

Initial Study

5200 Sheila Street Project

CEQA Lead Agency:



City of Commerce
Economic Development and Planning Department
2535 Commerce Way
Commerce, California 90040

Project Applicant:

GPT Sheila Street Owner LP
3401 Etiwanda Avenue, Leasing Office
Jurupa Valley, CA 92373

CEQA Consultant:



T&B Planning, Inc.
3200 El Camino Real, Suite 100
Irvine, CA 92602

June 11, 2020



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1.0 Introduction

This Initial Study (IS) evaluates the 5200 Sheila Street Project (“Project”) proposed by GPT Sheila Street Owner LP (Project Applicant). The Project Applicant proposes to construct and operate a 114,898 square foot speculative warehouse and office building on an approximately 5.65-acre site (“Project site”) located at 5200 Sheila Street in the City of Commerce, California. Under existing conditions, the Project site is currently developed with a one 4-story, 75-foot high, 104,888 square foot (sf) office building; one 1-story, 17-foot high, 8,065 sf cafeteria building; and an associated 429 space outdoor parking area. The existing development would be demolished prior to construction of the warehouse and office building.

1.1 Purpose of this Document

The California Environmental Quality Act (CEQA) is a statewide environmental law contained in Public Resources Code §§ 21000-21177. CEQA applies to most public agency decisions to carry out, authorize, or approve actions that have the potential to adversely affect the environment. CEQA requires that public agencies analyze and acknowledge the environmental consequences of their discretionary actions and consider alternatives and mitigation measures that could avoid or reduce significant adverse impacts to the environment when avoidance or reduction is feasible. The CEQA compliance process also gives other public agencies and the general public an opportunity to comment on a proposed project’s environmental effects.

This Initial Study addresses the potential environmental effects of the proposed Project, including all of the discretionary actions and approvals required to implement the Project, as well as subsequent construction and operation activities. As part of the City of Commerce’s permitting process, the Project is required to undergo an initial environment review pursuant to CEQA Guidelines § 15063. This Initial Study is a preliminary analysis prepared under the supervision of the City of Commerce Planning Department, acting in its capacity as the CEQA Lead Agency, to determine the type and scope of the environmental review that will be required for the Project. This Initial Study presents and substantiates the City of Commerce’s determination regarding the type of CEQA compliance document that will be prepared for the Project. Under CEQA this could consist of either an environmental impact report (EIR); mitigated negative declaration (MND); negative declaration (ND); addendum to a previously-prepared EIR; or a tiered analysis that relies on the findings and conclusions of a previously-prepared CEQA compliance document. Based on the findings of this Initial Study, an EIR will be prepared for the Project.

In summary, this Initial Study is an informational document that provides the City of Commerce, other public agencies, interested parties, and the public at-large with an objective assessment of the potential environmental impacts that could result from implementation of the proposed Project.

1.2 Format and Content of this Initial Study

The following items comprise the IS in its entirety:

Section 1.0, Introduction, identifies the purpose of this Initial Study, provides an overview of relevant CEQA requirements, and provides an overview of the organizational format of this Initial Study.

Section 2.0, Project Description, describes the proposed Project and provides a description of proposed discretionary actions required for Project implementation.



Section 3.0, Environmental Checklist and evaluation, presents a summary of the results of the environmental evaluation for the proposed Project, and identifies whether the Project would result in any potentially significant environmental impacts. Further, this section evaluates each response provided in the environmental checklist form. Each response checked is briefly discussed and supported by substantial evidence. As appropriate, each response discussion describes and identifies specific effects anticipated with Project implementation and provides a conclusion as to whether the Project would result in any significant impacts to the environment.

Section 4.0, References, provides a list of references that were consulted in preparation of this document.

Section 5.0, Persons Contributing to this Document, provides of list of individuals that contributed in the drafting and or editing of this document.

Appendix A, Geotechnical Report.

1.3 Potential Environmental Effects

The City of Commerce Planning Department directed and supervised the preparation of this Initial Study. Although prepared with assistance of the consulting firm T&B Planning, Inc. (refer to Section 5.0, Persons Contributing to this Document) the content contained within and the conclusions drawn by this Initial Study reflect the sole independent judgment of the City of Commerce. The analysis in this Initial Study determines whether the proposed Project has the potential to result in one or more significant direct, indirect, and/or cumulative environmental effects. Potential significant environmental effects would be analyzed further in an Environmental Impact Report (EIR); impacts determined to not occur or that would be less than significant would not be analyzed any further in an EIR.

The analysis presented in this Initial Study indicates that the proposed Project has the potential to result in one or more significant direct, indirect, and/or cumulative environmental effects to the following environmental subjects:

- Air Quality
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Noise
- Transportation
- Tribal Cultural Resources

Based on the environmental checklist and supporting environmental analysis (provided in Section 3.0), with adherence to applicable regulatory requirements, the Project would have no impact or less than significant impacts for the following environmental issue areas:

- Aesthetics
- Agricultural and Forestry Resources
- Biological Resources
- Energy
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems
- Wildfire



1.4 Processing of the Initial Study

This Initial Study and Notice of Preparation (NOP) to adopt the Initial Study will be distributed for a 30-day public review period to the following: 1) organizations and individuals who have previously requested such notice writing to the City of Commerce, 2) responsible agencies and other potentially affected agencies; and, 3) the Los Angeles County Registrar-Recorder/County Clerk.

The NOP identifies the location(s) where the Initial Study and its associated Technical appendices are available for public review. The environmental documentation is available for review at the City's website (<http://www.ci.commerce.ca.us/index.aspx?NID=357>) and at the following location:

- City of Commerce, Economic Development and Planning Department, 2535 Commerce Way, Commerce, California 90040; Phone: (323) 722-4805; Hours: 8:00 AM to 6:00 PM Monday through Thursday.



2.0 Project Description

2.1 Project Location

The Project site encompasses approximately 5.6 gross acres and is located east of I-710 and South Atlantic Boulevard, south of Sheila Street and north of the Metrolink railroad, at 5200 Sheila St, Commerce, CA 90040 (Assessor's Parcel Number [APN] 6335-007-021), in the City of Commerce.

The City of Commerce is located approximately 6 miles southeast of downtown Los Angeles and is bounded by the City of Montebello to the east, unincorporated East Los Angeles on the north, and the City of Bell Gardens on the south. Regional access is provided via Interstate 5 (I-5) and I-710. The regional and local vicinity of the Project site are depicted on Figure 2-1, Regional and Vicinity Map.

2.2 CEQA Requirements for Environmental Setting and Baseline Conditions

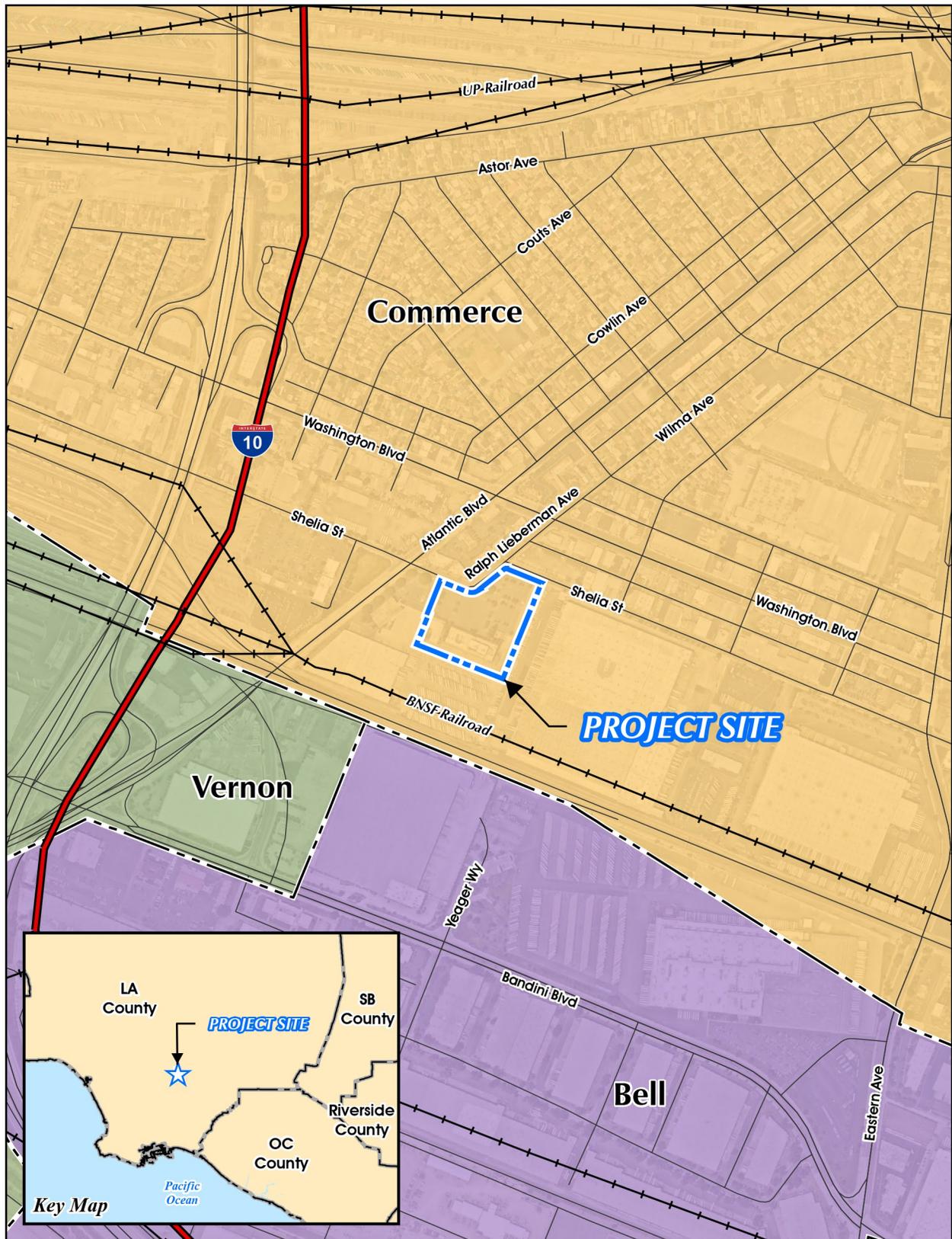
CEQA Guidelines § 15125 establishes requirements for defining the environmental setting to which the environmental effects of a proposed project must be compared. "Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced..." (CEQA Guidelines § 15125(a)(1)). Accordingly, the environmental setting for the Project is defined as the physical environmental conditions on the Project site at the time of release of the of the notice of preparation.

2.3 Existing Site and Area Characteristics

As shown on Figure 2-2, Aerial Photograph, the Project site is currently developed with a one 4-story, 75-foot high, 104,888 sf office building; one-story, 17-foot high, 8,065 sf office building; and an associated 429 space outdoor parking area. The 104,888 sf office building has a building footprint area of 26,222 sf and operates as a commercial office building for Unified Grocers Inc., who is the sole tenant. Also leased to Unified Grocers Inc, the one story, 8,065 sf cafeteria building features a kitchen area and dining room, which is used by the office employees. The combined building square footage totals 112,953 sf with a combined building footprint of 34,287 sf (26,222 sf office + 8,065 sf cafeteria footprints). Ornamental trees and landscaping exist throughout the parking area and near the buildings, and a guard shack is located at the eastern access point.

Vehicular access to the Project site is from a 20-foot gated access driveway that abuts the northern portions of the Project site located on Sheila Street, near the intersection of Sheila Street and Ralph Lieberman Avenue. A second entryway, which operates under compliance of a recorded easement, is located at the northeastern corner of the Project site off of Sheila Street. Sidewalks are present along both sides of Sheila Street and Ralph Lieberman Avenue.

There are approximately 210 employees on site and the primary hours of operation are Monday through Friday from 8:00 a.m. to 5:00 p.m. The existing use currently generates 332 daily passenger car trips and 14 daily truck trips, totaling 346 total daily trips with 50 a.m. peak hour trips and 34 p.m. peak hour trips. The existing uses are part of the existing baseline and will therefore be factored into the analysis of the proposed project. That is to say, because the existing uses create environmental impacts, the impacts of the existing uses will be deducted from the analysis of the proposed project's impacts so as to not over inflate and skew the impacts of the proposed project.

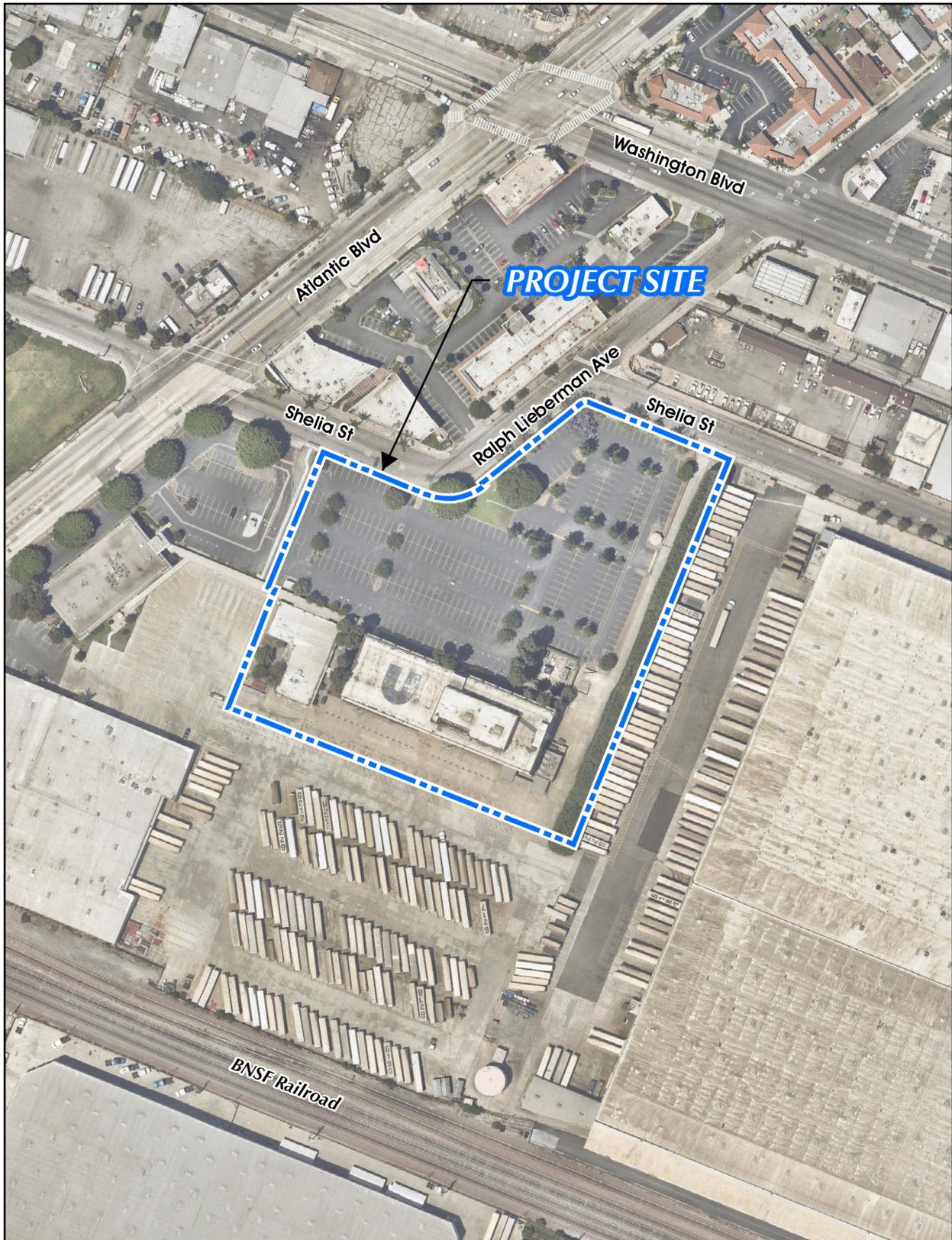


Source(s): ESRI, LA County Portal (2019), Nearmap Imagery (2019)

Figure 2-1



Regional and Vicinity Map



Source(s): ESRI, LA County Portal (2019), Nearmap Imagery (2019)

Figure 2-2



0 50 100 200
Feet

Aerial Photograph



2.3.2 Surrounding Land Uses and Development

The Project site is surrounded by existing restaurant and general commercial uses to the north; warehouse uses to the east; a trailer parking lot to the south; and a warehouse to the southwest. Immediately to the west and abutting the Project site is a commercial office building which is currently undergoing renovation. Located north of Sheila Street and south of East Washington Boulevard is a row of commercial uses which are currently occupied with various restaurants and commercial storefronts. Land uses further north of the Project site, beyond East Washington Boulevard, vary from commercial along South Atlantic Boulevard, to medium/high density residential, and single family residential.

The Project site is geographically situated in the proximity of the City of Commerce's rail transportation. Approximately 615 feet to the west of the Project site begins the perimeter of the Burlington Northern Santa Fe Los Angeles Intermodal Facility ("BNSF") and the Union Pacific Railroad Commerce Railyard ("UP") is located approximately 0.57 miles to the northwest of the Project site.

2.4 Existing General Plan and Zoning

The Project site has an "Industrial" land use designation in the City's General Plan and is zoned as "M-2" (Heavy Industrial) (City of Commerce, 2008). The Heavy Industrial designation allows manufacturing and distribution uses with a maximum floor area ratio (FAR) of 4.0 and is intended to provide safeguards and to establish adequate buffer distances between uses that pose potentially adverse public health, safety, and welfare impacts and land uses in adjacent, more restrictive zone districts (City of Commerce, 2008).

Permitted uses within M-2 zones are outlined in Table 19.11.030A of the City of Commerce Municipal Code and include Manufacturing, Trucking and Warehousing, and various other uses.

2.5 Project Description

The Project involves redevelopment of the Project site with a 114,898 sf warehouse building, as shown on Figure 2-3, Site Plan. Of the total square footage of the building, the Project would allocate 100,898 sf for warehousing and 14,000 sf for office uses. The Project would require the demolition of the existing 104,888 sf office building, 8,065 sf cafeteria building, and surface parking.

The Project would be developed in compliance with applicable provisions of the City's Municipal Code, including established development standards. A description of the following components of the Project is provided below, and the site plan is provided in Figure 2-3:

- Building Characteristics and Operations
- Circulation and Parking
- Landscaping, Walls, and Lighting



2.5.2 Building Characteristics and Operations

As depicted in Figure 2-4, Building Elevations, the proposed building would be one-story, 41-foot tall speculative warehouse and office building, which has been designed to be visually compatible with the adjacent building field colors. There are three aesthetic styles present on the north elevation which eliminates the appearances of “sameness” or “flat” from the publicly visible elevation. The first aesthetic style is present in the center segment of the north elevation, and would be painted with a two-tone color gradient on the gray scale with the lighter portions towards the sky. This segment would be given relief by a series of tempered spandrel glass windows with an accompanied painted metal awning. The building is recessed 28 feet south near the center of the building, offset slightly to the east. This area would be detailed with a window in the lower portion of this segment and accented by a metal awning with exposed wood paneling. The second aesthetic style is present on both sides of the north elevation which gives pedestrians a clear indication of the entryways and establishes the elevation’s depth and variety. The building would be painted a darker gray in these segments, and there are a higher number of windows halfway up the length of the building. Figure 2-4 also depicts the variation on the horizontal parapet portions of the roof which provides further depth to the building.

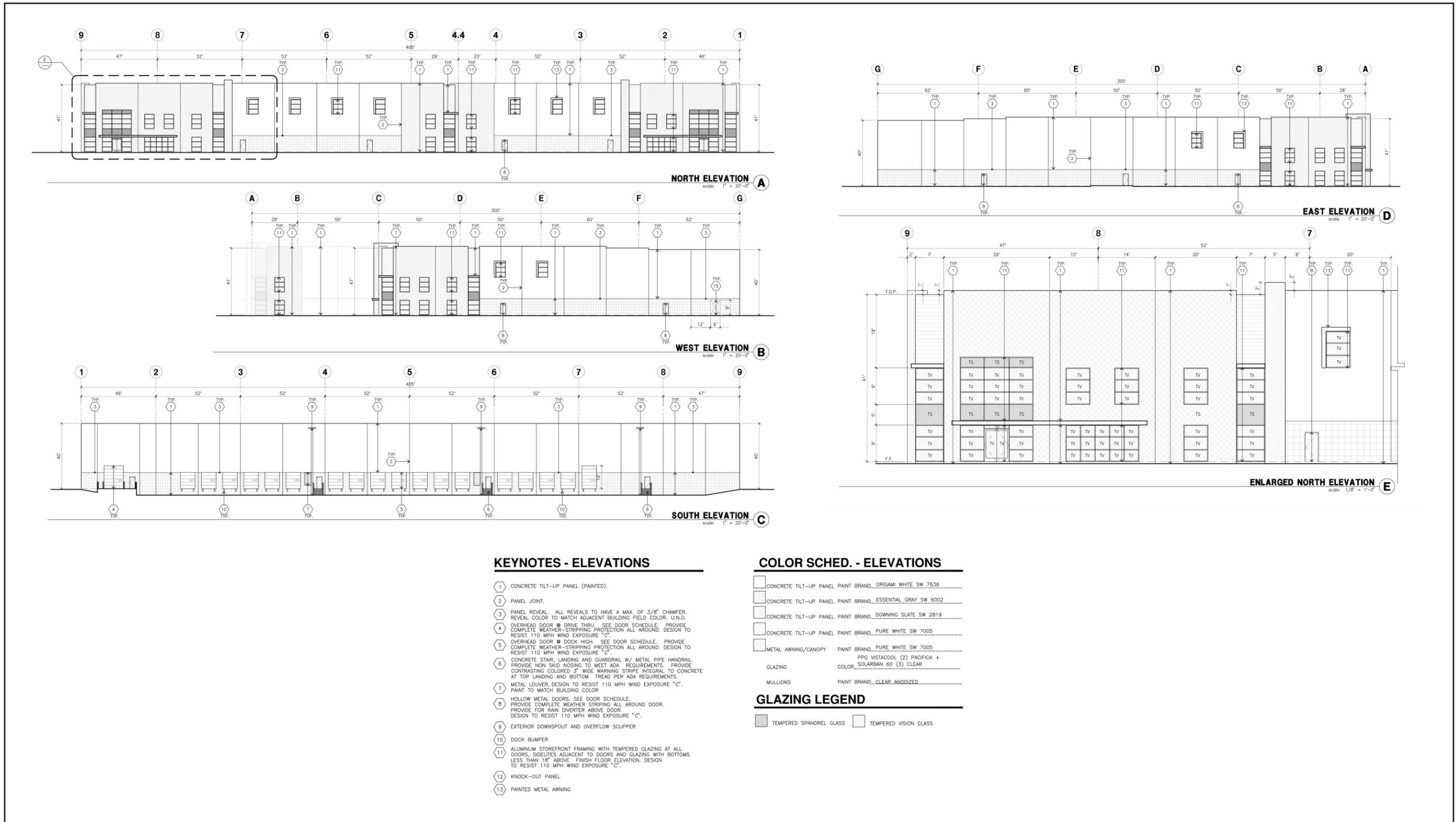
The east and west elevation, depicted in Figure 2-4, would display simplified aesthetic themes seen on the north elevation. The north elevation’s darker aesthetic style would wrap around to the east elevation of the structure where the proposed two-story office area would be located. The darker aesthetic style would also be present on the west elevation; however, it would not wrap from the north elevation. Also depicted in Figure 2-4, the south elevation less aesthetic variation and high logistical utility. At the south elevation, facing away from public viewpoints, the structure would install 18 dock doors and 1 drive through door.

Although the ultimate end-user is unknown at this time, the Project proposes to allow 24-hour daily operations. Loading and unloading activities would be at to the rear of the building out of view from the public right-of-way. The Project building would be designed, constructed, operated, and/or maintained in accordance with Leadership in Energy and Environmental Design (LEED). Project Applicant anticipates that the building would receive between 40-49 points and qualify for a certification level of “Certified.”

2.5.3 Circulation and Parking

Vehicle Circulation

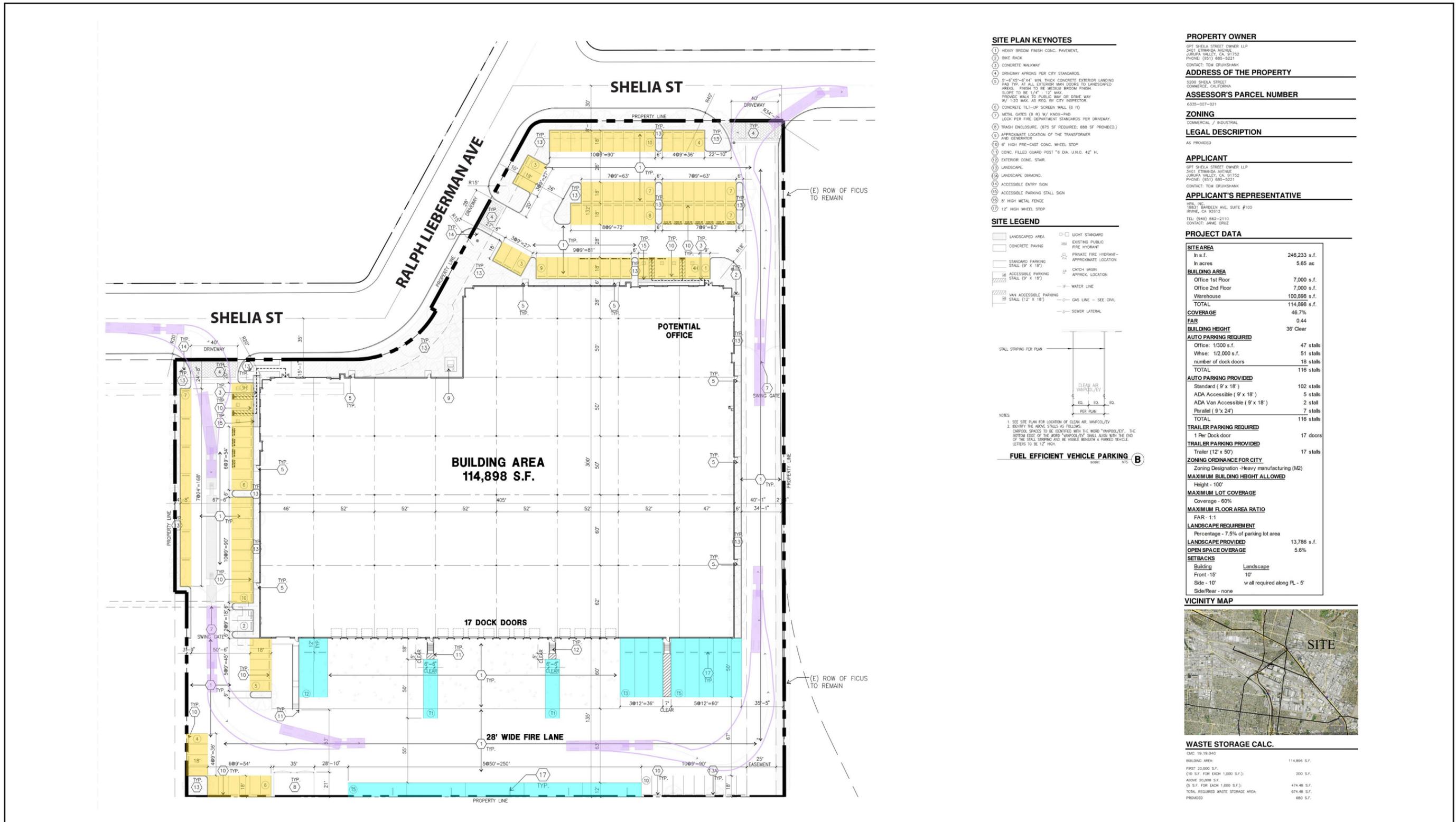
As depicted in Figure 2-5, *Circulation Plan*, the Project would provide three points of access to the site along Sheila Street and Ralph Lieberman Avenue. The first access point would be located at the northwest corner near the edge of the property line on Sheila Street. This access point would be the primary entryway for truck traffic into the Project site in order to reach the loading docks on the southern elevation, and would permit entrance from vehicles traveling from either direction of Sheila Street. Truck traffic would follow the perimeter of the proposed building, near the Project site boundary, along the western, southern, and eastern edges of the building. Egress from the Project site is made possible by the second access point located at the northeast corner near the edge of the property line on Sheila Street. Vehicles exiting this location would be permitted to enter into either direction of Sheila Street. A third access point would provide access from Ralph Lieberman Avenue which briefly interrupts Sheila Street as it travels east and west. The Ralph Lieberman Avenue access point would provide an access point for office employees, allow for ingress and egress, and permit ingress and egress to and from the Project site and either side of Ralph Lieberman Avenue.



Source(s): HPA (01-30-2020)

Figure 2-4

Not to Scale



Source(s): HPA (01-30-2020)

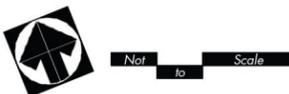


Figure 2-5

Circulation Plan



Parking

As depicted in Figure 2-3, the Project includes aboveground surface parking with 116 parking spaces. Of the 116 spaces, 86 stalls would be designated as standard, 11 stalls would be designated Clean Air Vehicle, 7 stalls would be designated as Parallel, 5 stalls would be designated as EV Standard, and 7 stalls would be designated as ADA Accessible. The largest parking area would be located to the northeast of the proposed building, with the remaining parking areas to the south and west of the proposed structure. The Project would also install two bike racks at the northeast and southwest corners of the building.

2.5.4 Landscaping, Walls, and Lighting

As depicted on Figure 2-6, Landscape Plan, the adjoining street and all parking areas would all be landscaped with a planter strip along the perimeter of the property bounded by street, except for areas where pedestrian crosswalks and driveways are provided. The minimum width of the parking perimeter landscaping between the street right-of-way and parking area would be 10 feet. A minimum of one tree would be provided for every eight parking spaces, and would be planted to provide uniform shade and coverage. An additional one tree shall be provided for every three hundred square feet of landscaped area. All trees would be of a minimum 24-inch box size.

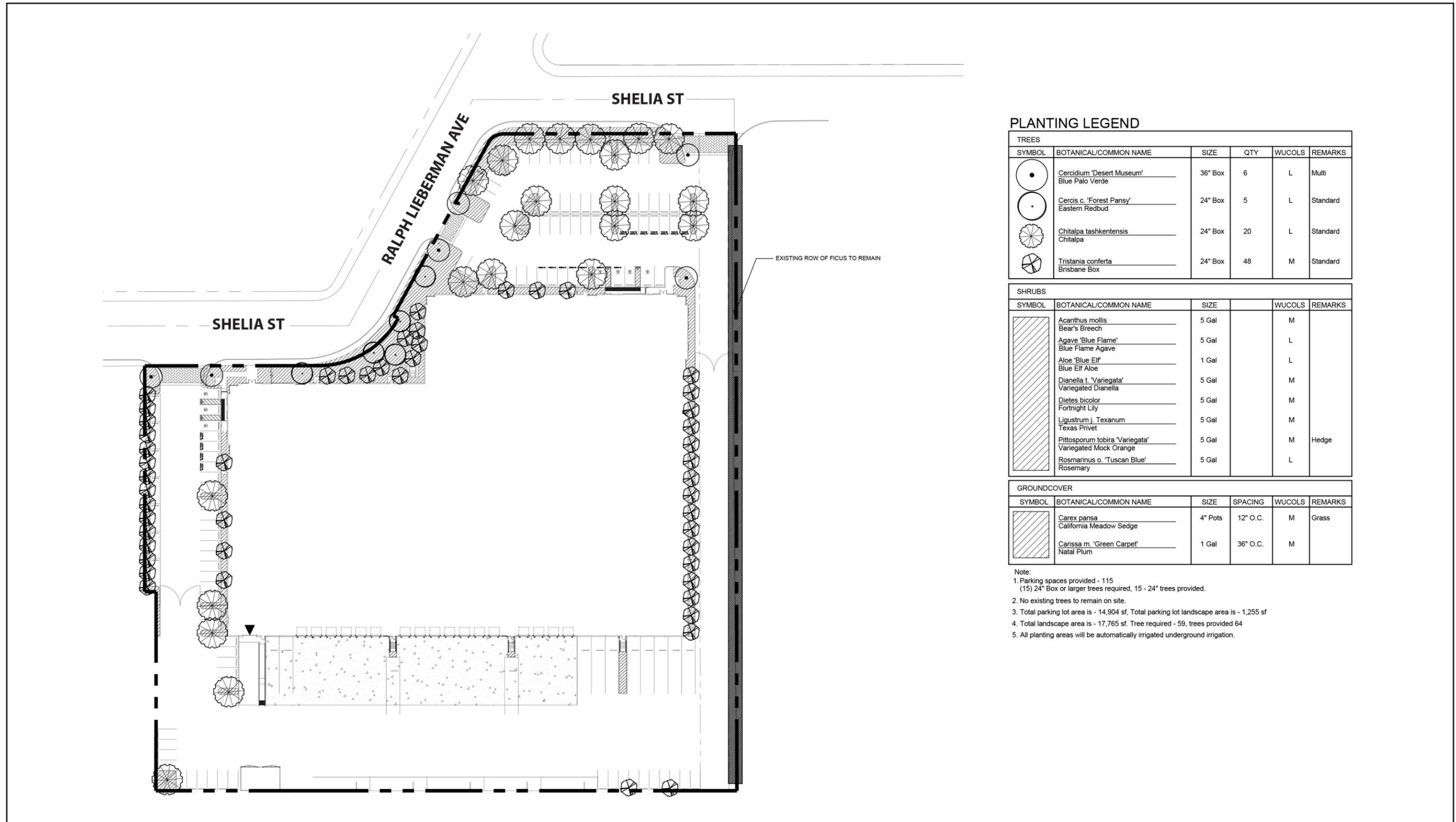
Exterior lighting would be installed on-site, as necessary, for safety, security, and wayfinding. Decorative architectural lighting as well as landscape lighting would also be installed to accent building entries as focal points throughout the site.

2.6 Project Construction Characteristics

Project construction would occur in one phase over approximately one year with an opening year of 2021. Construction activities and durations are as follows:

- Demolition (20 days)
- Site Preparation (10 days)
- Grading (20 days)
- Building Construction (230 days)
- Paving (20 days)
- Architectural Coating (20 days)

The Project will require demolition of the existing buildings (112,953 sf) and asphalt paving on site. Demolition will result in 3,160 tons of asphalt that will be pulverized and left in place and 8,500 tons of concrete crushed and left for reuse. All construction debris will be hauled to California Waste Services in Gardena approximately 15.5 miles away. Following demolition, the site will be graded requiring 9,728 cubic yards (CY) of cut and 9,900 CY of fill. Accordingly, the project would require 118 CY of imported soil.



PLANTING LEGEND

TREES					
SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Cercidium 'Desert Museum' Blue Palo Verde	36" Box	6	L	Multi
	Cercis c. 'Forest Pansy' Eastern Redbud	24" Box	5	L	Standard
	Chitalpa tashkentensis Chitalpa	24" Box	20	L	Standard
	Tristania conferta Brisbane Box	24" Box	48	M	Standard

SHRUBS					
SYMBOL	BOTANICAL/COMMON NAME	SIZE		WUCOLS	REMARKS
	Acanthus mollis Bear's Breech	5 Gal		M	
	Agave 'Blue Flame' Blue Flame Agave	5 Gal		L	
	Aloe 'Blue Elf' Blue Elf Aloe	1 Gal		L	
	Dianella t. 'Variegata' Variegated Dianella	5 Gal		M	
	Dietes bicolor Fortnight Lily	5 Gal		M	
	Ligustrum j. Texanum Texas Privet	5 Gal		M	
	Pittosporum tobira 'Variegata' Variegated Mock Orange	5 Gal		M	Hedge
	Rosmarinus o. 'Tuscan Blue' Rosemary	5 Gal		L	

GROUNDCOVER					
SYMBOL	BOTANICAL/COMMON NAME	SIZE	SPACING	WUCOLS	REMARKS
	Carex pansa California Meadow Sedge	4" Pots	12" O.C.	M	Grass
	Carissa m. 'Green Carpet' Natal Plum	1 Gal	36" O.C.	M	

- Note:
1. Parking spaces provided - 115
(15) 24" Box or larger trees required, 15 - 24" trees provided.
 2. No existing trees to remain on site.
 3. Total parking lot area is - 14,904 sf, Total parking lot landscape area is - 1,255 sf
 4. Total landscape area is - 17,765 sf. Tree required - 59, trees provided 64
 5. All planting areas will be automatically irrigated underground irrigation.

Source(s): Hunter Landscape (01-30-2020)

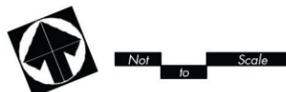


Figure 2-6



3.0 Environmental Checklist and Evaluation

3.1 Project Information

1. Project Title

5200 Sheila Street Project

2. Lead Agency Name and Address

City of Commerce
Economic Development and Planning Department
2535 Commerce Way
Commerce, CA 90040

3. Contact Person and Phone Number

Sonia Griego, Associate Planner – (323) 722-4805

4. Project Location

The Project site encompasses 5.6 gross acres and is located east of I-710 and South Atlantic Boulevard, south of Sheila Street and north of the Metrolink railroad, at 5200 Sheila St, Commerce, CA 90040 (Assessor's Parcel Number [APN] 6335-007-021), in the City of Commerce. The City of Commerce is located approximately 6 miles southeast of downtown Los Angeles and is bounded by the City of Montebello to the east, unincorporated East Los Angeles on the north, and the City of Bell Gardens on the south. Regional access is provided via Interstate 5 (I-5) and I-710. The regional and local vicinity of the Project site are depicted on Figure 2-1, Regional and Vicinity Map.

5. Project Applicant

GPT Sheila Street Owner LP

6. General Plan Designation

Heavy Industrial ("M-2")

7. Zoning

Industrial

8. Description of Project:

The Project involves redevelopment of the Project site with a 114,898 sf warehouse and office building. Of the total square footage of the building, the Project would allocate 100,898 sf for warehousing and 14,000 sf for office uses. The Project would require the demolition of the existing 104,888 sf office building, 8,065 sf cafeteria building, and surface parking.



9. Surrounding Land Uses and Setting:

The Project site is surrounded by existing restaurant and general commercial uses to the north; warehouse uses to the east; a trailer parking lot to the south; and a warehouse to the southwest. There are commercial and residential uses further to the north, across East Washington Boulevard. There is are two large railway stations further to the west and northwest.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement)

None.



3.2 Environmental Factors Potentially Affected

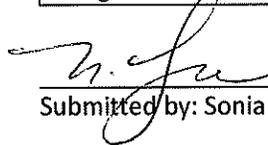
The environmental factors checked below would be potentially affected by this project, involving at least one impact that would require mitigation, as indicated by the checklist on the following pages.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Air Quality | <input type="checkbox"/> Hydrology/Water Quality | <input checked="" type="checkbox"/> Transportation |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use/Planning | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities/Service Systems |
| <input type="checkbox"/> Energy | <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Wildfire |
| <input checked="" type="checkbox"/> Geology/Soils | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Mandatory Findings of Significance |

3.3 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.	<input type="checkbox"/>
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.	<input type="checkbox"/>
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>
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 EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	<input type="checkbox"/>

 NICOLE MORSE FORB
Submitted by: Sonia Griego, Associate Planner

6/11/2020
Date



3.4 Evaluation of Environmental Impacts

This section contains the Environmental Checklist for the Project and is based on the Initial Study Environmental Checklist (Checklist) included in Appendix G of the CEQA Guidelines, approved in December 2019. The Checklist is marked with findings as to the environmental effects of the Project. The evaluation of environmental impacts in this section has been undertaken, pursuant to the provisions of CEQA, to provide the City of Commerce with the factual basis for determining, based on the information available, the form of environmental documentation the Project warrants. The basis for each of the findings is provided in the explanation of responses following the Checklist. References used to support the analyses are identified in the text and listed in Section 4.0 of this Initial Study.

3.4.1 Aesthetics

Environmental Issue Areas Examined	Potentially Significant Impact	Less Significant Mitigation Incorporated	Than with Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the Project:				
a) <i>Have a substantial adverse effect on a scenic vista?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) <i>In non-urbanized areas, substantially degrade the existing visual character or quality of public views 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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) <i>Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

No Impact. The City of Commerce 2020 General Plan does not identify any designated scenic vistas within the City of Commerce (City of Commerce, 2008). The viewshed experienced from the public areas in the vicinity of the project site predominantly reflects the industrial and warehouse uses of the surrounding properties. The Project site and immediate surrounding area is highly urbanized. While the Los Angeles River is approximately 0.75 miles away from the Project site, it is not a designated scenic vista nor is it within the viewshed of the Project site. Further, views from Sheila Street to the south are currently obstructed by the existing 17- and 76-foot buildings on the Project site. Views from South Atlantic Boulevard to the east are currently obstructed by the landscaping and structures of the neighboring site to the west. Due to the extent of existing urbanization and the lack of scenic vistas in the Project area, no impact 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 Project is not within a State scenic highway. The California Department of Transportation (Caltrans) Landscape Architecture Program administers the Scenic Highway Program, contained in the Streets and Highway Code, Sections 260–263. Scenic highways are classified as either Officially Listed or eligible (Caltrans, 2015). The nearest Eligible State scenic highway is a portion of State Highway 2 (HWY-2) that extends through the San Gabriel Mountain, beginning just north of the City of La Canada Flintridge (Caltrans, 2015). The Eligible portion of HWY-2 is located approximately 14 miles northwest of the Project site and is not visible from the Project site or surrounding areas. As such, the Project would not impact scenic resources within a State designated scenic highway. No impact would result.

c) *Would the Project, 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?*

No Impact. The Project is in an urbanized area with commercial uses to the north and industrial uses to the east, south, and west. Aerial photographs presented in Figure 2-2 demonstrate the visual character of the Project site and surrounding areas. As shown in the aerial photographs, the entirety of the Project site is developed with two structures and a parking lot. There is a limited number of trees and ornamental landscaping within the Project site.

Given the urban nature of the Project site and surrounding areas, the analysis threshold is appropriately based on review of potential for the Project to conflict with applicable zoning and other regulations governing scenic quality. Specifically, regulations governing scenic quality are established through the City's Municipal Code and General Plan, as discussed below. The purpose of Title 19, Zoning, of the City of Commerce Municipal Code, is to "protect health, safety, comfort, and welfare and to ensure the growth and development of the City is orderly and provides maximum benefit to its residents by establishing land use districts and regulations which prevent misuse or abuse of the land." (Commerce Municipal Code, 2019). The Project is zoned as M-2 (Heavy Industrial).

The Project would be developed in compliance with applicable provisions of the City's Municipal Code, including established development standards as stipulated in Table 19.11.040A of the Municipal Code (Commerce Municipal Code, 2019). Applicable development standards include: 1) a minimum lot area of 25,000 sf, 2) a maximum building height of 50 ft. within 100 ft. of any residential zone, school, or park; otherwise no height limit, 3) a minimum front yardage of 15 ft., 4) a minimum 5f ft. side and rear yard if adjoining residential zone, school, or park; otherwise no minimum side or rear yard, 5) a minimum of 5% of open space in total lot area, 6) a maximum lot coverage of 60% of total lot area, and 7) a max floor area ratio (FAR) of 1:1. Chapter 19.11 of the Municipal Code outlines permitted uses and development standards for manufacturing zones.

The proposed land use is consistent with the M-2 zoning designation, which allows warehouse and logistics facilities. Table 3-1 addresses the Projects consistency with applicable development standards outlined in section 19.11.040(A) of the Municipal Code.



Table 3-1 Zoning Development Standards Consistency Analysis

Applicable Development Standard	Project Consistency
<i>Commercial Highway Zone General Standards</i>	
Minimum Lot Area: 25,000 sf	<i>Consistent.</i> The Project site is approximately 5.65 acres (approximately 246,233 sf), which is substantially larger than the required minimum lot area of 25,000 sf. Therefore, the project would be consistent with the minimum lot requirement.
Maximum Building Height: None, unless Project site 100 ft of a residential zone, school or park, in which case 50 ft.	<i>Consistent.</i> The Project site is 41 ft in height at its highest point. The nearest residential zone is approximately 870 ft from the Project site. The nearest school is 1,329 ft from the project site. The nearest park is 2,411 ft from the Project site. Given the Project site's proximity to these protected areas, there is no maximum building height imposed on the Project. Therefore, the Project would be consistent with the maximum building height limit.
Distance Between Buildings (Minimum): None	<i>Consistent.</i> The Project would create a distance between the nearest building in the amount of approximately 2,200 ft. As there is no minimum, the Project would be consistent with the distance between buildings requirement.
Minimum Front Yard: 15 ft	<i>Consistent.</i> The Project's front yard space would range from 15'-1" to 140'-1". There is no location where the front yard would be less than the minimum 15 ft minimum requirement. Therefore, the Project would be consistent with the minimum front yard requirement.
Minimum Side Yard: None, unless Project site adjoins residential zone, school, or park, in which case 5 ft.	<i>Consistent.</i> The Project's minimum side yard would be approximately 40 ft. There are no residential zones, schools, or parks adjoining the Project site. Therefore, the Project site would be consistent with the minimum side yard requirement.
Minimum Rear Yard: None, unless Project site adjoins residential zone, school, or park, in which case 5 ft.	<i>Consistent.</i> The Project site's minimum rear yard would be approximately 74 ft. There are no residential zones, schools, or parks adjoining the Project site. Therefore, the Project would be consistent with the minimum rear yard requirement.
Open Space: 5% of total lot area	<i>Consistent.</i> The Project would allocate 5.6% of the Project site to open space. Therefore, the Project would be consistent with the minimum open space requirement.
Maximum Lot Coverage: 60% of total lot area	<i>Consistent.</i> The Projects lot coverage would be 46.7%, which is under the required maximum lot coverage. Therefore, the Project would be consistent with the maximum lot coverage requirement.
Floor Area Ratio (Maximum): 1:1	<i>Consistent.</i> The Project site has a FAR of approximately 1:0.44, which would not exceed the maximum allowed FAR of 1:1. Therefore, the project would be consistent with the maximum lot FAR requirement.

Municipal Code Section 19.11.050, Fence, hedges, and walls, would not be applicable as the Project does not propose the installation of any new fencing or the retention of old fencing. Section 19.11.060, Landscape Buffer, does not apply as the Project's setback area would not adjoin a residential zone. As a



standard condition of approval, the Project would remain consistent with restrictions on parking areas as set forth in Section 19.11.080, Required Parking Areas.

As discussed above, the City has established development standards and landscape requirements in the Municipal Code to protect the visual and scenic quality of the City. As demonstrated through the analysis presented above, the Project would not conflict with applicable development standards in the City's Municipal Code established for the M-2 zone. Therefore, no impact would occur.

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

Less than Significant Impact. Under existing conditions, the Project site is surrounded by a variety of industrial and commercial uses. Street lights are located along South Atlantic Boulevard and Sheila Street. Flood lights from the nearby train stations and lights associated with the use of Highway 710 are a prominent source of nighttime lighting in the area.

The Project would introduce new light sources to the Project site as necessary for security, safety, and wayfinding. However, the lighting would be consistent with lighting onsite and in the general area. Furthermore, the lighting and glare produced by the Project would be substantially similar to the existing Project site conditions. Currently, the Project site contains a series of parking lot lighting along with lighting created by the existing buildings, and the proposed Project would result in a similar lighting pattern.

Consistent with Section 19.19.130 of the City's Municipal Code, which establishes general lighting standards, exterior lighting shall not exceed twenty-five feet and will be, lighting candle power would be the minimum needed to accomplish the purpose of the light, lighting would not flicker and would remain consistently powered, lighting would be prevented from shining onto adjacent properties, public rights-of-way, and driveways in a manner that would obstruct drivers vision, lighting on advertising signs would not cause a light or glare on surrounding properties, and all light fixtures would be compatible with the architectural style of the project.

Glare is caused by light reflections from pavement, vehicles, and building materials such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on intensity and direction of sunlight. Glare can create hazards to motorists and can be a nuisance for pedestrians and other viewers. Proposed exterior building materials primarily include concrete, painted metal, and tempered glass. These non-reflective building materials would not result in potential glare impacts within the Project site or surrounding areas, and notably at the street level.

Implementation of the Project would not result in a significant source of light or glare that would adversely affect daytime or nighttime views. Accordingly, impacts would be less than significant.



3.4.2 Agriculture and Forestry Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less Significant Mitigation Incorporated	Than with	Less than Significant Impact	No Impact
Would the Project:					
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?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 mapping information available from the California Department of Conservation (CDC) Farmland Mapping and Monitoring Program (FMMP), the Project site does not contain any Prime Farmland, Unique Farmland, or Farmland (CDC, 2016a). The nearest area of any FMMP significance is a relatively small area of Prime Farmland located within the Los Alamitos Army Airfield approximately 15.5 miles to the southeast. Given the Project would not convert Prime Farmland, Unique Farmland, or Farmland, as shown on maps prepared pursuant to the FMMP, to non-agricultural use, no impact would result.

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

No Impact. The Project site is currently zoned as Heavy Industrial (M-2). The Project’s implementation will not require a zone change and will not result in a loss of land zoned for agriculture. The Project site is nearly completely paved with small exception for decorative landscaping. There are no farming activities occurring at the site. The Project site is not located within any agricultural preserves, nor is the Project site subject to any Williamson Act Contracts (City of Commerce, 2008) (CDC, 2016b). As a result, the Project will not result in conflict with existing agricultural zoning or Williamson Act contracts. The Project would cause no impact.



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. Under existing conditions, the Project site is located within the City of Commerce, has a zoning designation of M-2, and does not contain forest land. The Project does not propose an amendment to the zoning plan, and would utilize the land in a manner which is consistent with the M-2 zone designation. Accordingly, 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. The Project site and surrounding areas do not consist of forest land. Therefore, the Project would not result in the loss of forest land or result in the conversion of forest land to non-forest use. Accordingly, no impact would occur and no further analysis of this topic is required.

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. As previously stated, the Project would not result in changes in the environment which, due to their location and nature, could result in conversion of forest land to non-forest use. Accordingly, no impact would occur and no further analysis of this topic is required.

3.4.3 Air Quality

Environmental Issue Areas Examined	Potentially Significant Impact	Less Significant Than with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Potentially Significant Impact. The Project site is located in the South Coast Air Basin (SCAB). Air quality within the SCAB is regulated by the South Coast Air Quality Management District (SCAQMD). Standards for air quality are documented in the SCAQMD’s Air Quality Management Plan (AQMP), which was



adopted by SCAQMD on March 3, 2017 (SCAQMD, 2017). The proposed Project's construction and operational activities would emit pollutants into the SCAB that have potential to conflict with or obstruct implementation of the SCAQMDs AQMP. Accordingly, an air quality technical report shall be prepared for the Project and the EIR shall evaluate the proposed Project's potential to conflict with the adopted SCAQMD's AQMP.

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?*

Potentially Significant Impact. Air quality within the SCAB is regulated by the SCAQMD and standards for air quality are documented in the 2016 SCAQMD AQMP (SCAQMD, 2017). Implementation of the proposed Project has the potential to violate daily air pollutant emission significance thresholds established by the SCAQMD's AQMP during both construction and long-term operation. Accordingly, an air quality technical report shall be prepared and Project-related air emissions shall be modeled using the SCAQMD's California Emissions Estimator Model (CalEEMod). The purpose of this model is to estimate air quality emissions for criteria pollutants from direct and indirect sources. The EIR shall quantify the Project's expected pollutant levels and evaluate whether the proposed Project's emissions would violate local air quality standards and/or contribute substantially to an existing or projected air quality violation.

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

Potentially Significant Impact. The Project has the potential to expose sensitive receptors located near the Project site and/or along its primary truck route(s) to localized criteria pollutant emissions and/or diesel particulate matter (DPM) emissions from mobile sources (i.e., automobile/truck exhaust). These pollutants pose risks to human health. Due to the presence of sensitive receptors in the Project area, there is a potential for exposing nearby sensitive receptors to substantial pollutant concentrations associated with the Project. The Project's potential to expose nearby sensitive receptors to substantial pollutant concentrations shall be studied in the air quality technical report and will be disclosed in the EIR.

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

Potentially Significant Impact. Any temporary odor impacts generated during Project-related construction activities, such as asphalt paving and the application of architectural coatings, would be short-term and cease upon completion of the construction phase of the Project. The industrial uses proposed for the Project site are not expected to involve uses or activities that generate substantial or noticeable amounts of odor during long-term operation. Regardless, the Project's potential to expose a substantial number of people to objectionable odors during both construction and operation shall be studied in a Project-specific air quality technical report, and the findings of the air quality technical report shall be disclosed by the EIR.



3.4.4 Biological Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less Significant Mitigation Incorporated	Than with	Less than Significant Impact	No Impact
Would the Project:					
a) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) <i>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 impeded the use of native wildlife nursery sites?</i>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) <i>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</i>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) <i>Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</i>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 Wildlife or U.S. Fish and Wildlife Service?

No Impact. The Project site is currently developed with one 4-story, 75-foot high, 104,888 sf office building and a one 1-story, 17-foot high, 8,065 sf office building at the southern portion of the Project site. The northern portion of the Project site consists of surface parking with 429 spaces. Limited ornamental trees and landscaping are present throughout the Project site.

The Project site is in an urbanized and industrialized area in the City of Commerce and vegetation onsite is limited to ornamental species. As indicated in the City of Commerce General Plan, the City of Commerce



does not contain any natural habitats, and the CDFW has determined that there are no sensitive habitats or species on the Project site or surrounding areas (City of Commerce, 2008, p. 146)

As a part of the Project, existing vegetation within the developed portion of the Project site would be removed and replaced with a variety of trees and ornamental vegetation. The relocation and/or replacement of on-site vegetation and trees would not have a substantial adverse effect on candidate, sensitive or special-status species, as defined by the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Services (USFWS). No impact would occur.

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 Wildlife or U.S. Fish and Wildlife Service?*

No Impact. The Project site is currently developed with office buildings and associated parking lot and is in a highly urbanized and industrialized area in the City of Commerce. Vegetation onsite is limited to ornamental species. As indicated in the City of Commerce General Plan, the City of Commerce does not contain any natural habitats, and the CDFW has determined that there are no sensitive habitats or species within Commerce or in adjacent area (City of Commerce, 2008, p. 146). Accordingly, no impact would result and no mitigation is required.

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. See response for Threshold 3.4.4(b). There are no wetlands on the Project site. The City of Commerce does not contain any natural habitats, and the CDFW has determined that there are no sensitive habitats or species within Commerce or in adjacent areas (City of Commerce, 2008, p. 146). Accordingly, no impact would occur.

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 impeded the use of native wildlife nursery sites?*

No Impact. The Project site is in a highly urbanized area and is not within any wildlife movement corridor. Accordingly, no impact would result and no mitigation is required.

e) *Would the Project conflict with any local polices or ordinances protecting biological resources, such as tree preservation policy or ordinance?*

Less than Significant Impact. The existing trees and groundcover located within the Project site are ornamental, and would be either removed or relocated in the proposed Project. As a standard condition, Municipal Code Chapter 12.06 – City Trees will regulate the proposed Project’s tree policy (Commerce Municipal Code, 2019). Accordingly, given the Project site’s current developed condition, a less than significant impact is expected and no mitigation is required.

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



No Impact. The Project site is not within a Habitat Conservation Plan, Natural Community Conservation Plan. Accordingly, no impact would result and no mitigation is required.

3.4.5 Cultural Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
<i>a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>c) Disturb any human remains, including those interred outside of formal cemeteries?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the Project cause a substantial adverse change in the significant of historical resources pursuant to §15064.5?

Potentially Significant Impact. Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered “historically significant” if it meets one of the following criteria:

- 1) Is associated with events that have made a significant contribution to the broad patters 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 possess high artistic values;
- 4) Has yielded, or may be likely to yield, information important in prehistory or history.

The Project involves demolition of the existing buildings on site. Two existing building on the Project site were constructed circa 1956 (cafeteria building) and 1966 (office building) as part of the Fluor Corporation headquarters; these buildings are not on federal, State, or local lists of designated historic resources. A cultural resources report will be conducted to determine if the historic aged buildings are considered historically significant. The EIR will evaluate the proposed Project’s impacts on any potentially historical resources.



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

Potentially Significant Impact. The Project site is built out and previous grading at the site has occurred. The Project would involve demolition and grading activities to construct the proposed warehouse building. There may be a potential to encounter archeological resources in areas requiring excavation to depths greater than the current levels of disturbance. A cultural resources report will be prepared to determine the sensitivity of archaeological resources on the site and potential impacts during grading activities.

c) *Would the Project disturb any human remains, including those interred outside of formal cemeteries?*

No Impact. The possibility of uncovering human remains during Project-related grading activities is remote due to fact that the previous development of the site has substantially disturbed the subsurface of the site. Pursuant to California Health and Safety Code Section 7050.5, in the unlikely event human remains are encountered during ground-disturbing activities, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin. Pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made by the Coroner. If the Coroner determines the remains to be Native American, the California Native American Heritage Commission (NAHC) must be contacted and the NAHC must then immediately notify the “most likely descendant(s)” of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. Mandatory compliance with these requirements would ensure that no impacts associated with the discovery of human remains would occur.

3.4.6 Energy

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
<i>a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Less than Significant Impact. Project-related construction and operational activities would use local energy resources, including gasoline, diesel fuel, and electricity.



Construction

Construction of the proposed Project would create temporary increased demands for energy use to power the construction equipment. The energy use would vary during different phases of construction—the majority of construction equipment during demolition and grading would be gas or diesel-powered. The later construction phases could require electricity-powered equipment for interior construction and architectural coatings. Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline.

On July 17, 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (California Code of Regulations Title 24, Part 11, known as “CALGreen”) was adopted as part of the California Building Standards Code. Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection; stormwater control during construction; construction waste reduction. The Project would be required to comply with CALGreen.

The Project would not result in wasteful, inefficient, or unnecessary use of energy during construction. It is anticipated that the construction equipment would be well maintained and meet the appropriate tier ratings per CALGreen or EPA emissions standards, so that adequate energy efficiency level is achieved. Construction trips would not result in unnecessary use of energy since the Project site is centrally located and is served by numerous regional freeway systems (e.g., I-5 and SR-710) that provide the most direct routes from various areas of the region. Electrical energy would be available for use during construction from existing power lines and connections, precluding the use of less-efficient generators. Impacts would be less than significant.

Operation

The Project site is currently developed with two buildings, totaling 112,953 sf. The existing buildings consume electricity for heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; lighting; use of onsite equipment and appliances; etc. The proposed Project would involve the replacement of older buildings with new buildings that would be comply with the 2019 Building Energy Efficiency Standards. Under the 2019 standards, nonresidential buildings will be more energy efficient compared to the 2016 standards (CEC, 2018). The slight net increase of 1,945 sf of building space would not result in a substantial increase in energy consumption compared to existing conditions. The Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less would be less than significant.

b) *Would the Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?*

Less than Significant Impact. The California Renewables Portfolio Standard (RPS) was established in 2002 under SB 1078 and was amended in 2006 and 2011. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. Renewable energy sources include wind, small hydropower, solar, geothermal, biomass, and biogas. Electricity production from renewable sources



is generally considered carbon neutral. Executive Order S-14-08, signed in November 2008, expanded the state’s renewable portfolios standard (RPS) to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. Senate Bill 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures. On September 10, 2018, Governor Brown signed Senate Bill 100 (SB 100), which raises California’s RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under SB 100 the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Additionally, the Project will be required to comply with the California Code of Regulations (CCR) Title 24, Part 11: California Green Building Standards (Title 24) (Commerce Municipal Code, 2019). The Project would not conflict with or obstruct a state or local plan for energy efficiency. Impacts would be less than significant.

3.4.7 Geology and Soils

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:</i>				
i) <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.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) <i>Strong seismic ground shaking?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) <i>Seismic-related ground failure, including liquefaction?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) <i>Landslides?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>Result in substantial soil erosion or the loss of topsoil?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) <i>Have soils incapable of adequately supporting the use septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) <i>Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Information presented in this section is primarily based on Project-specific *Geotechnical Engineering Report Proposed Commerce Logistics Center, Commerce, Los Angeles County, California* (Terracon, 2019) (November 19, 2019), prepared by Terracon Consultants, Inc. The Geotechnical Report is included in Appendix A of this Initial Study.

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

a.i) *Rupture of a known earthquake fault?* No Impact. As indicated in the Geotechnical Report, there are no known faults on the Project site and the Project site is not located within an Alquist-Priolo earthquake fault zone (Terracon, 2019). Therefore, no impacts related to the rupture of a known earthquake fault, as depicted on the most Alquist-Priolo Earthquake Fault Zoning Map, are anticipated to occur as a result of Project implementation.

a.ii) *Strong seismic ground shaking?* Less than Significant Impact. Southern California is a seismically active area and properties in the City of Commerce, including the Project site, are subject to periodic ground shaking and other effects from earthquake activity along nearby regional faults. As indicated in the Geotechnical Report, the Project site is not at an increased risk relative to the surrounding areas (Terracon, 2019). Project-related structures and buildings would be required to be designed and built in compliance with the California Building Code (CBC [California Code of Regulations, Title 24, Part 2]), which contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the probable strength of ground motion. Therefore, as structures would be designed to meet or exceed CBC standards for earthquake resistance, development of the Project would create less than significant impacts related to seismic ground shaking. Impacts would be less than significant.



a.iii) Seismic-related ground, including liquefaction? No Impact. According to the California Geological survey (Los Angeles Quadrangle), the Project site is not located within a liquefaction potential zone. The historic groundwater levels are deeper than 50 feet below the ground surface and would therefore not have the necessary groundwater conditions for a liquefaction risk (Terracon, 2019). Accordingly, no impact would occur.

a.iv) Landslides? No Impact. Slope failures in the form of landslides are common during strong seismic shaking in areas of steep hills. The Project site and surrounding area are generally flat with no significant slopes. The Project site is not located within a landslide zone. Accordingly, no impact related to landslide hazards would occur.

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

Less than Significant Impact. Erosion is the movement of rock and soil from place to place. Erosion occurs naturally by agents such as wind and flowing water; however, grading and construction activities can greatly increase erosion if effective erosion control measures are not used. Common means of soil erosion from construction sites include water, wind, and being tracked offsite by vehicles. The Project site is in a highly urbanized, built-out portion of the City and is largely flat; soils have already been disturbed by existing development. Although soils in the Project site could experience erosion during construction and development, implementation of the Project would not cause substantial soil erosion.

The State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ (General Construction Permit) contains water quality standards and stormwater discharge requirements applying to construction projects of one acre or more. The General Construction Permit was issued pursuant to the National Pollutant Discharge Elimination System (NPDES) regulations for implementing part of the federal Clean Water Act. The General Construction Permit requires preparation of a Stormwater Pollution Prevention Plan (SWPPP) that identifies the sources of pollution that may affect the quality of stormwater discharges and describes and ensures the implementation of best management practices (BMPs) to reduce the pollutants, including silt and soil, in construction stormwater discharges. Examples of BMPs that are commonly included in SWPPPs are shown in Table 3-2, below.

Table 3-2 Examples of Construction-Phase Stormwater Pollution Prevention BMPs

Category	Goal	Sample Measures
Erosion Controls	Prevent soil particles from being detached from the ground surface and transported in runoff	Preserving existing vegetation; soil binders; geotextiles and mats
Sediment controls	Filter out soil particles that have entered runoff	Barriers such as slit fences and gravel bag berms; and street sweeping
Tracking Controls	Prevent soil from being tracked offsite by vehicles	Stabilized construction roadways and entrances/exits
Wind Erosion Control	Prevent soil from being transported offsite by wind	Similar to erosion controls above
Non-stormwater Management	Prevent discharges of soil from site by means other than runoff and wind	BMPs regulating various construction practices; water conservation
Waste and Materials Management	Prevent release of waste materials into storm discharges	BMPs regulating storage and handling of materials and wastes



Future development within the Project site would be required to comply with the NPDES permit by preparing and implementing a SWPPP specifying BMPs for minimizing pollution of stormwater with soil and sediment during Project construction. Adherence to the BMPs in the SWPPP would reduce, prevent, or minimize soil erosion from Project-related grading and construction activities. Therefore, impacts related to substantial soil erosion or the loss of topsoil 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?*

No Impact. The specific geological conditions of the Project site are located in the Geotechnical Report. The Project site is currently developed with office uses. The Project site is covered with asphalt and concrete slabs with up to approximately 0.5 to 0.6 inches deep. Below the asphalt and concrete layer is approximately a base layer approximately 3.0 to 7.5 inches thick followed by 4.0 – 5.0 feet of fill. Underlying native soils begin at an approximate depth 5.0 feet below the surface, and consist of interbedded silty sand, sand silt and sandy silty clay.

As stated previously, the Project site is not susceptible to landslides or liquefaction. Lateral spreading and collapse can occur as an effect of seismic ground shaking and expansive soils. Project-related structures and buildings would be required to be designed and built in compliance with the CBC and the City of Commerce Building Code, which requires the Project to implement the recommendations of the site-specific geotechnical investigation. The recommendations require foundations to be constructed based on the expansion index and shear strength of onsite soils. Compliance with the CBC and City Building Code would ensure that no impact would occur.

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?*

No Impact. The immediate underlying fill beneath the Project site consists of silty sand with a fine to coarse grain, brown to dark brown color, trace gravel up to 0.5 inches, and is considered “non-expansive.” (Terracon, 2019). Furthermore, compulsory compliance with the CBC and local regulations will further diminish the possibility of risk associated from expansive soil. Accordingly, no impact is anticipated.

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

No Impact. No septic tanks will be used as part of the proposed Project. The proposed Project would connect to the existing waste water disposal system. Accordingly, no impact is anticipated and no mitigation is required.

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

Potentially Significant Impact. Previous disturbance of the Project site from past construction activities has reduced the potential for paleontological resources or unique geologic features to exist onsite. However, a paleontological resources assessment report will be prepared to identify any potential significant paleontological resources or unique geologic features onsite. The assessment report will include an intensive pedestrian survey of the Project area by a qualified archeologist and cross-trained



paleontologist and records searches for paleontological resources. Results of the paleontological resources assessment report will be discussed in the EIR, along with any potential Project impacts.

3.4.8 Greenhouse Gas Emissions

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) <i>Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Potentially Significant Impact. Greenhouse gas (GHG) emissions associated with the proposed Project would primarily be associated with emissions from Project-related traffic. In addition, Project-related construction activities, energy consumption, water consumption, and solid waste generation also would contribute to the Project’s overall generation of GHGs. Specifically, Project-related construction and operational activities would result in the emissions of carbon dioxide (CO₂), nitrogen dioxide (NO₂), and methane (CH₄), which are GHGs. A Project-specific GHG emissions report shall be prepared for the Project to determine whether the Project exceeds SCAQMD’s bright-line greenhouse gas emissions threshold. The results of the GHG emissions report shall be documented in the EIR.

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

Potentially Significant Impact. The City of Commerce does not have an adopted Climate Action Plan. The Project’s potential impacts due to GHG emissions shall be assessed in the required GHG emissions report based on consistency with Assembly Bill 32 (AB 32) and Senate Bill 32 (SB 32), which are the primary policies/regulations adopted in the State of California to reduce GHG emissions. Thus, the proposed Project’s potential to result in a significant impact related to GHG emissions is based on its consistency with the AB 32 and SB 32. The EIR shall document the findings of the Project-specific GHG emissions report and shall evaluate the Project for consistency with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions.



3.4.9 Hazards and Hazardous Materials

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) <i>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?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) <i>Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) <i>Be located on a site which is included on a list of hazardous materials sites which complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) <i>For a project 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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) <i>Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) <i>Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Potentially Significant Impact. The term “hazardous material” is defined in different ways by different regulatory programs. For purposes of this environmental document, the definition of “hazardous material” is the same as that outlined in the California Health and Safety Code, Section 25501:



Hazardous materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

“Hazardous waste” is a subset of hazardous materials, and the definition is essentially the same as that in the California Health and Safety Code, Section 25117, and in the California Code of Regulations, Title 22, Section 66261.2:

Hazardous wastes are those that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Hazardous materials can be categorized as hazardous nonradioactive chemical materials, radioactive materials, and biohazardous materials (infectious agents such as microorganisms, bacteria, molds, parasites, viruses, and medical waste).

Hazardous materials such as fuels, greases, paints, and cleaning materials would be used during construction of the proposed Project. Onsite construction equipment might require routine or emergency maintenance that could result in the release of oil, diesel fuel, transmission fluid, or other materials. Additionally, operation of existing and future manufacturing uses at the Project site may involve the use of regulated hazardous materials. This is a potentially significant impact.

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?*

Potentially Significant Impact. The Project site is currently built out with office uses. Further analysis is necessary to characterize the existing conditions within the Project site with respect to past and current activities involving the handling, use, storage, transport, or emission of hazardous materials. Based on the findings of the analysis, it can be determined whether the proposed Project could involve a risk of release of hazardous materials into the environment. Therefore, potentially significant impacts may occur.

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?*

Potentially Significant Impact. The Project is located within an industrial and urbanized area and is within approximately a quarter mile of the Bandini Elementary school surrounded by a residential neighborhood to the north at 2318 Coutts Avenue, Commerce, CA. The proposed Project would be required to comply with applicable laws and regulations governing the use, storage, and transportation of hazardous materials. However, nearby schools may be affected by construction-related hauling activities generated in the Project site. Construction-related air quality emissions will be analyzed in the EIR and mitigation measures will be identified as necessary.



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

Less than Significant Impact. The Project is listed in the HHWMD and HAZNET databases which are both maintained by the DTSC and listed in the FINDS maintained by the EPA. As discussed under Threshold b, while the databases do indicate the presence that Other Organic Solids were stored on site but not treated onsite, there were no long-standing effects and the Project has no active hazard files recorded. HHWMD indicated a presence of Polychlorinated Biphenyls, but the matter was moved to an inactive state in the year 2000. Accordingly, impacts are considered less than significant.

e) *For a project 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 Project site is not located within an airport land use plan or within two miles of a public airport. The Project site is approximately 9.2 miles south west of the San Gabriel Airport (SGA) and is not within the SGA's sphere of influence. The nearest major airport is the Los Angeles Airport which is approximately 12.8 miles west of the Project site. Accordingly, the Project would not result in a safety hazard or excessive noise for people 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 Standardized Emergency Management System (SEMS), California Code of Regulations, Title 19, Division 2, Section 2443, requires compliance with the SEMS to... "be documented in the areas of planning, training, exercise, and performance." Los Angeles County adopted an Operational Area Emergency Response Plan (OAERP), which meets the SEMS requirements of state law. The OAERP addresses the planned response by the County to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The purpose of the OAERP is to guide the mitigation, response and recovery efforts before, during and after an emergency. The City of Commerce Emergency Preparedness Division coordinates the City's emergency response, and provides training to the City's 20-member Urban Search and Rescue team.

The City's General Plan Public Health and Public Safety Element (City of Commerce, 2008) outlines goals and policies aimed at reducing loss of life and damage to property resulting from a earthquakes, hazards, fires, floods, hazardous wastes, noise, and environmental impacts. The City of Commerce General Plan Safety Element identifies emergency evaluation routes throughout the city, which include E. Washington Boulevard, S. Atlantic Boulevard, and Eastern Avenue within proximity to the Project site.

The Project would not physically interfere with the implementation of the OAERP or any of the daily operations of the Los Angeles County Fire Department or City's Urban Search and Rescue team. All construction and operation would be required to be performed per the City's and Los Angeles County Fire Department standards and regulations. For example, future development is required to provide the necessary access and circulation for emergency vehicles and services during the construction and operation phases. Future developments would also be required to go through the City's development review and permitting process and as set forth by Los Angeles County Fire Department and in the Chapter



16.04 (Fire Prevention Code) of the City’s Municipal Code, to ensure that it does not interfere with the provision of local emergency services (e.g., provision of adequate access roads to accommodate emergency response vehicles, adequate numbers/locations of fire hydrants, etc.). Therefore, the proposed Project would not impair implementation of or physically interfere with any emergency response or evacuation plans. Project-related 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?

No Impact. The Project site is not located within a high fire severity zone or wildland fire hazard zone (insert GP citation). Similarly, the California Department of Forestry and Fire Protection (CalFire) does not designate the Project site as within a SRA. As the Project proposes redevelopment of a heavily urbanized site, the Project would have no effect on the risk to people or structures posed by wildfires. Accordingly, no impacts would occur.

3.4.10 Hydrology and Water Quality

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) <i>In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) <i>Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) *Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Less than Significant Impact: The California Porter-Cologne Water Quality Control Act (§ 13000 et seq., of the California Water Code) (Porter-Cologne Act), and the Federal Water Pollution Control Act Amendment of 1972 (also referred to as the Clean Water Act [CWA]) require that comprehensive water quality control plans be developed for all waters within the State of California. The Project site is located within the jurisdiction of the Los Angeles RWQCB (RWQCB, 2014).

Temporary Construction-Related Activities

Construction of the Project would involve demolition, clearing, grading, paving, utility installation, construction, and landscaping activities. Construction activities would result in the generation of potential water quality pollutants such as silt, debris, chemicals, paints and solvents, and other chemicals with the potential to adversely affect water quality. As such, short-term water quality impacts have the potential to occur during construction of the Project in the absence of protective or avoidance measures.

Construction of the Project would create a disturbance in the majority of the 5.65-acre site; therefore, the Project is subject to the requirements of the State Water Resources Control Board’s (SWRCB) *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*¹, herein referred to as the “Construction General Permit”. Construction-related water quality impacts would be minimized through compliance with the Construction General Permit, which requires completing a construction site risk assessment to determine appropriate coverage level, filing an NOI with the State Water Resources Control Board, and having a Qualified Stormwater Pollution Prevention Plan (SWPPP) Developer prepare a SWPPP. The SWPPP must include erosion- and sediment control BMPs that would meet or exceed measures required by the determined risk level of the Construction General Permit, in addition to BMPs that control the other potential construction-related pollutants (e.g., nutrients, heavy metals, and certain pesticides, including legacy pesticides) (Thienes, 2019a). Mandatory adherence to the Construction General Permit and implementation of measures outlined in the SWPPP would ensure that the Project does not violate any water

¹ NPDES No. CAS000002, Water Quality Order 2009-0009-DWQ, SWRCB NPDES General Permit for Storm Water Discharges Associated with Construction Activity (adopted by the SWRCB on September 2, 2009, and effective on July 1, 2010). This order was amended by 2010-0014-DWQ, which became effective on February 14, 2011, and 2012-0006-DWQ, which became effective on July 17, 2012. In accordance with the language set forth in Order No. 2009-0009-DWQ, this permit has been administratively extended indefinitely.



quality standards or waste discharge requirements during construction activities. Therefore, water quality impacts associated with construction activities would be less than significant.

Post-Development Water Quality Impacts

The existing impervious surfaces at the Project site consist of the asphalt/concrete area for the parking lot, roofs of the on-site buildings, landscaped areas near the building and within the parking lot, and concrete sidewalk areas. Under existing conditions, runoff originating from the Project site drains to several catch basins as part of a larger private storm drain system. The project would consist of a building, concrete sidewalk area, and asphalt/concrete along the parking lot and driveway entrances. Landscaped area would surround the building. Anticipated pollutants of concern for the Project are: heavy metals, oil, bacteria, oxygen demanding substances, and trash. Per the LID, the following water bodies potentially impacted by this project and their impairments are:

- Los Angeles Ricer Reach 2: Ammonia, Copper, Indicator Bacteria, Lead, Nutrients (algae), Oil, Trash
- Los Angeles River Reach 1: Ammonia, Cadmium, Copper, Cyanide, Indicator Bacteria, Lead, Nutrients (algae), pH, Trash, Zinc
- Los Angeles River Estuary: Chlordane, DDT (sediment), PCBs (Polychlorinated biphenyls), Total DDT and Toxicity
- Pacific Ocean: None

The proposed Project will disconnect runoff from impervious areas by means of biofiltration systems and underground detention. Inlets would be used to intercept “low flows” towards the biofiltration systems for treatment prior to discharge offsite (Thienes, 2019b, p. 6). Accordingly, the level of pollutants is expected to decrease when compared to existing conditions due to the current higher standards of water quality treatment. Additionally, the Project would be required to comply with the City of Commerce Municipal Code Section 6.17, *Stormwater and Runoff Pollution Control* and the General Construction Activity NPDES Permit. As a result, impacts are less than significant.

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

No Impact. Water supply to the Project would be provided by Central Basin Municipal Water District (CBMWD) and would not require the use of groundwater at the Project site. Therefore, the Project would not require direct additions or withdrawals of groundwater. Excavation that would result in the interception of existing aquifers or penetration of the existing water table is not proposed or anticipated. In addition, since the existing Project site is mostly impervious, the Project would not reduce any existing percolation of surface water into the groundwater table. Therefore, no impact would occur.

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 or through the addition of impervious surfaces, in a manner which would:*

c.i) *Result in substantial erosion or siltation on- or off-site?* Less than Significant Impact. Refer to Section 3.4.10. Hydrology and Water Quality, (a). Project construction would temporarily expose on-site soils to surface water runoff. However, compliance with construction-related BMPs and/or the Storm Water



Pollution Prevention Plan (SWPPP) would control and minimize erosion and siltation, resulting in a less than significant impact.

c.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. The Project site is currently developed; redevelopment of the site would not increase impervious surfaces. Additionally, the project site is not within an area subject to flooding in accordance with Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map No. 06037C1643F, effective September 26, 2008. As a result, impacts would be less than significant.

c.iii) Create or contribute runoff water which would exceed the capacity or existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? Less than Significant Impact. Refer to Section 3.4.10. Hydrology and Water Quality, (a). The City's Stormwater and Runoff Pollution Control Regulations (Municipal Code Chapter 6.17) contain requirements for construction activities and operation of development and redevelopment projects to integrate low impact development practices and standards for stormwater and other related requirements in the City's Development BMPs Handbook. Such regulations and practices are designed in consideration of existing and planned stormwater drainage systems. Conformance would be ensured during the permitting process with the Department of Building & Safety and impacts would remain less than significant.

c.iv) Impede or redirect flood flows? No Impact. According to the FEMA Flood Insurance Rate Map No. 06037C1643F, effective September 26, 2008, the subject property is not located within a Flood Zone; Therefore, the Project would not impede or redirect flood flows and no impact would occur.

d) *Would the Project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

No Impact. A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam or other artificial body of water. Thirteen dams in the greater Los Angeles area moved or cracked during the 1994 Northridge earthquake. However, none were severely damaged. This low damage level was due in part to completion of the retrofitting of dams and reservoirs pursuant to the 1972 State Dam Safety Act.

A tsunami is a series of ocean waves caused by a sudden displacement of the ocean floor, most often due to earthquakes. The subject property is not located within the Potential Inundation Area. Therefore, the possibility of the Project being affected by a tsunami or flooding is negligible and no impacts would occur.

e) *Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Less than Significant Impact. Refer to Section 3.4.10. Hydrology and Water Quality, (a). The quality of surface and groundwater at the Project site is affected by land uses within the watershed and the composition of subsurface geologic materials. Water quality in surface and ground water bodies is regulated by the State Water Resources Control Board (SWRCB) and the Los Angeles Regional Water Quality Control Board (LARWQCB). The City of Commerce is under the jurisdiction of the LARWQCB, which



is responsible for implementation of State and Federal water quality protection guidelines in the vicinity of the Project site.

The Project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) standards and the City’s Stormwater and Urban Runoff Pollution Control regulations to ensure pollutant loads from the Project site are minimized for downstream receiving waters. The Stormwater and Urban Runoff Pollution Control Ordinances contain requirements for construction activities and operation of development and redevelopment projects to integrate low impact development practices and standards for stormwater pollution mitigation, and maximize open, green and pervious space on all developments and redevelopments consistent with the City’s water efficient landscape ordinance and other related requirements in the City’s Development BMPs Handbook. Conformance would be ensured during the permitting process with the Department of Building & Safety. Therefore, the Project would not obstruct implementation of applicable plans. Impacts would be less than significant.

3.4.11 Land Use and Planning

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Physically divide an established community?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) *Would the Project physically divide an established community?*

No Impact. The Project site is currently developed with a two office buildings and associated parking lot within an urbanized portion of the City of Commerce. As indicated by the City of Commerce General Plan Land Use Map, the Project site is currently zoned as Industrial. The City of Commerce has designated areas south of Sheila Street, in the Project area, as Industrial. Areas to the north of Sheila Street in the Project area have designations of Commercial Manufacturing. The Project involves redevelopment of the Project site with an industrial warehouse with an attached office building and would not physically divide an establish community. Therefore, no impacts would occur.

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

No Impact. As identified in the City of Commerce Municipal Code, the site is zoned M2, with a General Plan land use designation of Industrial. The Project would be comprised of approximately 114,953 sf of warehouse and office. This use is a permitted use in M2 zoned lots with a maximum floor area ratio of 4.0. No changes to the existing land use designation is required or proposed with the Project. No impact would occur.



3.4.12 Mineral Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?*

No Impact: The Project does not conflict with California Legislature’s 1975 Surface Mining and Reclamation Act (SMARA), which provides guidelines of the classification and designation of mineral lands. The DOC Generalized Mineral Land Classification for the area shows that the Project site and surrounding areas contain no significant mineral resources (DOC, 2019). The California Department of Conservation does not show oil, gas, or geothermal fields underlying the Project site; and no oil or gas wells are recorded on or near the site in the Division of Oil, Gas, and Geothermal Resources (DOGGR) Well Finder (DOC, 2019). No mines, wells, or other resource extraction activity occurs on the Project site or is known to have ever occurred on the Project site. According to area maps provided by SMARA, the City of Commerce is located within the San Gabriel Valley P-C region and does not located in an area where there are significant aggregate resources present. Accordingly, no impacts would occur.

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?*

No Impact: As discussed above, no known valuable mineral resources exist on or near the Project site, and no mineral resource extraction activities occur on the site. The Project site is predominantly developed with office buildings and associated paved asphalt parking lot. Thus, the proposed Project would not result in the loss of availability of locally-important mineral resources. Accordingly, no impacts would occur.



3.4.13 Noise

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project result in:				
a) <i>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?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) <i>Generation of excessive groundborne vibration or groundborne noise levels?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) <i>For a project located within the vicinity of a private airstrip or an airport land use 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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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*

Potentially Significant Impact. Project-related construction activities, as well as long-term operational activities (including on-site activities and the expected increases in vehicular travel along area roadways), may expose persons in the vicinity of the Project site and/or its primary truck routes to noise levels in excess of standards established by the City’s General Plan. An acoustical analysis shall be prepared to analyze the potential for the Project to expose people, on- or off-site, to noise levels in excess of established noise standards. The results of the acoustical analysis shall be disclosed in the EIR.

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

Potentially Significant Impact. Construction activities on the Project site may produce groundborne vibration or groundborne noise levels during demolition, earthwork/grading, and/or during the operation of heavy machinery. The EIR shall analyze the potential of the Project to expose persons to excessive groundborne vibration. Long-term operation of the proposed Project is not anticipated to result in perceptible levels of groundborne vibration or groundborne noise and no impact would occur.

c) *For a project 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?*



No Impact. According to LA County’s Airport Land Use Commission data, the Project site is not within any boundaries for public or private airport land use plans (ALUC, 2020). Further, the Project would not expose people residing or working in the Project area to excessive noise levels within two miles of a public or private use airport that does not have an adopted plan. Accordingly, no impact is anticipated and no further analysis of this topic is required.

3.4.14 Population and Housing

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
<i>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)?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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)?*

No Impact: The Project would result in the development of approximately 114,953 sf warehousing and office building, replacing an existing 112,953 sf of office buildings. The Project may only result in a slight increase in employees. The Project is consistent with the City’s General Plan buildout assumptions and therefore is also consistent with Southern California Association of Governments’ (SCAG) 2040 employment projections for the City. Project generated jobs are well within the employment projections for the City of Commerce. Operation of the Project would not induce substantial unplanned population growth in the Project area, either directly or indirectly and would not exceed regional or local growth projections. Therefore, impacts would be less than significant. This topic will not be further analyzed in the EIR and no mitigation is required

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

No Impact: The Project includes demolition of an existing office building. The Project site does not contain any housing and there are no people living at the Project site that would be displaced by the Project. No impact would occur and no mitigation is required.



3.4.15 Public Services

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government 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:</i>				
<i>Fire protection?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Police protection?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Schools?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Other public facilities?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government 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: a) Fire protection; b) Police protection; c) Schools; or d) Other public facilities?*

Fire Service: No Impact. Fire prevention services are provided by the Los Angeles County Fire Department (LAFD). The services offered by the County of Los Angeles include firefighting, paramedic and first aid treatment, hazardous material response, and emergency preparedness coordination. There are three stations serving the City of Commerce; Station 22 – 928 South Gerhart Street, Commerce; Station 27 – 6031 Rickenbacker Road, Commerce; and Station 50 – 2327 South Saybrook Avenue, Commerce. Commerce has maintained a contract with the LAFD since incorporation, and the City’s overall fire protection rating is very good.

The closest fire stations to the Project site are LAFD Fire Station 27 on Rickenbacker Road (approximately 1.12 miles south east), and Fire Station Number 50 on Saybrook Avenue (approximately 1.51 miles east) (Google Earth, 2019). In addition to these stations, resources and personnel may be dispatched from other LAFD stations, as necessary, to respond to fire and emergency calls. Due to its close proximity to the Project site, the Vernon Fire Department Station 79 is likely to serve the Project site.

As indicated above, the Project would demolish the existing structure and replace it with an industrial warehouse building with some office space allocations. LAFD currently provides fire protection service to the existing Project site. The slight increase in building square footage (1,945 sf) on site would not generate a substantial increase in employees/personnel or uses necessitating increased calls for service. Furthermore, the Project would not generate the need for new firefighters or fire protection facilities.



The Project would be required to comply with all applicable LAFD and City of Commerce codes, ordinances, and regulations regarding fire prevention and suppression measures; fire hydrants and sprinkler systems; emergency access; and other similar requirements. A fire hydrant is located along Sheila Street at the edge of the Project site. Access to the Project site from Sheila Street would be provided from two driveways along the north Project site and would be required to meet fire access standards. The demand for fire protection services resulting from the Project would not require the construction of new or alteration of existing fire protection facilities to maintain an adequate level of fire protection service. Therefore, no physical impacts associated with the provision of fire protection services would occur.

Police Protection: No Impact. Police protection services are provided to the City of Commerce by the Los Angeles County Sheriff's Department (LASD). The City of Commerce is served by the 5019 East Third Street in East Los Angeles (approximately 2.33 miles south of the Project site).

The Project would replace the existing office building at the site, which currently require LASD services. As indicated above, the Project would not result in an increase in population in the City of Commerce, nor would it substantially increase the number of people at the Project site after completion. The slight increase in building square footage (1,945 sf) on site would not generate a substantial increase in employees/personnel or uses necessitating increased calls for service. The Project incorporates safety features such as setbacks from the street and well-lit exterior spaces with visual exposure. The Project would not require the construction of new or alteration of existing police protection facilities to maintain an adequate level of police protection service. Therefore, no physical impacts associated with the provision of fire protection services would occur.

Schools: No Impact. The City of Commerce is serviced by the Montebello Unified School District (MUSD). Due to the nature of the proposed Project and its foreseeable uses within the M-2 zone, no increase in population or students would occur and no impacts to associated schools are anticipated.

Parks: No Impact. The City's Department of Parks and Recreation operates and manages parks and park programs for the City of Commerce. The Department composition includes a camp in Lake Arrowhead, CA, three commissions, four neighborhood parks, seven community centers, and seventeen divisions. As indicated above, due to the nature of the proposed Project, its proximity to nearby parks, and its foreseeable uses within the M-2 zone, no impacts to associated parks are anticipated.

Other Public Facilities: No Impact. No new government services will be needed to implement the Project.



3.4.16 Recreation

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>Does the project include recreational facilities or require the construction of or expansion of recreational facilities which might have an adverse physical effect on the environment?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?*

No Impact. The proposed Project would not result in a direct demand for park facilities based on the proposed warehouse and office use. Accordingly, no changes in the demand for neighborhood and regional parks are anticipated.

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

No Impact. The proposed Project would not result in a direct demand for park facilities based on the proposed warehouse use. Accordingly, no changes in the demand for neighborhood and regional parks are anticipated.



3.4.17 Transportation

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Potentially Significant Impact. Implementation of the Project would result in construction and operation of a 114,898 sf warehouse and office building. The Project has the potential to result in an increase and redistribution of vehicle trips that could conflict with applicable plans, ordinances, and policies. A transportation impact analysis (TIA) will be prepared to address the Project’s consistency with circulation-related programs, plans, and policies. This issue will be evaluated further in the EIR and mitigation measures will be identified as necessary.

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

Potentially Significant Impact. On September 27, 2013, SB 743 was signed into law. SB 743 started a process that could fundamentally change transportation impact analysis as part of CEQA compliance. These changes include the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). As part of the updated CEQA Guidelines, the new criteria “shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses” (Public Resources Code Section 21099(b)(1)). On January 20, 2016, OPR released revisions to its proposed CEQA guidelines for the implementation of SB 743. Final review and rulemaking for the new guidelines were completed in December 28, 2018 when the California Natural Resource Agency certified and adopted the CEQA Guidelines update package, including guidelines section implementing SB 743. OPR allows agencies an opt-in period to adopt the guidelines; they become mandatory on July 1, 2020. Vehicle miles traveled (VMT) is an indicator of the travel levels on the roadway system by motor vehicles. It corresponds to the number of vehicles multiplied by the distance traveled in a given period over a geographical area. In other words, VMT is a function of (1) number of daily trips and (2) the average trip length (VMT= daily trips x average trip length).



The Project has the potential to increase vehicle trips and resulting VMT. A TIA will be prepared to provide an analysis of regional transportation performance measures, including total vehicle trips, VMT, and VMT per employee pursuant to City standards or State guidelines. This issue will be evaluated further in the EIR.

c) *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Potentially Significant Impact. An access study will be prepared to evaluate truck turning movements and automobile access. The study will evaluate the safe movement of trucks and automobiles to ensure that the project design would not result in any potentially hazardous traffic conditions. This issue will be evaluated further in the EIR.

d) *Would the Project result in inadequate emergency access?*

Less than Significant Impact. To address fire and emergency access needs, the proposed Project includes a 28-foot wide fire lane that circulates the inside perimeter of the site with two access points on Sheila Street. Future development would be required to incorporate all applicable design and safety requirements from the most current adopted fire codes, building codes and nationally recognized fire and life safety standards of the City and Los Angeles County Fire Department, including Municipal Code Chapter 16.04, which incorporates the provisions of Title 32 of the Los Angeles County Fire Code (2017 Edition) and the 2016 California Fire Code. The City and County would be responsible for reviewing Project compliance with related codes and standards prior to issuance of building permits. Review from the City's Department of Public Works would also be required for building plan check and traffic control plan review.

Additionally, during the building plan check and development review process, the City would coordinate with the Los Angeles County Fire Department to ensure that the necessary fire prevention and emergency response features are incorporated into the proposed Project, and that adequate circulation and access (e.g., adequate turning radii for fire trucks) is provided in the traffic and circulation components of the proposed Project. Thus, impacts on emergency access would be less than significant.

3.4.18 Tribal Cultural Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 defines 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				
a) <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)?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<p><i>b) 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 for the criteria set forth in (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?</i></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) 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)?

Potentially Significant Impact. A Sacred Lands File search request was made to the Native American Heritage Commission (NAHC) to determine the presence of any sacred sites within the Project site and area. The NAHC SLF search did not indicate the presence of a sacred site within the search radius (BFSA, 2019a). However, in accordance with AB 52, the City of Commerce is required to send notifications of the proposed Project to Native American tribes with possible traditional or cultural affiliation to the area and will consult with interested tribes regarding the Project’s potential to affect a tribal cultural resource. The results of the Native American consultation shall be disclosed in the EIR, which shall evaluate the Project’s potential to cause a substantial adverse change to tribal cultural resources that are 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).

b) 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 for the criteria set forth in (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

Potentially Significant Impact. This topic will be discussed in the EIR, as explained above in Section 3.4.18(a).



3.4.19 Utilities and Service Systems

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) *Would the project 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?*

Less than Significant Impact. The Project site is currently developed with two buildings totaling 112,953 sf, which are currently served by existing water, wastewater, and stormwater drainage infrastructure, as well as other dry utilities. Redevelopment of the site would result in the demolition of these structures and construction of a 114,898 sf warehouse and office building, resulting in a net increase of 1,945 sf building space. The slight increase in building square footage on site would not generate a substantial increase in water and energy demands or wastewater generation. The Project would not require the construction of new or expanded service system facilities that would could cause environmental effects. Impacts are 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. The Project would be served with potable water from the Central Basin Municipal Water District (CBMWD). CBMWD conducts water planning based on forecast population growth, which is based on growth assumed in cities' general plans. Accordingly, the increase in employment resulting from the Project would not be considered substantial in consideration of anticipated growth.

A net increase of 1,945 square feet of warehouse and office use as a result of the Project would be consistent with Citywide growth and buildout projections assumed in the 2015 Central Basin Municipal Water District Urban Water Management Plan (UWMP). Therefore, the Project demand for water is not anticipated to require new water supply entitlements and/or require the expansion of existing or construction of new water treatment facilities beyond those already considered in the UWMP. Thus, it is anticipated that the Project would not create any water system capacity issues, and there would be sufficient reliable water supplies available to meet Project demands. Additionally, the Project would be required to implement a water conservation strategy and demonstrate a minimum 20 percent reduction in indoor water usage when compared to baseline water demand (total expected water demand without implementation of the water conservation strategy). Therefore, impacts related to the availability of adequate water supplies to serve the Project from existing entitlements and reasonably foreseeable future development during normal, dry and multiple dry years 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. The County Sanitation Districts maintain and operate the sewer system in the City of Commerce. The project site is served by the Los Angeles County Sanitation District No. 2. Sewer lines are maintained by the County Department of Public Works with sewage from the City conveyed through sewer mains into the Joint Water Pollution Control Plant (JWPCP) in Carson. As stated previously the proposed Project would result in a slight increase in building square footage (1,945 sf). The associated increase in wastewater generation would have a negligible effect on the wastewater treatment provider. Impacts are less than significant.

d) *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Less than Significant Impact. Solid waste generated during the operation of the Project is anticipated to be collected by the Republic Services, Inc. or other private waste hauler and is anticipated to be hauled to Sunshine Canyon Landfill. Sunshine Canyon Landfill is permitted to receive 12,100 tons of solid waste per day and accepts approximately 8,300 tons of waste daily. The net 1,945 net increase in building sf would result in a slight increase in solid waste generation. However, even at buildout, the Project is estimated to generate approximately 1.42 pounds per 100 square feet per day (Cal Recycle, 2017), resulting in 1,149 pounds per day or 0.57 tons per day. The Project's increase in solid waste is well within the landfills remaining permitted capacity and is not anticipated to exceed the existing capacity.

In compliance with Assembly Bill (AB) 939, the project applicant would be required to implement a Solid Waste Diversion Program and divert at least 50 percent of the solid waste generated by the Project from



the Sunshine Canyon Landfill. In addition, the City of Commerce Solid Waste Integrated Resources Plan provide a series of policies, programs, and facilities required to reach the City's goals of 75 percent diversion by 2013 and 90 percent diversion by 2025 in the City. Since the Project would not result in a significant increase in solid waste generation, it would not result in the impairment of attaining solid waste reduction goals. Therefore, the solid waste impacts resulting from implementation of the Project would be less than significant.

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

Less than Significant Impact. The following federal and state laws and regulations govern solid waste disposal:

- AB 939 (Chapter 1095, Statutes of 1989), the California Integrated Waste Management Act of 1989 required each city, county, and regional agency to develop a source reduction and recycling element of an integrated waste management plan that contained specified components, including a source reduction component, a recycling component, and a composting component. With certain exceptions, the source reduction and recycling components were required to divert 50 percent of all solid waste from landfill disposal or transformation by January 1, 2000, through source reduction, recycling, and composting activities.
- AB 32 (Chapter 488, Statutes of 2006), the California Global Warming Solutions Act, established mandatory recycling as one of the measures to reduce GHG emissions adopted in the Scoping Plan by the California Air Resources Board.
- AB 341 (Chapter 476, Statutes of 2011) requires that all "commercial" generators of solid waste (businesses, institutions, and multifamily dwellings) establish recycling and/or composting programs. AB 341 goes beyond AB 939 and establishes the new recycling goal of 75 percent by 2020.

The Project would be required to adhere to the provisions outlined in Chapter 6.19 (Construction and Demolition Debris Diversion) of the City's Municipal Code. The chapter requires applicable projects to prepare and implement a construction and demolition waste management plan that includes the estimated volume or weight of waste generated, maximum volume that can be diverted via reuse or recycle, facility where the waste would be collected and received, and estimated volume or weight that would be landfilled. The Project would also be required to comply with the provisions of the 2016 Green Building Standards Code, which outlines requirements for construction waste reduction, material selection, and natural resource conservation. The proposed Project would be required to comply with all applicable laws and regulations governing solid waste, and impact would be less than significant.



3.4.20 Wildfire

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*
- b) *Would the project 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) *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?*
- 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 State Responsibility Area (SRA) is the land where the State of California is financially responsible for the prevention and suppression of wildfires. The SRA does not include lands within City boundaries or in federal ownership; therefore, the Project site is not within an SRA. Furthermore, the City of Commerce General Plan does not identify any high fire severity zones within the City, including the



Project site. Similarly, the California Department of Forestry and Fire Protection (CalFire) does not designate the Project site as within a SRA. Accordingly, no impacts related to wildfire would occur and mitigation is not required.

3.4.21 Mandatory Findings of Significance

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
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 period of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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 period of California history or prehistory?

Potentially Significant Impact. The Project site is in a highly urbanized area of the City that is already developed with office uses. As stated in Section 3.4.4, potentially significant biological impacts are not anticipated because the Project site is developed and there are no rare or endangered plants or animal species within the Project site. However, development has the potential to impact important examples of California history or prehistory. The EIR will analyze these topics in greater detail to determine whether the Project would generate any significant impacts.



- 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.)**
-

Potentially Significant Impact. Potentially significant impacts are identified in this Initial Study related to air quality, cultural resources, greenhouse gas emissions, hazards and hazardous materials, noise, transportation, and tribal cultural resources. Cumulative impacts for these environmental topics will be addressed in the EIR.

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

Potentially Significant Impact. Development of the proposed Project could create direct and indirect adverse effects on humans. The proposed Project has the potential to affect human beings through impacts related to air quality, greenhouse gas emissions, hazards and hazardous materials, noise, and transportation. The significance of these potential impacts will be analyzed in the EIR.



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5.0 Persons Contributing to this Document

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Appendix A

Geotechnical Report



Geotechnical Engineering Report

**Proposed Commerce Logistics Center
Commerce, Los Angeles County, California**

November 19, 2019

Terracon Project No. CB195128

Prepared for:

GPT Sheila Street Owner LP
Fort Washington, PA

Prepared by:

Terracon Consultants, Inc.
Colton, California



November 19, 2019

GPT Sheila Street Owner LP
220 Commerce Drive, Suite 400
Fort Washington, PA 19034



Attn: Mr. Joe Winning
P: (909) 223 9035
E: jwinning@lprop.com

Re: Geotechnical Engineering Report
Proposed Commerce Logistics Center
Commerce, Los Angeles County, California
Terracon Project No. CB195128

Dear Mr. Winning:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PCB195128 dated October 1, 2019. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs and pavement for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants, Inc.

A blue ink handwritten signature that reads "Ali Tabatabaei".

Ali Tabatabaei, Ph.D., P.E.
Geotechnical Project Engineer



Jay J. Martin, C.E.G.
Principal Geologist

Reviewed by: F. Fred Buhamdan, P.E.

REPORT TOPICS

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Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the [GeoReport](#) logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Geotechnical Engineering Report
Proposed Commerce Logistics Center
Commerce, Los Angeles County, California
Terracon Project No. CB195128
November 19, 2019

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed Commerce Logistic Center to be located at 5200 Sheila Street in Commerce, Los Angeles County, California. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- n Subsurface soil conditions
- n Groundwater conditions and historic high groundwater
- n 2019 California Building Code (CBC) seismic design parameters
- n Seismic settlement
- n Recommendations for foundation design and concrete slabs-on-grade
- n Subgrade preparation/earthwork recommendations
- n Recommendations for preliminary pavement section design

The geotechnical engineering Scope of Services for this project included the advancement of 14 test borings to depths ranging from approximately 5 to 51½ feet below existing site grades.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs and/or as separate graphs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project site includes two existing buildings with associated parking lots and driveways and located at 5200 Sheila Street in Commerce, Los Angeles County, California. 34.0013°N/118.1683°W (approximate) See Site Location
Current Ground Cover	The site is covered with asphalt and concrete slabs.

Item	Description
Existing Improvements	There are one existing 4-story stucco building and one existing 1-story stucco building with associated parking lots and driveways in the project site which will be demolished during site preparation.
Existing Topography	The project site is relatively flat.

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Proposed Development	One building is planned to be constructed with a total footprint area of approximately 114,898 SF (square feet). The project also includes associated parking lots and driveways.
Proposed Structures	We anticipate the proposed building will be of concrete tilt-up construction supported on strip footings and isolated column pads along with slab-on-grade floors.
Finished Floor Elevation	Assumed within five feet of existing grade.
Structural Loads (assumed)	Structural loads were not provided at the time of this report. We assume that the proposed structures will have the following loads: <ul style="list-style-type: none"> ■ Columns: 80 to 150 kips ■ Walls: 1 to 3 kips per linear foot (klf) ■ Slabs: 100 to 150 pounds per square foot (psf)
Grading Requirements	assumed to be less than five feet
Below Grade Structures	Not anticipated
Free-Standing Retaining Wall	Not anticipated
Pavements	<p>Paved driveway and parking will be constructed on site. We assume both rigid (concrete) and flexible (asphalt) pavement sections should be considered. Please confirm this assumption.</p> <p>Anticipated traffic indices (TIs) are as follows for asphalt pavement:</p> <ul style="list-style-type: none"> n Auto Parking Areas: TI=5.0 n Drive Lanes TI=5.5 n Truck Loading Areas: TI=6.0 n The pavement design period is 20 years. <p>Anticipated average daily truck traffic (ADTT) is as follows for concrete pavement:</p> <ul style="list-style-type: none"> n Light Duty: ADTT=1 (Category A) n Medium Duty: ADTT=25 (Category B) n Dumpster Pad: ADTT=700 (Category C)

GEOTECHNICAL CHARACTERIZATION

Subsurface Profile

We have developed a general characterization of the subsurface soil and groundwater conditions based upon our review of the data and our understanding of the geologic setting and planned construction. The following table provides our geotechnical characterization.

The geotechnical characterization forms the basis of our geotechnical calculations and evaluation of site preparation, foundation options and pavement options. As noted in **General Comments**, the characterization is based upon widely spaced exploration points across the site, and variations are likely.

Conditions encountered at each boring location are indicated on the individual boring logs shown in the **Exploration Results** section and are attached to this report. Stratification boundaries on the boring logs represent the approximate location of changes in native soil types; in situ, the transition between materials may be gradual.

Stratum	Approximate Depth to Bottom of Stratum (feet)	Material Description ¹	Consistency/Density
Stratum I ²	0.3 (thickness)	Asphalt, approximately 3 to 3.5 inches thick	---
Stratum Ia ²	0.5 to 0.6 (thickness)	Concrete, approximately 6.5 to 7 inches thick	---
Stratum II	0.5 to 0.9 (thickness)	Base, approximately 3 to 7.5 inches thick	---
Stratum III	1.0 to 5.0	Fill, classified as silty sand and sandy silt, light brown to dark brown	---
Stratum IV	5.0 to 51 ½	Interbedded silty sand, sand silt and sandy silty clay	Loose to very dense

1. The soil materials encountered are not expected to experience substantial volumetric changes (shrink/swell) with fluctuations in moisture content.
2. Asphalt pavement was encountered in all borings except borings B-12 through B-14 which concrete pavement was encountered

Groundwater Conditions

The borings were advanced using continuous flight auger drilling techniques that allow short-term groundwater observations to be made while drilling. Groundwater seepage was not observed within the maximum depths of exploration during or at the completion of drilling. We do not anticipate groundwater will affect construction at this project site.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed.

Historic Groundwater Conditions

The site is located in Section 17 of Township 2 South, Range 12 West, in the Coastal Plain of Los Angeles Basin. Depth-to-groundwater data in the vicinity of the site is available from the Los Angeles County Department of Public Works website and other groundwater resources. These data are summarized in the following tables:

Summary of Groundwater Data					
Well/Data Source	Date Measured	Measuring Point Elevation (feet)	Depth to Water (feet) Well/Site	Distance from Site	Source
2S12W17C01	04/05/2010 04/30/1997	137	117 90	375 Feet NE	Los Angeles County Department of Public Works Website (2019)
2S12W08P01	04/01/2001 04/30/1997	140	100 90	0.45 Miles NE	Los Angeles County Department of Public Works Website (2019)
T0603767053	12/30/2010 04/27/2011	152	113 113	0.58 Miles NW	GeoTracker (2015)

historic-high groundwater depth at the project site is anticipated to be deeper than 50 feet.

Hydroconsolidation

To evaluate the potential deformation that may be caused by the addition of water to subsurface soils, hydroconsolidation testing was performed on a selected, representative relatively undisturbed sample. The result is shown in Exploration Results section. The test result indicates slight hydroconsolidation (0.3%) when saturated under a confining pressure of 2,000 psf.

SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear

strength in accordance with Section 20.4 of ASCE 7 and the California Building Code (CBC). Based on the soil properties encountered at the site and as described on the exploration logs and results, it is our professional opinion that the **Seismic Site Classification is D**. Subsurface explorations at this site were extended to a maximum depth of 51-1/2 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

Seismic Design Parameters

The seismic design parameters per the 2019 CBC (ASCE 7-16) were determined from the web-based seismic design data and tools provided by the Applied Technology Council (<https://hazards.atcouncil.org/>) and a site-specific ground motion evaluation according to ASCE 7-19. Design values are summarized in the following table for reference. The structural engineer should verify and confirm these parameters during their design.

Description	Value
2019 California Building Code Site Classification (CBC) ¹	D ²
Site Latitude	34.0013°
Site Longitude	-118.1683°
Mapped Spectral Acceleration Parameters ³	$S_s = 1.849$ and $S_1 = 0.659$
Site Coefficients ³	$F_A = 1.0$ and $F_V = 1.7$
Site-Specific Data	Value
Site Modified Peak Ground Acceleration ³	0.802
De-aggregated Modal Magnitude	7.30

1. Seismic site classification in general accordance with the 2019 California Building Code, which refers to ASCE 7-16.
2. The 2019 California Building Code (CBC) uses a site profile extending to a depth of 100 feet for seismic site classification.
3. These values were developed using seismic design data and tools provided by the Applied Technology Council (<https://hazards.atcouncil.org/>) and Chapter 21 of ASCE 7-16.

Site-Specific Ground Motions

A site-specific ground motion study for the project was performed and consisted of a ground motion hazard analysis. This analysis is performed in general conformance with Chapter 21 of ASCE 7-16.

The procedures outlined in ASCE 7-16 Chapters 11, 20 and 21 were utilized for preparation of site-specific spectra for the proposed project. The site is approximately 3.8 km from the buried plane of the Puente Hills Blind Thrust (PHT) and 9.3 kilometers from the surface trace of the

closest element of the Elsinore fault zone. A Class D soil profile condition was utilized in the analysis based on estimated shear wave velocity of the soil profile to a depth of 100 feet bgs. We prepared deterministic and probabilistic spectra and associated limiting spectra. The site-specific response spectra in tabular and graphic forms and a discussion of methodology are included in this report.

Deterministic MCE spectra were evaluated for a scenario M7.1 event on the PHT and M7.8 event on the Elsinore fault zone consistent with the Next Generation West 2 (NGA-West 2) attenuation relations (GMPEs) used for the 2014 USGS seismic source model for the stated source distances. The equally-weighted spectral values from the attenuation relations of Abrahamson and others (ASK 2014), Boore and others (BSSA 2014), Campbell and Borzognia (CB 2014) and Chiou and Youngs (CY 2014) were used for the deterministic MCE spectrum. The MCE spectrum represents 84th-percentile, 5-percent-damped spectral response acceleration in the direction of maximum horizontal response (maximum rotated) for each period. Maximum rotated values were obtained using the scaling factors of ASCE 7-16 Section 21.2. Adjustment to the deterministic limit spectrum was applied as necessary. The Site Class 'D' condition was modeled using $V_{S100} \approx 270$ meters/second. The resulting deterministic spectrum is controlled by the PHT source for site periods from 0 seconds to 2 seconds and the Elsinore source for site periods of 3 to 5 seconds.

The probabilistic MCE spectrum was developed using spectral values obtained with the EZ-FRISK software program (version 8.00). The values so obtained were scaled to maximum rotated values using the factors of ASCE 7-16 Section 21.2. Areal sources are included in the probabilistic model. The probabilistic MCE spectrum was converted to risk-targeted spectra (MCE_R) using the risk coefficients of $C_{RS} = 0.903$ and $C_{R1} = 0.900$.

The lesser of the values at any site period from the deterministic MCE_R and MCE_R probabilistic spectra form the site-specific MCE_R spectrum. For this site, the site-specific MCE_R spectrum is controlled by the deterministic spectrum for site periods from 0.075 second to 0.15 second and the Probabilistic spectrum for the remaining site periods.

A design response spectrum was determined according to the procedure outlined in ASCE 7-16, Section 21.3, and is equal to two-thirds of the response spectral accelerations of the site-specific MCE_R . The design spectrum is limited by a "floor" at 80 percent of spectral acceleration determined according to ASCE 7-16, Section 11.4.6. The floor adjustment was applied for site periods from 0.05 second to 0.10 second. The recommended site-specific design response spectrum is attached in tabular and graphic forms.

Peak Ground Acceleration (PGA)

According to ASCE 7-16, Section 11.4.8, the site-specific geometric mean (MCE_G) PGA used for evaluation of soil effects is based on the lesser of the site-specific deterministic and probabilistic PGA values with an adjustment to 80% of the code value if needed. The following table summarizes the PGA values considered for the project.

Site-Specific PGA Values	
Code-Based Site-modified Geometric Mean PGAM	0.873g
80 Percent of Code-Based PGA	0.698g
Probabilistic Geometric Mean PGA	0.813
Deterministic Geometric Mean PGA	0.802g
Recommended Site-Specific PGA	0.802g

For the site-specific (MCE_G) PGA, the deterministic value is the lesser of the probabilistic and deterministic values and is greater than 80 percent of the code-based geometric mean PGA value. Therefore, we recommended a site-specific geomean PGA value of 0.802g for evaluation of soil effects such as liquefaction or seismic settlement.

LIQUEFACTION AND SEISMIC SETTLEMENT

Liquefaction Potential

According to the California Geological Survey (Los Angeles Quadrangle), the site is not located within a liquefaction potential zone.

Historic groundwater levels are deeper than 50 feet below the ground surface; therefore, the groundwater condition for liquefaction is not present.

Seismic Settlement

The underlying native soils are comprised predominantly of interbedded silty sand (SM), clayey sand (SC), sandy silt (ML) and sandy silty clay (CL-ML) from ground surface to the maximum boring termination depth of about 51 ½ feet bgs. SPT blow counts indicate that the relative density of the soils encountered generally are loose to very dense from ground surface to boring termination depth of about 51 ½.

Seismic settlement was estimated using soil profile from exploratory boring B-6. The site-specific geometric mean peak ground acceleration (PGA) of 0.802g and a deaggregated earthquake magnitude (M_w) of 7.3 were utilized as input into the liquefaction/seismic settlement analysis program.

Our analysis indicates that total seismic settlement (including dry sand settlement) would be less than ½ inch. Therefore, in our opinion, seismic induced settlement is not considered a significant geologic hazard at this site.

GEOTECHNICAL OVERVIEW

The site appears suitable for the proposed construction based upon geotechnical conditions encountered in the test borings, provided that the recommendations provided in this report are implemented in the design and construction phases of this project.

Geotechnical engineering recommendations for foundation systems and other earth connected phases of the project are outlined below. The recommendations contained in this report are based upon the results of field and laboratory testing, engineering analyses, and our current understanding of the proposed project.

On-site soils generally consist of silty sand and sandy silt from ground surface to the maximum boring termination depth of about 51 ½ feet bgs. On-site subsurface soils are not expected to experience substantial volumetric changes (shrink/swell) with fluctuations in moisture content.

Based on the conditions encountered, we believe the proposed logistic center building can be supported on shallow foundations, such as spread footings.

The 2019 California Building Code seismic site classification for this site is D.

No groundwater was encountered in any of the borings within the drilling depths at the time of drilling. Groundwater is not expected to affect shallow foundation construction on this site.

The **General Comments** section provides an understanding of the report limitations.

EARTHWORK

The following recommendations include site preparation, excavation, subgrade preparation and placement of engineered fills on the project. The recommendations presented for design and construction of earth supported elements including foundations, slabs, and pavements are contingent upon following the recommendations outlined in this section.

Earthwork on the project should be observed and evaluated by Terracon. The evaluation of earthwork should include observation and testing of engineered fill, subgrade preparation, foundation bearing soils, and other geotechnical conditions exposed during the construction of the project.

Site Preparation

Demolition of the existing building should include complete removal of all foundation systems and remaining underground utilities within the proposed construction area. This should include

removal of any loose backfill found adjacent to existing foundations. The existing pavement within the proposed building footprint should be demolished and any deleterious materials such as construction debris and organics, including demolished fragments of the existing asphalt/concrete pavement, should be removed and properly wasted from the project site. All materials derived from the demolition of existing structures and pavements should be removed from the site and not be allowed for use as on-site fill, unless processed in accordance with the fill requirements included in this report.

Our explorations indicate the site has approximately 1 to 5 feet of fill material across the site. The fill soils consisted of silty sand and sandy silt. We recommend that all fill soils be removed and the excavation thoroughly cleaned prior to backfill placement and/or construction.

Although no evidence of underground facilities such as septic tanks, cesspools, basements, and utilities was not observed during the site reconnaissance, such features could be encountered during construction. If unexpected fills or underground facilities are encountered, such features should be removed and the excavation thoroughly cleaned prior to backfill placement and/or construction.

Subgrade Preparation

Due to the low bearing capacity of the near surface soils and presence of approximately 1 to 5 feet of fill material across the site. We recommend that all fill soils be removed and the excavation thoroughly cleaned prior to backfill placement and/or construction. The proposed buildings may be supported by a shallow foundation bearing on engineered fill extending to a minimum depth of 2 feet below the bottom of foundations, or the depth of undocumented fill, whichever is greater. Engineered fill placed beneath the entire footprint of the building should extend horizontally a minimum distance of 3 feet beyond the outside edge of perimeter footings.

Subgrade soils beneath exterior slabs and pavements should be scarified, moisture conditioned, and compacted to a minimum depth of 10 inches. The moisture content and compaction of subgrade soils should be maintained until slab or pavement construction.

Exposed areas which will receive fill, once properly cleared and benched where necessary, should be scarified to a minimum depth of 10 inches, moisture conditioned, and compacted per the compaction requirements in this report.

Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction are anticipated to be relatively workable. However, the workability of the subgrade may be affected by precipitation, repetitive construction traffic or other factors. If unworkable conditions develop, workability may be improved by scarifying and drying.

Excavation

The bottom of excavations should be thoroughly cleaned of loose soils and disturbed materials prior to backfill placement and/or construction.

Onsite soils consist of sandy soils. Such soils have the tendency to cave and slough during excavations. Therefore, formwork may be needed for foundation excavations.

Individual contractors are responsible for designing and constructing stable, temporary excavations. Excavations should be sloped or shored in the interest of safety following local, and federal regulations, including current OSHA excavation and trench safety standards.

Fill Material Types

All fill materials should be inorganic soils free of vegetation, debris, and fragments larger than three inches in size. Pea gravel or other similar non-cementitious, poorly-graded materials should not be used as fill or backfill without the prior approval of the geotechnical engineer.

Clean on-site soils or approved imported materials may be used as fill material for the following:

n general site grading	n foundation backfill
n foundation areas	n pavement areas
n interior floor slab areas	n exterior slab areas

If imported soils are used as fill materials to raise grades, these soils should conform to low volume change materials and should conform to the following requirements:

<u>Gradation</u>	Percent Finer by Weight (ASTM C 136)
3"	100
No. 4 Sieve	50 - 100
No. 200 Sieve	20 - 50
n Liquid Limit.....	30 (max)
n Plasticity Index	15 (max)
n Maximum Expansive Index*	20 (max)

*ASTM D 4829

The contractor shall notify the Geotechnical Engineer of import sources sufficiently ahead of their use so that the sources can be observed and approved as to the physical characteristic of the import material. For all import material, the contractor shall also submit current verified reports from a recognized analytical laboratory indicating that the import has a "not applicable" (Class S0)

potential for sulfate attack based upon current ACI criteria and is "mildly corrosive" to ferrous metal and copper. The reports shall be accompanied by a written statement from the contractor that the laboratory test results are representative of all import material that will be brought to the job.

Engineered fill should be placed and compacted in horizontal lifts, using equipment and procedures that will produce recommended moisture contents and densities throughout the lift. Fill lifts should not exceed 10 inches loose thickness.

Compaction Requirements

Material Type and Location	Per the Modified Proctor Test (ASTM D 1557)		
	Minimum Compaction Requirement (%)	Range of Moisture Contents for Compaction Above Optimum	
		Minimum	Maximum
On-site soils and low volume change imported fill:			
Beneath foundations:	90	0%	+3%
Beneath interior slabs:	90	0%	+3%
Fill greater than 5 feet in depth	95	0%	+3%
Miscellaneous backfill and behind retain walls:	90	0%	+3%
Beneath pavements:	95	0%	+3%
Utility Trenches*:	90	0%	+3%
Bottom of excavation receiving fill:	90	0%	+3%
Aggregate base (beneath pavements):	95	0%	+3%

* Upper 12 inches should be compacted to 95% within pavement and structural areas. Low-volume change imported soils should be used in structural areas.

Utility Trenches

It is anticipated that the on-site soils will provide suitable support for underground utilities and piping that may be installed. Any soft and/or unsuitable material encountered at the bottom of excavations should be removed and be replaced with an adequate bedding material. A non-expansive granular material with a sand equivalent greater than 30 is recommended for bedding and shading of utilities, unless otherwise allowed by the utility manufacturer.

On-site materials are considered suitable for backfill of utility and pipe trenches from one foot above the top of the pipe to the final ground surface, provided the material is free of organic matter and deleterious substances.

Trench backfill should be mechanically placed and compacted as discussed earlier in this report. Compaction of initial lifts should be accomplished with hand-operated tampers or other lightweight compactors. Where trenches are placed beneath slabs or footings, the backfill should satisfy the gradation and expansion index requirements of engineered fill discussed in this report. Flooding or jetting for placement and compaction of backfill is not recommended.

Shrinkage

For balancing grading on-site, estimated shrink factor of granular soils when used as compacted fill following recommendations in this report ranges between 0.90 and 0.95. Shrinkage factors are based on converting materials in its natural state before disturbance to materials after compaction.

Grading and Drainage

Positive drainage should be provided during construction and maintained throughout the life of the development. Infiltration of water into utility trenches or foundation excavations should be prevented during construction. Planters and other surface features which could retain water in areas adjacent to the building or pavements should be sealed or eliminated. In areas where sidewalks or paving do not immediately adjoin the structure, we recommend that protective slopes be provided with a minimum grade of approximately 5 percent for at least 10 feet from perimeter walls. Backfill against footings, exterior walls, and in utility and sprinkler line trenches should be well compacted and free of all construction debris to reduce the possibility of moisture infiltration.

We recommend a minimum horizontal setback distance of 10 feet from the perimeter of any building and the high-water elevation of the nearest storm-water retention basin.

Roof drainage should discharge into splash blocks or extensions when the ground surface beneath such features is not protected by exterior slabs or paving. Sprinkler systems and landscaped irrigation should not be installed within 5 feet of foundation walls.

Exterior Slab Design and Construction

Exterior slabs-on-grade, exterior architectural features, and utilities founded on, or in backfill may experience some movement due to the volume change of the backfill. To reduce the potential for damage caused by movement, we recommend:

- n minimizing moisture increases in the backfill;
- n controlling moisture-density during placement of backfill;

- n using designs which allow vertical movement between the exterior features and adjoining structural elements;
- n placing effective control joints on relatively close centers.

Construction Considerations

Upon completion of filling and grading, care should be taken to maintain the subgrade moisture content prior to construction of floor slabs and pavements. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and recompacted prior to floor slab and pavement construction.

Construction Observation and Testing

The geotechnical engineer should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation, proof-rolling, placement and compaction of controlled compacted fills, backfilling of excavations to the completed subgrade.

The exposed subgrade and each lift of compacted fill should be tested, evaluated, and reworked as necessary until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test for every 50 linear feet of compacted utility trench backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. In the event that unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

SHALLOW FOUNDATIONS

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

Item	Description
Net Allowable Bearing pressure^{1, 2} (On-structural fill)	2,000 psf for square footing up to 8-ft wide 1,200 psf for square footings up to 14-ft wide 1,500 psf for continuous footings up to 5 feet wide
Required Bearing Stratum³	Engineered fill extending to a minimum depth of 2 feet below the bottom of foundations, or the depth of undocumented fill, whichever is greater.
Minimum Foundation Dimensions	Columns: 24 inches Continuous: 18 inches
Minimum Footing Depth	12" below finish grade
Ultimate Passive Resistance⁴	350 pcf
Ultimate Coefficient of Sliding Friction⁵	0.32
Estimated Total Static Settlement from Structural Loads²	about 1 inch
Estimated Differential Settlement^{2, 6}	About 1/2 of total settlement

1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. An appropriate factor of safety has been applied.
2. Values provided are for maximum loads noted in **Project Description**. The foundation settlement will depend upon the variations within the subsurface soil profile, the structural loading conditions, the embedment depth of the footings, the thickness of compacted fill, and the quality of the earthwork operations.
3. Unsuitable or soft soils should be over-excavated and replaced per the recommendations presented in the **Earthwork**.
4. Use of passive earth pressures requires the footing forms be removed and compacted structural fill be placed against the vertical footing face. A factor of safety of 2.0 is recommended.
5. Can be used to compute sliding resistance where foundations are placed on suitable soil/materials. Should be neglected for foundations subject to net uplift conditions. A factor of safety of 1.5 is recommended.
6. Differential settlements are as measured over a span of 50 feet.

Foundation Construction Considerations

As noted in **Earthwork**, the footing excavations should be evaluated under the direction of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

To ensure foundations have adequate support, special care should be taken when footings are located adjacent to trenches. The bottom of such footings should be at least 1 foot below an imaginary plane with an inclination of 1.5 horizontal to 1.0 vertical extending upward from the nearest edge of adjacent trenches.

FLOOR SLABS

DESCRIPTION	RECOMMENDATION
Interior floor system	Slab-on-grade concrete
Floor slab support	Engineered fill extending to a minimum depth of 2 feet below the bottom of foundations, or the depth of undocumented fill, whichever is greater
Subbase	Minimum 4-inches of Aggregate Base
Modulus of subgrade reaction	175 pounds per square inch per inch (psi/in) (The modulus was obtained based on estimates obtained from NAVFAC 7.1 design charts). This value is for a small loaded area (1 Sq. ft or less) such as for forklift wheel loads or point loads and should be adjusted for larger loaded areas.

The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

Saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual. Joints or cracks should be sealed with a water-proof, non-extruding compressible compound specifically recommended for heavy duty concrete pavement and wet environments.

Where floor slabs are tied to perimeter walls or turn-down slabs to meet structural or other construction objectives, our experience indicates differential movement between the walls and slabs will likely be observed in adjacent slab expansion joints or floor slab cracks beyond the length of the structural dowels. The Structural Engineer should account for potential differential settlement through use of sufficient control joints, appropriate reinforcing or other means.

PAVEMENTS

General Pavement Comments

Pavement designs are provided for the traffic conditions and pavement life conditions as noted in **Project Description** and in the following sections of this report. A critical aspect of pavement performance is site preparation. Pavement designs noted in this section must be applied to the site which has been prepared as recommended in the **Earthwork** section.

Pavement Design Parameters

Design of asphalt concrete (AC) pavements is based on the procedures outlined in the Caltrans "Highway Design Manual for Safety Roadside Rest Areas" (Caltrans, 2016). Design of Portland cement concrete (PCC) pavements are based upon American Concrete Institute (ACI) 330R-08; "Guide for Design and Construction of Concrete Parking Lots."

A design R-value of 16 was used for the AC pavement. A modulus of rupture of 600 psi was used for pavement concrete. The structural sections are predicated upon proper compaction of the utility trench backfills and the subgrade soils as prescribed by in **Earthwork**, with the upper 12 inches of subgrade soils and all aggregate base material brought to a minimum relative compaction of 95 percent in accordance with ASTM D 1557 prior to paving. The aggregate base should meet Caltrans requirements for Class 2 base.

It should be noted that the pavement designs were based upon the results of preliminary sampling and testing and should be verified by additional sampling and testing during construction when the actual subgrade soils are exposed.

Pavement Section Thicknesses

The following table provides options for AC and PCC Sections:

Asphalt Concrete Design		
Usage	Assumed Traffic Index	Recommended Structural Section
Auto Parking Areas	5	3" HMA ¹ /8" Class 2 AB ²
Drive lanes	5.5	3" HMA ¹ /10" Class 2 AB ²
Truck Delivery Areas	8.0	4.5" HMA ¹ /16" Class 2 AB ²

1. HMA = hot mix asphalt
 2. AB = aggregate base

Portland Cement Concrete Design			
Layer	Thickness (inches)		
	Light Duty ¹	Medium Duty ²	Dumpster Pad ³
PCC	5.0	6.0	7.5
Aggregate Base ⁴	--	--	--

1. Car Parking and Access Lanes, Average Daily Truck Traffic (ADTT) = 1 (Category A).
2. Truck Parking Areas, Multiple Units, ADTT = 25 (Category B)
3. In areas of anticipated heavy traffic, fire trucks, delivery trucks, or concentrated loads (e.g., dumpster pads), and areas with repeated turning or maneuvering of heavy vehicles, ADTT = 700 (Category C).
4. Aggregate base is not required. Compacted on-site material is considered competent.

Recommended structural sections were calculated based on assumed TIs and our preliminary sampling and testing.

Terracon does not practice traffic engineering. We recommend that the project civil engineer or traffic engineer verify that the TIs and ADTT traffic indices used are appropriate for this project.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Preventive maintenance is usually the priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur and repairs may be required.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- n Final grade adjacent to paved areas should slope down from the edges at a minimum 2 percent.
- n Subgrade and pavement surfaces should have a minimum 2 percent slope to promote proper surface drainage.
- n Install below pavement drainage systems surrounding areas anticipated for frequent wetting.
- n Install joint sealant and seal cracks immediately.
- n Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- n Place compacted, low permeability backfill against the exterior side of curb and gutter.
- n Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

CORROSIVITY

The following table lists the laboratory electrical resistivity (standard and as-received), chlorides, soluble sulfates, and pH testing results. These values may be used to estimate potential corrosive characteristics of the on-site soils with respect to contact with the various underground materials which will be used for project construction.

Boring	Depth (feet)	Soluble Sulfate (Percent)	Soluble Chloride (Percent)	Total Salts (Percent)	pH	Resistivity (as-received) (Ohm-cm)	Resistivity (saturated) (Ohm-cm)
B-10	2.0 to 6.0	0.0129	0.0043	0.0740	8.40	23,280	4,171

Results of soluble sulfate testing indicate samples of the on-site soils tested possess negligible sulfate concentrations when classified in accordance with Table 4.3.1 of the ACI Design Manual. Concrete should be designed in accordance with the provisions of the ACI Design Manual, Section 318, Chapter 4.

The resistivity measured on soil samples from the borings tested in the laboratory are 23,280 and 4,171 ohm-centimeter for as-received and saturated samples, respectively. Resistivity results indicate the soil sample tested has moderate to mild corrosive potential to buried ferrous metal pipes. Evaluation of the resistivity test results follows the guidelines of J.F. Palmer, “Soil Resistivity Measurements and Analysis”, Materials Performance, Volume 13, January 1974. The table below outlines the guidelines for soil resistivity versus corrosion potential. For protection against corrosion to buried metals, Terracon recommends that an experienced corrosion engineer be retained to design a suitable corrosion protection system for underground metal structures or components.

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Corrosion Potential of Soil on Steel

SOIL RESISTIVITY (ohm-cm)	CORROSION POTENTIAL
0 to 1,000	Very High
1,000 to 2,000	High
2,000 to 5,000	Moderate
> 5,000	Mild

If corrosion of buried metal is critical, it should be protected using a non-corrosive backfill, wrapping, coating, sacrificial anodes, or a combination of these methods, as designed by a qualified corrosion engineer.

REFERENCES

Abrahamson, N.A., Walter J. Silva, and Ronnie Kamai (2014) Summary of the ASK14 Ground Motion Relation for Active Crustal Regions. *Earthquake Spectra*: August 2014, Vol. 30, No. 3, pp. 1025-1055.

Boore, D.M., Jonathan P. Stewart, Emel Seyhan, and Gail M. Atkinson (2014) NGA-West2 Equations for Predicting PGA, PGV, and 5% Damped PSA for Shallow Crustal Earthquakes. *Earthquake Spectra*: August 2014, Vol. 30, No. 3, pp. 1057-1085.

Campbell, K.W. and Yousef Bozorgnia (2014) NGA-West2 Ground Motion Model for the Average Horizontal Components of PGA, PGV, and 5% Damped Linear Acceleration Response Spectra. *Earthquake Spectra*: August 2014, Vol. 30, No. 3, pp. 1087-1115.

Chiou, B. S. J. and Robert R. Youngs (2014) Update of the Chiou and Youngs NGA Model for the Average Horizontal Component of Peak Ground Motion and Response Spectra. *Earthquake Spectra*: August 2014, Vol. 30, No. 3, pp. 1117-1153.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Terracon conducted a total of fourteen (14) soil-testing borings. These borings were planned to the following extended depths below existing grades.

Number of Borings	Boring Depth (feet) ¹	Location
2 (B-1 and B-2)	5	Parking Lots
4 (B-3, B-10, B-12, and B-4)	30	Building footprint
3 (B-11, B-5 and B-7)	20	Building footprint
1 (B-6)	50	Building footprint
3 (B-8, B-14, and B-9)	5	Driveway
1 (B-13)	15	Trash Enclosure

1. Below ground surface.

Boring Layout and Elevations: Unless otherwise noted, Terracon personnel provided the boring layout. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±10 feet) and approximate elevations were obtained by interpolation from the Google Earth. If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

Subsurface Exploration Procedures: We advance the borings with a truck-mounted drill rig using hollow-stem augers. Both a standard penetration test (SPT) sampler (2-inch outer diameter and 1-3/8-inch inner diameter) and a modified California ring-lined sampler (3-inch outer diameter and 2-3/8-inch inner diameter) are utilized in our investigation. The penetration resistance is recorded on the boring logs as the number of hammer blows used to advance the sampler in 6-inch increments (or less if noted). The samplers are driven with an automatic hammer that drops a 140-pound weight 30 inches for each blow. After the required seating, samplers are advanced up to 18 inches, providing up to three sets of blowcounts at each sampling interval. The sampling depths, penetration distances, and other sampling information are recorded on the field boring logs. The recorded blows are raw numbers without any corrections for hammer type (automatic vs. manual cathead) or sampler size (ring sampler vs. SPT sampler). Relatively undisturbed and bulk samples of the soils encountered are placed in sealed containers and returned to the laboratory for testing and evaluation.

We observe and record groundwater levels during drilling and sampling. For safety purposes, all borings are backfilled with auger cuttings after their completion.

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Our exploration team prepares field boring logs as part of the drilling operations. These field logs include visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs are prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- n Water (Moisture) Content of Soil by Mass
- n Laboratory Determination of Density (Unit Weight) of Soil Specimens
- n Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
- n Consolidation test
- n Proctor test
- n R-value test

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

SITE LOCATION

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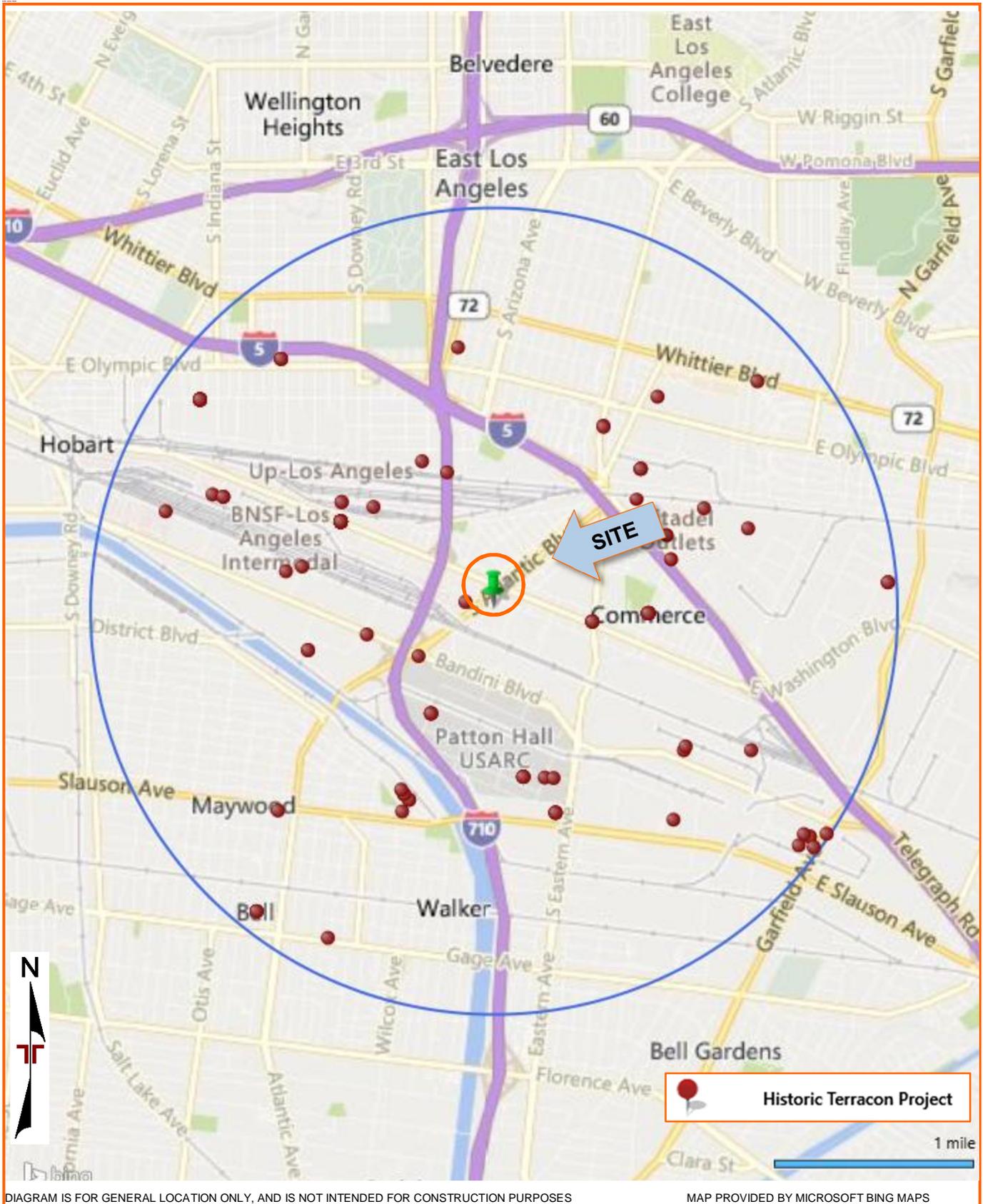


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

EXPLORATION PLAN

Proposed Commerce Logistics Center ■ Commerce, Los Angeles County, California
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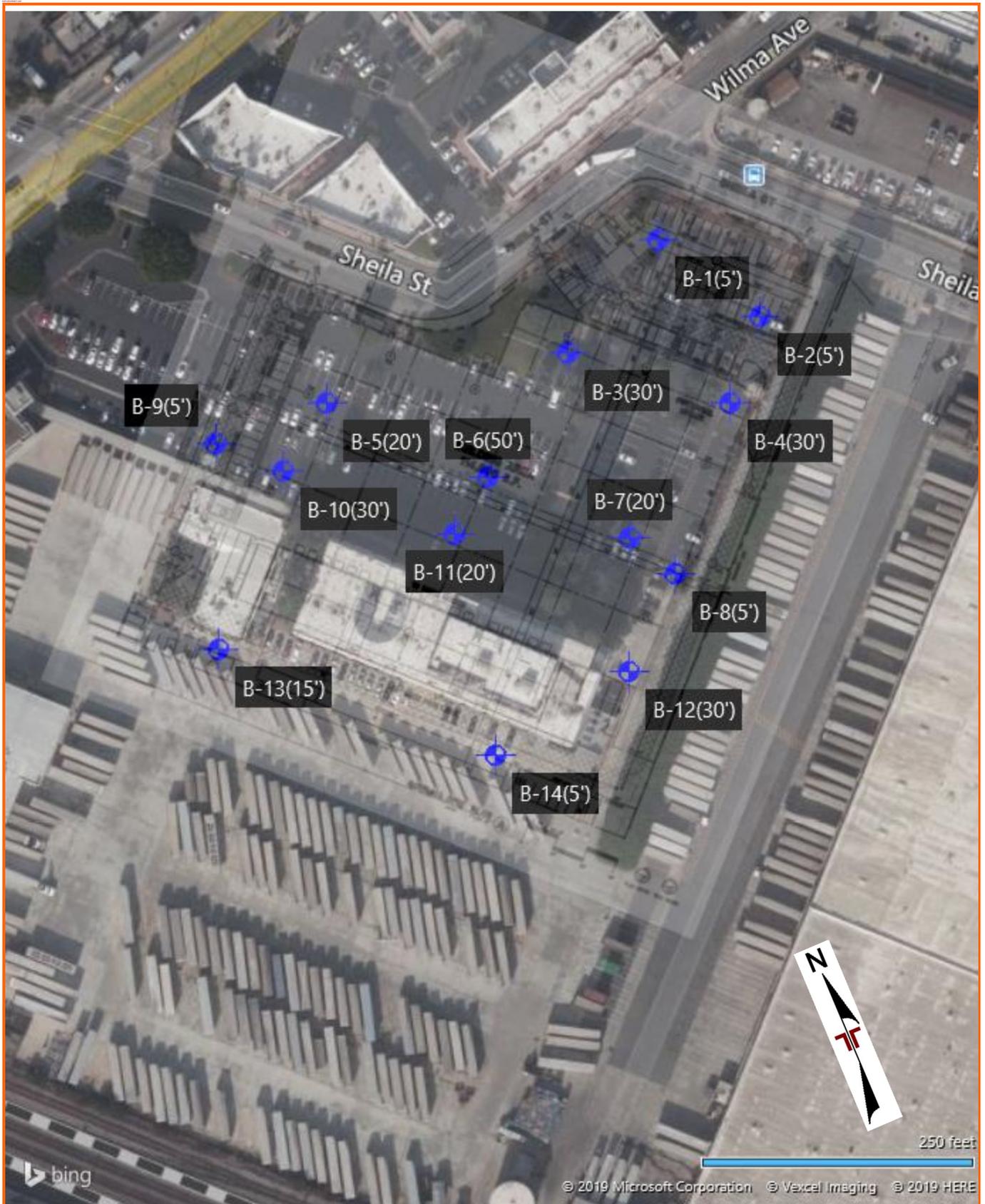


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

BORING LOG NO. B-1

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0018° Longitude: -118.1675°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
0.3	ASPHALT , approximately 3" thick										
0.5	BASE , approximately 3" thick										
2.0	FILL - SILTY SAND (SM) , fine to coarse grained, brown to dark brown, trace gravel to 0.5 "										
5.0	SILTY SAND (SM) , fine grained, brown to dark brown										
Boring Terminated at 5 Feet		5									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Auger Cuttings
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19

BORING LOG NO. B-2

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0016° Longitude: -118.1672°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
0.3	ASPHALT , approximately 3.5" thick										
0.9	BASE , approximately 7.5" thick										
2.0	FILL - SILTY SAND (SM) , fine to coarse grained, brown to dark brown, trace gravel to 0.5"										
5.0	SILTY SAND (SM) , fine grained, brown to dark brown										
Boring Terminated at 5 Feet		5									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Auger Cuttings
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19

BORING LOG NO. B-3

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL CB195128 5200 SHEILA STREET.GPJ TERRACON DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0015° Longitude: -118.1678°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
0.3	ASPHALT , approximately 3" thick										
0.8	BASE , approximately 6" thick										
	FILL - SILTY SAND (SM) , fine to coarse grained, brown to dark brown, trace gravel to 0.5"				6-9-16		9	117			
5.0	CLAYEY SAND (SC) , fine grained, light brown	5			5-6-7		12	101			
	No Recovery				19-29-30						
		10			10-9-15		10	93			
15.0	SANDY SILT (ML) , fine grained, brown to black	15			4-6-10		16	109			
20.0	SANDY SILT (ML) , fine to medium grained, brown	20			13-31-50/6"		13	120			
25.0	SILTY SAND (SM) , fine grained, light brown to brown	25			8-16-50/4"		16	106			
30.0	SILTY SAND (SM) , trace clay, fine to medium grained, light brown to brown	30			27-29-24		12	97			
31.5	Boring Terminated at 31.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



1355 E Cooley Dr, Ste C
Colton, CA

Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-4

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0014° Longitude: -118.1673°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
0.3	ASPHALT , approximately 3" thick										
0.8	BASE , approximately 6" thick										
	FILL - SILTY SAND (SM) , fine to coarse grained, brown to dark brown, trace gravel to 0.5"			X	7-8-10		12	96			
4.5	SILTY SAND (SM) , fine to coarse grained, light brown	5		X	10-15-20		4	101			
				X	7-11-16		3	91			
10.0	CLAYEY SAND (SC) , brown	10		X	7-16-20		7	96			
	- trace clay			X	5-6-9		13	97			
20.0	SANDY SILTY CLAY (CL-ML) , brown	20		X	17-36-50/5"		11	123			
				X	31-50/4"		10	109			
31.5	Boring Terminated at 31.5 Feet	30		X	18-26-31		9	114			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-5

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0014° Longitude: -118.1685°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
									LL-PL-PI	PERCENT FINES
0.3	ASPHALT , approximately 3" thick									
0.8	BASE , approximately 6" thick									
1.0	FILL - SILTY SAND (SM) , fine to coarse grained, brown to dark brown				7-11-16		11	100	NP	45
	SILTY SAND (SM) , fine grained, light brown									
5					5-8-7		9	92		
7.5	SANDY SILT (ML) , fine grained, brown				3-4-7		26	93		
10					5-5-5		25	94		
15					4-7-9		18	108		
20	SANDY SILT (SM) , fine grained, brown				9-17-14		14	111		
21.5	Boring Terminated at 21.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-6

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0011° Longitude: -118.168°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
									LL-PL-PI	PERCENT FINES
	0.3' ASPHALT , approximately 3.5" thick									
	0.6' BASE , approximately 4" thick									
	FILL - SANDY SILT (ML) , fine to coarse grained, brown to dark brown, trace gravel to 0.5"				3-3-5 N=8				NP	62
			5		4-6-6 N=12				NP	51
					2-4-6 N=10				NP NP	64 68
			10		1-2-4 N=6				NP	84
			15		2-3-5 N=8				NP	55
		20		3-8-11 N=19				NP	80	
		25		5-9-16 N=25				NP	52	
	trace gravel to 0.5"	30		6-12-16 N=28				NP	87	

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



1355 E Cooley Dr, Ste C
Colton, CA

Boring Started: 10-24-2019

Boring Completed: 10-24-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-6

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0011° Longitude: -118.168°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES	
	DEPTH								LL-PL-PI		
	SANDY SILT (ML) , fine grained, brown (<i>continued</i>)	35		X	2-6-6 N=12				NP	96	
		40		X	3-7-13 N=20				NP	92	
		45		X	10-8-7 N=15						
		50		X	3-5-6 N=11						
	Boring Terminated at 51.5 Feet	51.5									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-24-2019

Boring Completed: 10-24-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-7

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.001° Longitude: -118.1676°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
	DEPTH										
	0.3	ASPHALT , approximately 3" thick									
	0.8	BASE , approximately 6" thick									
		SILTY SAND (SM) , fine to coarse grained, brown		X		4-4-4 N=8					
	5.0	SILTY CLAYEY SAND (SC-SM) , brown	5			1-4-6 N=10					
					3-5-5 N=10						
					3-8-9 N=17						
					4-8-12 N=20						
					4-8-11 N=19						
	15.0	SILTY SAND (SM) , brown	15								
		trace gravel to 1"									
	21.5	Boring Terminated at 21.5 Feet	20								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-24-2019

Boring Completed: 10-24-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-8

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.001° Longitude: -118.1675°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
DEPTH											
0.3	ASPHALT , approximately 3" thick										
0.8	BASE , approximately 7" thick										
1.4	FILL - SILTY SAND (SM) , fine grained, light brown										
5.0	SILTY SAND (SM) , fine to coarse grained, light brown to brown										
	Boring Terminated at 5 Feet	5									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Auger Cuttings
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19

BORING LOG NO. B-9

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0012° Longitude: -118.1688°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
									LL-PL-PI	PERCENT FINES
0.3	ASPHALT , approximately 3" thick									
0.7	BASE , approximately 5" thick									
3.0	FILL - SANDY SILT (ML) , fine to coarse grained, brown to dark brown, trace gravel to 0.5"					5%			NP	59
5.0	SANDY SILT (ML) , fine grained, brown									
Boring Terminated at 5 Feet		5								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Auger Cuttings
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-10

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34001189° Longitude: -118.1686°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
									LL-PL-PI	PERCENT FINES
0.3	ASPHALT , approximately 3" thick									
0.6	BASE , approximately 4" thick									
2.0	FILL - SILTY SAND (SM) , fine to coarse grained, brown to dark brown, trace gravel to 0.5" SILTY SAND (SM) , fine grained, brown to dark brown	5		X	3-4-5 N=9				NP	45
6.5	SANDY SILT (ML) , fine grained, brown to dark brown	10		X	3-4-5 N=9				NP	32
		15		X	1-6-7 N=13				NP	54
		20		X	1-2-3 N=5				NP	81
20.0	SILTY SAND (SM) , fine to coarse grained, light brown to brown	25		X	2-3-6 N=9				NP	77
		30		X	5-8-10 N=18				NP	23
31.5	Boring Terminated at 31.5 Feet	30		X	2-5-10 N=15				NP	49
		30		X	5-9-13 N=22					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-24-2019

Boring Completed: 10-24-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-11

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.001° Longitude: -118.168°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
0.3	ASPHALT , approximately 3" thick										
0.8	BASE , approximately 6" thick										
	FILL - SILTY SAND (SM) , fine to coarse grained, brown to dark brown, trace gravel to 0.5"				2-6-6 N=12						
5.0	SILTY SAND (SM) , fine to coarse grained, brown to dark brown	5			4-5-6 N=11						
					4-4-5 N=9						
		10			4-5-6 N=11						
		15			3-4-8 N=12						
		20			4-7-13 N=20						
	Boring Terminated at 21.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-24-2019

Boring Completed: 10-24-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-12

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0007° Longitude: -118.1675°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
0.5	CONCRETE , approximately 6.5" thick										
2.0	FILL - SILTY SAND (SM) , fine to coarse grained, brown to dark brown, trace gravel to 0.5" SILTY SAND (SM) , fine to coarse grained, brown			X	10-15-25		9	101			
5				X	11-14-18		4	93			
7.5	INTERBEDED SILTY SAND, SANDY SILT and SANDY SILTY CLAY , brown			X	10-16-22		4	97			
				X	10-13-18		8	97			
				X	7-28-25		13	112			
				X	18-19-19		11	111			
				X	50/4"		11	80			
31.5	Boring Terminated at 31.5 Feet			X	13-25-45		5	96			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-13

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON DATATEMPLATE.GDT 11/7/19

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0007° Longitude: -118.1688°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
									LL-PL-PI	PERCENT FINES
0.6	CONCRETE , approximately 7" thick									
2.0	BASE , approximately 17" thick									
7.5	SILTY SAND (SM) , fine grained, brown to grayish brown	5		X	6-7-12		9	99	NP	38
		5		X	5-9-13		10	93	NP	30
		10		X	4-5-15		25	90		55
		10		X	6-10-10		16	97	NP	40
		15		X	2-5-7		23	96	NP	79
	Boring Terminated at 16.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Bentonite Grout to 10' bgs, Auger Cuttings to surface, surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

Driller: Martini Drilling

Project No.: CB195128

BORING LOG NO. B-14

PROJECT: 5200 Sheila Street Project, Commerce

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

SITE: 5200 Sheila Street
Commerce, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0005° Longitude: -118.168°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	Sand Equivalent	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI									
DEPTH										
0.5	CONCRETE , approximately 6.5" thick									
1.2	BASE , approximately 8" thick									
3.5	FILL - SILTY SAND (SM) , fine to coarse grained, brown to dark brown, trace gravel to 0.5"									
5.0	SILTY SAND (SM) , fine grained, brown to dark brown									
	Boring Terminated at 5 Feet	5								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Auger Cuttings
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 10-23-2019

Boring Completed: 10-23-2019

Drill Rig: CME 75

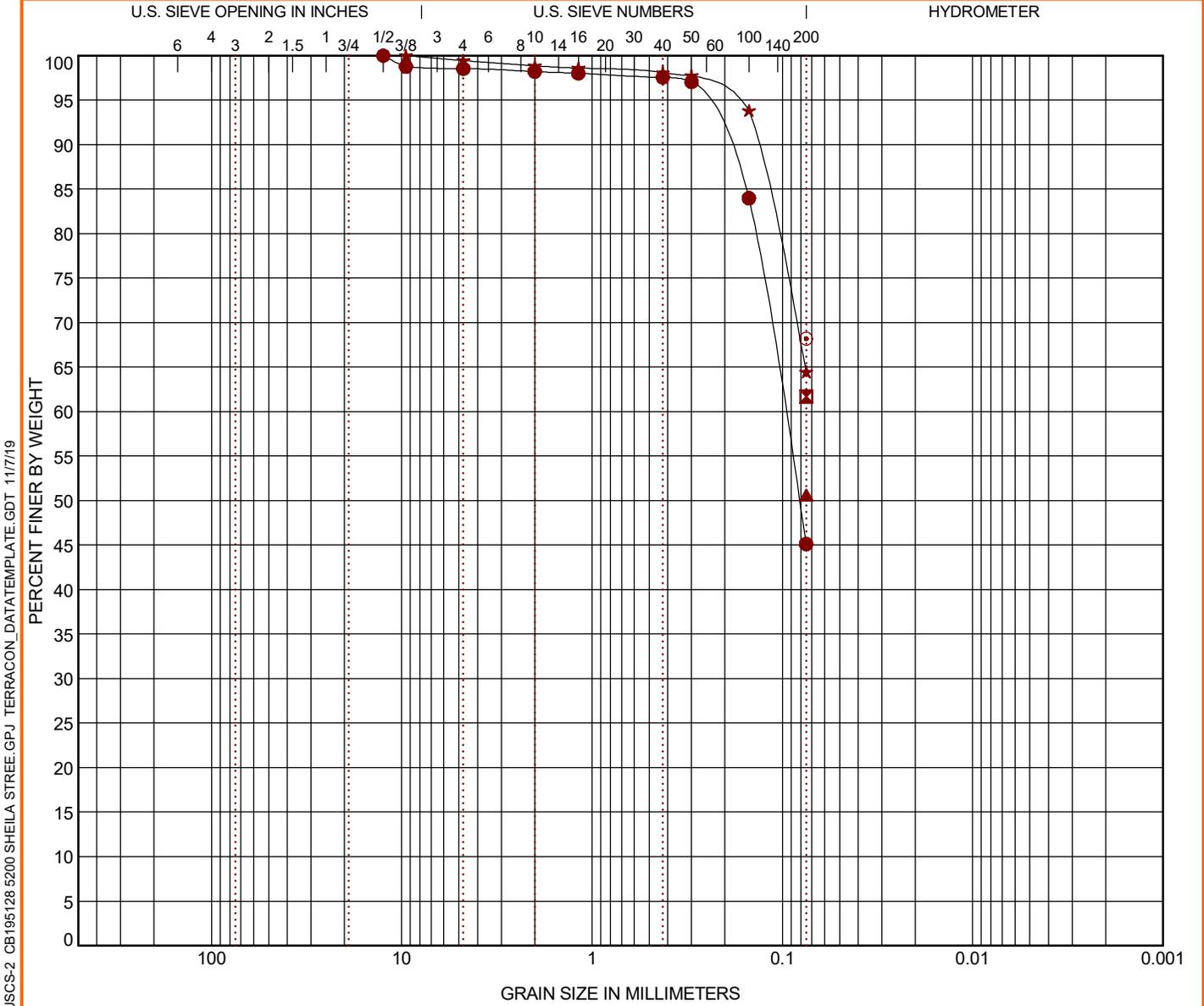
Driller: Martini Drilling

Project No.: CB195128

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 CB195128 5200 SHEILA STREE.GPJ TERRACON_DATA\TEMPLATE.GDT 11/7/19

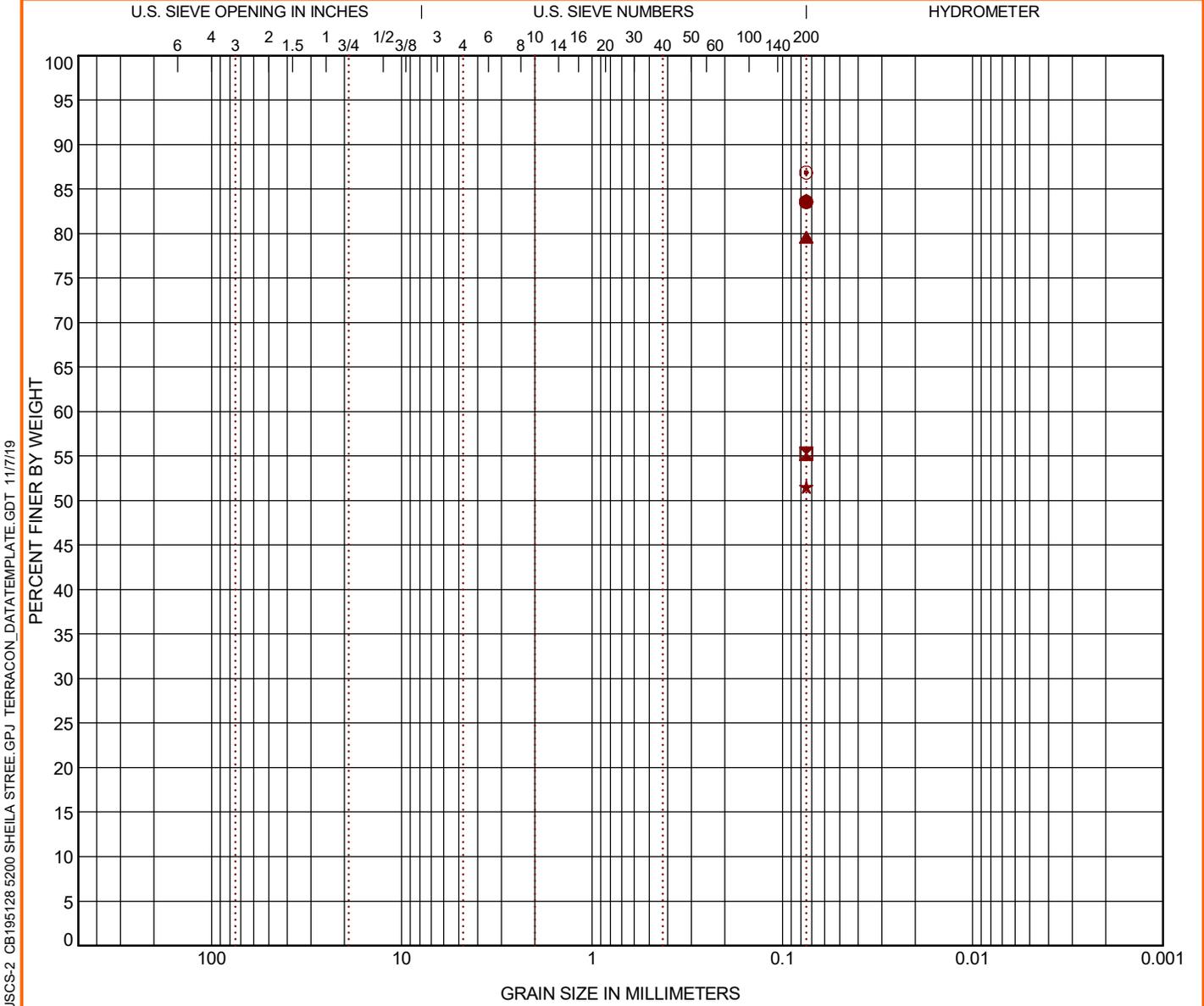
Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
● B-5	1 - 5	SILTY SAND (SM)		NP	NP	NP		
⊠ B-6	2 - 3.5	SANDY SILT (ML)		NP	NP	NP		
▲ B-6	5 - 6.5	SANDY SILT (ML)		NP	NP	NP		
★ B-6	5 - 10	SANDY SILT (ML)		NP	NP	NP		
⊙ B-6	7.5 - 9	SANDY SILT (ML)		NP	NP	NP		

Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
● B-5	1 - 5	12.5	0.098			0.0	1.5	53.4		45.1	
⊠ B-6	2 - 3.5	0.075								61.7	
▲ B-6	5 - 6.5	0.075								50.6	
★ B-6	5 - 10	9.5				0.0	0.5	35.0		64.5	
⊙ B-6	7.5 - 9	0.075								68.2	

PROJECT: 5200 Sheila Street Project, Commerce	1355 E Cooley Dr, Ste C Colton, CA	PROJECT NUMBER: CB195128
SITE: 5200 Sheila Street Commerce, CA		CLIENT: GPT Sheila Street Owner LP Fort Washington, PA

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
● B-6	10 - 11.5	SILT with SAND (ML)		NP	NP	NP		
☒ B-6	15 - 16.5	SANDY SILT (ML)		NP	NP	NP		
▲ B-6	20 - 21.5	SILT with SAND (ML)		NP	NP	NP		
★ B-6	25 - 26.5	SANDY SILT (ML)		NP	NP	NP		
⊙ B-6	30 - 31.5	SILT (ML)		NP	NP	NP		

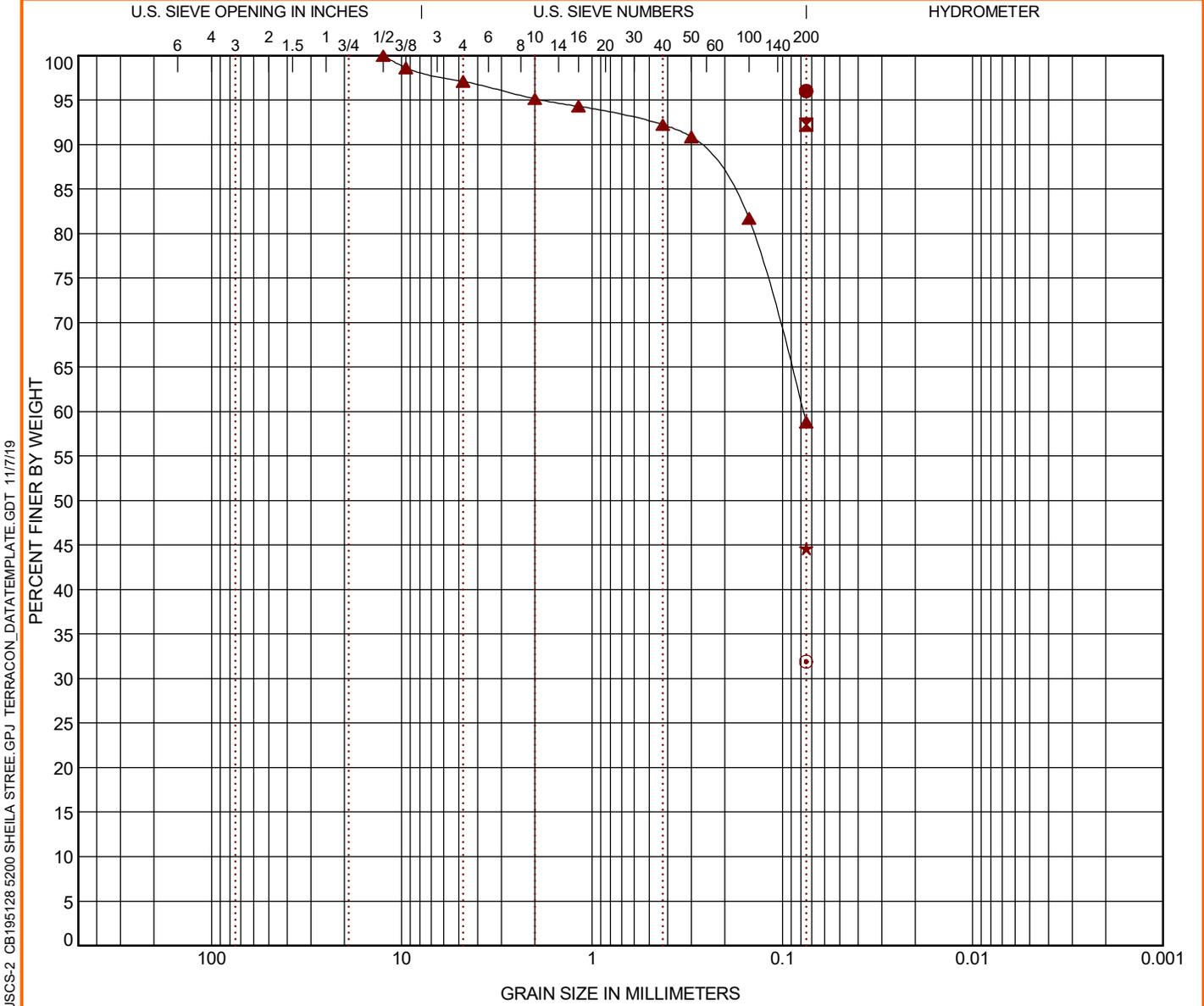
Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
● B-6	10 - 11.5	0.075								83.6	
☒ B-6	15 - 16.5	0.075								55.3	
▲ B-6	20 - 21.5	0.075								79.6	
★ B-6	25 - 26.5	0.075								51.5	
⊙ B-6	30 - 31.5	0.075								86.9	

PROJECT: 5200 Sheila Street Project, Commerce SITE: 5200 Sheila Street Commerce, CA	<p style="font-size: 0.8em; color: #800000;">1355 E Cooley Dr, Ste C Colton, CA</p>	PROJECT NUMBER: CB195128 CLIENT: GPT Sheila Street Owner LP Fort Washington, PA
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LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 CB195128 5200 SHEILA STREE.GPJ TERRACON_DATA\TEMPLATE.GDT 11/7/19

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
● B-6	35 - 36.5	SILT (ML)		NP	NP	NP		
☒ B-6	40 - 41.5	SILT (ML)		NP	NP	NP		
▲ B-9	0.7 - 5	SANDY SILT (ML)		NP	NP	NP		
★ B-10	2 - 3.5	SILTY SAND (SM)		NP	NP	NP		
⊙ B-10	5 - 6.5	SILTY SAND (SM)		NP	NP	NP		

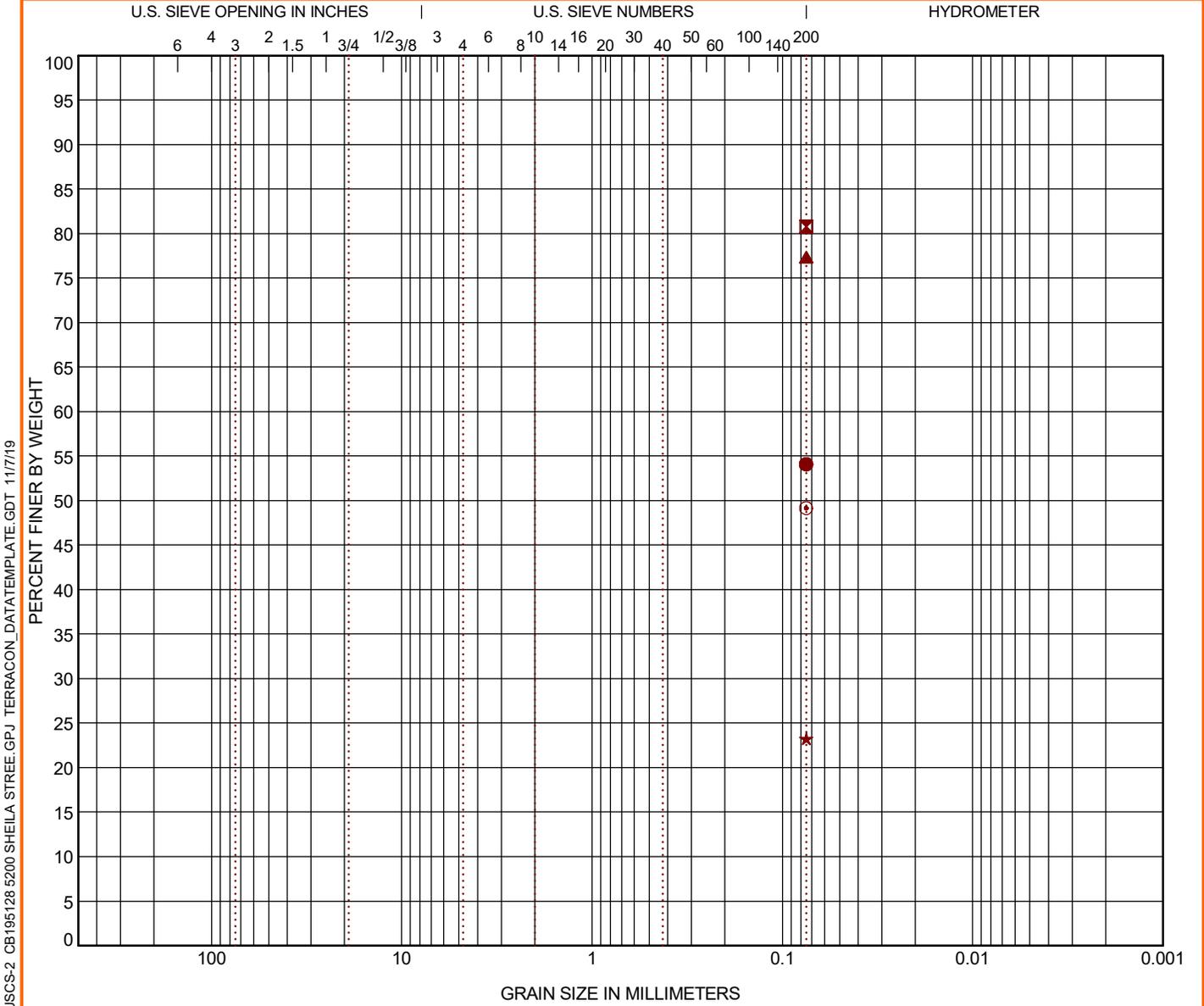
Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
● B-6	35 - 36.5	0.075								96.0	
☒ B-6	40 - 41.5	0.075								92.2	
▲ B-9	0.7 - 5	12.5	0.078			0.0	2.9	38.3		58.8	
★ B-10	2 - 3.5	0.075								44.6	
⊙ B-10	5 - 6.5	0.075								31.9	

PROJECT: 5200 Sheila Street Project, Commerce	1355 E Cooley Dr, Ste C Colton, CA	PROJECT NUMBER: CB195128
SITE: 5200 Sheila Street Commerce, CA		CLIENT: GPT Sheila Street Owner LP Fort Washington, PA

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 CB195128 5200 SHEILA STREE.GPJ TERRACON_DATA\TEMPLATE.GDT 11/7/19

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
● B-10	7.5 - 9	SANDY SILT (ML)		NP	NP	NP		
☒ B-10	10 - 11.5	SILT with SAND (ML)		NP	NP	NP		
▲ B-10	15 - 16.5	SILT with SAND (ML)		NP	NP	NP		
★ B-10	20 - 21.5	SILTY SAND (SM)		NP	NP	NP		
⊙ B-10	25 - 26.5	SILTY SAND (SM)		NP	NP	NP		

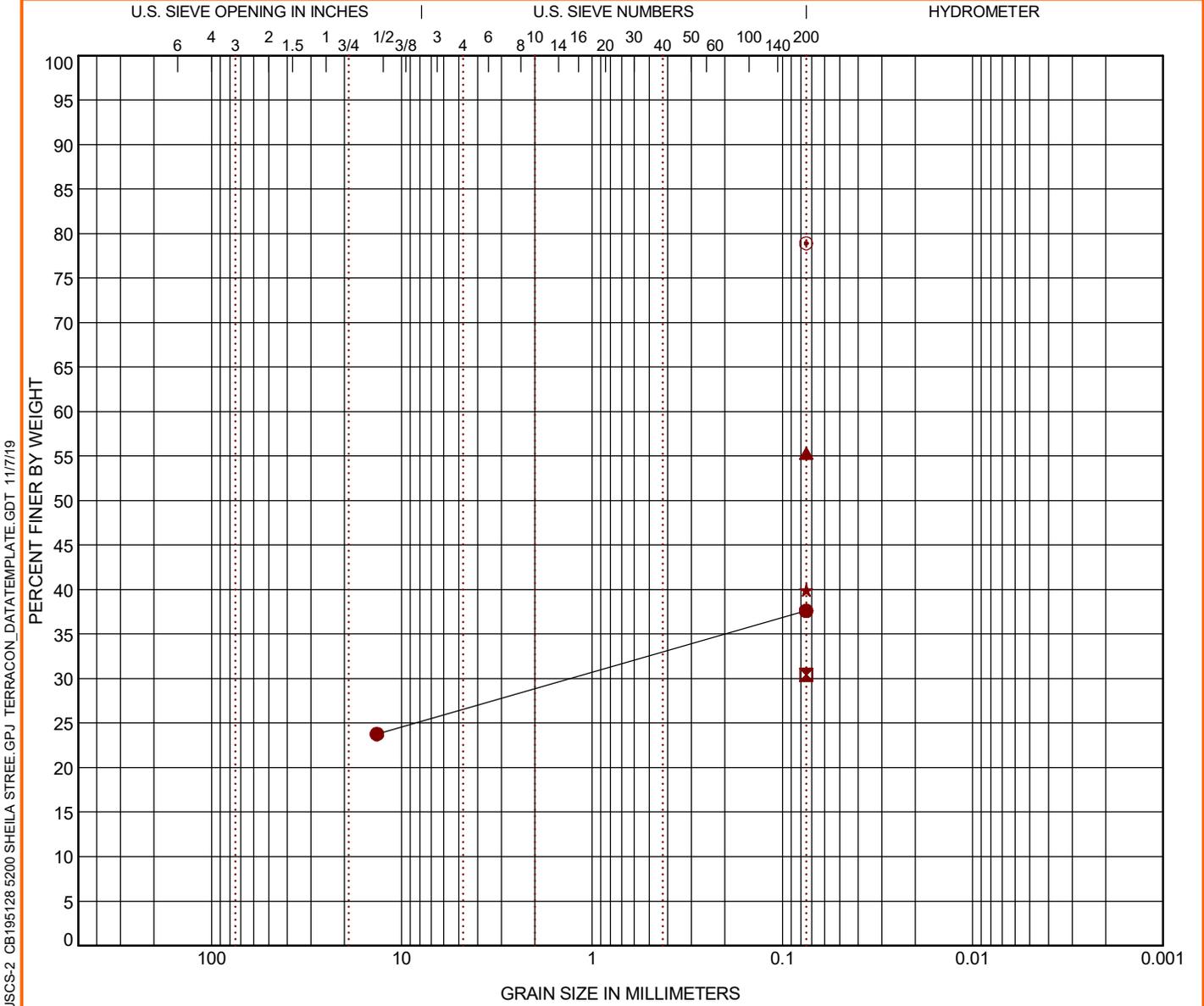
Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
● B-10	7.5 - 9	0.075								54.1	
☒ B-10	10 - 11.5	0.075								80.8	
▲ B-10	15 - 16.5	0.075								77.4	
★ B-10	20 - 21.5	0.075								23.2	
⊙ B-10	25 - 26.5	0.075								49.2	

PROJECT: 5200 Sheila Street Project, Commerce	1355 E Cooley Dr, Ste C Colton, CA	PROJECT NUMBER: CB195128
SITE: 5200 Sheila Street Commerce, CA		CLIENT: GPT Sheila Street Owner LP Fort Washington, PA

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 CB195128 5200 SHEILA STREE.GPJ TERRACON_DATA\TEMPLATE.GDT 11/7/19

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification				WC (%)	LL	PL	PI	Cc	Cu
● B-13	2 - 3.5					9	NP	NP	NP		
☒ B-13	5 - 6.5	SILTY SAND (SM)				10	NP	NP	NP		
▲ B-13	7.5 - 9					25					
★ B-13	10 - 11.5	SILTY SAND (SM)				16	NP	NP	NP		
⊙ B-13	15 - 16.5	SILT with SAND (ML)				23	NP	NP	NP		

Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
● B-13	2 - 3.5	13.5		1.302			11.1	-11.1		37.6	
☒ B-13	5 - 6.5	0.075								30.4	
▲ B-13	7.5 - 9	0.075								55.3	
★ B-13	10 - 11.5	0.075								39.9	
⊙ B-13	15 - 16.5	0.075								78.9	

PROJECT: 5200 Sheila Street Project,
Commerce

SITE: 5200 Sheila Street
Commerce, CA



PROJECT NUMBER: CB195128

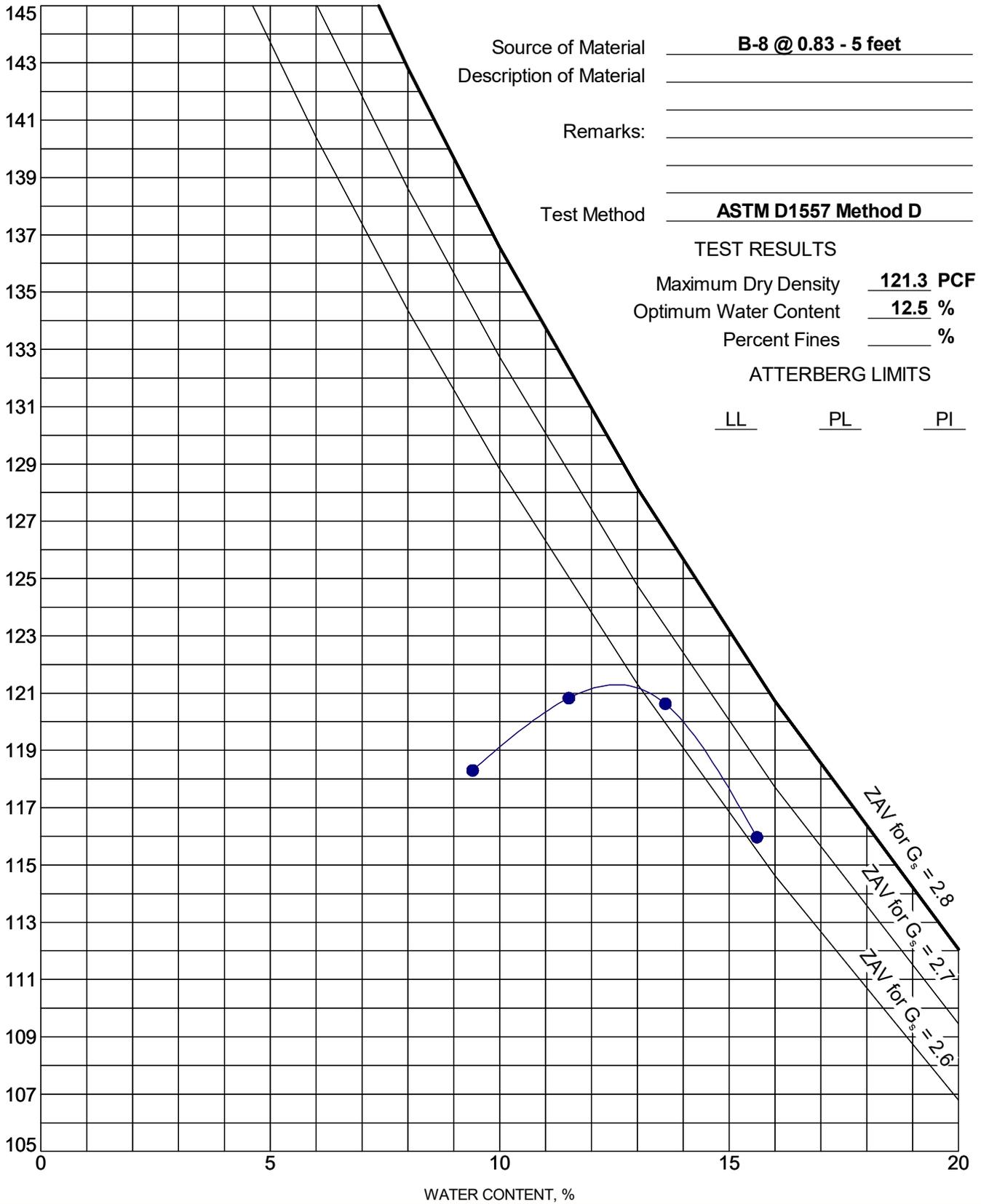
CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 CB195128 5200 SHEILA STREE.GPJ TERRACON_DATA\TEMPLATE.GDT 11/7/19

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V1 CB195128 5200 SHEILA STREET.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19



PROJECT: 5200 Sheila Street Project,
Commerce

SITE: 5200 Sheila Street
Commerce, CA



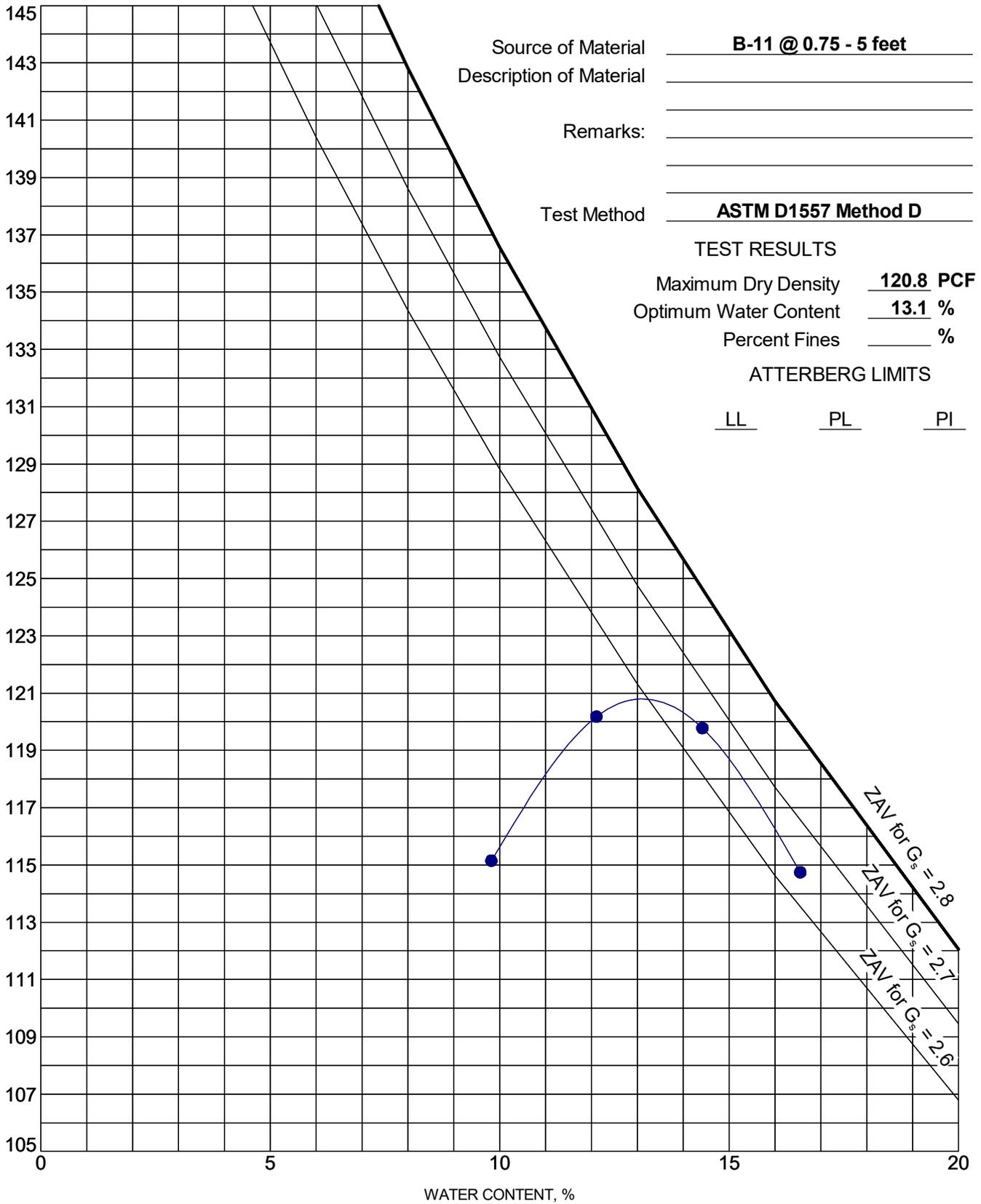
PROJECT NUMBER: CB195128

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V1 CB195128 5200 SHEILA STREE.GPJ TERRACON_DATATEMPLATE.GDT 11/7/19



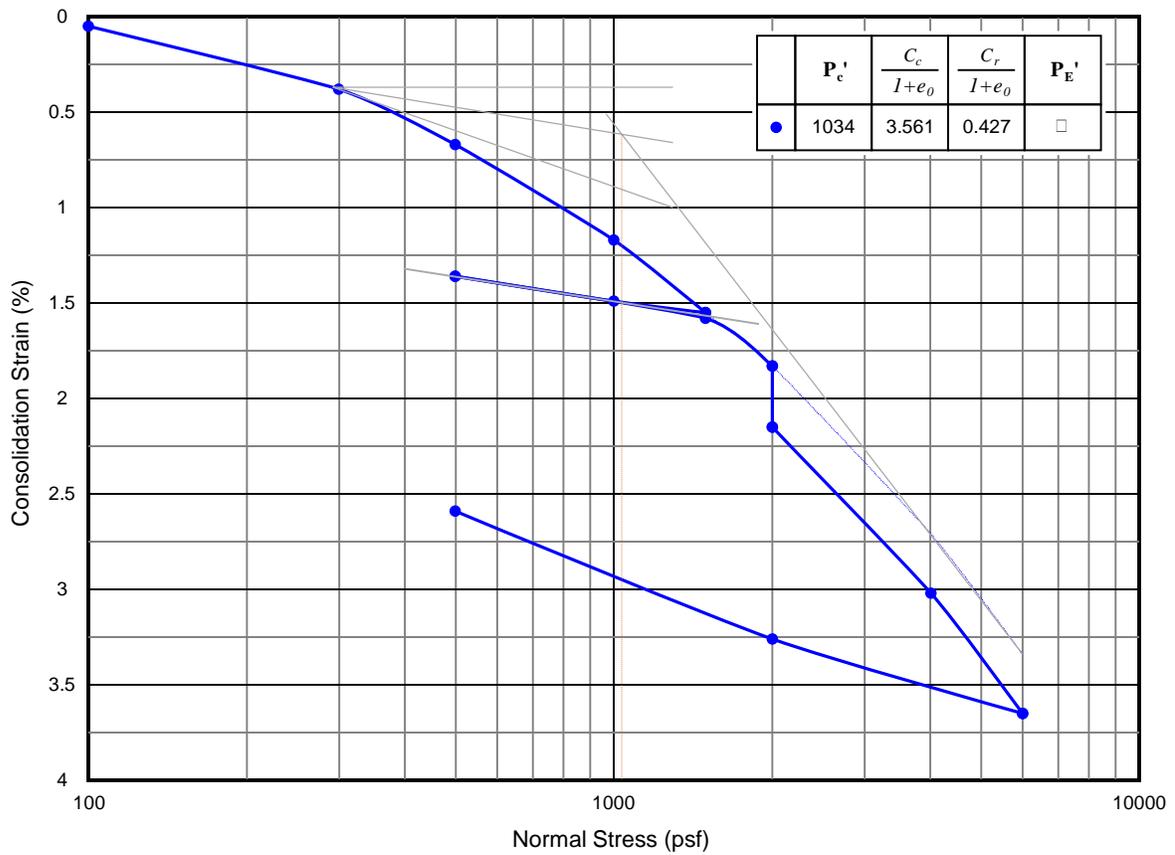
PROJECT: 5200 Sheila Street Project,
Commerce

SITE: 5200 Sheila Street
Commerce, CA



PROJECT NUMBER: CB195128

CLIENT: GPT Sheila Street Owner LP
Fort Washington, PA



	Boring No.	Depth (ft)	USCS Classification	γ_d (pcf)	w (%)	HCS (%)
●	5	5	Silty sand (SM)	91.2	8.8	0.3

Notes:
Sample was saturated at the axial pressure of 2,000 psf

Z:\Projects\2019\CB195128\Working Files\CALculations-Analysis\Hydro-consolidation\LabSuite_CB195128.dwg



CONSOLIDATION TESTS (ASTM D2435/4546)

Project:	Proposed Commerce Logistic Center				
Location:	Commerce, Los Angeles County, California				
Project No.:	CB195128	Engineer:	AT	Enclosure:	

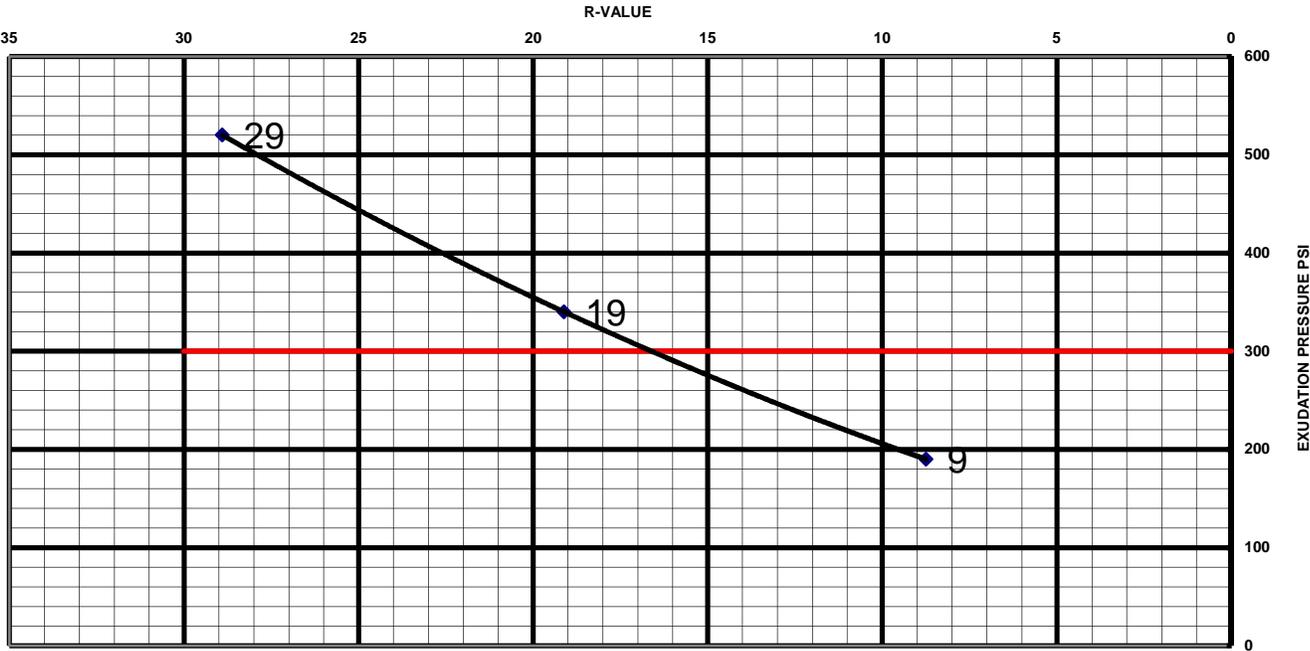
**LABORATORY RECORD OF TESTS MADE ON
 BASE, SUBBASE, AND BASEMENT SOILS**

CLIENT: GPT Sheila Street Owner LP
PROJECT 5200 Sheila Street Project, Commerce
LOCATION: Commerce, CA
R-VALUE # : B-9
T.I. :

COMPACTOR AIR PRESSURE P.S.I.
 INITIAL MOISTURE %
 WATER ADDED, ML
 WATER ADDED %
 MOISTURE AT COMPACTION %
 HEIGHT OF BRIQUETTE
 WET WEIGHT OF BRIQUETTE
 DENSITY LB. PER CU.FT.
 STABILOMETER PH AT 1000 LBS.
 2000 LBS.
 DISPLACEMENT
 R-VALUE
 EXUDATION PRESSURE
 THICK. INDICATED BY STAB.
 EXPANSION PRESSURE
 THICK. INDICATED BY E.P.

	A	B	C	D
COMPACTOR AIR PRESSURE P.S.I.	50	100	250	
INITIAL MOISTURE %	14.8	14.8	14.8	
WATER ADDED, ML	20	0	-10	
WATER ADDED %	2.1	0.0	-1.0	
MOISTURE AT COMPACTION %	16.9	14.8	13.8	
HEIGHT OF BRIQUETTE	2.55	2.49	2.50	
WET WEIGHT OF BRIQUETTE	1116	1108	1111	
DENSITY LB. PER CU.FT.	113.5	117.4	118.4	
STABILOMETER PH AT 1000 LBS.	58	48	37	
2000 LBS.	136	113	96	
DISPLACEMENT	4.60	4.40	4.10	
R-VALUE	9	19	29	
EXUDATION PRESSURE	190	340	520	
THICK. INDICATED BY STAB.	0.00	0.00	0.00	
EXPANSION PRESSURE	15	32	68	
THICK. INDICATED BY E.P.	0.50	1.07	2.27	

EXUDATION CHART



R-Value: 16

CHEMICAL LABORATORY TEST REPORT

Project Number: CB195128

Service Date: 11/05/19

Report Date: 11/08/19

Task:

Terracon

750 Pilot Road, Suite F
Las Vegas, Nevada 89119
(702) 597-9393

Client

GPT Sheila Street Owner LP
Fort Washington, PA

Project

5200 Sheila Street Project, Commerce

Sample Submitted By: Terracon (CB)

Date Received: 11/1/2019

Lab No.: 19-1226

Results of Corrosion Analysis

<i>Sample Number</i>	10B
<i>Sample Location</i>	B-10
<i>Sample Depth (ft.)</i>	2.0-6.0

pH Analysis, ASTM G 51	8.40
------------------------	------

Water Soluble Sulfate (SO ₄), ASTM C 1580 (mg/kg)	129
--	-----

Chlorides, ASTM D 512, (mg/kg)	43
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Total Salts, AWWA 2540, (mg/kg)	740
---------------------------------	-----

Resistivity (As-Received), ASTM G 57, (ohm-cm)	23280
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Resistivity (Saturated), ASTM G 57, (ohm-cm)	4171
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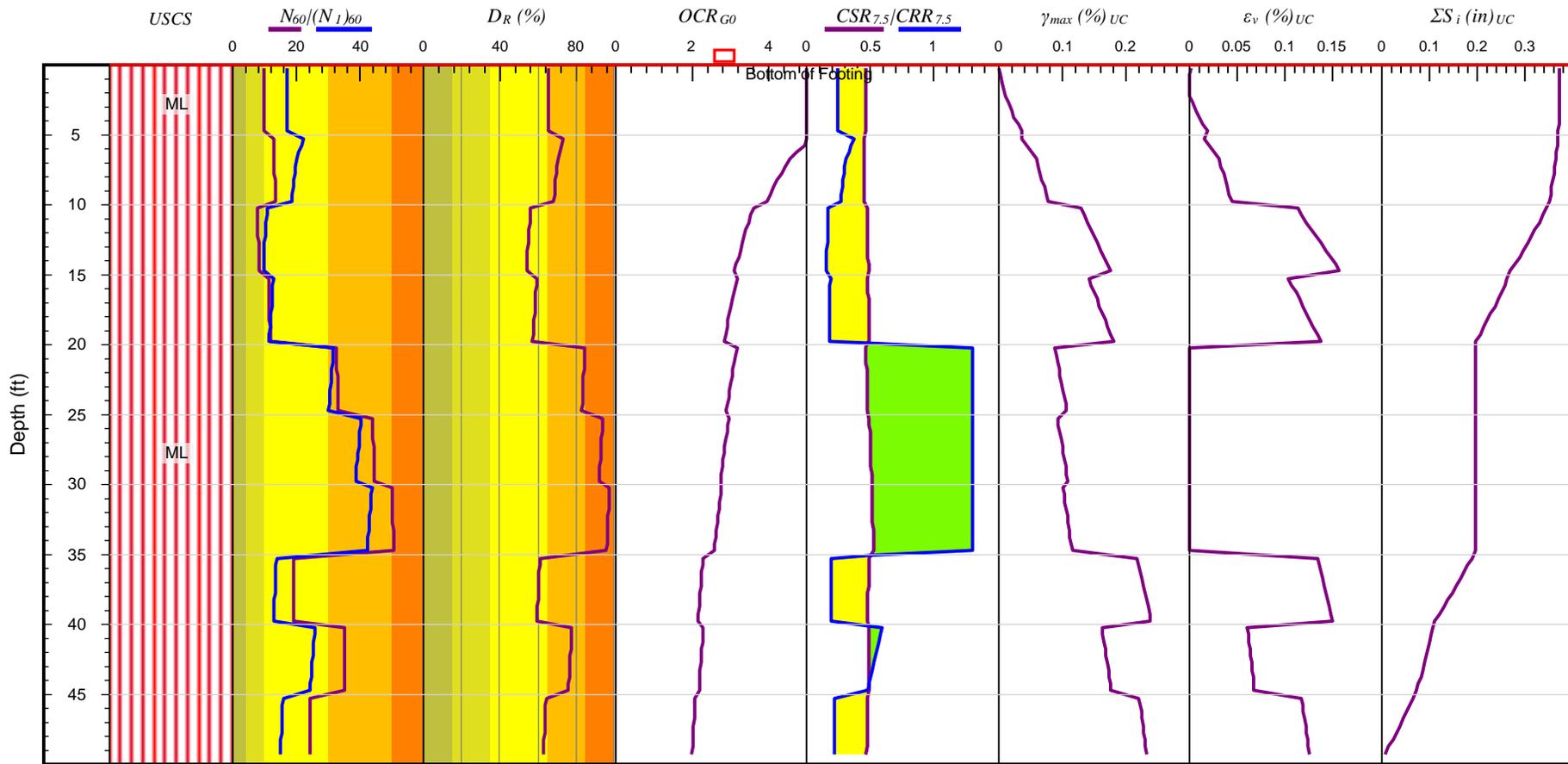
Analyzed By:



Trisha Campo
Chemist

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

Z:\Projects\2019\CB195128\Working Files\Calculations\Analysis\Seismic Settlement\GeoSuite_CB195128_B-6.csv



ML

Silt Correction: UCLA method

Earthquake & Groundwater Information:
 Magnitude = 7.3
 Max. Acceleration = 0.802 g
 Project GW = 100 ft
 Maximum Settlement = 0.37 in
 Settl. at Bottom of Footing = 0.37 in

Liquefaction: Boulanger & Idriss (2010-16)
 Settl.: [dry] UCLA (2008-14)
 Lateral spreading: Idriss & Boulanger (2008)
 M correction: [Sand] Boulanger & Idriss(2004)
 σ correction: Idriss & Boulanger (2008)
 Stress reduction: Idriss & Boulanger (2008)

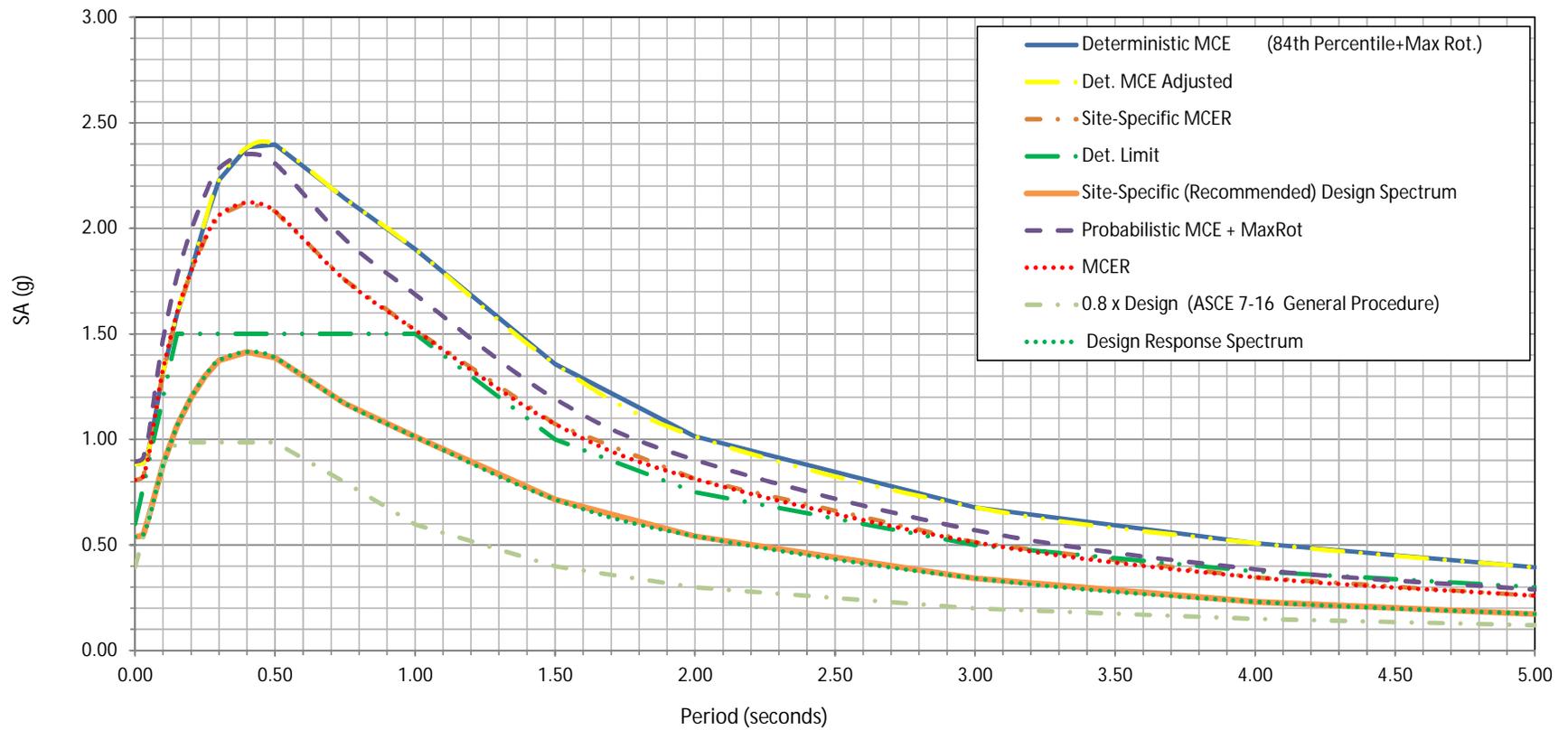
Seismic Settlement Potential - SPT Data

Project:	Proposed Commerce Logistic Center			
Location:	Commerce, Los Angeles, California			
Project No.:	CB195128	Boring No.:	B-6	Enclosure:



Logistics Center Project -Site-Specific Response Spectra 2019 CBC/ASCE 7-16										
Period (sec)	Deterministic MCE (84th Percentile+Max Rot.)	Det. Limit	Det. MCE Adjusted	Probabilistic MCE + MaxRot	MCE _R	Site-Specific MCE _R	0.8 x Design (ASCE 7-16 General Procedure)	Design Response Spectrum	Site-Specific (Recommended) Design Spectrum	CBC2019 'Code' Spectrum
0.000	0.882	0.600	0.882	0.894	0.808	0.808	0.395	0.538	0.538	0.493
0.010	0.883	0.660	0.883	0.897	0.810	0.810	0.443	0.540	0.540	0.554
0.020	0.886	0.720	0.886	0.901	0.814	0.814	0.492	0.543	0.543	0.615
0.030	0.888	0.780	0.888	0.916	0.827	0.827	0.541	0.551	0.551	0.676
0.050	0.954	0.900	0.954	1.034	0.934	0.934	0.639	0.622	0.639	0.799
0.075	1.136	1.050	1.136	1.263	1.140	1.136	0.761	0.757	0.761	0.951
0.100	1.315	1.200	1.315	1.475	1.332	1.315	0.883	0.877	0.883	1.104
0.150	1.594	1.500	1.594	1.774	1.602	1.594	0.986	1.063	1.063	1.233
0.200	1.801	1.500	1.801	1.990	1.797	1.797	0.986	1.198	1.198	1.233
0.250	2.035	1.500	2.035	2.160	1.951	1.951	0.986	1.300	1.300	1.233
0.300	2.229	1.500	2.229	2.285	2.062	2.062	0.986	1.375	1.375	1.233
0.400	2.384	1.500	2.384	2.352	2.122	2.122	0.986	1.415	1.415	1.233
0.500	2.397	1.500	2.397	2.308	2.081	2.081	0.986	1.388	1.388	1.233
0.750	2.141	1.500	2.141	1.948	1.755	1.755	0.797	1.170	1.170	0.996
1.000	1.902	1.500	1.902	1.687	1.519	1.519	0.597	1.012	1.012	0.747
1.500	1.358	1.000	1.358	1.192	1.073	1.073	0.398	0.715	0.715	0.498
2.000	1.014	0.750	1.014	0.903	0.812	0.812	0.299	0.542	0.542	0.373
3.000	0.678	0.500	0.678	0.570	0.513	0.513	0.199	0.342	0.342	0.249
4.000	0.509	0.375	0.509	0.385	0.346	0.346	0.149	0.231	0.231	0.187
5.000	0.394	0.300	0.394	0.288	0.259	0.259	0.119	0.173	0.173	0.149

Logistics Center Project- 5% Damped Horizontal Response Spectra 2019 CBC/ASCE 7-16



Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification		
				Group Symbol	Group Name ^B	
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F	
			$Cu < 4$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ ^E	GP	Poorly graded gravel ^F	
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}	
			Fines classify as CL or CH	GC	Clayey gravel ^{F, G, H}	
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	SW	Well-graded sand ^I	
			$Cu < 6$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ ^E	SP	Poorly graded sand ^I	
		Sands with Fines: More than 12% fines ^D	Fines classify as ML or MH	SM	Silty sand ^{G, H, I}	
			Fines classify as CL or CH	SC	Clayey sand ^{G, H, I}	
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line	CL	Lean clay ^{K, L, M}	
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K, L, M}	
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay ^{K, L, M, N}
			Liquid limit - not dried			Organic silt ^{K, L, M, O}
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K, L, M}	
			PI plots below "A" line	MH	Elastic Silt ^{K, L, M}	
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K, L, M, P}
			Liquid limit - not dried			Organic silt ^{K, L, M, Q}
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat	

^A Based on the material passing the 3-inch (75-mm) sieve.

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

$$Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains ³ 15% sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains ³ 15% gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains ³ 30% plus No. 200 predominantly sand, add "sandy" to group name.

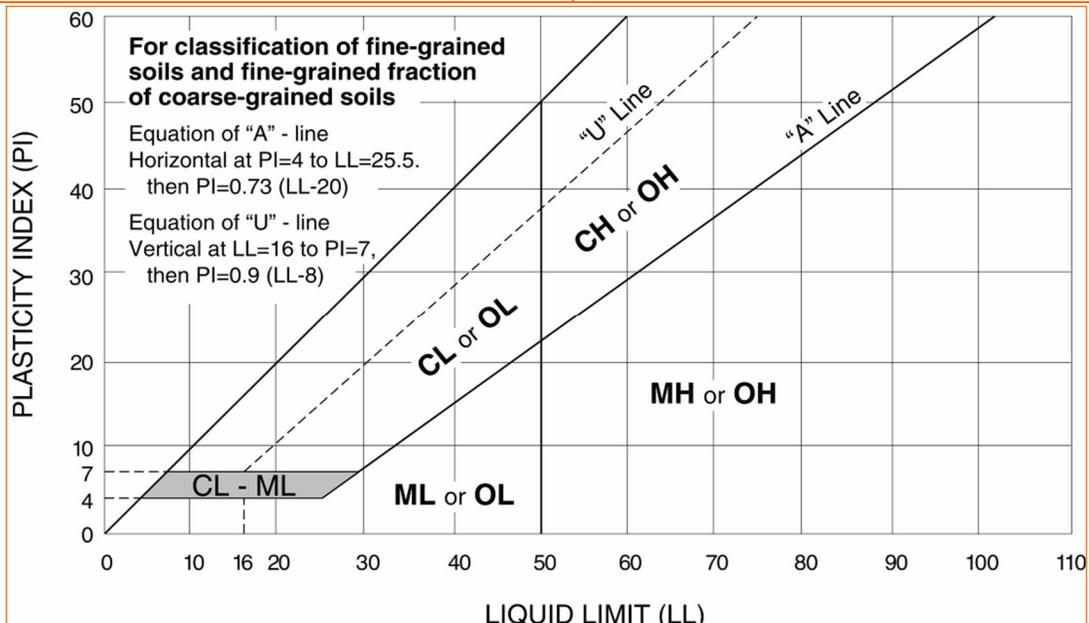
^M If soil contains ³ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

5200 Sheila Street Project, Commerce ■ Commerce, CA

November 18, 2019 ■ Terracon Project No. CB195128

SAMPLING	WATER LEVEL	FIELD TESTS
 Auger Cuttings  Modified California Ring Sampler  Standard Penetration Test	 Water Initially Encountered  Water Level After a Specified Period of Time  Water Level After a Specified Period of Time <p>Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.</p>	<p>N Standard Penetration Test Resistance (Blows/Ft.)</p> <p>(HP) Hand Penetrometer</p> <p>(T) Torvane</p> <p>(DCP) Dynamic Cone Penetrometer</p> <p>UC Unconfined Compressive Strength</p> <p>(PID) Photo-Ionization Detector</p> <p>(OVA) Organic Vapor Analyzer</p>

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance			
Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength Qu, (tsf)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.
Very Loose	0 - 3	0 - 6	Very Soft	less than 0.25	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	0.25 to 0.50	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium Stiff	0.50 to 1.00	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	1.00 to 2.00	8 - 15	10 - 18
Very Dense	> 50	> 99	Very Stiff	2.00 to 4.00	15 - 30	19 - 42
			Hard	> 4.00	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL		RELATIVE PROPORTIONS OF FINES	
Descriptive Term(s) of other constituents	Percent of Dry Weight	Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	<15	Trace	<5
With	15-29	With	5-12
Modifier	>30	Modifier	>12

GRAIN SIZE TERMINOLOGY		PLASTICITY DESCRIPTION	
Major Component of Sample	Particle Size	Term	Plasticity Index
Boulders	Over 12 in. (300 mm)	Non-plastic	0
Cobbles	12 in. to 3 in. (300mm to 75mm)	Low	1 - 10
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)	Medium	11 - 30
Sand	#4 to #200 sieve (4.75mm to 0.075mm)	High	> 30
Silt or Clay	Passing #200 sieve (0.075mm)		