B)	3/4-in.	93.4	70.7	56.8	34.1	11.5	ND	ND	NP	NP	SP-SM, POORLY GRADED SAND W/SILT AND GRAVEL		4.8	114.2
S	HSA-1	35.0 (T)	3/8-in.	100.0	78.5	61.6	35.4	21.4	ND	ND	21	3	SM, SILTY SAND W/GRAVEL		5.1	110.8
S	HSA-1	35.0 (B)	3/8-in.	100.0	97.9	97.2	95.9	60.1	ND	ND	27	8	CL, SANDY LEAN CLAY		13.5	102.5
S	HSA-1	40.0	3/4-in.	74.2	22.2	18.6	13.1	5.9	61.9	13.2	24	9	GP-GC, POORLY GRADED GRAVEL W/CLAY & SAND		8.1	125.8

NOTES:

1. S = SHELBY TUBE, B= BULK BAG.
2. T = TOP OF SAMPLE, B = BOTTOM OF SAMPLE.
3. MAXIMUM NOMINAL PARTICLE SIZE RETAINED ON A US STANDARD SIEVE.
4. CELLS LEFT BLANK AND WITH A GROUP SYMBOL AND GROUP NAME (SOIL CLASSIFICATION) INDICATE THAT A SOIL CLASSIFICATION WAS ASSIGNED TO THE SAMPLE. SEE FOOTNOTES NUMBER 7 AND 8.
5. ND = NOT DETERMINED. COEFFICIENTS DO NOT HAVE TO BE DETERMINED WHEN MORE THAN 12% OF THE TEST SPECIMEN PASSES THE NO. 200 SIEVE.
6. NP = NON-PLASTIC.
7. SOIL CLASSIFICATIONS PRESENTED IN BOLD TYPE INDICATE TESTING AS PER USCS, ASTM D2487-00. SOIL CLASSIFICATIONS PRESENTED IN REGULAR TYPE WERE DETERMINED IN GENERAL ACCORDANCE WITH THE VISUAL-MANUAL PROCEDURE, ASTM D2488-00. SEE FOOTNOTE NUMBER 8.
8. REFERENCE = SAMPLE SERVES TO ASSIGN A SOIL CLASSIFICATION TO A SIMILAR SOIL TYPE(S) OBSERVED WITHIN THE BORING AND/OR OTHER BORING(S) SEE FOOTNOTE 7.
   ↓ = SAMPLE WAS ASSIGNED A SOIL CLASSIFICATION, ITS REFERENCE IS LOCATED AT A DEEPER DEPTH WITHIN THE BORING
   ↑ = SAMPLE WAS ASSIGNED A SOIL CLASSIFICATION, ITS REFERENCE IS LOCATED AT A SHALLOWER DEPTH WITHIN THE BORING.
   Boring No. @ Depth = SAMPLE WAS ASSIGNED A SOIL CLASSIFICATION, ITS REFERENCE IS LOCATED AT THE INDICATED BORING NO AND DEPTH.
9. UNABLE TO DETERMINE DUE TO THE POOR QUALITY OF THE SAMPLE.

Jesus Nunez, 3-4-05

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

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SITE INVESTIGATION TESTING - SELECTIVE PRIMARY TESTING PROCEDURE (SIT-SPTP).
UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487-00), VISUAL-MANUAL PROCEDURE (ASTM D2488-00), WATER CONTENT (ASTM D2216-98), AND IN-PLACE UNIT WEIGHT (ASTM D2937-00).

Sample Type[1]	Hole No.	Depth (ft.)[2]	Classification of Soils for Engineering Purposes (Unified Soil Classification System)[4]											Water Content	In-Place Dry Unit Weight
			Maximum Particle Size[3]	Sieve Analysis-Percent Passing (%) (US Standard Sieve Size)					Coefficients[5]		Atterberg Limits[6]		Soil Classification[7]	Reference[8]	
				3/4 in.	No. 4	No. 10	No. 40	No. 200	Uniformity (Cu)	Curvature (Cc)	Liquid Limit (LL)	Plasticity Index (PI)			(%)	(pcf)
B	HSA-2	0.0-5.0	No. 4	100.0	91.5	82.1	67.4	47.1	ND	ND	32	13	SC, CLAYEY SAND			
S	HSA-2	5.0	No. 4	100.0	97.4	95.9	91.8	75.2	ND	ND	38	19	CL, LEAN CLAY W/SAND		21.1	98.2
B	HSA-2	5.0-10.0	No. 4	100.0	97.4	94.0	85.1	64.2	ND	ND	31	12	CL, SANDY LEAN CLAY			
S	HSA-2	10.0 (T)											CL, LEAN CLAY W/SAND	B-1 @ 10.0 (T)	11.1	107.3
S	HSA-2	10.0 (B)											SC, CLAYEY SAND	B-1 @ 10.0 (B)	11.0	107.4
B	HSA-2	10.0-15.0	No. 4	100.0	88.1	79.8	69.5	50.4	ND	ND	29	12	CL, SANDY LEAN CLAY			
S	HSA-2	15.0 (T)											CL, SANDY LEAN CLAY	B-1 @ 15.0 (T)	13.4	99.7
S	HSA-2	15.0 (B)											SC-SM, SILTY CLAYEY SAND W/GRAVEL	B-1 @ 15.0 (B)	7.4	105.3
B	HSA-2	15.0-20.0	No. 4	100.0	88.5	76.1	61.3	42.7	ND	ND	28	13	SC, CLAYEY SAND			
S	HSA-2	20.0	3/4-in.	93.0	80.0	70.5	57.2	33.5	ND	ND	27	9	SC, CLAYEY SAND W/GRAVEL		8.7	116.8
S	HSA-2	25.0 (T)											GP-GC, POORLY GRADED GRAVEL W/CLAY & SAND	B-1 @ 20.0 (B)	10.9	100.8
S	HSA-2	25.0 (B)											GP-GC, POORLY GRADED GRAVEL W/CLAY & SAND	B-1 @ 20.0 (B)	9.4	102.3
S	HSA-2	30.0 (T)											GP-GC, POORLY GRADED GRAVEL W/CLAY & SAND	B-1 @ 20.0 (B)	9.3	113.4
S	HSA-2	30.0 (B)	No. 4	100.0	99.6	99.1	96.6	63.8	ND	ND	26	6	CL-ML, SANDY SILTY CLAY		15.7	107.1
S	HSA-2	35.0 (T)	No. 4	100.0	98.9	96.8	92.7	76.4	ND	ND	32	12	CL, LEAN CLAY W/SAND		16.8	99.9
S	HSA-2	35.0 (B)	No. 10	100.0	100.0	99.9	98.2	73.6	ND	ND	26	5	CL-ML, SILTY CLAY W/SAND		20.2	97.0
S	HSA-2	40.0	3/8-in.	100.0	96.9	93.9	86.5	61.3	ND	ND	27	10	CL, SANDY LEAN CLAY		14.7	114.6
S	HSA-2	45.0	3/4-in.	93.8	67.6	45.1	31.1	18.0	ND	ND	30	10	SC, CLAYEY SAND W/GRAVEL		13.9	121.6

NOTES:

1. S = SHELBY TUBE, B= BULK BAG.
2. T = TOP OF SAMPLE, B = BOTTOM OF SAMPLE
3. MAXIMUM NOMINAL PARTICLE SIZE RETAINED ON A US STANDARD SIEVE.
4. CELLS LEFT BLANK AND WITH A GROUP SYMBOL AND GROUP NAME (SOIL CLASSIFICATION) INDICATE THAT A SOIL CLASSIFICATION WAS ASSIGNED TO THE SAMPLE. SEE FOOTNOTES NUMBER 7 AND 8.
5. ND = NOT DETERMINED. COEFFICIENTS DO NOT HAVE TO BE DETERMINED WHEN MORE THAN 12% OF THE TEST SPECIMEN PASSES THE NO. 200 SIEVE.
6. NP = NON-PLASTIC
7. SOIL CLASSIFICATIONS PRESENTED IN BOLD TYPE INDICATE TESTING AS PER USCS, ASTM D2487-00. SOIL CLASSIFICATIONS PRESENTED IN REGULAR TYPE WERE DETERMINED IN GENERAL ACCORDANCE WITH THE VISUAL-MANUAL PROCEDURE, ASTM D2488-00. SEE FOOTNOTE NUMBER 8.
8. **REFERENCE** = SAMPLE SERVES TO ASSIGN A SOIL CLASSIFICATION TO A SIMILAR SOIL TYPE(S) OBSERVED WITHIN THE BORING AND/OR OTHER BORING(S). SEE FOOTNOTE 7.

   ↓ = SAMPLE WAS ASSIGNED A SOIL CLASSIFICATION, ITS REFERENCE IS LOCATED AT A DEEPER DEPTH WITHIN THE BORING.

   ↑ = SAMPLE WAS ASSIGNED A SOIL CLASSIFICATION, ITS REFERENCE IS LOCATED AT A SHALLOWER DEPTH WITHIN THE BORING.

   Boring No. @ Depth = SAMPLE WAS ASSIGNED A SOIL CLASSIFICATION, ITS REFERENCE IS LOCATED AT THE INDICATED BORING NO. AND DEPTH.

Jesus Nunez, 3-4-05

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

WEST L.A. DISTRIBUTION HEAD QUARTERS
SITE INVESTIGATION TESTING - SELECTIVE PRIMARY TESTING PROCEDURE (SIT-SPTP).
UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487-00), VISUAL-MANUAL PROCEDURE (ASTM D2488-00), WATER CONTENT (ASTM D2216-98), AND IN-PLACE UNIT WEIGHT (ASTM D2937-00).

Sample Type[1]	Hole No.	Depth (ft.)[2]	Classification of Soils for Engineering Purposes (Unified Soil Classification System)[4]											Water Content	In-Place Dry Unit Weight
			Maximum Particle Size[3]	Sieve Analysis-Percent Passing (%) (US Standard Sieve Size)					Coefficients[5]		Atterberg Limits[6]		Soil Classification[7]	Reference[8]	
				3/4 in.	No. 4	No. 10	No. 40	No. 200	Uniformity (Cu)	Curvature (Cc)	Liquid Limit (LL)	Plasticity Index (PI)			(%)	(pcf)
B	HSA-3	0.0-5.0	No. 4	100.0	93.7	85.5	71.1	50.6	ND	ND	32	15	CL, SANDY LEAN CLAY			
S	HSA-3	5.0	No. 4	100.0	96.6	95.7	93.8	71.9	ND	ND	33	12	CL, LEAN CLAY W/SAND		18.2	99.2
B	HSA-3	5.0-10.0	No. 4	100.0	97.8	95.1	90.8	75.6	ND	ND	35	17	CL, LEAN CLAY W/SAND			
S	HSA-3	10.0 (T)	No. 4	100.0	89.4	84.8	77.7	59.4	ND	ND	34	13	CL, SANDY LEAN CLAY		16.9	103.5
S	HSA-3	10.0 (B)											SC, CLAYEY SAND	B-1 @ 10.0 (B)	9.7	110.3
B	HSA-3	10.0-15.0	No. 4	100.0	90.8	80.9	69.6	47.1	ND	ND	32	16	SC, CLAYEY SAND			
S	HSA-3	15.0 (T)	No. 4	100.0	96.4	92.0	83.3	63.1	ND	ND	30	14	CL, SANDY LEAN CLAY		13.2	107.0
S	HSA-3	15.0 (B)	3/4-in.	90.2	58.2	43.4	27.0	12.8	ND	ND	27	8	SC/SC-SM, CLAYEY SAND W/GRAVEL		5.3	115.0
B	HSA-3	15.0-20.0	3/4-in.	96.3	66.8	51.4	39.4	27.9	ND	ND	30	13	SC, CLAYEY SAND W/GRAVEL			
S	HSA-3	20.0 (T)	3/8-in.	100.0	87.9	73.9	54.1	34.2	ND	ND	24	9	SC, CLAYEY SAND		8.3	108.8
S	HSA-3	20.0 (B)	3/8-in.	100.0	82.9	71.1	52.4	28.5	ND	ND	23	6	SC-SM, SILTY CLAYEY SAND W/GRAVEL		9.0	108.1
S	HSA-3	25.0 (T)	3/4-in.	97.7	82.3	75.4	64.2	42.9	ND	ND	28	12	SC, CLAYEY SAND W/GRAVEL		11.4	109.3
S	HSA-3	25.0 (B)	3/8-in.	100.0	92.1	83.3	61.9	45.2	ND	ND	28	11	SC, CLAYEY SAND		12.8	107.9
S	HSA-3	30.0 (T)	3/8-in.	100.0	94.0	88.0	75.4	54.9	ND	ND	29	14	CL, SANDY LEAN CLAY	REFERENCE	12.1	113.7
S	HSA-3	30.0 (B)											CL, SANDY LEAN CLAY	↑	11.4	114.4
S	HSA-3	35.0 (T)	No. 4	100.0	99.5	97.8	94.1	82.0	ND	ND	32	13	CL, LEAN CLAY W/SAND		17.6	97.6
S	HSA-3	35.0 (B)	3/8-in.	100.0	84.1	69.8	41.6	19.8	ND	ND	22	5	SC-SM, SILTY CLAYEY SAND W/GRAVEL		4.9	109.5
S	HSA-3	40.0 (2)											CL, SANDY LEAN CLAY	↓	9.1	112.8
S	HSA-3	40.0 (1) (T)	3/8-in.	100.0	95.0	86.7	73.4	56.4	ND	ND	29	13	CL, SANDY LEAN CLAY	REFERENCE	12.1	108.2
S	HSA-3	40.0 (1) (B)	3/4-in.	95.4	65.0	51.7	31.0	15.7	ND	ND	26	7	SC-SM, SILTY CLAYEY SAND W/GRAVEL		6.8	113.6
S	HSA-3	45.0	3/4-in.	87.2	59.7	44.0	20.6	9.6	59.4	2.5	22	4	SW-SC, WELL GRADED SAND W/CLAY & GRAVEL		7.5	128.4

NOTES:

1. S = SHELBY TUBE, B= BULK BAG
2. T = TOP OF SAMPLE, B = BOTTOM OF SAMPLE
3. MAXIMUM NOMINAL PARTICLE SIZE RETAINED ON A US STANDARD SIEVE.
4. CELLS LEFT BLANK AND WITH A GROUP SYMBOL AND GROUP NAME (SOIL CLASSIFICATION) INDICATE THAT A SOIL CLASSIFICATION WAS ASSIGNED TO THE SAMPLE. SEE FOOTNOTES NUMBER 7 AND 8.
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8. REFERENCE = SAMPLE SERVES TO ASSIGN A SOIL CLASSIFICATION TO A SIMILAR SOIL TYPE(S) OBSERVED WITHIN THE BORING AND/OR OTHER BORING(S). SEE FOOTNOTE 7

↓ = SAMPLE WAS ASSIGNED A SOIL CLASSIFICATION, ITS REFERENCE IS LOCATED AT A DEEPER DEPTH WITHIN THE BORING.

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Boring No. @ Depth = SAMPLE WAS ASSIGNED A SOIL CLASSIFICATION, ITS REFERENCE IS LOCATED AT THE INDICATED BORING NO. AND DEPTH.

Jesus Nunez, 3-4-05

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

WEST LA DISTRICT HEADQUARTERS
SOIL CLASSIFICATION (ASTM D2487-00).

DIRECT SHEAR TEST SPECIMENS

Hole No.	Depth (ft.)[1]	Classification of Soils for Engineering Purposes (Unified Soil Classification System)									
		Sieve Analysis-Percent Passing (%) (US Standard Sieve Size)					Coefficients		Atterberg Limits		Soil Classification
		3/4 in.	No. 4	No. 10	No. 40	No. 200	Uniformity (Cu)	Curvature (Cc)	Liquid Limit (LL)	Plasticity Index (PI)	
BLEND (HSA-1 & HSA-3)	0-5	99.6	93.7	86.1	72.0	46.4	ND	ND	29	13	SC, CLAYEY SAND
HSA-1	15	99.1	86.2	78.7	66.0	43.4	ND	ND	27	11	SC, CLAYEY SAND
HSA-2	5	100.0	94.0	89.1	77.3	35.8	ND	ND	29	11	SC, CLAYEY SAND
HSA-3	20 (T)	100.0	100.0	99.2	95.6	73.1	ND	ND	32	13	CL, LEAN CLAY W/SAND
HSA-3	25 (T)	98.6	96.1	94.3	90.1	79.8	ND	ND	32	14	CL, LEAN CLAY W/SAND

STEPHEN MACORITTO

OCT 20 2005

NOTES:

1. T = TOP OF SAMPLE, B = BOTTOM OF SAMPLE.

ND = NOT DETERMINED. COEFFICIENTS DO NOT HAVE TO BE DETERMINED WHEN MORE THAN 12% OF THE TEST SPECIMEN PASSES THE NO. 200 SIEVE.

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

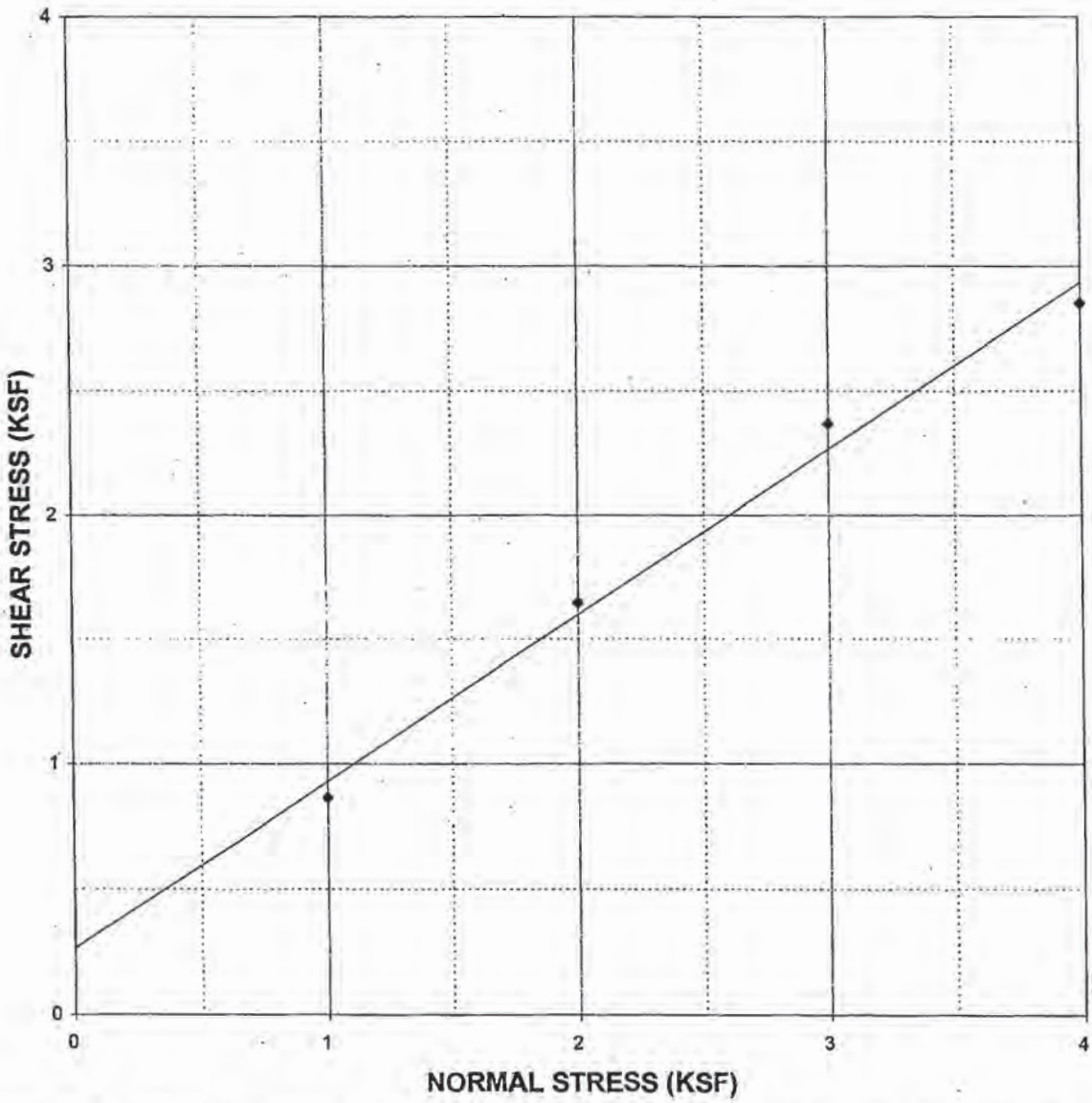
DIRECT SHEAR TEST RESULTS (ASTM D 3080-98)
FOR SOIL SCREENED THROUGH THE NUMBER 4 SIEVE (MINUS NO. 4):

JOB:	WEST LA DISTRICT HEADQUARTERS
DATE:	9/12/2005
SAMPLE:	HSA-1 @ 15.0'
TEST BY:	S. MACORITTO
SOIL TYPE:	SC, CLAYEY SAND
DRY UNIT WT.:	100.7 pcf
NOTE:	SAMPLE REMOLDED TO: IN-PLACE UNIT WEIGHT

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	39.0	0.86
2	74.1	1.64
3	106.7	2.37
4	128.5	2.85

FRICTION ANGLE = 33.7 DEGREES
COHESION[1] = 0.26 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



STEPHEN MACORITTC
OCT 20 2005

1 = GEOTECHNICAL ENGINEER TO USE PROPER JUDGEMENT IN DETERMINING AN APPROPRIATE COHESION VALUE.

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

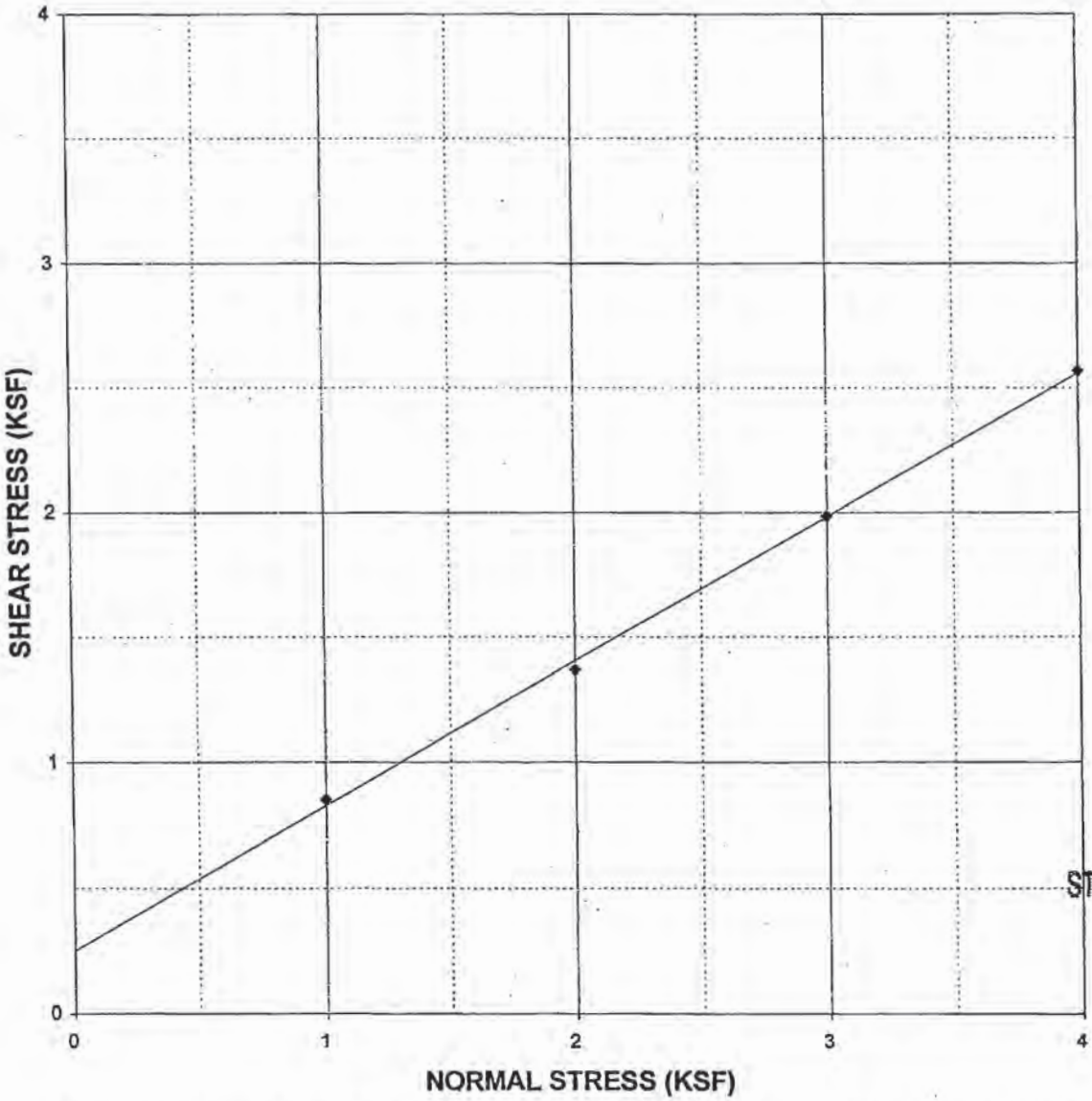
DIRECT SHEAR TEST RESULTS (ASTM D 3080-98)
FOR SOIL SCREENED THROUGH THE NUMBER 4 SIEVE (MINUS NO. 4):

JOB: WEST LA DISTRICT HEADQUARTERS
DATE: 9/15/2005
SAMPLE: HSA-2 @ 5.0'
TEST BY: S. MACORITTO
SOIL TYPE: SC, CLAYEY SAND
DRY UNIT WT.: 98.2 pcf
NOTE: SAMPLE REMOLDED TO:
IN-PLACE UNIT WEIGHT

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	38.4	0.85
2	61.7	1.37
3	89.5	1.99
4	115.8	2.57

FRICTION ANGLE = 30.0 DEGREES
COHESION[1] = 0.25 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



STEPHEN MACORITTO
OCT 20 2005

1 = GEOTECHNICAL ENGINEER TO USE PROPER JUDGEMENT IN DETERMINING AN APPROPRIATE COHESION VALUE.

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

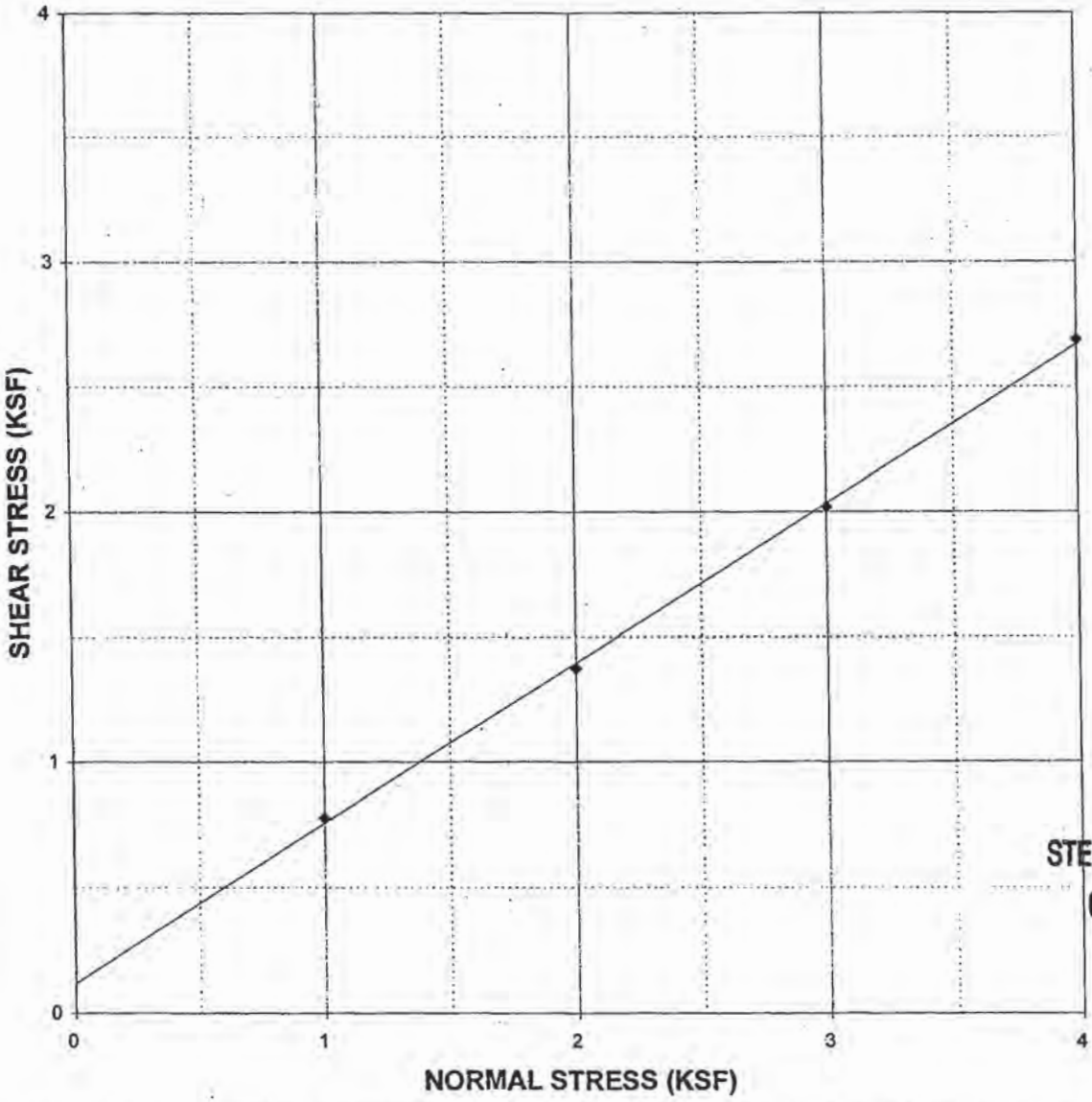
DIRECT SHEAR TEST RESULTS (ASTM D 3080-98)
FOR SOIL SCREENED THROUGH THE NUMBER 4 SIEVE (MINUS NO. 4):

JOB: WEST LA DISTRICT HEADQUARTERS
DATE: 9/12/2005
SAMPLE: HSA-3 @ 25 (TOP OF TUBE)
TEST BY: S. MACORITTO
SOIL TYPE: CL, LEAN CLAY W/ SAND
DRY UNIT WT.: 97.6 pcf
NOTE: SAMPLE REMOLDED TO:
IN-PLACE UNIT WEIGHT[2]

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	35.0	0.78
2	61.9	1.37
3	90.9	2.02
4	121.2	2.69

FRICTION ANGLE = 32.5 DEGREES
COHESION[1] = 0.12 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



STEPHEN MACORITTO
OCT 20 2005

1. GEOTECHNICAL ENGINEER TO USE PROPER JUDGEMENT IN DETERMINING AN APPROPRIATE COHESION VALUE.
2. SAMPLE PREPARED 3.8 PCF LOWER THAN THE IN-PLACE DRY UNIT WEIGHT (101.4 PCF).

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

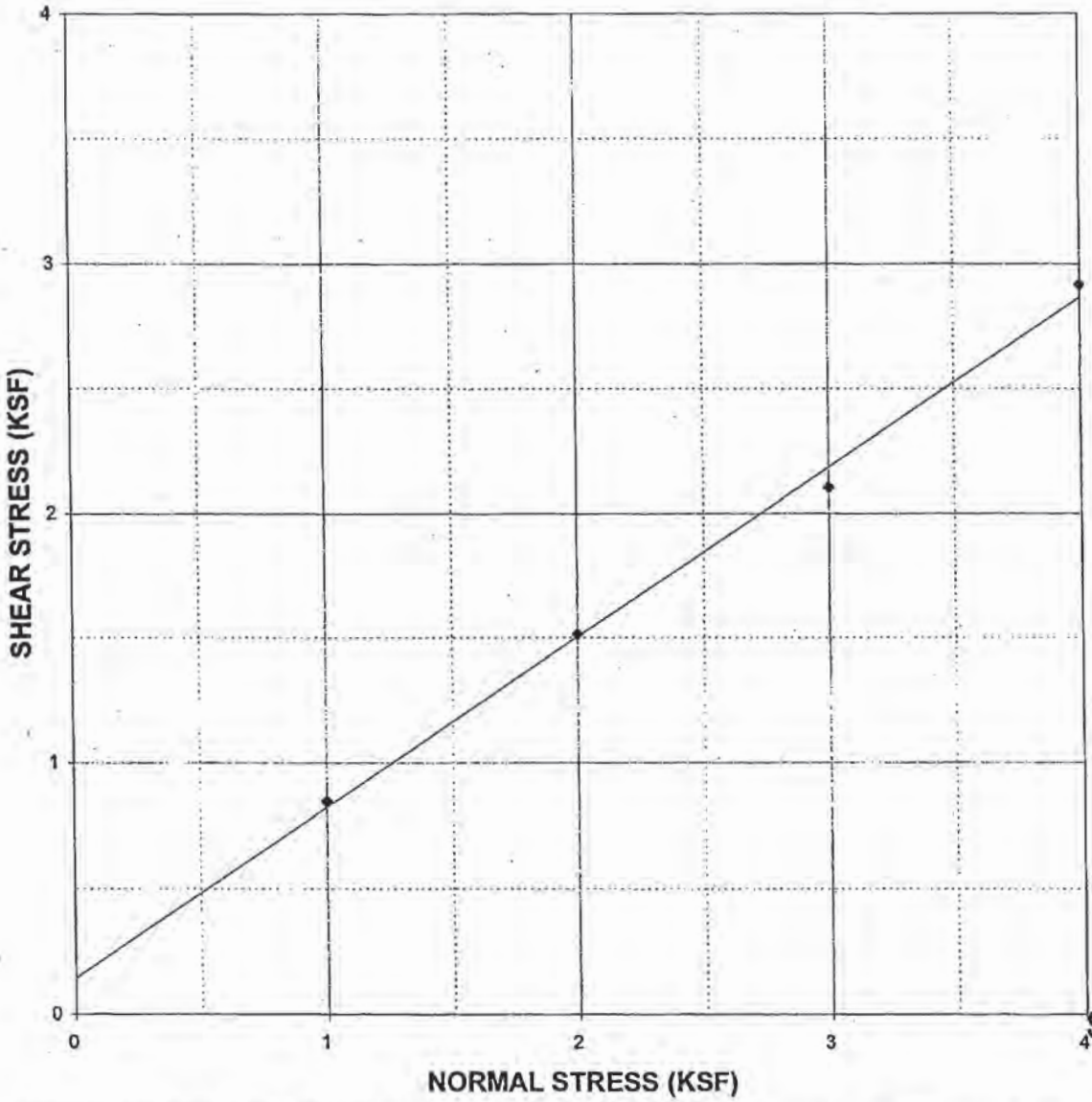
DIRECT SHEAR TEST RESULTS (ASTM D 3080-98)
FOR SOIL SCREENED THROUGH THE NUMBER 4 SIEVE (MINUS NO. 4):

JOB: WEST LA DISTRICT HEADQUARTERS
DATE: 9/12/2005
SAMPLE: BLEND (HSA-1 AND HSA-3 @ 0 - 5')
TEST BY: S. MACORITTO
SOIL TYPE: SC, CLAYEY SAND
DRY UNIT WT.: 116.5 pcf
NOTE: SAMPLE REMOLDED TO:
90 % RELATIVE COMPACTION

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	38.1	0.85
2	68.2	1.51
3	94.8	2.10
4	131.5	2.92

FRICTION ANGLE = 34.2 DEGREES
COHESION[1] = 0.14 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



STEPHEN MACORITTO
OCT 20 2005

1 = GEOTECHNICAL ENGINEER TO USE PROPER JUDGEMENT IN DETERMINING AN APPROPRIATE COHESION VALUE.

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

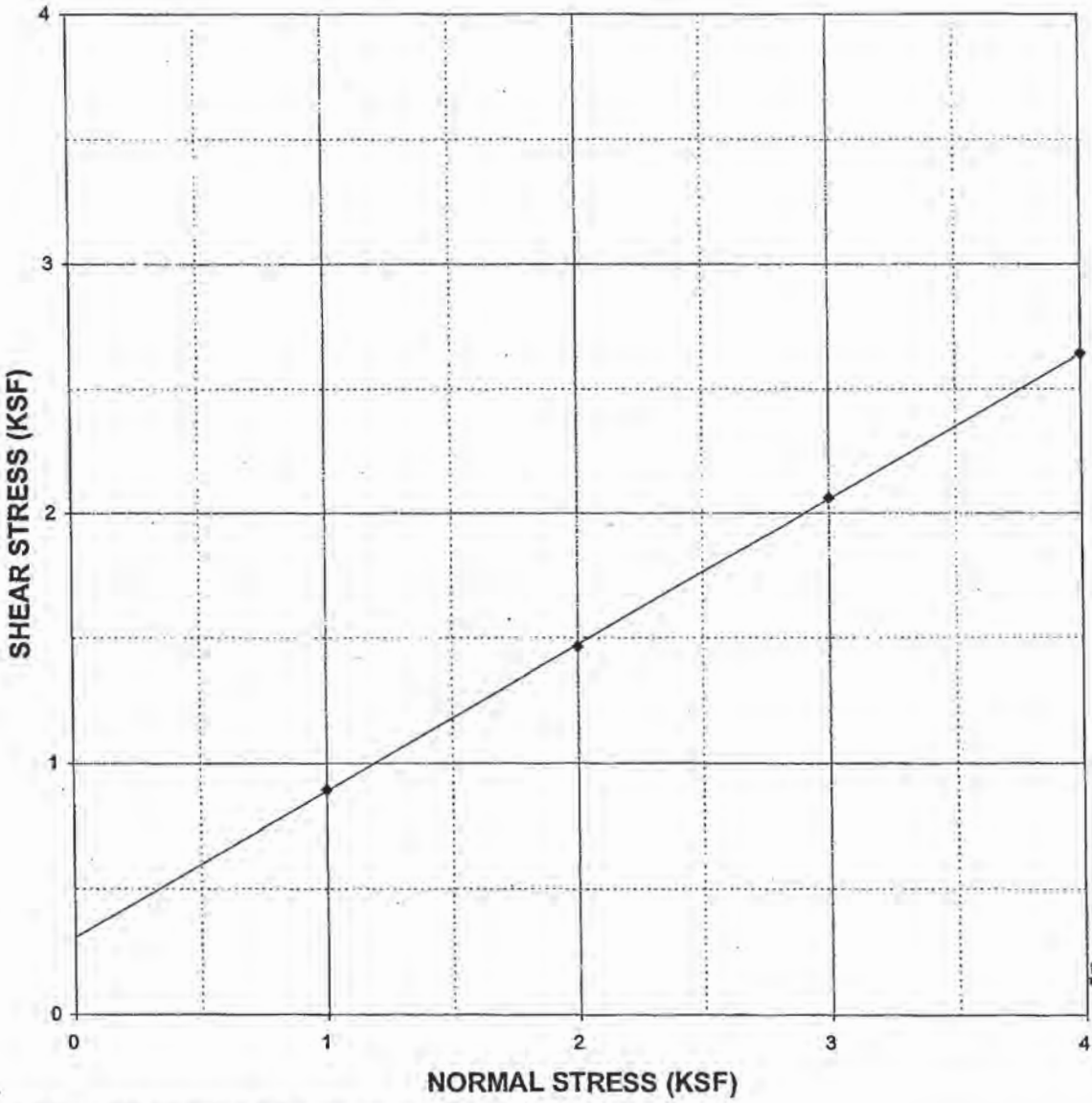
DIRECT SHEAR TEST RESULTS (ASTM D 3080-98)

JOB:	WEST LA DISTRICT HEADQUARTERS
DATE:	9/12/2005
SAMPLE:	HSA-3 @ 20 (TOP OF TUBE)
TEST BY:	S. MACORITTO
SOIL TYPE:	CL, LEAN CLAY W/ SAND
DRY UNIT WT.*:	112.5 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	40.3	0.89
2	66.0	1.46
3	92.9	2.06
4	119.0	2.64

FRICTION ANGLE = 30.3 DEGREES
COHESION[1] = 0.31 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



STEPHEN MACORITTO
OCT 20 2005

* THE DRY UNIT WEIGHT IS THE AVERAGE OF THE TESTED SPECIMENS.
1 = GEOTECHNICAL ENGINEER TO USE PROPER JUDGEMENT IN DETERMINING AN APPROPRIATE COHESION VALUE.

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

ASTM D4829-03, EXPANSION INDEX OF SOILS.

JOB:	WEST LA DISTRICT HEADQUARTERS
SAMPLE:	BLEND (HSA-1 AND HSA-3 @ 0 - 5').
DATE:	9/12/2005
TEST BY:	S. MACORITTO
DESCRIPTION:	SC, CLAYEY SAND
SPECIFIC GRAVITY:	2.69
NOTE:	

SAMPLE PROPERTIES

	PLACING	REMOVAL
WATER CONTENT (%)	7.9	14.1
DRY UNIT WEIGHT (PCF)	116.9	121.8
SATURATION (%)	49.0	99.8

MEASURED EXPANSION INDEX = 0

MEASURED EXPANSION POTENTIAL = VERY LOW

EXPANSION INDEX @ 50% SAT 0

EXPANSION POTENTIAL @ 50% SAT = VERY LOW

STEPHEN MACORITTO
OCT 20 2005

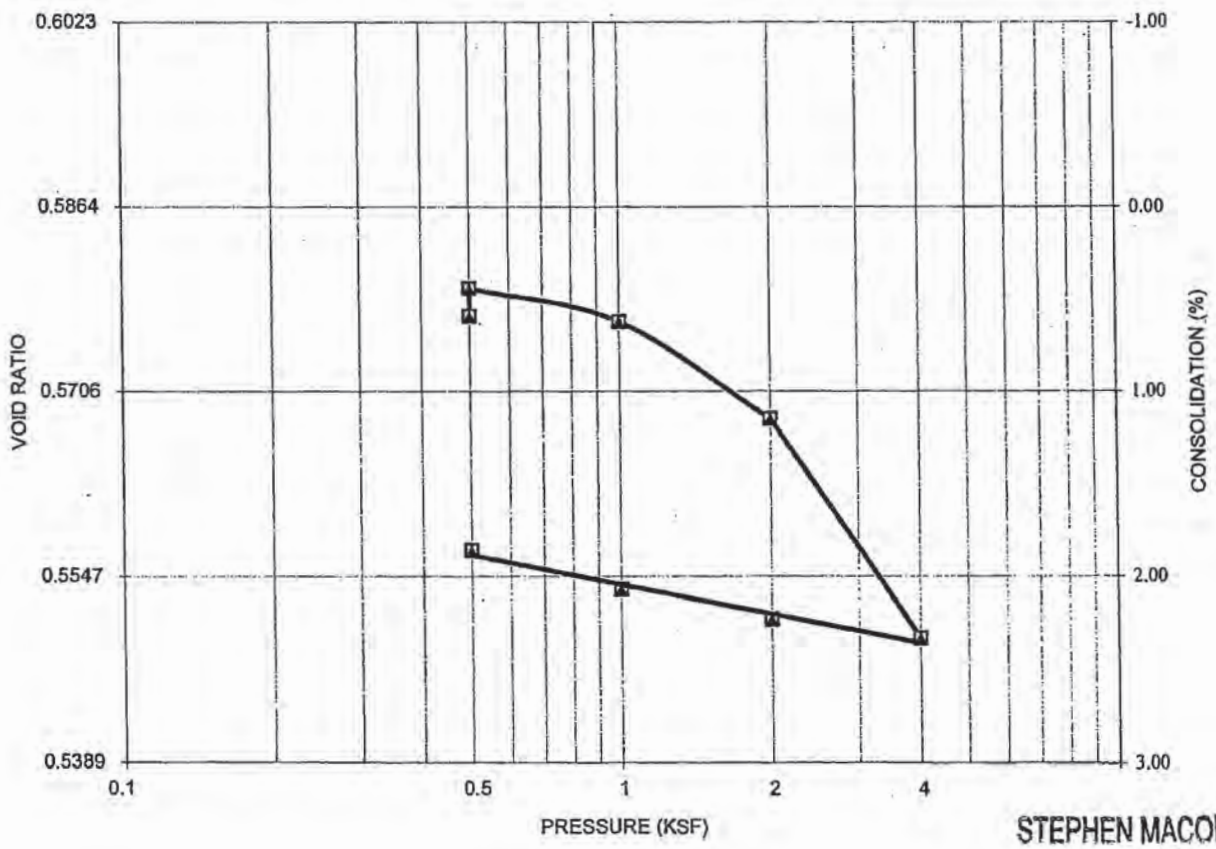
LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

ASTM D 2435-96 - ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS.

JOB:	WEST LA DISTRICT HEADQUARTERS
SAMPLE:	HSA - 2 @ 5.0'
DATE:	9/9/2005
TEST BY:	S. MACORITTO
DESCRIPTION:	SC, CLAYEY SAND
SPECIFIC GRAVITY:	2.70
NOTE:	UNDISTURBED SAMPLE

SAMPLE PROPERTIES:

	PLACING	REMOVAL
WATER CONTENT (%)	14.3	17.7
DRY UNIT WEIGHT (PCF)	106.3	108.1
SATURATION (%)	66.0	85.6
VOID RATIO	0.5864	0.5596

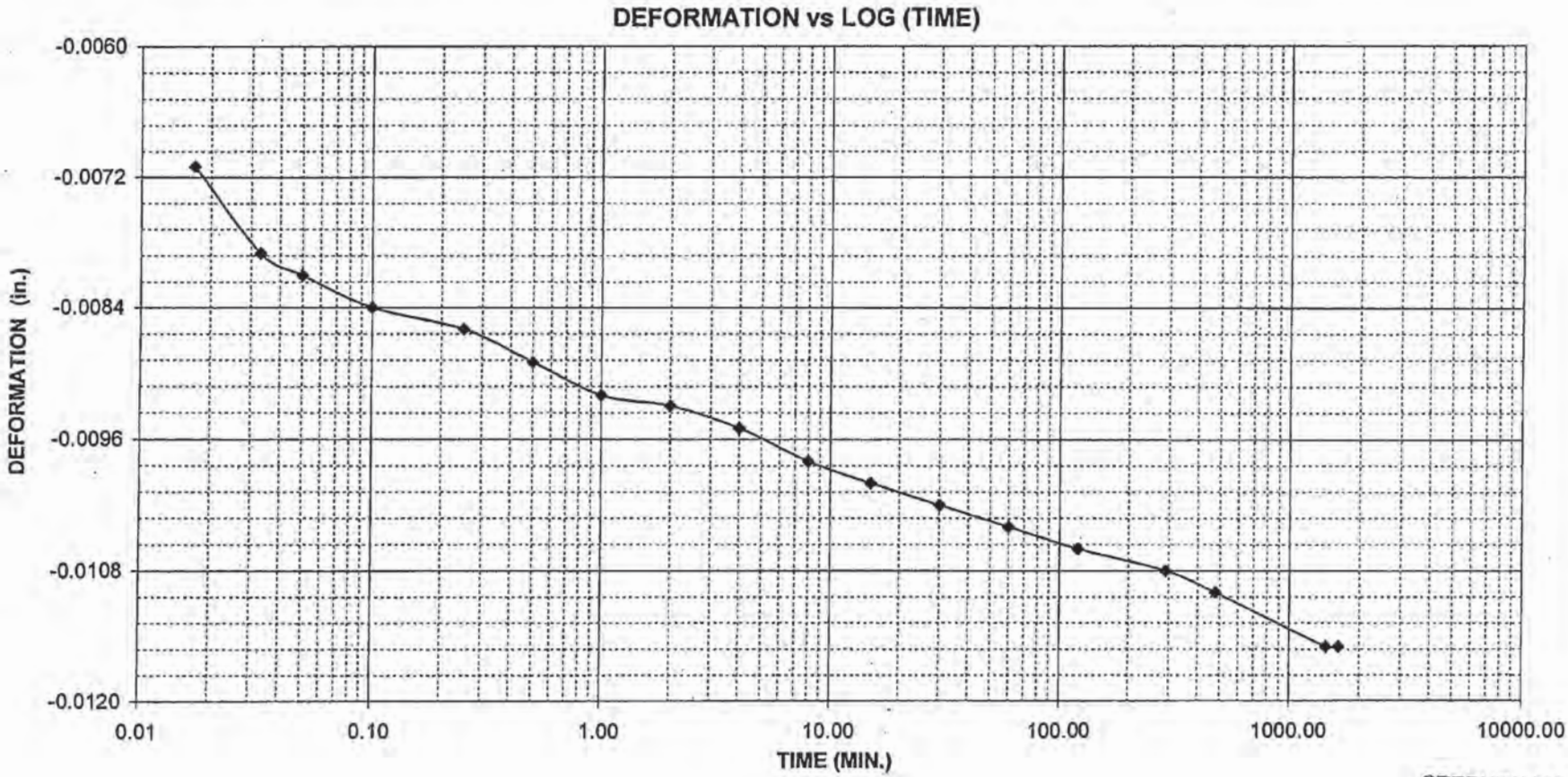


STEPHEN MACORITTO
OCT 20 2005

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

ASTM D2435 - METHOD B, "ONE DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS."

JOB: WEST LA DISTRICT HEADQUARTERS
SAMPLE: HSA-2 @ 5.0
LOAD: 2 KSF
SOIL TYPE: SC, CLAYEY SAND

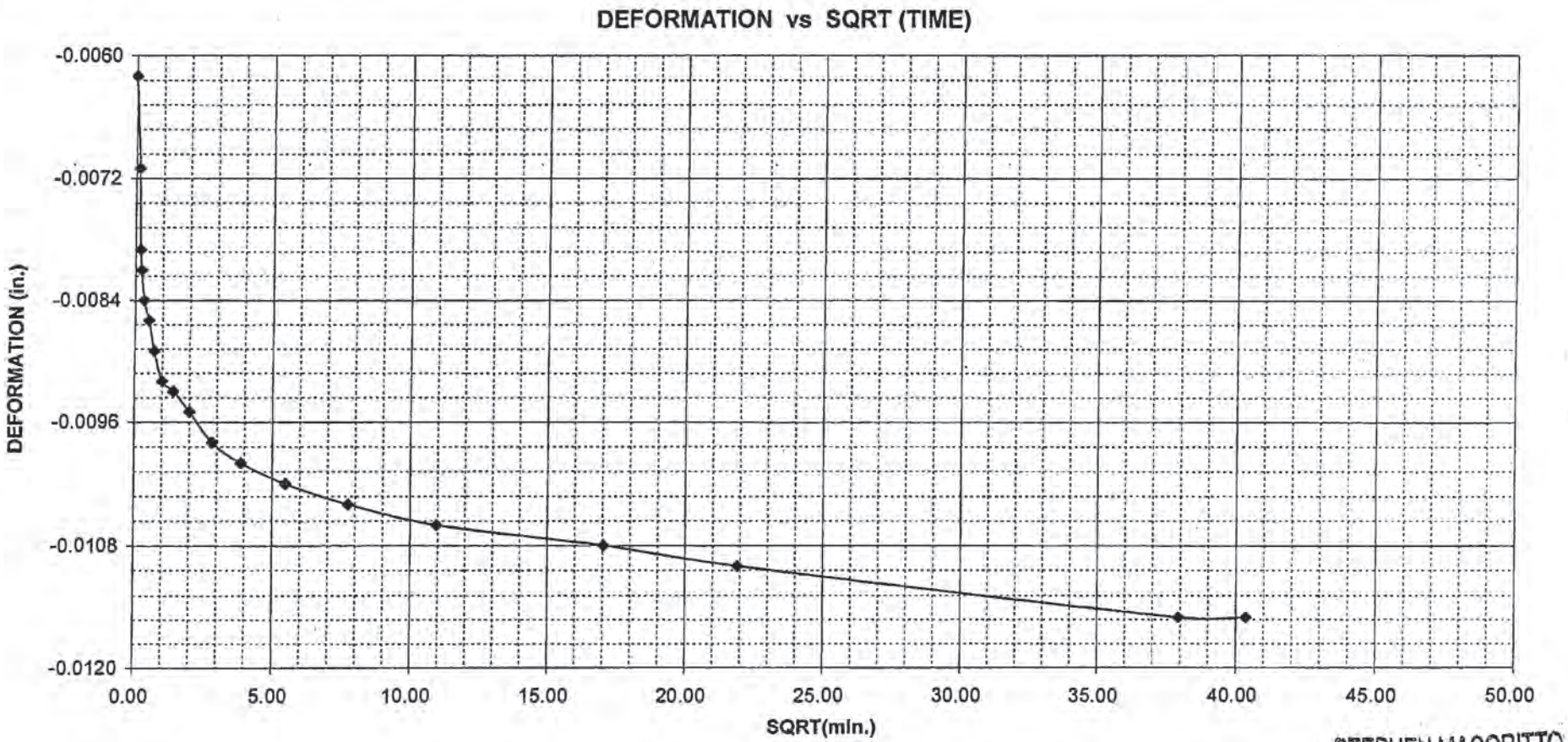


STEPHEN MACORITTO
OCT 20 2005

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

ASTM D2435 - METHOD B, "ONE DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS."

JOB: WEST LA DISTRICT HEADQUARTERS
SAMPLE: HSA-2 @ 5.0
LOAD: 2 KSF
SOIL TYPE: SC, CLAYEY SAND

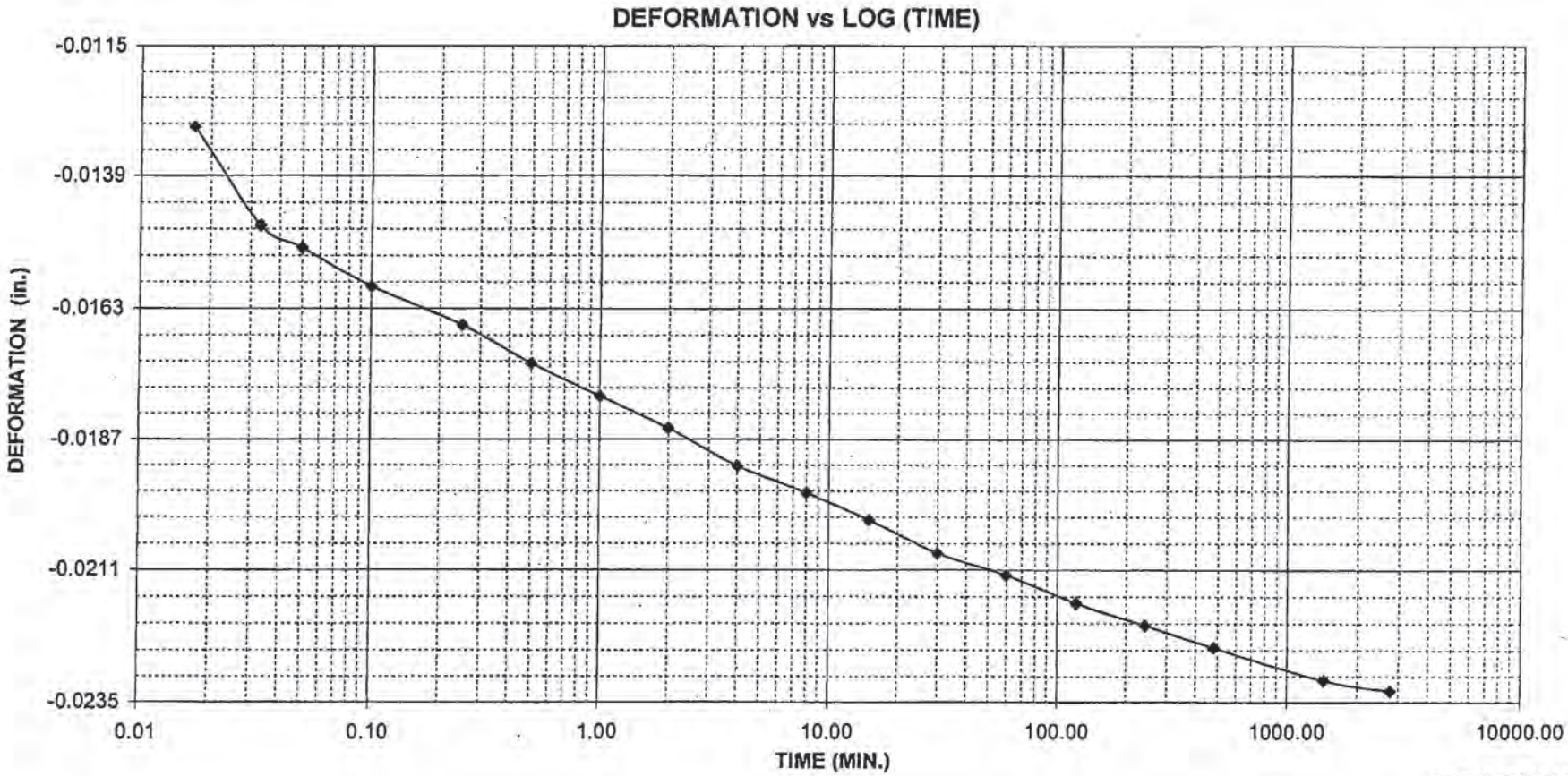


STEPHEN MACORITTO
OCT 20 2005

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

ASTM D2435 - METHOD B, "ONE DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS."

JOB: WEST LA DISTRICT HEADQUARTERS
SAMPLE: HSA-2 @ 5.0
LOAD: 4 KSF
SOIL TYPE: SC, CLAYEY SAND

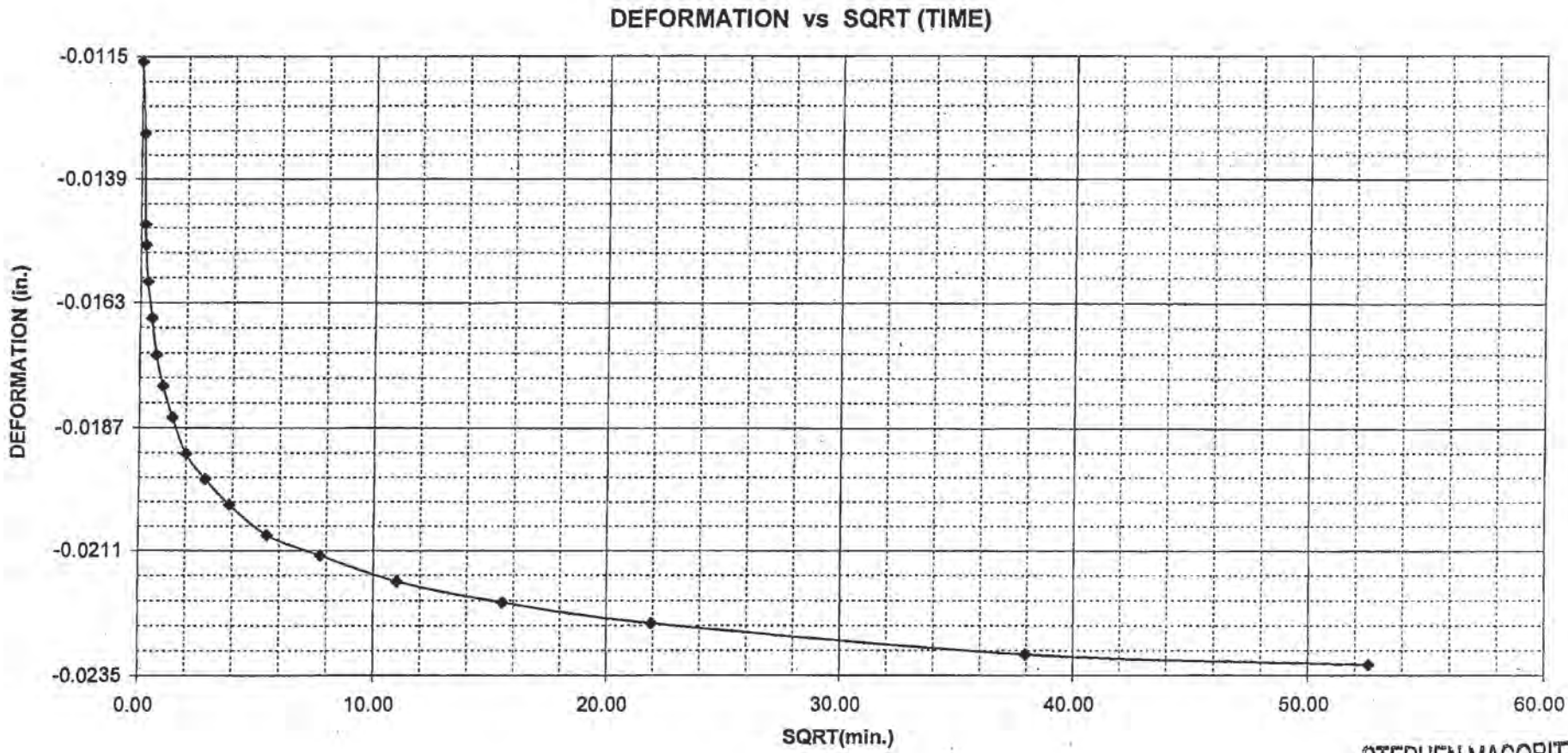


STEPHEN MACORITTO
OCT 20 2005

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

ASTM D2435 - METHOD B, "ONE DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS."

JOB: WEST LA DISTRICT HEADQUARTERS
SAMPLE: HSA-2 @ 5.0
LOAD: 4 KSF
SOIL TYPE: SC, CLAYEY SAND

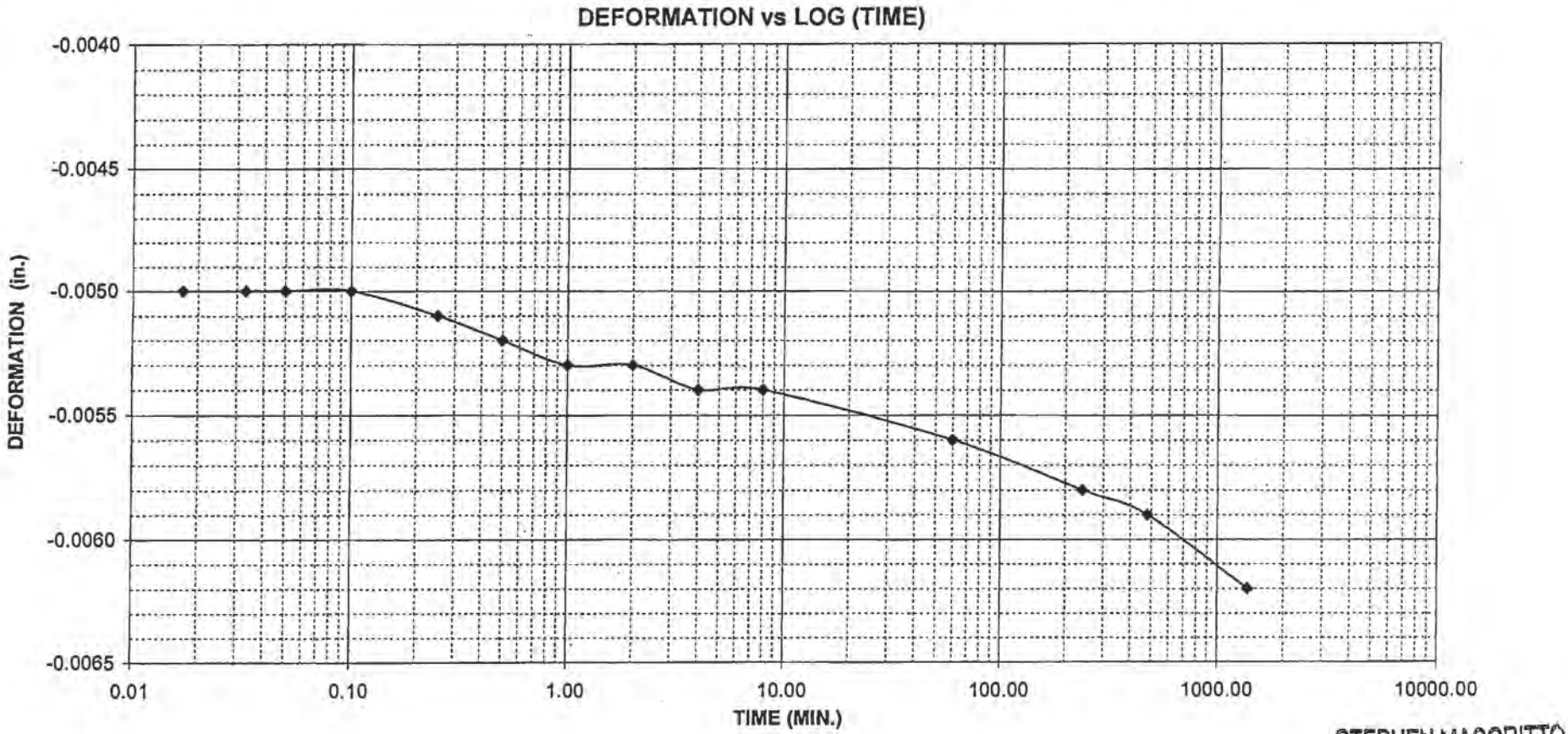


STEPHEN MACORITTO
OCT 20 2005

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

ASTM D2435 - METHOD B, "ONE DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS."

JOB: WEST LA DISTRICT HEADQUARTERS
SAMPLE: HSA-2 @ 5.0
LOAD: 1 KSF
SOIL TYPE: SC, CLAYEY SAND

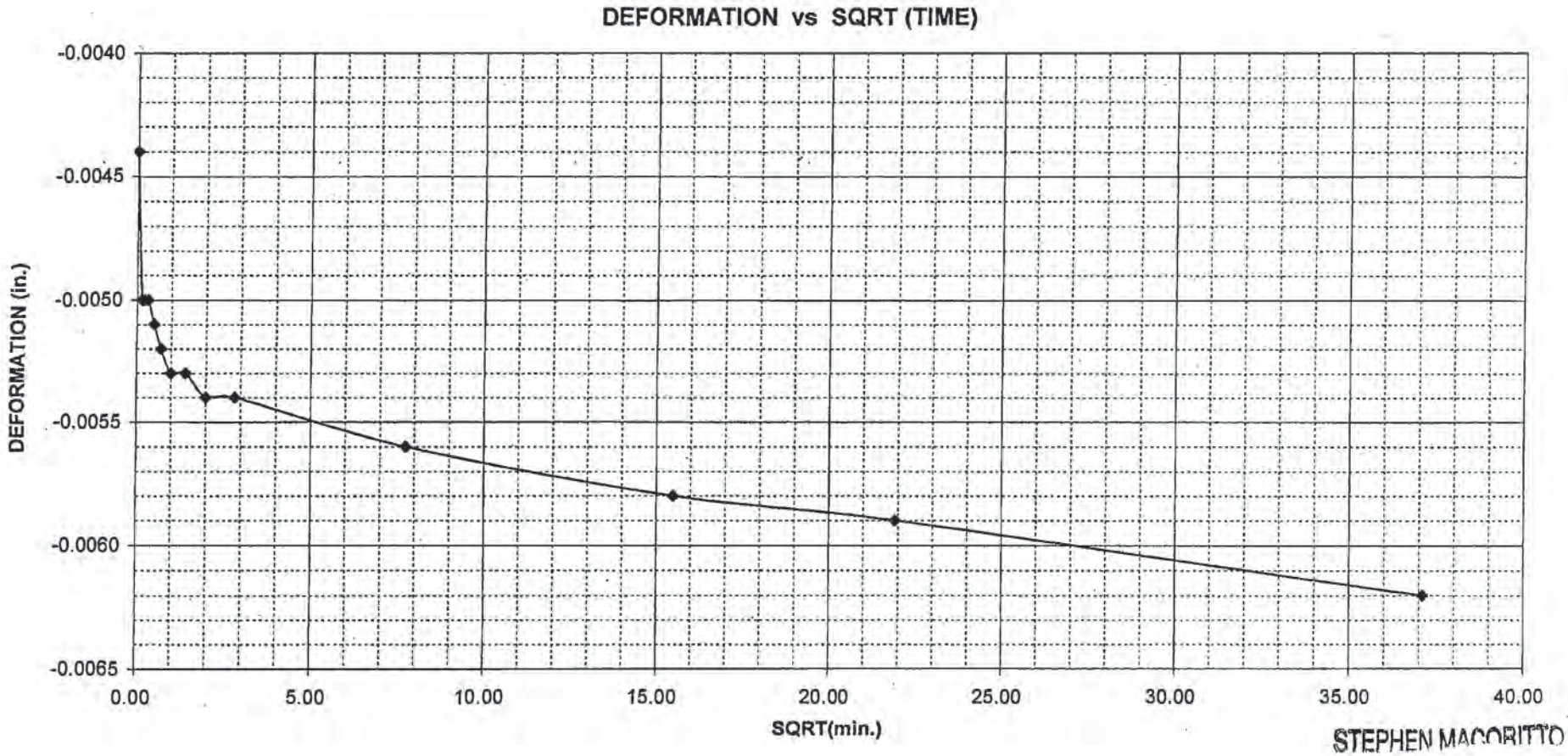


STEPHEN MACORITTO
OCT 20 2005

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

ASTM D2435 - METHOD B, "ONE DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS."

JOB: WEST LA DISTRICT HEADQUARTERS
SAMPLE: HSA-2 @ 5.0
LOAD: 1 KSF
SOIL TYPE: SC, CLAYEY SAND



STEPHEN MACORITTO
OCT 20 2005

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES BUSINESS UNIT
SOILS AND MATERIALS TESTING SQUAD

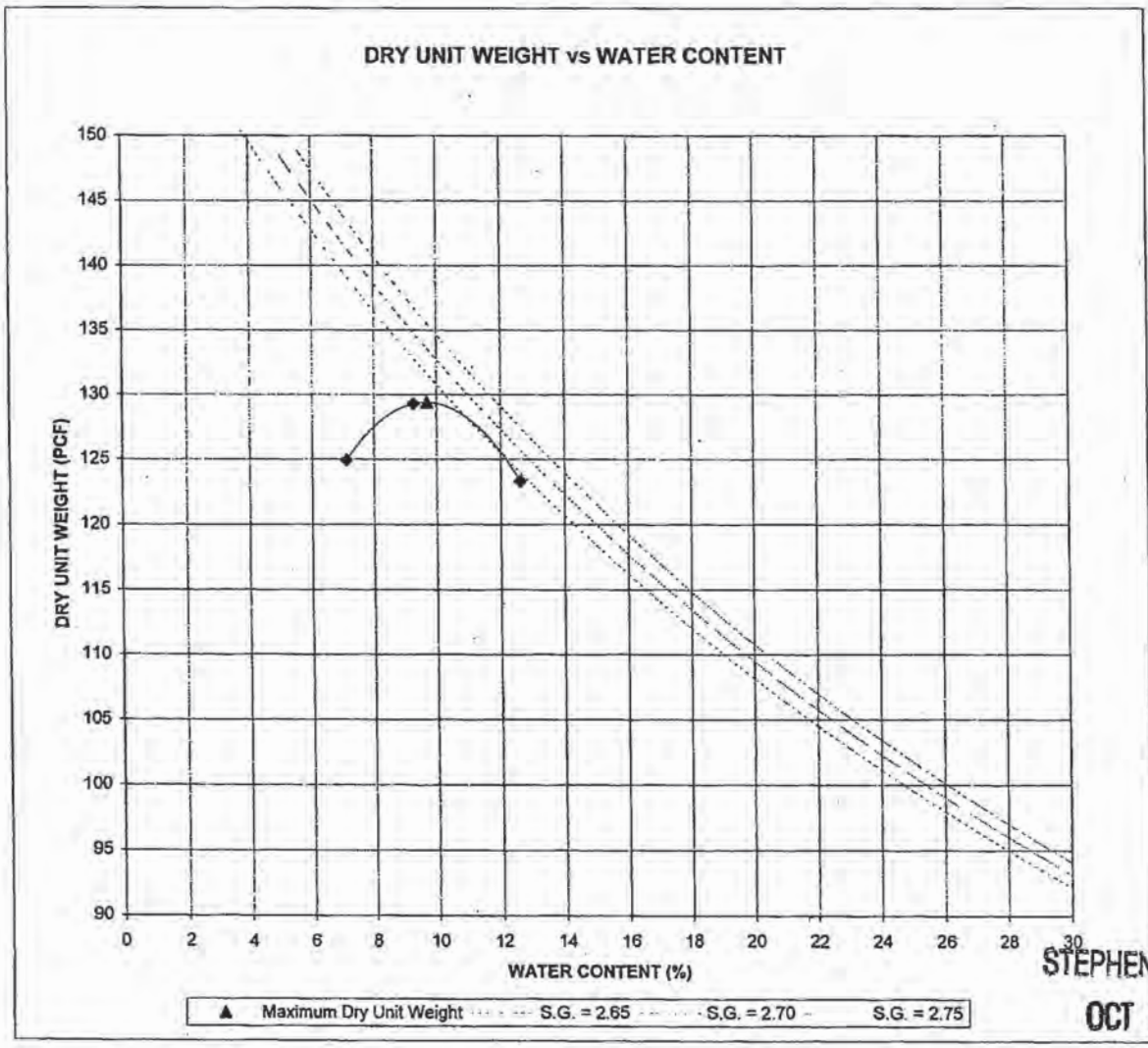
JOB:	WEST L.A. DISTRICT HEADQUARTERS	SAMPLE:	BLEND HSA-1 & HSA-3 @ 0-5'
OPERATOR:	S. MACORITTO		
LOCATION:	HSA-1 & HSA-3	DATE:	08/03/05
ELEVATION:	0-5'		
SOIL TYPE:	SC, CLAYEY SAND	% PLUS NO. 4:	6.3

LABORATORY COMPACTION CHARACTERISTICS

TEST METHOD: ASTM D1557A

OPTIMUM WATER CONTENT:	9.7 %
MAX. DRY UNIT WEIGHT:	129.4 PCF

REMARKS: SOME ASPHALT FOUND IN % PLUS NO. 4.



STEPHEN MACORITTO
OCT 20 2005

APPENDIX B. BORING LOGS

BORING 1

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 165 feet MSL
Logged By: AD

Excavation Date: July 10, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				0		**Asphalt:** 4 inches **Base:** 5 inches **Artificial Fill:** Sandy Silt, soft, moist, dark brown, fine- to medium-grained, trace fine gravel		
Cal-Mod	B1@2.5	4/4		2	CL	**Alluvium:** Sandy Clay, soft, slightly moist, dark reddish brown, fine-grained, some fine gravel (Santa Monica Slate (SMS))	112.2	16.9
SPT	B1@5	2/3/3		5		-Clay with Sand, soft, slightly moist, dark reddish brown, fine-grained, trace fine gravel (SMS)	-	12.3
Cal-Mod	B1@10	5/10		10		-Sandy Clay, firm, moist, dark reddish brown, fine- to coarse-grained, some fine gravel (SMS)	116.8	10.8
SPT Bulk	B1@15 B1@15-20	4/5/4		15	SC	-Clayey Sand with Gravel, loose, moist, dark reddish brown, fine-grained, fine gravel (SMS)	-	9.9
Cal-Mod	B1@20	8/12		20	CL	Clay, firm, moist, dark reddish brown, trace fine-grained sand, trace fine gravel (SMS)	115.4	12.2

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

BORING 1 (Continued)

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 165 feet MSL
Logged By: AD

Excavation Date: July 10, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				20 --				
				21 --				
				22 --				
				23 --				
				24 --				
SPT	B1@25	4/7/7		25 --		-Sandy Clay, firm, moist, dark reddish brown, fine- to medium-grained	-	11.4
				26 --				
				27 --				
				28 --				
				29 --				
Cal-Mod	B1@30	14/13		30 --	SP	Sand (lens), poorly graded, medium dense, moist, brown, fine-grained	104.0	15.4
				31 --	CL	Clay, stiff, moist, dark reddish brown, trace fine- to medium-grained sand		
				32 --				
				33 --				
				34 --				
SPT	B1@35	6/16/29		35 --			-	4.5
				36 --	SP	Sand, poorly graded, dense, moist, dark reddish brown, fine- to medium-grained with some coarse-grained, some fine- to coarse gravel (SMS)		
				37 --		Clayey Sand with Gravel, very dense, moist, gray to dark brown, fine- to coarse-grained, fine gravel (SMS)		
				38 --				
				39 --	SC	End boring at 40.5 feet bgs. Artificial fill to 2 feet bgs. No groundwater encountered.		
Cal-Mod	B1@40	44/31(2")		40 --		Boring backfilled with soil cuttings and tamped. Surface restored with asphalt patch.	124.2	6.2

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

BORING 2

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 162 feet MSL
Logged By: AD

Excavation Date: July 10, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				0		**Asphalt:** 3 inches **Base:** 6 inches **Artificial Fill:** Sandy Silt, soft, moist, dark brown, fine- to medium-grained, trace fine-gravel		
SPT	B2@2.5	5/5/3		2	CL	**Alluvium:** Sandy Clay, soft, moist, dark reddish brown, fine-grained	-	8.8
Cal-Mod	B2@5 Disturbed	8/9		5	ML	Silt, firm, moist, dark reddish brown, fine- to medium-grained, trace fine gravel (SMS)	-	11.1
SPT	B2@10	6/5/5		10	CL	Clay, firm, moist, dark brown	-	13.2
Cal-Mod Bulk	B2@15 B2@15-20	6/7		15	GC	Clayey Gravel with Sand, loose, moist, dark reddish brown, fine- to medium-grained, fine to coarse gravel (SMS)	122.2	9.5
SPT	B2@20	2/8/5		20	SC	Clayey Sand with Gravel, medium dense, moist, dark reddish brown, fine- to coarse-grained, fine gravel	-	10.1

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

BORING 2 (Continued)

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 162 feet MSL
Logged By: AD

Excavation Date: July 10, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				20 --				
				21 --				
				22 --				
				23 --				
				24 --				
Cal-Mod	B2@25	6/9	■	25 --	CL	Clay with Sand, firm, moist, dark brown, fine-grained	100.3	23.1
				26 --				
				27 --				
				28 --				
				29 --		-2 inch Sand lens, fine- to coarse-grained, some fine to coarse gravel		
SPT	B2@30	7/6/6	‖	30 --	ML	Sandy Silt, firm, moist, dark reddish brown, fine-grained, trace fine-gravel (SMS)	- -	18.2 (top) 4.9 (bot)
				31 --				
				32 --				
				33 --				
				34 --				
Cal-Mod	B2@35	7/9	■	35 --		-No gravel	96.6	26.5
				36 --				
				37 --				
				38 --				
				39 --				
SPT	B2@40	4/10/13	‖	40 --	SP-SM	Sand with Silt, poorly graded, medium dense, moist, dark brown to dark reddish brown, fine- to medium-grained, some fine to coarse gravel (SMS)	-	12.0

■ - California Modified Sampler (Cal-Mod)
‖ - Standard Penetration Test (SPT)
▨ - Bulk Sample
▨ - Disturbed Sample or Bag Sample
□ - No Sample Recovered
▼ - Groundwater or Seepage

BORING 2 (Continued)

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 162 feet MSL
Logged By: AD

Excavation Date: July 10, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				40 --				
				41 --				
				42 --				
				43 --				
				44 --				
Cal-Mod	B2@45	31/42	■	45 -- ▼	GW-GC	Gravel with Clay and Sand, well graded, dense, wet, dark reddish brown, fine- to medium-grained, fine to coarse gravel (SMS), minor seepage at 45 feet	132.4	9.5
				46 --				
				47 --				
				48 --				
				49 --				
SPT	B2@50	16/26/31	‖	50 --		-Very dense, moist, no seepage	-	9.6
				51 --		End boring at 50.5 feet bgs. Artificial fill to 1.5 feet bgs. Minor seepage encountered at 45 feet. Boring backfilled with soil cuttings and tamped. Surface restored with asphalt patch.		
				52 --				
				53 --				
				54 --				
				55 --				
				56 --				
				57 --				
				58 --				
				59 --				
				60 --				

■ - California Modified Sampler (Cal-Mod)
‖ - Standard Penetration Test (SPT)
▨ - Bulk Sample
▨ - Disturbed Sample or Bag Sample
□ - No Sample Recovered
▼ - Groundwater or Seepage

BORING 3

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 163 feet MSL
Logged By: CHL & AD

Excavation Date: July 6, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				0		**Asphalt:** 4 inches **Base:** 6 inches		
				1		**Artificial Fill:** Sandy Silt and Sandy Clay, soft, moist, dark brown, fine- to medium-grained, trace fine gravel, trace brick fragments		
				2				
SPT	B3@2.5	2/2/3		3	ML	**Alluvium:** Sandy Silt, soft, moist, dark reddish brown, fine-grained	-	19.4
				4				
					CL	Clay with Sand, soft, moist, dark reddish brown, fine-grained		
Cal-Mod	B3@5	4/4		5			101.3	19.4
				6				
						-Sandy Clay, soft, moist, dark reddish brown, fine- to medium-grained, trace fine gravel (SMS)		
SPT	B3@7.5	2/2/3		7			-	13.6
				8				
				9		-Dark brown		
SPT	B3@10	2/2/3		10			-	15.1
				11				
				12				
				13				
				14				
Cal-Mod	B3@15	5/8		15	SC	Clayey Sand with Gravel, loose, moist, dark reddish brown, fine- to medium-grained, fine gravel (SMS)	117.9	7.3
Bulk	B3@10-15			16				
				17				
				18				
				19	ML	Sandy Silt, soft, moist, dark reddish brown, fine- to coarse-grained, trace fine gravel (SMS), moderate plasticity		
SPT	B3@20	4/4/3		20			-	13.0

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

BORING 3 (Continued)

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 163 feet MSL
Logged By: CHL & AD

Excavation Date: July 6, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				20				
				21				
				22				
				23				
				24				
Cal-Mod	B3@25	10/20	■	25	GW-GC	Sandy Gravel with Clay, well graded, medium dense, slightly moist, dark reddish brown, fine- to medium-grained with some coarse-grained, fine gravel with trace coarse gravel (SMS)	120.0	6.3
				26				
				27				
				28				
				29	CL	Clay, soft, moist, dark olive brown with yellowish brown oxidation staining, trace fine-grained sand		
SPT	B3@30	3/3/4	‖	30			-	25.8
				31				
				32				
				33				
				34		-Sandy Clay, stiff, moist, dark olive brown with dark yellowish brown oxidation staining, fine-grained		
Cal-Mod	B3@35	10/21	■	35			105.6	16.1
				36				
				37		-@39' Dark reddish brown, fine-grained with trace medium- to coarse-grained, trace fine gravel		
				38				
				39		End boring at 40.5 feet bgs. Artificial fill to 2 feet bgs. No groundwater encountered.		
SPT	B3@40	5/8/7	‖	40		Boring backfilled with soil cuttings and tamped. Surface restored with asphalt patch.	-	14.3

■ - California Modified Sampler (Cal-Mod)
‖ - Standard Penetration Test (SPT)
▨ - Bulk Sample
▨ - Disturbed Sample or Bag Sample
□ - No Sample Recovered
▼ - Groundwater or Seepage

BORING 4

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 161 feet MSL
Logged By: CHL

Excavation Date: July 6, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				0		**Asphalt:** 4 inches **Base:** 6 inches		
				1		**Artificial Fill:** Sandy Silt and Sandy Clay, soft, moist, dark reddish brown, fine- to medium-grained, trace fine to coarse gravel, trace brick and asphalt fragments		
SPT	B4@2.5	2/2/2		2	CL	**Alluvium:** Clay, soft, moist, dark reddish brown, trace fine-grained sand	-	20.5
				3				
				4		-Clay with Sand, soft, moist, dark reddish brown, fine-grained		
Cal-Mod	B4@5	3/6		5			105.7	19.6
				6				
				7				
				8				
				9				
SPT	B4@10	3/2/3		10		-Fine-grained with trace medium- to coarse-grained, trace fine gravel (SMS)	-	15.5
				11				
				12				
				13				
				14				
Cal-Mod	B4@15	7/11		15		-Sandy Clay, firm, moist, dark reddish brown, fine-grained, trace fine gravel (SMS)	117.9	13.5
Bulk	B4@15-20			16				
				17				
				18				
				19				
SPT	B4@20	3/3/5		20	SC	Clayey Sand, loose, moist, dark reddish brown, fine to medium-grained with trace coarse-grained, trace fine gravel (SMS)	-	11.9

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

BORING 4 (Continued)

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 161 feet MSL
Logged By: CHL

Excavation Date: July 6, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				20				
				21	ML	Sandy Silt, firm, moist, dark reddish brown, medium- to coarse grained with some fine-grained, some fine to coarse gravel (SMS)		
				22				
				23				
				24	SM	Silty Sand, medium dense, moist, dark reddish brown, fine- to coarse-grained, some fine to coarse gravel		
Cal-Mod	B4@25	11/11	■	25			120.2	7.6
				26				
				27				
				28				
				29	CL/SM/SP	Interlayered Sandy Clay, Silty Sand and poorly graded Sand, stiff or medium dense, moist, dark reddish brown to dark olive brown, fine-grained (ML & SM) and fine- to coarse-grained (SP), some fine gravel, layers are 2 to 5 inches in thickness		
SPT	B4@30	7/9/11	‖	30			-	8.6
				31				
				32				
				33				
				34				
Cal-Mod	B4@35	11/33	■	35	GC	Clayey Gravel with Sand, medium dense, moist, dark reddish brown to dark olive brown, fine- to coarse-grained, fine to coarse gravel, few thin silt lenses (1 inch thick)	126.4	7.2
				36		-@39'Clayey Sand with Gravel, medium dense, moist, dark reddish brown, fine- to coarse-grained, fine gravel with trace coarse gravel		
				37		-@40' Gravel zone (4 inch thick)		
				38		End boring at 40.5 feet bgs.		
				39		Artificial fill to 2 feet bgs.		
						No groundwater encountered.		
SPT	B4@40	6/14/23	‖	40		Boring backfilled with soil cuttings and tamped.	-	7.8 (top)
						Surface restored with asphalt patch.	-	9.7 (bot)

■ - California Modified Sampler (Cal-Mod)
‖ - Standard Penetration Test (SPT)
▨ - Bulk Sample
▩ - Disturbed Sample or Bag Sample
□ - No Sample Recovered
▼ - Groundwater or Seepage

BORING 5

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 160 feet MSL
Logged By: AD

Excavation Date: July 11, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
Bulk	B5@0-5			0 -- 1 --		**Asphalt:** 5 inches **Base:** 2 inches **Artificial Fill:** Sandy Silt, soft, moist, dark brown, fine- to medium-grained, trace fine gravel		
Cal-Mod	B5@2.5	3/4		2 -- 3 -- 4 --	ML	**Alluvium:** Silt with Sand, soft, moist, dark reddish brown, moist, soft, fine-grained, trace fine-gravel (SMS)	96.7	15.7
SPT	B5@5	2/2/2		5 -- 6 -- 7 -- 8 -- 9 --		-moderate plasticity	-	19.9
Cal-Mod	B5@10	5/7		10 -- 11 -- 12 -- 13 -- 14 --	CL	Clay, firm, moist, dark reddish brown, trace fine gravel (SMS)	104.6	19.4
SPT Bulk	B5@15 B5@15-20	2/2/3		15 -- 16 -- 17 -- 18 -- 19 --	SC	-Clayey Sand, soft, moist, dark reddish brown, fine- to medium-grained with trace coarse-grained, trace fine gravel	-	13.5
Cal-Mod	B5@20	13/11		20 --	SC-SM	Silty Clayey Sand with Gravel, medium dense, moist, dark reddish brown, fine- to coarse-grained, fine gravel (SMS)	120.7	5.9

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

BORING 5 (Continued)

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 160 feet MSL
Logged By: AD

Excavation Date: July 11, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				20				
				21	ML	Silt, stiff, moist, dark reddish brown, trace fine gravel (SMS)		
				22				
				23				
				24				
SPT	B5@25	8/5/4		25	SM	Silty Sand with Gravel, loose, moist, dark reddish brown, fine- to coarse-grained, fine gravel	-	5.4
				26				
				27				
				28				
				29				
Cal-Mod	B5@30	6/11		30	CL	Clay with Sand, firm, moist, dark reddish brown, fine-grained	104.8	21.0
				31				
				32				
				33				
				34		-Clay, firm, moist, dark reddish brown		
SPT	B5@35	4/5/7		35			-	27.6
				36				
				37				
				38				
				39				
Cal-Mod	B5@40	31/43		40		-Dense, minor seepage at 40 feet bgs	128.6	10.0

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

BORING 5 (Continued)

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 160 feet MSL
Logged By: AD

Excavation Date: July 11, 2017
Driller: LA General Services
Excavation Method: HSA
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				40				
				41				
				42				
				43				
				44				
SPT	B5@45	7/9/12		45	SC	Clayey Sand, medium dense, very moist, dark reddish brown, fine- to medium-grained with trace coarse-grained, trace fine gravel	-	14.5
				46				
				47				
				48				
				49				
Cal-Mod	B5@50	18/33		50		-Clayey Sand with Gravel, dense, very moist, dark reddish brown, fine- to coarse-grained, fine gravel	117.4	15.4
				51		End boring at 50.5 feet bgs.		
				52		Artificial fill to 1.5 feet bgs.		
				53		Minor seepage encountered at 40 feet.		
				54		Boring backfilled with soil cuttings and tamped.		
				55		Surface restored with asphalt patch.		
				56				
				57				
				58				
				59				
				60				

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

BORING 6

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 159 feet MSL
Logged By: AD

Excavation Date: July 11, 2017
Driller: LA General Services
Excavation Method: Flight Auger
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				0		**Asphalt:** 6 inches **Base:** 6 inches		
				1		**Artificial Fill:** Sandy Silt, soft, moist, dark brown, fine- to medium-grained, trace fine gravel		
				2	CL	**Alluvium:** Clay, soft, moist, dark reddish brown, trace fine-grained sand		
SPT	B6@2.5	1/2/2		3			-	28.1
				4				
				5		-Clay with Sand, soft, moist, dark reddish brown, fine-grained		
Cal-Mod	B6@5	3/4		6			102.1	21.3
				7				
				8				
				9				
				10		- Fine-grained with trace medium- and coarse-grained		
SPT	B6@10	2/2/3		11			-	19.1
				12				
				13				
				14				
				15	GC	-Clayey Gravel with Sand, loose, moist, dark reddish brown, fine-grained with trace-medium and coarse-grained, fine gravel (SMS)		
Cal-Mod	B6@15	3/8		16			117.1	9.6
				17				
				18				
				19		Clayey Sand, medium dense, moist, dark reddish brown, fine- to coarse-grained		
					SC			
SPT	B6@20	8/6/5		20			-	12.8 (top)
						(continued on next sheet)	-	4.7 (bot)

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

BORING 6 (Continued)

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 159 feet MSL
Logged By: AD

Excavation Date: July 11, 2017
Driller: LA General Services
Excavation Method: Flight Auger
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
				20	SP-SM	Sand with Silt and Gravel, medium dense, moist, dark reddish brown, fine- to coarse-grained, fine gravel (SMS)		
				21				
				22				
				23				
				24	ML	Silt with Sand, firm, moist, dark reddish brown, fine- to medium-grained, some fine to coarse gravel (SMS)		
Cal-Mod	B6@25	7/8	■	25			105.2	21.0
				26		End boring at 25.5 feet bgs. Artificial fill to 1.5 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and tamped. Surface restored with asphalt patch.		
				27				
				28				
				29				
				30				
				31				
				32				
				33				
				34				
				35				
				36				
				37				
				38				
				39				
				40				

■ - California Modified Sampler (Cal-Mod)
‖ - Standard Penetration Test (SPT)
▨ - Bulk Sample
▩ - Disturbed Sample or Bag Sample
□ - No Sample Recovered
▼ - Groundwater or Seepage

BORING 7

Los Angeles Department of Water & Power

Project No.: LCW81
Client: LADWP
Location: West LA District Yard
12300 Nebraska Avenue
Los Angeles, CA 90025
Elevation: 158 feet MSL
Logged By: AD

Excavation Date: July 11, 2017
Driller: LA General Services
Excavation Method: Flight Auger
Boring Diameter: 7"
Sampling Method: Cal-Mod, SPT
Hammer Drop: 30 inches
Hammer Weight: 140 lbs.

Sample Type	Sample ID	Blow Count (Blows/6-in.)	Recovery	Depth (feet)	USCS Class.	Description	Dry Density (P.C.F)	Moisture Content (%)
Bulk	B7@0-5			0		**Asphalt:** 6 inches **Base:** 6 inches **Artificial Fill:** Sandy Silt, soft, moist, dark brown, fine- to medium-grained, trace fine-gravel		
				1				
				2	CL	**Alluvium:** Clay, soft, moist, dark reddish brown		
Cal-Mod	B7@2.5	3/3		3			85.1	28.6
				4		-Clay with Sand, soft, moist, dark reddish brown, fine-grained		
SPT	B7@5	2/2/3		5			-	20.8
				6				
				7				
				8				
				9		-Firm		
Cal-Mod	B7@10	5/7		10			104.2	15.9
				11				
				12				
				13				
				14		-Soft		
SPT	B7@15	3/2/4		15			-	17.7
				16				
				17		@19.5' Sandy Silt, firm, moist, dark reddish brown, fine- to medium-grained		
				18	ML			
				19		End boring at 20.5 feet bgs. Artificial fill to 1.5 feet bgs. No groundwater encountered.		
Cal-Mod	B7@20	5/9		20		Boring backfilled with soil cuttings and tamped. Surface restored with asphalt patch.	110.2	16.8

- California Modified Sampler (Cal-Mod)
- Standard Penetration Test (SPT)
- Bulk Sample
- Disturbed Sample or Bag Sample
- No Sample Recovered
- Groundwater or Seepage

APPENDIX C. LABORATORY TESTING RESULTS

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

WEST LA DISTRICT YARD
STANDARD PENETRATION TEST AND CAL. MODIFIED 2.875 IN. DIA. SAMPLES
SOIL CLASSIFICATION (ASTM D2487-11), WATER CONTENT (ASTM D2216-10), & IN-PLACE UNIT WEIGHT (ASTM D2937-10).

Sample Type[1]	Boring / Location	Depth (ft.)[2]	Classification of Soils for Engineering Purposes (Unified Soil Classification System)													Water Content	In-Place Dry Unit Weight
			Maximum Particle Size[3]	Sieve Analysis-Percent Passing (%) (US Standard Sieve Size)								Coefficients[4]		Atterberg Limits[5]		Soil Classification[6]		
				1 1/2 in.	3/4 in.	3/8 in.	No. 4	No. 10	No. 40	No. 100	No. 200	Uniformity (Cu)	Curvature (Cc)	Liquid Limit (LL)	Plasticity Index (PI)		(%)	(pcf)
SPT	B-1	15.0	3/4-in.	100.0	93.6	86.9	80.9	73.5	63.8	55.0	47.3	ND	ND	29	11	SC, CLAYEY SAND WITH GRAVEL	9.9	
CA	B-1	20.0	3/8-in.	100.0	100.0	98.5	92.2	91.0	89.6	87.7	86.3	ND	ND	39	17	CL, LEAN CLAY	12.2	115.4
SPT	B-1	25.0	3/8-in.	100.0	100.0	99.3	96.5	91.4	80.3	68.5	58.4	ND	ND	26	10	CL, SANDY LEAN CLAY	11.4	
CA	B-1	30.0	No. 4	100.0	100.0	100.0	99.9	99.1	94.5	89.9	87.6	ND	ND	36	14	CL, LEAN CLAY	15.4	104.0
SPT	B-1	35.0 (1)															4.5	
SPT	B-1	35.0 (2)															15.7	
CA	B-1	40.0	3/4-in.	100.0	93.5	85.1	69.2	56.5	38.3	26.3	21.6	ND	ND	26	9	SC, CLAYEY SAND WITH GRAVEL	6.3	124.2
CA	B-2	15.0	3/4-in.	100.0	90.6	73.8	61.5	53.7	44.3	35.7	30.4	ND	ND	29	11	GC, CLAYEY GRAVEL WITH SAND	9.5	122.2
SPT	B-2	20.0	3/4-in.	100.0	98.2	92.2	83.7	70.6	54.6	44.1	38.7	ND	ND	25	9	SC, CLAYEY SAND WITH GRAVEL	10.1	
CA	B-2	25.0	No. 40	100.0	100.0	100.0	100.0	100.0	99.8	97.6	84.5	ND	ND	33	13	CL, LEAN CLAY W/SAND	23.1	100.3
SPT	B-2	30.0 (1)															18.2	
SPT	B-2	30.0 (2)															4.9	
CA	B-2	35.0															26.5	96.6
SPT	B-2	40.0															12.0	
CA	B-2	45.0	3/4-in.	100.0	91.0	64.5	39.7	29.8	14.8	9.1	8.3	47.5	2.8	26	8	GW-GC, WELL-GRADED GRAVEL W/CLAY AND SAND	9.5	132.4
SPT	B-2	50.0	3/4-in.	100.0	95.1	89.5	77.1	60.9	38.1	24.1	19.7	ND	ND	23	7	SC-SM, SILTY, CLAYEY SAND WITH GRAVEL	9.6	
SPT	B-3	7.5	3/4-in.	100.0	99.0	95.1	92.2	86.5	77.4	66.4	59.4	ND	ND	30	13	CL, SANDY LEAN CLAY	13.6	
CA	B-3	15.0	3/8-in.	100.0	100.0	90.4	83.0	70.5	43.4	24.7	19.8	ND	ND	24	9	SC, CLAYEY SAND WITH GRAVEL	7.3	117.9
SPT	B-3	20.0															13.0	
CA	B-3	25.0	3/4-in.	100.0	91.4	69.2	48.3	41.1	26.6	19.2	16.0	ND	ND	28	11	GC, CLAYEY GRAVEL WITH SAND	6.3	120.0
SPT	B-3	30.0	No. 40	100.0	100.0	100.0	100.0	100.0	99.7	97.2	90.3	ND	ND	32	13	CL, LEAN CLAY	25.8	
CA	B-3	35.0	No. 10	100.0	100.0	100.0	100.0	99.8	98.4	82.4	58.3	ND	ND	27	9	CL, SANDY LEAN CLAY	16.1	105.6
SPT	B-3	40.0	3/8-in.	100.0	100.0	93.8	87.1	81.9	73.5	61.5	50.6	ND	ND	28	11	CL/SC, SANDY LEAN CLAY	14.3	

08/29/17

NOTES:

1. SPT = STANDARD PENETRATION TEST, CA = CALIFORNIA MODIFIED SAMPLES (2.875 IN. DIA.).
2. 1 OR 2 = SAMPLES AT THE SAME DEPTH.
3. MAXIMUM NOMINAL PARTICLE SIZE RETAINED ON THE INDICATED US STANDARD SIEVE .
4. ND = NOT DETERMINED. COEFFICIENTS DO NOT HAVE TO BE DETERMINED WHEN MORE THAN 12% OF THE TEST SPECIMEN PASSES THE NO. 200 SIEVE.
5. NP = NON-PLASTIC
6. GROUP SYMBOLS SEPARATED BY A DASH (-) ARE DUAL SYMBOLS. GROUP SYMBOLS SEPARATED BY A BACK SLASH (/) ARE BORDERLINE IN WHICH THE ASSIGNED GROUP SYMBOL IS ON THE LEFT AND THE ADJACENT OR BORDERING SYMBOL IS ON THE RIGHT.

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

WEST LA DISTRICT YARD
STANDARD PENETRATION TEST AND CAL. MODIFIED 2.875 IN. DIA. SAMPLES
SOIL CLASSIFICATION (ASTM D2487-11), WATER CONTENT (ASTM D2216-10), & IN-PLACE UNIT WEIGHT (ASTM D2937-10).

Sample Type[1]	Boring / Location	Depth (ft.)[2]	Classification of Soils for Engineering Purposes (Unified Soil Classification System)													Water Content	In-Place Dry Unit Weight
			Maximum Particle Size[3]	Sieve Analysis-Percent Passing (%) (US Standard Sieve Size)								Coefficients[4]		Atterberg Limits[5]		Soil Classification[6]		
				1 1/2 in.	3/4 in.	3/8 in.	No. 4	No. 10	No. 40	No. 100	No. 200	Uniformity (Cu)	Curvature (Cc)	Liquid Limit (LL)	Plasticity Index (PI)		(%)	(pcf)
SPT	B-4	2.5	No. 4	100.0	100.0	100.0	99.7	99.3	98.2	93.5	85.9	ND	ND	37	17	CL, LEAN CLAY	20.5	
CA	B-4	5.0	3/8-in.	100.0	100.0	99.4	99.1	98.8	97.0	91.7	83.5	ND	ND	36	16	CL, LEAN CLAY W/SAND	19.6	105.7
SPT	B-4	10.0	3/8-in.	100.0	100.0	98.3	97.8	96.3	92.7	82.1	71.7	ND	ND	29	13	CL, LEAN CLAY W/SAND	15.5	
CA	B-4	15.0	3/4-in.	100.0	98.4	95.3	89.1	87.4	83.3	75.3	69.4	ND	ND	36	16	CL, SANDY LEAN CLAY	13.5	117.9
SPT	B-4	20.0	3/8-in.	100.0	100.0	98.1	92.9	86.5	73.5	57.9	49.1	ND	ND	26	9	SC/CL, CLAYEY SAND	11.9	
CA	B-4	25.0															7.6	120.2
SPT	B-4	30.0	3/8-in.	100.0	100.0	94.6	86.8	77.8	64.7	51.3	41.7	ND	ND	26	10	SC, CLAYEY SAND	8.6	
CA	B-4	35.0	3/4-in.	100.0	91.6	74.3	45.1	43.3	34.4	27.7	21.9	ND	ND	27	10	GC, CLAYEY GRAVEL WITH SAND	7.2	126.4
SPT	B-4	40.0 (1)	3/4-in.	100.0	96.9	83.1	65.9	52.0	34.7	24.6	21.1	ND	ND	24	8	SC/SC-SM, CLAYEY SAND WITH GRAVEL	7.8	
SPT	B-4	40.0 (2)	3/8-in.	100.0	100.0	87.0	72.5	60.3	47.2	37.4	32.2	ND	ND	22	7	SC-SM, SILTY, CLAYEY SAND WITH GRAVEL	9.7	
SPT	B-5	15.0	3/4-in.	100.0	96.8	94.4	86.3	79.9	69.4	57.8	49.0	ND	ND	28	11	SC/CL, CLAYEY SAND	13.5	
CA	B-5	20.0	3/4-in.	100.0	97.5	86.7	72.0	56.4	34.6	22.0	18.0	ND	ND	23	8	SC/SC-SM, CLAYEY SAND WITH GRAVEL	5.9	120.7
SPT	B-5	25.0	3/8-in.	100.0	100.0	90.2	74.8	55.2	29.8	19.7	16.7	ND	ND	NP	NP	SM, SILTY SAND WITH GRAVEL	5.4	
CA	B-5	30.0	No. 4	100.0	100.0	100.0	99.5	99.3	98.1	90.8	80.7	ND	ND	33	15	CL, LEAN CLAY W/SAND	21.0	104.8
SPT	B-5	35.0	No. 40	100.0	100.0	100.0	100.0	100.0	99.8	98.9	95.1	ND	ND	34	12	CL, LEAN CLAY	27.6	
CA	B-5	40.0															10.0	128.6
SPT	B-5	45.0	3/8-in.	100.0	100.0	96.8	91.2	82.9	71.9	60.0	49.9	ND	ND	30	13	SC/CL, CLAYEY SAND	14.5	
CA	B-5	50.0	3/8-in.	100.0	100.0	97.8	79.3	68.6	50.4	28.1	20.8	ND	ND	22	7	SC-SM, SILTY, CLAYEY SAND WITH GRAVEL	15.4	117.4
SPT	B-6	2.5	No. 4	100.0	100.0	100.0	99.6	99.4	99.1	97.1	93.3	ND	ND	42	19	CL, LEAN CLAY	28.1	
CA	B-6	5.0	3/8-in.	100.0	100.0	99.2	99.0	98.9	98.1	91.6	82.1	ND	ND	36	16	CL, LEAN CLAY W/SAND	21.3	102.1
SPT	B-6	10.0	3/8-in.	100.0	100.0	98.5	95.9	92.7	89.0	83.3	79.2	ND	ND	38	19	CL, LEAN CLAY W/SAND	19.1	
CA	B-6	15.0	3/4-in.	100.0	98.0	88.4	71.7	68.8	63.5	53.3	45.3	ND	ND	29	11	GC, CLAYEY GRAVEL WITH SAND	9.6	117.1
SPT	B-6	20.0 (1)	3/8-in.	100.0	100.0	97.4	89.1	79.0	64.4	53.6	47.2	ND	ND	25	9	SC, CLAYEY SAND	12.8	
SPT	B-6	20.0 (2)	3/8-in.	100.0	100.0	90.6	75.7	56.6	28.4	15.8	12.2	ND	ND	NP	NP	SM/SP-SM, SILTY SAND WITH GRAVEL	4.7	
CA	B-6	25.0															21.0	105.2

08/29/17

NOTES:

1. SPT = STANDARD PENETRATION TEST, CA = CALIFORNIA MODIFIED SAMPLES (2.875 IN. DIA.).
2. 1 OR 2 = SAMPLES AT THE SAME DEPTH.
3. MAXIMUM NOMINAL PARTICLE SIZE RETAINED ON THE INDICATED US STANDARD SIEVE .
4. ND = NOT DETERMINED. COEFFICIENTS DO NOT HAVE TO BE DETERMINED WHEN MORE THAN 12% OF THE TEST SPECIMEN PASSES THE NO. 200 SIEVE.
5. NP = NON-PLASTIC
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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

WEST LA DISTRICT YARD
STANDARD PENETRATION TEST AND CAL. MODIFIED 2.875 IN. DIA. SAMPLES
SOIL CLASSIFICATION (ASTM D2487-11), WATER CONTENT (ASTM D2216-10), & IN-PLACE UNIT WEIGHT (ASTM D2937-10).

Sample Type[1]	Boring / Location	Depth (ft.)[2]	Classification of Soils for Engineering Purposes (Unified Soil Classification System)													Water Content	In-Place Dry Unit Weight
			Maximum Particle Size[3]	Sieve Analysis-Percent Passing (%) (US Standard Sieve Size)								Coefficients[4]		Atterberg Limits[5]		Soil Classification[6]		
				1 1/2 in.	3/4 in.	3/8 in.	No. 4	No. 10	No. 40	No. 100	No. 200	Uniformity (Cu)	Curvature (Cc)	Liquid Limit (LL)	Plasticity Index (PI)		(%)	(pcf)
CA	B-7	2.5	No. 40	100.0	100.0	100.0	100.0	100.0	99.9	99.4	98.2	ND	ND	46	21	CL, LEAN CLAY	28.6	85.1
SPT	B-7	5.0	No. 4	100.0	100.0	100.0	99.6	99.4	99.0	95.8	82.9	ND	ND	33	13	CL, LEAN CLAY W/SAND	20.8	
CA	B-7	10.0	No. 4	100.0	100.0	100.0	99.9	99.3	97.1	85.7	75.9	ND	ND	33	14	CL, LEAN CLAY W/SAND	15.9	104.2
SPT	B-7	15.0	No. 4	100.0	100.0	100.0	99.6	98.9	97.0	91.4	82.7	ND	ND	31	14	CL, LEAN CLAY W/SAND	17.7	
CA	B-7	20.0															16.8	110.2

08/29/17

NOTES:

1. SPT = STANDARD PENETRATION TEST, CA = CALIFORNIA MODIFIED SAMPLES (2.875 IN. DIA.).
2. 1 OR 2 = SAMPLES AT THE SAME DEPTH.
3. MAXIMUM NOMINAL PARTICLE SIZE RETAINED ON THE INDICATED US STANDARD SIEVE .
4. ND = NOT DETERMINED. COEFFICIENTS DO NOT HAVE TO BE DETERMINED WHEN MORE THAN 12% OF THE TEST SPECIMEN PASSES THE NO. 200 SIEVE.
5. NP = NON-PLASTIC
6. GROUP SYMBOLS SEPARATED BY A DASH (-) ARE DUAL SYMBOLS. GROUP SYMBOLS SEPARATED BY A BACK SLASH (/) ARE BORDERLINE IN WHICH THE ASSIGNED GROUP SYMBOL IS ON THE LEFT AND THE ADJACENT OR BORDERING SYMBOL IS ON THE RIGHT.

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WEST LA DISTRICT YARD
STANDARD PENETRATION TEST AND CAL. MODIFIED 2.875 IN. DIA. SAMPLES
SOIL CLASSIFICATION (ASTM D2487-11), WATER CONTENT (ASTM D2216-10), & IN-PLACE UNIT WEIGHT (ASTM D2937-10).

Sample Type[1]	Boring / Location	Depth (ft.)	Classification of Soils for Engineering Purposes (Unified Soil Classification System)														Water Content	In-Place Dry Unit Weight (pcf)[4]
			Maximum Particle Size[2]	Sieve Analysis-Percent Passing (%) (US Standard Sieve Size)								Coefficients[3]		Atterberg Limits		Soil Classification		
				1 1/2 in.	3/4 in.	3/8 in.	No. 4	No. 10	No. 40	No. 100	No. 200	Uniformity (Cu)	Curvature (Cc)	Liquid Limit (LL)	Plasticity Index (PI)		(%)	
CA	B-1	2.5	No. 4	100.0	100.0	100.0	99.4	98.6	96.9	85.9	72.5	ND	ND	31	11	CL, LEAN CLAY W/SAND	16.9	112.2
SPT	B-1	5.0															12.3	NA
CA	B-1	10.0	3/8-in.	100.0	100.0	98.4	93.2	88.4	77.4	63.1	53.8	ND	ND	27	11	CL, SANDY LEAN CLAY	10.8	116.8
SPT	B-2	2.5															8.8	NA
BAG	B-2	5.0															11.1	NA
SPT	B-2	10.0															13.2	NA
SPT	B-3	2.5															19.4	NA
CA	B-3	5.0	3/8-in.	100.0	100.0	99.1	98.1	95.1	91.1	82.2	70.0	ND	ND	29	11	CL, SANDY LEAN CLAY	19.4	101.3
SPT	B-3	10.0															15.1	NA
CA	B-5	2.5															15.7	96.7
SPT	B-5	5.0															19.9	NA
CA	B-5	10.0	No. 4	100.0	100.0	100.0	98.1	96.7	93.5	87.2	79.1	ND	ND	34	16	CL, LEAN CLAY W/SAND	19.4	104.6

10/12/17

NOTES:

1. CA = CALIFORNIA MODIFIED SAMPLE (2.875 IN. DIA.), SPT = STANDARD PENETRATION TEST, BAG = SMALL BAG SAMPLE.
2. MAXIMUM NOMINAL PARTICLE SIZE RETAINED ON THE INDICATED US STANDARD SIEVE .
3. ND = NOT DETERMINED. COEFFICIENTS DO NOT HAVE TO BE DETERMINED WHEN MORE THAN 12% OF THE TEST SPECIMEN PASSES THE NO. 200 SIEVE.
4. NA = NOT APPLICABLE

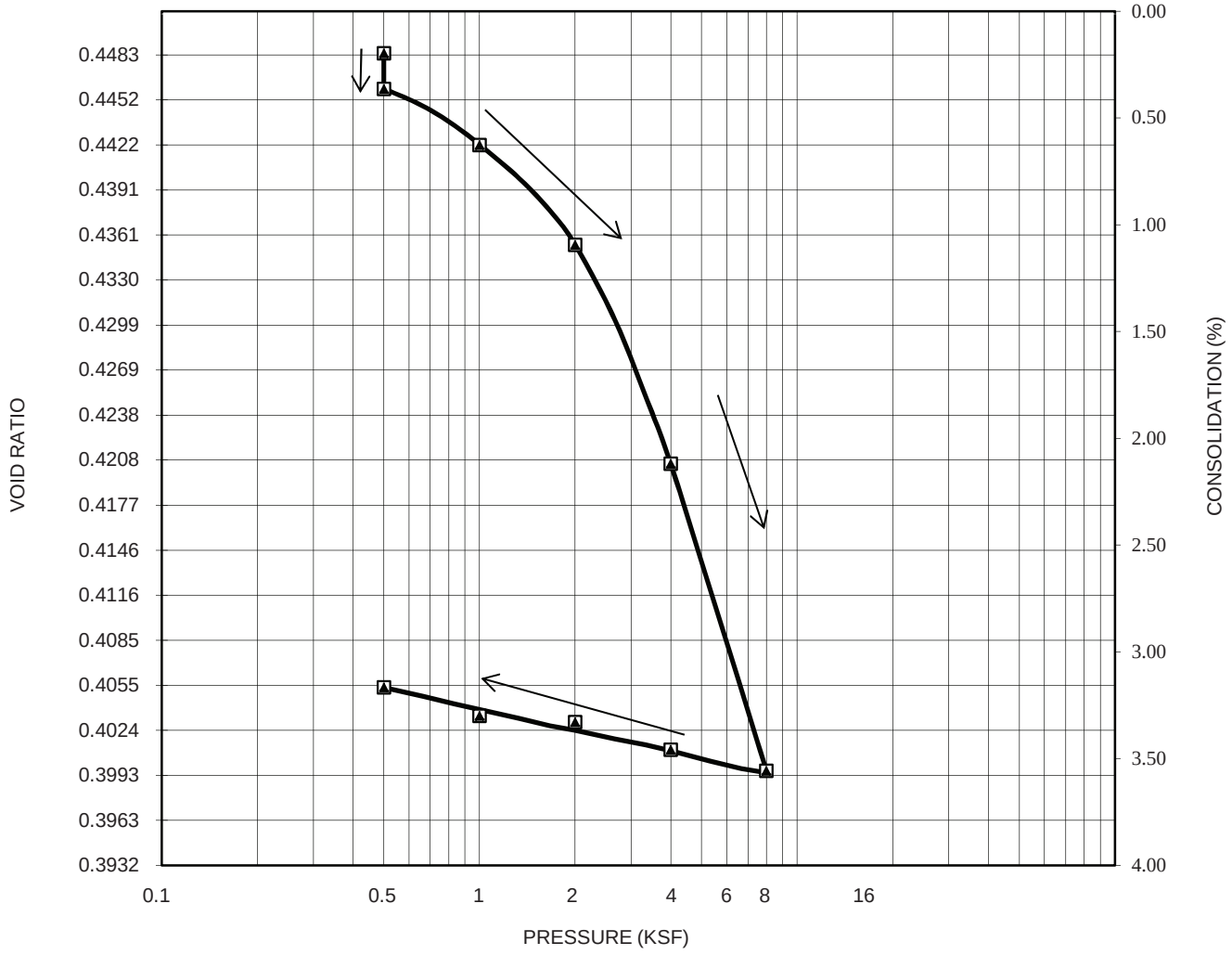
LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

ASTM D 2435-11 - ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS.

JOB:	WEST LA DISTRICT YARD
SAMPLE:	B-5 @ 20.0'
DATE:	8/28/2017
TEST BY:	JML
DESCRIPTION:	SC/SC-SM, CLAYEY SAND WITH GRAVEL
SPECIFIC GRAVITY:	2.74
NOTE:	UNDISTURBED SAMPLE

SAMPLE PROPERTIES:

	PLACING	REMOVAL
WATER CONTENT (%)	7.0	13.2
DRY UNIT WEIGHT (PCF)	117.9	121.7
SATURATION (%)	42.6	89.4
VOID RATIO	0.4513	0.4053



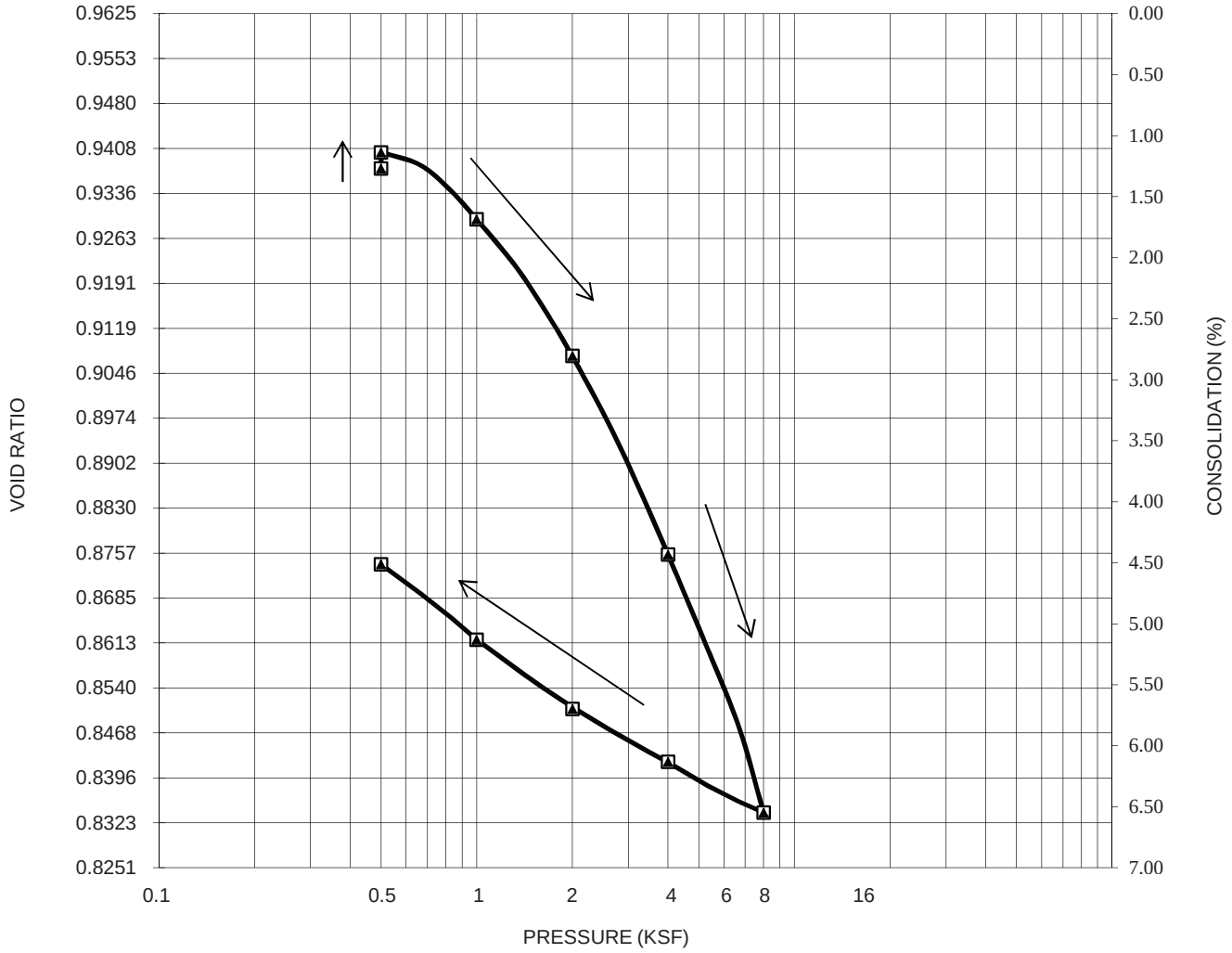
LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

ASTM D 2435-11 - ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS.

JOB:	WEST LA DISTRICT YARD
SAMPLE:	B-7 @ 2.5'
DATE:	8/14/2017
TEST BY:	JML
DESCRIPTION:	CL, LEAN CLAY
SPECIFIC GRAVITY:	2.70
NOTE:	UNDISTURBED SAMPLE

SAMPLE PROPERTIES:

	PLACING	REMOVAL
WATER CONTENT (%)	30.5	27.8
DRY UNIT WEIGHT (PCF)	85.9	90.0
SATURATION (%)	85.6	85.7
VOID RATIO	0.9625	0.8739



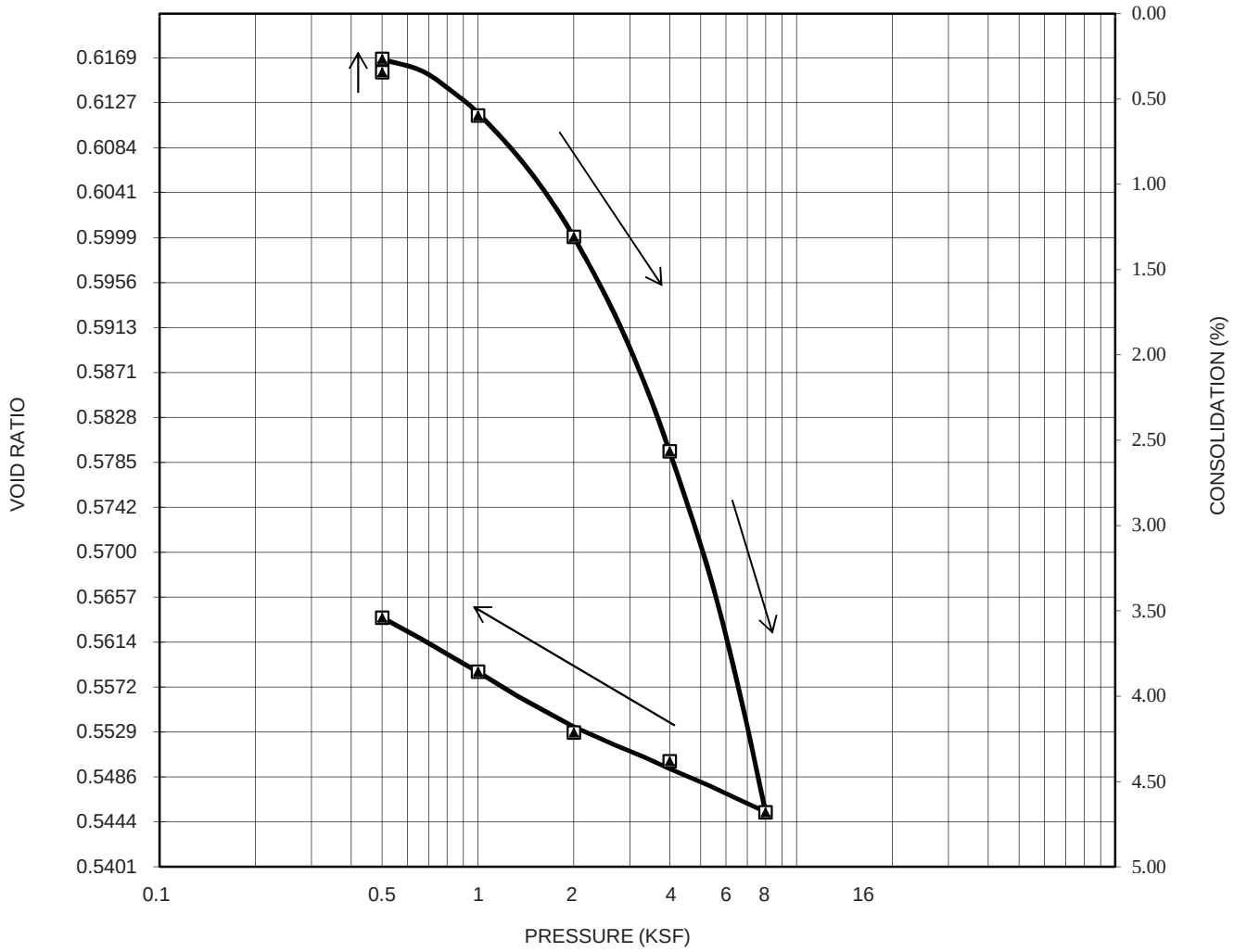
LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

ASTM D 2435-11 - ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS.

JOB:	WEST LA DISTRICT YARD
SAMPLE:	B-7 @ 10.0'
DATE:	8/14/2017
TEST BY:	JML
DESCRIPTION:	CL, LEAN CLAY W/SAND
SPECIFIC GRAVITY:	2.72
NOTE:	UNDISTURBED SAMPLE

SAMPLE PROPERTIES:

	PLACING	REMOVAL
WATER CONTENT (%)	16.1	18.3
DRY UNIT WEIGHT (PCF)	104.7	108.6
SATURATION (%)	70.7	88.1
VOID RATIO	0.6211	0.5638



LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

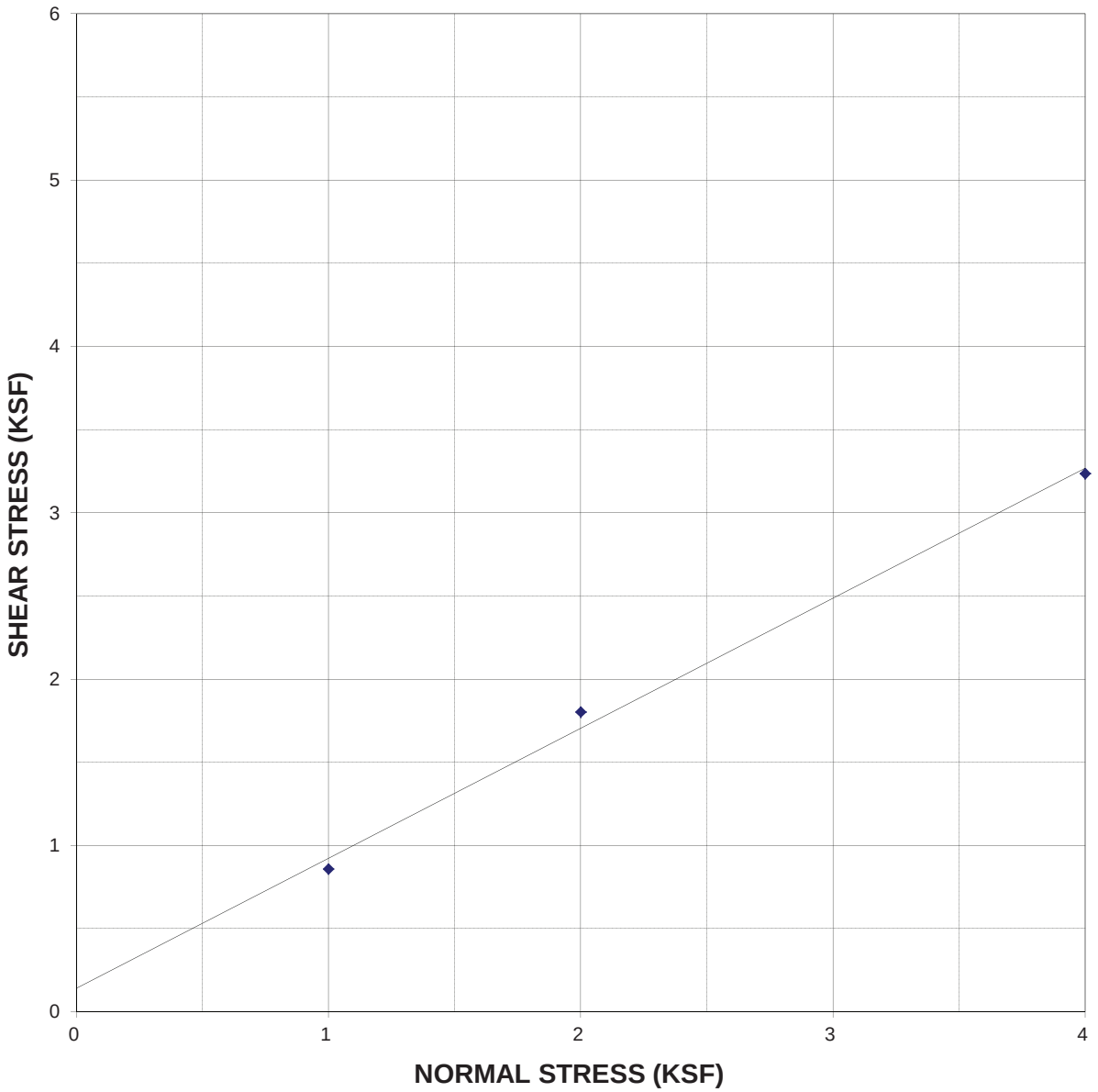
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	10/11/2017
SAMPLE:	B-1 @ 2.5'
TEST BY:	JML
SOIL TYPE:	CL, LEAN CLAY W/SAND
DRY UNIT WT.*:	93.9 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	38.7	0.86
2	81.3	1.80
4	145.9	3.24

FRICTION ANGLE = 38.0 DEGREES
COHESION[1] = 0.14 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



* THE DRY UNIT WEIGHT IS THE AVERAGE OF THE TESTED SPECIMENS.
1 = GEOTECHNICAL ENGINEER TO USE PROPER JUDGEMENT IN DETERMINING AN APPROPRIATE COHESION VALUE.

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

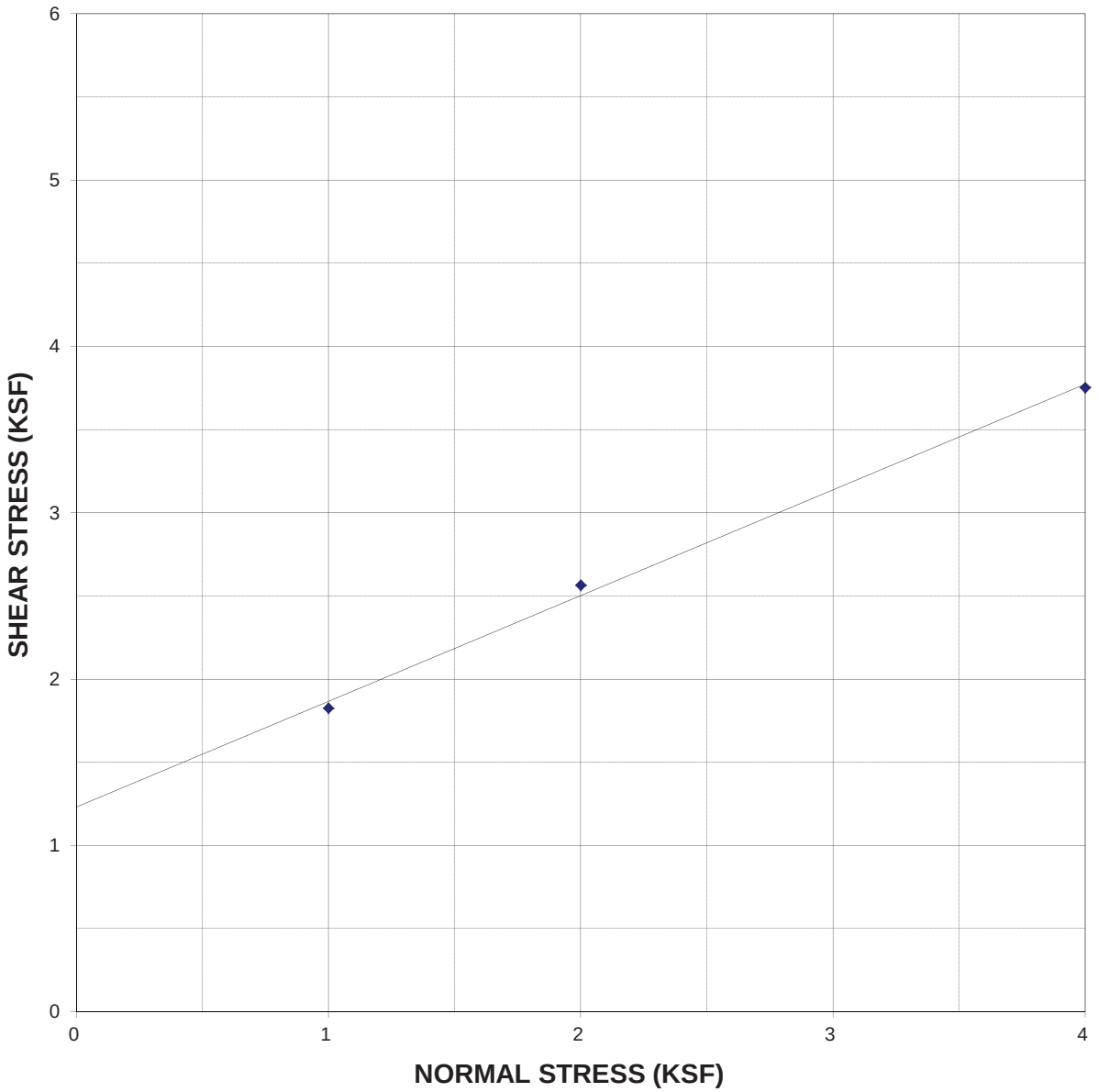
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	10/11/2017
SAMPLE:	B-1 @ 10.0'
TEST BY:	GP
SOIL TYPE:	CL, SANDY LEAN CLAY
DRY UNIT WT.*:	116.7 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	82.3	1.83
2	115.7	2.57
4	169.2	3.75

FRICTION ANGLE = 32.4 DEGREES
COHESION[1] = 1.23 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

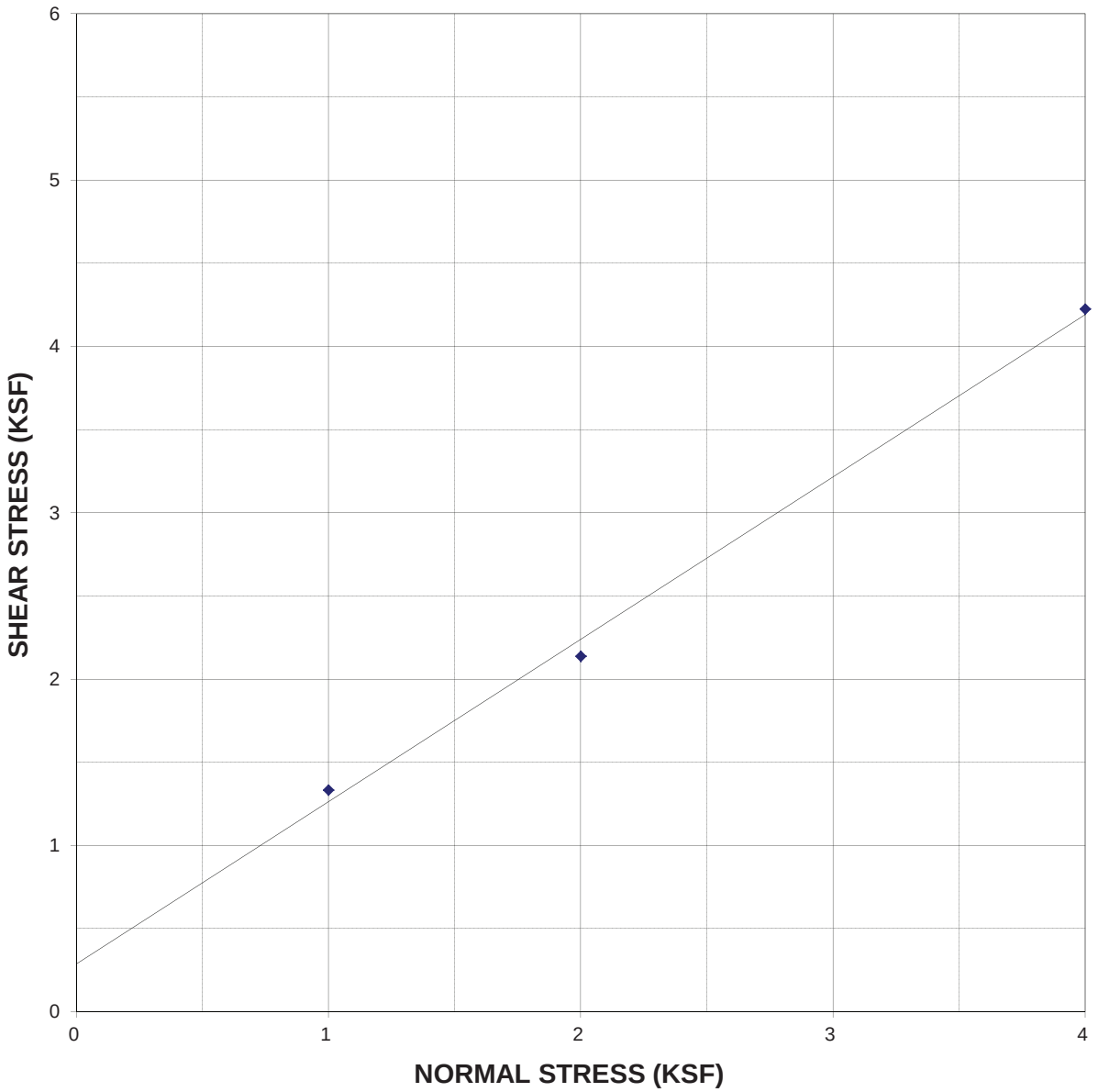
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-1 @ 20.0'
TEST BY:	GP
SOIL TYPE:	CL, LEAN CLAY
DRY UNIT WT.*:	115.2 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	60.1	1.33
2	96.4	2.14
4	190.5	4.23

FRICTION ANGLE = 44.3 DEGREES
COHESION[1] = 0.29 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

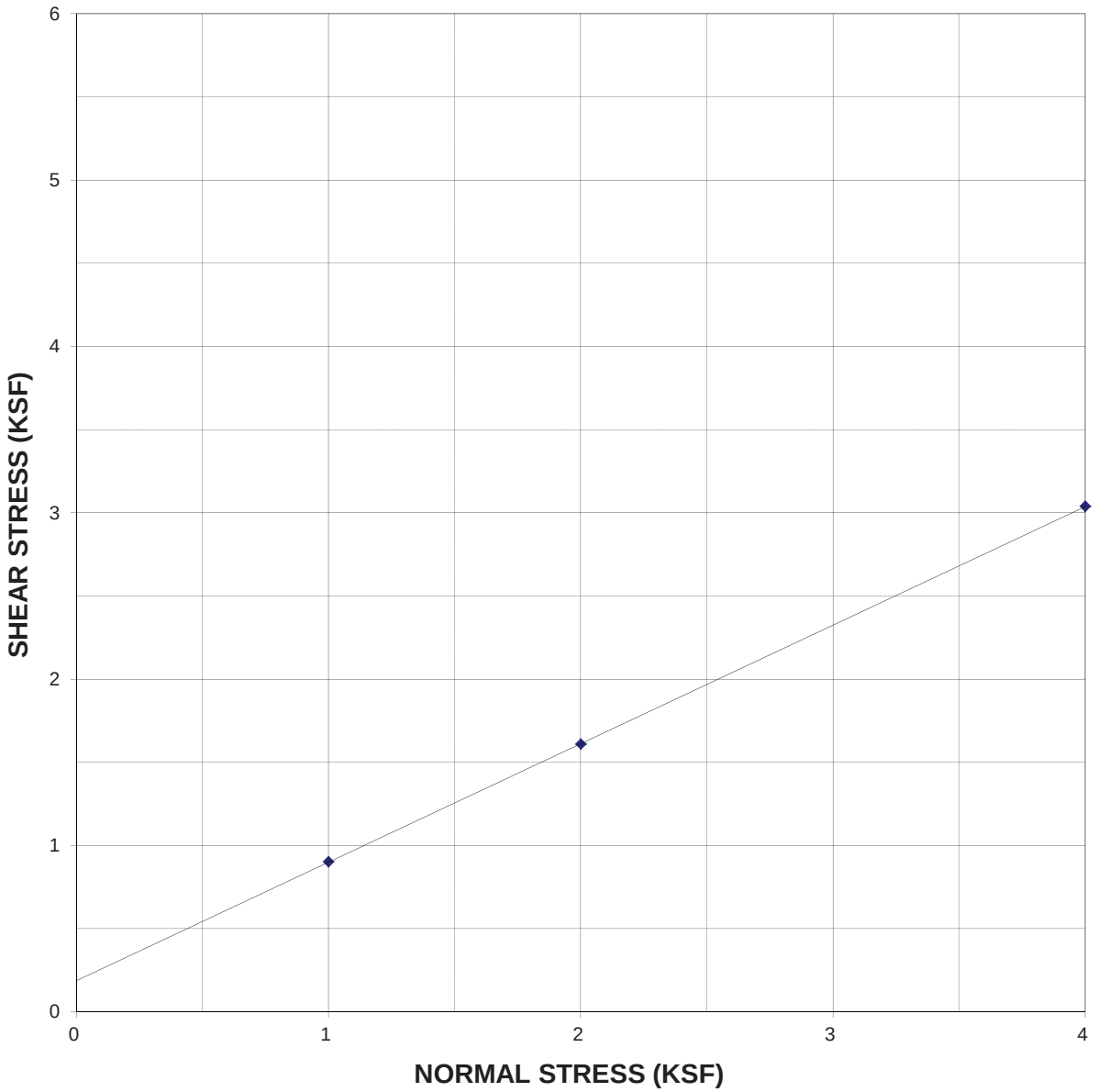
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-1 @ 30.0'
TEST BY:	GP
SOIL TYPE:	CL, LEAN CLAY
DRY UNIT WT.*:	105.9 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	40.7	0.90
2	72.6	1.61
4	137.0	3.04

FRICTION ANGLE = 35.5 DEGREES
COHESION[1] = 0.19 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

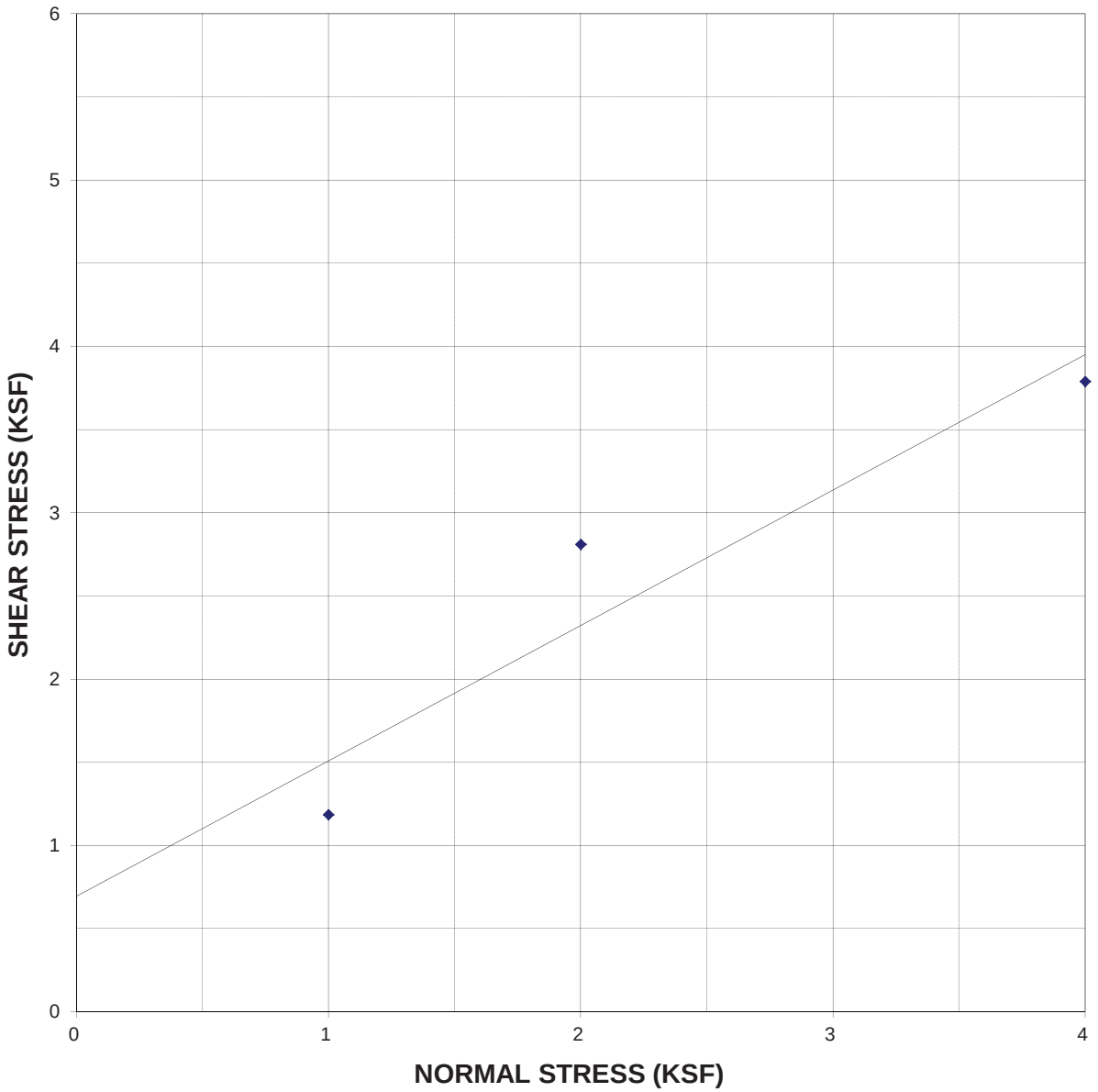
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-2 @ 15.0'
TEST BY:	GP
SOIL TYPE:	GC, CLAYEY GRAVEL WITH SAND
DRY UNIT WT.*:	122.1 pcf
NOTE:	UNDISTURBED SAMPLE.
	GRAVEL IN THE SHEAR PLANE.

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	53.4	1.18
2	126.7	2.81
4	170.8	3.79

FRICTION ANGLE = 39.1 DEGREES
COHESION[1] = 0.70 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



* THE DRY UNIT WEIGHT IS THE AVERAGE OF THE TESTED SPECIMENS.
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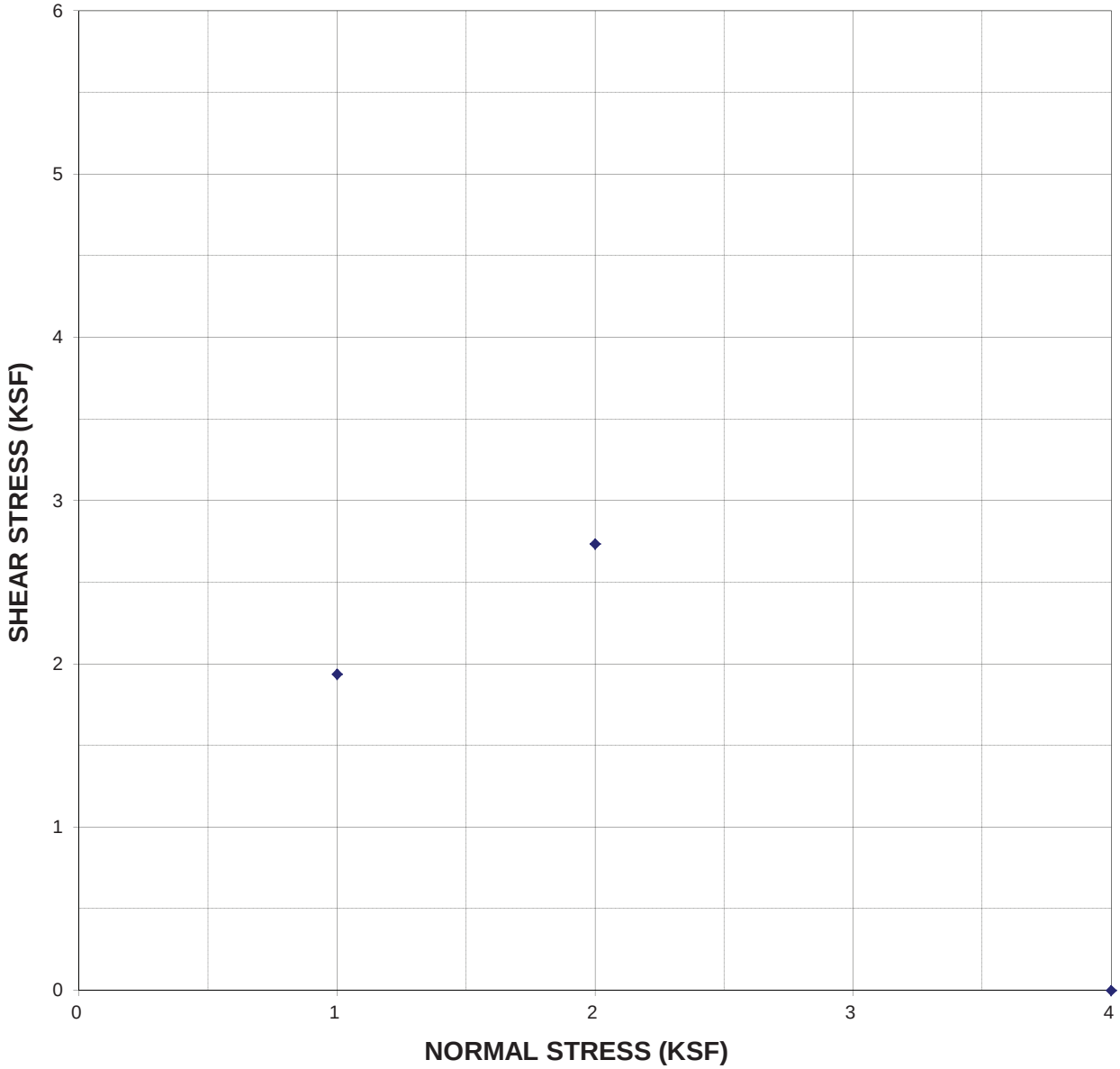
LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

		NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
JOB:	WEST LA DISTRICT YARD			
DATE:	8/14/2017			
SAMPLE:	B-2 @ 45.0'			
TEST BY:	GP			
SOIL TYPE:	GW-GC, WELL-GRADED GRAVEL W/CLAY AND SAND			
DRY UNIT WT.*:	129.9 pcf	1	87.3	1.94
NOTE:	UNDISTURBED SAMPLE.	2	123.3	2.73
	GRAVEL IN SHEAR PLANE HALTED TEST.	4	VOID	0.00

FRICTION ANGLE = DEGREES
COHESION[1] = KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

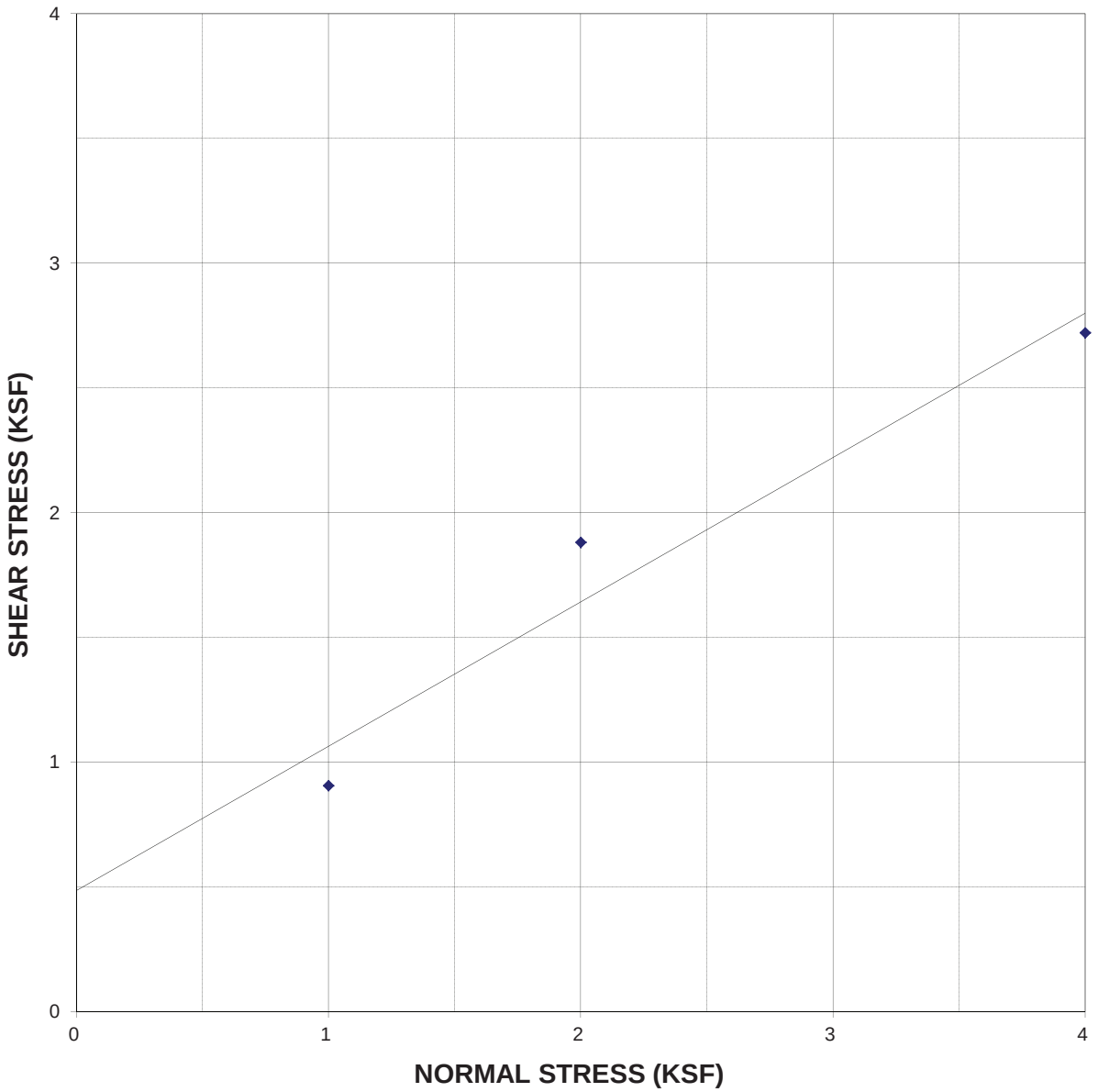
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	10/4/2017
SAMPLE:	B-3 @ 5.0'
TEST BY:	JML
SOIL TYPE:	CL, SANDY LEAN CLAY
DRY UNIT WT.*:	101.3 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	40.9	0.91
2	84.8	1.88
4	122.7	2.72

FRICTION ANGLE = 30.0 DEGREES
COHESION[1] = 0.49 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

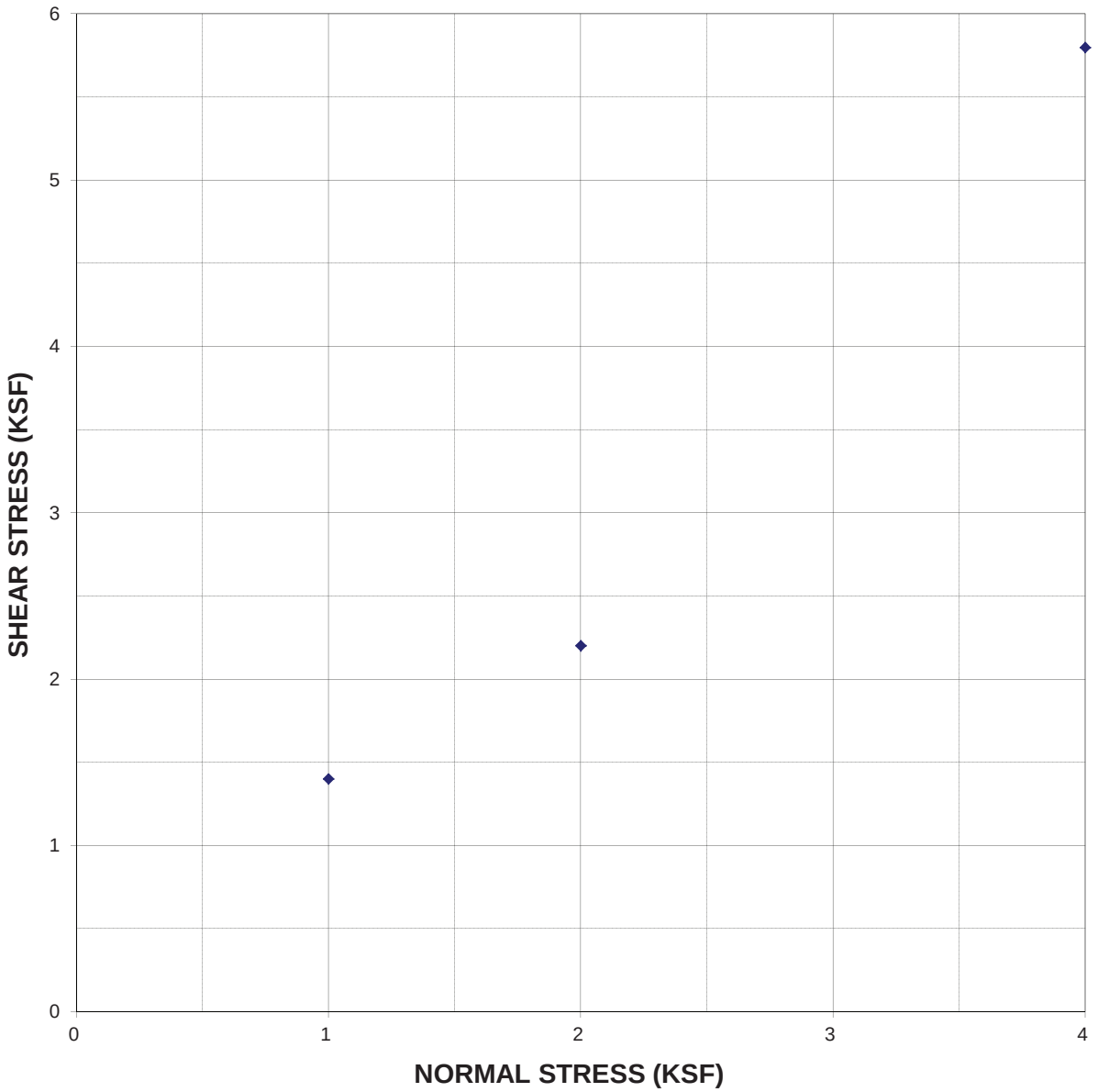
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-3 @ 25.0'
TEST BY:	GP
SOIL TYPE:	GC, CLAYEY GRAVEL WITH SAND
DRY UNIT WT.*:	127.9 pcf
NOTE:	UNDISTURBED SAMPLE. GRAVEL ON SHEAR PLANE AT 4 KSF NORMAL FORCE.

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	63.2	1.40
2	99.3	2.20
4	261.3	5.80

FRICTION ANGLE = DEGREES
COHESION[1] = KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

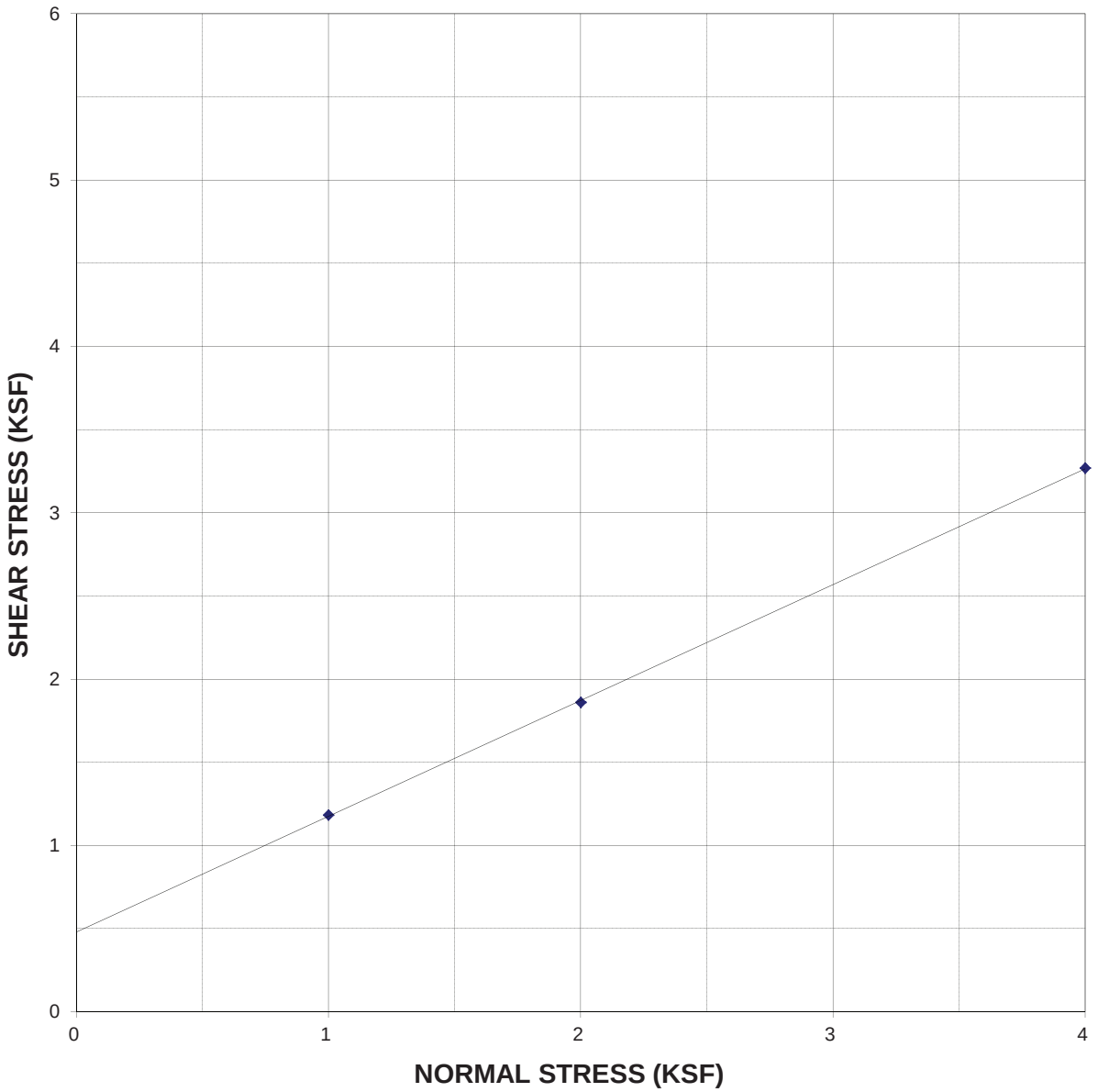
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-4 @15.0'
TEST BY:	GP
SOIL TYPE:	CL, SANDY LEAN CLAY
DRY UNIT WT.*:	114.1 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	53.4	1.18
2	83.9	1.86
4	147.3	3.27

FRICTION ANGLE = 34.8 DEGREES
COHESION[1] = 0.48 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

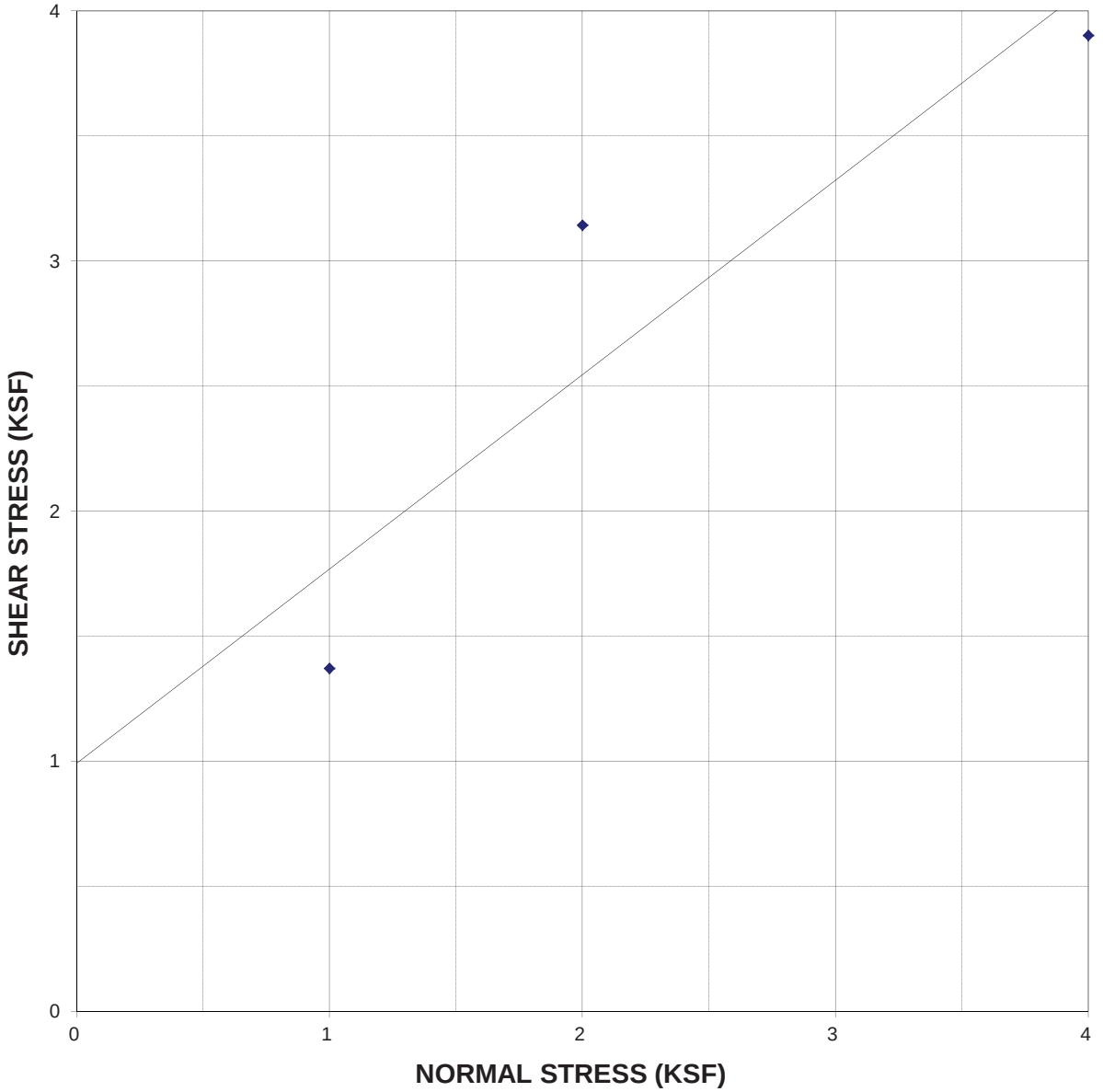
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-4 @ 35.0'
TEST BY:	JML
SOIL TYPE:	GC, CLAYEY GRAVEL WITH SAND
DRY UNIT WT.*:	124.4 pcf
NOTE:	UNDISTURBED SAMPLE
	GRAVEL ON SHEAR PLANE.

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	61.9	1.37
2	141.7	3.14
4	175.9	3.90

FRICTION ANGLE = 37.8 DEGREES
COHESION[1] = 0.99 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

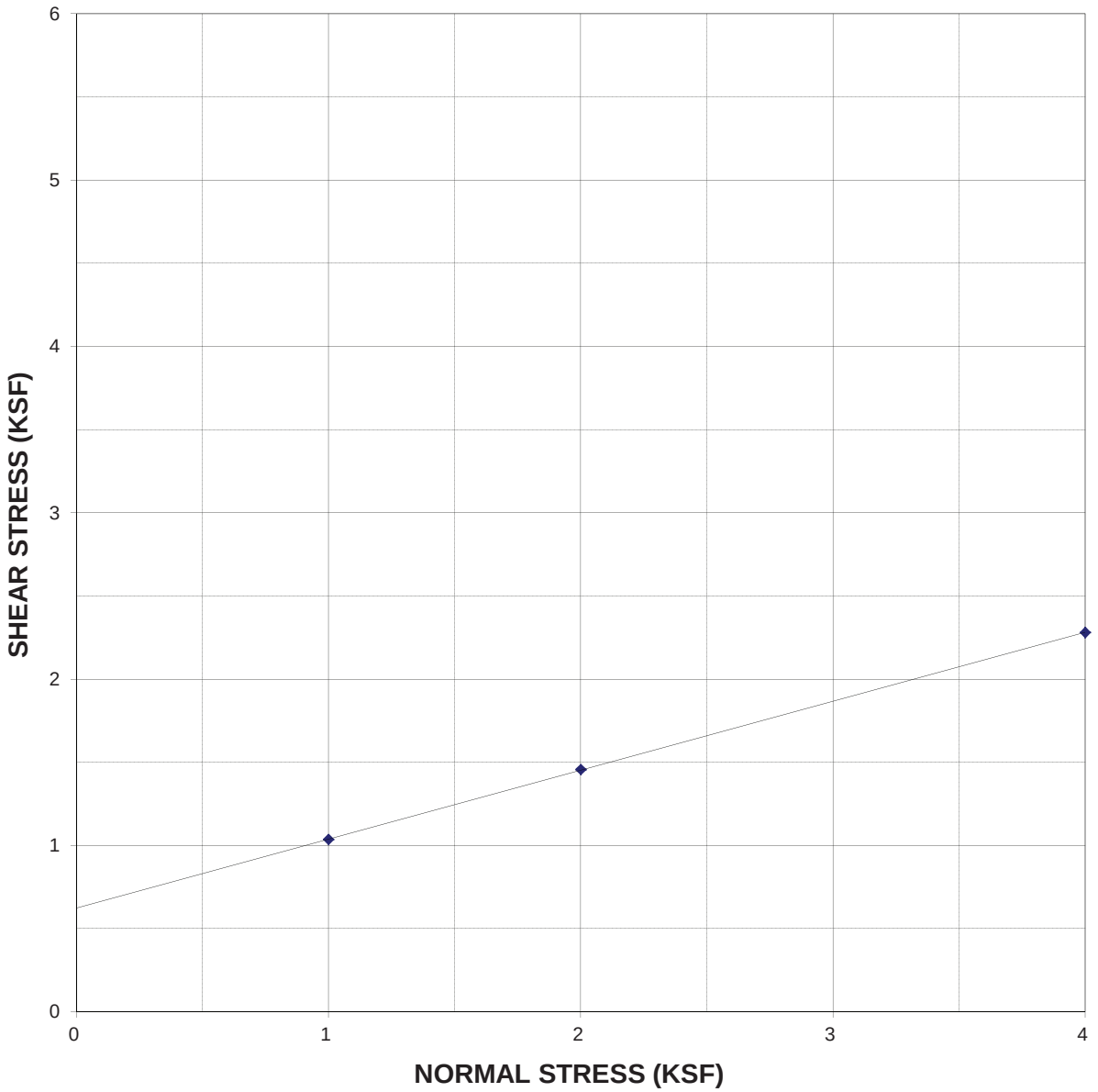
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	10/11/2017
SAMPLE:	B-5 @ 10.0'
TEST BY:	JML
SOIL TYPE:	CL, LEAN CLAY W/SAND
DRY UNIT WT.*:	104.2 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	46.8	1.04
2	65.6	1.46
4	102.8	2.28

FRICTION ANGLE = 22.5 DEGREES
COHESION[1] = 0.62 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

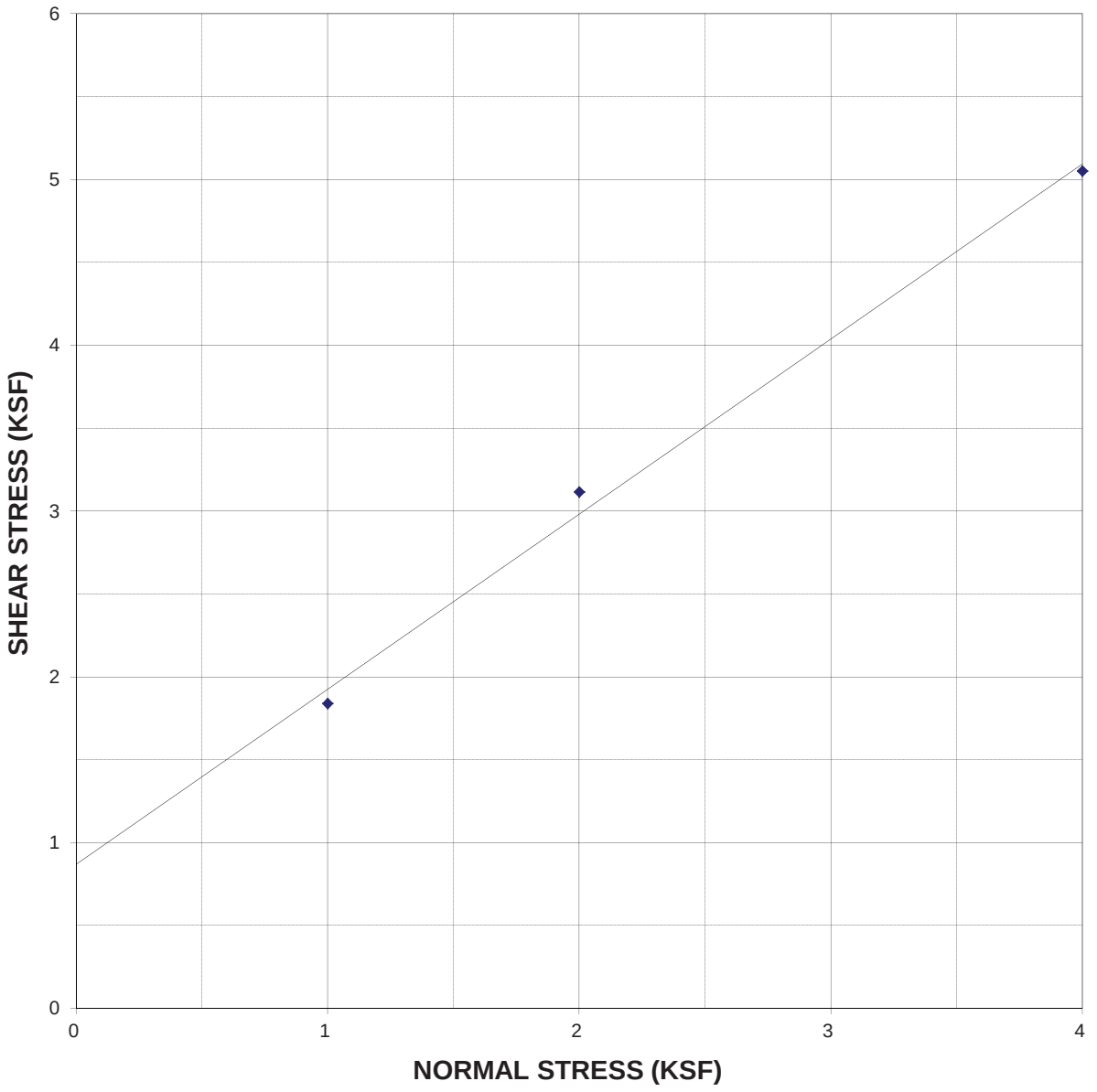
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-5 @ 20.0'
TEST BY:	GP
SOIL TYPE:	SC/SC-SM, CLAYEY SAND WITH GRAVEL
DRY UNIT WT.*:	119.1 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	82.9	1.84
2	140.4	3.11
4	227.7	5.05

FRICTION ANGLE = 46.6 DEGREES
COHESION[1] = 0.87 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

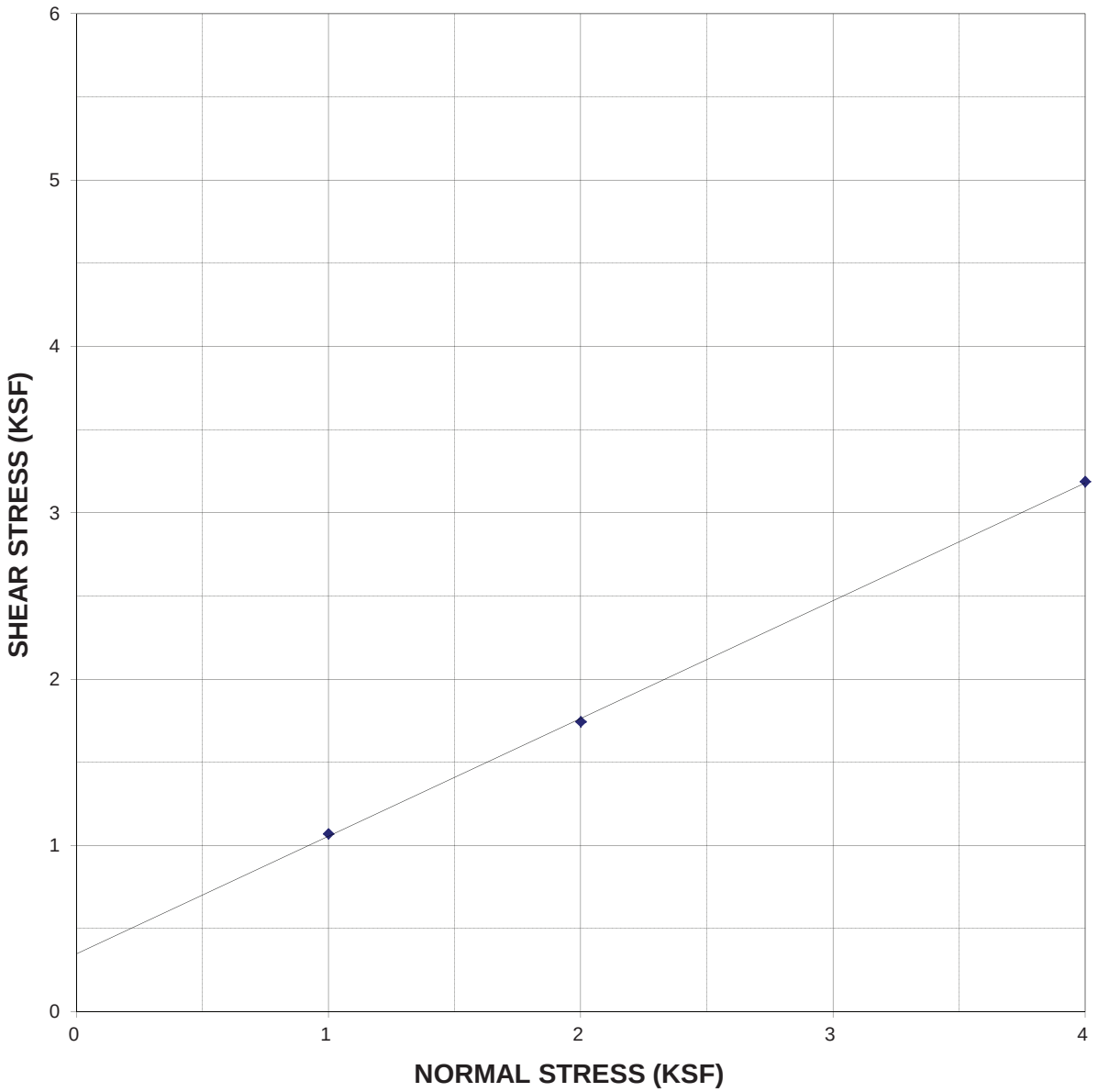
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-5 @ 30.0'
TEST BY:	JML
SOIL TYPE:	CL, LEAN CLAY W/SAND
DRY UNIT WT.*:	104.5 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	48.3	1.07
2	78.7	1.75
4	143.7	3.19

FRICTION ANGLE = 35.3 DEGREES
COHESION[1] = 0.35 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

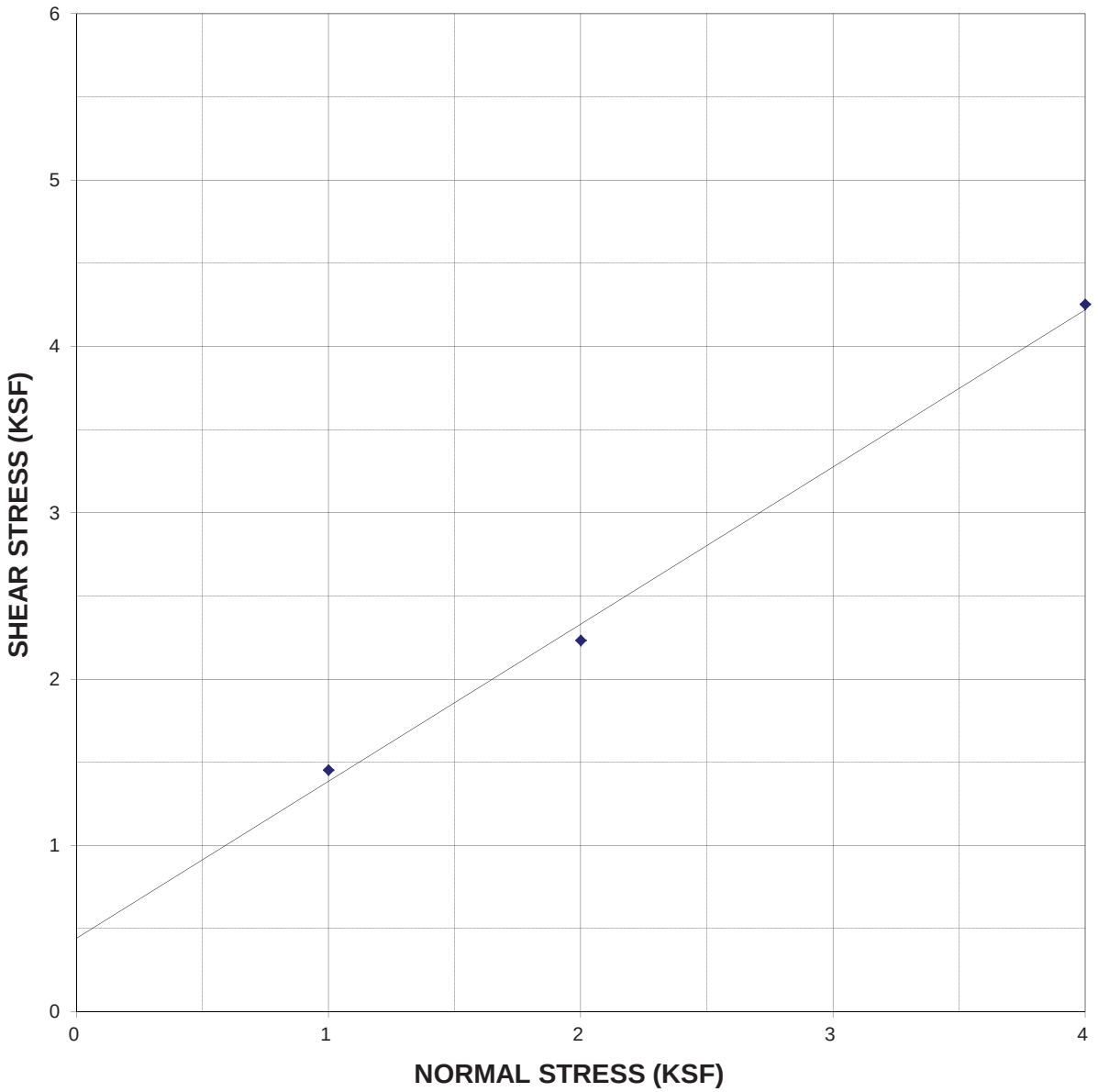
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-5 @ 50.0'
TEST BY:	JML
SOIL TYPE:	SC-SM, SILTY, CLAYEY SAND WITH GRAVEL
DRY UNIT WT.*:	116.4 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	65.5	1.45
2	100.7	2.23
4	191.7	4.25

FRICTION ANGLE = 43.4 DEGREES
COHESION[1] = 0.44 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

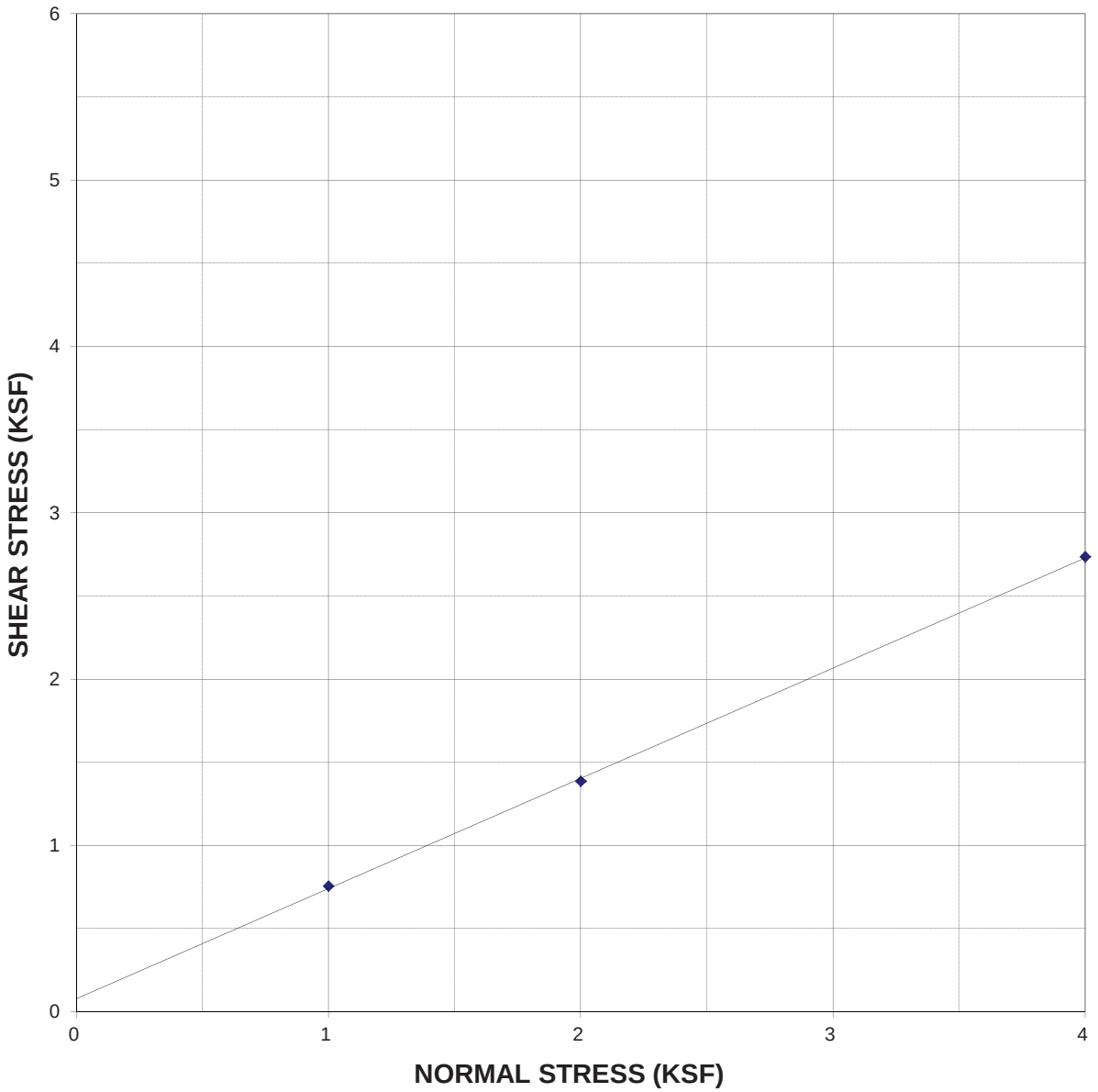
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-6 @ 5.0'
TEST BY:	GP
SOIL TYPE:	CL, LEAN CLAY W/SAND
DRY UNIT WT.*:	101.0 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	34.1	0.76
2	62.5	1.39
4	123.3	2.74

FRICTION ANGLE = 33.5 DEGREES
COHESION[1] = 0.08 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

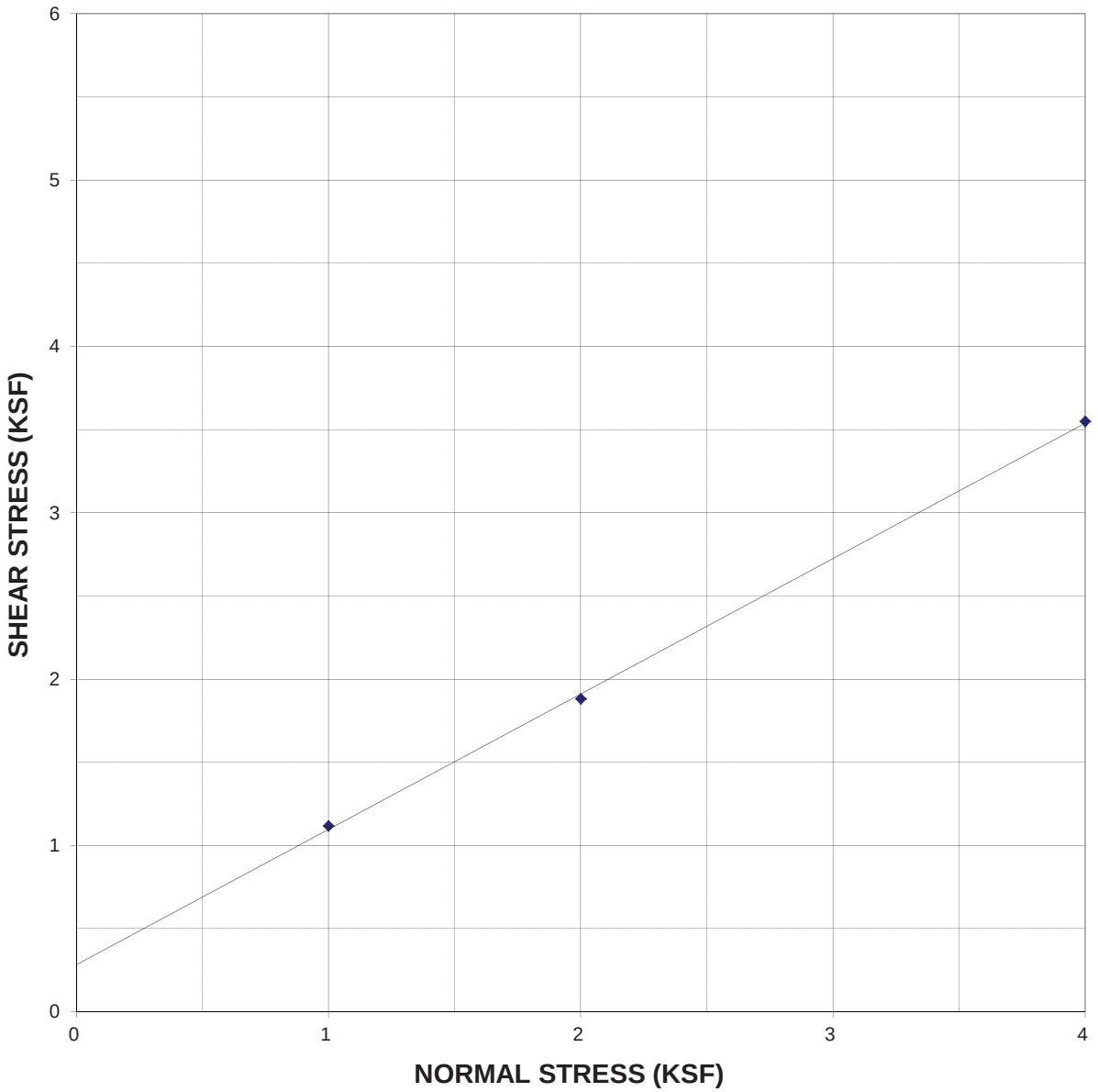
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-6 @ 15.0'
TEST BY:	GP
SOIL TYPE:	GC, CLAYEY GRAVEL WITH SAND
DRY UNIT WT.*:	117.8 pcf
NOTE:	UNDISTURBED SAMPLE
	GRAVEL PRESENT IN SAMPLE.

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	50.4	1.12
2	84.8	1.88
4	160.0	3.55

FRICTION ANGLE = 39.1 DEGREES
COHESION[1] = 0.28 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



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1 = GEOTECHNICAL ENGINEER TO USE PROPER JUDGEMENT IN DETERMINING AN APPROPRIATE COHESION VALUE.

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING & TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

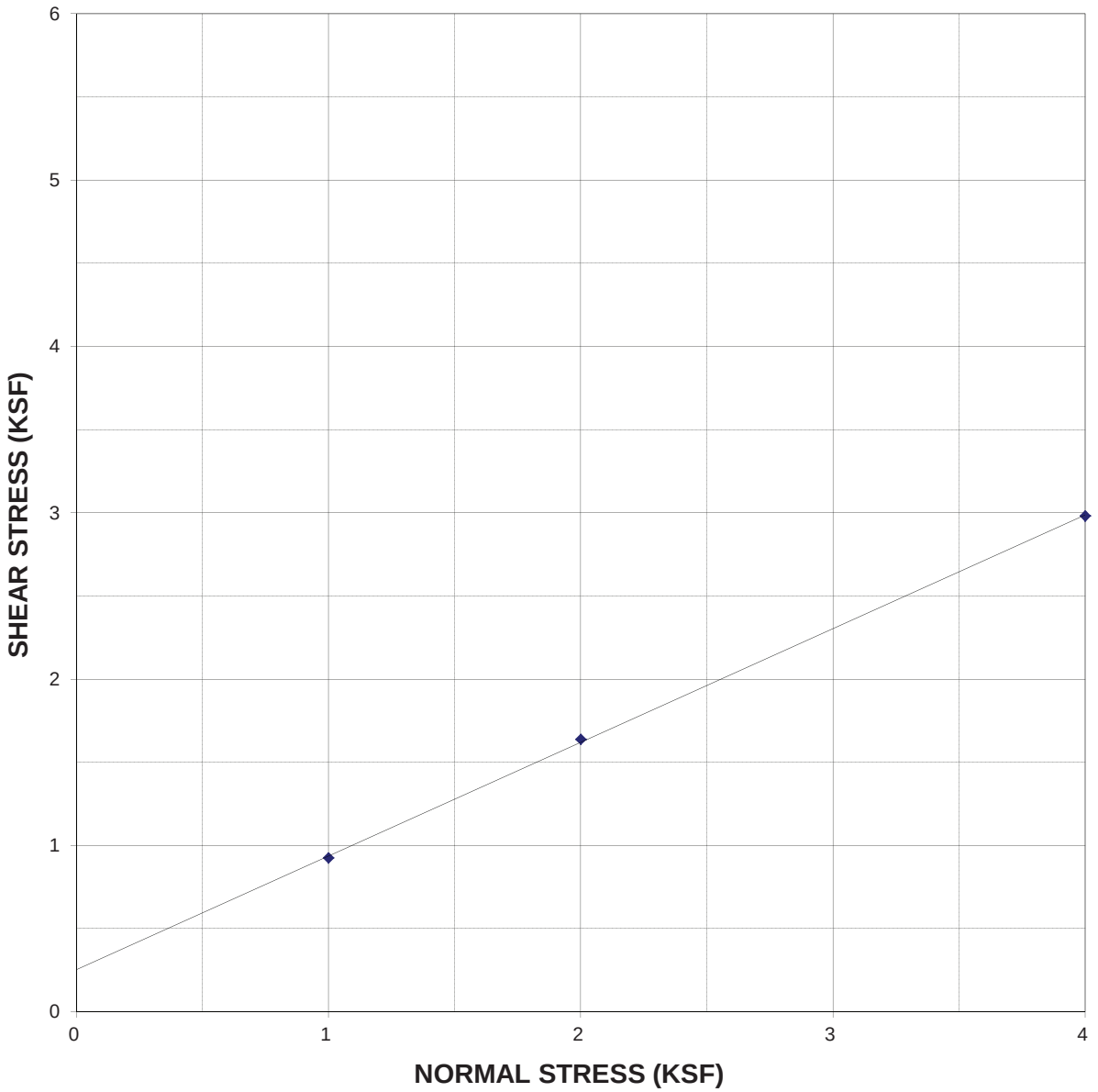
DIRECT SHEAR TEST RESULTS (ASTM D 3080-11)

JOB:	WEST LA DISTRICT YARD
DATE:	8/28/2017
SAMPLE:	B-7 @ 2.5'
TEST BY:	JML
SOIL TYPE:	CL, LEAN CLAY
DRY UNIT WT.*:	86.9 pcf
NOTE:	UNDISTURBED SAMPLE

NORMAL STRESS (ksf)	MAX SHEAR FORCE (lb)	MAX SHEAR STRESS (ksf)
1	41.7	0.93
2	73.9	1.64
4	134.4	2.98

FRICTION ANGLE = 34.3 DEGREES
COHESION[1] = 0.25 KSF

MAXIMUM SHEAR STRESS vs NORMAL STRESS



* THE DRY UNIT WEIGHT IS THE AVERAGE OF THE TESTED SPECIMENS.
1 = GEOTECHNICAL ENGINEER TO USE PROPER JUDGEMENT IN DETERMINING AN APPROPRIATE COHESION VALUE.

LOS ANGELES DEPARTMENT OF WATER AND POWER
WATER ENGINEERING AND TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

ASTM D 2850-03a - UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST.

JOB:	WEST LA DISTRICT YARD
SAMPLE LOCATION:	B-2 @ 25.0'
DATE:	8/29/2017
TEST BY:	JML
DESCRIPTION:	CL, LEAN CLAY W/SAND
LIQUID LIMIT:	33
PLASTIC LIMIT:	13
SPECIFIC GRAVITY:	2.74
NOTE:	NONE

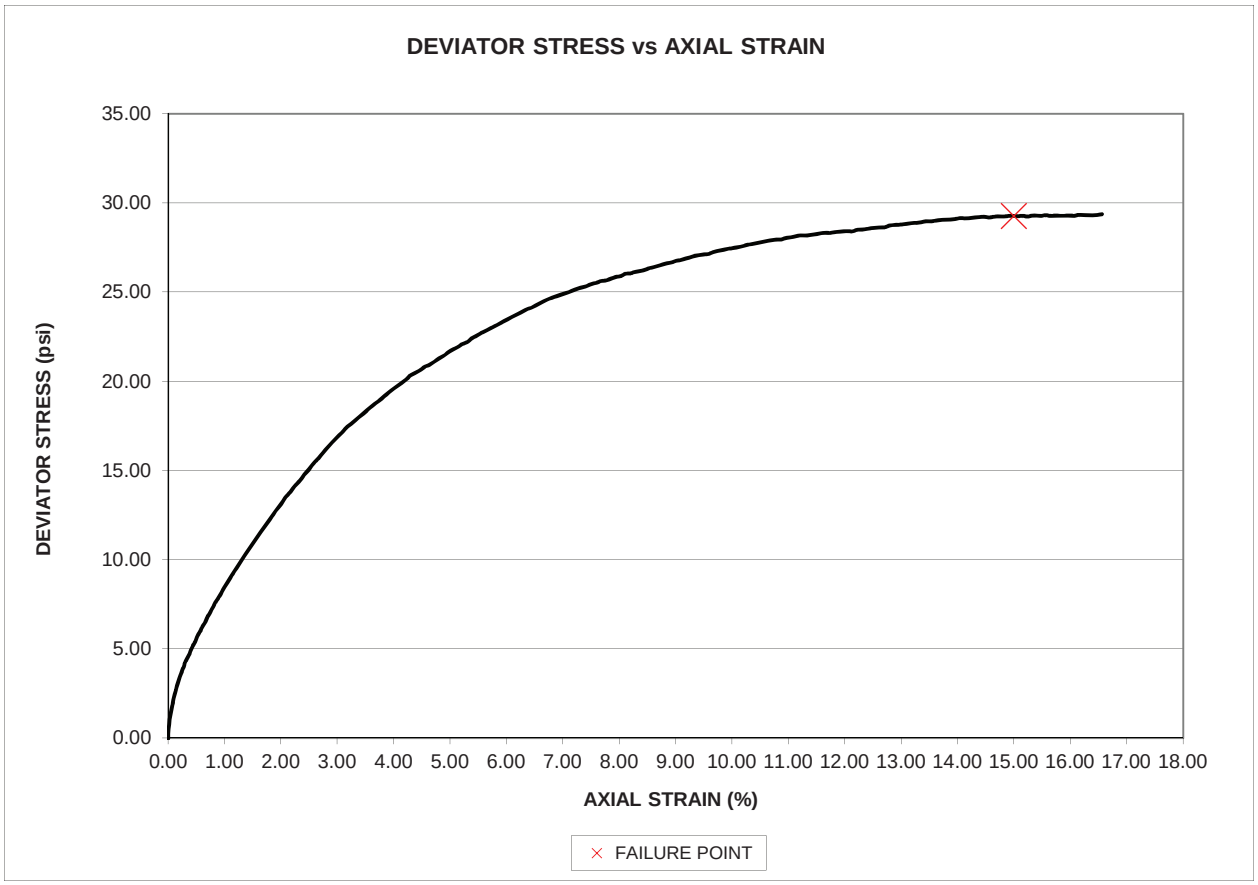
FAILURE SKETCH

SAMPLE PROPERTIES:

DIAMETER (in.)	2.865
HEIGHT (in.)	5.750
WATER CONTENT (%)	23.1
DRY UNIT WEIGHT (pcf)	100.7
SATURATION (%)	90.5
VOID RATIO	0.6990

TEST PROPERTIES

RATE (% AXIAL STRAIN/MIN.)	1%
CONFINING PRESSURE, ksf.	3.0
AXIAL STRAIN AT FAILURE, %	15.00
MAJOR PRINCIPAL STRESS, σ_1, AT FAILURE, psi.	50.11
MINOR PRINCIPAL STRESS, σ_3 AT FAILURE, psi.	20.83
DEVIATOR STRESS (σ_1 - σ_3) AT FAILURE, psi.*	29.27



* Rubber membrane correction per ASTM D2850-03 used, Young's modulus = 198.81 lb./in., 0.012 in. thick membrane.

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WATER ENGINEERING AND TECHNICAL SERVICES DIVISION
SOILS AND MATERIALS TESTING SQUAD

ASTM D 2850-03a - UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST.

JOB: WEST LA DISTRICT YARD
SAMPLE LOC. : B-2 @ 25.0'
DATE: 8/29/2017
TEST BY: JML
DESCRIPTION: CL, LEAN CLAY W/SAND
CONFINING PRES. 20.83 psi (3.00 ksf)
SPECIFIC GRAVITY: 2.74
NOTE: NONE

LIQUID LIMIT:	33
PLASTIC LIMIT:	13

DENSITY OF WATER= 1 gm/cc
SAMPLE VOL.= 607.45 cc
DRY WT.= 979.61 gm
Vs = 357.52 cc
Vv= 249.92 cc
Void Ratio, e = 0.6990
SATURATION= 0.905

SAMPLE PROPERTIES:

WEIGHT (GM)		DIAMETER (IN.)	HEIGHT (IN.)
1205.9	1	2.865	5.751
	2	2.864	5.748
	3	2.866	5.751
	AVE.:	2.865	5.750

WATER CONTENT, WC	
TARE (gm) :	87.7
WET (gm) :	1293.6
DRY (gm) :	1067.1
W.C (%)	23.1

RATE OF AXIAL STRAIN/MIN.	1

1% OR 0.3%

MEMBRANE STIFFNESS FACTOR (LB./IN.)	198.81
INITIAL DISPLACEMENT AT T=0, (IN.)	0.01654
AXIAL STRAIN AT FAILURE, %	14.9958
MAJOR PRINCIPAL STRESS, σ_1, AT FAILURE*	50.11
MINOR PRINCIPAL STRESS, σ_3 AT FAILURE*	20.83
DEVIATOR STRESS AT FAILURE, psi	29.27

INITIAL VALUES

HEIGHT, H_o (IN.)	5.720
AREA, A_o (SQ. IN.)	6.4467
DRY UNIT WT. (PCF)	100.7
SATURATION (%)	90.5
VOID RATIO	0.6990

Vo= 36.878 CU. IN.
Vc= 36.802 CU. IN.
Hc= 5.691 IN.
Ac= 6.467 SQ. IN.

SAMPLE 1

TIME (MIN.)	LOAD (LB.)	DISPL. (IN.)	CELL PRESS. (psi)	AXIAL STRAIN (%)	AREA CORR. (cu. In.)	DEVIATOR LOAD (lb.)	MEMBRANE CORR. (psi) (per ASTM)	DEVIATOR STRESS (psi)	$\sigma 1$ (psi)
0.000	4.55	0.04614	20.82	0.0000	6.4669	-0.24	0.00	-0.04	20.78
0.017	8.03	0.04675	20.79	0.0106	6.4676	3.25	0.00	0.50	21.29
0.035	11.38	0.04770	20.79	0.0272	6.4686	6.59	0.00	1.02	21.81
0.053	13.92	0.04891	20.77	0.0484	6.4700	9.14	0.00	1.41	22.18
0.071	16.06	0.05004	20.82	0.0681	6.4713	11.27	0.00	1.74	22.56
0.084	17.27	0.05086	20.79	0.0825	6.4722	12.48	0.00	1.93	22.71
0.101	19.00	0.05151	20.79	0.0938	6.4729	14.22	0.00	2.19	22.98
0.119	20.48	0.05268	20.81	0.1143	6.4743	15.69	0.00	2.42	23.23
0.137	22.08	0.05385	20.79	0.1347	6.4756	17.30	0.00	2.67	23.46
0.150	23.02	0.05450	20.75	0.1460	6.4763	18.25	0.00	2.81	23.56
0.168	24.36	0.05562	20.81	0.1657	6.4776	19.57	0.01	3.02	23.83
0.185	25.56	0.05670	20.79	0.1846	6.4788	20.78	0.01	3.20	23.99
0.203	26.77	0.05770	20.78	0.2020	6.4800	21.99	0.01	3.39	24.16
0.221	27.84	0.05887	20.82	0.2224	6.4813	23.05	0.01	3.55	24.37
0.234	28.51	0.05960	20.79	0.2353	6.4821	23.72	0.01	3.65	24.45
0.252	29.85	0.06077	20.79	0.2558	6.4835	25.06	0.01	3.86	24.65
0.270	30.65	0.06185	20.82	0.2747	6.4847	25.86	0.01	3.98	24.80
0.287	31.59	0.06263	20.81	0.2883	6.4856	26.80	0.01	4.12	24.93
0.301	32.25	0.06311	20.81	0.2966	6.4861	27.47	0.01	4.23	25.04
0.318	33.19	0.06462	20.78	0.3231	6.4878	28.41	0.01	4.37	25.15
0.336	33.86	0.06545	20.82	0.3375	6.4888	29.07	0.01	4.47	25.29
0.367	35.47	0.06774	20.81	0.3776	6.4914	30.68	0.01	4.71	25.52
0.402	36.94	0.06921	20.80	0.4033	6.4931	32.15	0.01	4.94	25.74
0.438	38.68	0.07151	20.79	0.4434	6.4957	33.90	0.01	5.20	26.00
0.469	39.88	0.07345	20.80	0.4774	6.4979	35.10	0.02	5.39	26.19
0.505	41.49	0.07519	20.79	0.5077	6.4999	36.71	0.02	5.63	26.42
0.535	42.83	0.07696	20.79	0.5388	6.5019	38.04	0.02	5.83	26.63
0.571	44.17	0.07921	20.79	0.5781	6.5045	39.38	0.02	6.04	26.83
0.602	45.50	0.08081	20.81	0.6061	6.5063	40.72	0.02	6.24	27.05
0.637	46.84	0.08319	20.80	0.6477	6.5090	42.06	0.02	6.44	27.24
0.668	48.05	0.08475	20.81	0.6750	6.5108	43.26	0.02	6.62	27.43
0.703	49.39	0.08635	20.80	0.7029	6.5127	44.60	0.02	6.83	27.63
0.734	50.59	0.08847	20.79	0.7400	6.5151	45.81	0.02	7.01	27.80
0.770	51.79	0.09008	20.78	0.7680	6.5169	47.02	0.03	7.19	27.97
0.801	53.00	0.09198	20.82	0.8013	6.5191	48.21	0.03	7.37	28.19
0.836	54.34	0.09367	20.79	0.8308	6.5210	49.55	0.03	7.57	28.36
0.867	55.41	0.09557	20.79	0.8641	6.5232	50.63	0.03	7.73	28.52
0.903	56.75	0.09795	20.82	0.9057	6.5260	51.96	0.03	7.93	28.75
0.934	57.82	0.09973	20.82	0.9368	6.5280	53.03	0.03	8.09	28.91
0.969	59.16	0.10142	20.79	0.9663	6.5300	54.37	0.03	8.29	29.09

TIME (MIN.)	LOAD (LB.)	DISPL. (IN.)	CELL PRESS. (psi)	AXIAL STRAIN (%)	AREA CORR. (cu. In.)	DEVIATOR LOAD (lb.)	MEMBRANE CORR. (psi) (per ASTM)	DEVIATOR STRESS (psi)	σ_1 (psi)
1.001	60.23	0.10319	20.83	0.9973	6.5320	55.44	0.03	8.45	29.28
1.085	63.17	0.10839	20.79	1.0882	6.5380	58.39	0.04	8.89	29.69
1.169	65.98	0.11280	20.80	1.1653	6.5431	61.20	0.04	9.31	30.12
1.253	68.79	0.11804	20.82	1.2569	6.5492	64.00	0.04	9.73	30.55
1.337	71.60	0.12258	20.83	1.3362	6.5545	66.81	0.04	10.15	30.98
1.421	74.41	0.12769	20.83	1.4256	6.5604	69.62	0.05	10.57	31.39
1.501	76.96	0.13245	20.83	1.5088	6.5659	72.16	0.05	10.94	31.77
1.585	79.50	0.13717	20.83	1.5913	6.5714	74.71	0.05	11.32	32.15
1.669	82.04	0.14184	20.83	1.6729	6.5769	77.25	0.06	11.69	32.52
1.754	84.58	0.14678	20.84	1.7593	6.5827	79.79	0.06	12.06	32.91
1.837	87.13	0.15163	20.82	1.8441	6.5884	82.34	0.06	12.44	33.25
1.917	89.54	0.15583	20.86	1.9175	6.5933	84.74	0.06	12.79	33.65
2.002	91.81	0.16080	20.87	2.0044	6.5991	87.01	0.07	13.12	33.99
2.086	94.22	0.16487	20.87	2.0755	6.6039	89.42	0.07	13.47	34.34
2.169	96.49	0.17011	20.86	2.1671	6.6101	91.70	0.07	13.80	34.66
2.254	98.64	0.17431	20.86	2.2405	6.6151	93.84	0.07	14.11	34.97
2.334	100.91	0.17994	20.87	2.3390	6.6218	96.11	0.08	14.44	35.30
2.418	103.05	0.18405	20.85	2.4108	6.6266	98.25	0.08	14.75	35.60
2.502	105.33	0.18907	20.83	2.4986	6.6326	100.54	0.08	15.08	35.91
2.586	107.74	0.19405	20.88	2.5856	6.6385	102.94	0.08	15.42	36.30
2.670	109.61	0.19863	20.84	2.6657	6.6440	104.82	0.09	15.69	36.53
2.755	111.75	0.20331	20.87	2.7475	6.6496	106.95	0.09	15.99	36.86
2.834	113.76	0.20790	20.85	2.8277	6.6551	108.96	0.09	16.28	37.13
2.918	115.77	0.21236	20.85	2.9057	6.6604	110.97	0.10	16.57	37.42
3.003	117.77	0.21720	20.85	2.9903	6.6662	112.97	0.10	16.85	37.70
3.087	119.65	0.22222	20.86	3.0781	6.6722	114.85	0.10	17.11	37.97
3.170	121.66	0.22690	20.82	3.1599	6.6779	116.87	0.10	17.40	38.22
3.251	123.26	0.23162	20.87	3.2424	6.6836	118.46	0.11	17.62	38.49
3.335	124.73	0.23616	20.87	3.3218	6.6891	119.93	0.11	17.82	38.69
3.419	126.47	0.24118	20.85	3.4095	6.6951	121.67	0.11	18.06	38.91
3.503	128.08	0.24616	20.84	3.4966	6.7012	123.29	0.11	18.28	39.13
3.587	129.82	0.25079	20.85	3.5775	6.7068	125.02	0.12	18.52	39.37
3.671	131.43	0.25577	20.85	3.6646	6.7129	126.63	0.12	18.74	39.59
3.751	132.76	0.26036	20.87	3.7448	6.7185	127.96	0.12	18.92	39.79
3.835	134.37	0.26512	20.86	3.8280	6.7243	129.57	0.12	19.14	40.00
3.919	135.98	0.26997	20.86	3.9128	6.7302	131.18	0.13	19.36	40.22
4.004	137.45	0.27395	20.85	3.9824	6.7351	132.65	0.13	19.57	40.42
4.088	138.79	0.27893	20.83	4.0694	6.7412	134.00	0.13	19.74	40.58
4.167	140.12	0.28334	20.86	4.1465	6.7466	135.32	0.14	19.92	40.78
4.252	141.60	0.28797	20.87	4.2275	6.7523	136.80	0.14	20.12	40.99
4.336	143.07	0.29161	20.85	4.2911	6.7568	138.27	0.14	20.32	41.17
4.420	144.27	0.29689	20.84	4.3834	6.7633	139.48	0.14	20.48	41.32
4.504	145.48	0.30209	20.84	4.4743	6.7698	140.69	0.15	20.64	41.48
4.584	146.82	0.30633	20.85	4.5484	6.7750	142.02	0.15	20.82	41.67
4.668	147.75	0.31139	20.83	4.6369	6.7813	142.96	0.15	20.93	41.76
4.752	149.22	0.31667	20.83	4.7292	6.7879	144.43	0.15	21.12	41.96
4.836	150.56	0.32113	20.86	4.8072	6.7934	145.76	0.16	21.30	42.16
4.920	151.63	0.32585	20.87	4.8897	6.7993	146.83	0.16	21.44	42.30
5.005	153.11	0.33048	20.86	4.9706	6.8051	148.31	0.16	21.63	42.49
5.084	154.18	0.33446	20.86	5.0402	6.8101	149.38	0.16	21.77	42.63
5.168	155.38	0.33987	20.86	5.1348	6.8169	150.58	0.17	21.92	42.78
5.253	156.59	0.34433	20.85	5.2127	6.8225	151.79	0.17	22.08	42.93
5.337	157.66	0.34987	20.85	5.3096	6.8295	152.86	0.17	22.21	43.06
5.421	159.13	0.35398	20.85	5.3814	6.8347	154.33	0.17	22.41	43.26
5.501	160.20	0.35857	20.84	5.4617	6.8405	155.41	0.18	22.54	43.38
5.585	161.27	0.36260	20.85	5.5321	6.8456	156.47	0.18	22.68	43.53
5.669	162.47	0.36822	20.83	5.6303	6.8527	157.68	0.18	22.83	43.66
5.753	163.55	0.37255	20.87	5.7060	6.8582	158.75	0.18	22.96	43.83
5.837	164.62	0.37766	20.85	5.7954	6.8647	159.82	0.19	23.09	43.94
5.921	165.69	0.38216	20.86	5.8740	6.8704	160.89	0.19	23.23	44.09
6.001	166.76	0.38640	20.86	5.9482	6.8759	161.96	0.19	23.36	44.22
6.085	167.96	0.39181	20.84	6.0427	6.8828	163.17	0.19	23.51	44.35
6.169	169.03	0.39567	20.85	6.1102	6.8877	164.23	0.20	23.65	44.50
6.254	170.10	0.40116	20.86	6.2062	6.8948	165.30	0.20	23.78	44.63
6.338	171.31	0.40597	20.85	6.2903	6.9010	166.51	0.20	23.93	44.78
6.417	172.38	0.41077	20.84	6.3742	6.9071	167.59	0.21	24.06	44.90
6.502	173.18	0.41566	20.83	6.4597	6.9135	168.39	0.21	24.15	44.98
6.586	174.39	0.42021	20.83	6.5392	6.9193	169.60	0.21	24.30	45.13
6.670	175.46	0.42536	20.86	6.6292	6.9260	170.66	0.21	24.43	45.29
6.754	176.66	0.43038	20.85	6.7170	6.9325	171.86	0.22	24.58	45.43
6.834	177.60	0.43532	20.86	6.8033	6.9390	172.80	0.22	24.68	45.54
6.918	178.40	0.44025	20.84	6.8895	6.9454	173.61	0.22	24.77	45.62
7.002	179.34	0.44549	20.85	6.9811	6.9522	174.54	0.22	24.88	45.73
7.086	180.01	0.44999	20.86	7.0598	6.9581	175.21	0.23	24.95	45.81
7.170	180.94	0.45527	20.87	7.1521	6.9650	176.14	0.23	25.06	45.93
7.255	182.01	0.46055	20.84	7.2444	6.9719	177.22	0.23	25.19	46.03
7.334	182.68	0.46536	20.85	7.3285	6.9783	177.88	0.23	25.26	46.11
7.418	183.49	0.47072	20.84	7.4222	6.9853	178.70	0.24	25.34	46.19

TIME (MIN.)	LOAD (LB.)	DISPL. (IN.)	CELL PRESS. (psi)	AXIAL STRAIN (%)	AREA CORR. (cu. In.)	DEVIATOR LOAD (lb.)	MEMBRANE CORR. (psi) (per ASTM)	DEVIATOR STRESS (psi)	σ_1 (psi)
7.503	184.42	0.47518	20.83	7.5001	6.9912	179.63	0.24	25.45	46.29
7.587	185.09	0.48042	20.85	7.5918	6.9982	180.29	0.24	25.52	46.37
7.671	186.03	0.48535	20.87	7.6779	7.0047	181.23	0.25	25.63	46.49
7.751	186.43	0.49042	20.86	7.7666	7.0114	181.63	0.25	25.66	46.52
7.835	187.37	0.49561	20.88	7.8573	7.0183	182.57	0.25	25.76	46.64
7.919	188.17	0.50016	20.85	7.9368	7.0244	183.37	0.25	25.85	46.70
8.003	188.71	0.50531	20.85	8.0269	7.0313	183.91	0.26	25.90	46.75
8.087	189.78	0.50968	20.86	8.1033	7.0371	184.98	0.26	26.03	46.89
8.171	190.18	0.51522	20.85	8.2001	7.0445	185.38	0.26	26.05	46.90
8.251	190.85	0.51916	20.84	8.2690	7.0498	186.06	0.26	26.13	46.97
8.335	191.38	0.52435	20.86	8.3597	7.0568	186.58	0.27	26.17	47.03
8.419	192.05	0.52933	20.86	8.4468	7.0635	187.25	0.27	26.24	47.10
8.504	192.99	0.53414	20.86	8.5308	7.0700	188.19	0.27	26.35	47.21
8.588	193.52	0.53851	20.85	8.6072	7.0759	188.72	0.27	26.40	47.25
8.667	194.19	0.54279	20.85	8.6821	7.0817	189.39	0.28	26.47	47.32
8.752	195.00	0.54768	20.86	8.7675	7.0883	190.20	0.28	26.55	47.41
8.836	195.67	0.55232	20.88	8.8487	7.0947	190.87	0.28	26.62	47.50
8.920	196.20	0.55725	20.83	8.9348	7.1014	191.41	0.28	26.67	47.50
9.004	197.00	0.56149	20.84	9.0090	7.1072	192.21	0.29	26.76	47.60
9.084	197.54	0.56643	20.85	9.0953	7.1139	192.74	0.29	26.81	47.66
9.168	198.21	0.57049	20.84	9.1663	7.1195	193.42	0.29	26.88	47.72
9.252	198.88	0.57547	20.86	9.2534	7.1263	194.08	0.29	26.94	47.80
9.336	199.68	0.57967	20.86	9.3268	7.1321	194.88	0.30	27.03	47.89
9.420	200.22	0.58443	20.87	9.4100	7.1386	195.42	0.30	27.08	47.94
9.505	200.62	0.58867	20.84	9.4841	7.1445	195.83	0.30	27.11	47.95
9.584	201.02	0.59383	20.85	9.5743	7.1516	196.22	0.30	27.14	47.99
9.668	201.96	0.59872	20.85	9.6598	7.1584	197.16	0.31	27.24	48.09
9.753	202.76	0.60378	20.87	9.7482	7.1654	197.96	0.31	27.32	48.19
9.837	203.29	0.60850	20.85	9.8308	7.1719	198.49	0.31	27.37	48.22
9.921	203.96	0.61335	20.85	9.9155	7.1787	199.16	0.31	27.43	48.28
10.001	204.36	0.61819	20.84	10.0002	7.1854	199.57	0.32	27.46	48.30
10.085	205.03	0.62339	20.83	10.0911	7.1927	200.24	0.32	27.52	48.35
10.169	205.57	0.62845	20.84	10.1795	7.1998	200.78	0.32	27.57	48.41
10.253	206.37	0.63295	20.84	10.2582	7.2061	201.58	0.32	27.65	48.49
10.337	206.91	0.63832	20.87	10.3521	7.2136	202.11	0.33	27.69	48.56
10.421	207.58	0.64343	20.87	10.4414	7.2208	202.78	0.33	27.75	48.62
10.501	208.11	0.64771	20.86	10.5162	7.2269	203.31	0.33	27.80	48.66
10.585	208.78	0.65304	20.83	10.6094	7.2344	203.99	0.33	27.86	48.70
10.669	209.32	0.65754	20.84	10.6880	7.2408	204.53	0.34	27.91	48.75
10.754	209.85	0.66330	20.84	10.7887	7.2489	205.06	0.34	27.95	48.79
10.838	210.12	0.66789	20.84	10.8690	7.2555	205.33	0.34	27.96	48.80
10.917	210.92	0.67291	20.83	10.9567	7.2626	206.13	0.34	28.04	48.87
11.002	211.46	0.67784	20.86	11.0429	7.2697	206.66	0.35	28.08	48.94
11.086	211.99	0.68243	20.85	11.1232	7.2762	207.19	0.35	28.13	48.98
11.170	212.66	0.68806	20.83	11.2216	7.2843	207.87	0.35	28.18	49.02
11.254	212.80	0.69282	20.86	11.3048	7.2911	208.00	0.35	28.17	49.03
11.334	213.20	0.69689	20.83	11.3759	7.2970	208.41	0.36	28.20	49.04
11.418	213.60	0.70152	20.86	11.4569	7.3036	208.80	0.36	28.23	49.09
11.502	214.27	0.70689	20.84	11.5507	7.3114	209.48	0.36	28.29	49.13
11.586	214.80	0.71208	20.86	11.6415	7.3189	210.00	0.36	28.33	49.19
11.670	214.94	0.71701	20.85	11.7277	7.3260	210.14	0.37	28.32	49.17
11.755	215.47	0.72199	20.85	11.8147	7.3333	210.67	0.37	28.36	49.21
11.834	215.87	0.72645	20.86	11.8927	7.3398	211.07	0.37	28.39	49.24
11.918	216.28	0.73108	20.85	11.9736	7.3465	211.48	0.37	28.41	49.26
12.003	216.54	0.73541	20.87	12.0493	7.3528	211.74	0.38	28.42	49.29
12.087	216.68	0.74039	20.86	12.1364	7.3601	211.88	0.38	28.41	49.27
12.171	217.48	0.74467	20.85	12.2112	7.3664	212.68	0.38	28.49	49.34
12.251	217.88	0.75008	20.85	12.3058	7.3743	213.08	0.38	28.51	49.36
12.335	218.28	0.75437	20.87	12.3808	7.3807	213.48	0.39	28.54	49.41
12.419	218.95	0.75961	20.87	12.4724	7.3884	214.15	0.39	28.60	49.46
12.503	219.22	0.76393	20.84	12.5479	7.3948	214.43	0.39	28.61	49.45
12.587	219.62	0.76813	20.84	12.6213	7.4010	214.83	0.39	28.63	49.48
12.671	219.89	0.77315	20.84	12.7091	7.4084	215.10	0.39	28.64	49.48
12.751	220.69	0.77705	20.84	12.7772	7.4142	215.90	0.40	28.72	49.56
12.835	221.23	0.78190	20.84	12.8620	7.4214	216.44	0.40	28.76	49.61
12.919	221.50	0.78627	20.84	12.9384	7.4279	216.71	0.40	28.77	49.62
13.004	222.03	0.79177	20.85	13.0346	7.4361	217.23	0.40	28.81	49.66
13.088	222.43	0.79627	20.85	13.1132	7.4429	217.63	0.41	28.83	49.68
13.167	222.97	0.80086	20.84	13.1935	7.4498	218.18	0.41	28.88	49.72
13.252	223.24	0.80527	20.86	13.2706	7.4564	218.44	0.41	28.89	49.74
13.336	223.77	0.81003	20.84	13.3538	7.4635	218.98	0.41	28.93	49.77
13.420	224.31	0.81501	20.86	13.4408	7.4710	219.51	0.42	28.97	49.82
13.504	224.57	0.82021	20.83	13.5317	7.4789	219.78	0.42	28.97	49.80
13.584	225.11	0.82449	20.84	13.6065	7.4854	220.32	0.42	29.01	49.85
13.668	225.64	0.82955	20.86	13.6950	7.4930	220.84	0.42	29.05	49.91
13.752	226.05	0.83497	20.83	13.7898	7.5013	221.26	0.43	29.07	49.90
13.836	226.31	0.83981	20.83	13.8744	7.5086	221.52	0.43	29.07	49.91
13.920	226.71	0.84427	20.86	13.9523	7.5155	221.91	0.43	29.10	49.96

TIME (MIN.)	LOAD (LB.)	DISPL. (IN.)	CELL PRESS. (psi)	AXIAL STRAIN (%)	AREA CORR. (cu. In.)	DEVIATOR LOAD (lb.)	MEMBRANE CORR. (psi) (per ASTM)	DEVIATOR STRESS (psi)	σ_1 (psi)
14.005	227.38	0.84951	20.83	14.0439	7.5235	222.59	0.43	29.15	49.99
14.084	227.52	0.85427	20.83	14.1271	7.5308	222.73	0.44	29.14	49.97
14.168	227.79	0.85890	20.85	14.2081	7.5379	222.99	0.44	29.15	50.00
14.253	228.32	0.86397	20.85	14.2967	7.5457	223.52	0.44	29.18	50.03
14.337	228.72	0.86899	20.85	14.3845	7.5534	223.92	0.44	29.20	50.05
14.421	229.12	0.87371	20.85	14.4670	7.5607	224.32	0.44	29.22	50.07
14.501	229.12	0.87899	20.83	14.5593	7.5688	224.33	0.45	29.19	50.02
14.585	229.53	0.88280	20.86	14.6259	7.5747	224.73	0.45	29.22	50.08
14.669	230.06	0.88855	20.84	14.7264	7.5837	225.27	0.45	29.25	50.09
14.753	230.19	0.89340	20.83	14.8112	7.5912	225.40	0.45	29.24	50.07
14.837	230.73	0.89855	20.85	14.9012	7.5993	225.93	0.46	29.27	50.12
14.921	231.00	0.90396	20.83	14.9958	7.6077	226.21	0.46	29.27	50.11
15.001	231.13	0.90803	20.86	15.0669	7.6141	226.33	0.46	29.26	50.12
15.085	231.53	0.91314	20.87	15.1563	7.6221	226.73	0.46	29.28	50.15
15.169	231.40	0.91768	20.85	15.2356	7.6292	226.60	0.47	29.24	50.09
15.253	232.07	0.92279	20.85	15.3250	7.6373	227.27	0.47	29.29	50.14
15.337	232.34	0.92729	20.86	15.4036	7.6444	227.54	0.47	29.29	50.15
15.417	232.47	0.93223	20.87	15.4900	7.6522	227.67	0.47	29.28	50.15
15.502	233.01	0.93638	20.87	15.5625	7.6588	228.21	0.48	29.32	50.19
15.585	232.87	0.94132	20.86	15.6489	7.6666	228.07	0.48	29.27	50.13
15.669	233.27	0.94577	20.85	15.7267	7.6737	228.47	0.48	29.29	50.14
15.754	233.41	0.95071	20.85	15.8130	7.6816	228.61	0.48	29.28	50.13
15.833	233.67	0.95525	20.86	15.8924	7.6888	228.87	0.48	29.28	50.14
15.917	234.08	0.96015	20.83	15.9781	7.6966	229.29	0.49	29.30	50.14
16.002	234.21	0.96560	20.85	16.0733	7.7054	229.41	0.49	29.28	50.13
16.086	234.88	0.97027	20.85	16.1550	7.7129	230.08	0.49	29.34	50.19
16.170	235.01	0.97573	20.86	16.2504	7.7217	230.21	0.49	29.32	50.18
16.254	235.15	0.98010	20.85	16.3268	7.7287	230.35	0.50	29.31	50.16
16.334	235.41	0.98469	20.83	16.4071	7.7361	230.62	0.50	29.31	50.15
16.418	235.68	0.98819	20.85	16.4682	7.7418	230.88	0.50	29.32	50.17
16.502	236.35	0.99339	20.84	16.5591	7.7502	231.56	0.50	29.37	50.22
16.586	236.62	0.99798	20.85	16.6394	7.7577	231.82	0.51	29.38	50.23
16.670	237.02	1.00270	20.85	16.7219	7.7654	232.22	0.51	29.40	50.25
16.755	237.42	1.00740	20.83	16.8041	7.7731	232.63	0.51	29.42	50.25
16.834	237.56	1.01210	20.85	16.8862	7.7807	232.76	0.51	29.40	50.25
16.918	237.96	1.01670	20.83	16.9666	7.7883	233.17	0.51	29.42	50.25
17.003	237.96	1.02150	20.84	17.0505	7.7962	233.17	0.52	29.39	50.23
17.087	238.63	1.02680	20.86	17.1432	7.8049	233.83	0.52	29.44	50.30
17.171	238.89	1.03150	20.85	17.2254	7.8126	234.09	0.52	29.44	50.29
17.251	239.30	1.03580	20.86	17.3005	7.8197	234.50	0.52	29.47	50.32
17.335	239.56	1.04100	20.85	17.3914	7.8283	234.76	0.53	29.46	50.31
17.419	239.70	1.04580	20.84	17.4753	7.8363	234.91	0.53	29.45	50.29
17.503	239.70	1.05130	20.83	17.5715	7.8454	234.91	0.53	29.41	50.25
17.587	239.83	1.05630	20.86	17.6589	7.8538	235.03	0.53	29.39	50.25
17.667	240.23	1.06070	20.88	17.7358	7.8611	235.43	0.53	29.41	50.29
17.752	240.77	1.06530	20.87	17.8162	7.8688	235.97	0.54	29.45	50.32
17.835	240.77	1.07100	20.84	17.9159	7.8783	235.98	0.54	29.41	50.25
17.919	241.04	1.07500	20.85	17.9858	7.8851	236.24	0.54	29.42	50.27
18.004	241.17	1.08040	20.85	18.0802	7.8941	236.37	0.54	29.40	50.25
18.083	241.44	1.08500	20.84	18.1606	7.9019	236.65	0.55	29.40	50.24
18.167	241.57	1.08980	20.86	18.2445	7.9100	236.77	0.55	29.38	50.24
18.252	241.70	1.09480	20.87	18.3319	7.9185	236.90	0.55	29.37	50.23
18.336	242.11	1.09930	20.84	18.4106	7.9261	237.32	0.55	29.39	50.23
18.420	242.11	1.10440	20.85	18.4997	7.9348	237.31	0.56	29.35	50.20
18.504	242.37	1.10930	20.87	18.5854	7.9431	237.57	0.56	29.35	50.22
18.584	242.64	1.11330	20.85	18.6553	7.9500	237.84	0.56	29.36	50.21
18.668	242.77	1.11870	20.83	18.7497	7.9592	237.98	0.56	29.34	50.17
18.753	242.77	1.12360	20.87	18.8354	7.9676	237.97	0.56	29.30	50.17
18.836	242.77	1.12830	20.85	18.9175	7.9757	237.97	0.57	29.27	50.12
18.920	243.18	1.13300	20.84	18.9997	7.9838	238.39	0.57	29.29	50.13
19.005	243.44	1.13780	20.85	19.0836	7.9920	238.64	0.57	29.29	50.14
19.084	243.58	1.14220	20.84	19.1605	7.9996	238.79	0.57	29.28	50.12
19.168	243.71	1.14750	20.86	19.2532	8.0088	238.91	0.58	29.26	50.11
19.253	243.98	1.15140	20.85	19.3214	8.0156	239.18	0.58	29.26	50.11
19.337	244.25	1.15690	20.84	19.4175	8.0252	239.46	0.58	29.26	50.10
19.421	244.38	1.16090	20.87	19.4874	8.0321	239.58	0.58	29.25	50.11
19.501	244.92	1.16580	20.88	19.5731	8.0407	240.12	0.58	29.28	50.15
19.585	245.05	1.17070	20.85	19.6588	8.0493	240.25	0.59	29.26	50.11
19.669	245.18	1.17530	20.86	19.7392	8.0573	240.38	0.59	29.25	50.10
19.755	245.72	1.17970	20.88	19.8161	8.0650	240.92	0.59	29.28	50.16
19.835	245.99	1.18410	20.84	19.8930	8.0728	241.20	0.59	29.29	50.13
19.919	246.25	1.18860	20.84	19.9717	8.0807	241.46	0.59	29.29	50.13
19.945	246.25	1.19030	20.84	20.0014	8.0837	241.46	0.59	29.27	50.12

Soil Resistivity Test Report

By the Corrosion Engineering Group of the Water Distribution Division

Date: October 14, 2017
Job Title: West LA District Yard
Work Order No: LCW81 (Power System)
Requested By: Soils & Materials Testing Squad of WETS Division

Introduction: Soil resistivity is an electrical property of moist soil that indicates its ability to resist current flow. Corrosion is an electrochemical process and resistivity is considered the most comprehensive indicator of a soil's corrosivity, or tendency to facilitate corrosion. Generally, lower resistivity values indicate greater corrosivity. Greater corrosivity means more rapid corrosion degradation of metal structures.

Test Date: October 6, 2017
Test Type: Measurement of Soil Resistivity
Reference Test Method: ASTM G 57 – 95a (Reapproved 2001) which is the Standard Test Method for Field Measurement of Soil Resistivity Using the Wenner Four-Electrode Method.
Test Equipment: Nilsson Model 400 Soil Resistance Meter with an MC Miller soil box
Test Sample Preparation: Saturated with distilled water

Test Results:

Soil Sample	Soil Resistivity (ohm/cm)	Soil Corrosivity
B1 at 15 to 20 feet	1800	Severe
B2 at 15 to 20 feet	3100	Moderate
B3 at 15 to 20 feet	3500	Moderate
B4 at 15 to 20 feet	2050	Severe
B6 at 0 to 5 feet	1800	Severe
B7 at 0 to 5 feet	1800	Severe

APPENDIX D. USGS DESIGN MAP DETAILED REPORT

Design Maps Detailed Report

ASCE 7-10 Standard (34.03417°N, 118.45915°W)

Site Class D – "Stiff Soil", Risk Category I/II/III

Section 11.4.1 — Mapped Acceleration Parameters

Note: Ground motion values provided below are for the direction of maximum horizontal spectral response acceleration. They have been converted from corresponding geometric mean ground motions computed by the USGS by applying factors of 1.1 (to obtain S_S) and 1.3 (to obtain S_1). Maps in the 2010 ASCE-7 Standard are provided for Site Class B. Adjustments for other Site Classes are made, as needed, in Section 11.4.3.

From Figure 22-1 [1]	S_S = 2.116 g
From Figure 22-2 [2]	S_1 = 0.784 g

Section 11.4.2 — Site Class

The authority having jurisdiction (not the USGS), site-specific geotechnical data, and/or the default has classified the site as Site Class D, based on the site soil properties in accordance with Chapter 20.

Table 20.3–1 Site Classification

Site Class	$\overline{v}_s$	$\overline{N}$ or $\overline{N}_{ch}$	$\overline{s}_u$
A. Hard Rock	>5,000 ft/s	N/A	N/A
B. Rock	2,500 to 5,000 ft/s	N/A	N/A
C. Very dense soil and soft rock	1,200 to 2,500 ft/s	>50	>2,000 psf
D. Stiff Soil	600 to 1,200 ft/s	15 to 50	1,000 to 2,000 psf
E. Soft clay soil	<600 ft/s	<15	<1,000 psf
	Any profile with more than 10 ft of soil having the characteristics: • Plasticity index *PI* > 20, • Moisture content *w* ≥ 40%, and • Undrained shear strength $\overline{s}_u$ < 500 psf		
F. Soils requiring site response analysis in accordance with Section 21.1	See Section 20.3.1		

For SI: 1ft/s = 0.3048 m/s 1lb/ft² = 0.0479 kN/m²

Section 11.4.3 — Site Coefficients and Risk–Targeted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration Parameters

Table 11.4–1: Site Coefficient F_a

Site Class	Mapped MCE_R Spectral Response Acceleration Parameter at Short Period				
	$S_S \leq 0.25$	$S_S = 0.50$	$S_S = 0.75$	$S_S = 1.00$	$S_S \geq 1.25$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of S_S

For Site Class = D and S_S = 2.116 g, F_a = 1.000

Table 11.4–2: Site Coefficient F_v

Site Class	Mapped MCE_R Spectral Response Acceleration Parameter at 1–s Period				
	$S_1 \leq 0.10$	$S_1 = 0.20$	$S_1 = 0.30$	$S_1 = 0.40$	$S_1 \geq 0.50$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of S_1

For Site Class = D and S_1 = 0.784 g, F_v = 1.500

Equation (11.4–1): $S_{MS} = F_a S_S = 1.000 \times 2.116 = 2.116$ g

Equation (11.4–2): $S_{M1} = F_v S_1 = 1.500 \times 0.784 = 1.176$ g

Section 11.4.4 — Design Spectral Acceleration Parameters

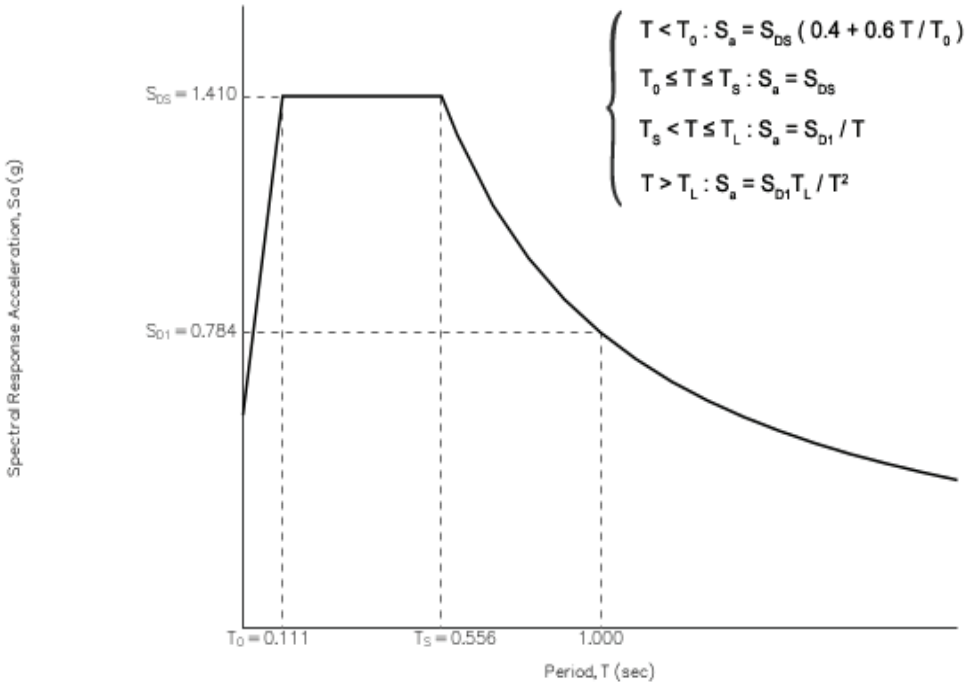
Equation (11.4–3): $S_{DS} = ⅔\ S_{MS} = ⅔ \times 2.116 = 1.410$ g

Equation (11.4–4): $S_{D1} = ⅔\ S_{M1} = ⅔ \times 1.176 = 0.784$ g

Section 11.4.5 — Design Response Spectrum

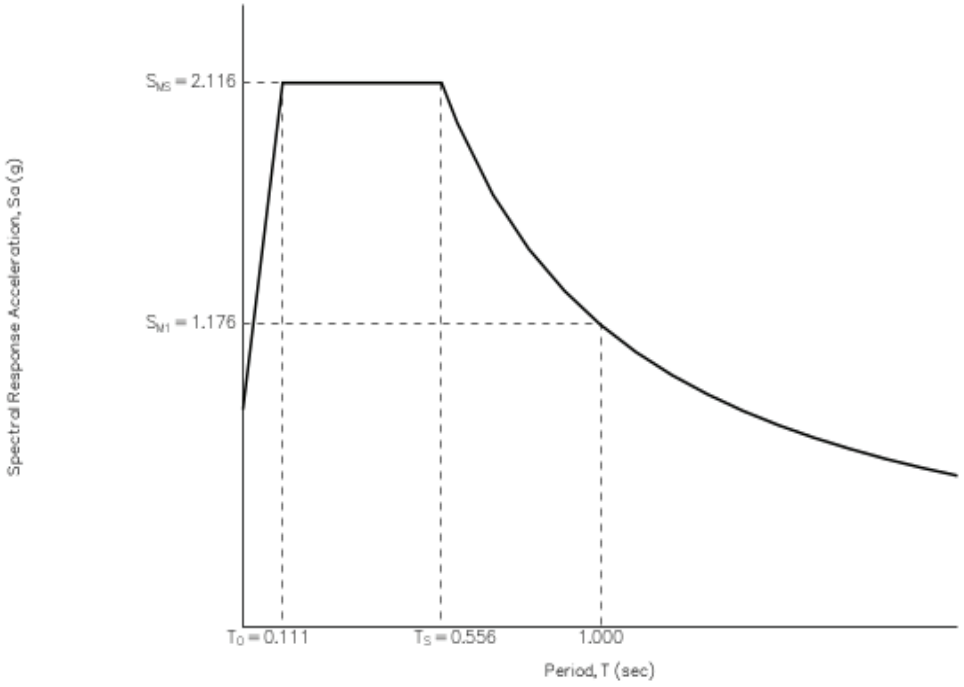
From Figure 22-12 [3] $T_L = 8$ seconds

Figure 11.4–1: Design Response Spectrum



Section 11.4.6 — Risk-Targeted Maximum Considered Earthquake (MCE_R) Response Spectrum

The MCE_R Response Spectrum is determined by multiplying the design response spectrum above by 1.5.



Section 11.8.3 — Additional Geotechnical Investigation Report Requirements for Seismic Design Categories D through F

From Figure 22-7 [4] PGA = 0.808

Equation (11.8–1): $PGA_M = F_{PGA}PGA = 1.000 \times 0.808 = 0.808$ g

Table 11.8–1: Site Coefficient F_{PGA}

Site Class	Mapped MCE Geometric Mean Peak Ground Acceleration, PGA				
	PGA ≤ 0.10	PGA = 0.20	PGA = 0.30	PGA = 0.40	PGA ≥ 0.50
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of PGA

For Site Class = D and PGA = 0.808 g, F_{PGA} = 1.000

Section 21.2.1.1 — Method 1 (from Chapter 21 – Site-Specific Ground Motion Procedures for Seismic Design)

From Figure 22-17 [5] C_{RS} = 0.953

From Figure 22-18 [6] C_{R1} = 0.952

Section 11.6 — Seismic Design Category

Table 11.6-1 Seismic Design Category Based on Short Period Response Acceleration Parameter

VALUE OF S_{DS}	**RISK CATEGORY**		
	I or II	**III**	**IV**
$S_{DS} < 0.167g$	A	A	A
$0.167g \le S_{DS} < 0.33g$	B	B	C
$0.33g \le S_{DS} < 0.50g$	C	C	D
$0.50g \le S_{DS}$	D	D	D

For Risk Category = I and S_{DS} = 1.410 g, Seismic Design Category = D

Table 11.6-2 Seismic Design Category Based on 1-S Period Response Acceleration Parameter

VALUE OF S_{D1}	**RISK CATEGORY**		
	I or II	**III**	**IV**
$S_{D1} < 0.067g$	A	A	A
$0.067g \le S_{D1} < 0.133g$	B	B	C
$0.133g \le S_{D1} < 0.20g$	C	C	D
$0.20g \le S_{D1}$	D	D	D

For Risk Category = I and S_{D1} = 0.784 g, Seismic Design Category = D

Note: When S_1 is greater than or equal to 0.75g, the Seismic Design Category is **E** for buildings in Risk Categories I, II, and III, and **F** for those in Risk Category IV, irrespective of the above.

Seismic Design Category ≡ "the more severe design category in accordance with Table 11.6-1 or 11.6-2" = E

Note: See Section 11.6 for alternative approaches to calculating Seismic Design Category.

References

1. *Figure 22-1*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-1.pdf
2. *Figure 22-2*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-2.pdf
3. *Figure 22-12*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-12.pdf
4. *Figure 22-7*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-7.pdf
5. *Figure 22-17*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-17.pdf
6. *Figure 22-18*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-18.pdf

Appendix C2

Paleontological Records Search

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Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007
tel 213.763.DINO
www.nhm.org

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

19 September 2017

Dudek
605 Third Street
Encinitas, CA 92024

Attn: Michael J. Williams, Ph.D., Paleontologist

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed LADWP West Los Angeles District Yard Project, Dudek Project # 8584-50, in the City of Los Angeles, Los Angeles County, project area

Dear Michael:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed LADWP West Los Angeles District Yard Project, Dudek Project # 8584-50, in the City of Los Angeles, Los Angeles County, project area as outlined on the portion of the Beverly Hills USGS topographic quadrangle map that you sent to me via e-mail on 5 September 2017. We have no fossil vertebrate localities that lie directly within the proposed project area boundaries, but we do have localities nearby from the same sedimentary deposits that occur in the proposed project area.

Surface deposits in all of the proposed project area consist of younger Quaternary Alluvium, derived broadly as alluvial fan deposits from the Santa Monica Mountains to the north. These younger Quaternary deposits typically do not contain significant vertebrate fossils in the very upper-most layers, but at relatively shallow depth may well contain significant fossil vertebrate remains from older Quaternary deposits.. Our closest vertebrate fossil locality in these older Quaternary deposits is LACM 5462, just to the southwest of the proposed project area along Pennsylvania Avenue. Locality LACM 5462 is particularly noteworthy because a specimen of extinct lion, *Felis atrox*, was recovered from this locality at a depth of only six feet below the surface. Our next closest vertebrate fossil locality from these deposits, LACM 7879,

situated due south of the proposed project area near the intersection of Rose Avenue and Penmar Avenue, produced fossil specimens of horse, *Equus*, and ground sloth, *Paramylodon*, at greater than eleven feet in depth.

Surface grading or very shallow excavations in the proposed project area probably will not uncover significant vertebrate fossil remains. Excavations that extend down below about five feet, however, may well encounter significant fossil vertebrate specimens. Any substantial excavations below the uppermost layers in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Sediment samples from the proposed project area should also be collected and processed to determine the small fossil potential of the site. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

APPENDIX D

Phase I ESA

Appendix D

Phase I Environmental Site Assessment

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Phase I Environmental Site Assessment
West Los Angeles District Yard
12300 and 12270 Nebraska Avenue
Los Angeles, California 90064

Prepared for:

Los Angeles Department of Water and Power
111 N. Hope Street, Room 1044
Los Angeles, California 90012
Contact: Aiden Leong

Prepared by:

DUDEK
Corporate Office:
605 Third Street
Encinitas, California 92024

Glenna McMahon, PE
Principal Engineer

Audrey Herschberger, PE
Environmental Engineer

OCTOBER 2018

Printed on 30% post-consumer recycled material.

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ACRONYMS

amsl	above mean sea level
APN	assessor's parcel number
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
bgs	below ground surface
CalEPA	California Environmental Protection Agency
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
City	City of Santa Monica
DCA	1,1-dichloroethane
DTSC	Department of Toxic Substance Control
EDR	Environmental Data Resources
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
LADWP	Los Angeles Department of Water and Power
LACFD	Los Angeles City Fire Department
LUST	leaking underground storage tank
NPMS	National Pipeline Mapping System
PCB	polychlorinated biphenyl
PCE	tetrachloroethylene
pCi/L	pico curies per liter
PRG	Preliminary Remediation Goal
RCRA LQG	Resource Conservation and Recovery Act – Large Quantity Generator
REC	recognized environmental condition
SVOC	semi-volatile organic compounds
SWAT	Solid Waste Assessment Test
TCE	trichloroethylene
TTLC	Total Threshold Limit Concentrations
ug/L	micrograms per liter
UST	underground storage tank
VEC	vapor encroachment condition
VES	Vapor Encroachment Screening
VOC	volatile organic compound
ZIMAS	Zone Information & Map Access System

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1 EXECUTIVE SUMMARY

A Phase I Environmental Site Assessment (ESA) was conducted for the West Los Angeles District Yard property located at 12270 and 12300 Nebraska Avenue in Los Angeles, California (subject property). The subject property consists of approximately 6.3 acres of land situated on assessor's parcel numbers (APNs) 4259-018-901, 4259-019-900, and a portion of 4259-018-902.

The findings of this investigation are based on a review of historical source information, a search of regulatory agency databases within specified distances, review of available local regulatory agency records, review of previous reports prepared for the subject property, interviews, and a site reconnaissance.

This Phase I ESA revealed the following information:

- The subject property was agricultural land from at least 1928 until 1950 (including operation as Consolidated Nurseries from 1943 to 1950) at which time industrial development began. The majority of the industrial activities occurred on 12270 Nebraska Avenue (APN 4295-018-901). Businesses that operated at the subject property between 1950 and 1989 included Riker Laboratories, Mesa Plastics, Allied Chemical Company, and Plaskon Electronic Materials. Los Angeles Department of Water and Power (LADWP) headquarters occupied the subject property (at 12300 Nebraska Avenue) beginning in 1989. The subject property is currently used as an overhead and underground power distribution and maintenance facility by LADWP.
- The surrounding area was agricultural with some commercial development to the east and west, and residential development to the north, beginning in at least 1928. Clay pits and brick-firing facilities began operations to the west of the subject property in the early 1930s, extending through the early to mid-1950s, at which time the pits were filled with solid waste and subsequently covered. The area was developed with commercial and industrial uses by the mid-1960s to the south, east, and west, and residential development to the north.
- The subject property is zoned City of Los Angeles PF-1XL: Public Facilities.
- The subject property, identified as West Los Angeles Service Center, Facility ID 85332 (FA0000806) is registered with California Environmental Protection Agency (CalEPA) for chemical storage, aboveground petroleum storage, and generating large quantities of hazardous waste (Resource Conservation and Recovery Act – Large Quantity Generator (RCRA LQG)). The most recent facility inspection was July 27, 2018, and violations were received for non-compliance of the Hazardous Materials Release Response Plan. Similar violations were received in December 2016 and April 2018. The chemical storage

report lists 42 materials used at the subject property, including greases, oils, paints, propane, and cleaners.

- Chemicals have been handled on the subject property since at least 1959. Chemical handling has included acetone, epoxys, phenols, diallylphthalate, acetone, oils and greases, silicone, silica compounds, tert-butyl peroxybenzoate, silane, resins, diethylaminoethanol, sodium hydroxide, sodium sulfite, kerosene, antimony oxide, diamyl peroxide, and barium carbonate. The manufacturing operations for which these materials were used have ceased on the subject property.
- A 7,500-gallon acetone underground storage tank (UST) was installed in 1959 by Mesa Plastics. It was removed in 1985 and replaced the same year with an 8,000-gallon acetone double-walled UST by Plaskon Electronic. The 8,000-gallon UST was removed in 1989 prior to demolition of all Plaskon buildings and termination of the company operations. Information regarding these tanks was received from the Los Angeles Fire Department and is discussed in Section 5.3.1.
- In February 1991, a 7,500-gallon gasoline UST, 2,000-gallon white gas UST, 500-gallon waste oil UST, an oil/water separator and a fuel island were removed from the subject property. Soil samples were collected after removal of these features. Xylene was detected in soil collected from three locations beneath the fuel tanks and fuel island at a maximum concentration of 26.7 parts per billion, and toluene was detected in soil collected from one location beneath the fuel island at 12.2 parts per billion. The low concentrations at shallow depths in the soil were determined to be de minimus.

Dudek performed this Phase I ESA of the subject property in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E1527-13. This report summarizes the research and findings of the Phase I ESA.

This assessment revealed the following recognized environmental conditions (RECs) in connection with the subject property:

- Metals in soil above background and regulatory levels as identified in a 2005 site investigation.
- Elevated levels of trichloroethylene (TCE), tetrachloroethylene (PCE), 1,4-dioxane, and 1,1-dichloroethane (DCA) in the groundwater beneath the eastern adjoining property (12333 Olympic Boulevard).
- Elevated levels of volatile organic compounds (VOCs), including TCE, in the groundwater beneath the northern adjoining property (12210 ½ Nebraska Avenue).

- Elevated levels of PCE, TCE, 1,4-dioxane, and chloroform in the groundwater within the Olympic Well Field. The radius of influence of this well field encompasses the subject property.

This assessment revealed the following controlled RECs in connection with the subject property:

- Elevated levels of VOCs in the groundwater related to the Boeing Supercharger facility, which received a no further action designation in 2013.

This assessment revealed the following data gaps:

- Incomplete documentation of the "product lagoon" and "unstable materials pit" located on the subject property in 1978.
- Areas of solid waste disposal identified on aerial photographs west of the subject property and deemed potential areas of groundwater contamination by the U.S. Envionmental Protection Agency (EPA).
- Potential vapor encroachment conditions due to potential on-site and off-site sources.

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2 INTRODUCTION

This Phase I Environmental Site Assessment (ESA) was performed according to the guidelines stipulated in American Society for Testing and Materials (ASTM) Standard E1527-13, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process." This Phase I ESA was conducted as part of environmental due diligence for the proposed redevelopment of the West Los Angeles District Yard. The redevelopment of the West Los Angeles District Yard includes demolition of existing buildings, excavation activities, and construction of new buildings.

2.1 Assessment Procedure and Scope of Investigation

Phase I ESAs assist in identifying past and present land use, including identification of possible releases or disposal of manufacturing or other wastes if such information is contained within regulatory reports or files, and/or is currently visible on site. The assessment reviews local, county, state, and U.S. Environmental Protection Agency (EPA) lists of known or potentially hazardous waste sites, landfills, and sites currently under investigation for environmental violations that may be of concern to a site.

The scope of this environmental investigation consisted of (1) a reconnaissance of the subject property; (2) a search of regulatory agency records; (3) review of available historical aerial photographs, topographic maps, Sanborn fire insurance maps, City Directory listings, and building department records; (4) an environmental lien search; (5) interview of a representative of the property owner; and (6) preparation of this Phase I ESA report detailing the findings of the investigation.

These activities were conducted to identify recognized environmental conditions (RECs). The term "recognized environmental condition" means the presence or likely presence of any hazardous substances or petroleum products on the subject property under conditions that indicate an existing release, a past release, or a material threat of a release into the ground, groundwater, or surface water.

The term "controlled recognized environmental condition" (controlled REC) is an environmental condition that would have been considered a REC in the past, but which has been remediated and received risk-based closure by a regulatory agency (i.e., no further action letter) where residual contamination remains in place. Furthermore, "controlled REC" is used if the property is subject to a control or use restriction (i.e., property use restrictions, activity and use limitations, institutional controls, or engineering controls) due to residual on-site contamination.

The term "historical recognized environmental condition" (historical REC) is an environmental condition that would have been considered a REC in the past, but that has been remediated and

received unrestricted residential use closure by the regulatory agency. Therefore, no controls or use restrictions have been applied to the property.

The term "recognized environmental condition" is not intended to include de minimus conditions. De minimus conditions are conditions that generally do not present a material risk of harm to public health or the environment and would not be the subject of an enforcement action if brought to the attention of governmental agencies.

2.2 Qualifications of Environmental Professionals

This Phase I ESA was prepared by Susan Smith, geologist, Audrey Herschberger, environmental engineer, and Glenna McMahon, environmental engineer. Qualifications for Ms. Smith, Ms. Herschberger, and Ms. McMahon are presented in Appendix A.

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in Section 312.10 of 40 Code of Federal Regulations (CFR) Part 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

3 SITE LOCATION

The subject property consists of approximately 6.3 acres of land located at 12270 and 12300 Nebraska Avenue in Los Angeles, California (Figure 1). The subject property is located on assessor's parcel numbers (APNs) 4259-018-901, 4259-019-900, and a portion of 4259-018-902. The subject property is bordered to the north by Nebraska Avenue, to the south by West Olympic Boulevard, and to the east and west by industrial properties (Figure 2). The subject property is currently used as power distribution and maintenance facility, including vehicle maintenance, for the Los Angeles Department of Water and Power (LADWP).

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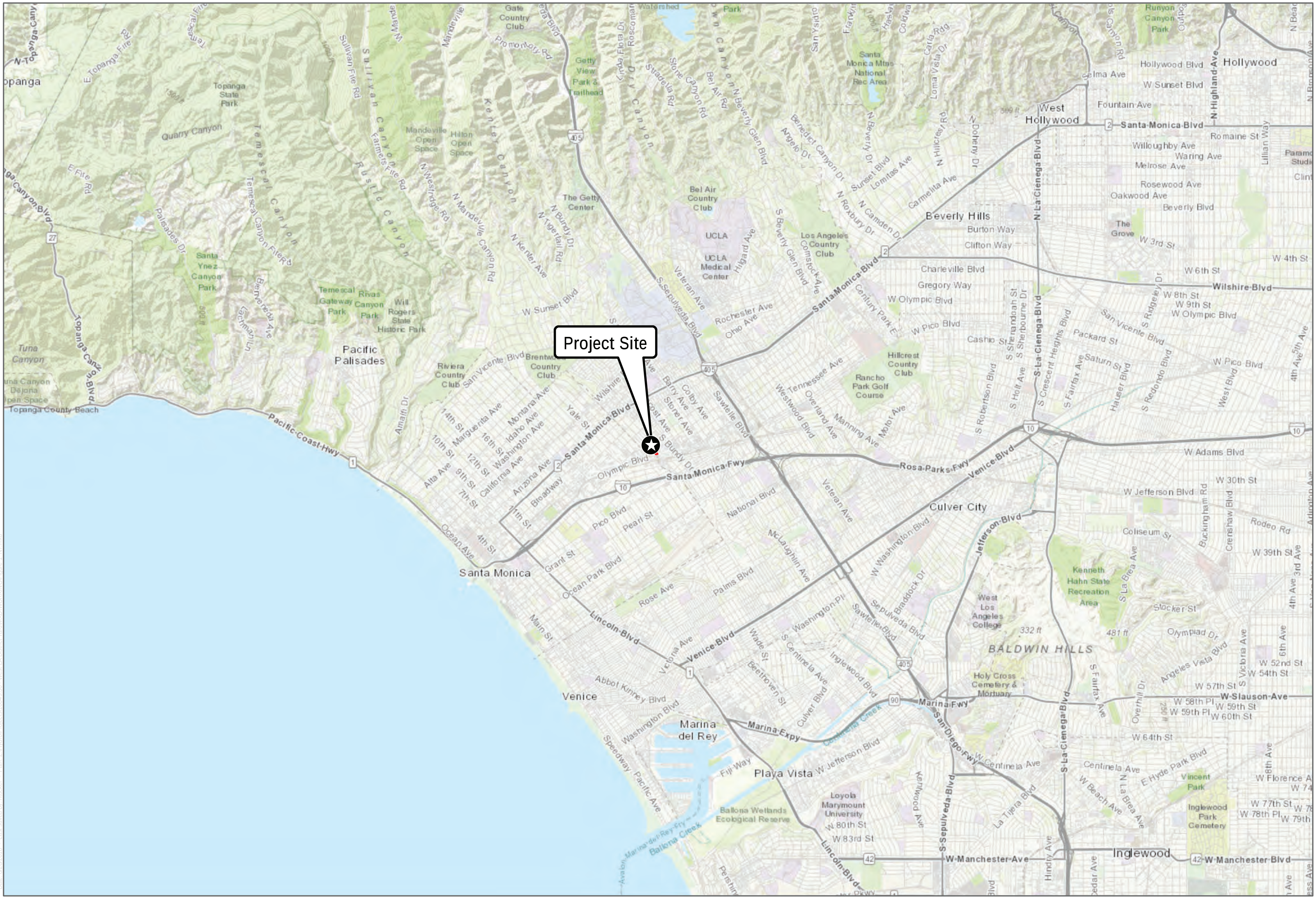

SOURCE: Esri Map Services

DUDEK

0 1 2 Miles

FIGURE 1

Regional Map

West LA District Yard Phase I Environmental Site Assessment

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SOURCE: Bing Imagery 2017

DUDEK

0 150 300 Feet

FIGURE 2

Subject Property

West LA District Yard Phase I Environmental Site Assessment

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4 ENVIRONMENTAL SETTING

General topographic information for the subject property and the surrounding area was obtained from a review of the Beverly Hills 7.5- x 7.5-minute U.S. Geological Survey topographic map, from the Environmental Data Resources (EDR) report (Appendix B), and from the site visit. The topography of the subject property is characterized by an overall south-southeast gradient, toward Olympic Boulevard. The elevation of the subject property is approximately 160 feet above mean sea level.

No subsurface geologic investigations were performed as part of this Phase I ESA. According to the U.S. Department of Agriculture Natural Cooperative Soil Survey, the subject property is mapped as having a soil component name of Urban Land, which has a variable surface texture. Other soil types in the area may consist of variable loams, clays, and sands. The geology of the subject property is primarily composed of Cenozoic-era quaternary rocks.

Based on sources searched by EDR, 22 water wells were mapped within 1 mile of the subject property; none of the wells are located on the subject property. In all, 4 of the wells were listed as U.S. Geological Survey wells, 1 was listed as a California oil and gas well, and the others are state-listed wells. Additional information regarding these wells is as follows:

- One of the wells is a monitoring well, with reported concentrations of volatile organic compounds (VOCs) from January 2012 until December 2017. This well is located between 0.25 and 0.5 miles southwest of the subject property. The most recent detected concentrations are as follows: chloroform at 4.4 micrograms per liter (ug/L), tetrachloroethylene (PCE) at 29.1 ug/L, 1,1-dichloroethylene (DCE) at 2 ug/L, trichloroethylene (TCE) at 39.9 ug/L, and cis-1,2-DCE at 2.1 ug/L.
- A second monitoring well was identified between 0.25 and 0.5 miles west of the subject property with reported concentrations of metals and other groundwater quality indicators from August 2012 to October 2017. The most recent detected concentrations are as follows: iron at 19.1 ug/L, manganese at 6.8 ug/L, and total trihalomethanes at 0.67 ug/L.
- A third monitoring well was identified 0.5 miles east of the subject property with reported concentrations of VOCs from January 2012 until December 2017. The most recent detected concentrations are as follows: chloroform at 1.1 ug/L, PCE at 8 ug/L, and TCE at 3 ug/L.

Based on sources searched by EDR and the California Division of Oil, Gas, and Geothermal Resources online database, three oil and gas wells are located within 1 mile of the subject property; none are located on the subject property. The closest oil and gas well is located

approximately 600 feet southwest of the subject property and is reported as a “dry hole.” Two active producing wells are located approximately 1 mile northwest of the subject property (DOGGR 2018).

Based on available reports and topography of the area, groundwater is expected to flow in a southerly direction, with local variations at shallow depths. Two City of Santa Monica supply wells are located within 0.25 miles of the subject property to the southwest. Groundwater monitoring reports (ICF 2017) conducted on these wells and surrounding associated monitoring wells indicate deep groundwater aquifers flow toward these wells due to a drawdown radius of approximately 5,000 feet from the wells.

5 INTERVIEWS

5.1 Site Representative Interview

On August 14, 2018, Susan Smith of Dudek interviewed Randolph Bowen of LADWP, representative for the subject property. A copy of the completed background questionnaire is included as Appendix C.

Mr. Bowen stated that the subject property is and has been used as an overhead and underground power distribution and maintenance facility.

Minimal vehicle maintenance is conducted in the Service Building. Mr. Bowen stated that damaged transformers are transported from the field to the subject property and the oil is sampled and analyzed for polychlorinated biphenyl (PCB). The damaged transformers are bagged and/or placed on spill pallets pending proper characterization and disposal. The hydraulic oil used in the equipment at the subject property does not contain PCB.

Soil from various excavations is sometimes stored on the subject property to be used as fill for various maintenance/repair activities; the soil is not used for fill material on the subject property.

Mr. Bowen stated that three aboveground storage tanks (ASTs) are located on the subject property; he was not aware of any underground storage tanks (USTs) on the subject property since the LADWP occupation.

Mr. Bowen stated that subject property was included in a lead-based paint and asbestos-containing materials survey in 2017. The interior and exterior of the office building and warehouse were abated for lead-based paint and asbestos-containing materials; the exteriors of the remaining buildings were also abated.

Mr. Bowen was not aware of any land use restrictions or litigation associated with the subject property.

5.2 User-Provided Information

In accordance with ASTM Standard E 1527-13, to qualify for one of the landowner liability protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the user must provide the following information (if available) to the environmental professional. On September 28, 2018, Randolph Bowen of the LADWP provided the answers to Dudek via telephone. The questions and responses are presented below.

1. **Question**: Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?

Response: No.

2. **Question**: Are you aware of any activity and land use limitations, such as engineering controls, land use restrictions, or institutional controls, that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

   Response: No.

3. **Question**: As the user of this ESA, do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

   Response: I only have knowledge pertaining to the southwestern-adjacent Receiving Station K.

4. **Question**: Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

   Response: Not applicable.

5. **Question**: Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user, (a) do you know the past uses of the property, (b) do you know of specific chemicals that are present or once were present at the property, (c) do you know of spills or other chemical releases that have taken place at the property, or (d) do you know of any environmental cleanups that have taken place at the property?

   Response: (a) the property has been used as a water and power distribution facility for the past 40 years; I am not aware of the previous use; (b) chemicals on the property include gasoline, diesel, motor oil, and cable oil; (c) no; and (d) no.

6. **Question**: As the user of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

   Response: No.

5.3 Agency Interviews

Regulatory agency records concerning environmental compliance for the subject property were requested from several agencies. Documents and information obtained from the regulatory agencies are summarized in Sections 5.3.1 through 5.3.9.

5.3.1 Los Angeles City Fire Department

The Los Angeles City Fire Department (LACFD) is the Certified Unified Program Agency for the City of Los Angeles. LACFD provides multiple online resources to find information about ASTs, USTs, and hazardous materials. Dudek accessed these online records on August 14, 2018.

- Active AST, UST, and Hazardous Materials Inventories (by address): The subject property address (12300 West Nebraska Avenue) was listed in the Hazardous Materials inventory under LADWP – West Los Angeles Service Center, Facility ID FA0000806.
- Inactive AST, UST, and Hazardous Materials Inventories: The subject property (12270 West Nebraska Avenue) was listed in the Inactive UST and Inactive Hazardous Materials inventory under Plaskon Electronic Materials Inc., Facility ID FA0001598.
- UST Historic File List: The subject property address was not listed.

Dudek submitted a request for records pertaining to 12270 W Nebraska Avenue. LACFD provided the following:

- A tank inspection form dated April 1959 for Mesa Plastics for the installation of a 7,500-gallon acetone UST. The tank was installed 225 feet south of the north property line, and 80 feet east of the west property line.
- A diagram of an "unstable materials pit" for Allied Chemical Co., dated January 18, 1978. The diagram states the pit will hold tertiary butyl perbenzoate and dicumyl peroxide. The location of this pit is not shown.
- A 1984 Hazardous Materials Inventory list. Materials included acetone, resins, silane, lubricating and hydraulic oils, flammable gases, and catalysts.
- An abandonment notification of a 7,500-gallon UST, dated May 22, 1985. The tank was reportedly 225 feet south of the north property line and 135 feet west of the east property line. This is the same approximate location of the Mesa Plastics acetone tank, installed in 1959.
- A permit application for the installation of an 8,000-gallon double-walled UST, dated April 1985 (completed May 1985).

- Final Closure Report for an Underground Solvent Storage Tank Removal (AMI 1989) and associated closure permits. The removal was for one 8,000-gallon double-walled steel tank containing acetone at atmospheric pressure. The tank was located in the approximate center of the former Plaskon Electronics site (APN 4259-018-901), in between the former buildings. Following abatement and removal of the tank, soil samples were collected. Analytical results identified slight acetone concentrations in the soils (maximum 0.56 milligrams per kilogram) below the tank, which were determined to be de minimus and did not indicate impacts to soils. The excavation was backfilled and graded.
- A notice of termination of operation of the Plaskon Electronic Materials manufacturing plant. Operations were noted as scheduled to be terminated on March 1, 1989, with subsequent building demolishment.

Dudek submitted a request for records pertaining to 12300 West Nebraska Avenue. LACFD provided the following:

- An UST inspection form, dated September 1953, indicating one 2,000-gallon and one 7,500-gallon gasoline UST, both located 15 feet from the east property line and 200 to 215 feet from the north property line.
- An UST inspection form, dated January 1957, indicates two tanks were located on the subject property: one 2,000-gallon UST and one 7,500-gallon UST. The notes indicate the 2,000-gallon tank was leaking so it was removed, repaired, and replaced in the same location. The tanks contained gasoline and were part of a service station.
- A tank abandonment form, dated February 1957, for one 2,000-gallon UST to be removed from the ground. The tank was repaired and replaced into the ground.
- A tank abandonment form, dated January 1958, for one 2,000-gallon UST to be filled with sand. The tank is located 15 feet west of the east property line and 200 feet south of the north property line.
- An UST inspection form, dated January 1958, indicating the installation of a 1,000-gallon UST to replace the 2,000-gallon UST.
- A tank closure report with soil sampling results dated February 20, 1991. A gasoline UST, white gasoline UST, waste oil UST, and a gasoline island were removed from the site. Based on available information, these two tanks appear to be the same tanks referenced in the 1950s documentation. Subsequent soil samples collected from each excavation area revealed no detections of petroleum hydrocarbons. A figure indicates the approximate locations of these USTs, which are shown on Figure 3 of this report. Xylenes were detected beneath the waste oil tank and beneath the gasoline island (max 26.7 parts per billion). Toluene was also

detected beneath the gasoline island (12.2 parts per million). This decommissioning activity is discussed further in Section 9.

- Various permits and authorizations for the 1991 removal of the USTs.
- Disposal confirmations and manifests for the 1991 USTs.
- A 2003 inspection report for the three Convalt ASTs located on the site.

LACFD also provided a link to the California Environmental Protection Agency (CalEPA) Regulated Site Portal. The results of the CalEPA portal are discussed in Section 5.3.7.

5.3.2 Los Angeles County Fire Department – Hazardous Materials Division

Dudek contacted the Los Angeles County Fire Department Hazardous Materials Division to obtain information about potential spills, tanks, or chemical use on the subject property. The county provided various files for the property at 12270 Nebraska Avenue. One set of files was for a health complaint involving contact dermatitis after packaging plastic materials. The second set of files included hazardous materials summaries from Plaskon Materials manufacturing facility. The chemicals identified in these various summaries include epoxys, phenols, diallylphthalate, acetone, oils and greases, silicone, silica compounds, tert-butyl peroxybenzoate, silane, resins, diethylaminoethanol, sodium hydroxide, sodium sulfite, kerosene, antimony oxide, diamyl peroxide, and barium carbonate. Copies of these files are provided in Appendix D.

5.3.3 Department of Toxic Substance Control, Chatsworth Regional Office

5.3.3.1 Office Records

Dudek contacted the Department of Toxic Substance Control (DTSC), Chatsworth Regional Office, to obtain information about spills, tanks, or chemicals used that may have impacted the environmental conditions on the subject property. As of the date of this report, DTSC has not responded.

5.3.3.2 EnviroStor

Dudek accessed EnviroStor (EnviroStor 2018), which is an online database of DTSC sites. The subject property was not listed in the EnviroStor database. The adjoining property, 12210 ½ Nebraska Avenue, was listed, and is discussed in Section 12.2.

5.3.4 South Coast Air Quality Management District

5.3.4.1 Office Records

Dudek contacted the South Coast Air Quality Management District on August 2, 2018, to obtain records regarding hazardous materials, permits, complaints, and code violations for the subject property. The information obtained is presented in the Table 1 and Appendix D.

Table 1
South Coast Air Quality Management District Records for the Subject Property

Date	Description
LA City, DWP 12300 Nebraska Ave	
8/8/1984	Permit to operate gasoline storage tanks and dispensing equipment
8/31/1991	Permit to operate two underground storage tanks (one 12,000-gallon gasoline and one 5,000-gallon diesel) and associated fuel dispensers
1995, 2004, 2005, 2012, 2013, 2014	Permit to operate gasoline and diesel aboveground storage tanks
1996, 2006	Permit to operate diesel generator
2007, 2015, 2016	Asbestos abatement notifications
2001, 2009	Notices of compliance – failure to provide copies of pressure test results and place orange sticker on engine
2002, 2011, 2017	Notices of violation – failure to perform vapor recovery recertification on gasoline-powered equipment, operation of emergency generator more than 30 hours per year, and failure to report gasoline throughput
Plaskon Electronic Materials 12270 Nebraska Ave	
1981, 1984	Multiple permits to operate various equipment including roll mills, blenders, mixers, molding, grinders, and various pollution control equipment; solvents were noted to be used on the 1981 roll mill permit
1984, 1984	Permit to operate a 7,500-gallon underground storage tank (acetone)
1985	Permit to operate an 8,000-gallon underground storage tank (acetone)

5.3.4.2 Online Database

Dudek accessed the South Coast Air Quality Management District's online search tool, FIND, on August 14, 2018 (FIND 2018). The information shown in Table 2 was obtained.

Table 2
South Coast Air Quality Management District FIND Records for the Subject Property

Date	Description
LA City, DWP (Facility ID 4471) 12300 Nebraska Ave	
6/12/2014	Active permit to operate a gasoline service station.

Table 2
South Coast Air Quality Management District FIND Records for the Subject Property

Date	Description
6/22/2006	Active permit to operate a diesel generator.
8/8/1984	Inactive permit to operate amine regeneration and gasoline service station.
8/31/1991	Inactive permit to operate a gasoline storage tank and refinery flare system.
3/13/1995	Inactive permit to operate a gasoline storage tank.
4/16/1996	Inactive permit to operate a diesel generator.
1/19/2000 6/4/2004 12/6/2012	Inactive permit to operate a gasoline service station
Paktank Corp (Facility ID 83184) 12270 Nebraska Ave	
12/20/1990	Application for a stationary diesel generator
3/2/2001	Application for an ERC alteration
Plaskon Electronic Materials Inc. (Facility ID 21406, 45149) 12270 Nebraska Ave	
1982, 1983, 1984, 1986, 1988	Multiple inactive permits to operate plastics and resins blending, size reduction, size classification, extruding, and packaging; dioctyl phthalate rolling; baghouse; miscellaneous material cleaning; and glass fiber size reduction processes.

Notices of violation were received by LADWP in 2002, 2011, and 2017, all of which were later brought into compliance. The violations involved improper paperwork and reporting.

5.3.5 Los Angeles Regional Water Quality Control Board

5.3.5.1 Office Records

Dudek contacted the Los Angeles Regional Water Quality Control Board (LARWQCB) on August 2, 2018, to obtain records of spills, tanks, or other releases that may have impacted the environmental conditions on the subject property. On August 9, 2018, the LARWQCB responded that it did not have any records related to the subject property addresses.

5.3.5.2 GeoTracker Records

Dudek accessed GeoTracker, the California Water Board online data management system, on August 14, 2018 (GeoTracker 2018). The subject property was not identified on the GeoTracker online mapping system. However, the EDR Report (Section 12.1) provided a link to a Hazardous Material Storage Container Information Sheet (UST records) that is stored on GeoTracker. Copies of these information sheets are provided in Appendix D.

5.3.6 City of Los Angeles

Dudek requested records from the City of Los Angeles on August 2, 2018. On August 3, 2018, the Office of the City Clerk responded stating it is "not in possession of any documents or information relating to your request."

Dudek accessed the City of Los Angeles Department of Planning and Zoning online Zone Information & Map Access System (ZIMAS) on August 14, 2018 (ZIMAS 2018). The subject property is zoned PF-1XL: Public Facilities.

Properties to the east and south are zoned M2-1: Light Manufacturing. Properties to the north are zoned R1-1: Low Residential. Properties to the west of Centinela Avenue are part of the City of Santa Monica, zoned Mixed Use Creative.

5.3.7 California Environmental Protection Agency Regulated Site Portal

Dudek accessed the CalEPA site portal on August 14, 2018 (CalEPA 2018). The following listing was found for the subject property:

- West Los Angeles Service Center, Facility ID 85332 (FA0000806) is listed for chemical storage facilities, aboveground petroleum storage, and generating large quantities of hazardous waste (RCRA LQG). The most recent facility inspection was July 27, 2018, and violations were received for non-compliance of the Hazardous Materials Release Response Plan. Similar violations were received in April 2018 and December 2016. Chemical storage includes 42 reported materials, including greases, oils, paints, propane, and cleaners. A full list is provided in Appendix D.

5.3.8 National Pipeline Mapping System

Dudek accessed the National Pipeline Mapping System (NPMS) online database on August 15, 2018, for information about hazardous materials pipelines, accidents, and other incidents on or near the subject property (NPMS 2018). There are two liquid natural gas pipelines east of the subject property, the closest being approximately 0.25 miles from the subject property. There are two hazardous liquid pipelines, one approximately 0.5 miles east of the subject property, and one approximately 0.8 miles west of the subject property. No accidents or incidents were reported within 1 mile of the subject property.

5.3.9 Los Angeles County Tax Assessor

Dudek accessed the Los Angeles County Tax Assessor's online property assessment information system database on August 15, 2018, to obtain information about building construction dates (County of Los Angeles 2018). Results of this search are presented in Table 3.

Table 3
Los Angeles County Tax Assessor Records for the Subject Property

APN	Address	Details
4259018901	12270 Nebraska Avenue	A commercial use, government owned parcel with no recorded buildings. The land is 84,867 square feet. The property was recorded sold in 1979, 1983, 1984, and 1989. The APN was changed in 1989 from 4259018001.
4259018902	None	A government owned parcel with no recorded buildings designated "other property type." The total land is 450,671 square feet. The property was recorded sold in 1967.
4259019900	None	A government owned parcel with no recorded buildings designated "other property type." The total land is 50,212 square feet. The property was recorded sold in 1967.

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6 SITE RECONNAISSANCE

A site reconnaissance was conducted on August 14, 2018, by Susan Smith of Dudek. Ms. Smith was accompanied by Randolph Bowen, representative of the subject property. The site reconnaissance consisted of walking the subject property and viewing adjacent properties from the subject property or public rights of way. Photographs are included in Appendix E.

The subject property consists of land used as an overhead and underground power distribution and maintenance facility. The subject property consists of several standalone structures (office building, assembly building, locker room building, warehouse/tool room building, and service building), outdoor storage areas, and parking (Photographs 1 through 6).

The subject property is bound to the northwest by Nebraska Avenue and residential housing (Photograph 7). The subject property is bound to the northeast by commercial businesses including an architecture firm and gaming company (Photograph 8). The subject property is bound to the southwest by Receiving Station K, Centinela Boulevard, and various office buildings (Photographs 5 and 9). The subject property is bound to the southeast by a veterinary clinic and Olympic Boulevard (Photograph 10).

New transformers are stored in two areas on the northeastern portion of the subject property (Photographs 11 and 12). Temporary transformers mounted on trailers are stored on the northeastern portion of the subject property, adjacent to the employee parking lot (Photograph 13). Used and damaged transformers are stored on a concrete pad located on the northeastern portion of the subject property (Photograph 14).

New and dirty oil drums (cable oil and inhibited oil) and cans of diesel fuel are stored in prefabricated buildings equipped with secondary containment (Photograph 15). Empty drums are stored adjacent to the prefabricated buildings (Photograph 16).

ASTs are located on the northern and southeastern portions of the subject property. The ASTs include a diesel generator with day tank and three double-walled tanks (two unleaded gasoline and one diesel).

Dry materials, including gravel and soil, are stored in outdoor bays on the northeastern portion of the subject property (Photograph 17).

Surface Water Discharge

The subject property slopes gently toward the southwest. A swale is present on the southeastern portion of the subject property and extends toward Centinela Avenue (Photograph 5).

Pits, Ponds, or Lagoons

No pits, ponds, or lagoons were observed on the subject property.

Distressed Vegetation

Distressed vegetation was not observed on the subject property.

Indications of Solid Debris Storage

Used lead cables coated in cable oil are stored in bins located on the southwestern portion of the subject property (Photograph 18). Damaged transformers are stored on the northeastern portion of the subject property (Photograph 14).

Chemical Storage or Use

Various chemicals were observed in the auto service building. Drums of chemicals include transmission fluid, motor oil, antifreeze, and brake cleaner (Photograph 19). Two parts washers atop drums were also observed in the auto service building (Photograph 20). Drums containing cable oil and inhibited oil were observed in the prefabricated hazardous materials buildings (Photograph 21). Aerosols and other flammable materials were observed in flammable cabinets in the tool room building (Photograph 22). Compressed gasses (acetylene, propane, and nitrogen) were observed in the empty drum storage area (Photograph 23).

Pools of Liquid

No unnaturally discolored pools or flowing water were observed on the subject property.

Groundwater Wells, Cisterns, Cesspools, or Septic Tanks

No groundwater wells, cesspools, cisterns, or septic tanks were observed during the site reconnaissance.

Drains and Sumps

Storm drains were observed on the southeastern portion of the subject property. A wash rack was observed in the auto service building (Photograph 24).

Transformers and Hydraulic Equipment

A hydraulic vehicle lift was observed in the auto service building; no staining was observed in the vicinity of the vehicle lift (Photograph 25). Trailer-mounted hydraulic cable pulling tools were observed on the southeastern portion of the subject property; minimal staining was observed on the asphalt adjacent to one of the trailers (Photograph 26). New and used/damaged transformers were observed on the subject property (Photograph 14). The damaged transformers were stored on a cement pad and were typically wrapped in plastic or placed on/within secondary containment. Absorbent materials were observed around the base of one of the transformers (Photograph 27). Minimal oil staining was observed on the asphalt in an area used to load and transport the damaged transformers for disposal (Photograph 28).

Abnormal Odor

Dudek did not notice any abnormal odors on the subject property during the site reconnaissance.

Soil Disturbances

No soil disturbances were observed during the site reconnaissance.

Storage Tanks

Three 2,000-gallon double-walled ASTs (two unleaded and one diesel) located within concrete berms were observed on the southeastern portion of the subject property; de minimus staining was observed in the vicinity of the nozzles, and no staining was observed beneath the tanks (Photographs 29 and 30). A diesel generator equipped with a double-walled day tank was observed in the northeastern portion of the subject property; no staining was observed beneath the tank (Photographs 31 and 32). No evidence of USTs was observed during the site reconnaissance.

Staining

Minimal oil staining was observed on the concrete floor beneath the used/damaged transformers, on the asphalt near the transformer disposal transportation area, and on the asphalt near the cable pulling trailer (Photographs 26 through 28).

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7 REVIEW OF HISTORICAL AERIAL PHOTOGRAPHS

Dudek reviewed historical aerial photographs from EDR for 1928, 1938, 1947, 1952, 1964, 1967, 1970, 1977, 1981, 1989, 1994, 2002, 2005, 2009, 2012, and 2016 (Appendix F). The photographs provided background information to assess the possibility of past activities that could present environmental concerns. The aerial photographs are described in Table 4.

Table 4
Description of Historical Aerial Photographs Reviewed

Date	Description
1928	The subject property appears to be all row crops with no observable buildings. The properties to the north appear to be developing residential communities. Adjoining to the east, west, and south are more agricultural areas (row crops). Commercial size buildings are observed to the east, west, and south, but are not adjoining the subject property. A disturbed area is observed approximately 500 feet to the west. Nebraska Avenue is observed bordering the subject property to the north, Centinela Ave borders to the west, and a portion of West Olympic Boulevard borders to the south, but does not connect to South Bundy Drive or extend west beyond Centinela Avenue. South Bundy Drive is observed to the east.
1938	No significant changes are observed to the subject property from the 1928 aerial photograph. There is a large commercial property to the west, where 12 large silos/tanks are observed approximately 1,500 feet from the subject property, as well as a large disturbed area. Residential properties are observed adjoining to the north and continue northward. The adjoining properties to the west, east, and south are agricultural. West Olympic Boulevard now extends beyond Centinela Avenue and Bundy Drive.
1947	No significant changes are observed to the subject property from the 1938 aerial photograph. Residential density has increased to the north and northeast, and is developing to the south beyond the adjacent agricultural/commercial areas. The western, eastern, and southern adjoining properties still appear agricultural. A fan-shaped ground disturbance is observed to the southeast, which appears to be an auditorium (topographic maps confirm it is a drive-in theater). Commercial development has increased directly to the south spanning along Olympic Boulevard. The large disturbed area to the west now contains large commercial buildings adjacent to the land disturbance.
1952	The northeastern portion of the subject property (APN 4295-018-901) is now developed with a large, rectangular commercial building along the eastern side, and a second smaller square building just to the south. The northern corner appears to be parking. The southeastern section of the subject property (APN 4259-019-900) appears disturbed with a long row of material down the center. The western portions (APN 4259-018-902) still appear agricultural row crops. The adjoining properties are now developed, with a large parking lot to the west, parking and commercial/industrial buildings to the east and south, a drive-in theater to the southeast, and residential to the north. The outlying areas are now commercially or residentially developed.
1964	The subject property is now developed, with multiple buildings on the northern parcels, as well as paved drive and parking areas. The southern portions of the subject property do not contain buildings, but appear to be paved areas. The southeast leg of the subject property appears to be a long strip of parking spaces. The surrounding area is completely developed, with residential to the north, and commercial/industrial to the east, west, and south. The western adjoining property (APN 4259-018-902) is developed as a substation.
1967	No significant changes are observed from the 1964 aerial photograph.
1970	The subject property contains multiple buildings, all located on the northern portion of the property. The southern leg is parking, and the western leg is paved driveway. Materials are stored outside in multiple areas of the subject property. Significant changes are not observed from the 1967 aerial photograph.
1977	The drive-in theater to the southeast is now being developed with a large commercial building. The subject

Table 4
Description of Historical Aerial Photographs Reviewed

Date	Description
	property appears similar to the 1970 aerial photograph, except there is a large area of stored materials in the center of the northern section of the property, along the western edge of APN 4295-018-901. The surrounding areas also appear similar to the 1977 aerial photograph.
1981	New buildings have been constructed to the southeast, where the former drive-in was located. These buildings appear commercial or industrial. A new structure or material storage area is observed on the top of the southern leg of the subject property, where vehicle parking was previously observed.
1989	The northern portion of the subject property (APN 4295-018-901) has been cleared of all structures and appears either bare dirt or paved. The remainder of the subject property appears unchanged. The surrounding areas appear unchanged.
1994	One new building is observed on the subject property, on the area that was cleared in the 1989 aerial photograph. The remaining area is paved vehicle parking. The remainder of the subject property appears unchanged, as do the surrounding areas.
2002	The subject property layout is unchanged. A concrete patch is observed in the northern portion of the subject property (on APN 4259-018-902), at the northwest end of the outdoor material storage area. Six buildings are observed. The remainder of the site appears paved with vehicle parking and material storage. The surrounding areas also appear unchanged.
2005	No significant changes are observed from the 2002 aerial photograph.
2009	Significant changes are not observed on the subject property from the 2005 aerial photograph. Two new commercial buildings are observed to the south, south of Olympic Boulevard. The buildings appear similar to the surrounding commercial buildings.
2012	No significant changes are observed from the 2009 aerial photograph.
2016	The subject property is commercially developed, with five buildings on the northern portion. The entire site is paved. Vehicle parking is located on the northern portion around the buildings. Exterior material storage is observed along the center line of the southeastern leg of the subject property, and in the northern portion along the southernmost building. The western leg of the subject property appears to be driveway area and some material storage. The surrounding areas are commercially/industrially developed to the east, west, and south, and residentially developed to the north. Nebraska Avenue borders the subject property to the north, and Centinela Avenue and Olympic Boulevard border to the south.

Dudek also reviewed the EPA Aerial Photographic Analysis of the Santa Monica Groundwater Area (EPA 1996). The coverage area included an almost-square area bordered by Santa Monica Boulevard to the north, Rose Avenue to the south, Butler Avenue to the east, and 20th Street to the west, and encompasses the subject property. In summary, clay mining operations were present in the 1930s, west of the subject property, and continued in the northern portion of the area until 1952 to 1958, followed by dumping in the open pit areas. By 1975 all excavations had been filled and commercial and industrial buildings had been constructed. Eight of these sites are located within a 1-mile radius of the subject property, and are shown on Figure 3. These areas were considered potential areas of groundwater contamination by EPA.

8 REVIEW OF HISTORICAL TOPOGRAPHIC MAPS

Dudek reviewed historical topographic maps from 1894, 1896, 1898, 1900, 1902, 1920, 1921, 1925, 1934, 1950, 1966, 1972, 1981, 1994, 1995, and 2012 (Appendix B). The topographic maps are a historical source that can be used to document the prior use of the subject property and surrounding area.

The topographic maps are described in Table 5.

Table 5
Summary of Topographical Maps Reviewed

Date	Scale	Description
1894, 1896, 1898, 1900	1:62,500	The subject property and surrounding areas show no development. Southern Pacific Railroad is observed approximately 0.25 miles south and 1 mile east, and Pasadena and Pacific Railroad 0.35 miles north of the subject property. The subject property is in a low-lying flat area south of the Santa Monica Mountains. Santa Monica lies to the west, La Ballona ot the south, San Jose de Buenos Ayres to the north, and Rincon de Los Bueyes to the east.
1902	1:62,500	A road is observed along the western border of the subject property. Development is observed beginning approximately 1 mile west and 1 mile north of the subject property.
1920, 1921	1:62,500	The subject property and surrounding areas are now developed with a city-style grid-pattern road system and small buildings throughout. A single building is shown on the western leg of the subject property. A road is now bordering the subject property to the west, then turns and also borders the southern leg of the property. Oil wells are shown approximately 1.25 miles northwest of the subject property. South of the subject property is still largely undeveloped.
1925	1:24,000	The subject property is in the "Sawtelle" area. Hot houses are shown to the east. The Los Angeles City Boundary runs along the road that borders the subject property to the west and south. Contour lines depict a slight southward gradient across the subject property; an elevation benchmark of 153 feet above mean sea level (amsl) is located just south on the railroad. The subject property is undeveloped, with no buildings or other features. The adjoining properties are also undeveloped. Two large pits or depressions are observed 0.5 and 0.75 miles west of the subject property.
1934	1:24,000	Development has increased surrounding the subject property, and now borders the subject property to the north. The municipal airport is observed approximately 0.75 miles to the south. Multiple depressions are depicted west of the subject property, the closest one located less than 0.25 miles west.
1950	1:24,000	The surrounding area is now "built-up area." The eastern adjoining property contains multiple mid-sized buildings (larger than residences). The properties 0.25 to 0.5 miles west of the subject property show depressions and gas tanks. North of the subject property is all built up. Olympic Boulevard borders to the south; Centinela Avenue to the west; Nebraska to the north. The area contains schools, an airport, and parks.

Table 5
Summary of Topographical Maps Reviewed

Date	Scale	Description
1966	1:24,000	The properties 0.5 miles to the west are now depicted as a “clay pit” mining site. The tanks are no longer depicted. Buildings are now shown on the subject property, eight in all. The adjoining properties all contain mid-sized buildings; a drive-in theater is located less than 1/8 miles to the east. The Santa Monica Freeway is now located approximately 0.25 miles to the south.
1972, 1981, 1994, 1995	1:24,000	No significant changes are observed on the subject property, except one new small building observed in 1981. New buildings are observed in the areas surrounding the subject property, mainly mid-sized to large buildings in commercial areas. The clay pit to the west is no longer depicted.
2012	1:24,000	Only roads and contour lines are depicted; buildings are no longer shown. No significant changes to the subject property or the area are observed.

9 PREVIOUS ENVIRONMENTAL SITE ASSESSMENTS

Phase I ESA, December 1999

A Phase I ESA was prepared by Parsons Engineering Science Inc. in 1999 for the subject property (Parsons 1999). The 1999 Phase I ESA identified the following RECs: suspect asbestos-containing materials throughout the buildings, the oil/water separator associated with the vehicle was rack in the truck shed, possible PCB-containing fluorescent light ballasts throughout the buildings, and suspected lead-based paint on the interior and exterior of the buildings. The oil/water separator was identified as a REC because there was no documentation of its installation, the integrity of the separator could not be assessed, and sampling of the environmental media at or near it had not been conducted.

During the 1999 site reconnaissance, two 2,000-gallon gasoline ASTs and one 2,000-gallon diesel AST with attached fuel nozzles, one 500-gallon waste oil AST at the truck shed and vehicle fleet maintenance shop, a three-stage oil/water separator at the wash rack, and a hazardous waste satellite accumulation area at the truck shed were observed on the subject property.

In February 1991, three USTs, a fueling station, and one oil/water separator were removed from the subject property. These tanks included a 7,500-gallon gasoline UST, approximately 10 years old; a 2,000-gallon white gas UST, approximately 20 years old; and a 500-gallon motor oil UST, age unknown.[1] The approximate location of the fuel island and USTs is shown on Figure 3. Soil samples collected after removal of these features showed concentrations of xylene in soil in three locations beneath the fuel tanks and fuel island at a maximum concentration of 26.7 parts per billion, and concentrations of toluene in soil in one location beneath the fuel island at 12.2 parts per billion. A removal report was submitted to the LACFD. The detected concentrations were located 3 feet below ground surface (bgs). Based on Dudek's review of the data, the detected levels of xylene are below the current Environmental Screening Level of 2.3 parts per million and the EPA Regional Screening Level for Residential Soil of 5,800 parts per million.[2] Shallow groundwater has been determined to be approximately 40 feet bgs (Citadel 2017). Based on the low concentrations at shallow depths in the soil and depth to groundwater, these levels appear to be de minimus, and do not pose a REC to the subject property.

[1] Documentation received from the LACFD (Section 5.3.1 of this report) indicates these tanks were installed in approximately 1951.

[2] These levels are referenced because they are typical screening levels used to evaluate soil contamination in the State of California. These are not necessarily the screening levels that would be utilized in a remediation activity at the subject property. They are being used to reference the de minimus nature of the reported contamination.

Initial Study/Proposed Mitigated Negative Declaration, February 2005

A California Environmental Quality Act Initial Study was completed on the subject property by LADPW Environmental Services in 2005. The study was conducted in the proposed location of a new Administration Building at the northeast portion of the subject property, northeast of the current office building. At the time of the study, the area was used as a parking lot. The Initial Study and subsequent Mitigated Negative Declaration did not find any significant environmental impacts due to the proposed construction of the new Administration Building.

Final Site Investigation Report, May 2005

A limited soil investigation was conducted on the subject property, the findings of which were reported in the Final Site Investigation Report prepared by Essentia Management Services in 2005 (Essentia 2005). The investigation was conducted in the proposed location of a new Administration Building at the northeast portion of the subject property, northeast of the current office building. At the time of the study, the area was used as a parking lot. The report states that the site was historically used as a nursery (1943–1950), laboratory (1950–1959), plastics company (1959–1964), chemical company (1964–1979), electronic materials company (1979–1989), and LADPW headquarters (1989–2005).

Eight direct-push borings were advanced to a depth of 8 feet bgs in this area. Samples from each boring were submitted for chemical analysis. The site investigation identified the following:

- VOCs, organophosphorus pesticides, and chlorinated herbicides were not detected; organochlorine pesticides were detected, but not at concentrations exceeding Preliminary Remediation Goals (PRGs) and Total Threshold Limit Concentrations (TTLCs).
- Arsenic was detected above PRG, TTLC, and estimated regional background concentrations; mercury was detected, but not at concentrations above the residential PRG, TTLC, or regional background concentrations.
- Vanadium was detected above residential PRG and regional background concentrations, but not above industrial PRG or TTLC concentrations.
- Beryllium, cadmium, chromium, cobalt, coper, molybdenum, nickel, selenium, and zinc were detected above regional background concentrations.
- Petroleum hydrocarbons were detected, but not above action levels.

Dudek believes the elevated concentrations of metals above background and, for some, above regulatory action levels, represents a REC to the subject property. The detected pesticides and petroleum hydrocarbons are not above regulatory action levels, and therefore represent a de minimus condition to the subject property.

10 SITE HISTORY

Based on review of the historical aerial photographs and topographic maps, agency records, the site representative interview, previous reports, and information obtained online, the subject property was agricultural land from at least 1928 until 1950 (including operation as Consolidated Nurseries from 1943 to 1950), at which time industrial development began. The subject property has been operated under two addresses, 12270 and 12300 Nebraska Avenue. The majority of the industrial activities occurred on 12270 Nebraska Avenue (APN 4295-018-901). The subject property operated as Riker Laboratories from 1950 to 1959, Mesa Plastics from 1959 until 1964, Allied Chemical Company from 1964 until 1979, Plaskon Electronic Materials from 1979 until 1989, and LADWP headquarters (at 12300 Nebraska Avenue) beginning in 1989.

Mesa Plastics installed a 7,500-gallon acetone UST in 1959, which was subsequently removed and replaced by Plaskon Electronic Materials in 1985. Plaskon installed an 8,000-gallon dual-walled steel acetone UST, which was removed in 1989 before demolition of all of the buildings on the Plaskon site. The former Plaskon site is now a paved parking lot (APN 4259-018-901), and operations and buildings for the LADWP headquarters are on the parcel to the west (APN 4259-018-902).

The surrounding area was agricultural with some commercial development to the east and west, and residential development to the north, beginning in at least 1928. Clay pits and brick firing-facilities began to the west of the subject property in the early 1930s, extending through the early to mid-1950s, at which time the pits were filled with solid waste and subsequently covered. The area was commercially and industrially developed by the mid-1960s to the south, east, and west, and residential development continued to the north.

10.1 Historical Sanborn Fire Insurance Maps

Historical Sanborn fire insurance maps were requested from EDR. Sanborn maps provide information regarding the historical uses of the subject property and surrounding properties. Sanborn maps typically exist for cities with populations of 2,000 or more; the coverage is dependent on the location of the subject site within the city limits. A Sanborn map from 1965 was available for a portion of an area adjacent to the subject property; however, the subject property was not mapped (Appendix G).

10.2 City Directory

City Directory listings were requested from EDR. Results included information for the years 1920 through 2014 (Appendix H). Table 6 summarizes the listings for the subject property (12300 West Nebraska was not found; results are for 12270 West Nebraska) and adjoining properties.

Table 6
Summary of City Directory Listings

Address	Listing Information	Year(s)
12270 Nebraska Ave	Mesa Plastics Co Los Angeles	1962
	Allied Chemical Corporation; Mesa Products Plastics	1975
	Plaskon Electronic Materials Inc.; Plaskon Products; Plaskon Products div. Allied Chemical Corp.	1980–1990
West of Subject Property		
3216 Nebraska Ave	Art Group International; Purchase Service Ltd; Hirsch/Bedner Int'l Inc.; Elephant Shop	2010–2014
3220 Nebraska Ave	AMC USA LLC; Dellice Group LLC; Walden Structures LLC	2010–2014
3226 Nebraska Ave	Hirsch Product; Tono Studios Inc.	2010–2014
3228 Nebraska Ave	Ecology West Tech; Rated I Creative LLC; Woody Fraser Productions	2010–2014
3232 Nebraska Ave	Oracle Post Inc.; Lot 4 Partners Ltd; Lot 9 LP	2010
East of Subject Property		
12210 Nebraska Ave	Transco Products Inc. (Aircraft Equipment)	1962
	Per Sci Inc.	1980
	Multiple production and film studio companies	1991
	Big Time Picture Co; HDI Consulting; ½ Early Edition; Third Miracle Productions	2000
	Big Time Picture Co	2006
1744–1761 Wellesley Avenue	Various residential listings	1928–2006

10.3 Review of Title Information/Environmental Liens

A title report and search for environmental liens and activity use limitations was not performed as part of this Phase I ESA.

11 VAPOR ENCROACHMENT SCREENING

A vapor encroachment screen report was prepared using EDR's vapor encroachment worksheet (Appendix I). A "Tier I" Vapor Encroachment Screening (VES) was performed for the site in accordance with ASTM E 2600-10, "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions." The Tier I VES was performed to evaluate whether there is a potential for vapors originating from contaminated soil and/or groundwater to occur in the subsurface below the existing and potential future on-site structures. For sites where a vapor encroachment condition (VEC) could not be ruled out but where reports of site sampling were available, those reports were used to evaluate the site (Tier 2 screening).

The EDR vapor encroachment worksheet evaluated types of soils, geology, and hydrology as well as listed contaminated sites as identified in federal, state, and local databases. Table 7 presents a summary of the VEC findings.

Table 7
Summary of Vapor Encroachment Screening Findings

Potential for Vapor Intrusion on Site	
Areas of Concern	*Conclusion*
Subject property (existing conditions)	VEC can be ruled out.
Subject property (former condition)	VEC cannot be ruled out.
Adjoining property or nearby property operations or existing conditions	VEC cannot be ruled out.
Historical uses of adjoining property or nearby properties	VEC cannot be ruled out.
Regulatory review of sites identified on federal, state, and local databases	VEC cannot be ruled out.

VEC cannot be ruled out for the subject property based on former conditions. Manufacturing occurred on the subject property from at least 1950 until 1989. Soil samples were collected in a limited soil investigation conducted in 2005 (Essentia 2005) in the area of the proposed new administration building. This area was described to be northeast of the existing administration building on the northeast portion of the property. A site map of the sampling was not available for review. The soil sample locations should be identified, and an investigation needs to be completed in potential areas of contamination (i.e., historical tank areas, pit areas, and manufacturing areas) before ruling out the potential for a VEC.

VEC cannot be ruled out for adjoining or nearby properties due to the presence of the Olympic Well Field contamination plume potentially beneath the subject property, Hudson Element groundwater contamination adjoining the subject property to the east, and 12210 ½ Nebraska Avenue Property groundwater, soil, and soil-gas contamination adjoining the subject property to the north.

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12 PUBLIC AGENCY RECORDS SEARCH REVIEW

A regulatory database search gives a listing of sites within a 1-mile radius of the subject property ("target property" is the term used by EDR) that are known to be chemical handlers, hazardous waste generators, or have confirmed or suspected releases of hazardous materials or petroleum products. Information in these listings includes the location of the site relative to the property, type of hazardous material at the site, and the status of the site. The search performed for this Phase I ESA was conducted in August 2018 by EDR. The database search report is included in Appendix J.

Table 8 describes which databases were searched and how many facilities were identified within those databases. The subject property is considered to be listing by addresses 12300 Nebraska Avenue and 12270 Nebraska Avenue.

Table 8
Regulatory Database Search Results for the Subject Property

Acronym	Database	Search Distance	Subject Property Listed?	Number of Sites Listed
NPL	National Priorities List (including proposed NPL sites)	1 mile	No	0
Delisted NPL	National Priority List Deletions	1 mile	No	0
CERCLIS-SEMS	Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) – Superfund Enterprise Management System	0.5 miles	No	1
CERCLIS NFRAP	CERCLIS No Further Remedial Action Planned	0.5 miles	No	30
CORRACTS	Resource Conservation and Recovery Act (RCRA) Corrective Action	1 mile	No	0
RCRA TSDF	RCRA - Transportation, Storage, and Disposal	0.5 miles	No	1
RCRA-LQG	RCRA Large Quantity Generators	0.25 miles	Yes	2
RCRA-SQG	RCRA Small Quantity Generators	0.25 miles	No	18
RCRA-CESQG	RCRA Conditionally Exempt Small Quantity Generators	0.25 miles	No	1
ERNS	Emergency Response Notification System	Target Property	No	0
US ENG CONTROLS	Sites with Engineering Controls	0.5 miles	No	0
US INST CONTROLS	Sites with Institutional Controls	0.5 miles	No	0
RESPONSE	State- and Tribal-Equivalent NPL	1 mile	No	1
ENVIROSTOR	State- and Tribal-Equivalent CERCLIS	1 mile	No	22
SWF/LF	State and Tribal Landfill and/or Solid Waste Disposal Site	0.5 miles	No	0
LUST	State and Tribal Leaking Storage Tank	0.5 miles	No	18

Table 8
Regulatory Database Search Results for the Subject Property

Acronym	Database	Search Distance	Subject Property Listed?	Number of Sites Listed
SLIC	State and Tribal Leaking Storage Tank	0.5 miles	No	13
Indian LUST	State and Tribal Leaking Storage Tank	0.5 miles	No	0
UST	State and Tribal Registered Storage Tank	0.25 miles	No	7
AST	State and Tribal Registered Storage Tank	0.25 miles	Yes	7
Indian UST	State and Tribal Registered Storage Tank	0.25 miles	No	0
FEMA UST	State and Tribal Registered Storage Tank	0.25 miles	No	0
LUCIS	Institutional Control/Engineering Control	0.5 miles	No	0
Indian VCP	State and Tribal Voluntary Cleanup	0.5 miles	No	0
VCP	State and Tribal Voluntary Cleanup	0.5 miles	No	2
US Brownfields	State and Tribal Brownfields	0.5 miles	No	0
SWEEPS UST	Statewide Environmental Evaluation and Planning System Underground Storage Tank	0.25 miles	Yes	16
HIST UST	Historical Underground Storage Tank	0.25 miles	Yes	18
FID UST	State Database of Registered USTs from Water Resources Control Board	0.25 miles	Yes	17
HIST CORTESE	Historical Hazardous Waste and Substances List	0.5 miles	No	16
HAZNET	Facility and Manifest Data	Target Property	Yes	2
RGA LUST	Recovered Government Archives Leaking Underground Storage Tank	Target Property	No	0
INDIAN RESERV	Indian Reservations	0.001 miles	No	0
EDR MGP	Manufactured Gas Plants	1 mile	No	0
EDR Hist Auto	Historic Auto Stations	0.125 miles	No	2
EDR Hist Cleaner	Historic Dry Cleaners	0.125 miles	No	2
Additional Environmental Records		Varies	Yes	16

12.1 Subject Property Database Listings

The subject property was listed in seven regulatory database records. These databases listings are discussed in Table 9. A determination as to whether or not the case would be considered a REC for the purposes of this Phase I ESA is included in Table 9.

Table 9
Regulatory Database Records for the Subject Property

Database Listing	Summary of Listing	REC?
12300 Nebraska Avenue (LADWP / West LA Service Center / W Los Angeles Distribution HQ)		
CA AST	LADWP has at least one AST registered at the subject property. A discussion of these ASTs is provided in Sections 6 and 13. The presence of the ASTs does not appear to be a REC.	No
CA HAZNET	LADWP reported generation and disposal of over 300 various types of hazardous wastes between 1993 and 2016. There are no violations reported with this listing; the type of waste, disposal method, amount, and year are summarized. This listing does not appear to be a REC.	No
RCRA-LQG	LADWP West LA Service Center reported a large quantity of hazardous waste generated in 2010. Wastes included inorganic solids, low pH liquids, ignitable wastes, and lead. A previous generator report (SQG) was also prepared in 1991, the details of which are not available in the EDR report. No violations were reported with this listing. This listing does not appear to be a REC.	No
FINDS	FINDS identified the subject property as a biennial hazardous waste reporter (also reported in CA HAZNET), and identified the site in ECHO (see entry below). This listing alone does not appear to be a REC.	No
ECHO	Enforcement and compliance history for the subject property includes the RCRA generator status, as described in the CA HAZNET and RCRA-LQG listings above. No violations are reported in this listing. This listing does not appear to be a REC.	No
CA SWEEPS UST CA FID UST	These databases track registered USTs. The site is registered on both sites, but there are no details regarding the type, age, and contents of the UST. The SWEEPS database is no longer updated or maintained. The CA FID UST database, which sources from the CWRCB, indicates an "inactive" status, generally referenced when a UST has been decommissioned or removed. Information obtained from the LACFD (Section 5.3.1) indicates USTs were previously located on the subject property. The 1999 Phase I ESA contains records of the removal of three USTs, an oil/water separator, and a fueling island (Parson 1999). See Section 9 of this report for details.	No
12270 Nebraska Avenue (Plaskon Electronic Matl Co Inc.)		
CA SWEEPS UST CA HIST UST CA FID UST	Hazardous Substance Storage Container Information Sheets were downloaded from GeoTracker (GeoTracker 2018). Those sheets, dated June 1988, indicate a 7,500-gallon acetone UST and a "product lagoon" were registered on the subject property. The tank was installed in 1959, while the lagoon was installed in 1978. The storage container details state the lagoon was 10-gauge double-walled carbon steel with an industrial enamel lining. The tank details are not known. A copy of the Information Sheets are provided in Appendix D. Additional information regarding USTs on this site were received from the LACFD, and are presented in Section 5.3.1. Information regarding the use and/or decommissioning of the "product lagoon" were not found. An "unstable materials pit" design was provided by LACFD, but the location, type of materials stored, and dates of use were not available. It is unknown if this is the same site feature. This represents a data gap.	Data Gap
RCRA NonGen	The site handled, but did not generate hazardous wastes. There are no violations associated with this listing. This listing does not appear to be a REC.	No
CA EMI	The site held an air quality permit in 1987. Additional details are provided in Section 5.3.4, South Coast Air Quality Management District. This listing does not appear to be a REC.	No
FINDS	FINDS identified the air quality permit reported under Toxics Release Inventory and the NonGen status under RCRA. This listing does not appear to be a REC.	No

Table 9
Regulatory Database Records for the Subject Property

Database Listing	Summary of Listing	REC?
ECHO	Enforcement and compliance history for the subject property include a Toxics Release Inventory report from 1988, and an inactive RCRA status. There are no violations reported. This listing does not appear to be a REC.	No

12.2 Other Site Database Listings

In all, 205 listings were identified within 1 mile of the subject property. Of these, 5 were determined to be potential RECs. The site name, address, database listings, relative location (approximate distance and direction) as measured from the nearest edge of the subject property, and discussion of the site status are included in Table 10. Based on distance from the subject property, known groundwater gradients, and status of the regulatory listing provided, the remaining sites do not appear to pose a REC to the subject property.

Table 10
Evaluation of Nearby Potential Recognized Environmental Conditions

Site Name and Address	Database Listings	Relative Location	Case Status	Flow Direction and Relative Gradient to Subject Property	REC?
Hudson Element **LA** **UNK** **AGI Properties** **Teledyne Controls** **12333 Olympic**	**CPS-SLIC** **CA SWEEPS UST** **CA FID UST** **CA CPS-SLIC** **RCRA-SQG** **CA EMI**	**Adjoining to the east**	**Open – Site Assessment**	**Down/cross gradient from subject property (local gradients vary)**	**Yes**
Comments: The site was previously utilized by Packard Bell for manufacturing of radios and televisions. By 1970, the property was operated by Teledyne for manufacturing of electronic aviation devices. Solvents, petroleum hydrocarbons, and other hazardous raw and waste products were handled on site. The site was vacated in September 2007. Remediation activities began in 1996 and have continued through 2018, and included soil vapor extraction, soil excavation, natural attenuation, and soil, soil vapor, and groundwater monitoring. A Limited Conceptual Site Model (LCSM) was submitted to LARWQCB in 2017 (Citadel 2017). Chemicals of concern include 1,1-dichloroethane (DCA), 1,1-dichloroethylene (DCE), 1,1,1-trichloroethane (TCA), chloroform, tetrachloroethylene (PCE), and trichloroethylene (TCE). The highest concentrations of these contaminants were found in groundwater wells located on the west side of the site, and in an off-site well to the south. Based on groundwater monitoring activities conducted between 2005 and 2018, groundwater is found at approximately 40 feet bgs historical gradients have been mostly southerly, with varying localized gradients ranging from eastward to southwestward. Therefore the LCSM suggests off-site, upgradient sources of these contaminants, specifically suggesting migration from the former Plaskon site and LADWP (subject property). The 2018 Annual Groundwater Monitoring Report (Citadel 2018) was submitted to LARWQCB in March 2018, and requested full site closure and a no further action designation for soil and groundwater at the site. The results of this 2018 report show detected concentrations of TCE (max 16.6 ug/L), PCE (max 11.5 ug/L), 1,1-DCA (max 12.0 ug/L), and 1,4-Dioxane (max 2.52 ug/L) above regulatory maximum contaminant levels. The detected concentrations were in wells located within approximately 225 feet of the subject property. Documents available for this listing can be found on GeoTracker					

Table 10
Evaluation of Nearby Potential Recognized Environmental Conditions

Site Name and Address	Database Listings	Relative Location	Case Status	Flow Direction and Relative Gradient to Subject Property	REC?
(http://geotracker.waterboards.ca.gov/profile_report?global_id=SL2046M1652&mytab=esidata#esidata). The groundwater contamination identified at this site poses a REC to the subject property.					
12210 ½ Nebraska Avenue Property	**CA ENVIROSTAR CA VCP**	**Adjoining to the north**	**Open – Site Assessment**	**Cross-gradient from subject property**	**Yes**
Comments: This site was entered into a voluntary cleanup agreement in 2009, which was later terminated in 2010 due to non-compliance of the agreement. The site was then referred to the LARWQCB, and no further activities have been reported. Sampling on the site identified several volatile organic compounds (VOCs) in soil, soil-gas, and groundwater, including TCE and chloroform. TCE has been identified in groundwater at concentrations as high as 260 ug/L. Groundwater is approximately 40 feet bgs. The contamination is reportedly due to historical site activities, and the current operations are not contributing to the environmental condition of the site. A remedial investigation report was completed in 2010, but no other remediation activities have been reported. Based on groundwater studies completed on adjoining properties (see Hudson Element listing above), groundwater flows generally southward, and this site is up gradient from the subject property. Documents available for this listing can be found on EnviroStor https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60001101. The groundwater contamination identified at this site poses a REC to the subject property.					
Boeing Co. - Supercharger Medical Chemical Corporation 1909 Centinela	**CA CPS-SLIC CA SWEEPS UST CA HIST UST CA FID UST**	**Approx. 100 feet south**	**Closed – NFA received**	**Downgradient from subject property**	**HREC**
Comments: The site was operated by Douglas Aircraft from 1952 to 1970. Boeing acquired the property in 1997. The facility tested aircraft components. These operations used TCE, an electrical generator, fuel tank, and a clarifier. The site was subsequently operated by Medical Chemical Corporation, who installed a 7,830-gallon IPA UST and seven ASTs. ASTs, USTs and the clarifier previously present on the site are believed to have been removed prior to site redevelopment. Investigations conducted on the site in 1980 and 1981 revealed VOC contamination in the groundwater, including TCE. Investigations continued through 2007, and a Human Health Risk Assessment was conducted in 2008. LARWQCB issued a no further action (NFA) designation for the soils on the site in 2011, stating "significant VOC contamination and other contaminants have not been detected in soil or soil gas samples from the site." Subsequent groundwater studies were conducted, revealing detected levels of VOCs, including TCE, in groundwater beneath and downgradient from the site. The City of Santa Monica (City) acknowledged that this site was part of a system of aquifers that contribute to the Olympic Well Field. The City developed an Olympic Well Field Management Plan which utilizes two nearby drinking water wells to pump and treat the groundwater in this area. The City and Boeing entered a Settlement and Release Agreement in 2012, and the City took over restoration and replacement of groundwater through the Olympic Well Field Management Plan. The Boeing site subsequently received a NFA letter for groundwater in 2013. Supporting documents for this information can be found on GeoTracker, http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0603761453. This individual site is considered a Controlled REC, because the site was closed by the LARWQCB, with the assumption that the groundwater contamination would be managed by the City. However, the Olympic Well Field is considered a REC to the subject property. More information on the Olympic Well Field is provided in Section 13.					

Table 10
Evaluation of Nearby Potential Recognized Environmental Conditions

Site Name and Address	Database Listings	Relative Location	Case Status	Flow Direction and Relative Gradient to Subject Property	REC?
CSHV Pen Factory Sanford/Paper Mate Gillette Co 1681 26th Street	**CA ENVIROSTOR CA CPS-SLIC FINDS ECHO CA ENF CA HIST CORTESE**	**Approximately ½ mile west**	**Open – Site Assessment**	**Cross to downgradient from the subject property**	**Yes**
Comments: This site was a clay quarry and brick firing facility until the mid-1950's. The mining pit was later used as a city landfill. In 1957, Paper Mate began manufacturing operations in one of the buildings on site. Numerous USTs and ASTs were on site, and wastewater was generated, treated, and discharged to the city sanitary sewer. Manufacturing began in 1968, which included plastic extrusion, sintering, grinding, ink manufacturing, product assembly, and nickel plating. Gillette occupied one of the former Paper Mate buildings beginning in 1982. Investigations conducted on the site revealed contamination of soil, soil-gas, and groundwater, including PCE and TCE in shallow and deep groundwater. Nearby City of Santa Monica water supply wells were impacted by this contamination. In-situ remediation of soil gas, groundwater, and soils began in 2009, and the site requested a NFA decision from LARWQCB in 2016. The NFA request letters indicate an agreement was made between Gillette and the City of Santa Monica for continuous groundwater treatment and monitoring through the Olympic Well Field Management Plan. A NFA has not been issued for this site, and land use restrictions have been issued by LARWQCB as part of the post-closure site management requirements. Supporting documents for this information can be found on GeoTracker, http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000006811, http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL2043C1560. Since this site is an open and ongoing case, it is considered a REC to the subject property.					
Santa Monica City Landfill II	**CA WMUDS/SWAT**	**Approximately ½ mile west**	**Closed**	**Downgradient**	**No**
The City Landfill is a former clay mining pit. The pit was subsequently used as a landfill by the City of Santa Monica from approximately 1948 to 1970. Municipal solid waste and incinerator ash were accepted. The disposal site was covered with 3 to 5 feet of final cover materials, but the site does not include engineering controls such as a liner, leachate collection and removal system, or landfill gas extraction system. A Solid Waste Assessment Test (SWAT) was completed by the LARWQCB in 1998 (LARWQCB 1998). Soil samples collected adjacent to and below the site did not detect VOCs or semi-volatile organic compounds (SVOCs). Sporadic detections of cis-1,2-DCE and TCE, and downgradient chromium were observed in groundwater, but these levels were below the existing applicable California Maximum Contaminant Levels (MCLs) for drinking water. Landfill gas and leachate indicator parameters indicated that neither leachate nor landfill gas impacted groundwater. Surface water samples did not reveal impacts from the landfill. Based on the information provided in the SWAT, the landfill does not appear to be a REC.					

12.3 Unmapped Sites

Unmapped sites are flagged by EDR but not mapped due to insufficient address information. They are usually included in the database search report because they are in the same zip code as the subject property. Two unmapped sites were listed in the EDR report. Both sites were listed in the SEMS-ARCHIVE database. This database tracks previously open cleanup sites. Assessment at these sites, to the best of EPA's knowledge, has been completed. Given EPA's determination regarding these types of sites, it is unlikely that these sites have impacted the environmental conditions of the subject property.

13 POTENTIAL HAZARDS AND ENVIRONMENTAL CONCERNS

Information regarding the following potential sources of hazards and hazardous material releases from the interview, site reconnaissance, and review of regulatory agency records is discussed below. Areas of concern are shown on Figure 3.

Agricultural Use

Based on a review of historical aerial photographs, the subject property was used for agricultural purposes until at least 1952. During this time, at least a portion of the subject property was owned by Consolidated Nurseries from 1943 to 1950 (Parsons 1999). The subject property is now completely developed and the surface soils have been disturbed and paved or constructed upon. Therefore, it is unlikely there are impacts to the subject property from former agricultural use (i.e., pesticides in the soils).

Tanks

During the Phase I ESA conducted in 1999 (Parsons 1999), two 2,000-gallon gasoline ASTs and one 2,000-gallon diesel AST with attached fuel nozzles, one 500-gallon waste oil AST at the truck shed and vehicle fleet maintenance shop, a three-stage oil/water separator at the wash rack, and a hazardous waste satellite accumulation area at the truck shed were observed on the subject property (Parsons 1999). The gasoline and diesel ASTs were observed during the 2018 site reconnaissance; the waste oil AST was not present during the 2018 site reconnaissance.

In February 1991, three USTs, a fueling station, and one oil/water separator were removed from the subject property (Parsons 1999). The USTs were 7,500-gallon gasoline, 2,000-gallon white gas, and 500-gallon waste oil tanks. Details of this removal are summarized in Section 9 of this report. The approximate tank locations are shown on Figure 3.

A 7,500-gallon acetone UST was installed in 1959 by Mesa Plastics. It was subsequently removed in 1985, to be replaced by an 8,000-gallon acetone double-walled UST installed by Plaskon Electronic the same year. The 8,000-gallon UST was removed in 1989 before demolition of all Plaskon buildings and termination of the company operations. Information regarding these tanks was received from LACFD, and is discussed in Section 5.3.1.

Chemicals

Based on regulatory records available, chemicals have been handled on the subject property since at least 1959. Chemical handling has included acetone, epoxys, phenols, diallylphthalate, acetone, oils and greases, silicone, silica compounds, tert-butyl peroxybenzoate, silane, resins,

diethylaminoethanol, sodium hydroxide, sodium sulfite, kerosene, antimony oxide, diamyl peroxide, and barium carbonate. The manufacturing operations that used these materials are no longer occurring on the subject property.

The subject property is currently registered in CalEPA as the West Los Angeles Service Center, Facility ID 85332 (FA0000806). Records include chemical storage facilities, aboveground petroleum storage, and generation of large quantities of hazardous waste (RCRA LQG). Chemical storage includes 42 reported materials, including greases, oils, paints, propane, and cleaners. A full list is provided in Appendix D.

Current operations on the subject property include overhead and underground power distribution and maintenance. Additional operations at the subject property include limited vehicle maintenance and damaged transformer storage pending proper waste characterization and disposal.

Asbestos-Containing Materials and Lead-Based Paint

According to the site representative (Section 5.1), the subject property was included in a lead-based paint and asbestos-containing materials survey in 2017. The interior and exterior of the office building and warehouse were abated for lead-based paint and asbestos-containing materials; the exteriors of the remaining buildings were also abated.

Manufacturing

The subject property was owned by a laboratory from 1950 to 1959, Mesa Plastics from 1959 to 1964, Allied Chemical Corporation from 1964 to 1979, and Plaskon Products/Plaskon Electronic Materials from 1979 until 1989 (Parsons 1999). The operations of these previous owners were reportedly plastic, chemical, and electronic manufacturing and formulation (Essentia 2005).

Adjoining properties have also been used as manufacturing and various industrial facilities since at least the 1960s. Due to these activities, groundwater contamination has been identified in multiple areas adjacent to and nearby the subject property. Details of these impacts are discussed in Section 12.2.

Wells

Groundwater monitoring wells were not discovered on the subject property during this Phase I ESA. Reportedly, there are no groundwater supply wells on the subject property.

Radon

The EDR report presents radon test results for the vicinity of the subject property. Ninety-four sites within zip code 90025 for Los Angeles were evaluated. Six sites had radon results greater than 4 pico curies per liter (pCi/L), which is the established EPA Action Level. The Federal EPA Radon Zone for Los Angeles County is 2, which corresponds with indoor average radon levels of $\geq$ 2 pCi/L and $\leq$ 4 pCi/L.

Off-Site Sources – Olympic Well Field

The Olympic Well Field is located in an area formerly occupied by a number of industrial facilities, including those within the ASTM search radius for the subject property (see Section 12.2). These industrial activities contributed to elevated levels of VOCs, including TCE, PCE, and 1,4-dioxane. The VOCs eventually impacted the City of Santa Monica (City) supply wells located downgradient of the source areas. Around 2011, The Olympic Well Field Management Plan was implemented by the City to prevent migration of VOCs in the deeper water-bearing zones; it included groundwater monitoring and pumping and treating of the affected production wells. The City entered into settlement agreements with responsible parties located within the Olympic Well Field that were potential or confirmed contributors of the groundwater contamination. These agreements allowed the City to gain full rights and responsibility to replace and restore the groundwater within the Olympic Well Field, with funds provided by the industrial contributors.

Groundwater in the area is found in three zones: A, B, and C. The A-zone aquifer (shallow aquifer) does not appear in the supply wells. However, shallow groundwater has been observed adjacent to the subject property at approximately 40 feet bgs. Groundwater measurements of the supply wells conducted in January 2017 indicate groundwater depths in the B-zone and C-zone aquifers between approximately 106 feet bgs to 182 feet bgs. Due to drawdown from the supply wells, the B- and C-zone groundwater flow trends toward the two wells (southwest from the subject property), and the wells have a combined radius of influence of approximately 5,000 feet. It is estimated that the VOC contamination is located within this radius (ICF 2017).

The subject property is located within the drawdown radius; the closest production well, SM-3, is located approximately 360 feet west of the subject property in Olympic Boulevard. The First Quarter 2017 Olympic Well Field Groundwater Monitoring Report (ICF 2017) shows a map of monitoring wells that are used to monitor the well field. The nearest monitoring wells to the subject property are approximately 90 feet to the south in Olympic Boulevard (OB-13C) and 950 feet to the west in Franklin Street (OB-12B). Concentrations of TCE, PCE, and 1,4-dioxane were not detected in OB-13C in the first quarter monitoring event. Concentrations of chloroform,

PCE, and 1,4-dioxane in OB-12B were 2.0 ug/L, 52 ug/L, and 2.9 ug/L, respectively. TCE was not detected.

Based on the radius of influence and proximity of detected concentrations of VOCs in groundwater, the contamination associated with the Olympic Well Field presents a REC to the subject property.

APPENDIX E

Noise Report

Appendix E

Noise Modeling

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Construction Noise Modeling
Input / Output Files

Report date: 10/10/2019
Case Description: LADWP West Yard_ Demolition

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Receiver 75'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	75	0
Concrete Saw	No	20		89.6	100	0
Concrete Saw	No	20		89.6	150	0
Excavator	No	40		80.7	85	0
Excavator	No	40		80.7	150	0
Excavator	No	40		80.7	300	0
Dozer	No	40		81.7	200	0
Dozer	No	40		81.7	250	0
Dozer	No	40		81.7	125	0
Dozer	No	40		81.7	300	0

Equipment	Calculated (dBA) *Lmax	Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Concrete Saw	86.1	79.1	N/A	N/A	N/A	N/A
Concrete Saw	83.6	76.6	N/A	N/A	N/A	N/A
Concrete Saw	80	73	N/A	N/A	N/A	N/A
Excavator	76.1	72.1	N/A	N/A	N/A	N/A
Excavator	71.2	67.2	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A
Dozer	69.6	65.6	N/A	N/A	N/A	N/A
Dozer	67.7	63.7	N/A	N/A	N/A	N/A
Dozer	73.7	69.7	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A
Total	86.1	82.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Typical Receiver 300'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	300	0
Concrete Saw	No	20		89.6	300	0
Concrete Saw	No	20		89.6	300	0
Excavator	No	40		80.7	300	0
Excavator	No	40		80.7	300	0
Excavator	No	40		80.7	300	0

Dozer	No	40	81.7	300	0
Dozer	No	40	81.7	300	0
Dozer	No	40	81.7	300	0
Dozer	No	40	81.7	300	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	74	67	N/A	N/A	N/A	N/A
Concrete Saw	74	67	N/A	N/A	N/A	N/A
Concrete Saw	74	67	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A
Total	74	74.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/10/2019
Case Description: LADWP West Yard_ Site Prepartion

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 75'	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	75	0
Dozer	No	40		81.7	100	0
Front End Loader	No	40		79.1	150	0
Tractor	No	40	84		200	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	78.1	74.2	N/A	N/A	N/A	N/A
Dozer	75.6	71.7	N/A	N/A	N/A	N/A
Front End Loader	69.6	65.6	N/A	N/A	N/A	N/A
Tractor	72	68	N/A	N/A	N/A	N/A
Total	78.1	77.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night

Typical Receiver 300'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	300	0
Dozer	No	40		81.7	300	0
Front End Loader	No	40		79.1	300	0
Tractor	No	40	84		300	0

	Results					
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	66.1	62.1	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A
Front End Loader	66.1	62.1	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A
Total	68.4	70.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/10/2019
Case Description: LADWP West Yard_ Grading 1_Shoring 1

				---- Receptor #1 ----	
		Baselines (dBA)			
Description	Land Use	Daytime	Evening	Night	
Nearest Receiver 75'	Residential	65	60	55	

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Drill Rig Truck	No	20		79.1	75	0
Crane	No	16		80.6	100	0

	Results					
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Drill Rig Truck	75.6	68.6	N/A	N/A	N/A	N/A
Crane	74.5	66.6	N/A	N/A	N/A	N/A
Total	75.6	70.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

				---- Receptor #2 ----	
		Baselines (dBA)			
Description	Land Use	Daytime	Evening	Night	
Typical Receiver 300'	Residential	65	60	55	

Description	Equipment Spec	Actual	Receptor	Estimated

Description	Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Drill Rig Truck	No	20		79.1	300	0
Crane	No	16		80.6	300	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Drill Rig Truck		63.6	56.6	N/A	N/A	N/A	N/A
Crane		65	57	N/A	N/A	N/A	N/A
	Total	65	59.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/10/2019
Case Description: LADWP West Yard_ Grading 2_Excavation

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 75'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	75	0
Excavator	No	40		80.7	100	0
Grader	No	40	85		150	0
Grader	No	40	85		85	0
Dozer	No	40		81.7	150	0
Dozer	No	40		81.7	200	0
Front End Loader	No	40		79.1	300	0
Front End Loader	No	40		79.1	250	0
Backhoe	No	40		77.6	250	0
Front End Loader	No	40		79.1	150	0
Tractor	No	40	84		100	0

	Results					
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	77.2	73.2	N/A	N/A	N/A	N/A
Excavator	74.7	70.7	N/A	N/A	N/A	N/A
Grader	75.5	71.5	N/A	N/A	N/A	N/A
Grader	80.4	76.4	N/A	N/A	N/A	N/A
Dozer	72.1	68.1	N/A	N/A	N/A	N/A
Dozer	69.6	65.6	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A
Front End Loader	65.1	61.2	N/A	N/A	N/A	N/A
Backhoe	63.6	59.6	N/A	N/A	N/A	N/A
Front End Loader	69.6	65.6	N/A	N/A	N/A	N/A

Tractor		78	74	N/A	N/A	N/A	N/A
	Total	80.4	81.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Receiver 300'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	300	0
Excavator	No	40		80.7	300	0
Grader	No	40	85		300	0
Grader	No	40	85		300	0
Dozer	No	40		81.7	300	0
Dozer	No	40		81.7	300	0
Front End Loader	No	40		79.1	0	0
Front End Loader	No	40		79.1	0	0
Backhoe	No	40		77.6	0	0
Front End Loader	No	40		79.1	0	0
Tractor	No	40	84		0	0

	Results					
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	65.1	61.2	N/A	N/A	N/A	N/A
Excavator	69.4	65.5	N/A	N/A	N/A	N/A
Grader	66.1	62.1	N/A	N/A	N/A	N/A
Grader	68.4	64.5	N/A	N/A	N/A	N/A
Dozer	63.5	59.6	N/A	N/A	N/A	N/A
Dozer	62	58	N/A	N/A	N/A	N/A
Front End Loader		0		0		0
Front End Loader		0		0		0
Backhoe		0		0		0
Front End Loader		0		0		0
Tractor		0		0		0
Total	69.4	70.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/10/2019
Case Description: LADWP West Yard_ Grading 3_Shoring 2

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 75'	Residential	65	60	55

Impact	Equipment Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding

Description	Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Drill Rig Truck	No	20		79.1	75	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Drill Rig Truck	75.6	68.6	N/A	N/A	N/A	N/A
Total	75.6	68.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Receiver 300'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Drill Rig Truck	No	20		79.1	300	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Drill Rig Truck	63.6	56.6	N/A	N/A	N/A	N/A
Total	63.6	56.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 43748
Case Description: LADWP West Yard_ Paving 1 Concrete Foundations

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 75'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	75	0
Crane	No	16		80.6	100	0
Excavator	No	40		80.7	125	0
Excavator	No	40		80.7	200	0
Man Lift	No	20		74.7	300	0
Man Lift	No	20		74.7	150	0
Generator	No	50		80.6	350	0
Backhoe	No	40		77.6	150	0
Tractor	No	40	84		250	0
Welder / Torch	No	40		74	175	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		77	69.1	N/A	N/A	N/A	N/A
Crane		74.5	66.6	N/A	N/A	N/A	N/A
Excavator		72.8	68.8	N/A	N/A	N/A	N/A
Excavator		68.7	64.7	N/A	N/A	N/A	N/A
Man Lift		59.1	52.1	N/A	N/A	N/A	N/A
Man Lift		65.2	58.2	N/A	N/A	N/A	N/A
Generator		63.7	60.7	N/A	N/A	N/A	N/A
Backhoe		68	64	N/A	N/A	N/A	N/A
Tractor		70	66	N/A	N/A	N/A	N/A
Welder / Torch		63.1	59.1	N/A	N/A	N/A	N/A
	Total	77	75.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Receiver 300'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	300	0
Crane	No	16		80.6	300	0
Excavator	No	40		80.7	300	0
Excavator	No	40		80.7	300	0
Man Lift	No	20		74.7	300	0
Man Lift	No	20		74.7	300	0
Generator	No	50		80.6	300	0
Backhoe	No	40		77.6	300	0
Tractor	No	40	84		300	0
Welder / Torch	No	40		74	300	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		65	57	N/A	N/A	N/A	N/A
Crane		65	57	N/A	N/A	N/A	N/A
Excavator		65.1	61.2	N/A	N/A	N/A	N/A
Excavator		65.1	61.2	N/A	N/A	N/A	N/A
Man Lift		59.1	52.1	N/A	N/A	N/A	N/A
Man Lift		59.1	52.1	N/A	N/A	N/A	N/A
Generator		65.1	62.1	N/A	N/A	N/A	N/A
Backhoe		62	58	N/A	N/A	N/A	N/A
Tractor		68.4	64.5	N/A	N/A	N/A	N/A
Welder / Torch		58.4	54.5	N/A	N/A	N/A	N/A
	Total	68.4	69.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 10/10/2019
Case Description: LADWP West Yard_ Trenching

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 75'	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	75	0
Blasting	Yes	1	94		125	0
Tractor	No	40	84		200	0

			Results			
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	77.2	73.2	N/A	N/A	N/A	N/A
Blasting	86	66	N/A	N/A	N/A	N/A
Tractor	72	68	N/A	N/A	N/A	N/A
Total	86	74.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Receiver 300'	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	300	0
Blasting	Yes	1	94		300	0
Tractor	No	40	84		300	0

			Results			
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	65.1	61.2	N/A	N/A	N/A	N/A
Blasting	78.4	58.4	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A
Total	78.4	66.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 10/10/2019
Case Description: LADWP West Yard_ Building Construction

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 75'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	75	0
Crane	No	16		80.6	100	0
Man Lift	No	20		74.7	150	0
Man Lift	No	20		74.7	250	0
Man Lift	No	20		74.7	200	0
Generator	No	50		80.6	125	0
Roller	No	20		80	250	0
Backhoe	No	40		77.6	350	0
Front End Loader	No	40		79.1	300	0
Tractor	No	40	84		400	0
Backhoe	No	40		77.6	175	0
Welder / Torch	No	40		74	350	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		77	69.1	N/A	N/A	N/A	N/A
Crane		74.5	66.6	N/A	N/A	N/A	N/A
Man Lift		65.2	58.2	N/A	N/A	N/A	N/A
Man Lift		60.7	53.7	N/A	N/A	N/A	N/A
Man Lift		62.7	55.7	N/A	N/A	N/A	N/A
Generator		72.7	69.7	N/A	N/A	N/A	N/A
Roller		66	59	N/A	N/A	N/A	N/A
Backhoe		60.7	56.7	N/A	N/A	N/A	N/A
Front End Loader		63.5	59.6	N/A	N/A	N/A	N/A
Tractor		65.9	62	N/A	N/A	N/A	N/A
Backhoe		66.7	62.7	N/A	N/A	N/A	N/A
Welder / Torch		57.1	53.1	N/A	N/A	N/A	N/A
	Total	77	74.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Receiver 300'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	300	0
Crane	No	16		80.6	300	0
Man Lift	No	20		74.7	300	0
Man Lift	No	20		74.7	300	0
Man Lift	No	20		74.7	300	0
Generator	No	50		80.6	300	0
Roller	No	20		80	300	0
Backhoe	No	40		77.6	300	0
Front End Loader	No	40		79.1	300	0

Tractor	No	40	84	300	0
Backhoe	No	40	77.6	300	0
Welder / Torch	No	40	74	300	0

			Results			
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	65	57	N/A	N/A	N/A	N/A
Crane	65	57	N/A	N/A	N/A	N/A
Man Lift	59.1	52.1	N/A	N/A	N/A	N/A
Man Lift	59.1	52.1	N/A	N/A	N/A	N/A
Man Lift	59.1	52.1	N/A	N/A	N/A	N/A
Generator	65.1	62.1	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A
Welder / Torch	58.4	54.5	N/A	N/A	N/A	N/A
Total	68.4	69.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/10/2019
Case Description: LADWP West Yard_ Paving 2 Concrete Paving

				---- Receptor #1 ----	
		Baselines (dBA)			
Description	Land Use	Daytime	Evening	Night	
Nearest Receiver 75'	Residential	65	60	55	

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Mixer Truck	No	40		78.8	75	0
Concrete Mixer Truck	No	40		78.8	100	0
Grader	No	40	85		125	0
Roller	No	20		80	200	0
Roller	No	20		80	350	0
Front End Loader	No	40		79.1	150	0

			Results			
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	75.3	71.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck	72.8	68.8	N/A	N/A	N/A	N/A
Grader	77	73.1	N/A	N/A	N/A	N/A
Roller	68	61	N/A	N/A	N/A	N/A
Roller	63.1	56.1	N/A	N/A	N/A	N/A
Front End Loader	69.6	65.6	N/A	N/A	N/A	N/A
Total	77	76.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Typical Receiver 300'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	300	0
Concrete Mixer Truck	No	40		78.8	300	0
Grader	No	40	85		300	0
Roller	No	20		80	300	0
Roller	No	20		80	300	0
Front End Loader	No	40		79.1	300	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck		63.2	59.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck		63.2	59.3	N/A	N/A	N/A	N/A
Grader		69.4	65.5	N/A	N/A	N/A	N/A
Roller		64.4	57.4	N/A	N/A	N/A	N/A
Roller		64.4	57.4	N/A	N/A	N/A	N/A
Front End Loader		63.5	59.6	N/A	N/A	N/A	N/A
	Total	69.4	68.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 43748
Case Description: LADWP West Yard_ Architectural Coating

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Receiver 75'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	75	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		74.1	70.2	N/A	N/A	N/A	N/A
	Total	74.1	70.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Typical Receiver 300'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	300	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		62.1	58.1	N/A	N/A	N/A	N/A
	Total	62.1	58.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Traffic Noise Modeling
Input / Output Files

Dudek 1 November 2019
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - Exist Rev1019

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Bundy Drive north of Nebraska Avenue	50.0	point1	1	1,563.5	3,417.6	160.00				Average	
		point3	3	2,100.8	2,854.2	160.00					
Centinela Avenue north of Olympic Blvd	50.0	point24	24	1,744.5	1,133.9	160.00				Average	
		point16	16	1,075.3	1,827.2	160.00					
Nebraska Avenue west of Centinela Av	50.0	point26	26	555.5	1,316.5	160.00				Average	
		point19	19	1,076.2	1,832.1	160.00					
Centinela Ave s of Olympic Blvd	35.0	point32	32	2,247.4	1,169.1	160.00				Average	
		point22	22	2,413.1	527.1	160.00				Average	
		point2	2	3,401.1	21.0	160.00					
Bundy Drive south of Olympic Blvd	50.0	point33	33	3,404.0	1,493.1	160.00				Average	
		point5	5	4,447.4	390.7	160.00					
Centinela Avenue north of Nebraska Av	35.0	point36	36	1,069.6	1,832.9	160.00				Average	
		point17	17	292.4	2,636.3	160.00					
Nebraska Avenue east of Centinela Ave	50.0	point38	38	1,076.2	1,832.1	160.00				Average	
		point44	44	1,585.0	2,341.1	160.00					
Olympic Blvd west of Centinela Avenue	50.0	point40	40	1,741.9	1,122.3	160.00				Average	
		point14	14	622.3	849.8	160.00					
Olympic Blvd east of Bundy Drive	50.0	point28	28	4,274.0	1,683.0	160.00				Average	
		point11	11	3,403.7	1,499.3	160.00					
Olympic Blvd east of Centinela Avenue	50.0	point41	41	3,403.7	1,499.3	160.00				Average	
		point39	39	2,214.0	1,236.9	160.00				Average	
		point13	13	1,741.9	1,122.3	160.00					
Bundy Drive south of Nebraska Avenue	50.0	point43	43	2,100.8	2,854.2	160.00				Average	
		point4	4	3,396.3	1,502.1	160.00					
Nebraska Avenue west of Bundy Drive	50.0	point45	45	1,585.0	2,341.1	160.00				Average	

		point20	20	2,093.9	2,850.1	160.00					

Dudek 1 November 2
MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - Exist Rev1019

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
Bundy Drive north of Nebraska Avenue	point1	1	2425	97	35	2	35	1	35	0	0	0	0
	point3	3											
Centinela Avenue north of Olympic Blvd	point24	24	1740	97	30	2	30	1	30	0	0	0	0
	point16	16											
Nebraska Avenue west of Centinela Av	point26	26	561	97	25	2	25	1	25	0	0	0	0
	point19	19											
Centinela Ave s of Olympic Blvd	point32	32	1459	97	30	2	30	1	30	0	0	0	0
	point22	22	1433	97	30	2	30	1	30	0	0	0	0
	point2	2											
Bundy Drive south of Olympic Blvd	point33	33	2704	97	35	2	35	1	35	0	0	0	0
	point5	5											
Centinela Avenue north of Nebraska Av	point36	36	1426	97	30	2	30	1	30	0	0	0	0
	point17	17											
Nebraska Avenue east of Centinela Ave	point38	38	353	97	25	2	25	1	25	0	0	0	0
	point44	44											
Olympic Blvd west of Centinela Avenue	point40	40	2114	97	35	2	35	1	35	0	0	0	0
	point14	14											
Olympic Blvd east of Bundy Drive	point28	28	2868	97	35	2	35	1	35	0	0	0	0
	point11	11											
Olympic Blvd east of Centinela Avenue	point41	41	3589	97	35	2	35	1	35	0	0	0	0
	point39	39	3589	97	35	2	35	1	35	0	0	0	0
	point13	13											
Bundy Drive south of Nebraska Avenue	point43	43	2513	97	35	2	35	1	35	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Percentages **10649**

	point4	4											
Nebraska Avenue west of Bundy Drive	point45	45	292	97	25	2	25	1	25	0	0	0	0
	point20	20											

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INPUT: RECEIVERS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - Exist Rev1019

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,721.8	2,514.4	160.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,519.3	2,317.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	1,489.6	2,498.0	160.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,630.0	2,181.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	1,275.2	2,081.6	160.00	5.00	0.00	66	10.0	8.0	Y
ST6	6	1	1,859.4	2,330.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST7	7	1	1,841.5	1,683.0	160.00	5.00	0.00	66	10.0	8.0	Y
M1	8	1	3,867.8	892.8	160.00	5.00	0.00	66	10.0	8.0	Y
M2	9	1	2,659.3	333.7	160.00	5.00	0.00	66	10.0	8.0	Y
M3	10	1	2,293.1	2,783.2	160.00	5.00	0.00	66	10.0	8.0	Y
M4	11	1	1,009.7	1,963.5	160.00	5.00	0.00	66	10.0	8.0	Y

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INPUT: BARRIERS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - Exist Rev1019

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per Unit Area	$ per Unit Vol.	Top Width	Run:Rise	$ per Unit Length			X	Y	Z	at Point	Seg Ht Incre-ment	Perturbs #Up	#Dn	On Struct?	Important Reflec-tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,776.3	2,465.9	0.00	0.00	0.00	0	0		
									point3	3	1,838.3	2,523.8	0.00	0.00	0.00	0	0		
									point4	4	2,119.4	2,226.2	0.00	0.00	0.00	0	0		
									point5	5	2,051.9	2,165.6	0.00	0.00					
Barrier2	W	0.00	99.99	0.00				0.00	point125	125	918.6	1,505.1	160.00	12.00	0.00	0	0		
									point100	100	1,135.1	1,697.6	160.00	12.00	0.00	0	0		
									point2	2	1,188.7	1,632.0	160.00	12.00					
Barrier3	W	0.00	99.99	0.00				0.00	point127	127	826.8	2,145.8	160.00	12.00	0.00	0	0		
									point96	96	1,079.3	1,899.7	160.00	12.00	0.00	0	0		
									point97	97	1,161.4	1,978.5	160.00	12.00	0.00	0	0		
									point98	98	916.4	2,238.7	160.00	12.00					
Barrier4	W	0.00	99.99	0.00				0.00	point129	129	1,452.9	2,262.2	160.00	12.00	0.00	0	0		
									point116	116	1,553.4	2,355.9	160.00	12.00	0.00	0	0		
									point117	117	1,118.1	2,806.4	160.00	12.00	0.00	0	0		
									point118	118	1,017.5	2,705.8	160.00	12.00					
Barrier5	W	0.00	99.99	0.00				0.00	point131	131	1,593.3	2,404.1	160.00	12.00	0.00	0	0		
									point120	120	1,673.1	2,482.2	160.00	12.00	0.00	0	0		
									point121	121	1,246.1	2,919.6	160.00	12.00	0.00	0	0		
									point122	122	1,155.9	2,831.1	160.00	12.00					
Barrier6	W	0.00	99.99	0.00				0.00	point133	133	1,708.9	2,520.4	160.00	12.00	0.00	0	0		
									point6	6	1,789.6	2,597.7	160.00	12.00	0.00	0	0		
									point7	7	1,365.3	3,039.4	160.00	12.00	0.00	0	0		
									point8	8	1,295.4	2,960.7	160.00	12.00					
Barrier7	W	0.00	99.99	0.00				0.00	point135	135	1,857.4	2,671.6	160.00	12.00	0.00	0	0		
									point10	10	2,029.2	2,843.5	160.00	12.00	0.00	0	0		
									point11	11	1,619.6	3,296.5	160.00	12.00	0.00	0	0		
									point12	12	1,430.4	3,107.3	160.00	12.00					
Barrier8	W	0.00	99.99	0.00				0.00	point137	137	1,944.3	2,013.4	160.00	12.00	0.00	0	0		
									point14	14	2,176.1	2,243.0	160.00	12.00	0.00	0	0		
									point15	15	2,265.8	2,153.3	160.00	12.00	0.00	0	0		
									point16	16	2,040.6	1,919.3	160.00	12.00					
Barrier9	W	0.00	99.99	0.00				0.00	point139	139	2,546.5	2,056.7	160.00	12.00	0.00	0	0		
									point110	110	2,185.5	2,392.9	160.00	12.00					
Barrier10	W	0.00	99.99	0.00				0.00	point141	141	1,974.7	2,687.7	160.00	12.00	0.00	0	0		
									point102	102	2,094.6	2,808.9	160.00	12.00	0.00	0	0		

									point103	103	2,328.8	2,562.3	160.00	12.00	0.00	0	0		
									point104	104	2,174.5	2,408.0	160.00	12.00	0.00	0	0		
									point105	105	2,034.0	2,547.2	160.00	12.00	0.00	0	0		
									point106	106	2,072.5	2,591.3	160.00	12.00					
Barrier11	W	0.00	99.99	0.00				0.00	point143	143	2,337.0	2,541.7	160.00	12.00	0.00	0	0		
									point108	108	2,680.1	2,180.7	160.00	12.00	0.00	0	0		
									point109	109	2,546.5	2,056.7	160.00	12.00					
Barrier12	W	0.00	99.99	0.00				0.00	point145	145	2,432.0	1,834.0	160.00	12.00	0.00	0	0		
									point18	18	2,714.1	2,100.8	160.00	12.00	0.00	0	0		
									point19	19	2,847.5	1,963.0	160.00	12.00	0.00	0	0		
									point20	20	2,574.1	1,680.9	160.00	12.00					
Barrier13	W	0.00	99.99	0.00				0.00	point147	147	1,896.2	1,672.2	160.00	12.00	0.00	0	0		
									point22	22	2,204.6	1,963.0	160.00	12.00	0.00	0	0		
									point23	23	2,368.6	1,796.8	160.00	12.00	0.00	0	0		
									point24	24	2,239.6	1,663.5	160.00	12.00	0.00	0	0		
									point25	25	2,515.1	1,387.9	160.00	12.00	0.00	0	0		
									point26	26	2,318.3	1,322.3	160.00	12.00	0.00	0	0		
									point27	27	2,114.9	1,547.5	160.00	12.00					
Barrier14	W	0.00	99.99	0.00				0.00	point149	149	1,595.6	1,342.5	160.00	12.00	0.00	0	0		
									point62	62	1,682.4	1,422.4	160.00	12.00	0.00	0	0		
									point63	63	1,880.2	1,210.6	160.00	12.00	0.00	0	0		
									point64	64	1,755.3	1,172.4	160.00	12.00					
Barrier15	W	0.00	99.99	0.00				0.00	point151	151	1,835.1	1,346.0	160.00	12.00	0.00	0	0		
									point58	58	1,953.1	1,464.0	160.00	12.00	0.00	0	0		
									point59	59	2,036.5	1,380.7	160.00	12.00	0.00	0	0		
									point60	60	1,921.9	1,269.6	160.00	12.00					
Barrier16	W	0.00	99.99	0.00				0.00	point153	153	2,114.9	1,547.5	160.00	12.00	0.00	0	0		
									point28	28	2,064.6	1,499.4	160.00	12.00					
Barrier17	W	0.00	99.99	0.00				0.00	point155	155	1,418.7	388.5	160.00	12.00	0.00	0	0		
									point87	87	2,358.2	589.6	160.00	12.00	0.00	0	0		
									point88	88	2,300.4	821.0	160.00	12.00	0.00	0	0		
									point89	89	1,360.8	584.1	160.00	12.00					
Barrier18	W	0.00	99.99	0.00				0.00	point157	157	2,917.5	713.6	160.00	12.00	0.00	0	0		
									point91	91	3,322.5	283.8	160.00	12.00	0.00	0	0		
									point92	92	3,490.6	432.6	160.00	12.00	0.00	0	0		
									point93	93	3,121.4	815.5	160.00	12.00	0.00	0	0		
									point94	94	2,884.5	757.7	160.00	12.00					
Barrier19	W	0.00	99.99	0.00				0.00	point159	159	2,368.5	789.5	160.00	12.00	0.00	0	0		
									point66	66	2,425.8	569.1	160.00	12.00	0.00	0	0		
									point67	67	2,679.2	437.2	160.00	12.00	0.00	0	0		
									point68	68	2,800.7	473.6	160.00	12.00	0.00	0	0		
									point69	69	2,878.8	386.8	160.00	12.00	0.00	0	0		
									point70	70	2,911.8	409.4	160.00	12.00	0.00	0	0		
									point71	71	2,984.7	338.2	160.00	12.00	0.00	0	0		
									point72	72	3,075.0	430.2	160.00	12.00	0.00	0	0		
									point73	73	2,903.1	607.3	160.00	12.00					
Barrier20	W	0.00	99.99	0.00				0.00	point160	160	2,733.9	1,244.3	160.00	12.00	0.00	0	0		
									point30	30	3,398.7	1,412.7	160.00	12.00	0.00	0	0		
									point31	31	3,431.5	1,283.6	160.00	12.00	0.00	0	0		

									point32	32	2,764.5	1,106.5	160.00	12.00					
Barrier21	W	0.00	99.99	0.00				0.00	point162	162	2,283.8	1,157.2	160.00	12.00	0.00	0	0		
									point79	79	2,338.9	942.3	160.00	12.00	0.00	0	0		
									point80	80	2,465.7	967.1	160.00	12.00	0.00	0	0		
									point81	81	2,451.9	1,005.6	160.00	12.00	0.00	0	0		
									point82	82	2,738.4	1,066.3	160.00	12.00	0.00	0	0		
									point83	83	2,705.4	1,182.0	160.00	12.00	0.00	0	0		
									point84	84	2,460.2	1,129.6	160.00	12.00	0.00	0	0		
									point85	85	2,443.6	1,195.8	160.00	12.00					
Barrier22	W	0.00	99.99	0.00				0.00	point164	164	3,722.4	1,294.6	160.00	12.00	0.00	0	0		
									point34	34	3,707.1	1,358.0	160.00	12.00	0.00	0	0		
									point35	35	3,860.2	1,526.4	160.00	12.00	0.00	0	0		
									point36	36	4,242.9	1,611.7	160.00	12.00	0.00	0	0		
									point37	37	4,247.2	1,554.8	160.00	12.00	0.00	0	0		
									point38	38	4,330.4	1,572.3	160.00	12.00	0.00	0	0		
									point39	39	4,380.7	1,484.8	160.00	12.00					
Barrier23	W	0.00	99.99	0.00				0.00	point166	166	2,972.6	308.6	160.00	12.00	0.00	0	0		
									point75	75	3,074.6	418.8	160.00	12.00	0.00	0	0		
									point76	76	3,234.4	270.0	160.00	12.00	0.00	0	0		
									point77	77	3,149.0	190.1	160.00	12.00					
Barrier24	W	0.00	99.99	0.00				0.00	point168	168	3,824.8	1,126.7	160.00	12.00	0.00	0	0		
									point46	46	3,986.2	960.1	160.00	12.00	0.00	0	0		
									point47	47	4,420.1	1,066.0	160.00	12.00	0.00	0	0		
									point48	48	4,312.5	1,269.0	160.00	12.00					
Barrier25	W	0.00	99.99	0.00				0.00	point170	170	3,708.5	1,109.4	160.00	12.00	0.00	0	0		
									point41	41	3,864.2	931.0	160.00	12.00	0.00	0	0		
									point42	42	3,719.5	802.9	160.00	12.00	0.00	0	0		
									point43	43	3,581.8	953.1	160.00	12.00	0.00	0	0		
									point44	44	3,540.1	1,071.2	160.00	12.00					
Barrier26	W	0.00	99.99	0.00				0.00	point172	172	4,086.7	861.7	160.00	12.00	0.00	0	0		
									point50	50	4,232.5	705.5	160.00	12.00	0.00	0	0		
									point51	51	4,520.6	870.4	160.00	12.00	0.00	0	0		
									point52	52	4,472.0	988.4	160.00	12.00					
Barrier27	W	0.00	99.99	0.00				0.00	point174	174	3,960.0	832.2	160.00	12.00	0.00	0	0		
									point54	54	4,187.3	604.8	160.00	12.00	0.00	0	0		
									point55	55	4,044.1	434.0	160.00	12.00	0.00	0	0		
									point56	56	3,809.9	671.0	160.00	12.00					

Dudek
MG
1 November 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - Exist Rev1019
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0
ST2	2	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
ST3	3	1	0.0	48.0	66	48.0	10	----	48.0	0.0	8	-8.0
ST4	4	1	0.0	55.7	66	55.7	10	----	55.7	0.0	8	-8.0
ST5	5	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0
ST6	6	1	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0
ST7	7	1	0.0	56.3	66	56.3	10	----	56.3	0.0	8	-8.0
M1	8	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
M2	9	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
M3	10	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
M4	11	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	11	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 1 November 2019
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - ExwP Rev1019

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Bundy Drive north of Nebraska Avenue	50.0	point1	1	1,563.5	3,417.6	160.00				Average	
		point3	3	2,100.8	2,854.2	160.00					
Centinela Avenue north of Olympic Blvd	50.0	point24	24	1,744.5	1,133.9	160.00				Average	
		point16	16	1,075.3	1,827.2	160.00					
Nebraska Avenue west of Centinela Av	50.0	point26	26	555.5	1,316.5	160.00				Average	
		point19	19	1,076.2	1,832.1	160.00					
Centinela Ave s of Olympic Blvd	35.0	point32	32	2,247.4	1,169.1	160.00				Average	
		point22	22	2,413.1	527.1	160.00				Average	
		point2	2	3,401.1	21.0	160.00					
Bundy Drive south of Olympic Blvd	50.0	point33	33	3,404.0	1,493.1	160.00				Average	
		point5	5	4,447.4	390.7	160.00					
Centinela Avenue north of Nebraska Av	35.0	point36	36	1,069.6	1,832.9	160.00				Average	
		point17	17	292.4	2,636.3	160.00					
Nebraska Avenue east of Centinela Ave	50.0	point38	38	1,076.2	1,832.1	160.00				Average	
		point44	44	1,585.0	2,341.1	160.00					
Olympic Blvd west of Centinela Avenue	50.0	point40	40	1,741.9	1,122.3	160.00				Average	
		point14	14	622.3	849.8	160.00					
Olympic Blvd east of Bundy Drive	50.0	point28	28	4,274.0	1,683.0	160.00				Average	
		point11	11	3,403.7	1,499.3	160.00					
Olympic Blvd east of Centinela Avenue	50.0	point41	41	3,403.7	1,499.3	160.00				Average	
		point39	39	2,214.0	1,236.9	160.00				Average	
		point13	13	1,741.9	1,122.3	160.00					
Bundy Drive south of Nebraska Avenue	50.0	point43	43	2,100.8	2,854.2	160.00				Average	
		point4	4	3,396.3	1,502.1	160.00					
Nebraska Avenue west of Bundy Drive	50.0	point45	45	1,585.0	2,341.1	160.00				Average	

		point20	20	2,093.9	2,850.1	160.00					

Dudek 1 November 2
MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - ExwP Rev1019

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
Bundy Drive north of Nebraska Avenue	point1	1	2434	97	35	2	35	1	35	0	0	0	0
	point3	3											
Centinela Avenue north of Olympic Blvd	point24	24	1743	97	30	2	30	1	30	0	0	0	0
	point16	16											
Nebraska Avenue west of Centinela Av	point26	26	562	97	25	2	25	1	25	0	0	0	0
	point19	19											
Centinela Ave s of Olympic Blvd	point32	32	1459	97	30	2	30	1	30	0	0	0	0
	point22	22	1433	97	30	2	30	1	30	0	0	0	0
	point2	2											
Bundy Drive south of Olympic Blvd	point33	33	2709	97	35	2	35	1	35	0	0	0	0
	point5	5											
Centinela Avenue north of Nebraska Av	point36	36	1431	97	30	2	30	1	30	0	0	0	0
	point17	17											
Nebraska Avenue east of Centinela Ave	point38	38	357	97	25	2	25	1	25	0	0	0	0
	point44	44											
Olympic Blvd west of Centinela Avenue	point40	40	2120	97	35	2	35	1	35	0	0	0	0
	point14	14											
Olympic Blvd east of Bundy Drive	point28	28	2880	97	35	2	35	1	35	0	0	0	0
	point11	11											
Olympic Blvd east of Centinela Avenue	point41	41	3598	97	35	2	35	1	35	0	0	0	0
	point39	39	3598	97	35	2	35	1	35	0	0	0	0
	point13	13											
Bundy Drive south of Nebraska Avenue	point43	43	2519	97	35	2	35	1	35	0	0	0	0

	point4	4											
Nebraska Avenue west of Bundy Drive	point45	45	307	97	25	2	25	1	25	0	0	0	0
	point20	20											

Dudek 1 November 2019
MG TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - ExwP Rev1019

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,721.8	2,514.4	160.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,519.3	2,317.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	1,489.6	2,498.0	160.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,630.0	2,181.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	1,275.2	2,081.6	160.00	5.00	0.00	66	10.0	8.0	Y
ST6	6	1	1,859.4	2,330.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST7	7	1	1,841.5	1,683.0	160.00	5.00	0.00	66	10.0	8.0	Y
M1	8	1	3,867.8	892.8	160.00	5.00	0.00	66	10.0	8.0	Y
M2	9	1	2,659.3	333.7	160.00	5.00	0.00	66	10.0	8.0	Y
M3	10	1	2,293.1	2,783.2	160.00	5.00	0.00	66	10.0	8.0	Y
M4	11	1	1,009.7	1,963.5	160.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 November 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - ExwP Rev1019

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per Unit Area	$ per Unit Vol.	Top Width	Run:Rise	$ per Unit Length			X	Y	Z	at Point	Seg Ht Incre-ment	Perturbs #Up	#Dn	On Struct?	Important Reflec-tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,776.3	2,465.9	0.00	0.00	0.00	0	0		
									point3	3	1,838.3	2,523.8	0.00	0.00	0.00	0	0		
									point4	4	2,119.4	2,226.2	0.00	0.00	0.00	0	0		
									point5	5	2,051.9	2,165.6	0.00	0.00					
Barrier2	W	0.00	99.99	0.00				0.00	point125	125	918.6	1,505.1	160.00	12.00	0.00	0	0		
									point100	100	1,135.1	1,697.6	160.00	12.00	0.00	0	0		
									point2	2	1,188.7	1,632.0	160.00	12.00					
Barrier3	W	0.00	99.99	0.00				0.00	point127	127	826.8	2,145.8	160.00	12.00	0.00	0	0		
									point96	96	1,079.3	1,899.7	160.00	12.00	0.00	0	0		
									point97	97	1,161.4	1,978.5	160.00	12.00	0.00	0	0		
									point98	98	916.4	2,238.7	160.00	12.00					
Barrier4	W	0.00	99.99	0.00				0.00	point129	129	1,452.9	2,262.2	160.00	12.00	0.00	0	0		
									point116	116	1,553.4	2,355.9	160.00	12.00	0.00	0	0		
									point117	117	1,118.1	2,806.4	160.00	12.00	0.00	0	0		
									point118	118	1,017.5	2,705.8	160.00	12.00					
Barrier5	W	0.00	99.99	0.00				0.00	point131	131	1,593.3	2,404.1	160.00	12.00	0.00	0	0		
									point120	120	1,673.1	2,482.2	160.00	12.00	0.00	0	0		
									point121	121	1,246.1	2,919.6	160.00	12.00	0.00	0	0		
									point122	122	1,155.9	2,831.1	160.00	12.00					
Barrier6	W	0.00	99.99	0.00				0.00	point133	133	1,708.9	2,520.4	160.00	12.00	0.00	0	0		
									point6	6	1,789.6	2,597.7	160.00	12.00	0.00	0	0		
									point7	7	1,365.3	3,039.4	160.00	12.00	0.00	0	0		
									point8	8	1,295.4	2,960.7	160.00	12.00					
Barrier7	W	0.00	99.99	0.00				0.00	point135	135	1,857.4	2,671.6	160.00	12.00	0.00	0	0		
									point10	10	2,029.2	2,843.5	160.00	12.00	0.00	0	0		
									point11	11	1,619.6	3,296.5	160.00	12.00	0.00	0	0		
									point12	12	1,430.4	3,107.3	160.00	12.00					
Barrier8	W	0.00	99.99	0.00				0.00	point137	137	1,944.3	2,013.4	160.00	12.00	0.00	0	0		
									point14	14	2,176.1	2,243.0	160.00	12.00	0.00	0	0		
									point15	15	2,265.8	2,153.3	160.00	12.00	0.00	0	0		
									point16	16	2,040.6	1,919.3	160.00	12.00					
Barrier9	W	0.00	99.99	0.00				0.00	point139	139	2,546.5	2,056.7	160.00	12.00	0.00	0	0		
									point110	110	2,185.5	2,392.9	160.00	12.00					
Barrier10	W	0.00	99.99	0.00				0.00	point141	141	1,974.7	2,687.7	160.00	12.00	0.00	0	0		
									point102	102	2,094.6	2,808.9	160.00	12.00	0.00	0	0		

									point103	103	2,328.8	2,562.3	160.00	12.00	0.00	0	0		
									point104	104	2,174.5	2,408.0	160.00	12.00	0.00	0	0		
									point105	105	2,034.0	2,547.2	160.00	12.00	0.00	0	0		
									point106	106	2,072.5	2,591.3	160.00	12.00					
Barrier11	W	0.00	99.99	0.00				0.00	point143	143	2,337.0	2,541.7	160.00	12.00	0.00	0	0		
									point108	108	2,680.1	2,180.7	160.00	12.00	0.00	0	0		
									point109	109	2,546.5	2,056.7	160.00	12.00					
Barrier12	W	0.00	99.99	0.00				0.00	point145	145	2,432.0	1,834.0	160.00	12.00	0.00	0	0		
									point18	18	2,714.1	2,100.8	160.00	12.00	0.00	0	0		
									point19	19	2,847.5	1,963.0	160.00	12.00	0.00	0	0		
									point20	20	2,574.1	1,680.9	160.00	12.00					
Barrier13	W	0.00	99.99	0.00				0.00	point147	147	1,896.2	1,672.2	160.00	12.00	0.00	0	0		
									point22	22	2,204.6	1,963.0	160.00	12.00	0.00	0	0		
									point23	23	2,368.6	1,796.8	160.00	12.00	0.00	0	0		
									point24	24	2,239.6	1,663.5	160.00	12.00	0.00	0	0		
									point25	25	2,515.1	1,387.9	160.00	12.00	0.00	0	0		
									point26	26	2,318.3	1,322.3	160.00	12.00	0.00	0	0		
									point27	27	2,114.9	1,547.5	160.00	12.00					
Barrier14	W	0.00	99.99	0.00				0.00	point149	149	1,595.6	1,342.5	160.00	12.00	0.00	0	0		
									point62	62	1,682.4	1,422.4	160.00	12.00	0.00	0	0		
									point63	63	1,880.2	1,210.6	160.00	12.00	0.00	0	0		
									point64	64	1,755.3	1,172.4	160.00	12.00					
Barrier15	W	0.00	99.99	0.00				0.00	point151	151	1,835.1	1,346.0	160.00	12.00	0.00	0	0		
									point58	58	1,953.1	1,464.0	160.00	12.00	0.00	0	0		
									point59	59	2,036.5	1,380.7	160.00	12.00	0.00	0	0		
									point60	60	1,921.9	1,269.6	160.00	12.00					
Barrier16	W	0.00	99.99	0.00				0.00	point153	153	2,114.9	1,547.5	160.00	12.00	0.00	0	0		
									point28	28	2,064.6	1,499.4	160.00	12.00					
Barrier17	W	0.00	99.99	0.00				0.00	point155	155	1,418.7	388.5	160.00	12.00	0.00	0	0		
									point87	87	2,358.2	589.6	160.00	12.00	0.00	0	0		
									point88	88	2,300.4	821.0	160.00	12.00	0.00	0	0		
									point89	89	1,360.8	584.1	160.00	12.00					
Barrier18	W	0.00	99.99	0.00				0.00	point157	157	2,917.5	713.6	160.00	12.00	0.00	0	0		
									point91	91	3,322.5	283.8	160.00	12.00	0.00	0	0		
									point92	92	3,490.6	432.6	160.00	12.00	0.00	0	0		
									point93	93	3,121.4	815.5	160.00	12.00	0.00	0	0		
									point94	94	2,884.5	757.7	160.00	12.00					
Barrier19	W	0.00	99.99	0.00				0.00	point159	159	2,368.5	789.5	160.00	12.00	0.00	0	0		
									point66	66	2,425.8	569.1	160.00	12.00	0.00	0	0		
									point67	67	2,679.2	437.2	160.00	12.00	0.00	0	0		
									point68	68	2,800.7	473.6	160.00	12.00	0.00	0	0		
									point69	69	2,878.8	386.8	160.00	12.00	0.00	0	0		
									point70	70	2,911.8	409.4	160.00	12.00	0.00	0	0		
									point71	71	2,984.7	338.2	160.00	12.00	0.00	0	0		
									point72	72	3,075.0	430.2	160.00	12.00	0.00	0	0		
									point73	73	2,903.1	607.3	160.00	12.00					
Barrier20	W	0.00	99.99	0.00				0.00	point160	160	2,733.9	1,244.3	160.00	12.00	0.00	0	0		
									point30	30	3,398.7	1,412.7	160.00	12.00	0.00	0	0		
									point31	31	3,431.5	1,283.6	160.00	12.00	0.00	0	0		

									point32	32	2,764.5	1,106.5	160.00	12.00					
Barrier21	W	0.00	99.99	0.00				0.00	point162	162	2,283.8	1,157.2	160.00	12.00	0.00	0	0		
									point79	79	2,338.9	942.3	160.00	12.00	0.00	0	0		
									point80	80	2,465.7	967.1	160.00	12.00	0.00	0	0		
									point81	81	2,451.9	1,005.6	160.00	12.00	0.00	0	0		
									point82	82	2,738.4	1,066.3	160.00	12.00	0.00	0	0		
									point83	83	2,705.4	1,182.0	160.00	12.00	0.00	0	0		
									point84	84	2,460.2	1,129.6	160.00	12.00	0.00	0	0		
									point85	85	2,443.6	1,195.8	160.00	12.00					
Barrier22	W	0.00	99.99	0.00				0.00	point164	164	3,722.4	1,294.6	160.00	12.00	0.00	0	0		
									point34	34	3,707.1	1,358.0	160.00	12.00	0.00	0	0		
									point35	35	3,860.2	1,526.4	160.00	12.00	0.00	0	0		
									point36	36	4,242.9	1,611.7	160.00	12.00	0.00	0	0		
									point37	37	4,247.2	1,554.8	160.00	12.00	0.00	0	0		
									point38	38	4,330.4	1,572.3	160.00	12.00	0.00	0	0		
									point39	39	4,380.7	1,484.8	160.00	12.00					
Barrier23	W	0.00	99.99	0.00				0.00	point166	166	2,972.6	308.6	160.00	12.00	0.00	0	0		
									point75	75	3,074.6	418.8	160.00	12.00	0.00	0	0		
									point76	76	3,234.4	270.0	160.00	12.00	0.00	0	0		
									point77	77	3,149.0	190.1	160.00	12.00					
Barrier24	W	0.00	99.99	0.00				0.00	point168	168	3,824.8	1,126.7	160.00	12.00	0.00	0	0		
									point46	46	3,986.2	960.1	160.00	12.00	0.00	0	0		
									point47	47	4,420.1	1,066.0	160.00	12.00	0.00	0	0		
									point48	48	4,312.5	1,269.0	160.00	12.00					
Barrier25	W	0.00	99.99	0.00				0.00	point170	170	3,708.5	1,109.4	160.00	12.00	0.00	0	0		
									point41	41	3,864.2	931.0	160.00	12.00	0.00	0	0		
									point42	42	3,719.5	802.9	160.00	12.00	0.00	0	0		
									point43	43	3,581.8	953.1	160.00	12.00	0.00	0	0		
									point44	44	3,540.1	1,071.2	160.00	12.00					
Barrier26	W	0.00	99.99	0.00				0.00	point172	172	4,086.7	861.7	160.00	12.00	0.00	0	0		
									point50	50	4,232.5	705.5	160.00	12.00	0.00	0	0		
									point51	51	4,520.6	870.4	160.00	12.00	0.00	0	0		
									point52	52	4,472.0	988.4	160.00	12.00					
Barrier27	W	0.00	99.99	0.00				0.00	point174	174	3,960.0	832.2	160.00	12.00	0.00	0	0		
									point54	54	4,187.3	604.8	160.00	12.00	0.00	0	0		
									point55	55	4,044.1	434.0	160.00	12.00	0.00	0	0		
									point56	56	3,809.9	671.0	160.00	12.00					

Dudek
MG
1 November 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard - ExwP Rev1019
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
ST2	2	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
ST3	3	1	0.0	48.1	66	48.1	10	----	48.1	0.0	8	-8.0
ST4	4	1	0.0	55.7	66	55.7	10	----	55.7	0.0	8	-8.0
ST5	5	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0
ST6	6	1	0.0	53.2	66	53.2	10	----	53.2	0.0	8	-8.0
ST7	7	1	0.0	56.3	66	56.3	10	----	56.3	0.0	8	-8.0
M1	8	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
M2	9	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
M3	10	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
M4	11	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	11	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 1 November 2019
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Future 1019

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Bundy Drive north of Nebraska Avenue	50.0	point1	1	1,563.5	3,417.6	160.00				Average	
		point3	3	2,100.8	2,854.2	160.00					
Centinela Avenue north of Olympic Blvd	50.0	point24	24	1,744.5	1,133.9	160.00				Average	
		point16	16	1,075.3	1,827.2	160.00					
Nebraska Avenue west of Centinela Av	50.0	point26	26	555.5	1,316.5	160.00				Average	
		point19	19	1,076.2	1,832.1	160.00					
Centinela Ave s of Olympic Blvd	35.0	point32	32	2,247.4	1,169.1	160.00				Average	
		point22	22	2,413.1	527.1	160.00				Average	
		point2	2	3,401.1	21.0	160.00					
Bundy Drive south of Olympic Blvd	50.0	point33	33	3,404.0	1,493.1	160.00				Average	
		point5	5	4,447.4	390.7	160.00					
Centinela Avenue north of Nebraska Av	35.0	point36	36	1,069.6	1,832.9	160.00				Average	
		point17	17	292.4	2,636.3	160.00					
Nebraska Avenue east of Centinela Ave	50.0	point38	38	1,076.2	1,832.1	160.00				Average	
		point44	44	1,585.0	2,341.1	160.00					
Olympic Blvd west of Centinela Avenue	50.0	point40	40	1,741.9	1,122.3	160.00				Average	
		point14	14	622.3	849.8	160.00					
Olympic Blvd east of Bundy Drive	50.0	point28	28	4,274.0	1,683.0	160.00				Average	
		point11	11	3,403.7	1,499.3	160.00					
Olympic Blvd east of Centinela Avenue	50.0	point41	41	3,403.7	1,499.3	160.00				Average	
		point39	39	2,214.0	1,236.9	160.00				Average	
		point13	13	1,741.9	1,122.3	160.00					
Bundy Drive south of Nebraska Avenue	50.0	point43	43	2,100.8	2,854.2	160.00				Average	
		point4	4	3,396.3	1,502.1	160.00					
Nebraska Avenue west of Bundy Drive	50.0	point45	45	1,585.0	2,341.1	160.00				Average	

		point20	20	2,093.9	2,850.1	160.00					

Dudek 1 November 2
MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Future 1019

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
Bundy Drive north of Nebraska Avenue	point1	1	2977	97	35	2	35	1	35	0	0	0	0
	point3	3											
Centinela Avenue north of Olympic Blvd	point24	24	2099	97	30	2	30	1	30	0	0	0	0
	point16	16											
Nebraska Avenue west of Centinela Av	point26	26	649	97	25	2	25	1	25	0	0	0	0
	point19	19											
Centinela Ave s of Olympic Blvd	point32	32	2105	97	30	2	30	1	30	0	0	0	0
	point22	22	2105	97	30	2	30	1	30	0	0	0	0
	point2	2											
Bundy Drive south of Olympic Blvd	point33	33	3254	97	35	2	35	1	35	0	0	0	0
	point5	5											
Centinela Avenue north of Nebraska Av	point36	36	1749	97	30	2	30	1	30	0	0	0	0
	point17	17											
Nebraska Avenue east of Centinela Ave	point38	38	392	97	25	2	25	1	25	0	0	0	0
	point44	44											
Olympic Blvd west of Centinela Avenue	point40	40	3389	97	35	2	35	1	35	0	0	0	0
	point14	14											
Olympic Blvd east of Bundy Drive	point28	28	3700	97	35	2	35	1	35	0	0	0	0
	point11	11											
Olympic Blvd east of Centinela Avenue	point41	41	5019	97	35	2	35	1	35	0	0	0	0
	point39	39	5019	97	35	2	35	1	35	0	0	0	0
	point13	13											
Bundy Drive south of Nebraska Avenue	point43	43	3066	97	35	2	35	1	35	0	0	0	0

	point4	4											
Nebraska Avenue west of Bundy Drive	point45	45	327	97	25	2	25	1	25	0	0	0	0
	point20	20											

Dudek 1 November 2019
MG TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Future 1019

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,721.8	2,514.4	160.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,519.3	2,317.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	1,489.6	2,498.0	160.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,630.0	2,181.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	1,275.2	2,081.6	160.00	5.00	0.00	66	10.0	8.0	Y
ST6	6	1	1,859.4	2,330.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST7	7	1	1,841.5	1,683.0	160.00	5.00	0.00	66	10.0	8.0	Y
M1	8	1	3,867.8	892.8	160.00	5.00	0.00	66	10.0	8.0	Y
M2	9	1	2,659.4	333.7	160.00	5.00	0.00	66	10.0	8.0	Y
M3	10	1	2,293.1	2,783.2	160.00	5.00	0.00	66	10.0	8.0	Y
M4	11	1	1,009.7	1,963.5	160.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 November 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Future 1019

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per Unit Area	$ per Unit Vol.	Top Width	Run:Rise	$ per Unit Length			X	Y	Z	at Point	Seg Ht Incre-ment	Perturbs #Up	#Dn	On Struct?	Important Reflec-tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,776.3	2,465.9	0.00	0.00	0.00	0	0		
									point3	3	1,838.3	2,523.8	0.00	0.00	0.00	0	0		
									point4	4	2,119.4	2,226.2	0.00	0.00	0.00	0	0		
									point5	5	2,051.9	2,165.6	0.00	0.00					
Barrier2	W	0.00	99.99	0.00				0.00	point125	125	918.6	1,505.1	160.00	12.00	0.00	0	0		
									point100	100	1,135.1	1,697.6	160.00	12.00	0.00	0	0		
									point2	2	1,188.7	1,632.0	160.00	12.00					
Barrier3	W	0.00	99.99	0.00				0.00	point127	127	826.8	2,145.8	160.00	12.00	0.00	0	0		
									point96	96	1,079.3	1,899.7	160.00	12.00	0.00	0	0		
									point97	97	1,161.4	1,978.5	160.00	12.00	0.00	0	0		
									point98	98	916.4	2,238.7	160.00	12.00					
Barrier4	W	0.00	99.99	0.00				0.00	point129	129	1,452.9	2,262.2	160.00	12.00	0.00	0	0		
									point116	116	1,553.4	2,355.9	160.00	12.00	0.00	0	0		
									point117	117	1,118.1	2,806.4	160.00	12.00	0.00	0	0		
									point118	118	1,017.5	2,705.8	160.00	12.00					
Barrier5	W	0.00	99.99	0.00				0.00	point131	131	1,593.3	2,404.1	160.00	12.00	0.00	0	0		
									point120	120	1,673.1	2,482.2	160.00	12.00	0.00	0	0		
									point121	121	1,246.1	2,919.6	160.00	12.00	0.00	0	0		
									point122	122	1,155.9	2,831.1	160.00	12.00					
Barrier6	W	0.00	99.99	0.00				0.00	point133	133	1,708.9	2,520.4	160.00	12.00	0.00	0	0		
									point6	6	1,789.6	2,597.7	160.00	12.00	0.00	0	0		
									point7	7	1,365.3	3,039.4	160.00	12.00	0.00	0	0		
									point8	8	1,295.4	2,960.7	160.00	12.00					
Barrier7	W	0.00	99.99	0.00				0.00	point135	135	1,857.4	2,671.6	160.00	12.00	0.00	0	0		
									point10	10	2,029.2	2,843.5	160.00	12.00	0.00	0	0		
									point11	11	1,619.6	3,296.5	160.00	12.00	0.00	0	0		
									point12	12	1,430.4	3,107.3	160.00	12.00					
Barrier8	W	0.00	99.99	0.00				0.00	point137	137	1,944.3	2,013.4	160.00	12.00	0.00	0	0		
									point14	14	2,176.1	2,243.0	160.00	12.00	0.00	0	0		
									point15	15	2,265.8	2,153.3	160.00	12.00	0.00	0	0		
									point16	16	2,040.6	1,919.3	160.00	12.00					
Barrier9	W	0.00	99.99	0.00				0.00	point139	139	2,546.5	2,056.7	160.00	12.00	0.00	0	0		
									point110	110	2,185.5	2,392.9	160.00	12.00					
Barrier10	W	0.00	99.99	0.00				0.00	point141	141	1,974.7	2,687.7	160.00	12.00	0.00	0	0		
									point102	102	2,094.6	2,808.9	160.00	12.00	0.00	0	0		

									point103	103	2,328.8	2,562.3	160.00	12.00	0.00	0	0		
									point104	104	2,174.5	2,408.0	160.00	12.00	0.00	0	0		
									point105	105	2,034.0	2,547.2	160.00	12.00	0.00	0	0		
									point106	106	2,072.5	2,591.3	160.00	12.00					
Barrier11	W	0.00	99.99	0.00				0.00	point143	143	2,337.0	2,541.7	160.00	12.00	0.00	0	0		
									point108	108	2,680.1	2,180.7	160.00	12.00	0.00	0	0		
									point109	109	2,546.5	2,056.7	160.00	12.00					
Barrier12	W	0.00	99.99	0.00				0.00	point145	145	2,432.0	1,834.0	160.00	12.00	0.00	0	0		
									point18	18	2,714.1	2,100.8	160.00	12.00	0.00	0	0		
									point19	19	2,847.5	1,963.0	160.00	12.00	0.00	0	0		
									point20	20	2,574.1	1,680.9	160.00	12.00					
Barrier13	W	0.00	99.99	0.00				0.00	point147	147	1,896.2	1,672.2	160.00	12.00	0.00	0	0		
									point22	22	2,204.6	1,963.0	160.00	12.00	0.00	0	0		
									point23	23	2,368.6	1,796.8	160.00	12.00	0.00	0	0		
									point24	24	2,239.6	1,663.5	160.00	12.00	0.00	0	0		
									point25	25	2,515.1	1,387.9	160.00	12.00	0.00	0	0		
									point26	26	2,318.3	1,322.3	160.00	12.00	0.00	0	0		
									point27	27	2,114.9	1,547.5	160.00	12.00					
Barrier14	W	0.00	99.99	0.00				0.00	point149	149	1,595.6	1,342.5	160.00	12.00	0.00	0	0		
									point62	62	1,682.4	1,422.4	160.00	12.00	0.00	0	0		
									point63	63	1,880.2	1,210.6	160.00	12.00	0.00	0	0		
									point64	64	1,755.3	1,172.4	160.00	12.00					
Barrier15	W	0.00	99.99	0.00				0.00	point151	151	1,835.1	1,346.0	160.00	12.00	0.00	0	0		
									point58	58	1,953.1	1,464.0	160.00	12.00	0.00	0	0		
									point59	59	2,036.5	1,380.7	160.00	12.00	0.00	0	0		
									point60	60	1,921.9	1,269.6	160.00	12.00					
Barrier16	W	0.00	99.99	0.00				0.00	point153	153	2,114.9	1,547.5	160.00	12.00	0.00	0	0		
									point28	28	2,064.6	1,499.4	160.00	12.00					
Barrier17	W	0.00	99.99	0.00				0.00	point155	155	1,418.7	388.5	160.00	12.00	0.00	0	0		
									point87	87	2,358.2	589.6	160.00	12.00	0.00	0	0		
									point88	88	2,300.4	821.0	160.00	12.00	0.00	0	0		
									point89	89	1,360.8	584.1	160.00	12.00					
Barrier18	W	0.00	99.99	0.00				0.00	point157	157	2,917.5	713.6	160.00	12.00	0.00	0	0		
									point91	91	3,322.5	283.8	160.00	12.00	0.00	0	0		
									point92	92	3,490.6	432.6	160.00	12.00	0.00	0	0		
									point93	93	3,121.4	815.5	160.00	12.00	0.00	0	0		
									point94	94	2,884.5	757.7	160.00	12.00					
Barrier19	W	0.00	99.99	0.00				0.00	point159	159	2,368.5	789.5	160.00	12.00	0.00	0	0		
									point66	66	2,425.8	569.1	160.00	12.00	0.00	0	0		
									point67	67	2,679.2	437.2	160.00	12.00	0.00	0	0		
									point68	68	2,800.7	473.6	160.00	12.00	0.00	0	0		
									point69	69	2,878.8	386.8	160.00	12.00	0.00	0	0		
									point70	70	2,911.8	409.4	160.00	12.00	0.00	0	0		
									point71	71	2,984.7	338.2	160.00	12.00	0.00	0	0		
									point72	72	3,075.0	430.2	160.00	12.00	0.00	0	0		
									point73	73	2,903.1	607.3	160.00	12.00					
Barrier20	W	0.00	99.99	0.00				0.00	point160	160	2,733.9	1,244.3	160.00	12.00	0.00	0	0		
									point30	30	3,398.7	1,412.7	160.00	12.00	0.00	0	0		
									point31	31	3,431.5	1,283.6	160.00	12.00	0.00	0	0		

									point32	32	2,764.5	1,106.5	160.00	12.00					
Barrier21	W	0.00	99.99	0.00				0.00	point162	162	2,283.8	1,157.2	160.00	12.00	0.00	0	0		
									point79	79	2,338.9	942.3	160.00	12.00	0.00	0	0		
									point80	80	2,465.7	967.1	160.00	12.00	0.00	0	0		
									point81	81	2,451.9	1,005.6	160.00	12.00	0.00	0	0		
									point82	82	2,738.4	1,066.3	160.00	12.00	0.00	0	0		
									point83	83	2,705.4	1,182.0	160.00	12.00	0.00	0	0		
									point84	84	2,460.2	1,129.6	160.00	12.00	0.00	0	0		
									point85	85	2,443.6	1,195.8	160.00	12.00					
Barrier22	W	0.00	99.99	0.00				0.00	point164	164	3,722.4	1,294.6	160.00	12.00	0.00	0	0		
									point34	34	3,707.1	1,358.0	160.00	12.00	0.00	0	0		
									point35	35	3,860.2	1,526.4	160.00	12.00	0.00	0	0		
									point36	36	4,242.9	1,611.7	160.00	12.00	0.00	0	0		
									point37	37	4,247.2	1,554.8	160.00	12.00	0.00	0	0		
									point38	38	4,330.4	1,572.3	160.00	12.00	0.00	0	0		
									point39	39	4,380.7	1,484.8	160.00	12.00					
Barrier23	W	0.00	99.99	0.00				0.00	point166	166	2,972.6	308.6	160.00	12.00	0.00	0	0		
									point75	75	3,074.6	418.8	160.00	12.00	0.00	0	0		
									point76	76	3,234.4	270.0	160.00	12.00	0.00	0	0		
									point77	77	3,149.0	190.1	160.00	12.00					
Barrier24	W	0.00	99.99	0.00				0.00	point168	168	3,824.8	1,126.7	160.00	12.00	0.00	0	0		
									point46	46	3,986.2	960.1	160.00	12.00	0.00	0	0		
									point47	47	4,420.1	1,066.0	160.00	12.00	0.00	0	0		
									point48	48	4,312.5	1,269.0	160.00	12.00					
Barrier25	W	0.00	99.99	0.00				0.00	point170	170	3,708.5	1,109.4	160.00	12.00	0.00	0	0		
									point41	41	3,864.2	931.0	160.00	12.00	0.00	0	0		
									point42	42	3,719.5	802.9	160.00	12.00	0.00	0	0		
									point43	43	3,581.8	953.1	160.00	12.00	0.00	0	0		
									point44	44	3,540.1	1,071.2	160.00	12.00					
Barrier26	W	0.00	99.99	0.00				0.00	point172	172	4,086.7	861.7	160.00	12.00	0.00	0	0		
									point50	50	4,232.5	705.5	160.00	12.00	0.00	0	0		
									point51	51	4,520.6	870.4	160.00	12.00	0.00	0	0		
									point52	52	4,472.0	988.4	160.00	12.00					
Barrier27	W	0.00	99.99	0.00				0.00	point174	174	3,960.0	832.2	160.00	12.00	0.00	0	0		
									point54	54	4,187.3	604.8	160.00	12.00	0.00	0	0		
									point55	55	4,044.1	434.0	160.00	12.00	0.00	0	0		
									point56	56	3,809.9	671.0	160.00	12.00					

Dudek
MG
1 November 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Future 1019
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0
ST2	2	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0
ST3	3	1	0.0	48.9	66	48.9	10	----	48.9	0.0	8	-8.0
ST4	4	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0
ST5	5	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0
ST6	6	1	0.0	54.1	66	54.1	10	----	54.1	0.0	8	-8.0
ST7	7	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0
M1	8	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
M2	9	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
M3	10	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
M4	11	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	11	0.0	0.0	0.0
All Impacted	3	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 1 November 2019
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Fut wP 1019

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Bundy Drive north of Nebraska Avenue	50.0	point1	1	1,563.5	3,417.6	160.00				Average	
		point3	3	2,100.8	2,854.2	160.00					
Centinela Avenue north of Olympic Blvd	50.0	point24	24	1,744.5	1,133.9	160.00				Average	
		point16	16	1,075.3	1,827.2	160.00					
Nebraska Avenue west of Centinela Av	50.0	point26	26	555.5	1,316.5	160.00				Average	
		point19	19	1,076.2	1,832.1	160.00					
Centinela Ave s of Olympic Blvd	35.0	point32	32	2,247.4	1,169.1	160.00				Average	
		point22	22	2,413.1	527.1	160.00				Average	
		point2	2	3,401.1	21.0	160.00					
Bundy Drive south of Olympic Blvd	50.0	point33	33	3,404.0	1,493.1	160.00				Average	
		point5	5	4,447.4	390.7	160.00					
Centinela Avenue north of Nebraska Av	35.0	point36	36	1,069.6	1,832.9	160.00				Average	
		point17	17	292.4	2,636.3	160.00					
Nebraska Avenue east of Centinela Ave	50.0	point38	38	1,076.2	1,832.1	160.00				Average	
		point44	44	1,585.0	2,341.1	160.00					
Olympic Blvd west of Centinela Avenue	50.0	point40	40	1,741.9	1,122.3	160.00				Average	
		point14	14	622.3	849.8	160.00					
Olympic Blvd east of Bundy Drive	50.0	point28	28	4,274.0	1,683.0	160.00				Average	
		point11	11	3,403.7	1,499.3	160.00					
Olympic Blvd east of Centinela Avenue	50.0	point41	41	3,403.7	1,499.3	160.00				Average	
		point39	39	2,214.0	1,236.9	160.00				Average	
		point13	13	1,741.9	1,122.3	160.00					
Bundy Drive south of Nebraska Avenue	50.0	point43	43	2,100.8	2,854.2	160.00				Average	
		point4	4	3,396.3	1,502.1	160.00					
Nebraska Avenue west of Bundy Drive	50.0	point45	45	1,585.0	2,341.1	160.00				Average	

		point20	20	2,093.9	2,850.1	160.00					

Dudek 1 November 2
MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Fut wP 1019

Roadway	Points		Segment											
Name	Name	No.	Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
Bundy Drive north of Nebraska Avenue	point1	1	2986	97	35	2	35	1	35	0	0	0	0
	point3	3											
Centinela Avenue north of Olympic Blvd	point24	24	2102	97	30	2	30	1	30	0	0	0	0
	point16	16											
Nebraska Avenue west of Centinela Av	point26	26	650	97	25	2	25	1	25	0	0	0	0
	point19	19											
Centinela Ave s of Olympic Blvd	point32	32	2105	97	30	2	30	1	30	0	0	0	0
	point22	22	2105	97	30	2	30	1	30	0	0	0	0
	point2	2											
Bundy Drive south of Olympic Blvd	point33	33	3259	97	35	2	35	1	35	0	0	0	0
	point5	5											
Centinela Avenue north of Nebraska Av	point36	36	1754	97	30	2	30	1	30	0	0	0	0
	point17	17											
Nebraska Avenue east of Centinela Ave	point38	38	396	97	25	2	25	1	25	0	0	0	0
	point44	44											
Olympic Blvd west of Centinela Avenue	point40	40	3395	97	35	2	35	1	35	0	0	0	0
	point14	14											
Olympic Blvd east of Bundy Drive	point28	28	3712	97	35	2	35	1	35	0	0	0	0
	point11	11											
Olympic Blvd east of Centinela Avenue	point41	41	5028	97	35	2	35	1	35	0	0	0	0
	point39	39	5028	97	35	2	35	1	35	0	0	0	0
	point13	13											
Bundy Drive south of Nebraska Avenue	point43	43	3072	97	35	2	35	1	35	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Percentages **10649**

	point4	4											
Nebraska Avenue west of Bundy Drive	point45	45	342	97	25	2	25	1	25	0	0	0	0
	point20	20											

Dudek 1 November 2019
MG TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Fut wP 1019

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,721.8	2,514.4	160.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,519.3	2,317.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	1,489.6	2,498.0	160.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,630.0	2,181.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	1,275.2	2,081.6	160.00	5.00	0.00	66	10.0	8.0	Y
ST6	6	1	1,859.4	2,330.1	160.00	5.00	0.00	66	10.0	8.0	Y
ST7	7	1	1,841.5	1,683.0	160.00	5.00	0.00	66	10.0	8.0	Y
M1	8	1	3,867.8	892.8	160.00	5.00	0.00	66	10.0	8.0	Y
M2	9	1	2,659.4	333.7	160.00	5.00	0.00	66	10.0	8.0	Y
M3	10	1	2,293.1	2,783.2	160.00	5.00	0.00	66	10.0	8.0	Y
M4	11	1	1,009.7	1,963.5	160.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 November 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Fut wP 1019

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per Unit Area	$ per Unit Vol.	Top Width	Run:Rise	$ per Unit Length			X	Y	Z	at Point	Seg Ht Incre-ment	Perturbs #Up	#Dn	On Struct?	Important Reflec-tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,776.3	2,465.9	0.00	0.00	0.00	0	0		
									point3	3	1,838.3	2,523.8	0.00	0.00	0.00	0	0		
									point4	4	2,119.4	2,226.2	0.00	0.00	0.00	0	0		
									point5	5	2,051.9	2,165.6	0.00	0.00					
Barrier2	W	0.00	99.99	0.00				0.00	point125	125	918.6	1,505.1	160.00	12.00	0.00	0	0		
									point100	100	1,135.1	1,697.6	160.00	12.00	0.00	0	0		
									point2	2	1,188.7	1,632.0	160.00	12.00					
Barrier3	W	0.00	99.99	0.00				0.00	point127	127	826.8	2,145.8	160.00	12.00	0.00	0	0		
									point96	96	1,079.3	1,899.7	160.00	12.00	0.00	0	0		
									point97	97	1,161.4	1,978.5	160.00	12.00	0.00	0	0		
									point98	98	916.4	2,238.7	160.00	12.00					
Barrier4	W	0.00	99.99	0.00				0.00	point129	129	1,452.9	2,262.2	160.00	12.00	0.00	0	0		
									point116	116	1,553.4	2,355.9	160.00	12.00	0.00	0	0		
									point117	117	1,118.1	2,806.4	160.00	12.00	0.00	0	0		
									point118	118	1,017.5	2,705.8	160.00	12.00					
Barrier5	W	0.00	99.99	0.00				0.00	point131	131	1,593.3	2,404.1	160.00	12.00	0.00	0	0		
									point120	120	1,673.1	2,482.2	160.00	12.00	0.00	0	0		
									point121	121	1,246.1	2,919.6	160.00	12.00	0.00	0	0		
									point122	122	1,155.9	2,831.1	160.00	12.00					
Barrier6	W	0.00	99.99	0.00				0.00	point133	133	1,708.9	2,520.4	160.00	12.00	0.00	0	0		
									point6	6	1,789.6	2,597.7	160.00	12.00	0.00	0	0		
									point7	7	1,365.3	3,039.4	160.00	12.00	0.00	0	0		
									point8	8	1,295.4	2,960.7	160.00	12.00					
Barrier7	W	0.00	99.99	0.00				0.00	point135	135	1,857.4	2,671.6	160.00	12.00	0.00	0	0		
									point10	10	2,029.2	2,843.5	160.00	12.00	0.00	0	0		
									point11	11	1,619.6	3,296.5	160.00	12.00	0.00	0	0		
									point12	12	1,430.4	3,107.3	160.00	12.00					
Barrier8	W	0.00	99.99	0.00				0.00	point137	137	1,944.3	2,013.4	160.00	12.00	0.00	0	0		
									point14	14	2,176.1	2,243.0	160.00	12.00	0.00	0	0		
									point15	15	2,265.8	2,153.3	160.00	12.00	0.00	0	0		
									point16	16	2,040.6	1,919.3	160.00	12.00					
Barrier9	W	0.00	99.99	0.00				0.00	point139	139	2,546.5	2,056.7	160.00	12.00	0.00	0	0		
									point110	110	2,185.5	2,392.9	160.00	12.00					
Barrier10	W	0.00	99.99	0.00				0.00	point141	141	1,974.7	2,687.7	160.00	12.00	0.00	0	0		
									point102	102	2,094.6	2,808.9	160.00	12.00	0.00	0	0		

									point103	103	2,328.8	2,562.3	160.00	12.00	0.00	0	0		
									point104	104	2,174.5	2,408.0	160.00	12.00	0.00	0	0		
									point105	105	2,034.0	2,547.2	160.00	12.00	0.00	0	0		
									point106	106	2,072.5	2,591.3	160.00	12.00					
Barrier11	W	0.00	99.99	0.00				0.00	point143	143	2,337.0	2,541.7	160.00	12.00	0.00	0	0		
									point108	108	2,680.1	2,180.7	160.00	12.00	0.00	0	0		
									point109	109	2,546.5	2,056.7	160.00	12.00					
Barrier12	W	0.00	99.99	0.00				0.00	point145	145	2,432.0	1,834.0	160.00	12.00	0.00	0	0		
									point18	18	2,714.1	2,100.8	160.00	12.00	0.00	0	0		
									point19	19	2,847.5	1,963.0	160.00	12.00	0.00	0	0		
									point20	20	2,574.1	1,680.9	160.00	12.00					
Barrier13	W	0.00	99.99	0.00				0.00	point147	147	1,896.2	1,672.2	160.00	12.00	0.00	0	0		
									point22	22	2,204.6	1,963.0	160.00	12.00	0.00	0	0		
									point23	23	2,368.6	1,796.8	160.00	12.00	0.00	0	0		
									point24	24	2,239.6	1,663.5	160.00	12.00	0.00	0	0		
									point25	25	2,515.1	1,387.9	160.00	12.00	0.00	0	0		
									point26	26	2,318.3	1,322.3	160.00	12.00	0.00	0	0		
									point27	27	2,114.9	1,547.5	160.00	12.00					
Barrier14	W	0.00	99.99	0.00				0.00	point149	149	1,595.6	1,342.5	160.00	12.00	0.00	0	0		
									point62	62	1,682.4	1,422.4	160.00	12.00	0.00	0	0		
									point63	63	1,880.2	1,210.6	160.00	12.00	0.00	0	0		
									point64	64	1,755.3	1,172.4	160.00	12.00					
Barrier15	W	0.00	99.99	0.00				0.00	point151	151	1,835.1	1,346.0	160.00	12.00	0.00	0	0		
									point58	58	1,953.1	1,464.0	160.00	12.00	0.00	0	0		
									point59	59	2,036.5	1,380.7	160.00	12.00	0.00	0	0		
									point60	60	1,921.9	1,269.6	160.00	12.00					
Barrier16	W	0.00	99.99	0.00				0.00	point153	153	2,114.9	1,547.5	160.00	12.00	0.00	0	0		
									point28	28	2,064.6	1,499.4	160.00	12.00					
Barrier17	W	0.00	99.99	0.00				0.00	point155	155	1,418.7	388.5	160.00	12.00	0.00	0	0		
									point87	87	2,358.2	589.6	160.00	12.00	0.00	0	0		
									point88	88	2,300.4	821.0	160.00	12.00	0.00	0	0		
									point89	89	1,360.8	584.1	160.00	12.00					
Barrier18	W	0.00	99.99	0.00				0.00	point157	157	2,917.5	713.6	160.00	12.00	0.00	0	0		
									point91	91	3,322.5	283.8	160.00	12.00	0.00	0	0		
									point92	92	3,490.6	432.6	160.00	12.00	0.00	0	0		
									point93	93	3,121.4	815.5	160.00	12.00	0.00	0	0		
									point94	94	2,884.5	757.7	160.00	12.00					
Barrier19	W	0.00	99.99	0.00				0.00	point159	159	2,368.5	789.5	160.00	12.00	0.00	0	0		
									point66	66	2,425.8	569.1	160.00	12.00	0.00	0	0		
									point67	67	2,679.2	437.2	160.00	12.00	0.00	0	0		
									point68	68	2,800.7	473.6	160.00	12.00	0.00	0	0		
									point69	69	2,878.8	386.8	160.00	12.00	0.00	0	0		
									point70	70	2,911.8	409.4	160.00	12.00	0.00	0	0		
									point71	71	2,984.7	338.2	160.00	12.00	0.00	0	0		
									point72	72	3,075.0	430.2	160.00	12.00	0.00	0	0		
									point73	73	2,903.1	607.3	160.00	12.00					
Barrier20	W	0.00	99.99	0.00				0.00	point160	160	2,733.9	1,244.3	160.00	12.00	0.00	0	0		
									point30	30	3,398.7	1,412.7	160.00	12.00	0.00	0	0		
									point31	31	3,431.5	1,283.6	160.00	12.00	0.00	0	0		

									point32	32	2,764.5	1,106.5	160.00	12.00					
Barrier21	W	0.00	99.99	0.00				0.00	point162	162	2,283.8	1,157.2	160.00	12.00	0.00	0	0		
									point79	79	2,338.9	942.3	160.00	12.00	0.00	0	0		
									point80	80	2,465.7	967.1	160.00	12.00	0.00	0	0		
									point81	81	2,451.9	1,005.6	160.00	12.00	0.00	0	0		
									point82	82	2,738.4	1,066.3	160.00	12.00	0.00	0	0		
									point83	83	2,705.4	1,182.0	160.00	12.00	0.00	0	0		
									point84	84	2,460.2	1,129.6	160.00	12.00	0.00	0	0		
									point85	85	2,443.6	1,195.8	160.00	12.00					
Barrier22	W	0.00	99.99	0.00				0.00	point164	164	3,722.4	1,294.6	160.00	12.00	0.00	0	0		
									point34	34	3,707.1	1,358.0	160.00	12.00	0.00	0	0		
									point35	35	3,860.2	1,526.4	160.00	12.00	0.00	0	0		
									point36	36	4,242.9	1,611.7	160.00	12.00	0.00	0	0		
									point37	37	4,247.2	1,554.8	160.00	12.00	0.00	0	0		
									point38	38	4,330.4	1,572.3	160.00	12.00	0.00	0	0		
									point39	39	4,380.7	1,484.8	160.00	12.00					
Barrier23	W	0.00	99.99	0.00				0.00	point166	166	2,972.6	308.6	160.00	12.00	0.00	0	0		
									point75	75	3,074.6	418.8	160.00	12.00	0.00	0	0		
									point76	76	3,234.4	270.0	160.00	12.00	0.00	0	0		
									point77	77	3,149.0	190.1	160.00	12.00					
Barrier24	W	0.00	99.99	0.00				0.00	point168	168	3,824.8	1,126.7	160.00	12.00	0.00	0	0		
									point46	46	3,986.2	960.1	160.00	12.00	0.00	0	0		
									point47	47	4,420.1	1,066.0	160.00	12.00	0.00	0	0		
									point48	48	4,312.5	1,269.0	160.00	12.00					
Barrier25	W	0.00	99.99	0.00				0.00	point170	170	3,708.5	1,109.4	160.00	12.00	0.00	0	0		
									point41	41	3,864.2	931.0	160.00	12.00	0.00	0	0		
									point42	42	3,719.5	802.9	160.00	12.00	0.00	0	0		
									point43	43	3,581.8	953.1	160.00	12.00	0.00	0	0		
									point44	44	3,540.1	1,071.2	160.00	12.00					
Barrier26	W	0.00	99.99	0.00				0.00	point172	172	4,086.7	861.7	160.00	12.00	0.00	0	0		
									point50	50	4,232.5	705.5	160.00	12.00	0.00	0	0		
									point51	51	4,520.6	870.4	160.00	12.00	0.00	0	0		
									point52	52	4,472.0	988.4	160.00	12.00					
Barrier27	W	0.00	99.99	0.00				0.00	point174	174	3,960.0	832.2	160.00	12.00	0.00	0	0		
									point54	54	4,187.3	604.8	160.00	12.00	0.00	0	0		
									point55	55	4,044.1	434.0	160.00	12.00	0.00	0	0		
									point56	56	3,809.9	671.0	160.00	12.00					

Dudek
MG
1 November 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 10649
RUN: LADWP West LA Yard Proj - Fut wP 1019
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
ST2	2	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0
ST3	3	1	0.0	48.9	66	48.9	10	----	48.9	0.0	8	-8.0
ST4	4	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0
ST5	5	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0
ST6	6	1	0.0	54.1	66	54.1	10	----	54.1	0.0	8	-8.0
ST7	7	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0
M1	8	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
M2	9	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
M3	10	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
M4	11	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	11	0.0	0.0	0.0
All Impacted	3	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

APPENDIX F

TIA & Assessment Letter

Appendix F

Traffic Impact Assessment

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LINSCOTT LAW & GREENSPAN
engineers

TRAFFIC IMPACT STUDY

LADWP WEST LOS ANGELES YARD DEMOLITION & CONSTRUCTION PROJECT

City of Los Angeles, California
February 27, 2018

Prepared for:

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TRAFFIC IMPACT STUDY
LADWP WEST LOS ANGELES
DEMOLITION & CONSTRUCTION PROJECT

City of Los Angeles, California
February 27, 2018

1.0 INTRODUCTION

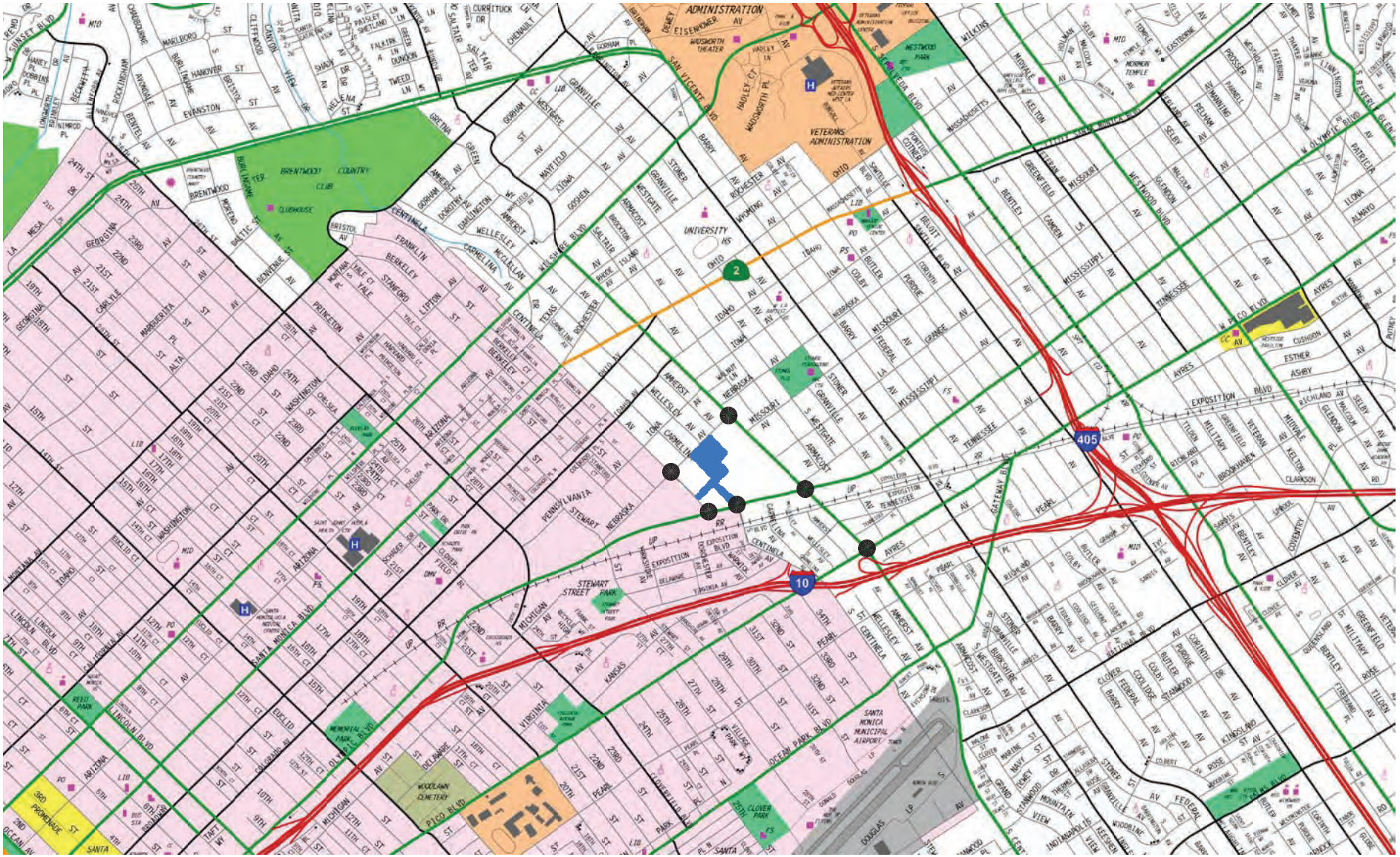
This traffic analysis has been conducted to identify and evaluate the potential traffic impacts of the proposed City of Los Angeles Department of Water & Power (LADWP) West Los Angeles Yard Demolition & Construction project ("proposed project" herein). The proposed project site is located at 12300 West Nebraska Avenue in the West Los Angeles Community Plan area of the City of Los Angeles, California. Additionally, the project site also is located within the West Los Angeles Transportation Improvement and Mitigation Specific Plan[1] (West LA TIMP) area. The project site is bounded by Nebraska Avenue to the north, Olympic Boulevard to the south, existing commercial development to the east, and Centinela Avenue to the west. The proposed LADWP West Los Angeles Yard Demolition & Construction project location and general vicinity are shown in ***Figure 1-1***.

1.1 Traffic Study Overview

The traffic analysis follows City of Los Angeles traffic study guidelines[2] and is consistent with traffic impact assessment guidelines set forth in the Los Angeles County Congestion Management Program[3]. This traffic analysis evaluates potential project-related impacts at six key intersections in the vicinity of the project site. The study intersections were determined in consultation with City of Los Angeles Department of Transportation (LADOT) staff. The Critical Movement Analysis method was used to determine Volume-to-Capacity ratios and corresponding Levels of Service for the study intersections. A review was also conducted of Los Angeles County Metropolitan Transportation Authority freeway and intersection monitoring stations to determine if a Congestion Management Program transportation impact assessment analysis is required for the proposed project. In addition, a screening analysis also was completed as it relates to the State of California Department of Transportation (Caltrans) highway system and the ramp intersections under Caltrans jurisdiction were evaluated based on the Highway Capacity Manual (HCM) operational analysis methodologies.

This study (i) presents existing traffic volumes, (ii) includes existing traffic volumes with the forecast traffic volumes from the proposed project, (iii) recommends mitigation measures, where necessary, (iv) forecasts future cumulative baseline traffic volumes, (v) forecasts future traffic volumes with the proposed project, (vi) determines future forecast with project-related impacts, and (vii) recommends mitigation measures, where necessary.

[1] *West Los Angeles Transportation Improvement and Mitigation Specific Plan*, Ordinance No. 171,492, adopted March 8, 1997.
[2] *Transportation Impact Study Guidelines*, City of Los Angeles Department of Transportation, December 2016.
[3] *2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority, October 2010.



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MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITE

STUDY INTERSECTION

FIGURE 1-1
VICINITY MAP

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LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

1.2 Study Area

Upon coordination with LADOT staff, a total of six study locations have been identified for this evaluation. The six study locations provide local access to the study area and define the extent of the boundaries for this traffic impact analysis. Further discussion of the existing street system and study area is provided in Section 4.0.

The general location of the project in relation to the study locations and surrounding street system is presented in *Figure 1–1*. The traffic analysis study area is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the proposed project as defined by the Lead Agency. In the traffic engineering practice, the study area generally includes those intersections that are:

a. Immediately adjacent or in close proximity to the project site;

b. In the vicinity of the project site that are documented to have current or projected future adverse operational issues; and

c. In the vicinity of the project site that are forecast to experience a relatively greater percentage of project-related vehicular turning movements (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, the proposed LADWP West Los Angeles Yard Demolition & Construction project peak hour vehicle trip generation, the anticipated distribution of project vehicular trips, and existing intersection/corridor operations. The approved Memorandum of Understanding for the formal traffic study scoping process with LADOT staff is contained in ***Appendix A***.

1.3 Project Overview

The West Los Angeles District Yard Project is a facility improvement project being proposed by the LADWP. The project would demolish six structures on-site including the district office, warehouse, break room, locker room, and fleet shop. Three new buildings would be constructed in their place: a warehouse, district office, and fleet shop. These new buildings would consolidate all of the functions of the demolished buildings. Beneath the proposed new buildings a single-level underground parking structure with a total of 204 parking stalls would be installed. Additionally, the straddle crane located within the existing yard would be relocated toward the southeast section of the District Yard closer to the driveway along Olympic Boulevard. At the existing on-site fueling station, also in along the access driveway connecting the project site to Olympic Boulevard, the existing unleaded and diesel fuel tanks would remain above ground, and a new compressed natural gas (CNG) tank would be installed aboveground. All fleet vehicle parking, a total of 32 oversized parking spaces, would be located on a surface parking lot.

1.4 Senate Bill 743 Overview

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 created a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code section 21000 and following), which could include analysis based on project vehicle miles traveled (VMT) rather than impacts to intersection Level of Service. On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis. The intent of the original guidance documentation was geared first towards projects located within areas that are designated as transit priority areas, to be followed by other areas of the State. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting some new revisions to the state CEQA Guidelines. OPR has submitted the proposed updates to the CEQA Guidelines to the State's Natural Resources Agency (NRA). Over the coming months, the NRA will conduct a formal administrative rulemaking process on the CEQA Guidelines. That rulemaking process will entail additional public review and may lead to further revisions. OPR then would update the technical advisory as appropriate. OPR has therefore not issued any final revisions to the state CEQA Guidelines to implement the CEQA traffic analysis component of SB 743; thus, the analysis in this study utilizes existing, long-established protocols in accordance with CEQA, the existing state CEQA Guidelines, and the City's CEQA Thresholds Guide. (See Public Resources Code section 21099(b).)

This is also consistent with the current City of Los Angeles traffic impact analysis procedures. In August 2014, Councilmember Mike Bonin introduced a motion directing the Department of City Planning (DCP) and LADOT to begin preparation for the shift to VMT analysis (CF 14-1169). DCP subsequently contracted with an outside consultant to develop the strategy and methodology in order to establish the tools necessary to bring the City into compliance with the state mandate. The City has recently conducted beta testing of the recommended VMT tools/metrics that will be used to conduct VMT analyses in traffic studies for projects. It is anticipated that in mid to late 2018, City staff will present the CEQA Appendix G environmental checklist update to the City Council, which will likely lead to the adoption of new VMT-based significance thresholds and its subsequent incorporation into the City's CEQA Threshold Guide in late-2018 to early 2019. Following adoption, projects must then comply with the updated transportation evaluation framework, thus bringing the City into compliance with the state mandate. The City's VMT tools/metrics have not been finalized as of the writing of this traffic study. Should the City finalize those tools/metrics prior to the City decisionmakers' consideration of the proposed project's entitlement, this traffic study may be updated in consultation with LADOT to include a VMT analysis and a determination of whether the proposed project would result in significant impacts based on VMT-based significance thresholds. While any agency can immediately apply the proposed new CEQA Guidelines section (proposed Guidelines section 15064.3), a statewide application of that new section would not be required until January 1, 2020.

2.0 PROJECT DESCRIPTION[4]

2.1 Project Location

The 6.3-acre project site is located at 12300 Nebraska Avenue in the City of Los Angeles. The project is located in Council District No. 11 and in the West Los Angeles Community Plan area, as well as within the WLA TIMP. The project site is bounded by Nebraska Avenue to the north, Olympic Boulevard to the south, existing commercial development to the east, and Centinela Avenue to the west. The proposed LADWP West Los Angeles Yard Demolition & Construction project location and general vicinity are shown in *Figure 1-1*.

2.2 Project Description

2.2.1 *Proposed Project Description*

The proposed West Los Angeles District Yard project is a facility improvement project that is being proposed by the LADWP. The purpose of this project is to enhance the workplace quality, improve safety, provide functional efficacy and efficiency, integrate sustainability into the project design, and enhance site beautification. The current structures on site are aging and will be unable to support the planned increase in staff at the facility nor does the current facility have adequate storage capacity for existing equipment. Furthermore, the current site layout does not allow for much free space for fleet vehicles to maneuver around. The proposed project would allow for more capacity for housing employees and more open space for vehicles, thereby preventing congestion at the facility and improving overall operating conditions, workflow and safety. The project would involve the demolition of all existing structures and construction of new buildings on the same site as the existing West Los Angeles District Yard. An aerial photograph of the existing West Los Angeles District Yard is contained in ***Figure 2-1***.

The structures proposed to be demolished are the existing district office, warehouse, break room, locker room, and fleet shop. Three new buildings would be constructed in their place: a warehouse and fleet shop (22,915 square feet), a district yard office (19,900 square feet), and an exterior storage area (18,500 square feet). These new buildings would consolidate all of the functions of the demolished buildings. Additionally, the existing straddle crane located at the yard would be moved toward the section of the District Yard closer to the entrance along Olympic Boulevard. The proposed reconfiguration of the West Los Angeles District Yard site is shown in ***Figure 2-2***, Site Plan. The proposed structures would be one to two stories in height with beige exteriors. All buildings would include photovoltaic solar panels on rooftops. Finally, one existing tree is proposed to be removed, while three existing trees would remain. New trees would be added to the project site in landscape designated areas.

One existing fueling station is present at the yard site. The existing unleaded and diesel fuel tanks that are part of the existing fueling station would remain above ground, and a new compressed natural gas tank would be placed aboveground. Additionally, an approximately 75,284 square-foot

[4] Source: Dudek.

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MAP SOURCE: GOOGLE EARTH

OVERALL LADWP WLA FACILITY

PORTION OF SITE TO BE IMPROVED

EXISTING DRIVEWAY

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FIGURE 2-1
AERIAL PHOTOGRAPH OF EXISTING SITE

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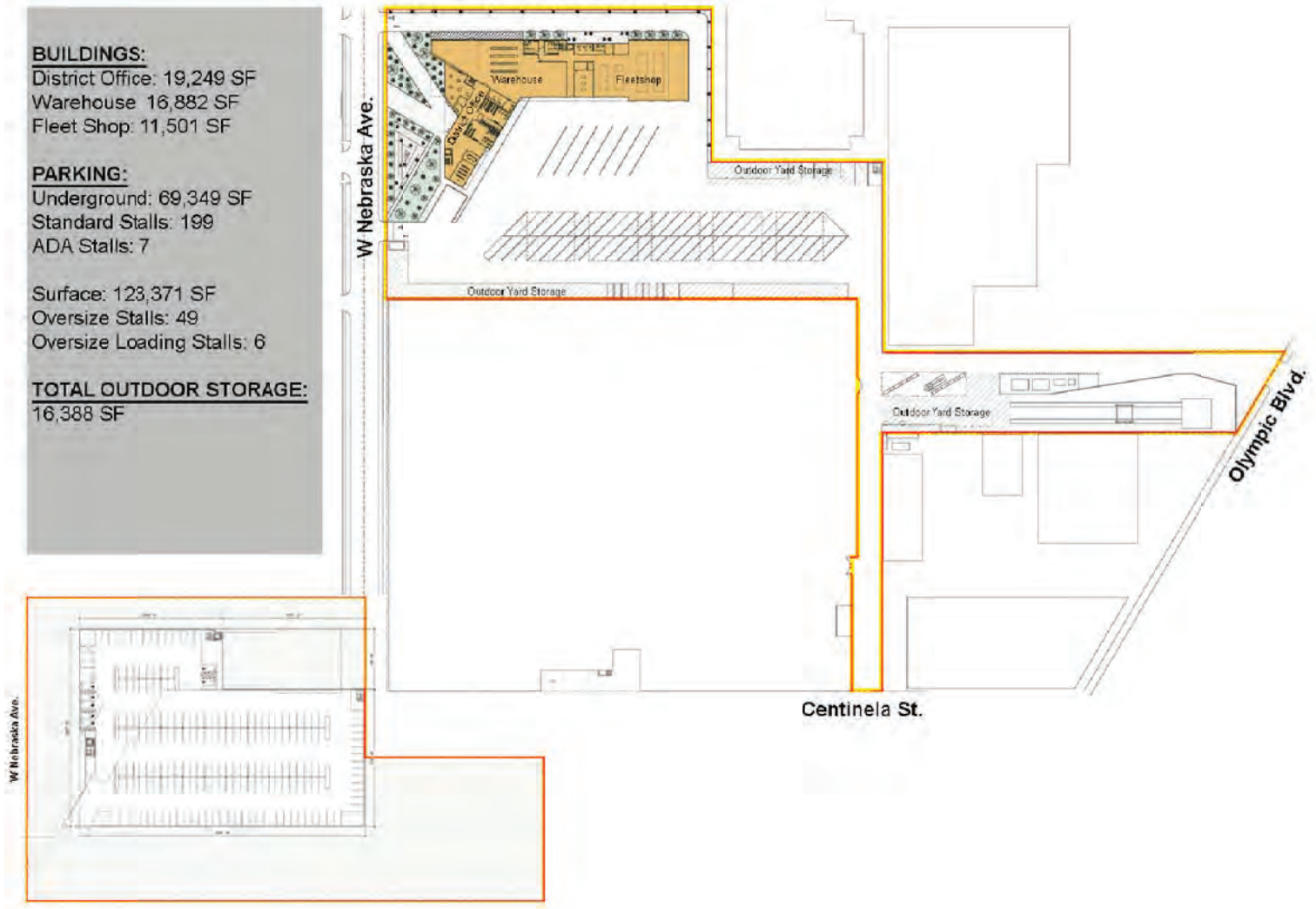

MAP SOURCE: LADWP

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FIGURE 2-2
SITE PLAN

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LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

underground parking structure would be constructed. The underground parking lot would be one level with a total of 204 parking spaces to be used by employee vehicles; the lot would also include new electric vehicle charging stations. All fleet vehicle parking, a total of 55 oversized parking spaces, would be located on the surface parking lot.

2.2.2 *Facility Operations*

The West Los Angeles service area for this facility is bounded to the north by Mulholland Drive, to the south by Imperial Highway, to the east by Robertson Boulevard, and to the west by Vista Del Mar Boulevard. A map depicting the West Los Angeles service area is contained in ***Figure 2-3***. A total of 120 employees are currently assigned to this facility, including 105 fleet services employees. Upon build-out of the project, 200 employees would be assigned to this facility. The proposed project would operate during the following hours:

- Monday and Friday: 6:30 AM – 4:00 PM
- Tuesday and Thursday: 6:30 AM – 7:00 PM
- Saturday and every other Sunday: 6:30 AM – 4:30 PM

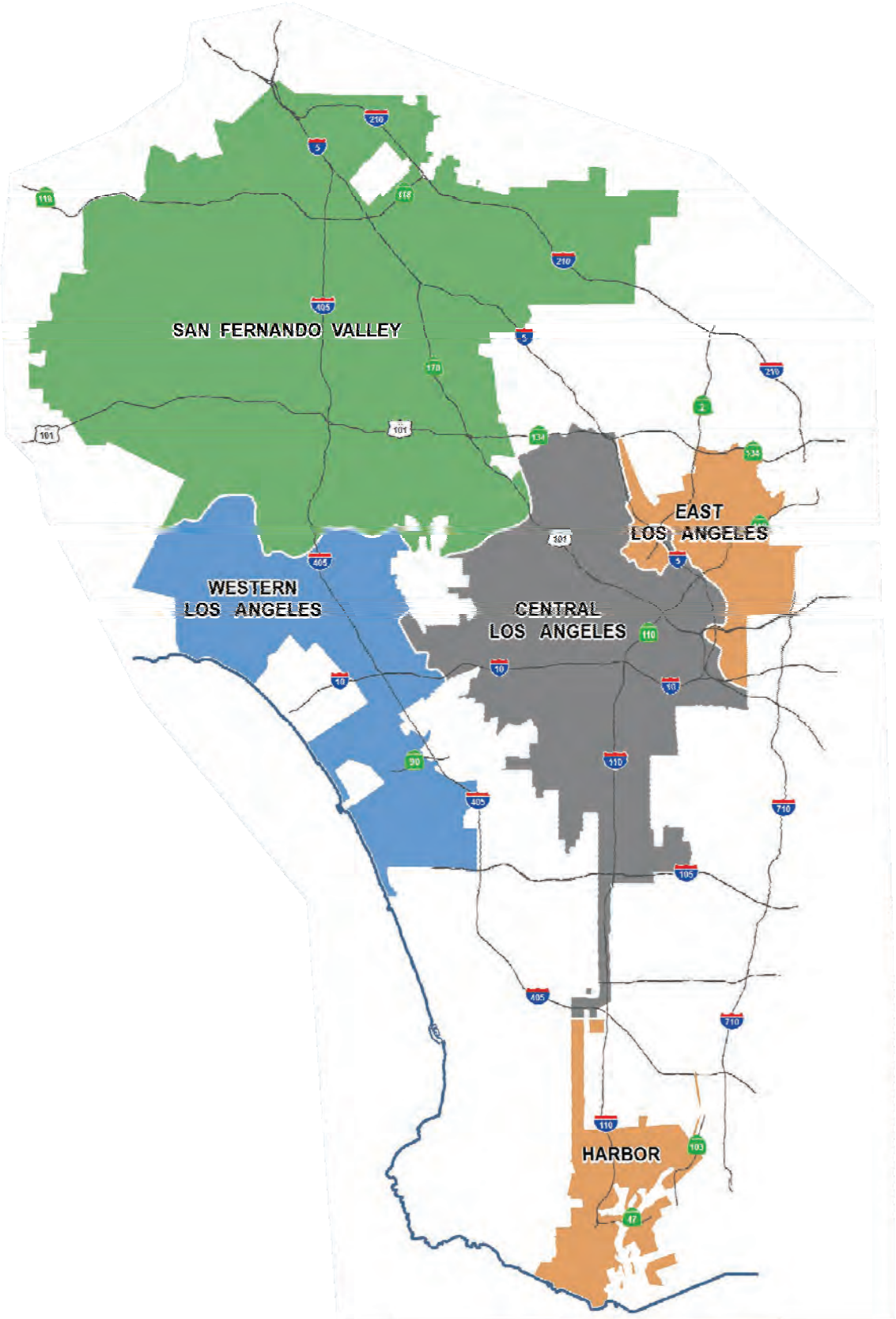
2.2.3 *Project Construction*

The project would be carried out in two phases in order for the district yard to remain operational throughout construction. Phase 1, which would last approximately three years (October 2019 through December 2023), would involve both demolition of the existing structures and construction of a portion of the proposed project. Phase 1 demolition is scheduled from February 2020 through October 2023. During Phase 1, the district office building, locker room, break room, and the surface employee parking lot would be removed to facilitate the excavation and construction of the new underground parking structure. Once the parking structure is completed, the new district office building and combined warehouse and fleet shop would be constructed.

Phase 2, which would last approximately 3.5 years, would involve the demolition of the remaining structures, including the warehouses located in the southwestern portion of the site as well as the fleet shop, followed by construction of the department vehicle parking area, exterior storage areas, and relocation of the straddle crane. Phase 2 demolition is scheduled for December 2023 through August 2024. Phase 2 construction is scheduled from September 2024 through June 2027.

Construction vehicle access to the yard would be restricted to the entrances located on Centinela Avenue and Olympic Boulevard; employee access to the yard would be via Nebraska Avenue. No construction vehicles would access the site via Nebraska Avenue.

Equipment used for the construction of the proposed project would, at a minimum, include two excavators with thumb attachments, two dozers, one or two drill rigs, two cranes, one backhoe, one forklift, one padfoot compactor, one soil compactor, one loader, one bobcat with broom attachment, one water truck, two dump trucks, and one flatbed truck. It is assumed construction equipment



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MAP SOURCE: LADWP

FIGURE 2-3
WEST LOS ANGELES YARD SERVICE AREA

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would operate up to eight hours per day and that two to four vendor trips would be averaged daily during both construction phases of the project. Best management practices such as silt fencing, sand bags, filter fabrics, drain sock, and water trucks for dust control would be implemented during construction of the proposed project.

3.0 SITE ACCESS AND CIRCULATION

3.1 Vehicular Site Access

As shown in *Figure 2-1*, the portion of the LADWP West Los Angeles Yard Demolition & Construction project site that is planned to be improved contains a total of five driveways, including three driveways on Nebraska Avenue, one driveway on Centinela Avenue, and one driveway that essentially forms the north leg of the Centinela Avenue East/Olympic Boulevard intersection. All five driveways are currently controlled by either manual or automatic gates that are operated by LADWP. There are no planned changes in driveway locations or operations, nor in the site access and circulation scheme for employees, vendors and visitors, as part of the proposed project.

3.2 Pedestrian Access

The LADWP West Los Angeles Yard Demolition & Construction project is located within the Sawtelle district of the West Los Angeles Community Plan area. The project is well-located to encourage pedestrian activity and walking as a transportation mode.[5.] The project site is situated within easy walking distance to several established residential areas as well as other retail, restaurant, and other commercial businesses within the area. The site's proximity both to nearby residential areas and amenities on the commercial corridors, as well as the existing public sidewalks throughout the area roadway system, will promote and encourage walking. The project will connect to the adjacent sidewalk network via the Nebraska Avenue and Centinela Avenue property frontages. Additionally, regional and local public bus transit stops are provided nearby on Centinela Avenue, Bundy Drive, Nebraska Avenue, and Olympic Boulevard which will promote pedestrian connectivity with the project site.

3.3 Bicycle Access

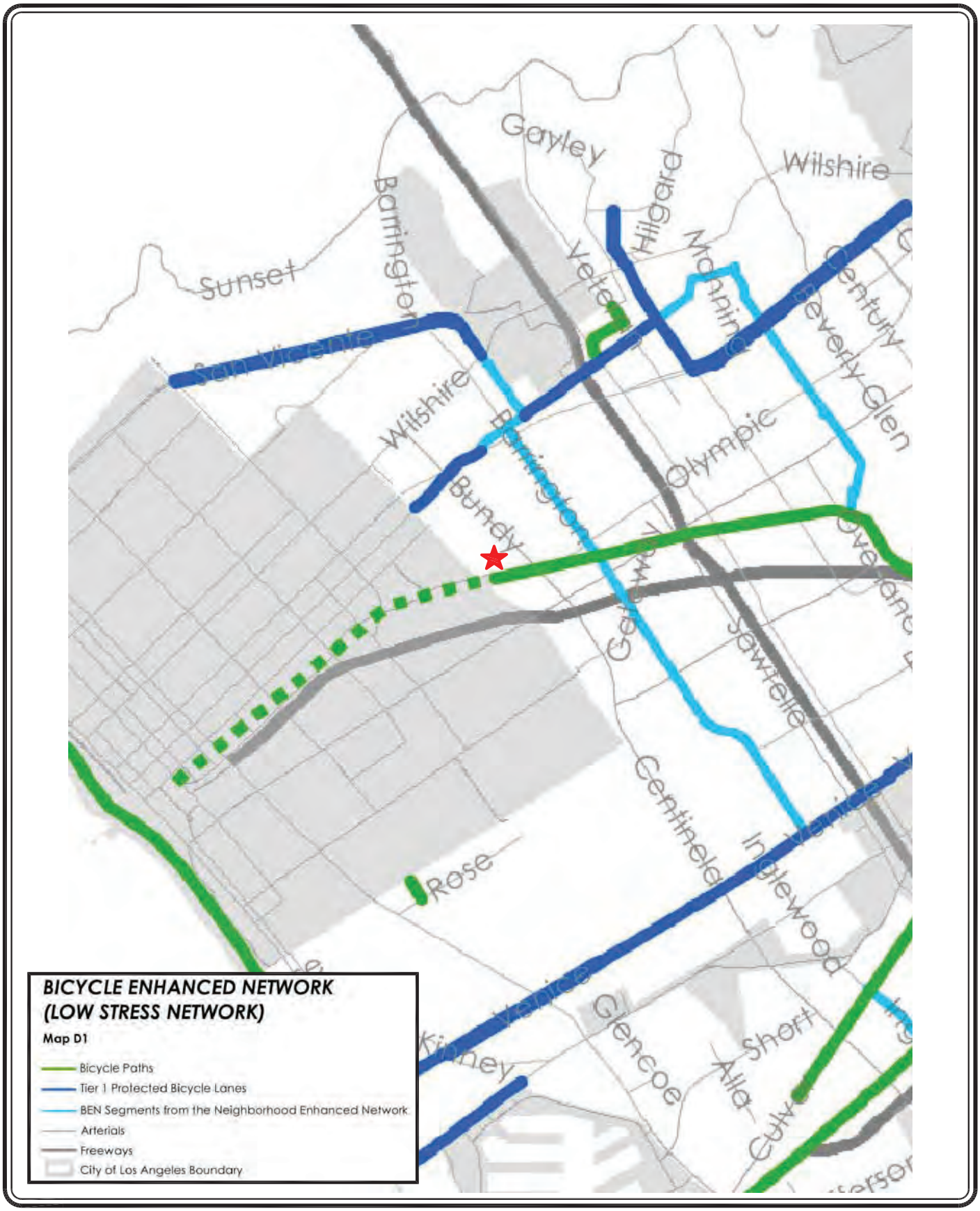
Bicycle access to the project site is facilitated by the City of Los Angeles bicycle roadway network.[6] Existing or proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, Proposed Bicycle Routes, Bicycle Friendly Streets, etc.) in the City's 2010 Bicycle Plan are located within an approximate one-mile radius from the project site.[7] It is important to note that the 2010 Bicycle Plan goals and policies have been folded into the Mobility 2035 Plan to reflect a commitment to a balanced, multi-modal viewpoint. The location of the City of Los Angeles

[5] For example, refer to http://www.walkscore.com/, which generates a walkability score of approximately 82 (Very Walkable) out of 100 for the project site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, etc. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for walking.

[6] Walk Score also calculates a bike score based on the topography, number and proximity of bike lanes, etc., near the project site. For example, refer to http://www.walkscore.com/, which generates a bike score of approximately 63 (Bikeable) out of 100 for the project site. Walk Score calculates the bike score of an address by locating nearby bicycling facilities as well as connections to bus/rail transit routes and stops. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for bicycling.

[7] Sources: City of Los Angeles Mobility Plan 2035 (2015), and City of Los Angeles Bicycle Parking Plan; www.labikeplan.org. As noted in the Mobility Plan 2035, the 2010 Bicycle Plan and policies have been folded into the Mobility Plan to reflect a commitment to a balanced, multi-modal viewpoint.

bicycle enhanced network (low stress network) in close proximity to the project site and in the surrounding area is shown in ***Figure 3-1***. The location of the City of Los Angeles bicycle lane network in close proximity to the project site and in the surrounding area is illustrated in ***Figure 3-2***. Use of bicycles as a transportation mode to and from the project site should be encouraged by the provision of ample and safe parking. The type of spaces and dimensions will be provided based on City Code requirements (refer to Los Angeles Municipal Code Sections 12.21.A.16 and 12.21 A.4(c)), as well as to meet the needs of a variety of bicycles.



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MAP SOURCE: CITY OF LOS ANGELES MOBILITY PLAN 2035

PROJECT SITES

FIGURE 3-1
CITY OF LOS ANGELES BICYCLE ENHANCED NETWORK (LOW STRESS NETWORK)

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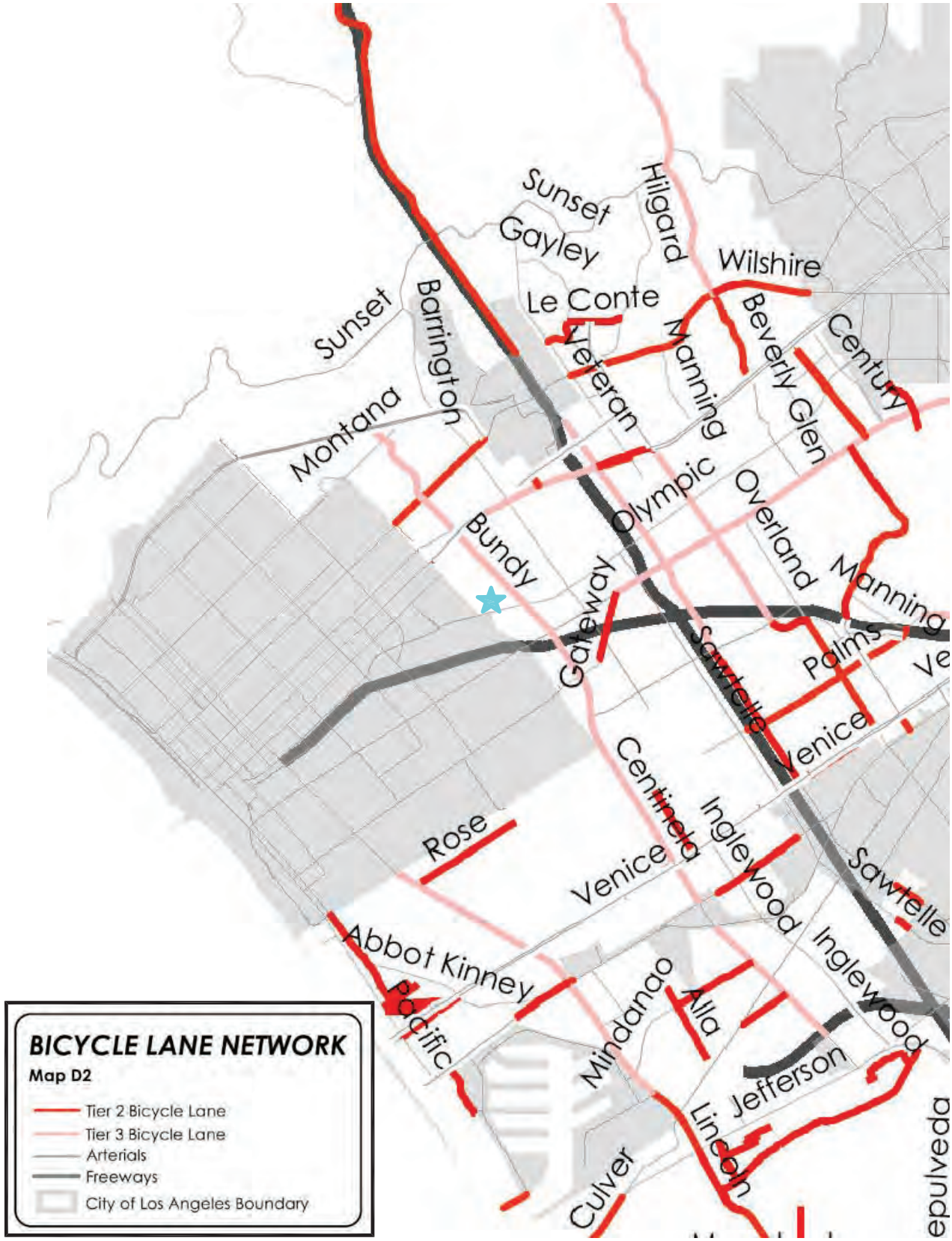

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MAP SOURCE: CITY OF LOS ANGELES MOBILITY PLAN 2035

PROJECT SITES

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FIGURE 3-2
CITY OF LOS ANGELES
PROPOSED BICYCLE LANE NETWORK
LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

4.0 EXISTING STREET SYSTEM

4.1 Regional Highway System

Regional access to the project site is provided by Interstate 405 (I-405) Freeway and I-10 Freeway, as shown in *Figure 1-1*. A northbound off-ramp and a southbound on-ramp are provided for I-405 Freeway at Santa Monica Boulevard and Olympic Boulevard east of the project site. A brief description of I-405 Freeway and I-10 Freeway is provided in the following paragraphs.

I-405 (San Diego) Freeway is a north-south oriented freeway connecting the North Los Angeles County area to the north to Orange County to the south. The San Diego Freeway generally contains four to five mainline freeway lanes in each direction along with auxiliary lanes in the project vicinity. Within the project study area, northbound and southbound connecting ramps are provided at Wilshire Boulevard, Santa Monica Boulevard and Olympic Boulevard. A full interchange with the I-10 Freeway is located southwest of the project study area.

I-10 (Santa Monica) Freeway is a major east-west oriented freeway connecting Santa Monica to the west to the Inland Empire and beyond to the east. The Santa Monica Freeway generally contains four mainline freeway lanes in each direction along with auxiliary lanes in the project vicinity. In the eastbound direction on the Santa Monica Freeway, off-ramps are provided at 20th Street and Pico Boulevard. In the westbound direction on the Santa Monica Freeway, off-ramps are provided at Bundy Drive, Centinela Avenue and Cloverfield Boulevard.

4.2 Local Street System

Immediate access to the project site is via Nebraska Avenue, Olympic Boulevard and Centinela Avenue. The list of the study intersections selected in consultation with LADOT staff for analysis of potential impacts related to the proposed project is presented in ***Table 4-1***. The study intersections selected for analysis in the traffic study also are noted in *Figure 1-1*. All of the existing study intersections are presently controlled by traffic signals. The existing roadway configurations and intersection controls at the study intersections are displayed in ***Figure 4-1***.

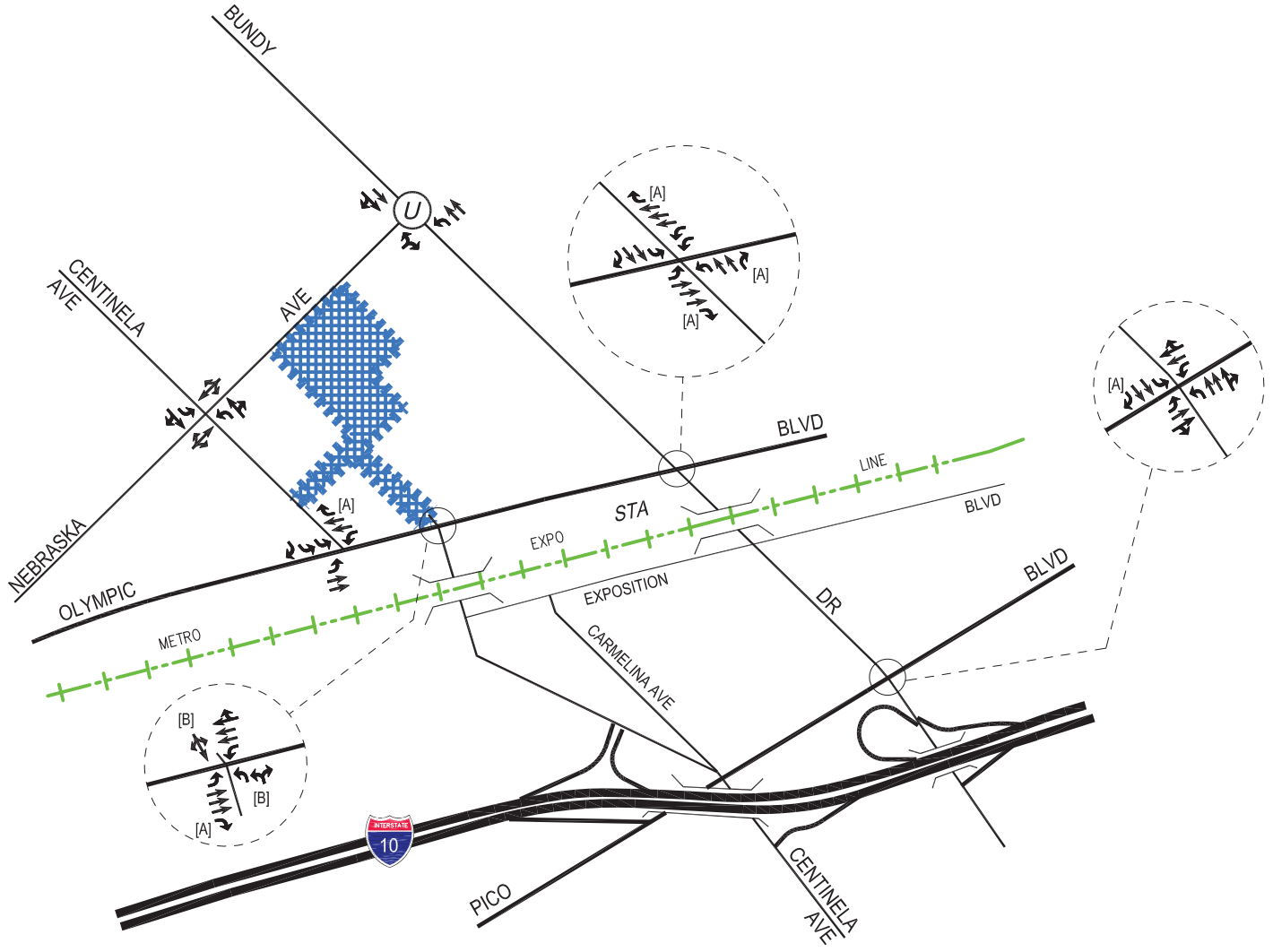
4.3 Roadway Classifications

The City of Los Angeles utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.

Table 4-1
LIST OF STUDY INTERSECTIONS

NO.	INTERSECTION	TRAFFIC CONTROL	JURISDICTION(S)
1	Centinela Avenue / Nebraska Avenue	Signalized	City of Los Angeles
2	Centinela Avenue / Olympic Boulevard (Northbound)	Signalized	City of Los Angeles
3	Centinela Avenue / Olympic Boulevard (Southbound)	Signalized	City of Los Angeles
4	Bundy Drive / Nebraska Avenue	Unsignalized	City of Los Angeles
5	Bundy Drive / Olympic Boulevard	Signalized	City of Los Angeles
6	Bundy Drive / Pico Boulevard	Signalized	City of Los Angeles



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PROJECT SITE

U UNSIGNALIZED INTERSECTION

[A] OVERLAP PHASE

[B] SPLIT PHASE OPERATION

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FIGURE 4-1
EXISTING LANE CONFIGURATIONS

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commute traffic.

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

4.4 Roadway Descriptions

A review of the important roadways in the project site vicinity and study area are summarized in ***Table 4-2***. As indicated in *Table 4-2*, the important roadways within the project study area were reviewed in terms of the number of lanes provided, posted speed limits, etc. Additionally, the roadway classifications also are presented in *Table 4-2*.

4.5 Existing Transit Services[8]

Public bus transit service is provided within the LADWP West Los Angeles Yard Demolition & Construction project study area. Public bus transit service is currently provided by Los Angeles County Metropolitan Transit Authority (Metro) and City of Santa Monica Big Blue Bus. A summary of the existing transit service, including the transit route, destinations, and peak hour headways is presented in ***Table 4–3***. The existing public transit routes in the LADWP West Los Angeles Yard Demolition & Construction project site vicinity are illustrated in ***Figure 4–2***.

[8] Walk Score also calculates a transit score based on the number and proximity of bus and rail routes near the project site. For example, refer to http://www.walkscore.com/, which generates a transit score of approximately 67 (Good Transit) out of 100 for the project site. Walk Score calculates the transit score of an address by locating nearby bus/rail transit routes and stops. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for using transit service.

Table 4-2
EXISTING ROADWAY DESCRIPTIONS

Roadway	Classification [1]	Travel Lanes		Median Types [4]	Speed Limit
		Direction [2]	No. Lanes [3]		
Centinela Avenue					
Wilshire Blvd to I-10 Fwy Ramps	Collector Street	N-S	2	2WLT	30
I-10 Fwy Ramps to Ocean Park Blvd	Collector Street	N-S	4	N/A	30
Bundy Drive					
Wilshire Blvd to Airport Ave	Avenue I	N-S	4	2WLT	35
Nebraska Avenue					
Centinela Ave to Beloit Ave	Collector Street	E-W	2	N/A	25
Olympic Boulevard					
Centinela Ave to Century Park East	Boulevard II	E-W	6	2WLT	35
Pico Boulevard					
Centinela Ave to Gateway Blvd	Avenue I	E-W	4	2WLT	35
Gateway Blvd to Sepulveda Blvd	Avenue I	E-W	6	N/A	35

Notes:
[1] Roadway classifications obtained from the *City of Los Angeles Mobility Plan 2035,* Adopted January 20, 2016.
[2] Direction of roadways in the project area: NB-SB - northbound and southbound; and EB-WB - eastbound and westbound.
[3] Number of lanes in both directions on the roadway.
[4] Median type of the road: RMI - Raised Median Island; 2WLT - 2-Way Left-Turn Lane; and N/A-Not Applicable.

Table 4-3
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Big Blue Bus Route 5	Santa Monica to Palms via West Los Angeles, Rancho Park, Century City and Cheviot Hills	Centinela Avenue, Bundy Drive, Olympic Boulevard	EB WB	3 3	3 3
Big Blue Bus Route 7	Santa Monica to Mid City via West Los Angeles, Century City and Beverlywood	Bundy Drive, Pico Boulevard	EB WB	4 4	4 4
Big Blue Bus Rapid 10	Santa Monica to Downtown Los Angeles via West Los Angeles	Bundy Drive, Pico Boulevard	EB WB	3 3	3 3
Big Blue Bus Route 14	Playa Vista to Brentwood via Culver City, Mar Vista and West Los Angeles	Bundy Drive, Nebraska Avenue, Olympic Boulevard, Pico Boulevard	NB SB	4 4	4 4
Big Blue Bus Route 15	West Los Angeles to Brentwood	Bundy Drive, Olympic Boulevard, Pico Boulevard	NB SB	2 2	2 2
Metro Expo Line	Downtown Los Angeles to Santa Monica via Exposition Park, Jefferson Park, West Adams, Culver City, Century City, and West Los Angeles	Bundy Drive, Olympic Boulevard	EB WB	10 10	10 10
			Total	52	52

[1] Sources: City of Santa Monica (Big Blue Bus) and Los Angeles County Metropolitan Transportation Authority (Metro) websites, 2017.

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MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY (METRO) WEBSITE 2017

★ PROJECT SITE

FIGURE 4-2
EXISTING TRANSIT ROUTES

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5.0 TRAFFIC COUNTS

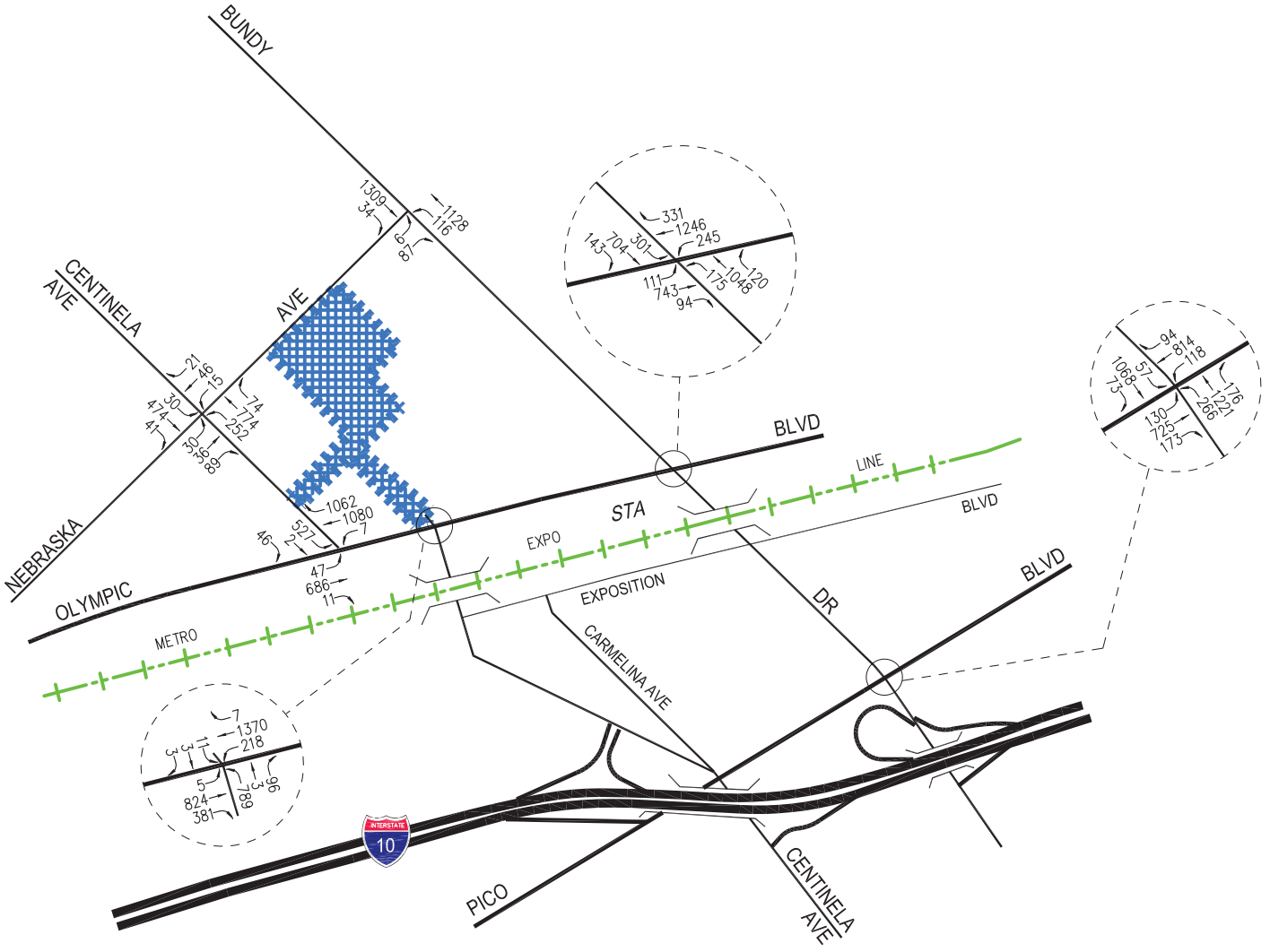
Manual counts of vehicular turning movements were conducted at each of the study intersections during the weekday morning (AM) and afternoon (PM) commute periods to determine the peak hour traffic volumes. The manual counts were conducted by an independent traffic count subconsultant (City Traffic Counters) at the study intersections from 7:00 to 10:00 AM to determine the weekday AM peak commute hour, and from 3:00 to 6:00 PM to determine the weekday PM peak commute hour. In conjunction with the manual turning movement vehicle counts, a count of bicycle and pedestrian volumes were also collected during the peak periods. It is noted that all of the traffic counts were conducted when local schools were in session. Traffic volumes at the study intersections show the typical peak periods between 7:00 to 10:00 AM and 3:00 to 6:00 PM generally associated with metropolitan Los Angeles weekday peak commute hours.

The weekday and weekend peak hour manual counts of vehicle movements at the study intersections are summarized in ***Table 5-1***. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figures 5-1*** and ***5-2***, respectively. Summary data worksheets of the manual traffic counts at the study intersections are contained in ***Appendix B***.

Table 5-1
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Centinela Avenue/ Nebraska Avenue	11/16/2017	NB SB EB WB	8:30	1,100 545 155 82	5:00	735 668 452 138
2	Centinela Avenue (West)/ Olympic Boulevard	11/16/2017	NB SB EB WB	8:00	0 575 744 2,149	5:00	0 995 1,146 1,510
3	Centinela Avenue (East)/ Olympic Boulevard	11/16/2017	NB SB EB WB	8:15	888 17 1,210 1,595	4:45	527 34 2,100 1,107
4	Bundy Drive/ Nebraska Avenue	11/16/2017	NB SB EB WB	8:00	1,244 1,343 93 0	4:00	1,348 1,022 193 0
5	Bundy Drive/ Olympic Boulevard	11/16/2017	NB SB EB WB	8:00	1,343 1,148 948 1,822	4:30	1,190 911 1,467 1,661
6	Bundy Drive/ Pico Boulevard	11/16/2017	NB SB EB WB	8:00	1,663 1,198 1,028 1,026	4:45	1,451 1,332 1,259 715

[1] Counts conducted by The Traffic Solution.



PROJECT SITE

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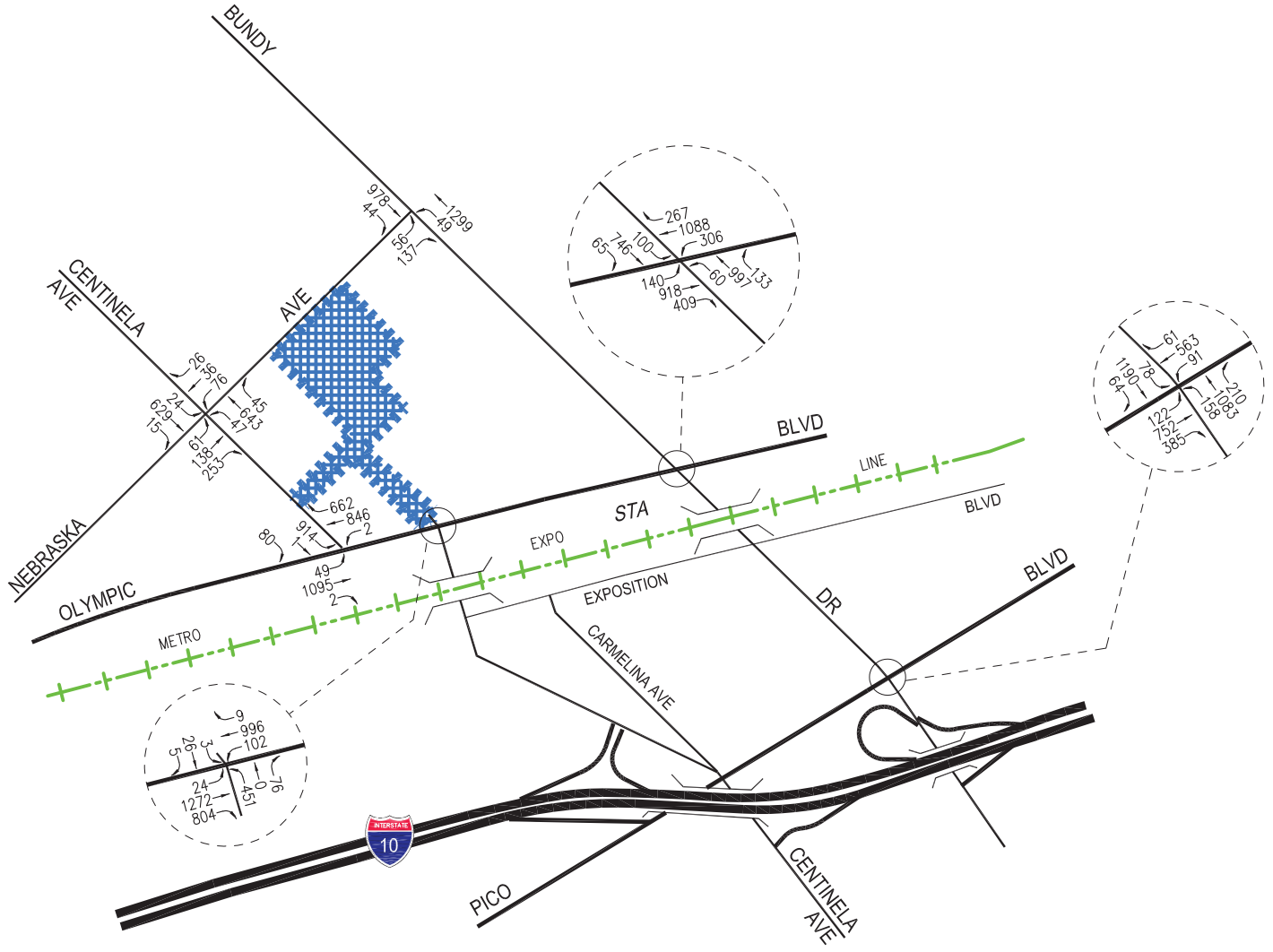
NOT TO SCALE

FIGURE 5-1
EXISTING TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

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FIGURE 5-2
EXISTING TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

6.0 CUMULATIVE DEVELOPMENT PROJECTS

The forecast of future pre-project conditions was prepared in accordance with procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provides two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

Accordingly, the traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast.

6.1 Related Projects

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the City of Los Angeles Departments of Transportation and Planning, as well as the City of Santa Monica. The list of related projects in the project site area is presented in ***Table 6-1***. The location of the related projects are shown in ***Figure 6-1***.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[9]. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 6-1*. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 6-2*** and ***6-3***, respectively.

[9] Institute of Transportation Engineers *Trip Generation* manual, 9th Edition, 2012, Washington, D.C.

Table 6-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
City of Los Angeles												
L1	Proposed	Vons Supermarket 11660 West Santa Monica Boulevard	Supermarket	53,000 GSF	[1]	1,946	51	32	83	45	28	73
L2	Under Construction	Westside Family YMCA 1466 South Westgate Avenue	Recreational Community Center	65,000 GSF	[1]	1,204	52	33	85	27	46	73
L3	Proposed	Pico - Sepulveda Mixed Use 11122 West Pico Boulevard	Apartment Retail Supermarket	538 DU 212,000 GLSF 54,000 GSF	[1]	1,280	9	34	43	88	47	135
L4	Proposed	11600 West Wilshire Boulevard	Medical Office Building	120,874 GSF	[1]	1,280	34	9	43	38	97	135
L5	Under Construction	The Picasso Mixed Use 12029 West Wilshire Boulevard	Apartment Specialty Retail	108 DU 13,000 GLSF	[1]	789	(10)	40	30	39	(3)	36
L6	Proposed	Martin Expo Town Center 12101 West Olympic Boulevard	Apartment Retail Office	516 DU 67,000 GLSF 200,000 GSF	[1]	6,330	227	212	439	241	225	466
L7	Proposed	11421 West Olympic Boulevard	Apartment Retail	89 DU 6,030 GLSF	[1]	682	10	36	46	34	21	55
L8	Under Construction	1900 South Sawtelle Boulevard	Apartment Restaurant	52 DU 3,300 GSF	[1]	327	13	28	41	34	21	55
L9	Proposed	11750 West Wilshire Boulevard	Apartment Retail	376 DU	[1]	(400)	(22)	99	77	(22)	(64)	(86)
L10	Proposed	11800 West Santa Monica Boulevard	Apartment Specialty Retail	175 DU	[1]	1,824	13	64	77	115	89	204
L11	Proposed	2231 South Barrington Avenue	Restaurant Catering Office	6,904 GSF 2,750 GSF 9,731 GSF	[1]	610	24	11	35	34	39	73
L12	Proposed	11355 West Olympic Boulevard	Office	120,242 GSF	[1]	1,246	133	33	166	49	122	171
L13	Proposed	11460 West Gateway Boulevard	Apartment Specialty Retail	128 DU 5,153 GLSF	[1]	1,107	(1)	84	83	51	17	68
L14	Proposed	12300 West Wilshire Boulevard	Medical Office Building	33,392 GSF	[1]	838	17	11	28	24	29	53
L15	Proposed	11750 West Santa Monica Boulevard	Apartment	187 DU	[1]	1,006	(5)	65	60	80	36	116

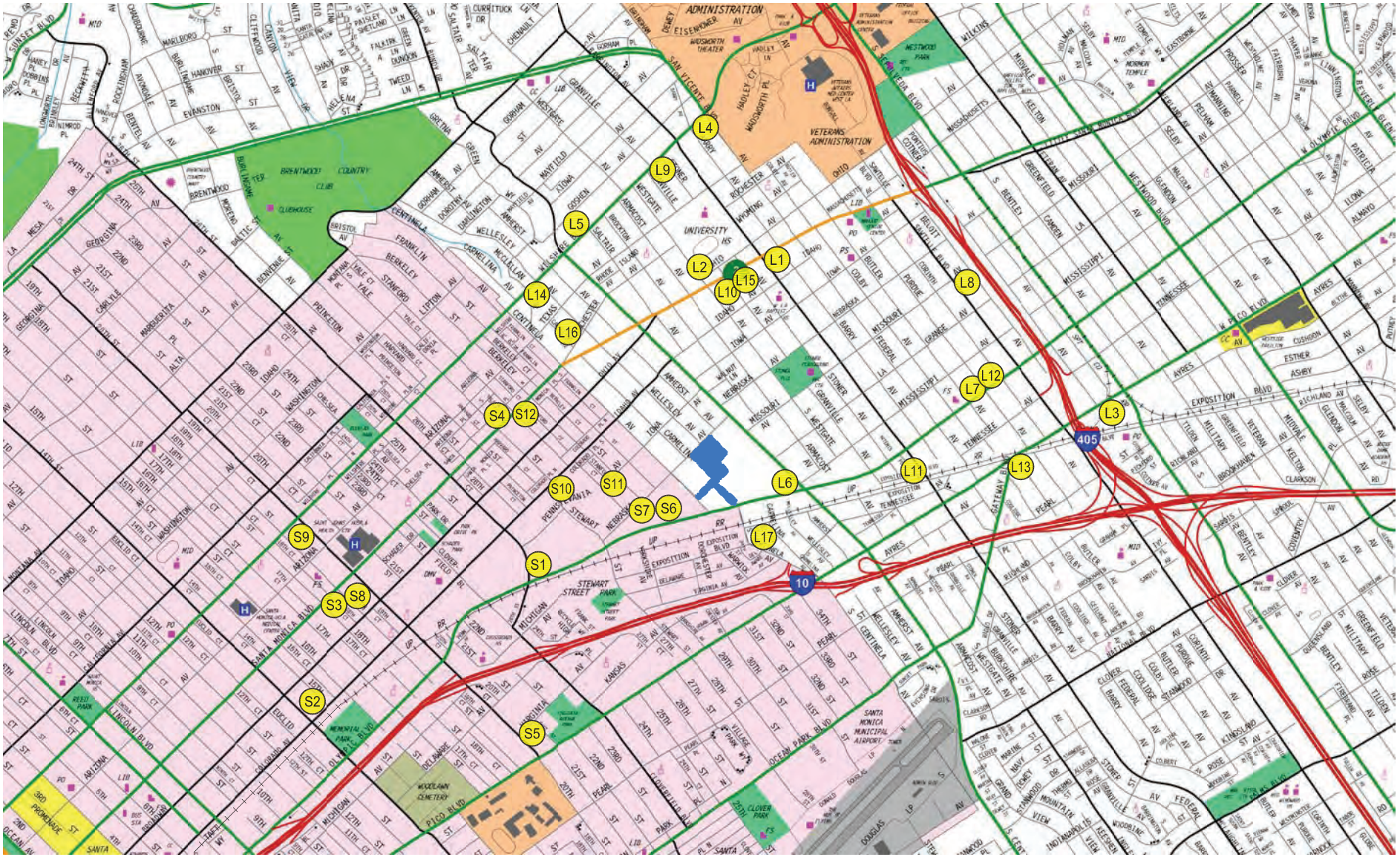
Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
L16	Proposed	12431 West Rochester Avenue	Apartment	50 DU	[1]	333	5	21	26	16	9	25
L17	Proposed	12414 West Exposition Boulevard	Office	70,844 GSF	[1]	584	81	9	90	17	107	124
City of Santa Monica												
S1	Under Construction	Bergamot Transit Village Center 1681 South 26th Street	Shopping Center Office Apartment	84,000 GLSF 567,000 GSF 325 DU	[1]	15,340	607	372	979	564	612	1,176
S2	Proposed	1431 Colorado Avenue	Apartment Retail Restaurant	50 DU 10,475 GLSF 2,110 GSF	[3] [4] [5]	333 447 268	5 6 13	21 4 10	26 10 23	20 19 13	11 20 8	31 39 21
S3	Proposed	1802 Santa Monica Boulevard	Apartment Restaurant Auto Dealer	23 DU 1,390 GSF 13,590 GSF	[3] [5] [6]	153 177 439	2 8 20	10 7 6	12 15 26	9 8 14	5 6 22	14 14 36
S4	Proposed	2901 Santa Monica Boulevard	Apartment Retail	60 DU 5,100 GLSF	[3] [4]	399 218	6 3	25 2	31 5	24 9	13 10	37 19
S5	Proposed	2020 Virginia Avenue	Apartment	21 DU	[3]	140	2	9	11	8	5	13
S6	Proposed	3025 Olympic Boulevard	Apartment Retail Office	174 DU 8,500 GLSF 75,247 GSF	[3] [4] [7]	1,157 363 830	18 5 103	71 3 14	89 8 117	70 15 19	38 17 93	108 32 112
S7	Proposed	3030 Nebraska Avenue	Apartment Office	177 DU 66,100 GSF	[3] [7]	1,177 729	18 91	72 12	90 103	72 17	38 81	110 98
S8	Proposed	1419 19th Street	Medical Office Building	5,342 GSF	[8]	193	10	3	13	5	14	19
S9	Proposed	1242 20th Street	Medical Office Building	110,500 GSF	[8]	3,992	209	55	264	110	284	394
S10	Under Construction	2848-2912 Colorado Avenue	Apartment Retail Restaurant Office	282 DU 19,610 GLSF 4,990 GSF 4,500 GSF	[3] [4] [5] [7]	1,875 837 634 50	29 12 30 6	115 7 24 1	144 19 54 7	114 35 29 1	61 38 20 6	175 73 49 7
S11	Under Construction	2930 Colorado Avenue	Condominiums Apartment Office Retail	216 DU 161 DU 4,250 GSF 20,700 GLSF	[9] [3] [7] [4]	1,255 1,071 47 884	16 16 6 12	79 66 1 8	95 82 7 20	75 65 1 37	37 35 5 40	112 100 6 77

Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
S12	Proposed	3008 Santa Monica Boulevard	Apartment	26 DU	[3]	173	3	10	13	10	6	16
			Retail	3,397 GLSF	[4]	145	2	1	3	6	7	13
TOTAL						54,312	1,889	1,829	3,718	2,279	2,398	4,677

[1] Source: City of Los Angeles Department of Transportation (LADOT), Department of City Planning (LADCP) and City of Santa Monica Planning & Community Development, except as noted below.
The peak hour traffic volumes were forecast based on trip data provided by LADOT and by applying trip rates as provided in the ITE "Trip Generation Manual", 9th Edition, 2012.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 220 (Apartment) trip generation average rates.
[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[5] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
[6] ITE Land Use Code 841 (Automobile Sales) trip generation average rates.
[7] ITE Land Use Code 710 (General Office Building) trip generation average rates.
[8] ITE Land Use Code 720 (Medical-Dental Office Building) trip generation average rates.
[9] ITE Land Use Code 230 (Residential Condominium/Townhouse) trip generation average rates.



NOT TO SCALE

MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITE

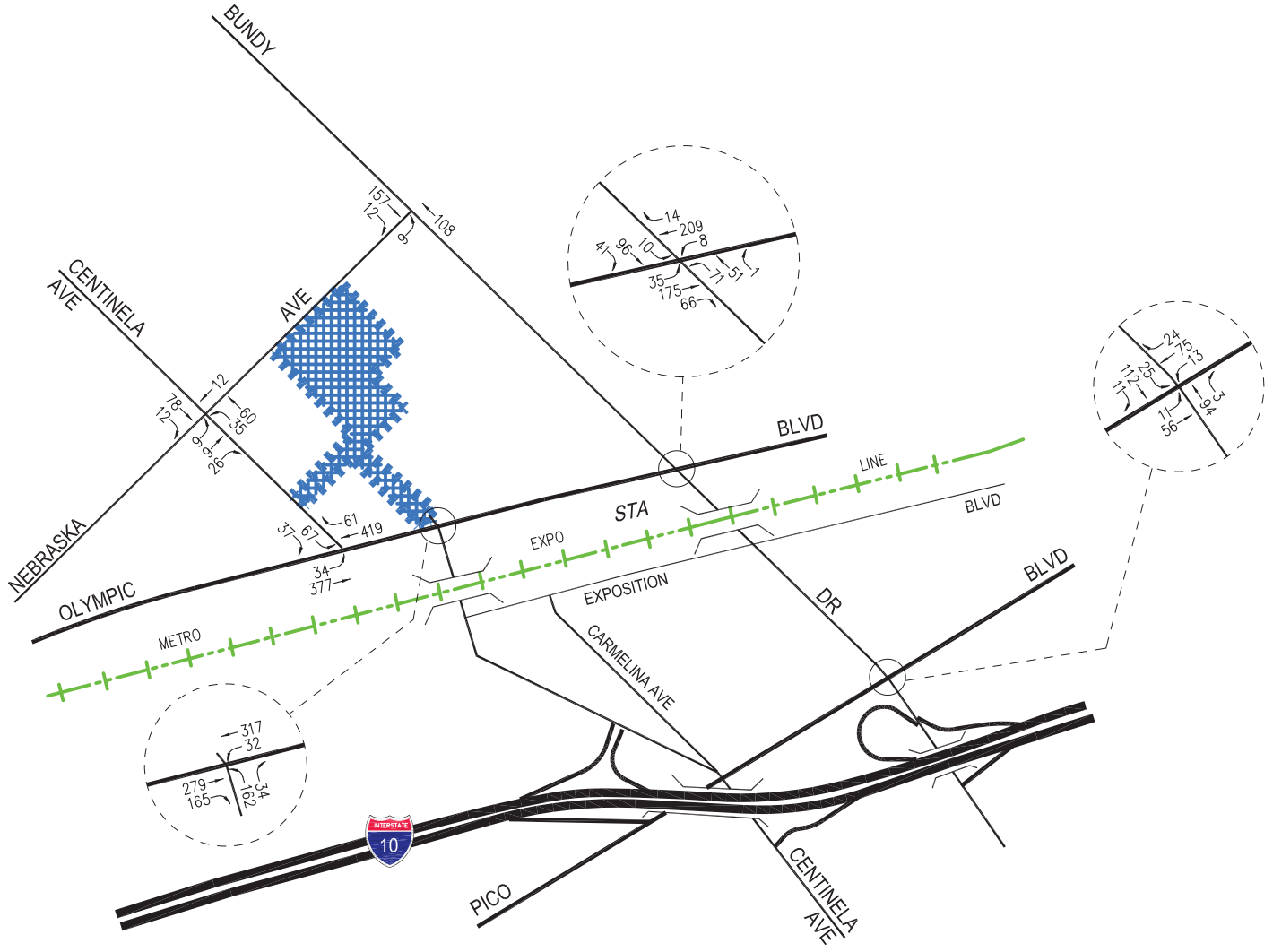
L CITY OF LOS ANGELES RELATED PROJECT

S CITY OF SANTA MONICA RELATED PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 6-1
LOCATION OF RELATED PROJECTS

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT



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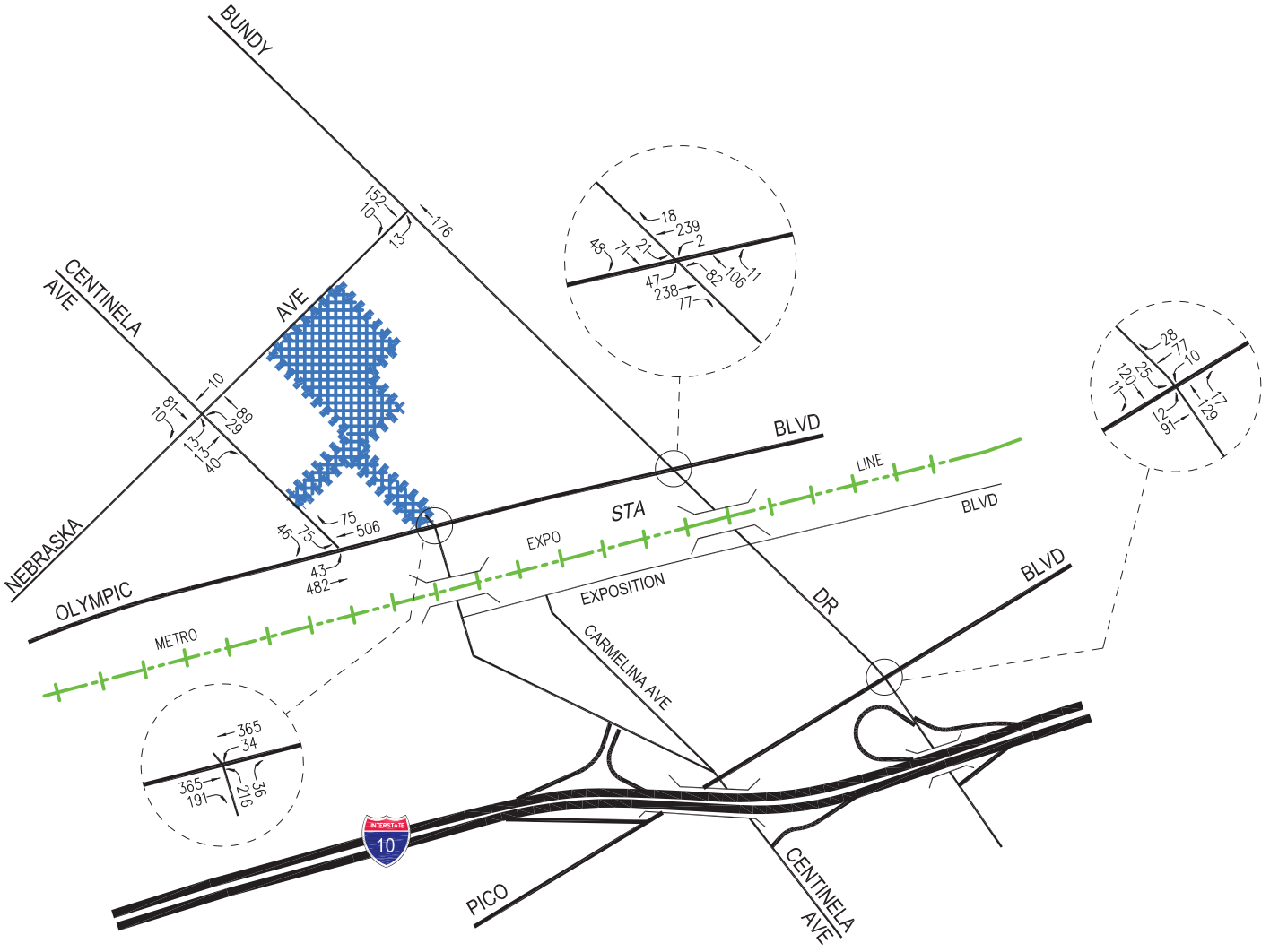
PROJECT SITE

FIGURE 6-2
RELATED PROJECTS TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



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PROJECT SITE

FIGURE 6-3
RELATED PROJECTS TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

6.2 Ambient Traffic Growth Factor

In order to account for area-wide regional growth not included in this analysis, the existing traffic volumes were increased at an annual rate of one percent (1.0%) to the year 2028. This provides a conservative forecast since the project construction is expected to be completed by June 2017. The ambient growth factor was based on general traffic growth factors provided in the *2010 Congestion Management Program for Los Angeles County* (the "CMP manual") and determined in consultation with City staff. It is noted that based on review of the general traffic growth factors provided in the CMP manual for the project study area (i.e., Regional Statistical Area 16 includes West Los Angeles), it is anticipated that the existing traffic volumes are expected to increase at an annual rate of less than 1.0% per year between the years 2015 and 2030. Thus, application of the 1.0% annual growth factor allows for a conservative forecast of future traffic volumes in the area that likely overstates future traffic volumes. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient traffic growth factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the LADWP West Los Angeles Yard Demolition & Construction project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using existing and expected future traffic volumes without and with forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

7.1 Project Traffic Generation

The resource typically used by traffic engineers (including the City of Los Angeles) to forecast trip generation for development projects is the ITE *Trip Generation Manual*. However, in this instance, the ITE manual does not provide trip rates for a land use such as the proposed project. The LADWP West Los Angeles Yard Demolition & Construction project is unique due to the nature of the project's land use components, operations, and unique hours of operation. Therefore, it was determined in consultation with City staff that it would be appropriate to forecast the trips generated by the project based on derived site-specific trip generation rates rather than trip rates published in the ITE *Trip Generation Manual.*

In order to review the characteristics and level of overall existing site traffic generation, weekday manual peak period traffic counts were conducted at the existing site. Specifically, manual traffic counts were conducted by a traffic count subconsultant (The Traffic Solution) on an hourly basis (in 15-minute time increments) at the five existing active site driveways (i.e., those driveways that are also included in the portion of the site that will be improved) for the following time periods:

- Weekday AM Peak Period: 6:00 to 10:00 AM

- Weekday PM Peak Period: 3:00 to 7:30 PM

The locations of the existing site driveways observed for the trip generation assessment are noted in *Figure 2-1*. The existing site driveway traffic counts were conducted on Wednesday, October 4, 2017, and Thursday, October 5, 2017, in order for LLG to develop site-specific weekday trip generation rates. Through conduct of these counts, the number of existing vehicle trips arriving and departing the site during the peak hours was determined, and when compared to the existing number of employees, site-specific trip generation rates (i.e., on a per employee basis) were derived for the site. The existing site driveway traffic count data worksheets are contained in ***Appendix C*** (refer to *Appendix Table C*).

The traffic count data for the observation locations were compiled, reviewed and analyzed to determine the highest one-hour period of traffic volume at the site during both the weekday morning and afternoon commute periods for each observation day. The summary of the existing site counts during the weekday conditions is provided in *Appendix Table C*. The weekday morning and afternoon peak hour counts for each day were then averaged (i.e., two-day average) for purposes of developing the site-specific weekday trip generation rates. As indicated in *Appendix Table C*, the existing facility peak hour traffic generation is as follows for the weekday condition:

- Weekday Average AM Peak Hour:
  - 17.5 inbound trips
  - 28.5 outbound trips
  - 46 total trips
- Weekday Average PM Peak Hour:
  - 19 inbound trips
  - 45 outbound trips
  - 64 total trips

As summarized in ***Table 7-1*** (and *Appendix Table C*), the empirical trip rates derived from the site counts for the existing facility (i.e., based on 120 existing employees) are as follows:

- Weekday AM Peak Hour:
  - 0.146 inbound trips per employee
  - 0.238 outbound trips per employee
  - 0.384 total trips per employee

Table 7-1
PROJECT TRIP GENERATION [1]

TRIP GENERATION RATES [2]								
		DAILY TRIP	AM PEAK HOUR TRIP RATE			PM PEAK HOUR TRIP RATE		
LAND USE	VARIABLE	RATE	IN	OUT	TOTAL	IN	OUT	TOTAL
Existing WLA District Yard	Per Employee	4.583	0.146	0.238	0.384	0.158	0.375	0.533
Distribution Split			38%	62%	100%	30%	70%	100%
PROJECT TRIP GENERATION								
		DAILY TRIP END	AM PEAK HOUR VOLUMES [3]			PM PEAK HOUR VOLUMES [3]		
LAND USE	SIZE	VOLUMES [3]	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project								
WLA District Yard	200 Employees	917	29	48	77	32	75	107
Less Existing Site								
WLA District Yard	(120) Employees	(550)	(17)	(29)	(46)	(19)	(45)	(64)
NET NEW VEHICLE TRIPS		***367***	***12***	***19***	***31***	***13***	***30***	***43***

[1] Trips are one-way traffic movements, entering or leaving.

[2] Refer to Table C contained in Appendix C for derivation of empirical trip rates.

[3] Trip generation forecast based on empirical trip rates shown above.

- Weekday PM Peak Hour:
    - 0.158 inbound trips per employee
    - 0.375 outbound trips per employee
    - 0.533 total trips per employee

In order to develop daily trip rates for the existing facility, the daily trip ends were estimated based on the assumption that the average peak hours (i.e., the average of the AM and PM peak hour trips) represent ten percent (10%) of the total daily trip ends.

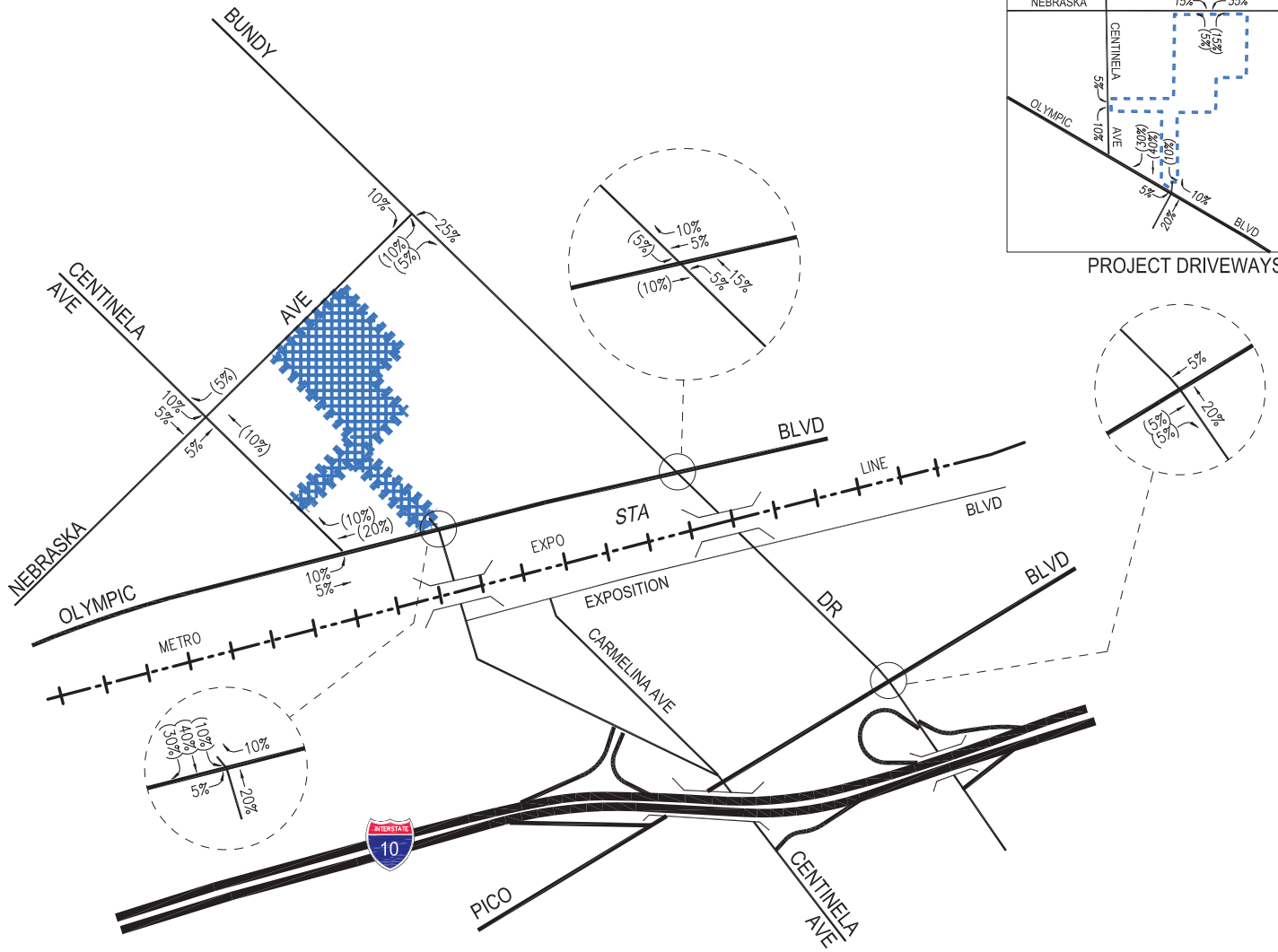
The weekday trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in *Table 7-1*. The trip generation forecast for the proposed project was submitted for review and approval by LADOT staff. As presented in *Table 7-1*, the proposed project is expected to generate a net increase of 31 vehicle trips (12 inbound trips and 19 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate a net increase of 43 vehicle trips (13 inbound trips and 30 outbound trips). Over a 24-hour period, the proposed project is forecast to generate a net increase of 367 daily trip ends during a typical weekday (approximately 184 inbound trips and 184 outbound trips).

7.2 Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Santa Monica Boulevard, Olympic Boulevard, Pico Boulevard, Centinela Avenue, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Existing site parcel access ingress/egress schemes;
- Nearby population and employment centers; and
- Input from LADOT staff.

The project traffic volume distribution percentages during weekday AM and PM peak hours at the study intersections are illustrated in ***Figure 7-1***. The forecast net new project traffic volumes at the study intersections for the weekday AM and PM peak hours are displayed in ***Figures 7-2*** and ***7-3***, respectively. The traffic volume assignments presented in *Figures 7-2* and *7-3* reflect the traffic



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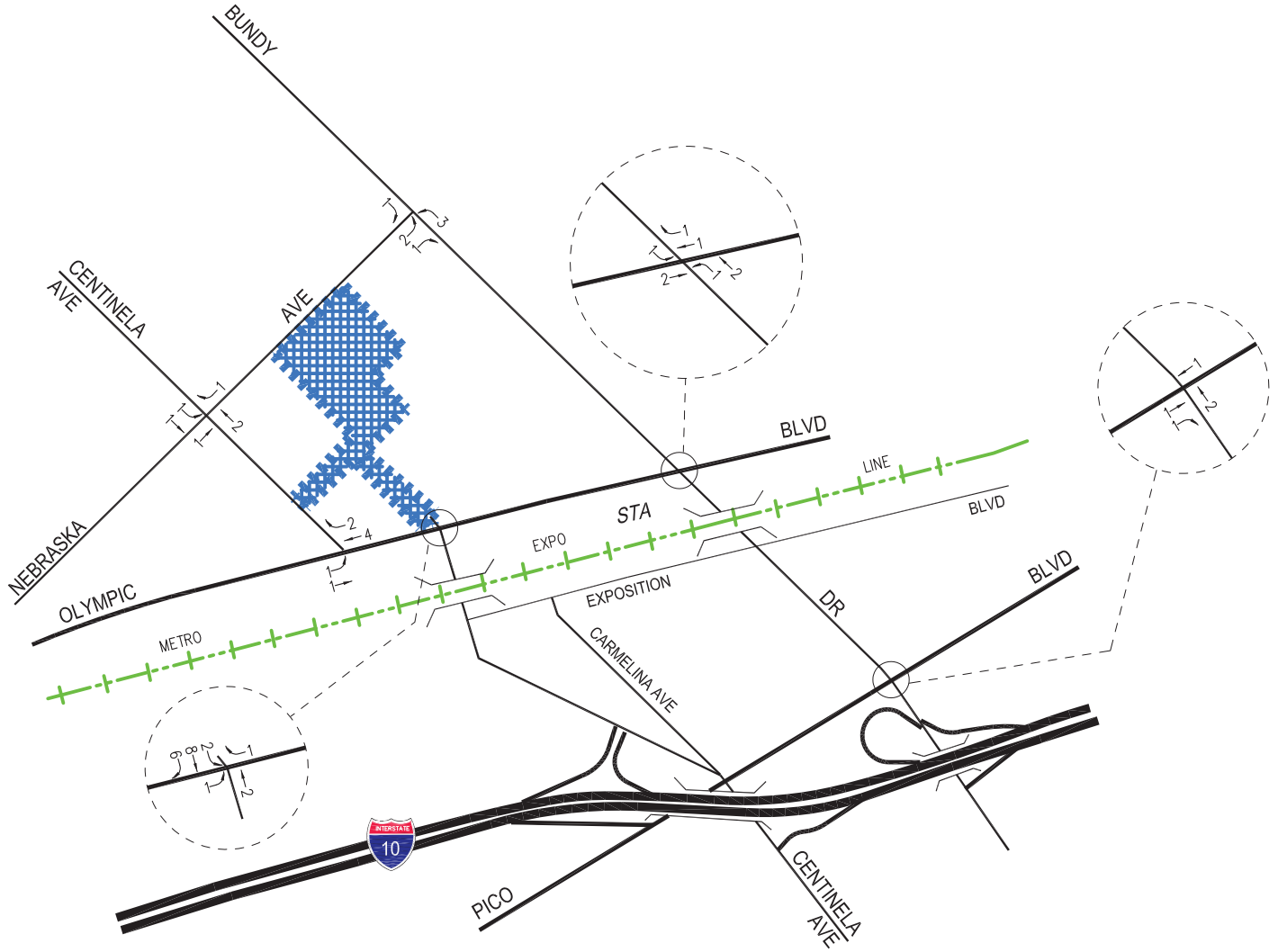
PROJECT SITE

XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

FIGURE 7-1
PROJECT TRIP DISTRIBUTION

LINSCOTT, LAW & GREENSPAN, engineers

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT



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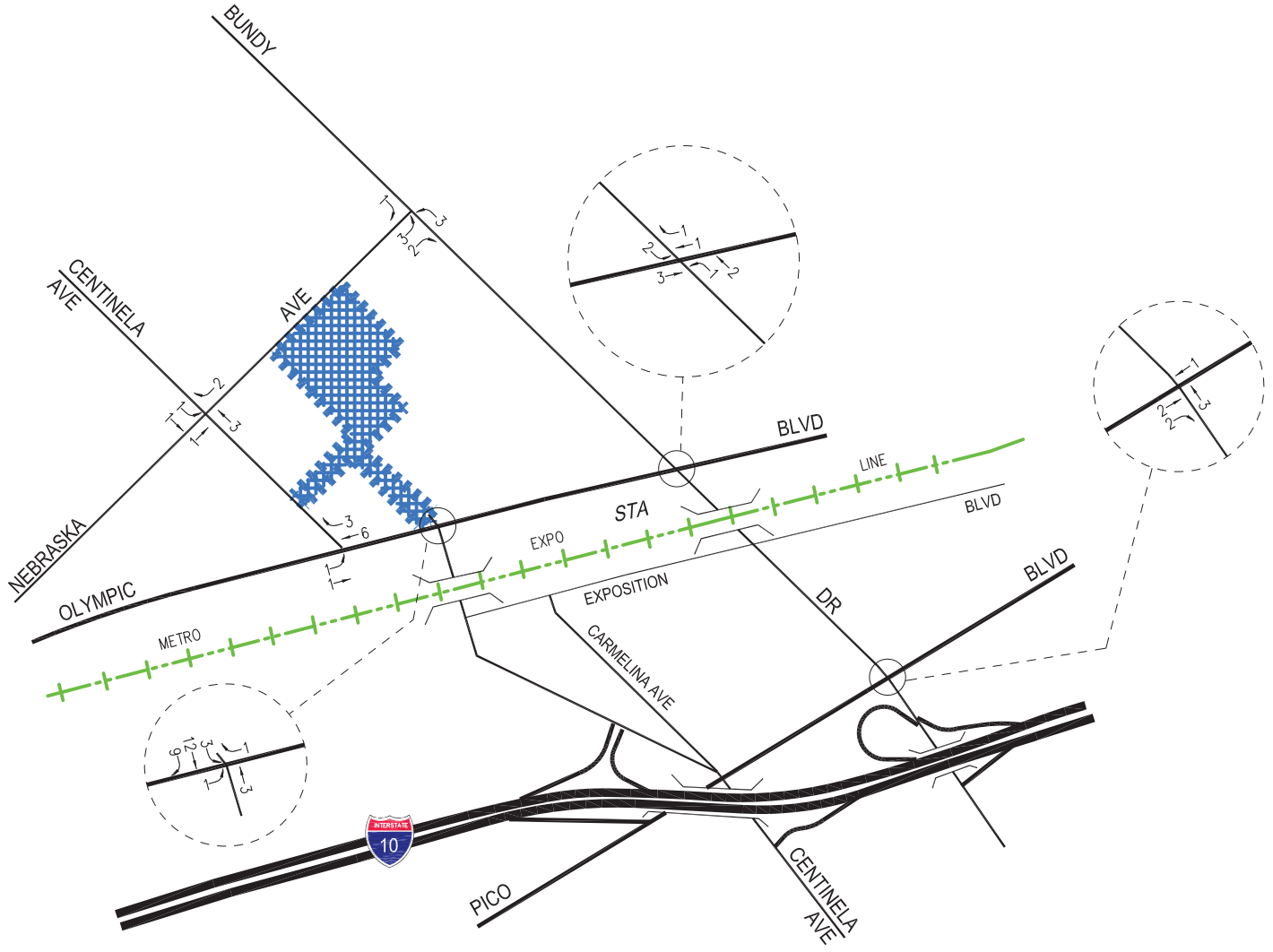
PROJECT SITE

FIGURE 7-2
NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



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PROJECT SITE

FIGURE 7-3
NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

distribution characteristics shown in *Figure 7-1* and the project traffic generation forecasts presented in *Table 7-1*.

8.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

The study intersections were evaluated using the Critical Movement Analysis (CMA) method of analysis which determines Volume-to-Capacity (*v/c*) ratios on a critical lane basis. The overall intersection *v/c* ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). A description of the CMA method and corresponding Level of Service is provided in ***Appendix D***.

8.1 Intersection Impact Criteria and Thresholds

The relative impact of the added project traffic volumes to be generated by the proposed project during the weekday AM and PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* relationships and service level characteristics at each study intersection.

The significance of the potential impacts of project-generated traffic was identified using the traffic impact criteria set forth in LADOT's *Transportation Impact Study Guidelines*, December 2016. According to the City's published traffic study guidelines, the impact is considered significant if the project-related increase in the *v/c* ratio equals or exceeds the thresholds presented in ***Table 8–1***.

Table 8-1
CITY OF LOS ANGELES
INTERSECTION IMPACT THRESHOLD CRITERIA

Final *v/c*	**Level of Service**	**Project Related Increase in *v/c***
> 0.701 - 0.800	C	equal to or greater than 0.040
> 0.801 - 0.900	D	equal to or greater than 0.020
>0.901	E or F	equal to or greater than 0.010

The City's Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above.

8.2 Intersection Traffic Impact Analysis Scenarios

Traffic impacts at the study intersections were analyzed for the following conditions:

[a] Existing conditions.

[b] Existing with project conditions.

[c] Condition [b] with implementation of project mitigation measures, where necessary.

[d] Condition [a] plus one percent (1.0%) annual ambient traffic growth through year 2028 and with completion and occupancy of the related projects (i.e., future without project conditions).

[e] Condition [d] with completion and occupancy of the proposed project.

[f] Condition [e] with implementation of project mitigation measures, where necessary.

It should be noted that Condition [b] above is a hypothetical scenario in that it calculates the traffic due to the occupancy of the proposed project in addition to the existing traffic volumes, but changes to existing volumes are expected to occur throughout the project's construction period due to other area projects and regional growth. However, this condition has been prepared to be consistent with the general rule under CEQA that the potential impacts of a development project are to be measured against existing conditions. Condition [d] above analyzes future conditions upon completion and full occupancy of the proposed project, which is expected to occur in 2028.

9.0 TRAFFIC ANALYSIS

The traffic impact analysis prepared for the study intersections using the CMA methodology and application of the City of Los Angeles significant traffic impact criteria is summarized in ***Table 9-1***. The CMA data worksheets for the analyzed intersections are contained in *Appendix D*.

9.1 Existing Conditions

9.1.1 *Existing Conditions*

As indicated in column [1] of *Table 9–1*, five of the six study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours. The following study intersection is expected to operate at LOS E during both the AM and PM peak hours shown below under existing conditions:

- Int. No. 6: Bundy Drive/Pico Boulevard — AM Peak Hour: *v/c*=0.907, LOS E; PM Peak Hour: *v/c*=0.928, LOS E

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 5–1* and *5–2*, respectively.

9.1.2 *Existing With Project Conditions*

As shown in column [2] of *Table 9–1*, application of the City's threshold criteria to the "Existing With Project" scenario indicates that the proposed project is not expected to create significant impacts at any of the six study intersections. Less than significant impacts are noted at all of the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Existing With Project" conditions. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 9–1*** and ***9–2***, respectively.

9.2 Future Conditions

9.2.1 *Future Without Project Conditions*

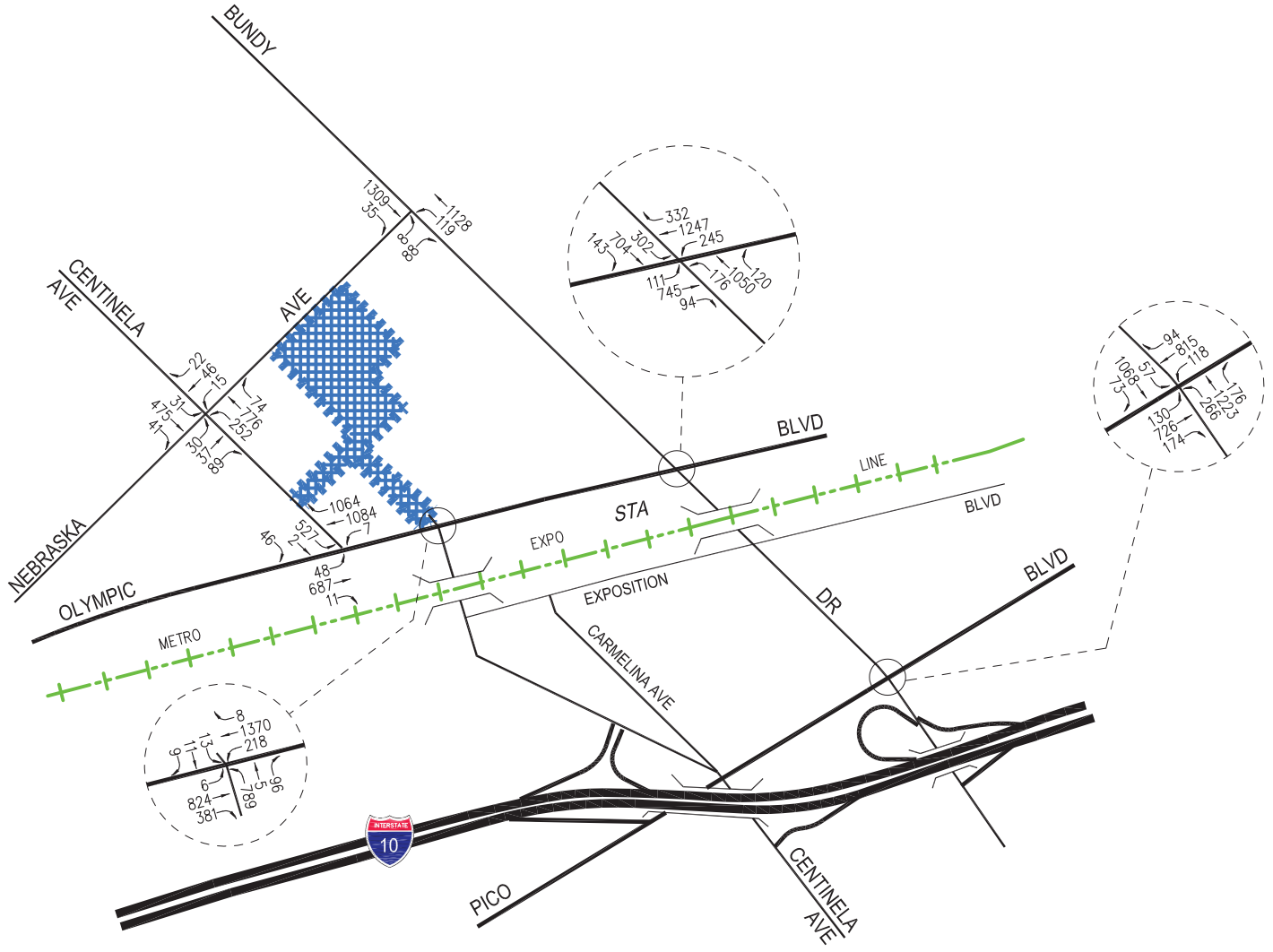
The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6–1*. As presented in column [3] of *Table 9–1*, three of the six study intersections are expected to continue operating at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The following study intersections are expected to operate at LOS E or F during the peak hours shown below with the addition of ambient growth traffic and traffic due to the related projects:

Table 9-1
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2017 EXISTING V/C	[1] LOS	[2] YEAR 2017 EXISTING WITH PROJECT V/C	[2] LOS	[2] CHANGE V/C [(2)-(1)]	[2] SIGNIF. IMPACT [a]	[3] YEAR 2028 FUTURE W/O PROJECT V/C	[3] LOS	[4] YEAR 2028 FUTURE WITH PROJECT V/C	[4] LOS	[4] CHANGE V/C [(4)-(3)]	[4] SIGNIF. IMPACT [a]
1	Centinela Avenue/	AM	0.599	A	0.601	B	0.002	No	0.749	C	0.751	C	0.002	No
	Nebraska Avenue	PM	0.727	C	0.730	C	0.003	No	0.931	E	0.932	E	0.001	No
2	Centinela Avenue (West)/	AM	0.639	B	0.641	B	0.002	No	0.788	C	0.790	C	0.002	No
	Olympic Boulevard	PM	0.603	B	0.603	B	0.000	No	0.871	D	0.872	D	0.001	No
3	Centinela Avenue (East)/	AM	0.569	A	0.581	A	0.012	No	0.802	D	0.814	D	0.012	No
	Olympic Boulevard	PM	0.560	A	0.576	A	0.016	No	0.794	C	0.811	D	0.017	No
4	Bundy Drive/	AM	0.734	C	0.739	C	0.005	No	0.897	D	0.902	E	0.005	No
	Nebraska Avenue	PM	0.703	C	0.707	C	0.004	No	0.868	D	0.872	D	0.004	No
5	Bundy Drive/	AM	0.883	D	0.885	D	0.002	No	1.099	F	1.100	F	0.001	No
	Olympic Boulevard	PM	0.712	C	0.713	C	0.001	No	0.939	E	0.942	E	0.003	No
6	Bundy Drive/	AM	0.907	E	0.907	E	0.000	No	1.108	F	1.109	F	0.001	No
	Pico Boulevard	PM	0.928	E	0.929	E	0.001	No	1.131	F	1.132	F	0.001	No

[a] According to LADOT's "Transportation Impact Study Guidelines," December 2016, a transportation impact on an intersection shall be deemed significant in accordance with the following table:

Final v/c	LOS	Project Related Increase in v/c
>0.701 - 0.800	C	equal to or greater than 0.040
>0.801 - 0.900	D	equal to or greater than 0.020
>0.901	E/F	equal to or greater than 0.010



PROJECT SITE

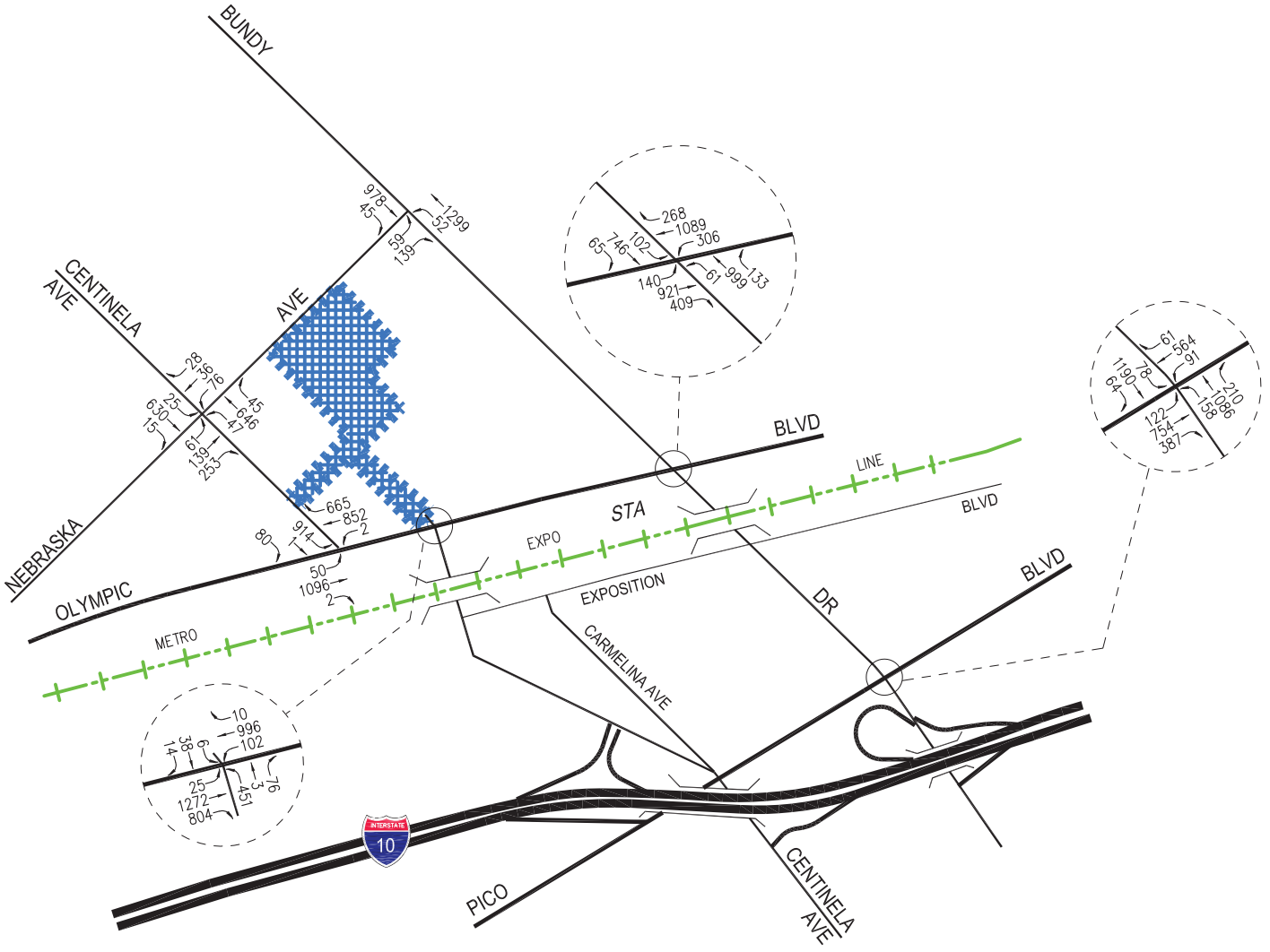
NOT TO SCALE

FIGURE 9-1
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

NOT TO SCALE

FIGURE 9-2
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

- Int. No. 1: Centinela Avenue /Nebraska Avenue — PM Peak Hour: *v/c*=0.931, LOS E
- Int. No. 5: Bundy Drive/Olympic Boulevard — AM Peak Hour: *v/c*=1.099, LOS F; PM Peak Hour: *v/c*=0.939, LOS E
- Int. No. 6: Bundy Drive/Pico Boulevard — AM Peak Hour: *v/c*=1.108, LOS F; PM Peak Hour: *v/c*=1.131, LOS F

The future without project (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in ***Figures 9–3*** and ***9–4***, respectively.

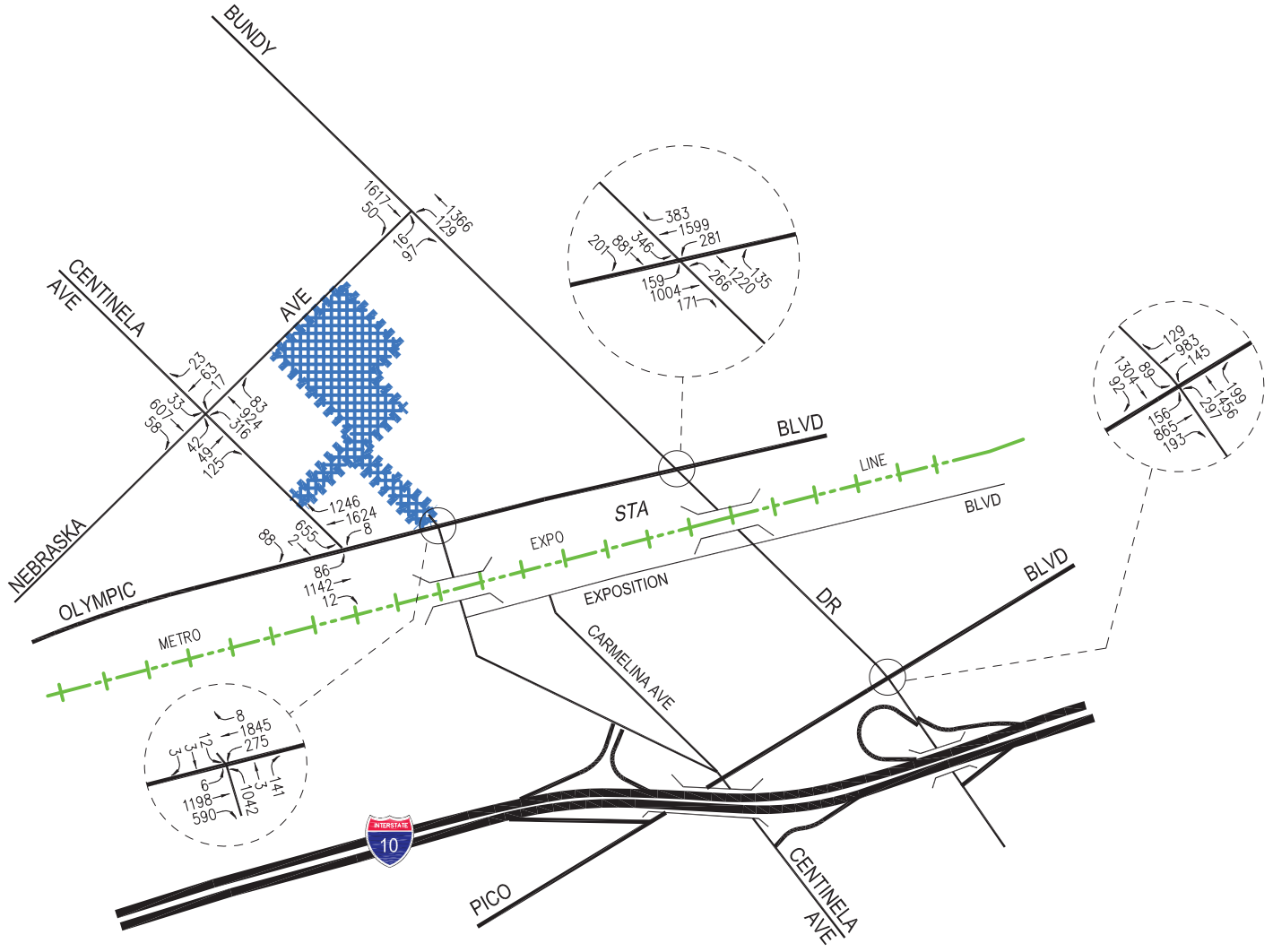
9.2.2 *Future With Project Conditions*

As shown in column [4] of *Table 9–1,* application of the City's threshold criteria to the "With Proposed Project" scenario indicates that the proposed project is not expected to create significant impacts at any of the six study intersections. Less than significant impacts are noted at all of the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections. The future with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday AM and PM peak hours are provided in ***Figures 9-5*** and ***9-6***, respectively.

9.3 Freeway Impact Analysis Screening Criteria Review

Pursuant to the "Freeway Impact Analysis Procedures" agreement executed in October 2013 between LADOT and Caltrans District 7, as amended in December 2015, traffic studies may be required to conduct a focused freeway impact analysis in addition to the CMP analysis. If projects meet any of the following criteria, applicants are directed to the Caltrans' Intergovernmental Review (IGR) section for a determination on the need for analysis and, if necessary, the methodology to be utilized for a freeway impact analysis:

- The project's peak hour trips would result in a 1% or more increase to the freeway mainline capacity of a freeway segment operating at LOS E or F (based on an assumed capacity of 2,000 vehicles per hour per lane); or
- The project's peak hour trips would result in a 2% or more increase to the freeway mainline capacity of a freeway segment operating at LOS D (based on an assumed capacity of 2,000 vehicles per hour per lane); or
- The project's peak hour trips would result in a 1% or more increase to the capacity of a freeway off-ramp operating at LOS E or F (based on an assumed ramp capacity of 850 vehicles per hour per lane); or



N

NOT TO SCALE

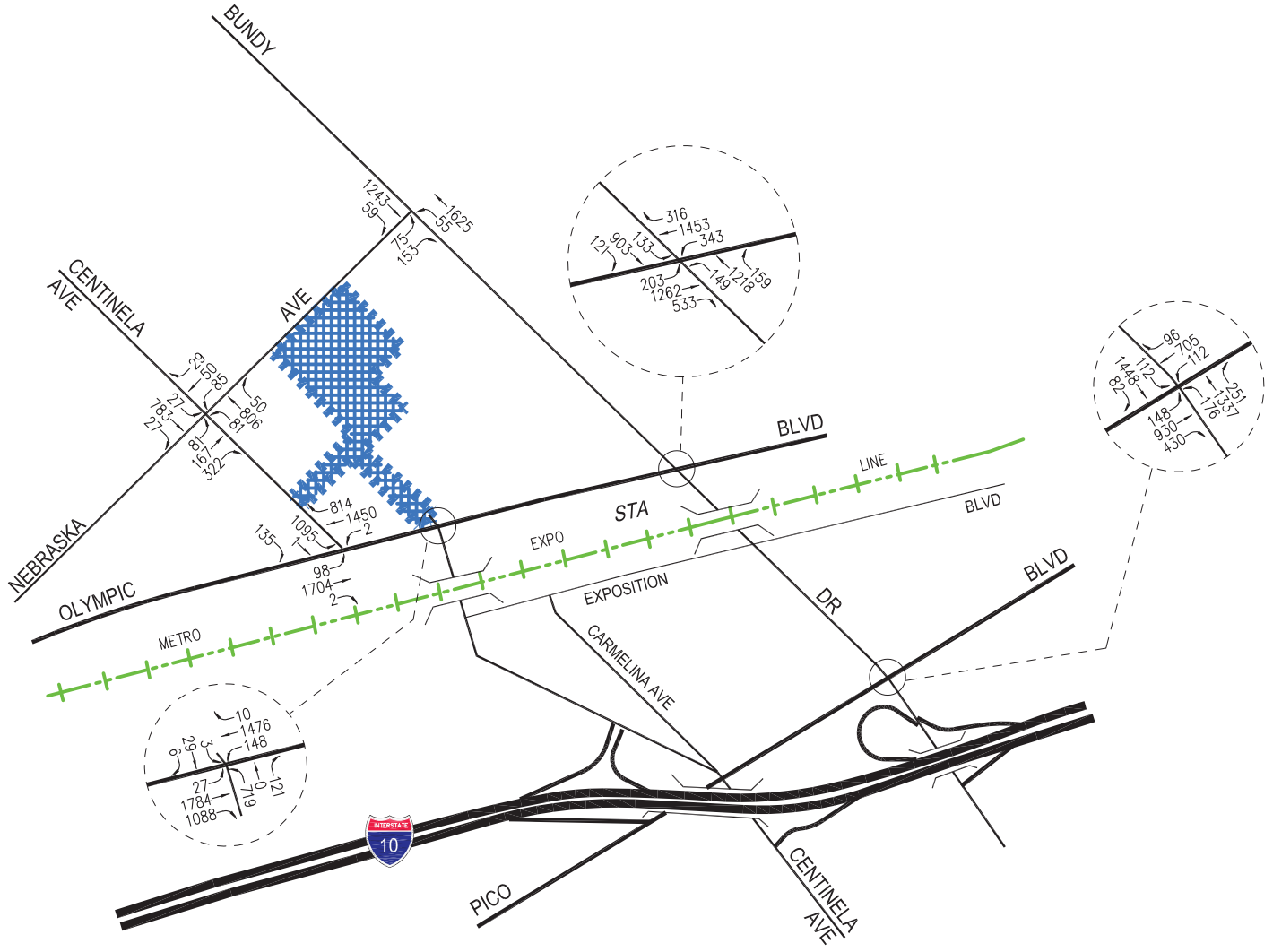
PROJECT SITE

FIGURE 9-3
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

N

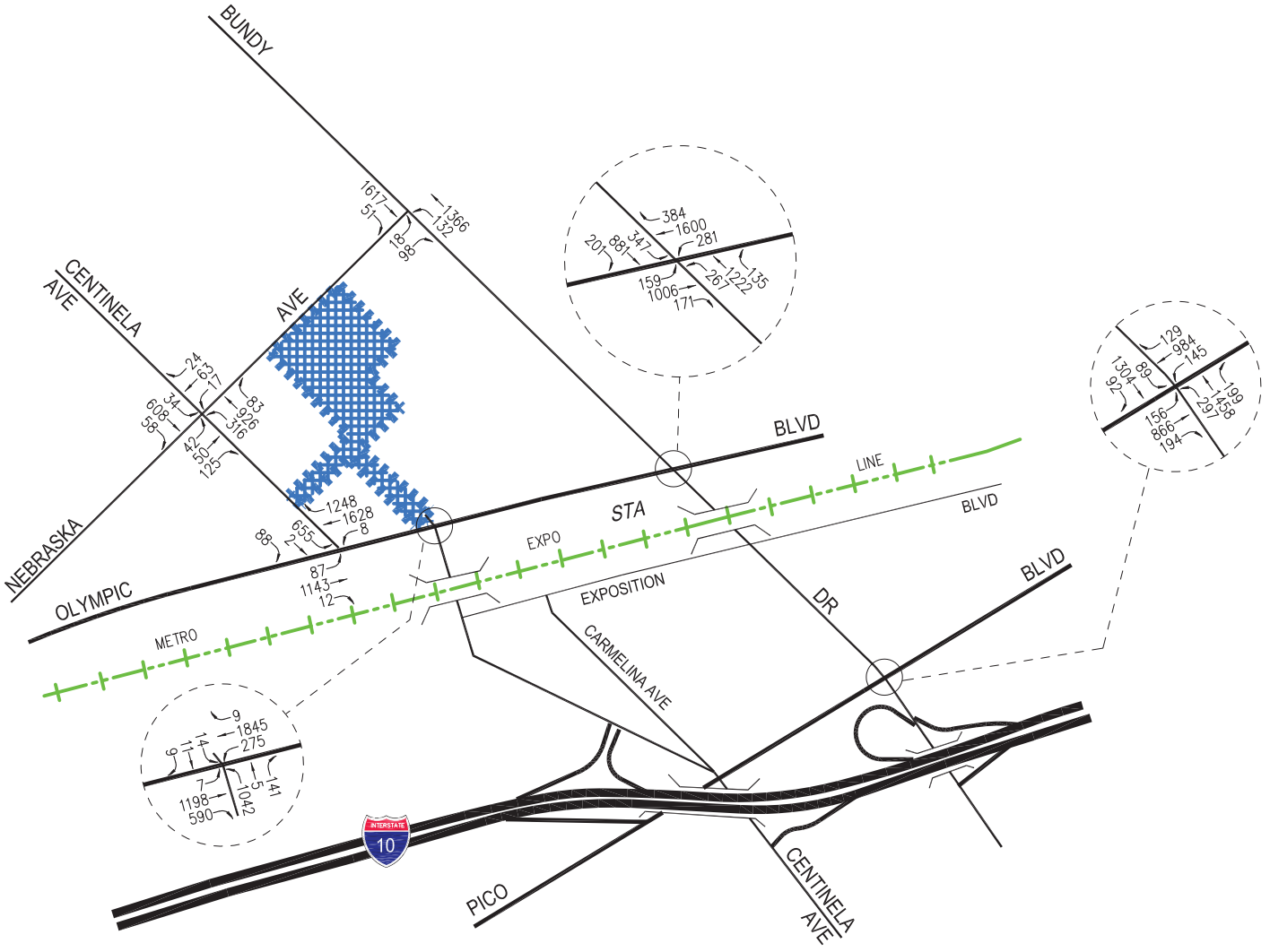
NOT TO SCALE

FIGURE 9-4
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

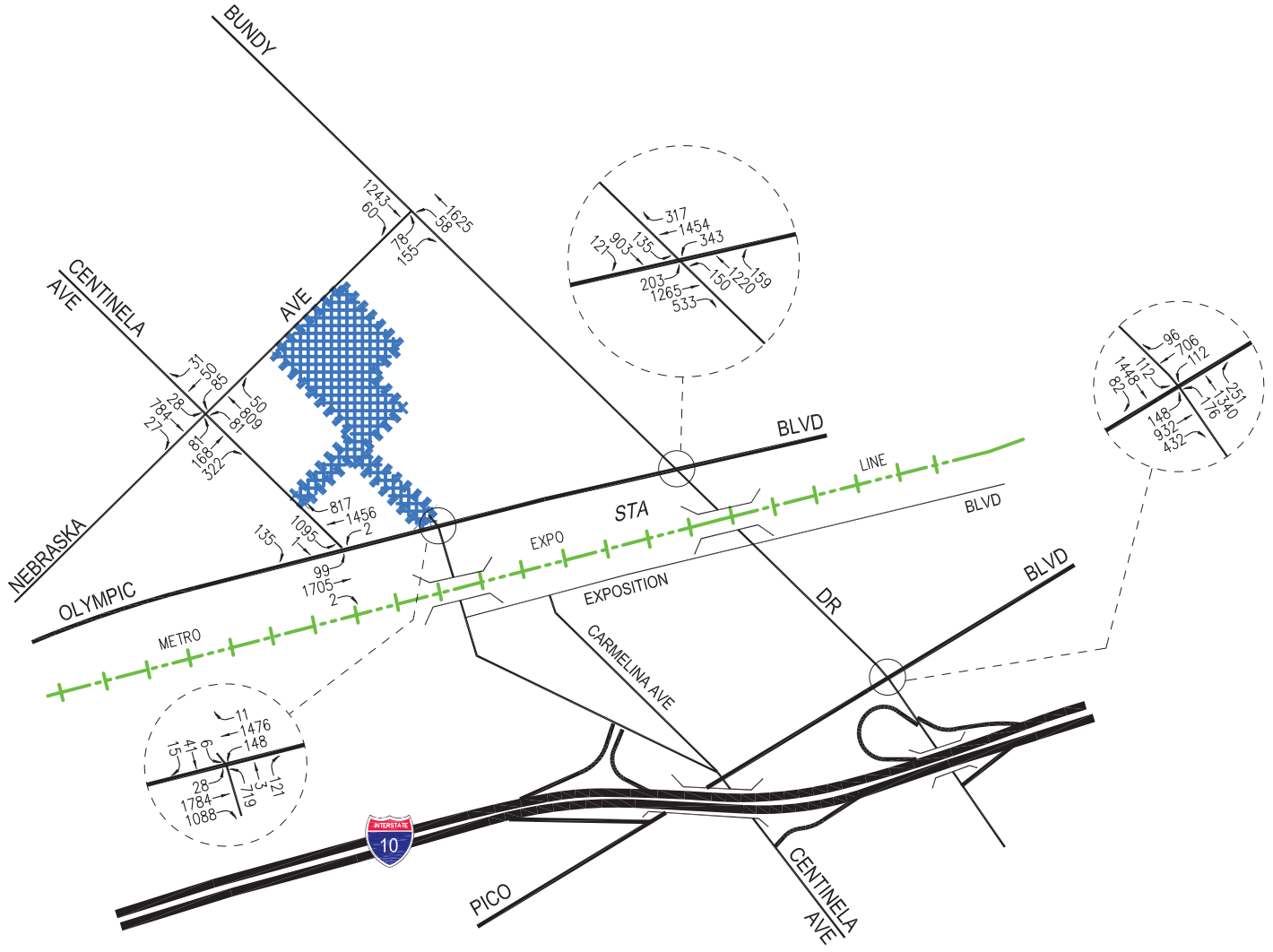
NOT TO SCALE

FIGURE 9-5
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

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NOT TO SCALE

FIGURE 9-6
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

- The project's peak hour trips would result in a 2% or more increase to the capacity of a freeway off-ramp operating at LOS D (based on an assumed ramp capacity of 850 vehicles per hour per lane).

Freeway mainline segments and off-ramps in the project vicinity that are forecast to receive net new project trips are subject to freeway impact analysis screening. This screening analysis is based solely on the comparisons between the expected net new project-related traffic volumes and the capacity of the subject mainline freeway segments and freeway off-ramps. Thus, cumulative conditions (i.e., related project's traffic volumes and regional growth) are not considered for purposes of the screening analysis. The three (3) mainline freeway segments and four (4) freeway off-ramps selected for screening due to the proposed project are presented in ***Table 9-2***, with the freeway impact analysis screening performed for these facilities also presented therein. The project trips assigned to the freeway facilities are based on the trip distribution percentages presented in *Figure 7-1* and the trip generation forecast presented in *Table 7-1*. Based on this review, the amount of project traffic expected to occur on the freeway system is not expected to meet any of the above listed criteria. Therefore, no further analysis of potential impacts to the freeway system is required.

9.4 City of Los Angeles High Injury Network Review

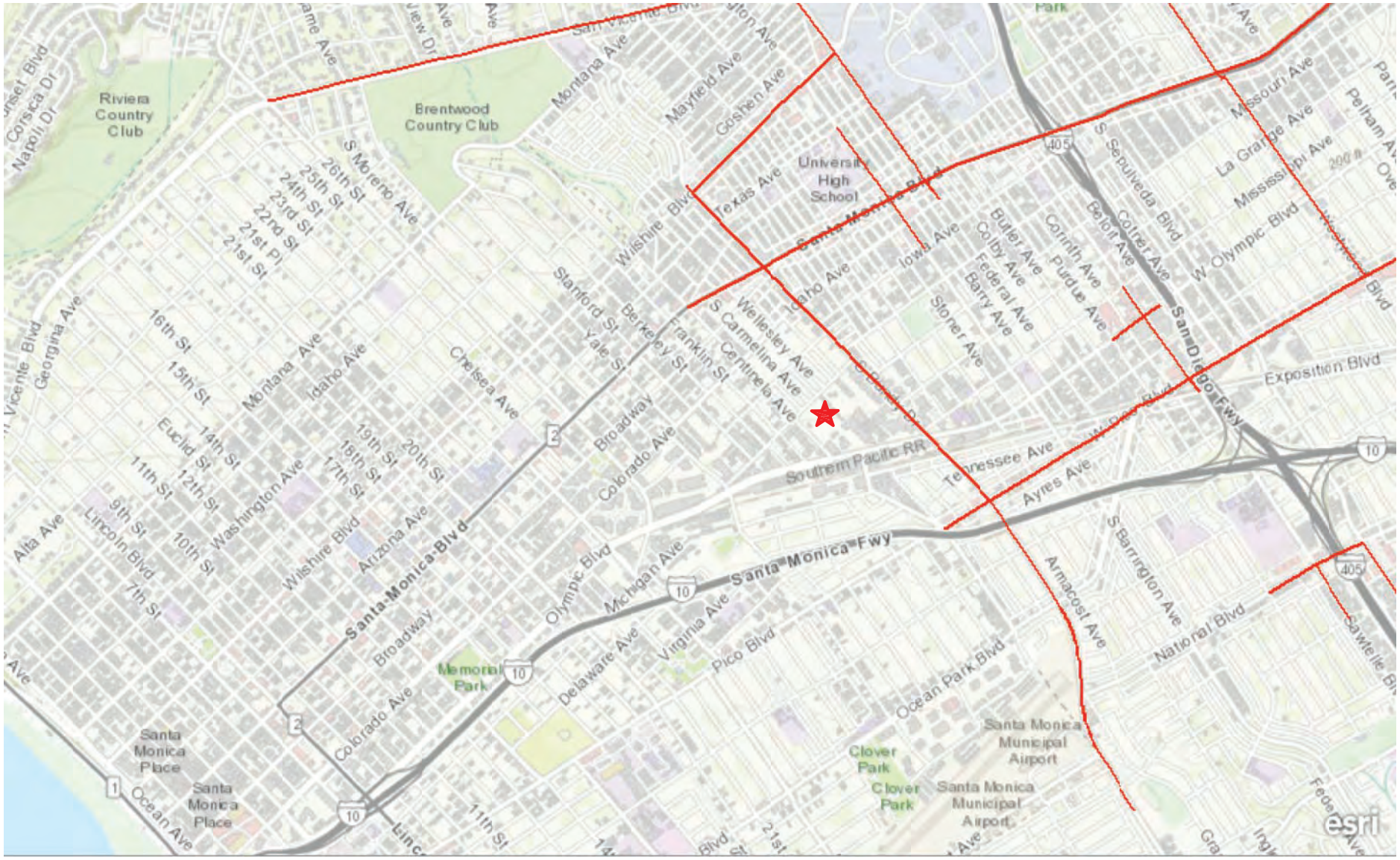
Vision Zero is a citywide initiative which prioritizes the safety of pedestrians and bicyclists on public streets, with the understanding that roads which are safe for vulnerable users will be safer for all users, in an effort to eliminate traffic fatalities. Key elements of the policy, such as reducing traffic speeds, are founded on the principles of engineering, education, enforcement, evaluation, and equity. Originating in Sweden, the policy has been adopted in numerous other North American cities, including California cities such as San Francisco and San Diego.

Mayor Eric Garcetti issued Executive Directive No. 10 in August 2015, formally launching the Vision Zero initiative in Los Angeles. Vision Zero is also a stated safety objective in the Mobility Plan 2035, which sets the goal of zero traffic deaths by 2035. Jointly directed by LADOT and the Police Department, Vision Zero takes a multi-disciplinary approach to identifying safety risk factors and implementing solutions on a citywide scale. Using a methodology originally developed by the San Francisco Public Health Department, the Vision Zero Task Force has identified streets where investments in safety will have the most impact in reducing severe injuries and traffic fatalities in the City.[10] These roads are collectively known as the High Injury Network (HIN). The HIN will be reviewed by the LADOT's Vision Zero group for potential engineering re-design as well as educational and enforcement campaigns.

The proposed project is located in the West Los Angeles area where the Vision Zero focus is on major corridors. As shown in ***Figure 9-7***, roadways in the immediate vicinity of the proposed project which have been identified on the HIN are noted below:

- Bundy Drive

[10] Vision Zero Los Angeles 2015-2025, August 2015.



SOURCE: COUNTY OF LOS ANGELES, BUREAU OF LAND MANAGEMENT, ESRI

PROJECT SITE

N

NOT TO SCALE

FIGURE 9-7
CITY OF LOS ANGELES HIGH INJURY NETWORK IN PROJECT VICINITY

LINSCOTT, LAW & GREENSPAN, engineers

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

- Santa Monica Boulevard east of Centinela Avenue
- Pico Boulevard east of Centinela Avenue

If a proposed project results in significant traffic impacts at intersections located along a designated HIN, LADOT's Vision Zero group will review those specific locations and immediate vicinity for potential safety enhancements that are consistent with the City's Vision Zero initiative.

10.0 TRANSPORTATION IMPROVEMENT MEASURES

As summarized in Subsections 9.1.2 (Existing With Project Conditions) and 9.2.2 (Future With Project Conditions) herein, application of the City's threshold criteria to the with proposed project scenarios indicates that the proposed project is not expected to create significant impacts at any of the six study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections.

11.0 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrant analyses have been prepared to determine whether traffic signals are warranted at the Bundy Drive/Nebraska Avenue intersection upon completion of the proposed project. The determination of whether the installation of a traffic signal is warranted was based on criteria set forth in the *Manual of Policies and Procedures*, Section 353 (Guidelines for Traffic Signals). The warrant analysis is also consistent with the signal warrants outlined in Chapter 4C of the *California Manual on Uniform Traffic Control Devices*[11] (MUTCD).

Traffic signal warrants were prepared for the Bundy Drive/Nebraska Avenue intersection. Specifically, Warrant No. 1 (Eight Hour Vehicular Volume), Warrant No. 2 (Four Hour Vehicular Volume), and Warrant No. 3 (Peak Hour Volume) were prepared for the forecast future with project traffic conditions, and Warrant No. 7 (Crash Experience) was prepared based on a review of existing collision records. The traffic signal warrant calculations were based on, existing AM and PM peak hour volumes, and future with project peak hour traffic volumes. The traffic signal warrant worksheets are provided in ***Appendix E***. The following paragraphs provide detailed discussions of the traffic signal warrants prepared for the intersections.

Warrant 1: Eight-Hour Vehicular Volume

The Eight Hour Vehicular Volume warrant consists of three conditions: Condition A - the Minimum Vehicular Volume, Condition B – the Interruption of Continuous Traffic, and the Combination of Conditions A and B.

The Minimum Vehicular Volume warrant (Condition A) is intended for application where a large volume of intersecting traffic is the principal reason for consideration of a signal installation. The warrant is satisfied when for each of any eight hours of an average day the traffic volumes provided in the table for Warrant 1 under Condition A exist on the major street and on the higher-volume minor street approach to the intersection.

The Interruption of Continuous Traffic warrant (Condition B) applies to operating conditions where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or hazard in entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes given in the table exist on the major street and on the higher-volume minor street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

The Combination of Conditions A and B warrant applies at locations where Conditions A and B are not satisfied but where Conditions A and B are satisfied to the extent of 80 percent or more of the stated numerical values.

Warrant 2: Four-Hour Vehicular Volume

[11] *California Manual on Uniform Traffic Control Devices (MUTCD),* State of California Business, Transportation and Housing Agency, Department of Transportation, 2014 Edition.

The Four Hour Vehicular Volume Warrant is satisfied when, for each of any four hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the curve in Figure 4C-1 for the combination of approach lanes. The lower threshold for a minor street approach with two or more lanes is 115 vehicles per hour while the lower threshold for a minor street approach with one lane is 80 vehicles per hour. As shown in the worksheet contained in *Appendix E,* the signal warrant is met when the plotted points falls above the appropriate curve.

Warrant 3: Peak Hour Volume

The Peak Hour Warrant consists of Part A and Part B and is intended for application where traffic conditions are such that for one hour of the day minor street traffic suffers undue delay in entering or crossing the major street. The Peak Hour warrant applies when one of the following criteria are satisfied:

- Part A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

    - The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds 4 vehicle-hours for a one-lane approach, or 5 vehicle-hours for a two-lane approach, and

    - The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and

    - The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

- Part B of Warrant No. 3 is satisfied when the plotted point, representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) for one hour of an average day, falls above the curve in Figure 4C-3 for the applicable number of approach lanes. The lower threshold for a minor street approach with two or more lanes is 150 vehicles per hour while the lower threshold for a minor street approach with one lane is 100 vehicles per hour. As shown in the worksheets contained in *Appendix E,* the signal warrant is met when the plotted point falls above the appropriate curve.

Warrant 7: Crash Experience

The Crash Experience Warrant is intended for application where the severity and frequency of collisions are the primary reasons to consider installation of a traffic signal. The Crash Experience warrant applies when the following criteria are satisfied:

- Condition A or B of Warrant No. 1 is satisfied to the extent of 80 percent or more of the stated numerical values, or Warrant No. 4 (Pedestrian Volume) is satisfied to the extent of 80 percent or more of the stated numerical values, and
- Adequate trial of less restrictive remedies has failed to reduce the accident frequency, and
- Five or more reported accidents of types susceptible to correction by traffic signal control have occurred within the most recent 12-month period, or two per year during the most recent three-year period.

As stated above, a lead agency/jurisdiction may elect to proceed with a traffic signal installation when other issues are present, such as a need for further assignment of motorist right-of-way, even though none of the industry standard warrants are met.

11.1 Bundy Drive/Nebraska Avenue Intersection

As described above, traffic signal warrants were prepared for the Bundy Drive/Nebraska Avenue intersection. Specifically, Warrant No. 1 (Eight Hour Vehicular Volume), Warrant No. 2 (Four Hour Vehicular Volume), and Warrant No. 3 (Peak Hour Volume) were prepared for the forecast future with project traffic conditions, and Warrant No. 7 (Crash Experience) was prepared based on a review of existing collision records. In reviewing the traffic signal warrant analysis for the Bundy Drive/Nebraska Avenue intersection, it is important to note the following:

- For the signal warrant analysis, Bundy Drive was assumed to be the major street while Nebraska Avenue was assumed to be the minor street.
- Weekday AM and PM peak period manual traffic counts were conducted when local schools were in session. Summary data worksheets of the current traffic counts for the subject intersection are contained in *Appendix B*.

It should be noted that pursuant to the Eight-Hour Vehicular Volume Warrant worksheet included in the *Manual of Policies and Procedures*, Section 353, a six-hour manual turning movement count may be used in order to support a determination that the warrant is not met. Therefore, existing six-hour manual counts were utilized to prepare the eight-hour and four-hour vehicular volume warrants. The forecast future with project volumes utilized in the analysis are presented in *Appendix Table E*.

The following lane configurations have been assumed for the intersection:

- Northbound approach: one left-turn lane and two through lanes
- Southbound approach: one through lane and one combination through/right-turn lane
- Eastbound approach: one combination left-turn/through/right-turn lane

The resulting warrant analysis is described below:

Warrant 1 – Eight-Hour Vehicular Volume: As shown in the worksheets provided in *Appendix E*, both the Minimum Vehicular Volume warrant (Condition A) and the Interruption of Continuous Traffic (Condition B) warrant are not met under future with project conditions for the Bundy Drive/Nebraska Avenue intersection. Similarly, the Combination of Conditions A and B are not met for future with project conditions. Therefore, Warrant No. 1 is not satisfied for the for the Bundy Drive/Nebraska Avenue intersection.

Warrant 2 – Four-Hour Vehicular Volume: As indicated in Figure 4C-1 provided in *Appendix E*, all of the plotted points for the four highest hours of the day under future with project conditions fall above the applicable curve for the subject study intersection. Thus, Warrant No. 2 is satisfied for the Bundy Drive/Nebraska Avenue intersection.

Warrant 3 – Peak Hour Volume: As previously described, when either Part A or Part B of the Peak Hour Volume Warrant is met, the warrant can be considered satisfied. As shown in Figure 4C-3 provided in *Appendix E*, the plotted point for the peak hour under future with project conditions falls above the applicable curve for the subject study intersection. Therefore, Part B is met under future with project conditions. As Part B of Warrant No. 3 (Peak Hour) is met, preparation of Part A of the warrant was not required. Thus, Warrant No. 3 is satisfied under future with project conditions for the Bundy Drive/Nebraska Avenue intersection.

Warrant 7 – Crash Experience: Research was conducted of available collision records in order to determine the existing collision history at the subject study intersection. Collision records for the Bundy Drive/Nebraska Avenue intersection were requested for the most recent three year period (June 1, 2013 through May 31, 2016) from the City of Los Angeles Department of Transportation Traffic Control Records Division. *Appendix E* contains a summary of the collision records data. As shown in the collision data, a total of five (5) collisions occurred over the most recent three year period at this location. As the number of collisions at or near this intersection did not exceed five or more collisions during the most recent 12-month period, Warrant No. 7 is not satisfied for the Bundy Drive/Nebraska Avenue intersection.

In summary, Warrant No. 1 (Eight-Hour Vehicular Volume) is not satisfied under future with project conditions for the Bundy Drive/Nebraska Avenue intersection, while Warrant No. 2 (Four-Hour Vehicular Volume) and Warrant No. 3 (Peak Hour) are satisfied under future with project conditions. Warrant No. 7 (Crash Experience) is not satisfied based on a review of existing collision records. It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if a traffic signal warrant is not met, these other factors may be just cause for consideration of a traffic signal installation. The lead agency/agencies must carefully consider all aspects related to installation of traffic controls.

12.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2010 Congestion Management Program, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority, October 2010.

According to Section D.9.1 (Appendix D, page D-6) of the 2010 CMP manual, the criteria for determining a significant transportation impact is listed below:

> "A significant transportation impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C $\geq$ 0.02), causing or worsening LOS F (V/C > 1.00); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C $\geq$ 0.02)."

The CMP impact criteria apply for analysis of both intersection and freeway monitoring locations.

12.1 Intersections

The following CMP intersection monitoring locations in the project vicinity have been identified:

CMP Station	Intersection
Int. No. 59	Santa Monica Boulevard/Bundy Drive
Int. No. 70	Venice Boulevard/Centinela Avenue
Int. No. 71	Venice Boulevard/La Cienega Boulevard

The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the weekday AM or PM peak hours. The proposed project will not add 50 or more trips during either the weekday AM or PM peak hours (i.e., of adjacent street traffic) at CMP monitoring intersections, as stated in the CMP manual as the threshold criteria for a traffic impact assessment. Therefore, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

12.2 Freeways

The following CMP freeway monitoring locations in the project vicinity have been identified:

CMP Station	Location
Seg. No. 1011	I-10 Freeway east of Overland Avenue
Seg. No. 1070	I-405 Freeway north of Venice Boulevard
Seg. No. 1071	I-405 Freeway south of Mulholland Drive

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the weekday AM or PM peak periods. The proposed project will not add 150 or more trips (in either direction) during either the weekday AM or PM peak hours to CMP freeway monitoring locations which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

12.3 Transit Impact Review

As required by the *2010 Congestion Management Program*, a review has been made of the potential impacts of the project on transit service. As discussed in Subsection 4.5 herein, existing transit service is provided in the vicinity of the proposed LADWP West Los Angeles Yard Demolition & Construction project.

The project trip generation, as shown in *Table 7–1*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed project is forecast to generate demand for 2 transit trips during both the weekday AM and PM peak hours. Over a 24-hour period, the proposed project is forecast to generate demand for 18 daily transit trips. The calculations are as follows:

- Weekday AM Peak Hour = $31 \times 1.4 \times 0.035 = 2$ Transit Trips
- Weekday PM Peak Hour = $43 \times 1.4 \times 0.035 = 2$ Transit Trips
- Weekday Daily Trips = $367 \times 1.4 \times 0.035 = 18$ Transit Trips

As shown in *Table 4–3*, six bus transit lines and routes are provided in close proximity to the project site. As outlined in *Table 4–3*, under the "No. of Buses During Peak Hour" column, these six transit lines provide services for an average of (i.e., average of the directional number of buses/trains during the peak hours) roughly 52 buses during both the weekday AM and PM peak hours. Therefore, based on the above calculated weekday AM and PM peak hour trips, this would correspond to less

than one additional transit rider per bus. It is anticipated that the existing transit service in the project area will adequately accommodate the increase of project-generated transit trips. Thus, given the number of project-generated transit trips per bus, no project impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

13.0 CONCLUSIONS

- ***Project Description*** – The West Los Angeles District Yard Project is a facility improvement project being proposed by the LADWP. The project would demolish six structures on site including the district office, warehouse, break room, locker room, and fleet shop. Three new buildings would be constructed in their place: a warehouse, district office, and fleet shop. These new buildings would consolidate all of the functions of the demolished buildings. Beneath the proposed new buildings a single-level underground parking structure with a total of 204 parking stalls would be installed. Additionally, the straddle crane located within the existing yard would be relocated toward the southeast section of the District Yard closer to the driveway along Olympic Boulevard. At the existing on-site fueling station, along the access driveway connecting the project site to Olympic Boulevard, the existing unleaded and diesel fuel tanks would remain above ground, and a new compressed natural gas tank would be installed aboveground. All fleet vehicle parking, a total of 55 oversized parking spaces, would be located on a surface parking lot.

- ***Vehicular Site Access*** – The portion of the LADWP West Los Angeles Yard Demolition & Construction project site that is planned to be improved contains a total of five driveways, including three driveways on Nebraska Avenue, one driveway on Centinela Avenue, and one driveway that essentially forms the north leg of the Centinela Avenue East/Olympic Boulevard intersection. All five driveways are currently controlled by either manual or automatic gates that are operated by LADWP. There are no planned changes in driveway locations or operations, nor in the site access and circulation scheme for employees, vendors and visitors, as part of the proposed project.

- ***Study Scope –*** A total of six study intersections were selected for analysis in consultation with LADOT staff in order to determine potential impacts related to the proposed project.

- ***Project Trip Generation*** – The proposed project is expected to generate a net increase of 31 vehicle trips (12 inbound trips and 19 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate a net increase of 43 vehicle trips (13 inbound trips and 30 outbound trips). Over a 24-hour period, the proposed project is forecast to generate a net increase of 367 vehicle trips (approximately 184 inbound trips and 184 outbound trips) during a typical weekday.

- ***Related Projects*** – The City of Los Angeles Departments of Transportation and Planning, as well as the City of Santa Monica, were consulted to obtain the list of development projects (related projects) in the area. A total of 29 related projects, including 17 in the City of Los Angeles and 12 in the City of Santa Monica, was identified and considered as part of the cumulative traffic analysis. In addition, an annual growth rate of one percent (1.0%) to the year 2028 (i.e., the anticipated project build-out year) was used for analysis purposes. Therefore, application of this ambient growth factor in addition to the forecast traffic generated by the related projects allows for a conservative forecast of future traffic volumes in the project study area as incorporation of

both (i.e., an ambient traffic growth rate and a detailed list of cumulative development projects) is expected to overstate potential future traffic volumes. Further, as described in Section 6.0 above, CEQA only requires that one of these two approaches be employed in developing the future traffic volume forecasts.

- ***Traffic Impact Analysis*** – It is concluded that the proposed project is not expected to create significant impacts at any of the six study intersections under either the Existing With Project or Future With Project conditions based on the City of Los Angeles thresholds of significance used for evaluating traffic impacts. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections.

- ***Traffic Signal Warrant Analysis*** - Traffic signal warrants were prepared for the Bundy Drive/Nebraska Avenue intersection. Warrant No. 1 (Eight-Hour Vehicular Volume) is not satisfied under future with project conditions for the Bundy Drive/Nebraska Avenue intersection, while Warrant No. 2 (Four-Hour Vehicular Volume) and Warrant No. 3 (Peak Hour) are satisfied under future with project conditions. Warrant No. 7 (Crash Experience) is not satisfied based on a review of existing collision records. It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if a traffic signal warrant is not met, these other factors may be just cause for consideration of a traffic signal installation. The lead agency/agencies must carefully consider all aspects related to installation of traffic controls.

- ***CMP Traffic Assessment*** – The results of the Los Angeles CMP traffic assessment indicate that the proposed project will not adversely affect any CMP arterial monitoring intersections or freeway monitoring locations. Therefore, no improvements/mitigation measures are required.

APPENDIX A

TRAFFIC STUDY MEMORANDUM OF UNDERSTANDING

LADOT

Transportation Impact Study Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Impact Study for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Impact Study Guidelines:

I. PROJECT INFORMATION

Project Name: LADWP West Los Angeles Yard Demolition and Construction Project

Project Address: 12300 West Nebraska Avenue; West Los Angeles Community Plan area

Project Description: Please refer to the attached City of Los Angeles Task Order Request Proposal form which includes the project description and location.

LADOT Project Case Number: WLA 18-166700 Project Site Plan attached? *(Required)* ■ Yes ☐ No
Refer to Figure 2-2

II. TRIP GENERATION

Geographic Distribution: N 25.00 % S 25.00 % E 30.00 % W 20.00 %

Illustration of Project trip distribution percentages at Study intersections attached? *(Required)* ■ Yes ☐ No

Trip Generation Adjustments *(Exact amount of credit subject to approval by LADOT)* Refer to Figure 7-1

	Yes	No
Transit Usage	☐	■
Transportation Demand Management	☐	■
Existing Active Land Use	■	☐
Previous Land Use	☐	■
Internal Trip	☐	■
Pass-By Trip	☐	■

Source of Trip Generation Rate(s)? ☐ ITE 9th Edition ■ Other: Empirical trip rates derived from the existing project site

Trip generation table including a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? *(Required)* ■ Yes ☐ No

Refer to Table 7-1 & Appendix Table C

	IN	OUT	TOTAL
AM Trips	12	19	31
PM Trips	13	30	43

III. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2028 Ambient or CMP Growth Rate: 1.0 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? *(Required)* ■ Yes ☐ No
Refer to Table 6-1 & Figure 6-1

Subject to Freeway Impact Analysis, in addition to CMP Analysis? *(Freeway analysis screening filter must be included in this MOU; selecting "yes" implies that at least one criteria was satisfied)* ☐ Yes ■ No Refer to Table 9-2

Map of Study Intersections attached? *(May be subject to LADOT revision after initial impact analysis)* ■ Yes ☐ No
Refer to Figure 1-1

Is this Project located on a street within the High Injury Network? ☐ Yes ■ No

IV. CONTACT INFORMATION

	CONSULTANT	DEVELOPER
Name:	Clare Look-Jaeger, LLG Engineers	LADWP/Dudek (Rep: Nicole Cobleigh)
Address:	600 S. Lake Avenue, Suite 500, Pasadena CA 91106	605 3rd Street, Encinitas, CA 92024
Phone Number:	626-796-2322, Ext. 222	626-204-9825
E-Mail:	look-jaeger@llgengineers.com	ncobleigh@dudek.com

Approved by: Clare M. Look-Jaeger 12-12-17 x [signature] 2-7-18

Consultant's Representative Date LADOT Representative Date

Task Order Request Proposal

Environmental Assessment and Air Quality Services
Agreement Nos. 47265-5 through 47271-5

Task/Project Manager:	Contract Administrator:	Issue Date: 4/19/2017	TORP #010
Aiden Leong	Dora Leung	Due Date: 5/4/2017	

1. Task Title: West Los Angeles Distirct Yard Demolition and Construction Project

2. Project Description and Location:

The Los Angeles Department of Water and Power (LADWP), will be demolishing all existing structures and constructing new buildings in their place at the West Los Angeles District Yard located at 12300 Nebraska Ave, Los Angeles, CA 90025. The facilitiy at its current capacity does not have adequate storage for its equipment and will not be able to support the planned increase to 100 full time staff. Structures planned for demolition include the district office, warehouse, break room, locker room, and fleet shop. Three new buildings are planned to be constructed, a warehouse, district office, and fleet shop. These new buildings will consolidate the functions of the demolished buildings. The existing straddle crane will be moved toward the section of the District Yard closer to the Olympic Blvd entrance. Existing unleaded and diesel fuel tanks and a new compressed natural gas tank will be placed underground at the current fueling station location. Parking will consist of a 116,800 square feet underground parking lot and surface parking. The underground parking lot will be one level and have 352 parking spaced to be used by employee vehicles. Surface parking will be for fleet vehicles and will consist of 32 oversize parking spaces. Please see the attached maps showing the current existing structures and the planned layout for the new structures.

The project is planned to be carried out in two phases in order for the district yard to be operational at the time of demolition and construction. Phase 1 involves the demolition of the district office building, demolition of the break room building, and the construction of the underground lot. Phase 1 of the project is expected to be completed within 3 years. Phase 2 involves the demolition and construction of all other structures. Phase 2 is expected to be completed within 1.5 years. Construction vehicle access to the district yard will be restricted at the entrances located on Centinela Ave and Olympic Blvd. Employee access to the district yard is located on W Nebraska Ave.

3. Task Scope and Schedule Requirements:

The scope of environmental services will include preparing the Initial Study (IS) with associated technical studies. The project is expected to result in a Mitigated Negative Declaration (MND).The scope will also include preparing the MND and further technical studies if required. We expect that air quality, historical resources, noise and vibration, and traffic will need to be analyzed in detail. Dudek will coordinate with LADWP staff to review each scope of work to ensure the level of effort is appropriate in complying with CEQA.

Construction is scheduled to begin in June 2019.

4. Overall Approach: (Provide details of how the task will be carried out. Use The General Task Order Request Approach Described in Section 501 of the contract including the following key details)

1. Purpose and Objective
2. Prerequisites to Consultant's performance
3. Scope of Work
4. Schedule
5. Premises (assumptions, conditions, restrictions, project location, etc.)
6. Key Consultant and subconsultant personnel required for the task
7. Applicable rate schedules
8. Task Cost Estimate

Task Order Request Proposal

Environmental Assessment and Air Quality Services
Agreement Nos. 47265-5 through 47271-5

5. Task Scope of Work: **(Description of sub tasks which may include: intermediate and end-products, deliverables, documents, completion date, etc.)**
6. Overall Schedule: (Provide details of how the task will be carried out in terms of the timing of each major deliverable or sub task.)
7. List of Key Personnel Used for this Task: (List their role and responsibilities. Approval from LADWP is required if personnel other than what is on the Exhibit D from Agreement is used)
8. Special Expertise or Background **-** Describe why key task members and/or team is best suited for the subject project. Highlight past experience or qualifications. (Brief.)
9. Cost - The Consultant shall provide the Department with a detailed cost estimate, including identification of all required personnel, rates, and hours of effort, for the Task Order proposal.

N

NOT TO SCALE

MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITE

STUDY INTERSECTION

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

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N

NOT TO SCALE

MAP SOURCE: GOOGLE EARTH

OVERALL LADWP WLA FACILITY

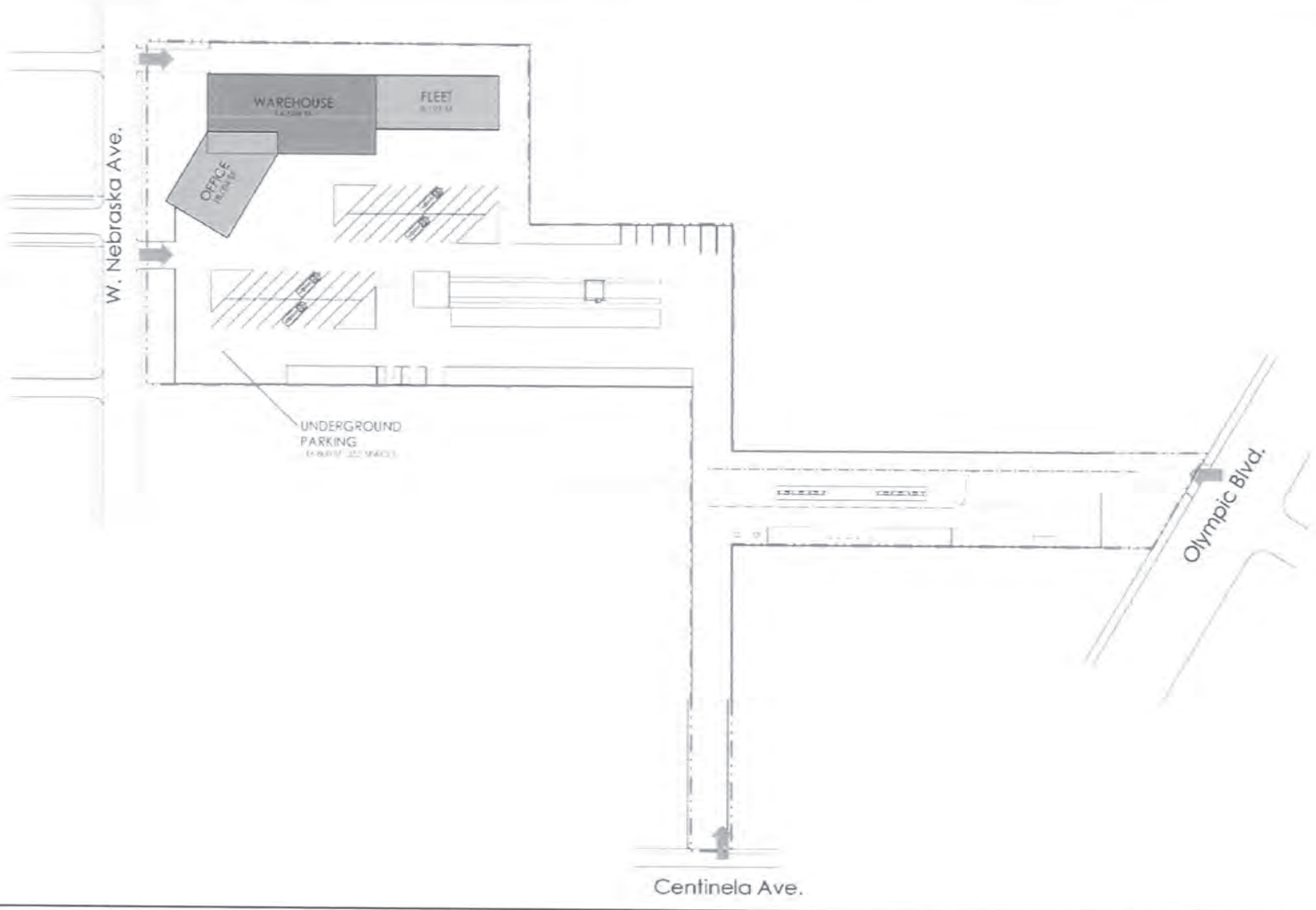
PORTION OF SITE TO BE IMPROVED

EXISTING DRIVEWAY

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 2-1
AERIAL PHOTOGRAPH OF EXISTING SITE

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT



MAP SOURCE: LADWP

NOT TO SCALE

FIGURE 2-2
SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

N

NOT TO SCALE

MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITE

(L) CITY OF LOS ANGELES RELATED PROJECT

(S) CITY OF SANTA MONICA RELATED PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 6-1
LOCATION OF RELATED PROJECTS

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

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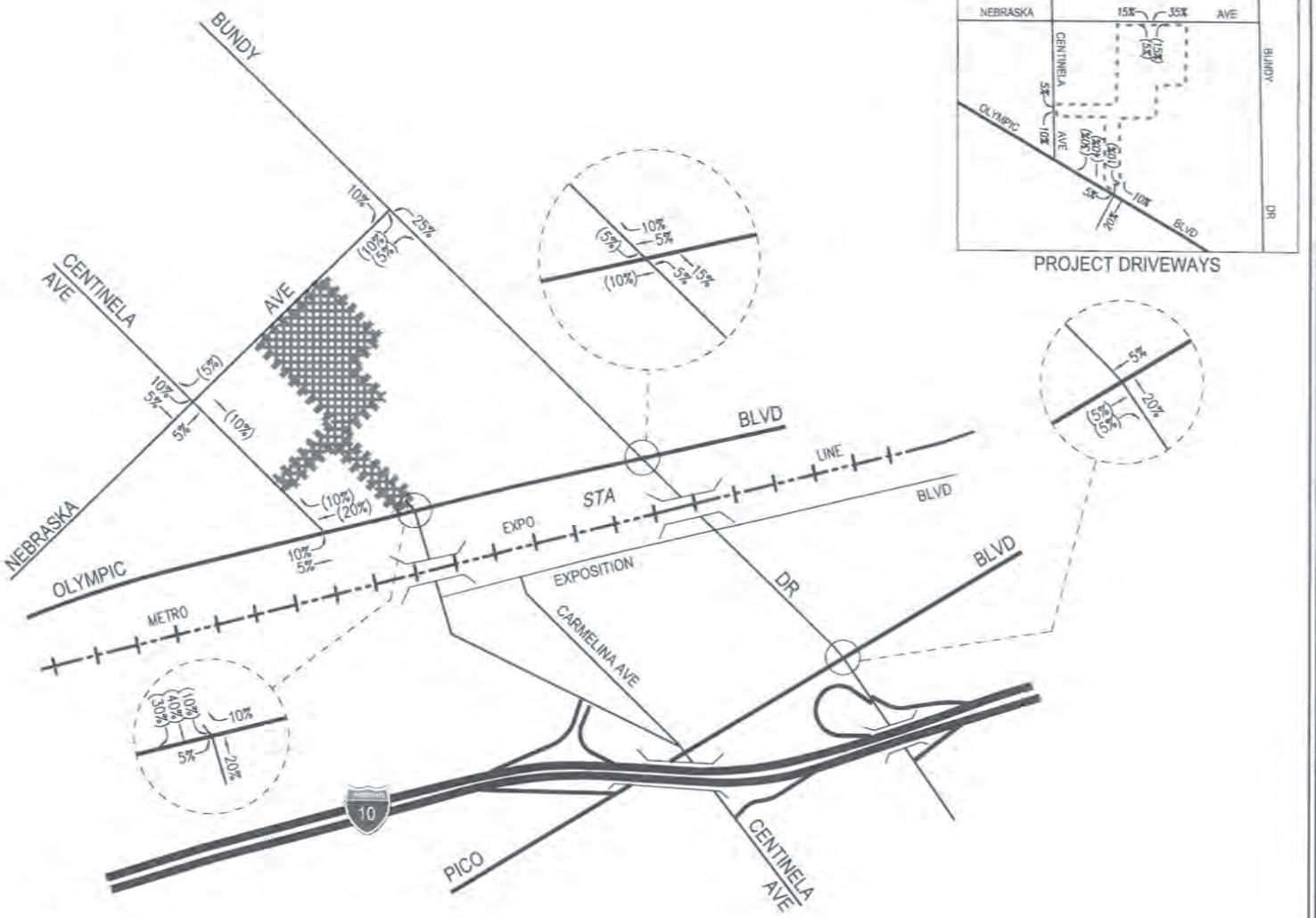

PROJECT SITE

N

NOT TO SCALE

XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

FIGURE 7-1
PROJECT TRIP DISTRIBUTION

LINSCOTT, LAW & GREENSPAN, engineers

LADWP WLA DISTRICT YARD DEMOLITION & CONSTRUCTION PROJECT

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Table 6-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
City of Los Angeles												
L1	Proposed	Vons Supermarket 11660 West Santa Monica Boulevard	Supermarket	53,000 GSF	[1]	1,946	51	32	83	45	28	73
L2	Under Construction	Westside Family YMCA 1466 South Westgate Avenue	Recreational Community Center	65,000 GSF	[1]	1,204	52	33	85	27	46	73
L3	Proposed	Pico - Sepulveda Mixed Use 11122 West Pico Boulevard	Apartment Retail Supermarket	538 DU 212,000 GLSF 54,000 GSF	[1]	1,280	9	34	43	88	47	135
L4	Proposed	11600 West Wilshire Boulevard	Medical Office Building	120,874 GSF	[1]	1,280	34	9	43	38	97	135
L5	Under Construction	The Picasso Mixed Use 12029 West Wilshire Boulevard	Apartment Specialty Retail	108 DU 13,000 GLSF	[1]	789	(10)	40	30	39	(3)	36
L6	Proposed	Martin Expo Town Center 12101 West Olympic Boulevard	Apartment Retail Office	516 DU 67,000 GLSF 200,000 GSF	[1]	6,330	227	212	439	241	225	466
L7	Proposed	11421 West Olympic Boulevard	Apartment Retail	89 DU 6,030 GLSF	[1]	682	10	36	46	34	21	55
L8	Under Construction	1900 South Sawtelle Boulevard	Apartment Restaurant	52 DU 3,300 GSF	[1]	327	13	28	41	34	21	55
L9	Proposed	11750 West Wilshire Boulevard	Apartment Retail	376 DU	[1]	(400)	(22)	99	77	(22)	(64)	(86)
L10	Proposed	11800 West Santa Monica Boulevard	Apartment Specialty Retail	175 DU	[1]	1,824	13	64	77	115	89	204
L11	Proposed	2231 South Barrington Avenue	Restaurant Catering Office	6,904 GSF 2,750 GSF 9,731 GSF	[1]	610	24	11	35	34	39	73
L12	Proposed	11355 West Olympic Boulevard	Office	120,242 GSF	[1]	1,246	133	33	166	49	122	171
L13	Proposed	11460 West Gateway Boulevard	Apartment Specialty Retail	128 DU 5,153 GLSF	[1]	1,107	(1)	84	83	51	17	68
L14	Proposed	12300 West Wilshire Boulevard	Medical Office Building	33,392 GSF	[1]	838	17	11	28	24	29	53
L15	Proposed	11750 West Santa Monica Boulevard	Apartment	187 DU	[1]	1,006	(5)	65	60	80	36	116

Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
L16	Proposed	12431 West Rochester Avenue	Apartment	50 DU	[1]	333	5	21	26	16	9	25
L17	Proposed	12414 West Exposition Boulevard	Office	70,844 GSF	[1]	584	81	9	90	17	107	124
			City of Santa Monica									
S1	Under Construction	Bergamot Transit Village Center 1681 South 26th Street	Shopping Center Office Apartment	84,000 GLSF 567,000 GLSF 325 DU	[1]	15,340	607	372	979	564	612	1,176
S2	Proposed	1431 Colorado Avenue	Apartment Retail Restaurant	50 DU 10,475 GLSF 2,110 GSF	[3] [4] [5]	333 447 268	5 6 13	21 4 10	26 10 23	20 19 13	11 20 8	31 39 21
S3	Proposed	1802 Santa Monica Boulevard	Apartment Restaurant Auto Dealer	23 DU 1,390 GSF 13,590 GSF	[3] [5] [6]	153 177 439	2 8 20	10 7 6	12 15 26	9 8 14	5 6 22	14 14 36
S4	Proposed	2901 Santa Monica Boulevard	Apartment Retail	60 DU 5,100 GLSF	[3] [4]	399 218	6 3	25 2	31 5	24 9	13 10	37 19
S5	Proposed	2020 Virginia Avenue	Apartment	21 DU	[3]	140	2	9	11	8	5	13
S6	Proposed	3025 Olympic Boulevard	Apartment Retail Office	174 DU 8,500 GLSF 75,247 GSF	[3] [4] [7]	1,157 363 830	18 5 103	71 3 14	89 8 117	70 15 19	38 17 93	108 32 112
S7	Proposed	3030 Nebraska Avenue	Apartment Office	177 DU 66,100 GSF	[3] [7]	1,177 729	18 91	72 12	90 103	72 17	38 81	110 98
S8	Proposed	1419 19th Street	Medical Office Building	5,342 GSF	[8]	193	10	3	13	5	14	19
S9	Proposed	1242 20th Street	Medical Office Building	110,500 GSF	[8]	3,992	209	55	264	110	284	394
S10	Under Construction	2848-2912 Colorado Avenue	Apartment Retail Restaurant Office	282 DU 19,610 GLSF 4,990 GSF 4,500 GSF	[3] [4] [5] [7]	1,875 837 634 50	29 12 30 6	115 7 24 1	144 19 54 7	114 35 29 1	61 38 20 6	175 73 49 7
S11	Under Construction	2930 Colorado Avenue	Condominiums Apartment Office Retail	216 DU 161 DU 4,250 GSF 20,700 GLSF	[9] [3] [7] [4]	1,255 1,071 47 884	16 16 6 12	79 66 1 8	95 82 7 20	75 65 1 37	37 35 5 40	112 100 6 77

Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
S12	Proposed	3008 Santa Monica Boulevard	Apartment Retail	26 DU 3.397 GLSF	[3] [4]	173 145	3 2	10 1	13 3	10 6	6 7	16 13
TOTAL						20,986	631	821	1,452	910	866	1,776

[1] Source: City of Los Angeles Department of Transportation (LADOT), Department of City Planning (LADCP) and City of Santa Monica Planning & Community Development, except as noted below. The peak hour traffic volumes were forecast based on trip data provided by LADOT and by applying trip rates as provided in the ITE "Trip Generation Manual", 9th Edition, 2012.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 220 (Apartment) trip generation average rates.
[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[5] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
[6] ITE Land Use Code 841 (Automobile Sales) trip generation average rates.
[7] ITE Land Use Code 710 (General Office Building) trip generation average rates.
[8] ITE Land Use Code 720 (Medical-Dental Office Building) trip generation average rates.
[9] ITE Land Use Code 230 (Residential Condominium/Townhouse) trip generation average rates.

Table 7-1
PROJECT TRIP GENERATION [1]

TRIP GENERATION RATES [2]								
		DAILY TRIP	AM PEAK HOUR TRIP RATE			PM PEAK HOUR TRIP RATE		
LAND USE	VARIABLE	RATE	IN	OUT	TOTAL	IN	OUT	TOTAL
Existing WLA District Yard	Per Employee	4.583	0.146	0.238	0.384	0.158	0.375	0.533
Distribution Split			38%	62%	100%	30%	70%	100%

PROJECT TRIP GENERATION								
		DAILY TRIP END	AM PEAK HOUR VOLUMES [3]			PM PEAK HOUR VOLUMES [3]		
LAND USE	SIZE	VOLUMES [3]	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project								
WLA District Yard	200 Employees	917	29	48	77	32	75	107
Less Existing Site								
WLA District Yard	(120) Employees	(550)	(17)	(29)	(46)	(19)	(45)	(64)
NET NEW VEHICLE TRIPS		*367*	*12*	*19*	*31*	*13*	*30*	*43*

[1] Trips are one-way traffic movements, entering or leaving.

[2] Refer to Table C contained in Appendix C for derivation of empirical trip rates.

[3] Trip generation forecast based on empirical trip rates shown above.

Appendix Table C
EMPIRICAL TRIP RATES [1]

Wednesday, October 4, 2017 [2]

LAND USE	SIZE	DAILY TRIP ENDS VOLUMES [5]	AM PEAK HOUR VOLUMES [6]			PM PEAK HOUR VOLUMES [6]			DAILY TRIP RATE [7]	AM PEAK HOUR TRIP RATES [7]			PM PEAK HOUR TRIP RATES [7]		
			IN	OUT	TOTAL	IN	OUT	TOTAL		IN	OUT	TOTAL	IN	OUT	TOTAL
Existing WLA District Yard	120 Employees	535	25	18	43	20	44	64	4.458	0.208	0.150	0.358	0.167	0.367	0.534
Distribution Split		50% In/50% Out	58%	42%	100%	31%	69%	100%	50% In/50% Out	58%	42%	100%	31%	69%	100%

Thursday, October 5, 2017 [3]

LAND USE	SIZE	DAILY TRIP ENDS VOLUMES [5]	AM PEAK HOUR VOLUMES [6]			PM PEAK HOUR VOLUMES [6]			DAILY TRIP RATE [7]	AM PEAK HOUR TRIP RATES [7]			PM PEAK HOUR TRIP RATES [7]		
			IN	OUT	TOTAL	IN	OUT	TOTAL		IN	OUT	TOTAL	IN	OUT	TOTAL
Existing WLA District Yard	120 Employees	565	10	39	49	18	46	64	4.708	0.083	0.325	0.408	0.150	0.383	0.533
Distribution Split		50% In/50% Out	20%	80%	100%	28%	72%	100%	50% In/50% Out	20%	80%	100%	28%	72%	100%

Two-Day Average [4]

LAND USE	SIZE	DAILY TRIP ENDS VOLUMES [5]	AM PEAK HOUR VOLUMES [6]			PM PEAK HOUR VOLUMES [6]			DAILY TRIP RATE [7]	AM PEAK HOUR TRIP RATES [7]			PM PEAK HOUR TRIP RATES [7]		
			IN	OUT	TOTAL	IN	OUT	TOTAL		IN	OUT	TOTAL	IN	OUT	TOTAL
Existing WLA District Yard	120 Employees	550	17.5	28.5	46	19	45	64	4.583	0.146	0.238	0.384	0.158	0.375	0.533
Distribution Split		50% In/50% Out	38%	62%	100%	30%	70%	100%	50% In/50% Out	38%	62%	100%	30%	70%	100%

[1] Trips are one-way traffic movements, entering or leaving.

[2] Based on actual site observations on Wednesday, October 4, 2017, the AM peak hour occurred from 6:45 AM to 7:45 AM, and the PM peak hour occurred from 6:15 PM to 7:15 PM.

[3] Based on actual site observations on Thursday, October 5, 2017, the AM peak hour occurred from 7:15 AM to 8:15 AM, and the PM peak hour occurred from 3:15 PM to 4:15 PM.

[4] The two-day average was determined by averaging the individual peak hour trips identified on October 4, 2017 and October 5, 2017, for the AM and PM peak hours.

[5] Daily trip ends were estimated based on the assumption that the average peak hour trips (i.e., the average of the AM and PM peak hour trips) represent ten percent (10%) of the total daily trip ends.

[6] Actual site driveway counts and on-street parking observations were conducted during the morning (6:00 to 10:00 AM) and evening peak periods (3:00 to 7:30 PM) at the existing West Los Angeles District Yard in order to determine the site's actual operating peak hours and empirical peak hour trip rates. The volumes shown represent the peak hour generation (i.e., the peak sum of inbound outbound trips).

[7] Trip rates per employee.

Table 9-2
FREEWAY IMPACT ANALYSIS SCREENING [1]
Weekday AM and PM Peak Hours

PROJECT TRIP GENERATION	TOTAL PROJECT	
	AM	PM
Inbound	12	13
Outbound	19	30

FREEWAY LOCATION	DIR.	PROJECT TRIP DIRECTION	TOTAL PROJECT TRIPS			NO. OF LANES	TOTAL CAPACITY [2]	PERCENT OF CAPACITY		FREEWAY ANALYSIS REQUIRED? (YES/NO) [3]
			DIST.	AM	PM			AM	PM	
Mainline Segment										
I-10 Freeway west of Centinela Avenue	EB	Inbound	5%	1	1	4	8,000	0.0%	0.0%	No
	WB	Outbound	5%	1	2	4	8,000	0.0%	0.0%	No
I-10 Freeway east of Bundy Drive	EB	Outbound	20%	4	6	4	8,000	0.1%	0.1%	No
	WB	Inbound	20%	2	3	4	8,000	0.0%	0.0%	No
I-405 Freeway north of Santa Monica Boulevard	NB	Outbound	10%	2	3	4	8,000	0.0%	0.0%	No
	SB	Inbound	10%	1	1	4	8,000	0.0%	0.0%	No
Off-Ramp										
I-10 Freeway Eastbound at Centinela Avenue	EB	Inbound	5%	1	1	3	2,550	0.0%	0.0%	No
I-10 Freeway Westbound at Centinela Avenue	WB	Inbound	10%	1	1	2	1,700	0.1%	0.1%	No
I-10 Freeway Westbound at Bundy Avenue	WB	Inbound	15%	2	2	1	850	0.2%	0.2%	No
I-405 Freeway Southbound at Santa Monica Boulevard	SB	Inbound	5%	1	1	3	2,550	0.0%	0.0%	No

[1] Pursuant to *Traffic Study Policies and Procedures*, City of Los Angeles Department of Transportation, August 2014, *Agreement Between City of Los Angeles and Caltrans District 7 on Freeway Impact Analysis Procedures*, October 2013, and per *First Amendment to the Agreement between LADOT and Caltrans District 7 on Freeway Impact Analysis Procedures*, December 15, 2015.

[2] Total Capacity derived from the assumed free-flow capacities shown below: (in vehicles per hour per lane)

Facility Type	Capacity
Mainline Segment	2,000 vphpl
Off-Ramp	850 vphpl

[3] Freeway impact analysis is required if the project would result in an increase of ≥2% of capacity for facilities operating at LOS D, or in an increase of ≥1% of capacity for facilities operating at LOS E/F. For a more conservative screening analysis, all facilities are assumed to be operating at LOS E/F.

APPENDIX B

TRAFFIC COUNT DATA

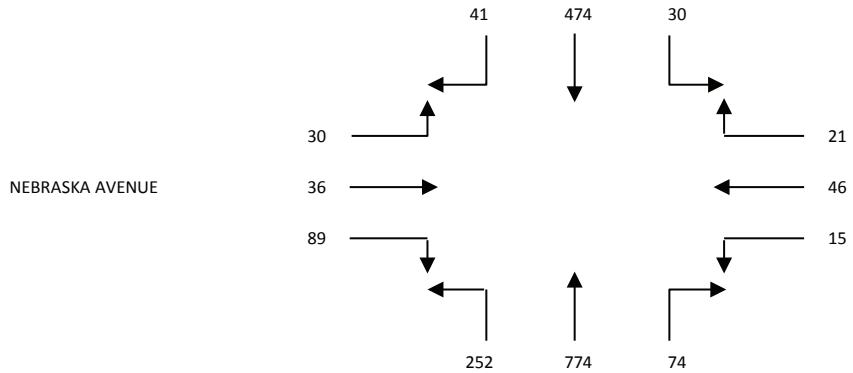
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: N/S CENTINELA AVENUE
E/W NEBRASKA AVENUE
FILE NUMBER: 1-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	1	40	3	3	4	2	5	87	23	10	2	1
0715-0730	3	55	6	2	9	3	7	91	25	20	7	5
0730-0745	5	69	2	4	3	5	8	131	30	30	8	10
0745-0800	11	78	3	4	7	3	5	154	48	45	14	18
0800-0815	6	99	6	2	10	6	10	212	40	42	10	11
0815-0830	4	103	8	2	8	2	13	203	44	35	10	7
0830-0845	6	105	5	3	11	5	19	220	53	28	11	7
0845-0900	11	126	9	3	12	3	18	192	62	23	8	6
0900-0915	14	133	10	5	10	3	18	180	65	20	6	7
0915-0930	10	110	6	10	13	4	19	182	72	18	11	10
0930-0945	8	82	8	5	9	6	19	205	68	20	11	9
0945-1000	11	60	9	4	10	6	25	197	57	26	11	11

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	20	242	14	13	23	13	25	463	126	105	31	34	1109
0715-0815	25	301	17	12	29	17	30	588	143	137	39	44	1382
0730-0830	26	349	19	12	28	16	36	700	162	152	42	46	1588
0745-0845	27	385	22	11	36	16	47	789	185	150	45	43	1756
0800-0900	27	433	28	10	41	16	60	827	199	128	39	31	1839
0815-0915	35	467	32	13	41	13	68	795	224	106	35	27	1856
0830-0930	41	474	30	21	46	15	74	774	252	89	36	30	1882
0845-0945	43	451	33	23	44	16	74	759	267	81	36	32	1859
0900-1000	43	385	33	24	42	19	81	764	262	84	39	37	1813

A.M. PEAK HOUR
0830-0930



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: CENTINELA AVENUE / NEBRASKA AVENUE

FILE: 1AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	1	1	1
0715-0730	1	3	5	0
0730-0745	1	7	10	2
0745-0800	4	1	10	2
0800-0815	3	1	3	6
0815-0830	0	0	2	0
0830-0845	3	5	7	4
0845-0900	5	1	6	2
0900-0915	5	2	0	3
0915-0930	8	3	10	3
0930-0945	2	5	9	2
0945-1000	7	2	4	1

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	1	0
0715-0730	2	0	0	0
0730-0745	0	0	1	0
0745-0800	0	1	0	0
0800-0815	2	1	1	0
0815-0830	2	1	0	1
0830-0845	2	0	1	1
0845-0900	1	0	1	0
0900-0915	2	0	0	0
0915-0930	3	0	3	2
0930-0945	1	0	0	0
0945-1000	1	0	1	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	6	12	26	5	49
0715-0815	9	12	28	10	59
0730-0830	8	9	25	10	52
0745-0845	10	7	22	12	51
0800-0900	11	7	18	12	48
0815-0915	13	8	15	9	45
0830-0930	21	11	23	12	67
0845-0945	20	11	25	10	66
0900-1000	22	12	23	9	66

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	2	1	2	0	5
0715-0815	4	2	2	0	8
0730-0830	4	3	2	1	10
0745-0845	6	3	2	2	13
0800-0900	7	2	3	2	14
0815-0915	7	1	2	2	12
0830-0930	8	0	5	3	16
0845-0945	7	0	4	2	13
0900-1000	7	0	4	2	13

THE TRAFFIC SOLUTION
9 ALTA STREET UNIT E
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trafsolutn@aol.com

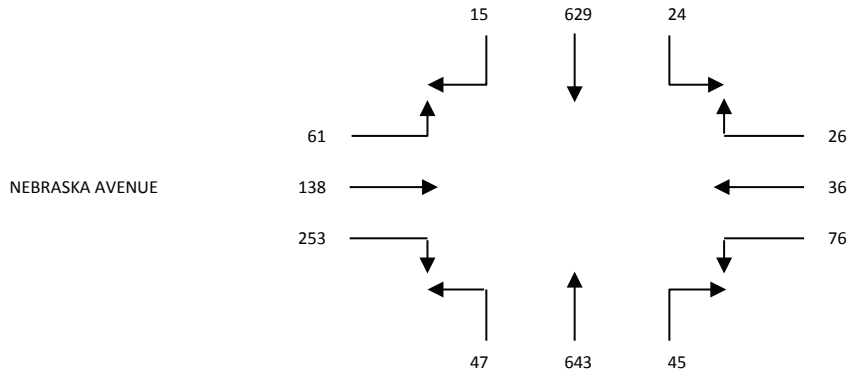
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION: N/S CENTINELA AVENUE
E/W NEBRASKA AVENUE
FILE NUMBER: 1-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0300-0315	15	125	3	3	8	14	7	109	29	36	6	6
0315-0330	15	135	4	2	10	14	7	100	23	64	19	9
0330-0345	10	170	6	4	8	17	9	122	19	72	14	13
0345-0400	6	163	7	7	9	10	16	106	12	58	20	11
0400-0415	5	173	4	3	9	11	11	124	10	40	23	9
0415-0430	3	142	6	4	11	18	10	117	17	55	26	5
0430-0445	4	157	9	4	7	16	12	123	12	57	32	10
0445-0500	5	161	5	6	5	14	11	138	12	51	20	11
0500-0515	3	182	3	5	6	19	17	162	10	50	30	11
0515-0530	3	162	4	7	9	17	10	145	15	77	39	15
0530-0545	5	152	7	6	13	22	11	155	10	69	34	19
0545-0600	4	133	10	8	8	18	7	181	12	57	35	16

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0300-0400	46	593	20	16	35	55	39	437	83	230	59	39	1652
0315-0415	36	641	21	16	36	52	43	452	64	234	76	42	1713
0330-0430	24	648	23	18	37	56	46	469	58	225	83	38	1725
0345-0445	18	635	26	18	36	55	49	470	51	210	101	35	1704
0400-0500	17	633	24	17	32	59	44	502	51	203	101	35	1718
0415-0515	15	642	23	19	29	67	50	540	51	213	108	37	1794
0430-0530	15	662	21	22	27	66	50	568	49	235	121	47	1883
0445-0545	16	657	19	24	33	72	49	600	47	247	123	56	1943
0500-0600	15	629	24	26	36	76	45	643	47	253	138	61	1993

P.M. PEAK HOUR
0500-0600



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 03:00 PM TO 06:00 PM

INTERSECTION: CENTINELA AVENUE / NEBRASKA AVENUE

FILE: 1PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	4	3	4	5
0315-0330	1	0	6	2
0330-0345	4	5	6	6
0345-0400	3	2	0	2
0400-0415	0	3	2	2
0415-0430	2	1	1	4
0430-0445	2	3	0	0
0445-0500	3	0	2	4
0500-0515	5	2	1	2
0515-0530	2	1	3	4
0530-0545	3	2	2	2
0545-0600	1	1	2	3

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	0	0	0	0
0315-0330	0	1	0	1
0330-0345	1	1	1	0
0345-0400	0	0	1	0
0400-0415	4	0	0	0
0415-0430	0	0	1	1
0430-0445	0	0	1	1
0445-0500	0	0	0	1
0500-0515	1	0	2	0
0515-0530	0	0	0	0
0530-0545	0	0	0	1
0545-0600	0	0	3	1

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	12	10	16	15	53
0315-0415	8	10	14	12	44
0330-0430	9	11	9	14	43
0345-0445	7	9	3	8	27
0400-0500	7	7	5	10	29
0415-0515	12	6	4	10	32
0430-0530	12	6	6	10	34
0445-0545	13	5	8	12	38
0500-0600	11	6	8	11	36

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	1	2	2	1	6
0315-0415	5	2	2	1	10
0330-0430	5	1	3	1	10
0345-0445	4	0	3	2	9
0400-0500	4	0	2	3	9
0415-0515	1	0	4	3	8
0430-0530	1	0	3	2	6
0445-0545	1	0	2	2	5
0500-0600	1	0	5	2	8

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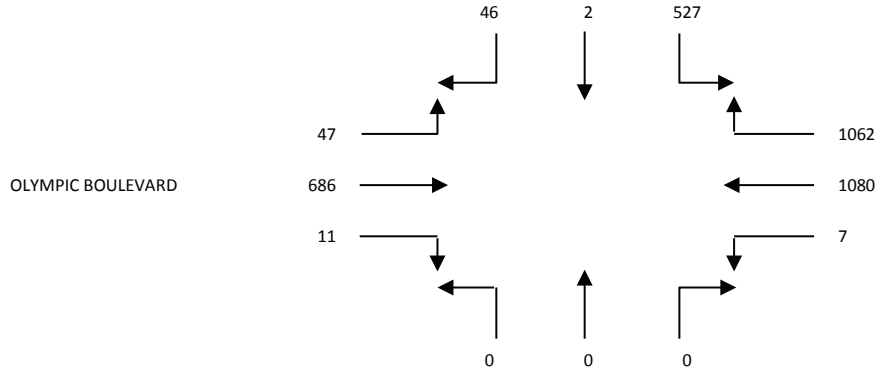
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: N/S CENTINELA AVENUE WEST
E/W OLYMPIC BOULEVARD
FILE NUMBER: 2-AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0700-0715	7	1	39	116	145	0	0	0	0	1	52	2
0715-0730	9	0	78	133	203	1	0	0	0	2	70	3
0730-0745	17	0	83	161	274	2	0	0	0	0	105	4
0745-0800	25	0	110	203	281	1	0	0	0	1	148	6
0800-0815	18	1	135	270	268	0	0	0	0	3	161	5
0815-0830	10	1	121	241	267	2	0	0	0	1	195	10
0830-0845	8	0	151	260	279	2	0	0	0	4	173	15
0845-0900	10	0	120	291	266	3	0	0	0	3	157	17
0900-0915	10	1	123	282	231	2	0	0	0	2	185	18
0915-0930	11	1	100	278	220	1	0	0	0	4	180	10
0930-0945	8	1	110	280	205	2	0	0	0	2	167	8
0945-1000	3	2	94	289	192	3	0	0	0	3	171	12

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0700-0800	58	1	310	613	903	4	0	0	0	4	375	15	2283
0715-0815	69	1	406	767	1026	4	0	0	0	6	484	18	2781
0730-0830	70	2	449	875	1090	5	0	0	0	5	609	25	3130
0745-0845	61	2	517	974	1095	5	0	0	0	9	677	36	3376
0800-0900	46	2	527	1062	1080	7	0	0	0	11	686	47	3468
0815-0915	38	2	515	1074	1043	9	0	0	0	10	710	60	3461
0830-0930	39	2	494	1111	996	8	0	0	0	13	695	60	3418
0845-0945	39	3	453	1131	922	8	0	0	0	11	689	53	3309
0900-1000	32	5	427	1129	848	8	0	0	0	11	703	48	3211

A.M. PEAK HOUR
0800-0900



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: CENTINELA AVENUE WEST / OLYMPIC BOULEVARD

FILE: 2AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	1	0	1	2
0715-0730	1	0	1	2
0730-0745	5	0	1	3
0745-0800	0	0	2	5
0800-0815	1	0	0	5
0815-0830	2	0	1	2
0830-0845	4	0	3	3
0845-0900	3	0	3	2
0900-0915	4	0	2	3
0915-0930	1	0	4	0
0930-0945	4	0	2	1
0945-1000	6	0	3	1

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	2	0	0	0
0715-0730	0	0	0	0
0730-0745	2	0	1	0
0745-0800	0	0	1	0
0800-0815	0	0	0	0
0815-0830	0	0	0	1
0830-0845	0	0	1	1
0845-0900	1	0	2	1
0900-0915	0	0	1	0
0915-0930	0	0	0	2
0930-0945	2	0	1	1
0945-1000	1	0	0	2

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	7	0	5	12	24
0715-0815	7	0	4	15	26
0730-0830	8	0	4	15	27
0745-0845	7	0	6	15	28
0800-0900	10	0	7	12	29
0815-0915	13	0	9	10	32
0830-0930	12	0	12	8	32
0845-0945	12	0	11	6	29
0900-1000	15	0	11	5	31

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	4	0	2	0	6
0715-0815	2	0	2	0	4
0730-0830	2	0	2	1	5
0745-0845	0	0	2	2	4
0800-0900	1	0	3	3	7
0815-0915	1	0	4	3	8
0830-0930	1	0	4	4	9
0845-0945	3	0	4	4	11
0900-1000	3	0	2	5	10

THE TRAFFIC SOLUTION
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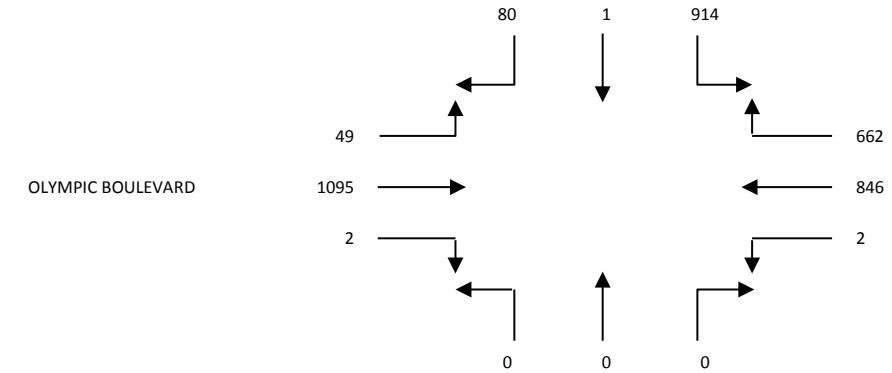
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION: N/S CENTINELA AVENUE WEST
E/W OLYMPIC BOULEVARD
FILE NUMBER: 2-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0300-0315	15	0	150	145	197	1	0	0	0	2	228	4
0315-0330	24	1	227	129	203	0	0	0	0	1	233	7
0330-0345	22	1	217	124	212	2	0	0	0	3	275	8
0345-0400	20	1	239	115	228	2	0	0	0	2	266	16
0400-0415	23	1	209	133	211	1	0	0	0	4	305	12
0415-0430	21	2	232	145	200	2	0	0	0	5	273	17
0430-0445	27	1	219	129	188	1	0	0	0	2	250	10
0445-0500	21	0	193	136	197	0	0	0	0	1	282	15
0500-0515	23	1	227	144	190	2	0	0	0	1	277	16
0515-0530	18	0	263	178	217	0	0	0	0	0	262	11
0530-0545	24	0	205	145	208	0	0	0	0	1	286	10
0545-0600	15	0	219	195	231	0	0	0	0	0	270	12

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0300-0400	81	3	833	513	840	5	0	0	0	8	1002	35	3320
0315-0415	89	4	892	501	854	5	0	0	0	10	1079	43	3477
0330-0430	86	5	897	517	851	7	0	0	0	14	1119	53	3549
0345-0445	91	5	899	522	827	6	0	0	0	13	1094	55	3512
0400-0500	92	4	853	543	796	4	0	0	0	12	1110	54	3468
0415-0515	92	4	871	554	775	5	0	0	0	9	1082	58	3450
0430-0530	89	2	902	587	792	3	0	0	0	4	1071	52	3502
0445-0545	86	1	888	603	812	2	0	0	0	3	1107	52	3554
0500-0600	80	1	914	662	846	2	0	0	0	2	1095	49	3651

P.M. PEAK HOUR
0500-0600



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 03:00 PM TO 06:00 PM

INTERSECTION: CENTINELA AVENUE WEST / OLYMPIC BOULEVARD

FILE: 2PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	4	0	3	0
0315-0330	3	0	5	4
0330-0345	11	0	5	3
0345-0400	5	0	3	4
0400-0415	2	0	6	4
0415-0430	4	0	3	5
0430-0445	2	0	4	0
0445-0500	5	0	4	3
0500-0515	2	0	3	3
0515-0530	6	0	2	4
0530-0545	6	0	3	3
0545-0600	2	0	2	2

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	0	0	0	1
0315-0330	2	0	0	1
0330-0345	0	0	1	0
0345-0400	0	0	0	2
0400-0415	0	0	0	0
0415-0430	0	0	1	1
0430-0445	1	0	0	0
0445-0500	0	0	1	1
0500-0515	0	0	0	0
0515-0530	0	0	0	2
0530-0545	1	0	1	2
0545-0600	0	0	0	3

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	23	0	16	11	50
0315-0415	21	0	19	15	55
0330-0430	22	0	17	16	55
0345-0445	13	0	16	13	42
0400-0500	13	0	17	12	42
0415-0515	13	0	14	11	38
0430-0530	15	0	13	10	38
0445-0545	19	0	12	13	44
0500-0600	16	0	10	12	38

	BICYCLIST MOVEMENTS			
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0400	2	0	1	4
0315-0415	2	0	1	3
0330-0430	0	0	2	3
0345-0445	1	0	1	3
0400-0500	1	0	2	2
0415-0515	1	0	2	2
0430-0530	1	0	1	3
0445-0545	1	0	2	5
0500-0600	1	0	1	7

THE TRAFFIC SOLUTION
9 ALTA STREET UNIT E
ARCADIA, CALIFORNIA 91006
626.485.8048 PHONE
trafsolutn@aol.com

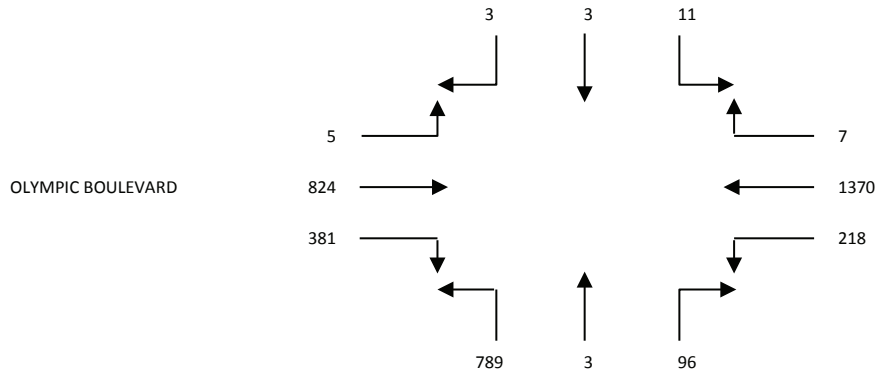
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: N/S CENTINELA AVENUE EAST / PROJECT DRIVEWAY
E/W OLYMPIC BOULEVARD
FILE NUMBER: 3-AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0700-0715	1	0	0	1	137	34	17	0	114	32	50	0
0715-0730	0	2	3	0	212	41	10	0	120	54	86	1
0730-0745	1	2	6	0	296	59	16	0	176	66	125	2
0745-0800	1	5	13	2	332	56	23	1	209	90	162	2
0800-0815	0	0	5	1	301	52	28	0	207	88	189	1
0815-0830	1	0	2	3	318	45	25	1	202	104	219	1
0830-0845	1	1	5	3	369	69	21	1	196	102	203	0
0845-0900	1	0	2	1	309	54	27	0	197	85	194	2
0900-0915	0	2	2	0	374	50	23	1	194	90	208	2
0915-0930	3	2	2	4	337	48	29	1	185	75	223	3
0930-0945	2	2	2	2	308	30	31	2	170	65	229	2
0945-1000	3	4	5	2	286	42	34	2	183	73	188	3

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0700-0800	3	9	22	3	977	190	66	1	619	242	423	5	2560
0715-0815	2	9	27	3	1141	208	77	1	712	298	562	6	3046
0730-0830	3	7	26	6	1247	212	92	2	794	348	695	6	3438
0745-0845	3	6	25	9	1320	222	97	3	814	384	773	4	3660
0800-0900	3	1	14	8	1297	220	101	2	802	379	805	4	3636
0815-0915	3	3	11	7	1370	218	96	3	789	381	824	5	3710
0830-0930	5	5	11	8	1389	221	100	3	772	352	828	7	3701
0845-0945	6	6	8	7	1328	182	110	4	746	315	854	9	3575
0900-1000	8	10	11	8	1305	170	117	6	732	303	848	10	3528

A.M. PEAK HOUR
0815-0915



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: CENTINELA AVENUE EAST - PROJECT DRIVEWAY / OLYMPIC BOULEVARD

FILE: 3AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	1	0	2	0
0715-0730	2	3	0	0
0730-0745	3	3	2	0
0745-0800	2	1	4	0
0800-0815	1	5	4	0
0815-0830	3	7	5	0
0830-0845	3	6	7	0
0845-0900	2	7	0	0
0900-0915	1	16	4	0
0915-0930	3	23	4	0
0930-0945	5	11	2	0
0945-1000	5	19	7	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	1	0	0
0715-0730	1	0	0	0
0730-0745	1	1	0	0
0745-0800	0	3	0	0
0800-0815	0	1	0	0
0815-0830	1	1	1	0
0830-0845	0	2	5	0
0845-0900	2	1	1	0
0900-0915	0	1	2	0
0915-0930	1	0	0	0
0930-0945	2	2	1	0
0945-1000	1	3	1	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	8	7	8	0	23
0715-0815	8	12	10	0	30
0730-0830	9	16	15	0	40
0745-0845	9	19	20	0	48
0800-0900	9	25	16	0	50
0815-0915	9	36	16	0	61
0830-0930	9	52	15	0	76
0845-0945	11	57	10	0	78
0900-1000	14	69	17	0	100

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	2	5	0	0	7
0715-0815	2	5	0	0	7
0730-0830	2	6	1	0	9
0745-0845	1	7	6	0	14
0800-0900	3	5	7	0	15
0815-0915	3	5	9	0	17
0830-0930	3	4	8	0	15
0845-0945	5	4	4	0	13
0900-1000	4	6	4	0	14

THE TRAFFIC SOLUTION
9 ALTA STREET UNIT E
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trafsolutn@aol.com

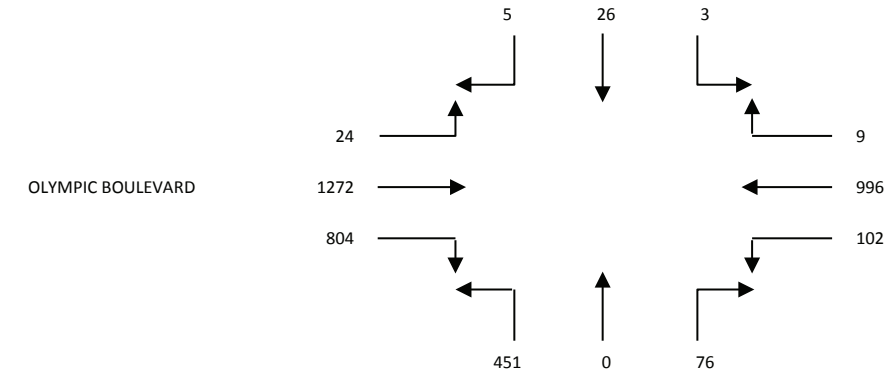
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION: N/S CENTINELA AVENUE EAST / PROJECT DRIVEWAY
E/W OLYMPIC BOULEVARD
FILE NUMBER: 3-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0300-0315	0	1	1	6	205	33	12	3	122	117	246	0
0315-0330	1	1	0	6	215	40	26	5	113	185	348	3
0330-0345	0	1	2	8	213	30	21	2	106	204	309	2
0345-0400	1	2	3	3	233	32	17	4	93	200	279	0
0400-0415	3	14	6	3	234	28	19	1	93	224	321	0
0415-0430	3	26	3	4	217	21	16	0	99	234	314	0
0430-0445	2	20	1	3	245	28	14	1	84	218	278	1
0445-0500	0	19	0	2	277	39	16	0	103	196	308	4
0500-0515	1	5	0	2	239	30	15	0	122	194	310	8
0515-0530	2	1	2	3	234	20	21	0	105	200	336	7
0530-0545	2	1	1	2	246	13	24	0	121	214	318	5
0545-0600	1	0	0	2	262	15	20	1	124	189	322	2

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0300-0400	2	5	6	23	866	135	76	14	434	706	1182	5	3454
0315-0415	5	18	11	20	895	130	83	12	405	813	1257	5	3654
0330-0430	7	43	14	18	897	111	73	7	391	862	1223	2	3648
0345-0445	9	62	13	13	929	109	66	6	369	876	1192	1	3645
0400-0500	8	79	10	12	973	116	65	2	379	872	1221	5	3742
0415-0515	6	70	4	11	978	118	61	1	408	842	1210	13	3722
0430-0530	5	45	3	10	995	117	66	1	414	808	1232	20	3716
0445-0545	5	26	3	9	996	102	76	0	451	804	1272	24	3768
0500-0600	6	7	3	9	981	78	80	1	472	797	1286	22	3742

P.M. PEAK HOUR
0445-0545



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
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PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 03:00 PM TO 06:00 PM

INTERSECTION: CENTINELA AVENUE EAST - PROJECT DRIVEWAY / OLYMPIC BOULEVARD

FILE: 3PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	9	51	7	0
0315-0330	13	51	8	0
0330-0345	11	49	3	0
0345-0400	9	32	3	0
0400-0415	8	30	4	0
0415-0430	11	30	0	0
0430-0445	4	11	2	0
0445-0500	7	25	2	0
0500-0515	8	34	10	0
0515-0530	6	11	9	0
0530-0545	5	3	2	0
0545-0600	3	5	5	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	1	0	0	0
0315-0330	1	1	0	0
0330-0345	0	0	1	0
0345-0400	0	0	0	0
0400-0415	2	0	2	0
0415-0430	1	0	3	0
0430-0445	1	0	1	0
0445-0500	0	0	2	0
0500-0515	2	1	4	0
0515-0530	3	0	0	0
0530-0545	2	0	1	0
0545-0600	2	0	1	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	42	183	21	0	246
0315-0415	41	162	18	0	221
0330-0430	39	141	10	0	190
0345-0445	32	103	9	0	144
0400-0500	30	96	8	0	134
0415-0515	30	100	14	0	144
0430-0530	25	81	23	0	129
0445-0545	26	73	23	0	122
0500-0600	22	53	26	0	101

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	2	1	1	0	4
0315-0415	3	1	3	0	7
0330-0430	3	0	6	0	9
0345-0445	4	0	6	0	10
0400-0500	4	0	8	0	12
0415-0515	4	1	10	0	15
0430-0530	6	1	7	0	14
0445-0545	7	1	7	0	15
0500-0600	9	1	6	0	16

THE TRAFFIC SOLUTION
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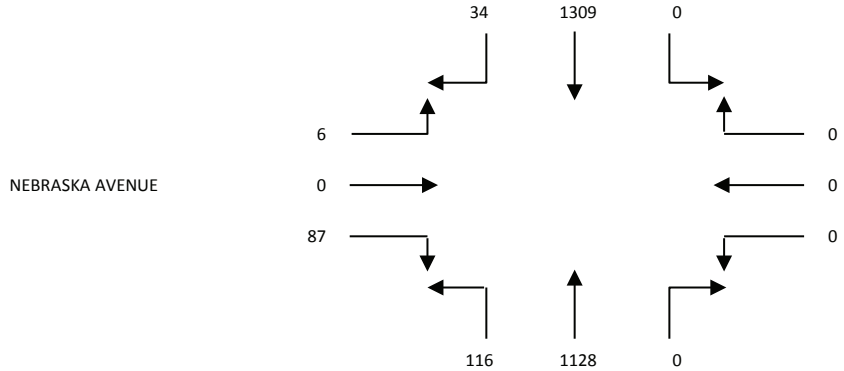
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: N/S BUNDY DRIVE
E/W NEBRASKA AVENUE
FILE NUMBER: 4-AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0700-0715	6	120	0	0	0	0	0	208	18	3	0	0
0715-0730	4	140	0	0	0	0	0	286	17	8	0	2
0730-0745	4	185	0	0	0	0	0	327	20	10	0	2
0745-0800	4	242	0	0	0	0	0	319	20	15	0	1
0800-0815	8	333	0	0	0	0	0	283	33	25	0	3
0815-0830	8	325	0	0	0	0	0	276	35	24	0	1
0830-0845	8	334	0	0	0	0	0	288	23	20	0	2
0845-0900	10	317	0	0	0	0	0	281	25	18	0	0
0900-0915	16	326	0	0	0	0	0	269	39	14	0	0
0915-0930	16	297	0	0	0	0	0	270	47	18	0	2
0930-0945	19	277	0	0	0	0	0	249	42	21	0	1
0945-1000	15	251	0	0	0	0	0	230	54	19	0	3

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0700-0800	18	687	0	0	0	0	0	1140	75	36	0	5	1961
0715-0815	20	900	0	0	0	0	0	1215	90	58	0	8	2291
0730-0830	24	1085	0	0	0	0	0	1205	108	74	0	7	2503
0745-0845	28	1234	0	0	0	0	0	1166	111	84	0	7	2630
0800-0900	34	1309	0	0	0	0	0	1128	116	87	0	6	2680
0815-0915	42	1302	0	0	0	0	0	1114	122	76	0	3	2659
0830-0930	50	1274	0	0	0	0	0	1108	134	70	0	4	2640
0845-0945	61	1217	0	0	0	0	0	1069	153	71	0	3	2574
0900-1000	66	1151	0	0	0	0	0	1018	182	72	0	6	2495

A.M. PEAK HOUR
0800-0900



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
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PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: BUNDY DRIVE / NEBRASKA AVENUE

FILE: 4AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	4
0715-0730	0	0	0	1
0730-0745	0	0	0	3
0745-0800	0	0	0	5
0800-0815	0	0	0	1
0815-0830	0	0	0	3
0830-0845	0	0	0	3
0845-0900	0	0	0	1
0900-0915	0	0	0	4
0915-0930	0	0	0	4
0930-0945	0	0	0	4
0945-1000	0	0	0	5

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	1
0715-0730	0	0	0	0
0730-0745	0	0	0	2
0745-0800	0	0	0	2
0800-0815	0	0	0	1
0815-0830	0	0	0	2
0830-0845	0	0	0	2
0845-0900	0	0	0	1
0900-0915	0	0	0	3
0915-0930	0	0	0	1
0930-0945	0	0	0	1
0945-1000	0	0	0	1

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	0	0	0	13	13
0715-0815	0	0	0	10	10
0730-0830	0	0	0	12	12
0745-0845	0	0	0	12	12
0800-0900	0	0	0	8	8
0815-0915	0	0	0	11	11
0830-0930	0	0	0	12	12
0845-0945	0	0	0	13	13
0900-1000	0	0	0	17	17

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	0	0	0	5	5
0715-0815	0	0	0	5	5
0730-0830	0	0	0	7	7
0745-0845	0	0	0	7	7
0800-0900	0	0	0	6	6
0815-0915	0	0	0	8	8
0830-0930	0	0	0	7	7
0845-0945	0	0	0	6	6
0900-1000	0	0	0	6	6

THE TRAFFIC SOLUTION
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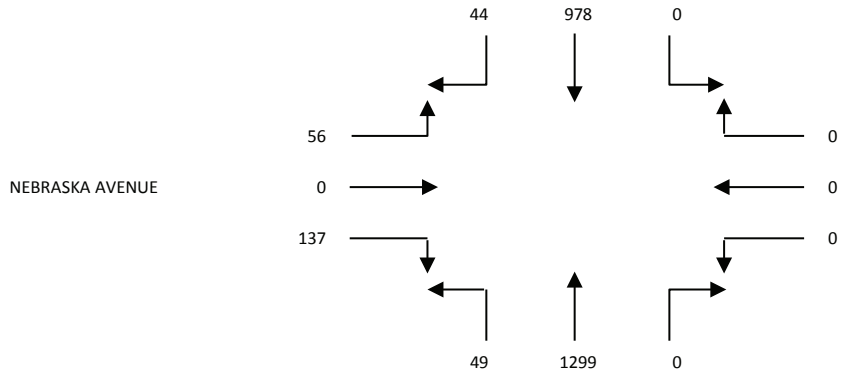
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION: N/S BUNDY DRIVE
E/W NEBRASKA AVENUE
FILE NUMBER: 4-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0300-0315	17	324	0	0	0	0	0	290	17	42	0	5
0315-0330	16	310	0	0	0	0	0	283	10	33	0	9
0330-0345	11	204	0	0	0	0	0	278	10	26	0	8
0345-0400	13	245	0	0	0	0	0	300	15	39	0	12
0400-0415	13	297	0	0	0	0	0	356	10	40	0	10
0415-0430	11	225	0	0	0	0	0	304	13	30	0	11
0430-0445	10	236	0	0	0	0	0	299	12	33	0	17
0445-0500	10	220	0	0	0	0	0	340	14	34	0	18
0500-0515	6	210	0	0	0	0	0	294	9	39	0	11
0515-0530	8	224	0	0	0	0	0	316	10	31	0	16
0530-0545	7	217	0	0	0	0	0	325	14	30	0	19
0545-0600	8	202	0	0	0	0	0	291	11	28	0	18

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0300-0400	57	1083	0	0	0	0	0	1151	52	140	0	34	2517
0315-0415	53	1056	0	0	0	0	0	1217	45	138	0	39	2548
0330-0430	48	971	0	0	0	0	0	1238	48	135	0	41	2481
0345-0445	47	1003	0	0	0	0	0	1259	50	142	0	50	2551
0400-0500	44	978	0	0	0	0	0	1299	49	137	0	56	2563
0415-0515	37	891	0	0	0	0	0	1237	48	136	0	57	2406
0430-0530	34	890	0	0	0	0	0	1249	45	137	0	62	2417
0445-0545	31	871	0	0	0	0	0	1275	47	134	0	64	2422
0500-0600	29	853	0	0	0	0	0	1226	44	128	0	64	2344

P.M. PEAK HOUR
0400-0500



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
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PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 03:00 PM TO 06:00 PM

INTERSECTION: BUNDY DRIVE / NEBRASKA AVENUE

FILE: 4PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	0	0	0	8
0315-0330	0	0	0	10
0330-0345	0	0	0	7
0345-0400	0	0	0	7
0400-0415	0	0	0	3
0415-0430	0	0	0	10
0430-0445	0	0	0	5
0445-0500	0	0	0	4
0500-0515	0	0	0	3
0515-0530	0	0	0	3
0530-0545	0	0	0	5
0545-0600	0	0	0	5

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	0	0	0	1
0315-0330	0	0	0	1
0330-0345	0	0	0	2
0345-0400	0	0	0	1
0400-0415	0	0	0	2
0415-0430	0	0	0	3
0430-0445	0	0	0	4
0445-0500	0	0	0	3
0500-0515	0	0	0	3
0515-0530	0	0	0	2
0530-0545	0	0	0	1
0545-0600	0	0	0	1

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	0	0	0	32	32
0315-0415	0	0	0	27	27
0330-0430	0	0	0	27	27
0345-0445	0	0	0	25	25
0400-0500	0	0	0	22	22
0415-0515	0	0	0	22	22
0430-0530	0	0	0	15	15
0445-0545	0	0	0	15	15
0500-0600	0	0	0	16	16

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	0	0	0	5	5
0315-0415	0	0	0	6	6
0330-0430	0	0	0	8	8
0345-0445	0	0	0	10	10
0400-0500	0	0	0	12	12
0415-0515	0	0	0	13	13
0430-0530	0	0	0	12	12
0445-0545	0	0	0	9	9
0500-0600	0	0	0	7	7

THE TRAFFIC SOLUTION
9 ALTA STREET UNIT E
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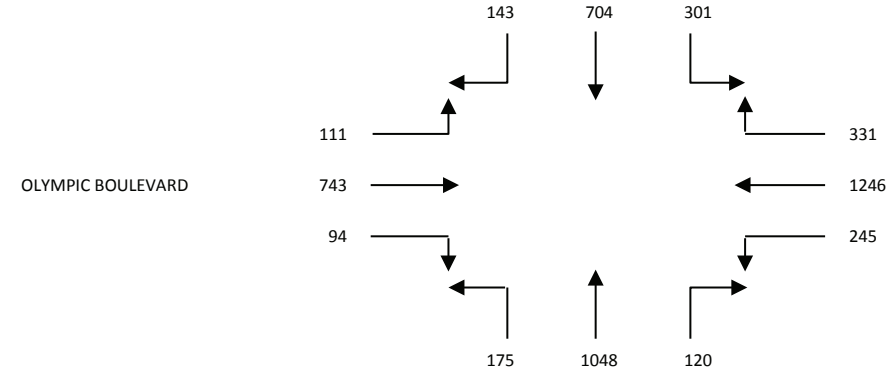
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: N/S BUNDY DRIVE
E/W OLYMPIC BOULEVARD
FILE NUMBER: 5-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	22	103	20	60	168	43	24	255	32	7	63	12
0715-0730	31	136	29	83	202	31	30	278	34	15	85	8
0730-0745	31	158	49	84	283	34	33	261	34	20	109	14
0745-0800	30	166	54	70	337	46	28	243	38	25	153	15
0800-0815	34	190	83	91	297	58	37	278	41	21	195	20
0815-0830	45	160	71	88	290	70	31	259	46	28	195	33
0830-0845	34	183	87	77	313	69	24	251	33	20	162	20
0845-0900	30	171	60	75	346	48	28	260	55	25	191	38
0900-0915	36	167	64	84	288	51	31	238	42	20	153	28
0915-0930	45	161	53	81	277	50	27	231	50	36	171	29
0930-0945	35	149	59	66	280	46	39	217	64	27	160	26
0945-1000	39	142	51	77	304	44	47	224	63	34	188	21

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	114	563	152	297	990	154	115	1037	138	67	410	49	4086
0715-0815	126	650	215	328	1119	169	128	1060	147	81	542	57	4622
0730-0830	140	674	257	333	1207	208	129	1041	159	94	652	82	4976
0745-0845	143	699	295	326	1237	243	120	1031	158	94	705	88	5139
0800-0900	143	704	301	331	1246	245	120	1048	175	94	743	111	5261
0815-0915	145	681	282	324	1237	238	114	1008	176	93	701	119	5118
0830-0930	145	682	264	317	1224	218	110	980	180	101	677	115	5013
0845-0945	146	648	236	306	1191	195	125	946	211	108	675	121	4908
0900-1000	155	619	227	308	1149	191	144	910	219	117	672	104	4815

A.M. PEAK HOUR
0800-0900



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: BUNDY DRIVE / OLYMPIC BOULEVARD

FILE: 5AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	6	31	6	13
0715-0730	3	19	4	5
0730-0745	4	45	14	6
0745-0800	9	21	5	8
0800-0815	9	36	14	15
0815-0830	10	66	8	19
0830-0845	17	44	18	14
0845-0900	10	14	11	39
0900-0915	25	34	11	18
0915-0930	10	34	21	16
0930-0945	10	25	28	15
0945-1000	6	41	20	16

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	5	0	0
0715-0730	0	3	1	0
0730-0745	1	3	0	1
0745-0800	2	4	0	2
0800-0815	1	6	1	4
0815-0830	2	9	0	1
0830-0845	1	3	0	2
0845-0900	1	3	1	4
0900-0915	1	3	1	1
0915-0930	0	4	0	0
0930-0945	4	8	1	1
0945-1000	1	10	3	5

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	22	116	29	32	199
0715-0815	25	121	37	34	217
0730-0830	32	168	41	48	289
0745-0845	45	167	45	56	313
0800-0900	46	160	51	87	344
0815-0915	62	158	48	90	358
0830-0930	62	126	61	87	336
0845-0945	55	107	71	88	321
0900-1000	51	134	80	65	330

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	3	15	1	3	22
0715-0815	4	16	2	7	29
0730-0830	6	22	1	8	37
0745-0845	6	22	1	9	38
0800-0900	5	21	2	11	39
0815-0915	5	18	2	8	33
0830-0930	3	13	2	7	25
0845-0945	6	18	3	6	33
0900-1000	6	25	5	7	43

THE TRAFFIC SOLUTION
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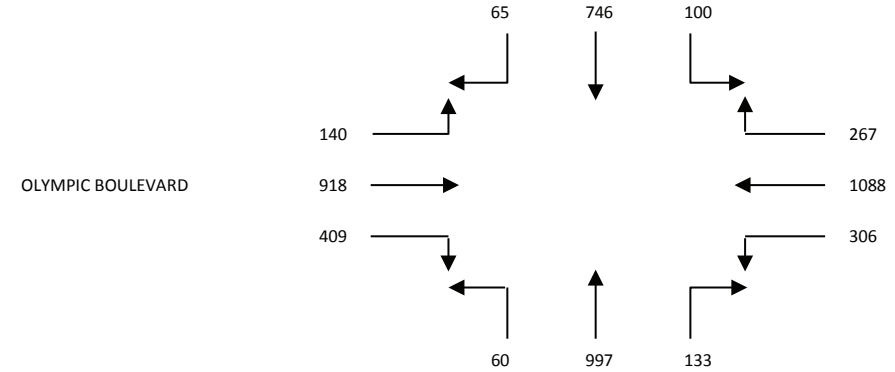
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION: N/S BUNDY DRIVE
E/W OLYMPIC BOULEVARD
FILE NUMBER: 5-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0300-0315	22	235	47	52	236	58	76	215	16	73	208	24
0315-0330	28	228	40	75	228	64	54	222	17	82	229	28
0330-0345	22	225	35	79	215	65	50	230	19	84	224	30
0345-0400	26	227	29	72	240	51	31	240	17	88	233	37
0400-0415	18	201	34	69	264	63	45	269	10	91	251	38
0415-0430	17	207	20	55	255	75	32	257	12	86	225	37
0430-0445	19	182	29	59	274	72	30	254	12	95	217	32
0445-0500	10	164	26	66	257	79	40	266	18	101	241	34
0500-0515	14	187	23	60	290	78	33	236	17	103	225	34
0515-0530	22	213	22	82	267	77	30	241	13	110	235	40
0530-0545	16	176	18	76	243	76	31	238	8	105	190	36
0545-0600	11	170	13	86	220	71	23	240	11	103	184	45

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0300-0400	98	915	151	278	919	238	211	907	69	327	894	119	5126
0315-0415	94	881	138	295	947	243	180	961	63	345	937	133	5217
0330-0430	83	860	118	275	974	254	158	996	58	349	933	142	5200
0345-0445	80	817	112	255	1033	261	138	1020	51	360	926	144	5197
0400-0500	64	754	109	249	1050	289	147	1046	52	373	934	141	5208
0415-0515	60	740	98	240	1076	304	135	1013	59	385	908	137	5155
0430-0530	65	746	100	267	1088	306	133	997	60	409	918	140	5229
0445-0545	62	740	89	284	1057	310	134	981	56	419	891	144	5167
0500-0600	63	746	76	304	1020	302	117	955	49	421	834	155	5042

P.M. PEAK HOUR
0430-0530



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
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FAX: 626-446-2877
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PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 03:00 PM TO 06:00 PM

INTERSECTION: BUNDY DRIVE / OLYMPIC BOULEVARD

FILE: 5PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	14	17	6	16
0315-0330	15	18	7	16
0330-0345	10	89	16	27
0345-0400	16	52	7	24
0400-0415	27	43	2	27
0415-0430	18	57	6	27
0430-0445	13	40	15	16
0445-0500	19	19	5	16
0500-0515	18	41	3	28
0515-0530	13	36	4	10
0530-0545	10	44	4	20
0545-0600	13	35	8	27

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	0	2	0	2
0315-0330	0	5	1	1
0330-0345	1	2	0	0
0345-0400	0	7	1	1
0400-0415	0	6	1	5
0415-0430	3	0	0	2
0430-0445	0	3	1	1
0445-0500	1	6	0	0
0500-0515	1	6	2	2
0515-0530	0	3	2	2
0530-0545	0	5	1	1
0545-0600	0	2	1	1

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	55	176	36	83	350
0315-0415	68	202	32	94	396
0330-0430	71	241	31	105	448
0345-0445	74	192	30	94	390
0400-0500	77	159	28	86	350
0415-0515	68	157	29	87	341
0430-0530	63	136	27	70	296
0445-0545	60	140	16	74	290
0500-0600	54	156	19	85	314

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	1	16	2	4	23
0315-0415	1	20	3	7	31
0330-0430	4	15	2	8	29
0345-0445	3	16	3	9	31
0400-0500	4	15	2	8	29
0415-0515	5	15	3	5	28
0430-0530	2	18	5	5	30
0445-0545	2	20	5	5	32
0500-0600	1	16	6	6	29

THE TRAFFIC SOLUTION
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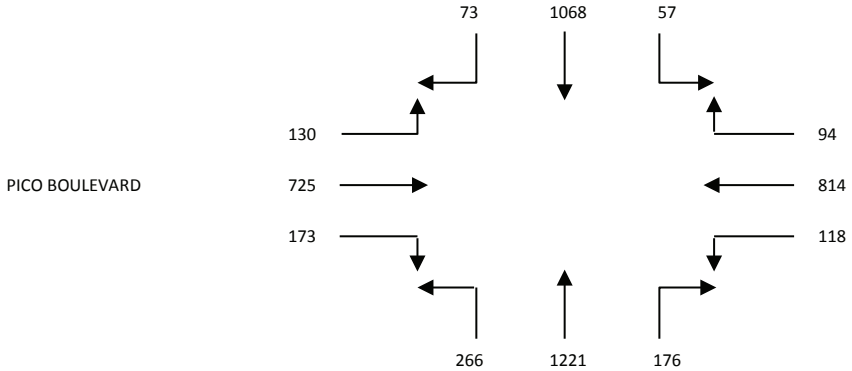
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: N/S BUNDY DRIVE
E/W PICO BOULEVARD
FILE NUMBER: 6-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	15	168	3	17	128	16	35	324	28	12	69	24
0715-0730	22	155	8	13	185	24	33	308	44	15	73	27
0730-0745	22	177	15	15	217	20	44	314	65	20	118	29
0745-0800	23	238	13	21	185	26	47	322	75	33	127	39
0800-0815	22	252	15	26	238	39	49	325	67	30	175	31
0815-0830	17	289	13	21	200	32	46	312	62	39	199	40
0830-0845	16	277	19	20	197	21	46	298	53	57	179	35
0845-0900	18	250	10	27	179	26	35	286	84	47	172	24
0900-0915	21	206	13	27	196	24	40	305	78	38	192	22
0915-0930	22	221	10	22	170	21	36	270	71	48	185	39
0930-0945	17	217	18	19	174	24	39	296	67	38	173	43
0945-1000	18	210	16	14	160	20	37	275	70	49	187	47

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	82	738	39	66	715	86	159	1268	212	80	387	119	3951
0715-0815	89	822	51	75	825	109	173	1269	251	98	493	126	4381
0730-0830	84	956	56	83	840	117	186	1273	269	122	619	139	4744
0745-0845	78	1056	60	88	820	118	188	1257	257	159	680	145	4906
0800-0900	73	1068	57	94	814	118	176	1221	266	173	725	130	4915
0815-0915	72	1022	55	95	772	103	167	1201	277	181	742	121	4808
0830-0930	77	954	52	96	742	92	157	1159	286	190	728	120	4653
0845-0945	78	894	51	95	719	95	150	1157	300	171	722	128	4560
0900-1000	78	854	57	82	700	89	152	1146	286	173	737	151	4505

A.M. PEAK HOUR
0800-0900



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
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PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: BUNDY DRIVE / PICO BOULEVARD

FILE: 6AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	12	4	0	5
0715-0730	10	0	4	6
0730-0745	22	6	1	4
0745-0800	11	5	4	2
0800-0815	11	5	5	7
0815-0830	8	3	3	4
0830-0845	4	5	3	6
0845-0900	19	2	4	8
0900-0915	13	4	3	6
0915-0930	9	3	2	7
0930-0945	8	0	3	13
0945-1000	5	1	2	10

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	1	0	0	1
0730-0745	1	0	1	1
0745-0800	0	1	0	1
0800-0815	0	1	0	0
0815-0830	1	2	0	2
0830-0845	2	2	1	1
0845-0900	2	2	1	1
0900-0915	1	2	0	0
0915-0930	3	2	1	0
0930-0945	2	0	1	2
0945-1000	1	1	0	1

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	55	15	9	17	96
0715-0815	54	16	14	19	103
0730-0830	52	19	13	17	101
0745-0845	34	18	15	19	86
0800-0900	42	15	15	25	97
0815-0915	44	14	13	24	95
0830-0930	45	14	12	27	98
0845-0945	49	9	12	34	104
0900-1000	35	8	10	36	89

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	2	1	1	3	7
0715-0815	2	2	1	3	8
0730-0830	2	4	1	4	11
0745-0845	3	6	1	4	14
0800-0900	5	7	2	4	18
0815-0915	6	8	2	4	20
0830-0930	8	8	3	2	21
0845-0945	8	6	3	3	20
0900-1000	7	5	2	3	17

THE TRAFFIC SOLUTION
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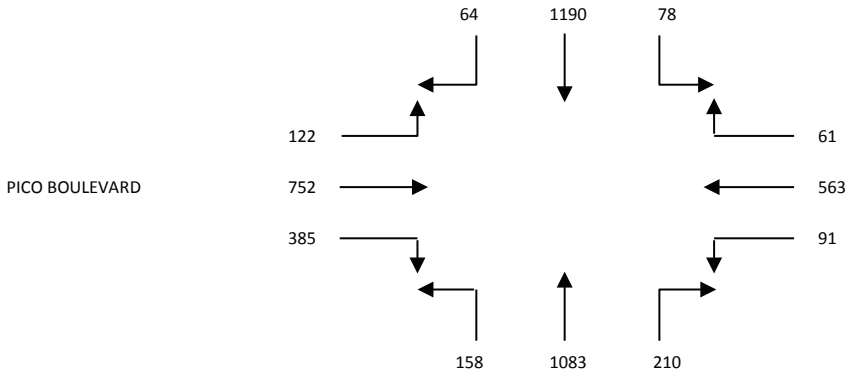
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, NOVEMBER 16, 2017
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION: N/S BUNDY DRIVE
E/W PICO BOULEVARD
FILE NUMBER: 6-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0300-0315	19	280	16	19	146	40	51	237	35	50	156	30
0315-0330	22	307	21	15	181	34	58	242	45	52	198	35
0330-0345	19	300	16	17	147	35	70	292	51	72	180	30
0345-0400	13	277	26	15	117	21	51	289	38	67	171	27
0400-0415	13	298	21	15	144	24	52	290	58	66	179	38
0415-0430	14	306	19	16	149	20	44	267	40	71	196	36
0430-0445	16	294	23	19	128	16	40	262	38	80	200	27
0445-0500	19	283	22	17	128	22	55	287	35	97	194	27
0500-0515	11	302	14	15	144	28	55	280	44	91	187	30
0515-0530	18	304	19	13	143	20	51	266	36	98	190	39
0530-0545	16	301	23	16	148	21	49	250	43	99	181	26
0545-0600	10	308	15	14	151	20	30	228	38	111	156	28

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0300-0400	73	1164	79	66	591	130	230	1060	169	241	705	122	4630
0315-0415	67	1182	84	62	589	114	231	1113	192	257	728	130	4749
0330-0430	59	1181	82	63	557	100	217	1138	187	276	726	131	4717
0345-0445	56	1175	89	65	538	81	187	1108	174	284	746	128	4631
0400-0500	62	1181	85	67	549	82	191	1106	171	314	769	128	4705
0415-0515	60	1185	78	67	549	86	194	1096	157	339	777	120	4708
0430-0530	64	1183	78	64	543	86	201	1095	153	366	771	123	4727
0445-0545	64	1190	78	61	563	91	210	1083	158	385	752	122	4757
0500-0600	55	1215	71	58	586	89	185	1024	161	399	714	123	4680

P.M. PEAK HOUR
0445-0545



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
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PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: WEST L.A. DISTRICT YARD

DATE: THURSDAY, NOVEMBER 16, 2017

PERIOD: 03:00 PM TO 06:00 PM

INTERSECTION: BUNDY DRIVE / PICO BOULEVARD

FILE: 6PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	4	14	10	6
0315-0330	5	16	10	8
0330-0345	9	24	7	6
0345-0400	11	10	15	3
0400-0415	8	14	22	7
0415-0430	5	17	17	6
0430-0445	8	13	12	4
0445-0500	5	17	15	4
0500-0515	6	23	16	4
0515-0530	8	16	16	2
0530-0545	6	23	8	8
0545-0600	3	18	12	3

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0300-0315	0	3	1	2
0315-0330	1	0	0	0
0330-0345	2	1	1	0
0345-0400	3	1	0	2
0400-0415	1	1	1	2
0415-0430	2	1	1	2
0430-0445	1	0	1	4
0445-0500	2	0	4	0
0500-0515	2	0	1	1
0515-0530	0	2	2	0
0530-0545	1	1	2	1
0545-0600	1	2	0	1

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	29	64	42	23	158
0315-0415	33	64	54	24	175
0330-0430	33	65	61	22	181
0345-0445	32	54	66	20	172
0400-0500	26	61	66	21	174
0415-0515	24	70	60	18	172
0430-0530	27	69	59	14	169
0445-0545	25	79	55	18	177
0500-0600	23	80	52	17	172

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0300-0400	6	5	2	4	17
0315-0415	7	3	2	4	16
0330-0430	8	4	3	6	21
0345-0445	7	3	3	10	23
0400-0500	6	2	7	8	23
0415-0515	7	1	7	7	22
0430-0530	5	2	8	5	20
0445-0545	5	3	9	2	19
0500-0600	4	5	5	3	17

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APPENDIX C

EXISTING SITE TRIP GENERATION DATA

Appendix Table C
EMPIRICAL TRIP RATES [1]

Wednesday, October 4, 2017 [2]															
		DAILY TRIP ENDS	AM PEAK HOUR VOLUMES [6]			PM PEAK HOUR VOLUMES [6]			DAILY TRIP	AM PEAK HOUR TRIP RATES [7]			PM PEAK HOUR TRIP RATES [7]		
LAND USE	SIZE	VOLUMES [5]	IN	OUT	TOTAL	IN	OUT	TOTAL	RATE [7]	IN	OUT	TOTAL	IN	OUT	TOTAL
Existing WLA District Yard	120 Employees	535	25	18	43	20	44	64	4.458	0.208	0.150	0.358	0.167	0.367	0.534
Distribution Split		50% In/50% Out	58%	42%	100%	31%	69%	100%	50% In/50% Out	58%	42%	100%	31%	69%	100%

Thursday, October 5, 2017 [3]															
		DAILY TRIP ENDS	AM PEAK HOUR VOLUMES [6]			PM PEAK HOUR VOLUMES [6]			DAILY TRIP	AM PEAK HOUR TRIP RATES [7]			PM PEAK HOUR TRIP RATES [7]		
LAND USE	SIZE	VOLUMES [5]	IN	OUT	TOTAL	IN	OUT	TOTAL	RATE [7]	IN	OUT	TOTAL	IN	OUT	TOTAL
Existing WLA District Yard	120 Employees	565	10	39	49	18	46	64	4.708	0.083	0.325	0.408	0.150	0.383	0.533
Distribution Split		50% In/50% Out	20%	80%	100%	28%	72%	100%	50% In/50% Out	20%	80%	100%	28%	72%	100%

Two-Day Average [4]															
		DAILY TRIP ENDS	AM PEAK HOUR VOLUMES [6]			PM PEAK HOUR VOLUMES [6]			DAILY TRIP	AM PEAK HOUR TRIP RATES [7]			PM PEAK HOUR TRIP RATES [7]		
LAND USE	SIZE	VOLUMES [5]	IN	OUT	TOTAL	IN	OUT	TOTAL	RATE [7]	IN	OUT	TOTAL	IN	OUT	TOTAL
Existing WLA District Yard	120 Employees	550	17.5	28.5	46	19	45	64	4.583	0.146	0.238	0.384	0.158	0.375	0.533
Distribution Split		50% In/50% Out	38%	62%	100%	30%	70%	100%	50% In/50% Out	38%	62%	100%	30%	70%	100%

[1] Trips are one-way traffic movements, entering or leaving.

[2] Based on actual site observations on Wednesday, October 4, 2017, the AM peak hour occurred from 6:45 AM to 7:45 AM, and the PM peak hour occurred from 6:15 PM to 7:15 PM.

[3] Based on actual site observations on Thursday, October 5, 2017, the AM peak hour occurred from 7:15 AM to 8:15 AM, and the PM peak hour occurred from 3:15 PM to 4:15 PM.

[4] The two-day average was determined by averaging the individual peak hour trips identified on October 4, 2017 and October 5, 2017, for the AM and PM peak hours.

[5] Daily trip ends were estimated based on the assumption that the average peak hour trips (i.e., the average of the AM and PM peak hour trips) represent ten percent (10%) of the total daily trip ends.

[6] Actual site driveway counts and on-street parking observations were conducted during the morning (6:00 to 10:00 AM) and evening peak periods (3:00 to 7:30 PM) at the existing West Los Angeles District Yard in order to determine the site's actual operating peak hours and empirical peak hour trip rates. The volumes shown represent the peak hour generation (i.e., the peak sum of inbound outbound trips).

[7] Trip rates per employee.

DRIVEWAY COUNT SUMMARY - RESULTS

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: WEDNESDAY, OCTOBER 04, 2017
PERIOD: 06:00 AM TO 10:00 AM

15-MIN	NEBRASKA AVENUE DRIVEWAY		CENTINELA AVENUE DRIVEWAY		OLYMPIC BOULEVARD DRIVEWAY		CENTINELA AVENUE / ON-STREET PARKING				TOTAL SITE				
	TOTAL		TOTAL		TOTAL		TO DWP		FROM DWP		VOLUMES			PERCENTAGES	
PERIOD:	ENTRANCE	EXIT	ENTRANCE	EXIT	ENTRANCE	EXIT	EAST SIDE	WEST SIDE	EAST SIDE	WEST SIDE	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND
0600-0615	2	0	0	0	4	0	0	0	0	0	6	0	6	100%	0%
0615-0630	4	0	0	0	2	1	0	0	0	0	6	1	7	86%	14%
0630-0645	3	1	0	0	0	0	0	0	0	0	3	1	4	75%	25%
0645-0700	6	1	4	0	0	3	0	0	0	0	10	4	14	71%	29%
0700-0715	7	2	4	0	1	0	0	0	0	0	12	2	14	86%	14%
0715-0730	1	2	2	0	0	4	0	0	0	0	3	6	9	33%	67%
0730-0745	0	0	0	0	0	6	0	0	0	0	0	6	6	0%	100%
0745-0800	0	2	1	0	0	8	0	0	0	0	1	10	11	9%	91%
0800-0815	0	1	0	0	0	6	0	0	0	0	0	7	7	0%	100%
0815-0830	0	0	0	2	0	6	0	0	0	0	0	8	8	0%	100%
0830-0845	0	0	1	1	0	4	1	0	0	0	2	5	7	29%	71%
0845-0900	0	0	0	0	0	4	0	0	0	0	0	4	4	0%	100%
0900-0915	1	0	0	0	0	4	0	0	0	0	1	4	5	20%	80%
0915-0930	0	0	0	0	0	1	0	0	0	0	0	1	1	0%	100%
0930-0945	0	0	0	0	0	5	0	0	0	0	0	5	5	0%	100%
0945-1000	0	0	0	0	0	1	0	0	0	0	0	1	1	0%	100%

1-HOUR	NEBRASKA AVENUE DRIVEWAY		CENTINELA AVENUE DRIVEWAY		OLYMPIC BOULEVARD DRIVEWAY		CENTINELA AVENUE / ON-STREET PARKING				TOTAL SITE				
	TOTAL		TOTAL		TOTAL		TO DWP		FROM DWP		VOLUMES			PERCENTAGES	
PERIOD	ENTRANCE	EXIT	ENTRANCE	EXIT	ENTRANCE	EXIT	EAST SIDE	WEST SIDE	EAST SIDE	WEST SIDE	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND
0600-0700	15	2	4	0	6	4	0	0	0	0	25	6	31	81%	19%
0615-0715	20	4	8	0	3	4	0	0	0	0	31	8	39	79%	21%
0630-0730	17	6	10	0	1	7	0	0	0	0	28	13	41	68%	32%
0645-0745	***14***	***5***	***10***	***0***	***1***	***13***	***0***	***0***	***0***	***0***	***25***	***18***	***43***	***58%***	***42%***
0700-0800	8	6	7	0	1	18	0	0	0	0	16	24	40	40%	60%
0715-0815	1	5	3	0	0	24	0	0	0	0	4	29	33	12%	88%
0730-0830	0	3	1	2	0	26	0	0	0	0	1	31	32	3%	97%
0745-0845	0	3	2	3	0	24	1	0	0	0	3	30	33	9%	91%
0800-0900	0	1	1	3	0	20	1	0	0	0	2	24	26	8%	92%
0815-0915	1	0	1	3	0	18	1	0	0	0	3	21	24	13%	88%
0830-0930	1	0	1	1	0	13	1	0	0	0	3	14	17	18%	82%
0845-0945	1	0	0	0	0	14	0	0	0	0	1	14	15	7%	93%
0900-1000	1	0	0	0	0	11	0	0	0	0	1	11	12	8%	92%

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DRIVEWAY COUNT SUMMARY - RESULTS

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: WEDNESDAY, OCTOBER 04, 2017
PERIOD: 03:00 PM TO 07:30 PM

15-MIN	NEBRASKA AVENUE DRIVEWAY		CENTINELA AVENUE DRIVEWAY		OLYMPIC BOULEVARD DRIVEWAY		CENTINELA AVENUE / ON-STREET PARKING				TOTAL SITE				
	TOTAL		TOTAL		TOTAL		TO DWP		FROM DWP		VOLUMES			PERCENTAGES	
PERIOD:	ENTRANCE	EXIT	ENTRANCE	EXIT	ENTRANCE	EXIT	EAST SIDE	WEST SIDE	EAST SIDE	WEST SIDE	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND
0300-0315	1	1	0	1	2	2	0	0	0	0	3	4	7	43%	57%
0315-0330	1	0	0	0	4	5	0	0	0	0	5	5	10	50%	50%
0330-0345	2	1	0	1	2	10	0	0	0	0	4	12	16	25%	75%
0345-0400	0	2	0	0	0	12	0	0	0	0	0	14	14	0%	100%
0400-0415	0	0	0	0	0	15	0	0	0	0	0	15	15	0%	100%
0415-0430	0	0	0	0	0	6	0	0	0	0	0	6	6	0%	100%
0430-0445	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
0445-0500	0	0	0	0	2	0	0	0	0	0	2	0	2	100%	0%
0500-0515	2	1	0	0	0	3	0	0	0	0	2	4	6	33%	67%
0515-0530	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
0530-0545	1	0	0	0	1	0	0	0	0	0	2	0	2	100%	0%
0545-0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
0600-0615	4	0	0	0	2	0	0	0	0	0	6	0	6	100%	0%
0615-0630	6	0	0	0	7	0	0	0	0	0	13	0	13	100%	0%
0630-0645	2	1	0	0	3	3	0	0	0	0	5	4	9	56%	44%
0645-0700	1	1	0	0	0	25	0	0	0	0	1	26	27	4%	96%
0700-0715	0	0	0	0	1	14	0	0	0	0	1	14	15	7%	93%
0715-0730	0	0	0	0	1	1	0	0	0	0	1	1	2	50%	50%

1-HOUR	NEBRASKA AVENUE DRIVEWAY		CENTINELA AVENUE DRIVEWAY		OLYMPIC BOULEVARD DRIVEWAY		CENTINELA AVENUE / ON-STREET PARKING				TOTAL SITE				
	TOTAL		TOTAL		TOTAL		TO DWP		FROM DWP		VOLUMES			PERCENTAGES	
PERIOD	ENTRANCE	EXIT	ENTRANCE	EXIT	ENTRANCE	EXIT	EAST SIDE	WEST SIDE	EAST SIDE	WEST SIDE	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND
0300-0400	4	4	0	2	8	29	0	0	0	0	12	35	47	26%	74%
0315-0415	3	3	0	1	6	42	0	0	0	0	9	46	55	16%	84%
0330-0430	2	3	0	1	2	43	0	0	0	0	4	47	51	8%	92%
0345-0445	0	2	0	0	0	33	0	0	0	0	0	35	35	0%	100%
0400-0500	0	0	0	0	2	21	0	0	0	0	2	21	23	9%	91%
0415-0515	2	1	0	0	2	9	0	0	0	0	4	10	14	29%	71%
0430-0530	2	1	0	0	2	3	0	0	0	0	4	4	8	50%	50%
0445-0545	3	1	0	0	3	3	0	0	0	0	6	4	10	60%	40%
0500-0600	3	1	0	0	1	3	0	0	0	0	4	4	8	50%	50%
0515-0615	5	0	0	0	3	0	0	0	0	0	8	0	8	100%	0%
0530-0630	11	0	0	0	10	0	0	0	0	0	21	0	21	100%	0%
0545-0645	12	1	0	0	12	3	0	0	0	0	24	4	28	86%	14%
0600-0700	13	2	0	0	12	28	0	0	0	0	25	30	55	45%	55%
0615-0715	***9***	***2***	***0***	***0***	***11***	***42***	***0***	***0***	***0***	***0***	***20***	***44***	***64***	***31%***	***69%***
0630-0730	3	2	0	0	5	43	0	0	0	0	8	45	53	15%	85%

NOTE: NO DWP ON-STREET PARKING OBSERVED

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DRIVEWAY COUNT SUMMARY - RESULTS

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, OCTOBER 05, 2017
PERIOD: 06:00 AM TO 10:00 AM

15-MIN	NEBRASKA AVENUE DRIVEWAY		CENTINELA AVENUE DRIVEWAY		OLYMPIC BOULEVARD DRIVEWAY		CENTINELA AVENUE / ON-STREET PARKING				TOTAL SITE				
	TOTAL		TOTAL		TOTAL		TO DWP		FROM DWP		VOLUMES			PERCENTAGES	
PERIOD:	ENTRANCE	EXIT	ENTRANCE	EXIT	ENTRANCE	EXIT	EAST SIDE	WEST SIDE	EAST SIDE	WEST SIDE	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND
0600-0615	2	0	0	0	5	0	0	0	0	0	7	0	7	100%	0%
0615-0630	2	0	0	0	3	1	0	0	0	0	5	1	6	83%	17%
0630-0645	1	0	0	0	2	0	0	0	0	0	3	0	3	100%	0%
0645-0700	0	0	1	0	0	0	0	0	0	0	1	0	1	100%	0%
0700-0715	0	1	0	0	1	2	0	0	0	0	1	3	4	25%	75%
0715-0730	0	1	1	1	0	7	0	0	0	0	1	9	10	10%	90%
0730-0745	0	0	1	0	2	16	0	0	0	0	3	16	19	16%	84%
0745-0800	1	1	0	0	0	8	0	0	0	0	1	9	10	10%	90%
0800-0815	4	2	1	0	0	3	0	0	0	0	5	5	10	50%	50%
0815-0830	0	0	0	0	0	8	0	0	0	0	0	8	8	0%	100%
0830-0845	1	1	0	0	0	2	0	0	0	0	1	3	4	25%	75%
0845-0900	0	2	0	0	0	3	0	0	0	0	0	5	5	0%	100%
0900-0915	0	1	0	0	0	1	0	0	0	0	0	2	2	0%	100%
0915-0930	1	1	0	0	2	1	0	0	0	0	3	2	5	60%	40%
0930-0945	1	0	0	0	1	2	0	0	0	0	2	2	4	50%	50%
0945-1000	0	0	0	0	1	2	0	0	0	0	1	2	3	33%	67%

1-HOUR	NEBRASKA AVENUE DRIVEWAY		CENTINELA AVENUE DRIVEWAY		OLYMPIC BOULEVARD DRIVEWAY		CENTINELA AVENUE / ON-STREET PARKING				TOTAL SITE				
	TOTAL		TOTAL		TOTAL		TO DWP		FROM DWP		VOLUMES			PERCENTAGES	
PERIOD	ENTRANCE	EXIT	ENTRANCE	EXIT	ENTRANCE	EXIT	EAST SIDE	WEST SIDE	EAST SIDE	WEST SIDE	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND
0600-0700	5	0	1	0	10	1	0	0	0	0	16	1	17	94%	6%
0615-0715	3	1	1	0	6	3	0	0	0	0	10	4	14	71%	29%
0630-0730	1	2	2	1	3	9	0	0	0	0	6	12	18	33%	67%
0645-0745	0	2	3	1	3	25	0	0	0	0	6	28	34	18%	82%
0700-0800	1	3	2	1	3	33	0	0	0	0	6	37	43	14%	86%
0715-0815	***5***	***4***	***3***	***1***	***2***	***34***	***0***	***0***	***0***	***0***	***10***	***39***	***49***	***20%***	***80%***
0730-0830	5	3	2	0	2	35	0	0	0	0	9	38	47	19%	81%
0745-0845	6	4	1	0	0	21	0	0	0	0	7	25	32	22%	78%
0800-0900	5	5	1	0	0	16	0	0	0	0	6	21	27	22%	78%
0815-0915	1	4	0	0	0	14	0	0	0	0	1	18	19	5%	95%
0830-0930	2	5	0	0	2	7	0	0	0	0	4	12	16	25%	75%
0845-0945	2	4	0	0	3	7	0	0	0	0	5	11	16	31%	69%
0900-1000	2	2	0	0	4	6	0	0	0	0	6	8	14	43%	57%

NOTE: NO DWP ON-STREET PARKING OBSERVED

THE TRAFFIC SOLUTION
9 ALTA STREET, UNIT E
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DRIVEWAY COUNT SUMMARY - RESULTS

CLIENT: LLG - PASADENA
PROJECT: WEST L.A. DISTRICT YARD
DATE: THURSDAY, OCTOBER 05, 2017
PERIOD: 03:00 PM TO 07:30 PM

15-MIN	NEBRASKA AVENUE DRIVEWAY		CENTINELA AVENUE DRIVEWAY		OLYMPIC BOULEVARD DRIVEWAY		CENTINELA AVENUE / ON-STREET PARKING				TOTAL SITE				
	TOTAL		TOTAL		TOTAL		TO DWP		FROM DWP		VOLUMES			PERCENTAGES	
PERIOD:	ENTRANCE	EXIT	ENTRANCE	EXIT	ENTRANCE	EXIT	EAST SIDE	WEST SIDE	EAST SIDE	WEST SIDE	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND
0300-0315	3	1	0	1	5	7	0	0	0	0	8	9	17	47%	53%
0315-0330	5	2	0	0	7	1	0	0	0	0	12	3	15	80%	20%
0330-0345	1	0	0	0	2	5	0	0	0	0	3	5	8	38%	63%
0345-0400	0	2	0	0	3	15	0	0	0	0	3	17	20	15%	85%
0400-0415	0	3	0	0	0	18	0	0	0	0	0	21	21	0%	100%
0415-0430	0	0	0	0	0	8	0	0	0	0	0	8	8	0%	100%
0430-0445	0	0	0	0	0	2	0	0	0	0	0	2	2	0%	100%
0445-0500	0	0	0	0	1	0	0	0	0	0	1	0	1	100%	0%
0500-0515	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
0515-0530	0	1	0	0	0	0	0	0	0	0	0	1	1	0%	100%
0530-0545	1	1	0	0	0	0	0	0	0	0	1	1	2	50%	50%
0545-0600	3	0	0	0	1	0	0	0	0	0	4	0	4	100%	0%
0600-0615	1	0	0	0	4	1	0	0	0	0	5	1	6	83%	17%
0615-0630	3	1	0	0	8	0	0	0	0	0	11	1	12	92%	8%
0630-0645	3	0	0	0	3	0	0	0	0	0	6	0	6	100%	0%
0645-0700	0	0	0	0	1	18	0	0	0	0	1	18	19	5%	95%
0700-0715	0	0	0	0	0	18	0	0	0	0	0	18	18	0%	100%
0715-0730	0	0	0	0	1	10	0	0	0	0	1	10	11	9%	91%

1-HOUR	NEBRASKA AVENUE DRIVEWAY		CENTINELA AVENUE DRIVEWAY		OLYMPIC BOULEVARD DRIVEWAY		CENTINELA AVENUE / ON-STREET PARKING				TOTAL SITE				
	TOTAL		TOTAL		TOTAL		TO DWP		FROM DWP		VOLUMES			PERCENTAGES	
PERIOD	ENTRANCE	EXIT	ENTRANCE	EXIT	ENTRANCE	EXIT	EAST SIDE	WEST SIDE	EAST SIDE	WEST SIDE	INBOUND	OUTBOUND	TOTAL	INBOUND	OUTBOUND
0300-0400	9	5	0	1	17	28	0	0	0	0	26	34	60	43%	57%
0315-0415	***6***	***7***	***0***	***0***	***12***	***39***	***0***	***0***	***0***	***0***	***18***	***46***	***64***	***28%***	***72%***
0330-0430	1	5	0	0	5	46	0	0	0	0	6	51	57	11%	89%
0345-0445	0	5	0	0	3	43	0	0	0	0	3	48	51	6%	94%
0400-0500	0	3	0	0	1	28	0	0	0	0	1	31	32	3%	97%
0415-0515	0	0	0	0	1	10	0	0	0	0	1	10	11	9%	91%
0430-0530	0	1	0	0	1	2	0	0	0	0	1	3	4	25%	75%
0445-0545	1	2	0	0	1	0	0	0	0	0	2	2	4	50%	50%
0500-0600	4	2	0	0	1	0	0	0	0	0	5	2	7	71%	29%
0515-0615	5	2	0	0	5	1	0	0	0	0	10	3	13	77%	23%
0530-0630	8	2	0	0	13	1	0	0	0	0	21	3	24	88%	13%
0545-0645	10	1	0	0	16	1	0	0	0	0	26	2	28	93%	7%
0600-0700	7	1	0	0	16	19	0	0	0	0	23	20	43	53%	47%
0615-0715	6	1	0	0	12	36	0	0	0	0	18	37	55	33%	67%
0630-0730	3	0	0	0	5	46	0	0	0	0	8	46	54	15%	85%

NOTE: NO DWP ON-STREET PARKING OBSERVED

THE TRAFFIC SOLUTION
9 ALTA STREET, UNIT E
ARCADIA, CALIFORNIA 91006
626.485.8048 PHONE
TRAFSOLUTN@AOL.COM

APPENDIX D

CMA AND LEVELS OF SERVICE EXPLANATION
CMA DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

CRITICAL MOVEMENT ANALYSIS (CMA) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Level of Service concept denotes any one of a number of differing combinations of operating conditions which may take place as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

Critical Movement Analysis (CMA) is a procedure which provides a capacity and level of service geometry and traffic signal operation and results in a level of service determination for the intersection as a whole operating unit.

The per lane volume for each movement in the intersection is determined and the per lane intersection capacity based on the Transportation Research Board (TRB) Report 212 (*Interim Materials on Highway Capacity*). The resulting CMA represents the ratio of the intersection's cumulative volume over its respective capacity (V/C ratio). Critical Movement Analysis takes into account lane widths, bus and truck operations, pedestrian activity and parking activity, as well as number of lanes and geometrics.

The Level of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding CMA and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Critical Movement Analysis Characteristics

Level of Service	Load Factor	Equivalent CMA
A (free flow)	0.0	0.00 - 0.60
B (rural design)	0.0 - 0.1	0.61 - 0.70
C (urban design)	0.1 - 0.3	0.71 - 0.80
D (maximum urban design)	0.3 - 0.7	0.81 - 0.90
E (capacity)	0.7 - 1.0	0.91 - 1.00
F (force flow)	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (CMA = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Centinela Avenue	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
1	East-West Street:	Nebraska Avenue	Projection Year:	2028	Peak Hour:	AM	Reviewed by:		Project:	LADWP West LA District Yard De

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			2			2			2				2				2	
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 EB-- 0 SB-- WB--		0	NB-- 0 EB-- 0 SB-- WB--		0	NB-- EB-- 0 SB-- WB--		0		NB-- EB-- 0 SB-- WB--		0		NB-- EB-- 0 SB-- WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
	Override Capacity			0			0			0				0				0	
NORTHBOUND	Left	252	1	252	0	252	252	35	316	1	316	0	316	1	316	0	316	1	316
	Left-Through		0							0				0				0	
	Through	774	0	**848**	2	776	**850**	60	924	0	**1007**	2	926	0	**1009**	0	926	0	**1009**
	Through-Right		1							1				1				1	
	Right	74	0	0	0	74	0	0	83	0	0	0	83	0	0	0	83	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	30	1	**30**	1	31	**31**	0	33	1	**33**	1	34	1	**34**	0	34	1	**34**
	Left-Through		0							0				0				0	
	Through	474	0	515	1	475	516	78	607	0	665	1	608	0	666	0	608	0	666
	Through-Right		1							1				1				1	
	Right	41	0	0	0	41	0	12	58	0	0	0	58	0	0	0	58	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	30	0	30	0	30	30	9	42	0	42	0	42	0	42	0	42	0	42
	Left-Through		0							0				0				0	
	Through	36	0	**155**	1	37	**156**	9	49	0	**216**	1	50	0	**217**	0	50	0	**217**
	Through-Right		0							0				0				0	
	Right	89	0	0	0	89	0	26	125	0	0	0	125	0	0	0	125	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	15	0	**15**	0	15	**15**	0	17	0	**17**	0	17	0	**17**	0	17	0	**17**
	Left-Through		0							0				0				0	
	Through	46	0	82	0	46	83	12	63	0	103	0	63	0	104	0	63	0	104
	Through-Right		0							0				0				0	
	Right	21	0	0	1	22	0	0	23	0	0	1	24	0	0	0	24	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		878	North-South:		881	North-South:			1040	North-South:			1043	North-South:			1043
		East-West:		170	East-West:		171	East-West:			233	East-West:			234	East-West:			234
		SUM:		1048	SUM:		1052	SUM:			1273	SUM:			1277	SUM:			1277
	VOLUME/CAPACITY (V/C) RATIO:			0.699			0.701				0.849				0.851				0.851
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.599			0.601				0.749				0.751				0.751
	LEVEL OF SERVICE (LOS):			A			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Centinela Avenue	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
1	East-West Street:	Nebraska Avenue	Projection Year:	2028	Peak Hour:	PM	Reviewed by:		Project:	LADWP West LA District Yard De

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	47	1	47	0	47	47	29	81	1	**81**	0	81	1	**81**	0	81	1	**81**
	Left-Through		0							0				0				0	
	Through	643	0	**688**	3	646	**691**	89	806	0	856	3	809	0	859	0	809	0	859
	Through-Right		1							1				1				1	
	Right	45	0	0	0	45	0	0	50	0	0	0	50	0	0	0	50	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	24	1	**24**	1	25	**25**	0	27	1	27	1	28	1	28	0	28	1	28
	Left-Through		0							0				0				0	
	Through	629	0	644	1	630	645	81	783	0	**810**	1	784	0	**811**	0	784	0	**811**
	Through-Right		1							1				1				1	
	Right	15	0	0	0	15	0	10	27	0	0	0	27	0	0	0	27	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	61	0	61	0	61	61	13	81	0	81	0	81	0	81	0	81	0	81
	Left-Through		0							0				0				0	
	Through	138	0	**452**	1	139	**453**	13	167	0	**570**	1	168	0	**571**	0	168	0	**571**
	Through-Right		0							0				0				0	
	Right	253	0	0	0	253	0	40	322	0	0	0	322	0	0	0	322	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	76	0	**76**	0	76	**76**	0	85	0	**85**	0	85	0	**85**	0	85	0	**85**
	Left-Through		0							0				0				0	
	Through	36	0	138	0	36	140	10	50	0	164	0	50	0	166	0	50	0	166
	Through-Right		0							0				0				0	
	Right	26	0	0	2	28	0	0	29	0	0	2	31	0	0	0	31	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		712	*North-South:*		716	*North-South:*			891	*North-South:*			892	*North-South:*			892
		East-West:		528	*East-West:*		529	*East-West:*			655	*East-West:*			656	*East-West:*			656
		SUM:		1240	*SUM:*		1245	*SUM:*			1546	*SUM:*			1548	*SUM:*			1548
VOLUME/CAPACITY (V/C) RATIO:				0.827			0.830				1.031				1.032				1.032
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.727**			**0.730**				**0.931**				**0.932**				**0.932**
LEVEL OF SERVICE (LOS):				C			C				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Centinela Avenue (West)	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
2	East-West Street:	Olympic Boulevard	Projection Year:	2028	Peak Hour:	AM	Reviewed by:		Project:	LADWP West LA District Yard De

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	527	2	**290**	0	527	**290**	67	655	2	**360**	0	655	2	**360**	0	655	2	**360**
	Left-Through		0							0				0				0	
	Through	2	0	0	0	2	0	0	2	0	0	0	2	0	0	0	2	0	0
	Through-Right		0							0				0				0	
	Right	46	1	23	0	46	22	37	88	1	45	0	88	1	45	0	88	1	45
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	47	1	**47**	1	48	**48**	34	86	1	**86**	1	87	1	**87**	0	87	1	**87**
	Left-Through		0							0				0				0	
	Through	686	1	349	1	687	349	377	1142	1	577	1	1143	1	578	0	1143	1	578
	Through-Right		1							1				1				1	
	Right	11	0	11	0	11	11	0	12	0	12	0	12	0	12	0	12	0	12
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	7	1	7	0	7	7	0	8	1	8	0	8	1	8	0	8	1	8
	Left-Through		0							0				0				0	
	Through	1080	2	540	4	1084	542	419	1624	2	812	4	1628	2	814	0	1628	2	814
	Through-Right		0							0				0				0	
	Right	1062	1	**772**	2	1064	**774**	61	1246	1	**886**	2	1248	1	**888**	0	1248	1	**888**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		290	*North-South:*		290	*North-South:*			360	*North-South:*			360	*North-South:*			360
		East-West:		819	*East-West:*		822	*East-West:*			972	*East-West:*			975	*East-West:*			975
		SUM:		1109	*SUM:*		1112	*SUM:*			1332	*SUM:*			1335	*SUM:*			1335
VOLUME/CAPACITY *(V/C)* RATIO:				0.739			0.741				0.888				0.890				0.890
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.639**			**0.641**				**0.788**				**0.790**				**0.790**
LEVEL OF SERVICE (LOS):				**B**			**B**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	$\Delta v/c$ after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Centinela Avenue (West)	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
2	East-West Street:	Olympic Boulevard	Projection Year:	2028	Peak Hour:	PM	Reviewed by:		Project:	LADWP West LA District Yard De

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	914	2	**503**	0	914	**503**	75	1095	2	**602**	0	1095	2	**602**	0	1095	2	**602**
	Left-Through		0							0				0				0	
	Through	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
	Through-Right		0							0				0				0	
	Right	80	1	56	0	80	55	46	135	1	86	0	135	1	86	0	135	1	86
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	49	1	49	1	50	50	43	98	1	98	1	99	1	99	0	99	1	99
	Left-Through		0							0				0				0	
	Through	1095	1	**549**	1	1096	**549**	482	1704	1	**853**	1	1705	1	**854**	0	1705	1	**854**
	Through-Right		1							1				1				1	
	Right	2	0	2	0	2	2	0	2	0	2	0	2	0	2	0	2	0	2
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	2	1	**2**	0	2	**2**	0	2	1	**2**	0	2	1	**2**	0	2	1	**2**
	Left-Through		0							0				0				0	
	Through	846	2	423	6	852	426	506	1450	2	725	6	1456	2	728	0	1456	2	728
	Through-Right		0							0				0				0	
	Right	662	1	159	3	665	162	75	814	1	212	3	817	1	215	0	817	1	215
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		503	*North-South:*		503	*North-South:*			602	*North-South:*			602	*North-South:*			602
		East-West:		551	*East-West:*		551	*East-West:*			855	*East-West:*			856	*East-West:*			856
		SUM:		1054	*SUM:*		1054	*SUM:*			1457	*SUM:*			1458	*SUM:*			1458
VOLUME/CAPACITY (V/C) RATIO:				0.703			0.703				0.971				0.972				0.972
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.603**			**0.603**				**0.871**				**0.872**				**0.872**
LEVEL OF SERVICE (LOS):				**B**			**B**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Centinela Avenue (East)	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
3	East-West Street:	Olympic Boulevard	Projection Year:	2028	Peak Hour:	AM	Reviewed by:		Project:	LADWP West LA District Yard De

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3	3			3	3				3
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1	1			1	1				1
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- EB-- 3 WB--		0	NB-- 0 SB-- EB-- 3 WB--		0	NB-- 0 SB-- EB-- 3 WB--		0	0	NB-- 0 SB-- EB-- 3 WB--		0	0	NB-- 0 SB-- EB-- 3 WB--		0	0
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2	2			2	2				2
	Override Capacity			0			0			0	0			0	0				0
NORTHBOUND	Left	789	1	444	0	789	445	162	1042	1	593	0	1042	1	594	0	1042	1	594
	Left-Through		0							0				0				0	
	Through	3	0	444	2	5	445	0	3	0	593	2	5	0	594	0	5	0	594
	Through-Right		0							0				0				0	
	Right	96	0	0	0	96	0	34	141	0	0	0	141	0	0	0	141	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	11	0	11	2	13	13	0	12	0	12	2	14	0	14	0	14	0	14
	Left-Through		0							0				0				0	
	Through	3	0	17	8	11	33	0	3	0	18	8	11	0	34	0	11	0	34
	Through-Right		0							0				0				0	
	Right	3	0	0	6	9	0	0	3	0	0	6	9	0	0	0	9	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	5	1	5	1	6	6	0	6	1	6	1	7	1	7	0	7	1	7
	Left-Through		0							0				0				0	
	Through	824	3	275	0	824	275	279	1198	3	399	0	1198	3	399	0	1198	3	399
	Through-Right		0							0				0				0	
	Right	381	1	0	0	381	0	165	590	1	0	0	590	1	0	0	590	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	218	1	218	0	218	218	32	275	1	275	0	275	1	275	0	275	1	275
	Left-Through		0							0				0				0	
	Through	1370	2	459	0	1370	459	317	1845	2	618	0	1845	2	618	0	1845	2	618
	Through-Right		1							1				1				1	
	Right	7	0	7	1	8	8	0	8	0	8	1	9	0	9	0	9	0	9
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		461	North-South:		478	North-South:			611	North-South:			628	North-South:			628
		East-West:		493	East-West:		493	East-West:			674	East-West:			674	East-West:			674
		SUM:		954	SUM:		971	SUM:			1285	SUM:			1302	SUM:			1302
	VOLUME/CAPACITY (V/C) RATIO:			0.669			0.681				0.902				0.914				0.914
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.569			0.581				0.802				0.814				0.814
	LEVEL OF SERVICE (LOS):			A			A				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.012	Δ*v/c* after mitigation:	0.012
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Centinela Avenue (East)	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
3	East-West Street:	Olympic Boulevard	Projection Year:	2028	Peak Hour:	PM	Reviewed by:		Project:	LADWP West LA District Yard De

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					3
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1				1					1
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- EB-- 3 WB--		0	NB-- 0 SB-- EB-- 3 WB--		0	NB-- 0 SB-- EB-- 3 WB--		0		NB-- 0 SB-- EB-- 3 WB--		0		NB-- 0 SB-- EB-- 3 WB--		0
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	451	1	**264**	0	451	**265**	216	719	1	**420**	0	719	1	**422**	0	719	1	**422**
	Left-Through		0							0				0				0	
	Through	0	0	264	3	3	265	0	0	0	420	3	3	0	422	0	3	0	422
	Through-Right		0							0				0				0	
	Right	76	0	0	0	76	0	36	121	0	0	0	121	0	0	0	121	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	3	0	3	3	6	6	0	3	0	3	3	6	0	6	0	6	0	6
	Left-Through		0							0				0				0	
	Through	26	0	**34**	12	38	**58**	0	29	0	**38**	12	41	0	**62**	0	41	0	**62**
	Through-Right		0							0				0				0	
	Right	5	0	0	9	14	0	0	6	0	0	9	15	0	0	0	15	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	24	1	24	1	25	25	0	27	1	27	1	28	1	28	0	28	1	28
	Left-Through		0							0				0				0	
	Through	1272	3	424	0	1272	424	365	1784	3	595	0	1784	3	595	0	1784	3	595
	Through-Right		0							0				0				0	
	Right	804	1	**540**	0	804	**539**	191	1088	1	**668**	0	1088	1	**666**	0	1088	1	**666**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	102	1	**102**	0	102	**102**	34	148	1	**148**	0	148	1	**148**	0	148	1	**148**
	Left-Through		0							0				0				0	
	Through	996	2	335	0	996	335	365	1476	2	495	0	1476	2	496	0	1476	2	496
	Through-Right		1							1				1				1	
	Right	9	0	9	1	10	10	0	10	0	10	1	11	0	11	0	11	0	11
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		298	*North-South:*		323	*North-South:*			458	*North-South:*			484	*North-South:*			484
		East-West:		642	*East-West:*		641	*East-West:*			816	*East-West:*			814	*East-West:*			814
		SUM:		940	*SUM:*		964	*SUM:*			1274	*SUM:*			1298	*SUM:*			1298
	VOLUME/CAPACITY (V/C) RATIO:			0.660			0.676				0.894				0.911				0.911
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.560**			**0.576**				**0.794**				**0.811**				**0.811**
	LEVEL OF SERVICE (LOS):			**A**			**A**				**C**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.017	Δ*v/c* after mitigation:	0.017
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Bundy Drive	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
4	East-West Street:	Nebraska Avenue	Projection Year:	2028	Peak Hour:	AM	Reviewed by:		Project:	LADWP West LA District Yard De

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			0			0			0	0			0	0				0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0	0			0	0				0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- EB-- 0 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0	0	NB-- 0 SB-- EB-- 0 WB--		0	0	NB-- 0 SB-- EB-- 0 WB--		0	0
	ATSAC-1 or ATSAC+ATCS-2?			0			0			0	0			0	0				0
	Override Capacity			1200			1200				1200				1200				1200
NORTHBOUND	Left	116	1	**116**	3	119	**119**	0	129	1	**129**	3	132	1	**132**	0	132	1	**132**
	Left-Through		0							0				0				0	
	Through	1128	2	564	0	1128	564	108	1366	2	683	0	1366	2	683	0	1366	2	683
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
	Left-Through		0							0				0				0	
	Through	1309	1	**672**	0	1309	**672**	157	1617	1	**834**	0	1617	1	**834**	0	1617	1	**834**
	Through-Right		1							1				1				1	
	Right	34	0	34	1	35	35	12	50	0	50	1	51	0	51	0	51	0	51
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	6	0	6	2	8	8	9	16	0	16	2	18	0	18	0	18	0	18
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	87	0	**93**	1	88	**96**	0	97	0	**113**	1	98	0	**116**	0	98	0	**116**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		788	North-South:		791	North-South:			963	North-South:			966	North-South:			966
		East-West:		93	East-West:		96	East-West:			113	East-West:			116	East-West:			116
		SUM:		881	SUM:		887	SUM:			1076	SUM:			1082	SUM:			1082
	VOLUME/CAPACITY (V/C) RATIO:			0.734			0.739				0.897				0.902				0.902
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.734			0.739				0.897				0.902				0.902
	LEVEL OF SERVICE (LOS):			C			C				D				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.005 — $\Delta v/c$ after mitigation: 0.005

Significant impacted? NO — Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Bundy Drive	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
4	East-West Street:	Nebraska Avenue	Projection Year:	2028	Peak Hour:	PM	Reviewed by:		Project:	LADWP West LA District Yard De

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	49	1	49	3	52	52	0	55	1	55	3	58	1	58	0	58	1	58
	Left-Through		0							0				0				0	
	Through	1299	2	**650**	0	1299	**650**	176	1625	2	**813**	0	1625	2	**813**	0	1625	2	**813**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	1	**0**	0	0	**0**	0	0	1	**0**	0	0	1	**0**	0	0	1	**0**
	Left-Through		0							0				0				0	
	Through	978	1	511	0	978	512	152	1243	1	651	0	1243	1	652	0	1243	1	652
	Through-Right		1							1				1				1	
	Right	44	0	44	1	45	45	10	59	0	59	1	60	0	60	0	60	0	60
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	56	0	56	3	59	59	13	75	0	75	3	78	0	78	0	78	0	78
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	137	0	**193**	2	139	**198**	0	153	0	**228**	2	155	0	**233**	0	155	0	**233**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		650	*North-South:*		650	*North-South:*			813	*North-South:*			813	*North-South:*			813
		East-West:		193	*East-West:*		198	*East-West:*			228	*East-West:*			233	*East-West:*			233
		SUM:		843	*SUM:*		848	*SUM:*			1041	*SUM:*			1046	*SUM:*			1046
VOLUME/CAPACITY (V/C) RATIO:				0.703			0.707				0.868				0.872				0.872
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.703			0.707				0.868				0.872				0.872
LEVEL OF SERVICE (LOS):				C			C				D				D				D

	NB--	SB--	EB--	WB--	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases					0	0	0	0	0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	0	0	0	0	0	0	0	0	0
ATSAC-1 or ATSAC+ATCS-2?					0	0	0	0	0
Override Capacity					1200	1200	1200	1200	1200

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Bundy Drive	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
5	East-West Street:	Olympic Boulevard	Projection Year:	2028	Peak Hour:	AM	Reviewed by:		Project:	LADWP West LA District Yard De

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4				4	
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3 SB-- EB-- 3 WB--		0	NB-- 3 SB-- EB-- 3 WB--		0	NB-- 3 SB-- EB-- 3 WB--		0		NB-- 3 SB-- EB-- 3 WB--		0		NB-- 3 SB-- EB-- 3 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
	Override Capacity			0			0			0				0				0	
NORTHBOUND	Left	175	1	175	1	176	176	71	266	1	266	1	267	1	267	0	267	1	267
	Left-Through		0							0				0				0	
	Through	1048	2	**524**	2	1050	**525**	51	1220	2	**610**	2	1222	2	**611**	0	1222	2	**611**
	Through-Right		0							0				0				0	
	Right	120	1	0	0	120	0	1	135	1	0	0	135	1	0	0	135	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	301	1	**301**	1	302	**302**	10	346	1	**346**	1	347	1	**347**	0	347	1	**347**
	Left-Through		0							0				0				0	
	Through	704	2	352	0	704	352	96	881	2	441	0	881	2	441	0	881	2	441
	Through-Right		0							0				0				0	
	Right	143	1	88	0	143	88	41	201	1	122	0	201	1	122	0	201	1	122
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	111	1	**111**	0	111	**111**	35	159	1	**159**	0	159	1	**159**	0	159	1	**159**
	Left-Through		0							0				0				0	
	Through	743	3	248	2	745	248	175	1004	3	335	2	1006	3	335	0	1006	3	335
	Through-Right		0							0				0				0	
	Right	94	1	0	0	94	0	66	171	1	0	0	171	1	0	0	171	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	245	2	135	0	245	135	8	281	2	155	0	281	2	155	0	281	2	155
	Left-Through		0							0				0				0	
	Through	1246	3	**415**	1	1247	**416**	209	1599	3	**533**	1	1600	3	**533**	0	1600	3	**533**
	Through-Right		0							0				0				0	
	Right	331	1	30	1	332	30	14	383	1	37	1	384	1	37	0	384	1	37
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		825	*North-South:*		827	*North-South:*			956	*North-South:*			958	*North-South:*			958
		East-West:		526	*East-West:*		527	*East-West:*			692	*East-West:*			692	*East-West:*			692
		SUM:		1351	*SUM:*		1354	*SUM:*			1648	*SUM:*			1650	*SUM:*			1650
	VOLUME/CAPACITY *(V/C)* RATIO:			0.983			0.985				1.199				1.200				1.200
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.883**			**0.885**				**1.099**				**1.100**				**1.100**
	LEVEL OF SERVICE (LOS):			**D**			**D**				**F**				**F**				**F**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	∆*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Bundy Drive	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
5	East-West Street:	Olympic Boulevard	Projection Year:	2028	Peak Hour:	PM	Reviewed by:		Project:	LADWP West LA District Yard De

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4				4	
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3 SB-- EB-- 3 WB--		0	NB-- 3 SB-- EB-- 3 WB--		0	NB-- 3 SB-- EB-- 3 WB--		0		NB-- 3 SB-- EB-- 3 WB--		0		NB-- 3 SB-- EB-- 3 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			3			3			3				3				3	
	Override Capacity			2			2			2				2				2	
				0			0			0				0				0	
NORTHBOUND	Left	60	1	60	1	61	61	82	149	1	149	1	150	1	150	0	150	1	150
	Left-Through		0							0				0				0	
	Through	997	2	**499**	2	999	**500**	106	1218	2	**609**	2	1220	2	**610**	0	1220	2	**610**
	Through-Right		0							0				0				0	
	Right	133	1	0	0	133	0	11	159	1	0	0	159	1	0	0	159	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	100	1	**100**	2	102	**102**	21	133	1	**133**	2	135	1	**135**	0	135	1	**135**
	Left-Through		0							0				0				0	
	Through	746	2	373	0	746	373	71	903	2	452	0	903	2	452	0	903	2	452
	Through-Right		0							0				0				0	
	Right	65	1	0	0	65	0	48	121	1	20	0	121	1	20	0	121	1	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	140	1	140	0	140	140	47	203	1	**203**	0	203	1	**203**	0	203	1	**203**
	Left-Through		0							0				0				0	
	Through	918	3	306	3	921	307	238	1262	3	421	3	1265	3	422	0	1265	3	422
	Through-Right		0							0				0				0	
	Right	409	1	**349**	0	409	**348**	77	533	1	384	0	533	1	383	0	533	1	383
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	306	2	**168**	0	306	**168**	2	343	2	189	0	343	2	189	0	343	2	189
	Left-Through		0							0				0				0	
	Through	1088	3	363	1	1089	363	239	1453	3	**484**	1	1454	3	**485**	0	1454	3	**485**
	Through-Right		0							0				0				0	
	Right	267	1	167	1	268	166	18	316	1	183	1	317	1	182	0	317	1	182
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		599	*North-South:*		602	*North-South:*			742	*North-South:*			745	*North-South:*			745
		East-West:		517	*East-West:*		516	*East-West:*			687	*East-West:*			688	*East-West:*			688
		SUM:		1116	*SUM:*		1118	*SUM:*			1429	*SUM:*			1433	*SUM:*			1433
	VOLUME/CAPACITY (V/C) RATIO:			0.812			0.813				1.039				1.042				1.042
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.712**			**0.713**				**0.939**				**0.942**				**0.942**
	LEVEL OF SERVICE (LOS):			C			C				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.003 — Δ*v/c* after mitigation: 0.003

Significant impacted? NO — Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Bundy Drive	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
6	East-West Street:	Pico Boulevard	Projection Year:	2028	Peak Hour:	AM	Reviewed by:		Project:	LADWP West LA District Yard De

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4				4	
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 EB-- 0	SB-- WB--	3 0	NB-- 0 EB-- 0	SB-- WB--	3 0	NB-- 0 EB-- 0	SB-- WB--	3 0		NB-- 0 EB-- 0	SB-- WB--	3 0		NB-- 0 EB-- 0	SB-- WB--	3 0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
	Override Capacity			0			0			0				0				0	
NORTHBOUND	Left	266	1	**266**	0	266	**266**	0	297	1	**297**	0	297	1	**297**	0	297	1	**297**
	Left-Through		0							0				0				0	
	Through	1221	2	466	2	1223	466	94	1456	2	552	2	1458	2	552	0	1458	2	552
	Through-Right		1							1				1				1	
	Right	176	0	176	0	176	176	3	199	0	199	0	199	0	199	0	199	0	199
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	57	1	57	0	57	57	25	89	1	89	0	89	1	89	0	89	1	89
	Left-Through		0							0				0				0	
	Through	1068	2	**534**	0	1068	**534**	112	1304	2	**652**	0	1304	2	**652**	0	1304	2	**652**
	Through-Right		0							0				0				0	
	Right	73	1	0	0	73	0	11	92	1	0	0	92	1	0	0	92	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	130	1	**130**	0	130	**130**	11	156	1	**156**	0	156	1	**156**	0	156	1	**156**
	Left-Through		0							0				0				0	
	Through	725	1	449	1	726	450	56	865	1	529	1	866	1	530	0	866	1	530
	Through-Right		1							1				1				1	
	Right	173	0	173	1	174	174	0	193	0	193	1	194	0	194	0	194	0	194
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	118	1	118	0	118	118	13	145	1	145	0	145	1	145	0	145	1	145
	Left-Through		0							0				0				0	
	Through	814	1	**454**	1	815	**455**	75	983	1	**556**	1	984	1	**557**	0	984	1	**557**
	Through-Right		1							1				1				1	
	Right	94	0	94	0	94	94	24	129	0	129	0	129	0	129	0	129	0	129
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		800	*North-South:*		800	*North-South:*			949	*North-South:*			949	*North-South:*			949
		East-West:		584	*East-West:*		585	*East-West:*			712	*East-West:*			713	*East-West:*			713
		SUM:		1384	*SUM:*		1385	*SUM:*			1661	*SUM:*			1662	*SUM:*			1662
	VOLUME/CAPACITY *(V/C)* RATIO:			1.007			1.007				1.208				1.209				1.209
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.907**			**0.907**				**1.108**				**1.109**				**1.109**
	LEVEL OF SERVICE (LOS):			**E**			**E**				**F**				**F**				**F**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	∆*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Bundy Drive	Year of Count:	2017	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	2/8/2018
6	East-West Street:	Pico Boulevard	Projection Year:	2028	Peak Hour:	PM	Reviewed by:		Project:	LADWP West LA District Yard De

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4				4	
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- EB-- 0 WB--		3	NB-- 0 SB-- EB-- 0 WB--		3	NB-- 0 SB-- EB-- 0 WB--		3		NB-- 0 SB-- EB-- 0 WB--		3		NB-- 0 SB-- EB-- 0 WB--		3	
	ATSAC-1 or ATSAC+ATCS-2?			0			0			0				0				0	
	Override Capacity			2			2			2				2				2	
NORTHBOUND	Left	158	1	**158**	0	158	**158**	0	176	1	**176**	0	176	1	**176**	0	176	1	**176**
	Left-Through		0							0				0				0	
	Through	1083	2	431	3	1086	432	129	1337	2	529	3	1340	2	530	0	1340	2	530
	Through-Right		1							1				1				1	
	Right	210	0	210	0	210	210	17	251	0	251	0	251	0	251	0	251	0	251
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	78	1	78	0	78	78	25	112	1	112	0	112	1	112	0	112	1	112
	Left-Through		0							0				0				0	
	Through	1190	2	**595**	0	1190	**595**	120	1448	2	**724**	0	1448	2	**724**	0	1448	2	**724**
	Through-Right		0							0				0				0	
	Right	64	1	0	0	64	0	11	82	1	0	0	82	1	0	0	82	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	122	1	122	0	122	122	12	148	1	148	0	148	1	148	0	148	1	148
	Left-Through		0							0				0				0	
	Through	752	1	**569**	2	754	**571**	91	930	1	**680**	2	932	1	**682**	0	932	1	**682**
	Through-Right		1							1				1				1	
	Right	385	0	385	2	387	387	0	430	0	430	2	432	0	432	0	432	0	432
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	91	1	**91**	0	91	**91**	10	112	1	**112**	0	112	1	**112**	0	112	1	**112**
	Left-Through		0							0				0				0	
	Through	563	1	312	1	564	313	77	705	1	401	1	706	1	401	0	706	1	401
	Through-Right		1							1				1				1	
	Right	61	0	61	0	61	61	28	96	0	96	0	96	0	96	0	96	0	96
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		753	*North-South:*		753	*North-South:*			900	*North-South:*			900	*North-South:*			900
		East-West:		660	*East-West:*		662	*East-West:*			792	*East-West:*			794	*East-West:*			794
		SUM:		1413	*SUM:*		1415	*SUM:*			1692	*SUM:*			1694	*SUM:*			1694
	VOLUME/CAPACITY (V/C) RATIO:			1.028			1.029				1.231				1.232				1.232
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.928**			**0.929**				**1.131**				**1.132**				**1.132**
	LEVEL OF SERVICE (LOS):			**E**			**E**				**F**				**F**				**F**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	∆*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

APPENDIX E

TRAFFIC SIGNAL WARRANT DATA

SR#

Traffic Signal Warrants Worksheet

DATE 12/14/17 PREPARER GT REVIEWER _____

MAJOR ST: BUNDY DRIVE

MINOR ST: NEBRASKA AVENUE

Critical Approach Speed ____ MPH or Speed Limit 35 MPH

Speed limit or critical speed on major street traffic > 40 mph..... ☐

or

In built up area of isolated community of < 10,000 population..... ☐

☐ RURAL (R) ☒ URBAN (U)

Eight-Hour Vehicular Volume — WARRANT 1

N/A ☐

SATISFIED YES ☐

NO ☒

☆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ☆

a. Condition A or Condition B or combination of 80% of both parts A and B must be satisfied.
b. A 6-hour Manual Count may be used in a determination that this warrant is not met. However, supplement manual counts should be taken during separate hours for a determination that this warrant is met.
c. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.
d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.
e. Figure 4C-103(CA) should be used for new intersections, significantly reconstructed intersections, where near-term land development will result in increased volumes, or where it is not reasonable to use current traffic volumes.
f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Eight-Hour Vehicular Volume *(continued)*

☆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ☆

Condition A

Minimum Vehicle Volume

SATISFIED	YES	NO
100%	☐	☒
80%	☐	☒

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* *(If Yes, fill in percentage)* ☐ ____% ☒

	MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)				Hours							
	U	R	U	R	*07:00*	*08:00*	*09:00*	*15:00*	*16:00*	*17:00*		
APPROACH LANES	1		2 or More									
Both Approach Major Street	500 (400)	350 (280)	600 (480)	420 (336)	*2424*	*3167*	*2978*	*2956*	*2986*	*2743*		
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	*58*	*116*	*99*	*212*	*233*	*232*		

Condition B

Interruption of Continuous Traffic

SATISFIED	YES	NO
100%	☐	☒
80%	☐	☒

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* *(If Yes, fill in percentage)* ☐ ____% ☒

	MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)				Hours							
	U	R	U	R	*07:00*	*08:00*	*09:00*	*15:00*	*16:00*	*17:00*		
APPROACH LANES	1		2 or More									
Both Approach Major Street	750 (600)	525 (420)	900 (720)	630 (504)	*2424*	*3167*	*2978*	*2956*	*2986*	*2743*		
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	*58*	*116*	*99*	*212*	*233*	*232*		

COMBINATION OF A & B

SATISFIED	YES	NO
	☐	☒

REQUIREMENT	CONDITION	✓	FULFILLED YES	FULFILLED NO
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		☐	☒
	AND			
	B. INTERRUPTION OF CONTINUOUS TRAFFIC			
AND				
AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCOVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			☐	☒

Four-Hour Vehicular Volume

WARRANT 2

N/A ☐
SATISFIED YES ☒
NO ☐

☆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ☆

a. Record hourly vehicle volumes for the highest four hours of an average day.
b. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.
c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.
d. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
e. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

APPROACH LANES	One	2 or More	Hours 16:00	17:00	15:00	08:00
Both Approaches - Major Street		✓	*2986*	*2743*	*2956*	*3167*
Higher Approach - Minor Street	✓		*233*	*232*	*212*	*116*

	YES	NO
RIGHT TURN REDUCTION APPLICATION *MINOR STREET*	☐	☒
(If Yes, fill in percentage) _____%		

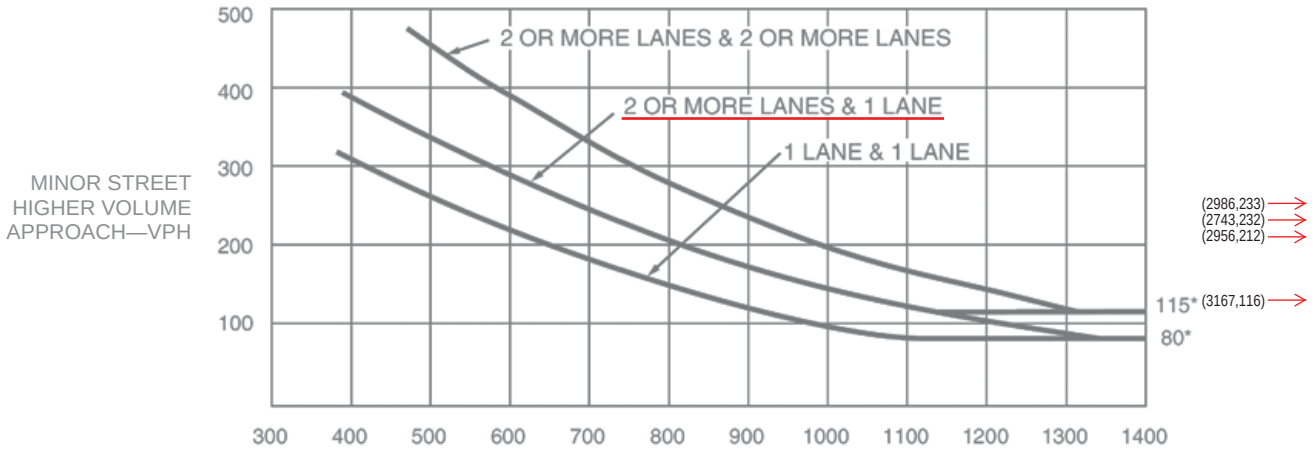
* All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	☒	☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)		

Four-Hour Vehicular Volume *(continued)*

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

URBAN

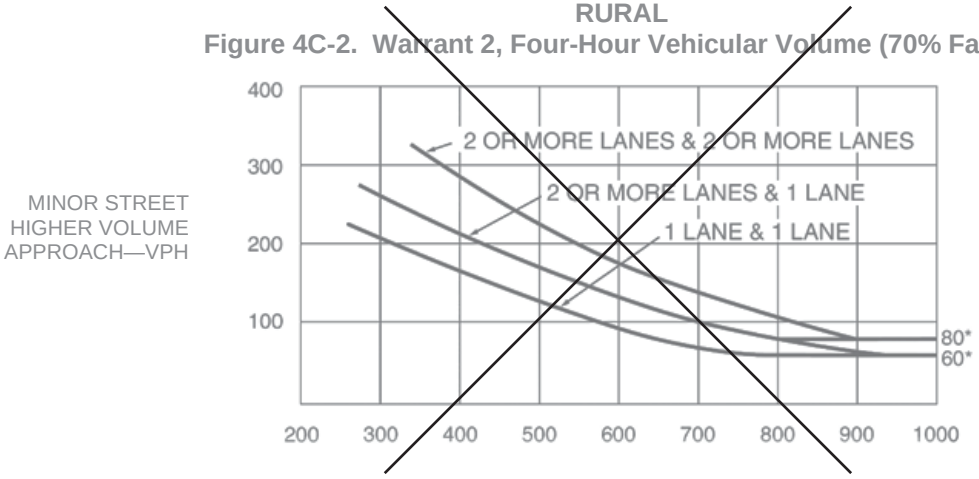
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



**Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.*

RURAL

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



**Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.*

Peak Hour WARRANT 3

N/A ☐
SATISFIED YES ☒
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Part A or Part B must be satisfied.
b. In applying each condition, the major street and minor street volumes shall be for the same hours.
c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.
d. Estimated Peak Hour Volumes may be used for new intersections, significantly reconstructed intersections, or where near-term land development will result in increased volumes.
e. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
f. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

PART A

SATISFIED YES ☐ NO ☐

All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

	YES	NO	N/A
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	☐	☐	☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	☐	☐	☒
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	☐	☐	☒

PART B

SATISFIED YES ☒ NO ☐

APPROACH LANES	One	2 or More	Hour 4:00 PM
Both Approaches - Major Street		✓	2986
Higher Approach - Minor Street	✓		233

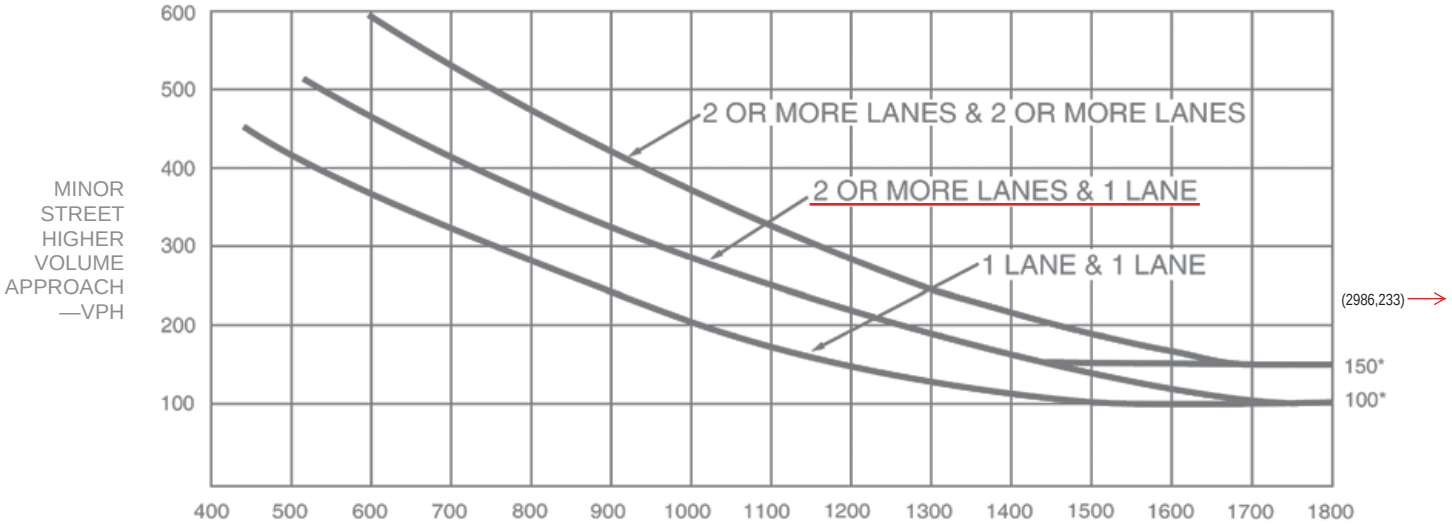
	YES	NO
The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	☒	☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)		

Peak Hour *(continued)*

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

URBAN

Figure 4C-3. Warrant 3, Peak Hour

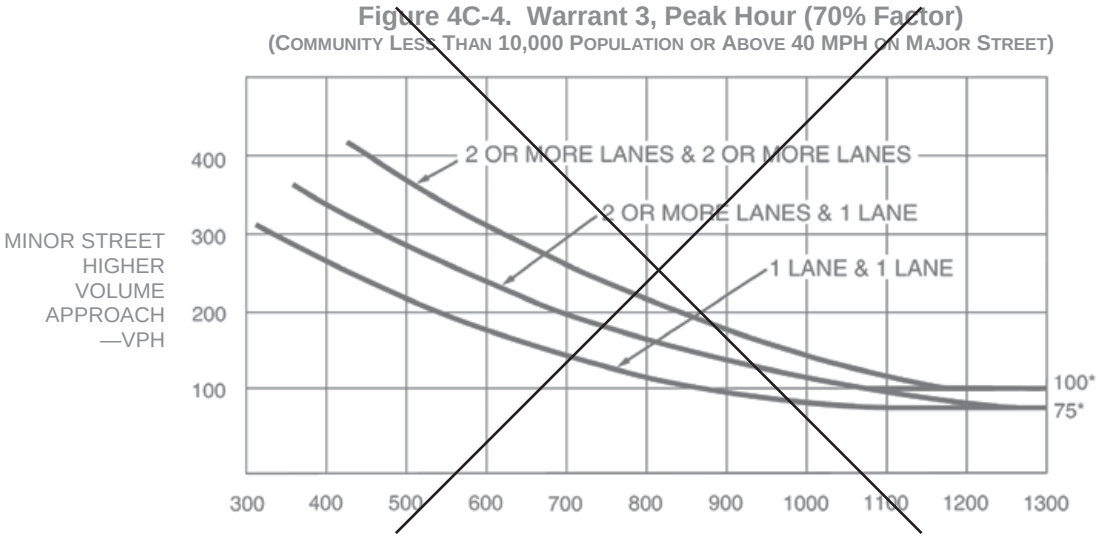


** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.*

RURAL

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(Community Less Than 10,000 Population or Above 40 MPH on Major Street)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.*

Crash Experience Warrant

WARRANT 7

N/A ☐
SATISFIED YES ☐
NO ☒

☆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ☆

a. All Parts must be satisfied.
b. For locations that involve other agencies, crash data from other involved jurisdictions should be obtained.

			YES	NO
Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency			☐	☒
REQUIREMENTS	Number of crashes reported within a 12-month period susceptible to correction by a traffic signal: *3*		☐	☒
5 OR MORE	*Indicate Date(s):* *4/26/2015; 8/15/2014; 5/22/2014*			
REQUIREMENTS	**CONDITIONS**	✓		
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		☐	☒
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic			
	OR, Warrant 4, Pedestrian Volume Condition - Ped Vol ≥ 80% for ped volumes per Figures 4C-5 to 4C-8			

Roadway Network

WARRANT 8

N/A ☒
SATISFIED YES ☐
NO ☐

☆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ☆

a. Existing traffic volumes with an ambient growth rate of 1% (or other LADOT approved ambient growth rate) may be used if projected volumes are not available.
b. All Parts must be satisfied.

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULLFILLED YES	FULLFILLED NO
1000 Veh / Hr	During Typical Weekday Peak Hour _____ Veh/Hr **AND** has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday.		☐	☐
	OR During Each of Any 5 Hrs. of a Saturday or Sunday _____ Veh / Hr			

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	YES	NO
Highway System Serving as Principal Network for Through Traffic				
Rural or Suburban Highway Outside Of, Entering, or Traversing a City				
Appears as Major Route on an Official Plan				
Any Major Route Characteristics Met, Both Streets			☐	☐

Appendix Table E
TRAFFIC SIGNAL WARRANT VOLUMES
Bundy Drive/Nebraska Avenue

	EXISTING VOLUMES [1]		AMBIENT GROWTH VOLUMES [2]		RELATED PROJECT VOLUMES [3]		PROJECT VOLUMES [3]		FUTURE WITH PROJECT VOLUMES [4]	
HOUR	**Major Street (Both Approaches)** Bundy Drive	**Minor Street (Higher Approach)** Nebraska Avenue	**Major Street (Both Approaches)** Bundy Drive	**Minor Street (Higher Approach)** Nebraska Avenue	**Major Street (Both Approaches)** Bundy Drive	**Minor Street (Higher Approach)** Nebraska Avenue	**Major Street (Both Approaches)** Bundy Drive	**Minor Street (Higher Approach)** Nebraska Avenue	**Major Street (Both Approaches)** Bundy Drive	**Minor Street (Higher Approach)** Nebraska Avenue
7:00 AM	1920	41	222	5	277	9	4	3	2424	58
8:00 AM	2587	93	299	11	277	9	4	3	3167	116
9:00 AM	2417	78	280	9	277	9	4	3	2978	99
3:00 PM	2343	174	271	20	338	13	4	5	2956	212
4:00 PM	2370	193	274	22	338	13	4	5	2986	233
5:00 PM	2152	192	249	22	338	13	4	5	2743	232

[1] Data worksheets for the existing six-hour manual turning movement counts utilized in this analysis are included in Appendix B.
[2] An ambient growth rate of one percent (1.0%) per year has been applied to grow the existing Year 2017 volumes to future Year 2028 volumes.
[3] Please refer to the peak hour caluclation worksheets contained in Appendix D. For the purposes of this warrant analysis, the AM and PM peak hour related projects and project volumes have been applied to each AM and PM hour, respectively.
[4] Future with project volumes obtained by summing existing, ambient growth, related projects, and project volumes.

Settings Used For Query

Parameter	Setting
Street Name	NEBRASKA *
Cross Street	BUNDY *
Starting Date	6/1/2013
Ending Date	5/31/2016
Distance from Intersection	>= 0' for non rear-end collisions
	>= 0' for rear-end collisions

City of Los Angeles
Department of Transportation

Collision Report Summary

12/12/2017

Date Range Reported: 6/1/13 - 5/31/16
Total Number of Collisions: 5

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
6217614	9/17/13	17:45	Bundy Drive & Nebraska Avenue (N)	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	North	Making Left Turn	Unsafe Speed	1	0	
6286558	10/6/13	23:35	Bundy Drive & Nebraska Avenue (N)	140'	South	Broadside	Other Motor Vehicle	East	Making Left Turn	North	Proceeding Straight	Improper Turning	1	0	
6578156	5/22/14	23:15	Nebraska Avenue & Bundy Drive (N)	15'	East	Head-On	Parked Motor Vehicle	East	Making Right Turn	Not State	Parked	Driving Under Influence	0	0	
6647390	8/15/14	15:15	Nebraska Avenue & Bundy Drive (N)	0'	In Int.	Vehicle - Pedestrian	Pedestrian	North	Proceeding Straight	East	Making Right Turn	Unknown	1	0	
6931609	4/26/15	03:32	Bundy Drive & Nebraska Avenue (N)	20'	South	Hit Object	Fixed Object	South	Ran Off Road			Unsafe Speed	0	0	

CITY OF LOS ANGELES

INTER-DEPARTMENTAL MEMORANDUM

12300 Nebraska Av
DOT Case No. WLA18-106700

DATE: November 7, 2019

TO: Luciralia Ibarra, Senior City Planner
Department of City Planning

FROM: Robert Sanchez, Transportation Engineer
Department of Transportation

SUBJECT: **UPDATED TRAFFIC IMPACT ASSESSMENT FOR THE PROPOSED LADWP WEST LOS ANGELES YARD DEMOLITION AND CONSTRUCTION PROJECT TO BE LOCATED AT 12300 W. NEBRASKA AVE.**

The Department of Transportation (DOT) has reviewed the updated traffic impact analysis prepared by Linscott Law & Greenspan Engineers (LLG), dated September 11, 2019, for the proposed LADWP West Los Angeles Yard Demolition and Construction project at the existing facility located at 12300 West Nebraska Avenue. After a review of the pertinent data, DOT has determined that the analysis conducted adequately describes the project related impact of the proposed project.

PROJECT DESCRIPTION

LADWP will be demolishing all existing structures, and constructing new buildings in their place, at the West Los Angeles Yard. The facility, at its current capacity, does not have adequate storage for its equipment and will not be able to support the planned increase to 375 full time staff, 315 District Yard employees and 60 Service Planning Center employees. Structures planned for demolition include the district office, warehouse, break room, locker room, and fleet shop. One new building is planned to be constructed: warehouse, administration office, electric trouble office, service planning office and fleet shop totalling approximately 91,000 square feet. The new building will consolidate the functions of the demolished buildings. The existing gantry crane will be moved toward the southeast section of the District Yard, closer to the Olympic Boulevard entrance. Existing unleaded and diesel fuel tanks would remain aboveground. Parking will consist of a new 145,000 square foot one level underground parking structure, located under the new three story building, and consisting of 389 parking spaces for employees and fleet vehicles. There will also be an aboveground parking structure, directly south of the new building, with two levels, 154 spaces, and approximately 156,000 square feet to be used by a variety of LADWP fleet vehicles. Additionally, 12 public parking spaces would be provided at-grade outside the Service Planning Center office. All parking spaces would include electric vehicle charging stations.

On-site circulation would be altered to require all departmental vehicles to access via Olympic Boulevard, Centinela Avenue, and the northernmost driveway on Nebraska Avenue. Employee access would be from the new primary driveway on Nebraska Avenue; employees would be required to enter past the new security gate located at this driveway.

An expansion of the existing driveway within the off-site right-of-way along Nebraska Avenue would be required. To accommodate the driveway expansion, one existing street tree is proposed to be removed.

New trees would be added to the project site in the landscape designated areas. No off-site utility or infrastructure are required.

The project involves the demolition of all existing structures and the construction of a new three-story, 91000 square foot building on the same site as the existing West Los Angeles District Yard. During construction, approximately half of all the employees would temporarily relocate to the Palms Yard, located at 2311 South Fairfax Avenue, Los Angeles 90016, with the remaining employees temporarily relocating to a yard site in the western portion of Los Angeles World Airport (LAX). During construction, employees would have access via Nebraska Avenue while construction vehicles will be allowed to access from entrances located on Centinela Avenue and Olympic Boulevard. Equipment used for construction would include a minimum of two excavators with thumb attachments, two dozers, one or two drill rigs, two cranes, one backhoe, one forklift, one padfoot compactor, one soil compactor, one loader, one bobcat with broom attachment, one water truck, two dump trucks, and one flatbed truck. The hours or operation for construction equipment are assumed to be eight (8) hours a day. It is assumed that an average of 12 workers would be present daily during demolition activities and an average of 30 workers per day would be present during construction activities.

DISCUSSION AND FINDINGS

Trip Generation

The proposed project would increase the total number of employees on site from 191 to 375, 315 of which are District Yard employees and 60 employees that will work in the new Service Planning Center. The facility will operate during the following hours:

- Monday through Friday: 6:30AM- 4:00PM
  - District/ Service Planning personnel: 287, Security: 2, Supply Chain: 6, Fleet: 2
- Monday through Friday: 7:00PM- 3:00PM
  - Electric Trouble: 2
- Monday through Friday: 3:00PM – 11:00PM
  - Electric Trouble: 10, Security: 2, Fleet: 8
- Monday through Friday: 11:00PM – 7:00AM
  - Electric Trouble: 10, Security: 2
- Saturday and every other Sunday: 6:30AM – 4:30PM
  - Weekend staffing is on a volunteer basis. On average, there are approximately 150 employees during this shift.
- Saturday and Sunday: 7:00AM- 3:00PM, 3:00PM – 11:00PM, 11:00PM – 7:00AM
  - Electric Trouble: 10, Security: 2

Typically the ITE Trip Generation Manual is used to forecast trip rates, however, due to the unique nature of this facility, City staff agreed that it would be appropriate to forecast the trips generated by the project based on derived site-specific trip generation rates. The derived trip rates, based on weekday manual peak hour traffic counts at the five existing active driveways, were the following:

- **Weekday AM Peak Hour**: 0.055 inbound trips per employee, 0.194 outbound trips per employee, and 0.249 total trips per employee
- **Weekday PM Peak Hour**: 0.059 inbound trips per employee, 0.221 outbound trips per employee, and 0.280 total trips per employee
- **Daily Trip Rates**: estimated based on the assumption that average peak hours represent ten percent (10%) of the total daily trip ends.

The trip generation of the proposed facility, based on these site-specific rates, are the following:

- Weekday AM: 52 new trips (24 inbound/ 28 outbound)
- Weekday PM: 59 new trips (12 inbound/ 47 outbound)
- Daily: 525 new trips

(See **Attachment "A"**)

Traffic Impact

It is concluded that the proposed project is not expected to create a significant impact at any of the eight (8) study intersections under either the Existing With Project or Future With Project conditions, based on the City of Los Angeles thresholds of significance used for evaluating traffic impacts. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections. In addition, because of the temporary relocation of employees to two existing off site facilities, the project will provide oversight of operations at the off-site locations. If any vehicle queuing should occur, temporary remedial measures would be recommended and implemented as necessary by the City.

Congestion Management Program (CMP)

The results of the Los Angeles CMP traffic assessment indicate that the proposed project will not adversely affect any of the CMP arterial monitoring intersections or freeway monitoring locations, therefore, no improvements are required.

Transportation Demand Management (TDM)

LADOT recommends that the project comply with the City's Trip Reduction Ordinance and generally work to decrease the number of single occupant vehicle trips and increase the use of other transportation modes such as transit, walking, bicycling and ridesharing.

Traffic Signal Warrants

Traffic signal warrants were prepared for the Bundy Drive/Nebraska Avenue intersection. Warrant No. 1 (Eight-Hour Vehicular Volume) is not satisfied under future with project conditions for the Bundy Drive/Nebraska Avenue intersection, while Warrant No. 2 (Four-Hour Vehicular Volume) and Warrant No. 3 (Peak Hour) are satisfied under future with project conditions. Warrant No. 7 (Crash Experience) is not satisfied based on a review of existing collision records. It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if a traffic signal warrant is not met, these other factors may be just cause for consideration of a traffic signal installation. The lead agency/agencies must carefully consider all aspects related to installation of traffic controls.

PROJECT REQUIREMENTS

A. Highway Dedication and Street Widening Requirements

The applicant shall consult the Bureau of Engineering (BOE) for any highway dedication or street widening requirements. These requirements must be guaranteed before the issuance of any building permit through the B-permit process of the BOE. They must be constructed and completed prior to the issuance of any certificate of occupancy to the satisfaction of DOT and BOE.

B. Construction Impacts

DOT recommends that a construction work site traffic control plan be submitted to the DOT Western District Operations Office for review and approval prior to the start of any construction work. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. DOT also recommends that all construction related traffic be restricted to off-peak hours. In addition, the

C. **Driveway Access and Circulation**
Review of the traffic impact analysis does not constitute approval of the Project's driveway dimensions and internal circulation schemes. Those require separate review and approval and should be coordinated with DOT's West LA/Coastal Development Review Section (7166 W Manchester Ave, @ 213-485-1062). In order to minimize potential building design changes, the applicant should contact DOT for driveway width and internal circulation requirements so that such traffic flow considerations are designed and incorporated early into the building and parking layout plans.

D. **Parking Requirements**
The applicant should check with the Department of Building and Safety on the number of Code-required parking spaces needed for this project.

E. **Pedestrian Connectivity**
Applicant shall consult with the Department of City Planning for any additional requirements pertaining to pedestrian walkability and connectivity, as described in the Walkability Checklist.

F. **Development Review Fees**
An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to DOT for permit issuance activities was adopted by the Los Angeles City Council in 2009 and updated in 2014. This ordinance identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Pedro Ayala or me at (213) 485-1062.

RS:pa

Attachments

cc: Krista Kline, CD 11
Eddie Guerrero, Tim Fremaux, Rudy Guevara, DOT
Kevin Azarmahan, BOE
K.C. Jaeger, Linscott, Law & Greenspan, Engineers

Table 7-1
PROJECT TRIP GENERATION FORECAST

TRIP GENERATION RATES [1]									
	ITE LAND USE		WEEKDAY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
ITE LAND USE CATEGORY	CODE	VARIABLE	DAILY	IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
Existing West LA District Yard	[2]	Per Employee	2.644	22%	78%	0.249	21%	79%	0.280
General Office Building	710	Per Employee	3.28	83%	17%	0.37	20%	80%	0.40

PROJECT TRIP GENERATION FORECAST [3]									
	ITE LAND USE		DAILY TRIP ENDS [4]	AM PEAK HOUR VOLUMES [4]			PM PEAK HOUR VOLUMES [4]		
LAND USE	CODE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project									
West LA District Yard	[2]	315 Employees	833	17	61	78	18	70	88
Service Planning Center	710	60 Employees	197	18	4	22	5	19	24
Subtotal Proposed Project			***1,030***	***35***	***65***	***100***	***23***	***89***	***112***
Existing Uses									
West LA District Yard	[2]	(191) Employees	(505)	(11)	(37)	(48)	(11)	(42)	(53)
Subtotal Existing Uses			***(505)***	***(11)***	***(37)***	***(48)***	***(11)***	***(42)***	***(53)***
NET NEW PROJECT TRIPS			***525***	***24***	***28***	***52***	***12***	***47***	***59***

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017, except as noted below.
[2] The trip generation forecast for the DWP West LA yard operations is based on empirical trip rates derived from observations of the existing DWP yards. Refer to Appendix Table C for derivation of the empirical trip rates.
[3] Projected employment totals 375 employees per the LADWP project description (June 2019) which includes 315 West LA Yard employees plus 60 employees that will work in the new 8,531 square-foot Service Planning Center to be constructed on-site.
[4] Trips are one-way traffic movements, entering or leaving.