

APPENDIX A

Initial Study, NOP, NOP Responses

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING FOR THE 2025 L STREET / 2101 CAPITOL AVENUE MIXED-USE PROJECT

COMMENT PERIOD
November 21st, 2014 to December 22nd, 2014

INTRODUCTION

The City of Sacramento (“City”) is the Lead Agency for preparation of an Environmental Impact Report (EIR) for the proposed 2025 L Street / 2101 Capitol Avenue Mixed-Use Project (proposed project). The EIR will evaluate potential significant environmental effects associated with implementation of the proposed project. The EIR is being prepared in compliance with the California Environmental Quality Act (CEQA). Written comments regarding the issues that should be considered in the EIR, including potential alternatives to the proposed project and the scope of the analysis, are invited.

Under CEQA, upon deciding to prepare an EIR, the City of Sacramento as lead agency, must issue a Notice of Preparation (NOP) to inform trustee and responsible agencies, and the public, of the decision to undertake this form of environmental review. The purpose of the NOP is to provide information describing the proposed project and its potential environmental effects to those who may wish to comment regarding the scope and content of the information to be considered in the EIR. Agencies should comment on such information as it relates to their statutory responsibilities in connection with the proposed project. Agencies and the public are invited to provide comments on the scope of review, potential mitigation strategies, and alternative project designs. Comments on the merits of the proposed project are accepted through a separate planning process.

The project description, location, and environmental issue areas that may be affected by development of the proposed project are set forth below. The EIR will evaluate the project-specific and cumulative impacts, identify mitigation measures that may be available and feasible to reduce or avoid such impacts, and identify a reasonable range of alternatives to the proposed project and their comparative environmental effects. An Environmental Initial Study will describe potential impacts associated with implementation of the project and will be available for review prior to the December 10th scoping meeting.

SUBMITTING COMMENTS

Comments and suggestions as to the appropriate scope of analysis in the EIR are invited from all interested parties. Written comments or questions concerning the EIR for the proposed project should be directed to the environmental project manager at the following address by December 22nd, 2014, 2014. Please include the contact person’s full name and address so that staff may respond appropriately:

Dana Mahaffey, Associate Planner
City of Sacramento Community Development Department
Environmental Planning Services
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811-0218
DMahaffey@cityofsacramento.org

SCOPING MEETING

A public scoping meeting will be held on Wednesday, December 10th, 2014 from 4:30pm to 6:30pm at the lobby of Sacramento City Hall at 915 I Street, Sacramento, CA 95814. Trustee and responsible agencies, as well as members of the public are invited to attend and provide input on the scope of the EIR. The scoping meeting will have an “open house” format, so participants can attend at any point during this two-hour window. Participants arriving after 4:30pm will not miss any meeting content. Written comments regarding relevant issues may be submitted at the meeting.

PROJECT LOCATION / SETTING

The proposed project consists of two new buildings that would be constructed in midtown Sacramento, at the following two locations:

1. 2025 L Street, on the half-block on the north side of L Street, between 20th and 21st Streets
2. 2101 Capitol Avenue, northeast of the intersection of 21st Street and Capitol Avenue

Exhibit 1 shows the properties that make up the project site within the Central City Area, and Exhibit 2 is a closer view of the location of the properties included in the project site.

PROJECT DESCRIPTION

Pappas Investments, the project applicant, is requesting entitlements to construct a mixed-use residential, retail/commercial, and parking garage project in midtown Sacramento. The proposed project would entail reuse of an existing developed area. The two project components are described below.

2025 L STREET

This project component would be located on the half-block on the north side of L Street, between 20th and 21st Streets. An existing above-ground, two-story parking garage and adjacent two-story building at this location would be demolished, and a new six-story mixed-use building would be constructed. The new building would house an approximately 40,000-square-foot Whole Foods Market on the ground floor, and customer parking on the second and third floors. In addition, approximately 141 apartments in a range of sizes from 544-square-foot studios to 1,330-square-foot two-bedroom units would be constructed on floors 2 through 6 of the building. A club and fitness center for residents, along with an outdoor kitchen, dining, and lounge spaces, would be located on the fourth floor of the building.

Exhibit 3 illustrates the conceptual design of the proposed 2025 L Street component of the project.

Access to parking for the Whole Foods Market would be provided by a ramp from 20th Street in approximately the same location as the existing parking garage ramp. Loading and deliveries for the Whole Foods Market would take place from Kayak Alley (which is located between K and L streets), with two loading docks recessed into the building for larger trucks. Parking for the proposed residences would be provided in a basement garage underneath the Whole Foods Market. This underground parking would be accessed from 21st Street. The proposed project also includes bulb-outs at 20th Street and 21st Street to improve the streetscape appearance, enhance pedestrian access, and provide outdoor dining opportunities.

2101 CAPITOL AVENUE

This project component would be located on the northeast corner of 21st Street and Capitol Avenue. The existing ground-level parking lot would be replaced with a six-level parking structure. The structure would include approximately 13,000 square feet of retail and commercial space on the ground floor. The existing restaurant, currently occupied by “Kupros Craft House” will remain in its current location.

The replacement parking would serve the existing 2020 L Street offices, which are currently served by the two-story parking garage to be demolished on the 2025 L Street site. This new parking would also replace the existing surface parking on the site. In the evenings, parking spaces in the structure would also be available for public use. The parking garage would be accessed via the alley located between L Street and Capitol Avenue, where deliveries for the proposed retail development would also be routed. Retail patrons would access parking from Capitol Avenue and a new turn lane would be required on Capitol Avenue midway between 21st and 22nd Streets for access.

Exhibit 4 illustrates the conceptual design of the 2101 Capitol Avenue retail space and parking structure.

REQUESTED ENTITLEMENTS

The City discretionary approvals/actions that would be considered for the proposed project include, but are not limited to, the following:

- ▶ General Plan Amendment to change 0.16 acres of land designated for Traditional Neighborhood Medium to Urban Corridor Low (2021 Capitol Avenue only) (see Exhibit 5)
- ▶ Rezone for 0.406 acres from R-O (Residential-Office) to C-2 (General Commercial) (2021 Capitol Avenue only) (see Exhibit 5)
- ▶ Conditional Use Permit for a retail store exceeding 40,000 gross square feet (2025 L Street only)
- ▶ Tentative Map (2025 L Street only)
- ▶ Variance to deviate from the signage allowed (both properties) and no wall between residential and non-residential development (2021 Capitol Avenue only)

- ▶ Site Plan and Design Review for new construction in the Central City Design Review area with deviations including height over 65 feet (both properties), potentially open space deviations (2025 L Street only), and potentially other deviations from relevant design standards and guidelines

Review of the proposed project by the Planning and Design Commission would be conducted as a part of the EIR review and entitlements process. The project entitlements would ultimately require approval by the City Council.

PROBABLE ENVIRONMENTAL EFFECTS AND SCOPE OF THE EIR

Topics that the City has preliminarily determined would be discussed in documentation for this project include:

- ▶ Aesthetics
- ▶ Air Quality
- ▶ Biological Resources
- ▶ Cultural Resources
- ▶ Energy
- ▶ Geology and Soils
- ▶ Greenhouse Gas Emissions
- ▶ Hazards and Hazardous Materials
- ▶ Hydrology and Water Quality
- ▶ Land Use/Planning
- ▶ Noise and Vibration
- ▶ Population and Housing
- ▶ Public Services and Recreation
- ▶ Urban Decay
- ▶ Utilities and Service Systems
- ▶ Transportation/Traffic

As environmental documentation for this project becomes available, it will be available for review at the Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento California 95811, and online at:

<http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx>

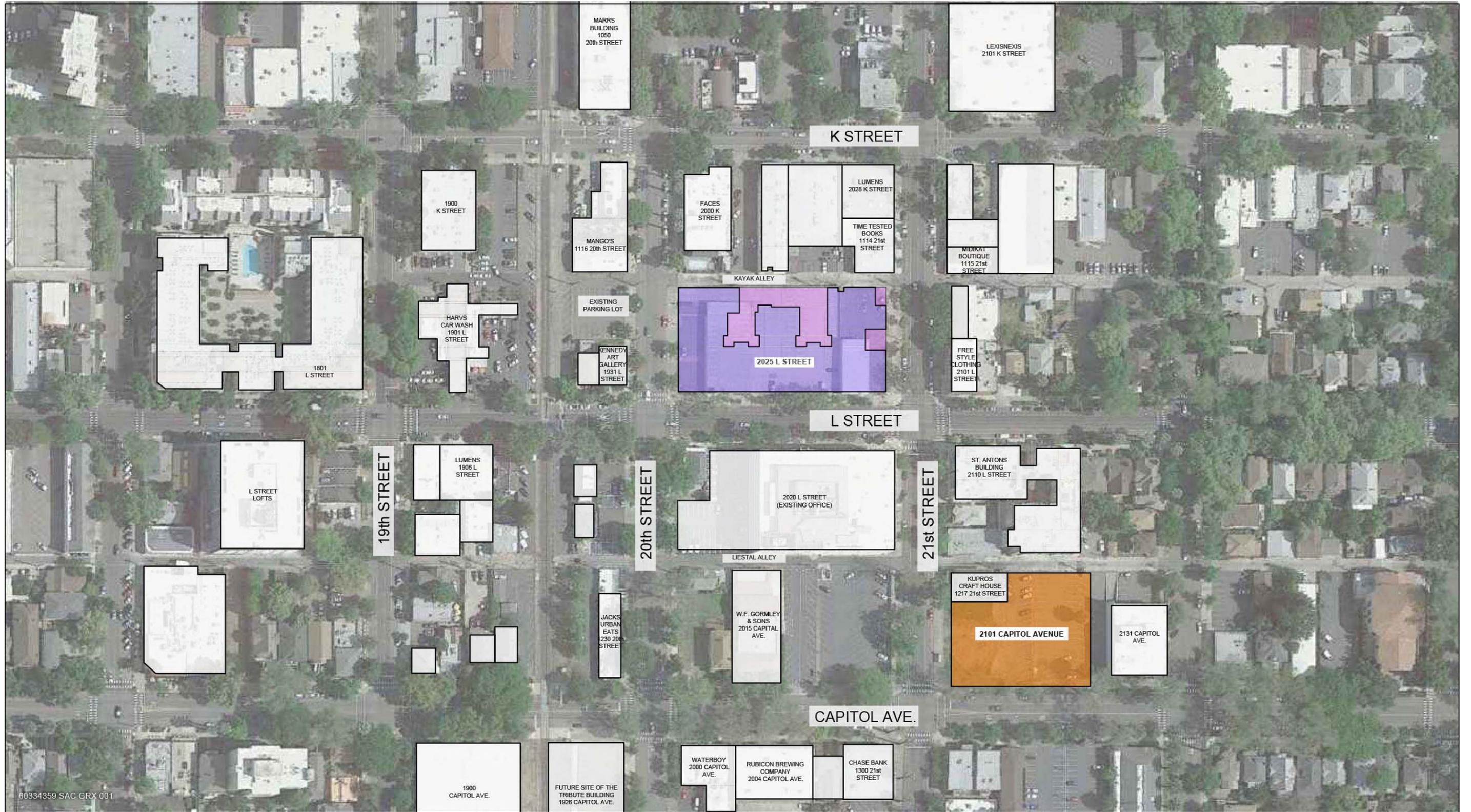


Exhibit 2. Project Location

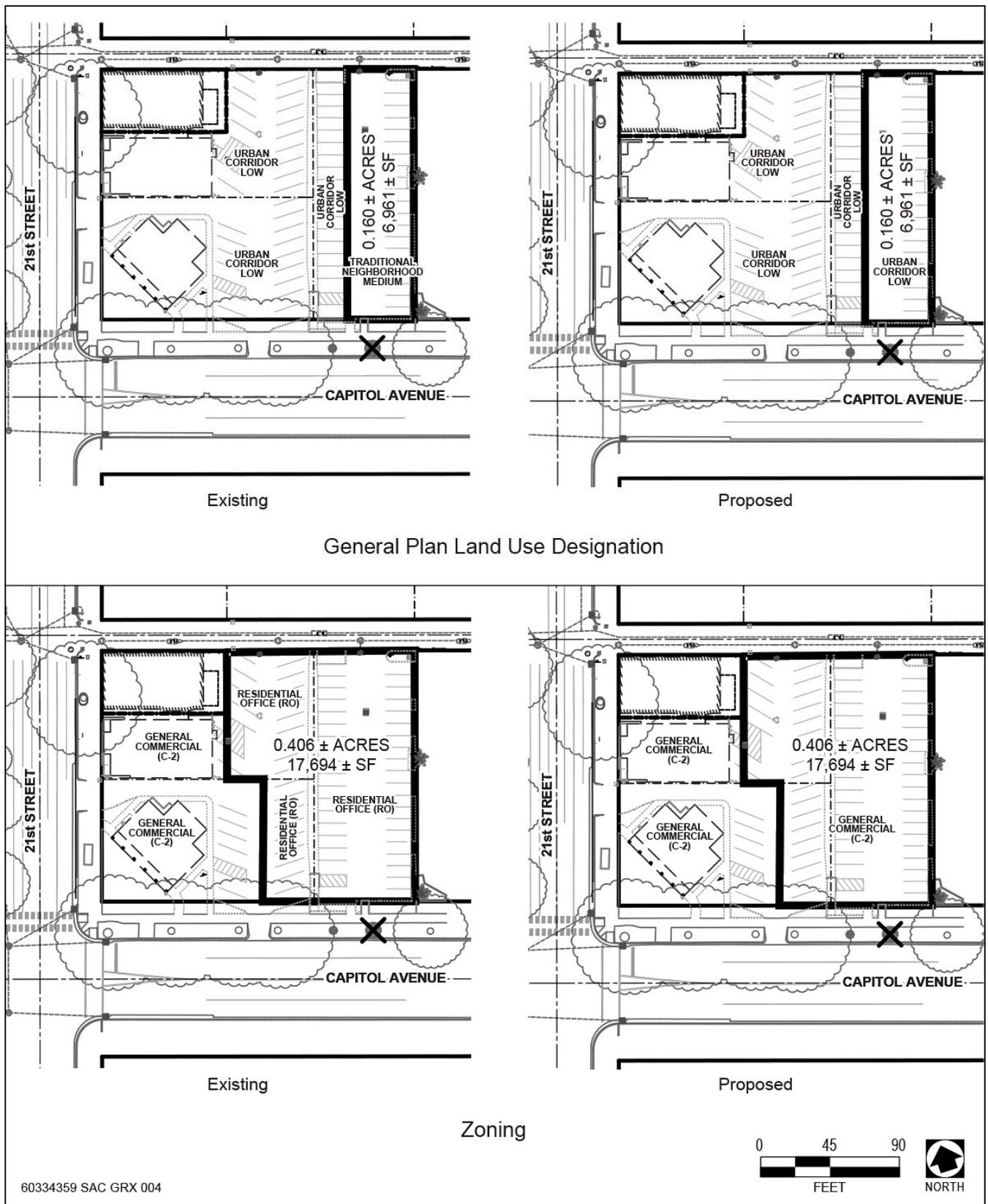


Exhibit 3. View of 2025 L Street Looking Northeast from the Intersection of L and 20th Streets



60334359 SAC GRX 003

Exhibit 4. View of 2101 Capitol Avenue Ground Floor Retail Space and Parking Structure Looking Northeast from 21st Street toward Capitol Avenue



60334359 SAC GRX 004

Exhibit 5. Proposed General Plan Land Use Designation and Zoning Changes

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

2014112053
SCH #

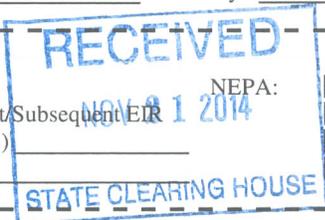
Project Title: 2025 L Street / 2101 Capitol Avenue Mixed-Use Project

Lead Agency: City of Sacramento Contact Person: Dana Mahaffey
Mailing Address: 300 Richards Boulevard Phone: 916-808-2762
City: Sacramento Zip: 95811 County: Sacramento

Project Location: County: Sacramento City/Nearest Community: Sacramento
Cross Streets: 20th Street, 21st Street, L Street, Capitol Avenue Zip Code: 95811
Longitude/Latitude (degrees, minutes and seconds): 38 57.41' N / -121 47.96' W Total Acres: Approx 4
Assessor's Parcel No.: Multiple Section: Twp.: Range: Base:
Within 2 Miles: State Hwy #: 50, 51, 5, 99 Waterways: Sacramento River, American River
Airports: Railways: Multiple Schools: Multiple

Document Type:

CEQA: [X] NOP [] Draft EIR NEPA: [] NOI Other: [] Joint Document
[] Early Cons [] Supplement/Subsequent EIR [] EA [] Final Document
[] Neg Dec (Prior SCH No.) [] Draft EIS [] Other:
[] Mit Neg Dec Other:



Local Action Type:

[] General Plan Update [] Specific Plan [X] Rezone [] Annexation
[X] General Plan Amendment [] Master Plan [] Prezone [] Redevelopment
[] General Plan Element [] Planned Unit Development [X] Use Permit [] Coastal Permit
[] Community Plan [] Site Plan [X] Land Division (Subdivision, etc.) [] Other:

Development Type:

[X] Residential: Units 141 Acres Employees Transportation: Type
[] Office: Sq.ft. Acres Employees Mining: Mineral
[X] Commercial: Sq.ft. 53,000 Acres Employees Power: Type MW
[] Industrial: Sq.ft. Acres Employees Waste Treatment: Type MGD
[] Educational: Hazardous Waste: Type
[] Recreational: Other:
[] Water Facilities: Type MGD

Project Issues Discussed in Document:

[X] Aesthetic/Visual [X] Fiscal [X] Recreation/Parks [] Vegetation
[] Agricultural Land [X] Flood Plain/Flooding [X] Schools/Universities [X] Water Quality
[X] Air Quality [] Forest Land/Fire Hazard [X] Septic Systems [X] Water Supply/Groundwater
[X] Archeological/Historical [X] Geologic/Seismic [X] Sewer Capacity [X] Wetland/Riparian
[X] Biological Resources [X] Minerals [X] Soil Erosion/Compaction/Grading [X] Growth Inducement
[] Coastal Zone [X] Noise [X] Solid Waste [X] Land Use
[X] Drainage/Absorption [X] Population/Housing Balance [X] Toxic/Hazardous [X] Cumulative Effects
[X] Economic/Jobs [X] Public Services/Facilities [X] Traffic/Circulation [] Other:

Present Land Use/Zoning/General Plan Designation:

Multiple, including Urban Corridor Low/General Commercial C-2

Project Description: (please use a separate page if necessary)
Please see attached.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X". If you have already sent your document to the agency please denote that with an "S".

- | | |
|---|---|
| <input checked="" type="checkbox"/> Air Resources Board | <input checked="" type="checkbox"/> Office of Historic Preservation |
| <input type="checkbox"/> Boating & Waterways, Department of | <input type="checkbox"/> Office of Public School Construction |
| <input type="checkbox"/> California Emergency Management Agency | <input type="checkbox"/> Parks & Recreation, Department of |
| <input checked="" type="checkbox"/> California Highway Patrol | <input type="checkbox"/> Pesticide Regulation, Department of |
| <input checked="" type="checkbox"/> Caltrans District # <u>3</u> | <input type="checkbox"/> Public Utilities Commission |
| <input type="checkbox"/> Caltrans Division of Aeronautics | <input checked="" type="checkbox"/> Regional WQCB # <u>5</u> |
| <input type="checkbox"/> Caltrans Planning | <input type="checkbox"/> Resources Agency |
| <input checked="" type="checkbox"/> Central Valley Flood Protection Board | <input checked="" type="checkbox"/> Resources Recycling and Recovery, Department of |
| <input type="checkbox"/> Coachella Valley Mtns. Conservancy | <input type="checkbox"/> S.F. Bay Conservation & Development Comm. |
| <input type="checkbox"/> Coastal Commission | <input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy |
| <input type="checkbox"/> Colorado River Board | <input type="checkbox"/> San Joaquin River Conservancy |
| <input type="checkbox"/> Conservation, Department of | <input type="checkbox"/> Santa Monica Mtns. Conservancy |
| <input type="checkbox"/> Corrections, Department of | <input type="checkbox"/> State Lands Commission |
| <input type="checkbox"/> Delta Protection Commission | <input type="checkbox"/> SWRCB: Clean Water Grants |
| <input type="checkbox"/> Education, Department of | <input type="checkbox"/> SWRCB: Water Quality |
| <input type="checkbox"/> Energy Commission | <input type="checkbox"/> SWRCB: Water Rights |
| <input type="checkbox"/> Fish & Game Region # _____ | <input type="checkbox"/> Tahoe Regional Planning Agency |
| <input type="checkbox"/> Food & Agriculture, Department of | <input checked="" type="checkbox"/> Toxic Substances Control, Department of |
| <input type="checkbox"/> Forestry and Fire Protection, Department of | <input type="checkbox"/> Water Resources, Department of |
| <input type="checkbox"/> General Services, Department of | Other: _____ |
| <input type="checkbox"/> Health Services, Department of | Other: _____ |
| <input checked="" type="checkbox"/> Housing & Community Development | |
| <input type="checkbox"/> Native American Heritage Commission | |

Local Public Review Period (to be filled in by lead agency)

Starting Date November 21, 2014 Ending Date December 22, 2014

Lead Agency (Complete if applicable):

Consulting Firm: <u>AECOM</u>	Applicant: <u>Pappas Investments</u>
Address: <u>2020 L Street</u>	Address: <u>2020 L Street</u>
City/State/Zip: <u>Sacramento CA 95811</u>	City/State/Zip: <u>Sacramento CA 95811</u>
Contact: <u>Matthew Gerken</u>	Phone: <u>916-447-7100</u>
Phone: <u>916-414-5800</u>	

Signature of Lead Agency Representative: *Matthew Gerken for City of Sacramento* Date: 11/21/2014

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Administrative Draft Initial Study
2025 L Street/2101 Capitol Avenue Mixed-Use Project

P14-045

City of Sacramento



Contact:

Dana Mahaffey, Associate Planner
City of Sacramento Community Development Department
300 Richards Blvd., Third Floor, Sacramento, CA 95811
Telephone: (916) 808-2762
E-mail: dmahaffey@cityofsacramento.org

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Appendices

Appendix 1: Arborist Report

Appendix 2: Geotechnical Reports

Appendix 3: Phase I Environmental Site Assessments

ACRONYMS AND OTHER ABBREVIATIONS

afy	acre-feet per year
bgs	below the ground surface
BMP	best management practice
Cal-OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CBC	California Building Standards Code
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFMP	Comprehensive Flood Management Plan
cfs	cubic feet per second
CNDDDB	California Natural Diversity Database
CSS	Combined Sewer System
DBH	diameter at breast height
EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
ESD	equivalent single-family dwelling
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GIS	geographic information system
gpd	gallons per day
HB&T	HB&T Environmental, Inc.
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MOU	memorandum of understanding
MTP	Metropolitan Transportation Plan
NFIP	National Flood Insurance Program
NPDES	National Pollutant Discharge Elimination System
PG&E	Pacific Gas and Electric Company
Phase I ESA	Phase I Environmental Site Assessment
PRMP	City of Sacramento Parks and Recreation Master Plan 2005–2010
RACM	Regulated Asbestos-Containing Material
RAP	rammed aggregate pier
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SAFCA	Sacramento Area Flood Control Agency
SCS	Sustainable Communities Strategy
SCUSD	Sacramento City Unified School District

ACRONYMS AND OTHER ABBREVIATIONS

SFD	Sacramento Fire Department
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SPD	Sacramento Police Department
SRCSD	Sacramento Regional County Sanitation District
SRWTP	Sacramento Regional Wastewater Treatment Plant
SRWWTP	Sacramento Regional Wastewater Treatment Plant
SSQP	Sacramento Stormwater Quality Partnership
SWRCB	State Water Resources Control Board
TPA	Transit Priority Area
tpd	tons per day
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UWMP	2010 Urban Water Master Plan
VMT	vehicle miles traveled
WDR	waste discharge requirement

2025 L STREET / 2101 CAPITOL AVENUE MIXED-USE PROJECT

Section I - BACKGROUND

PROJECT INFORMATION		
1. Project Title:	2025 L St. / 2101 Capitol Ave. Mixed-Use Project, P14-045	
2. Project Planner:	Teresa Haenggi	
3. Environmental Planner:	Dana Mahaffey	
4. Project Applicant:	Pappas Investments	
5. General Plan Designation:	Urban Corridor Low, Traditional Neighborhood Medium	
6. Zoning:	General Commercial (C-2), Residential Office (RO)	
8. Description of Project:	See Section II	
9. Surrounding Land Uses and Setting:	See Section II	
10: Other public agencies whose approval is required:	Sacramento Metropolitan Air Quality Management District – Authority to Construct State Water Resources Control Board /Central Valley Regional Water Quality Control Board - Construction Storm Water Discharge Permits	
ENVIRONMENTAL FACTORS TO BE CONSIDERED IN ENVIRONMENTAL IMPACT REPORT:		
The environmental factors checked below will be addressed in a Focused Environmental Impact Report for the project.		
<input checked="" type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture & Forestry Resources	<input checked="" type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology & Soils
<input checked="" type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Hydrology & Water Quality
<input checked="" type="checkbox"/> Land Use & Planning	<input type="checkbox"/> Mineral Resources	<input checked="" type="checkbox"/> Noise
<input checked="" type="checkbox"/> Population & Housing	<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation
<input checked="" type="checkbox"/> Transportation/Traffic	<input type="checkbox"/> Utilities & Service Systems	<input checked="" type="checkbox"/> Mandatory Findings of Significance

Section II - PROJECT DESCRIPTION

The 2025 L Street / 2101 Capitol Avenue Mixed-Use Project (proposed project) is a request for entitlements to construct a mixed-use residential, retail/commercial, and parking garage project in midtown Sacramento. The proposed project involves the development of two project components, described below.

The proposed project consists of two new buildings that would be constructed at the following two locations:

- ▶ 2025 L Street, on the half-block on the north side of L Street, between 20th and 21st Streets
- ▶ 2101 Capitol Avenue, northeast of the intersection of 21st Street and Capitol Avenue

Exhibit 1 shows the general site vicinity, and Exhibit 2 shows a site plan and illustrates surrounding land uses.

2025 L STREET

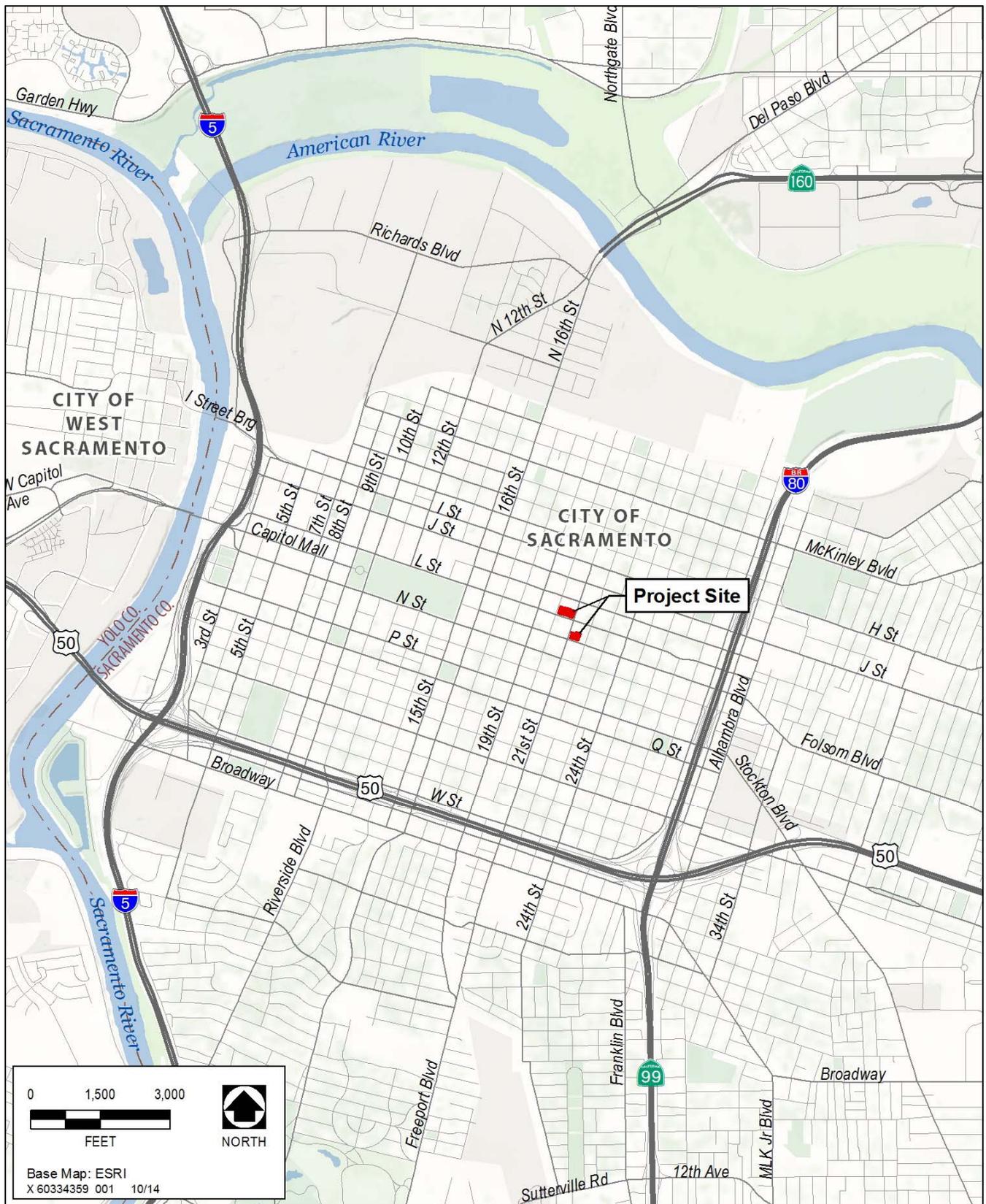
This project component would be located on the half-block north of L Street, between 20th and 21st Streets. An existing above-ground, two-story parking garage and adjacent two-story building at this location would be demolished, and a new six-story, mixed-use building would be constructed.

The new six-story building would house an approximately 47,000-square-foot grocery store on the ground floor. The grocery store would be occupied by a Whole Foods Market and Whole Foods customer parking would be located on the 2nd and 3rd floors. In addition, approximately 141 apartments in a range of sizes from approximately 544-square-foot studios to approximately 1,330-square-foot, two-bedroom units would be constructed on the 2nd through 6th floors of the building. A club and fitness center for residents, along with an outdoor kitchen, dining, and lounge spaces, would be located on the 4th floor of the building. Exhibit 3 illustrates the proposed design of this building.

Access to parking for the Whole Foods Market would be provided by a ramp from 20th Street in approximately the same location as the existing parking garage ramp. Loading and deliveries for the Whole Foods Market would take place from Kayak Alley (which is located between K and L Streets), with two loading docks recessed into the building for larger trucks. Parking for the proposed residences would be provided in a basement garage underneath the Whole Foods Market. This underground parking would be accessed from 21st Street. The proposed project includes bulb-outs at 20th Street and 21st Street to improve the streetscape appearance, enhance pedestrian access, and provide outdoor dining opportunities.

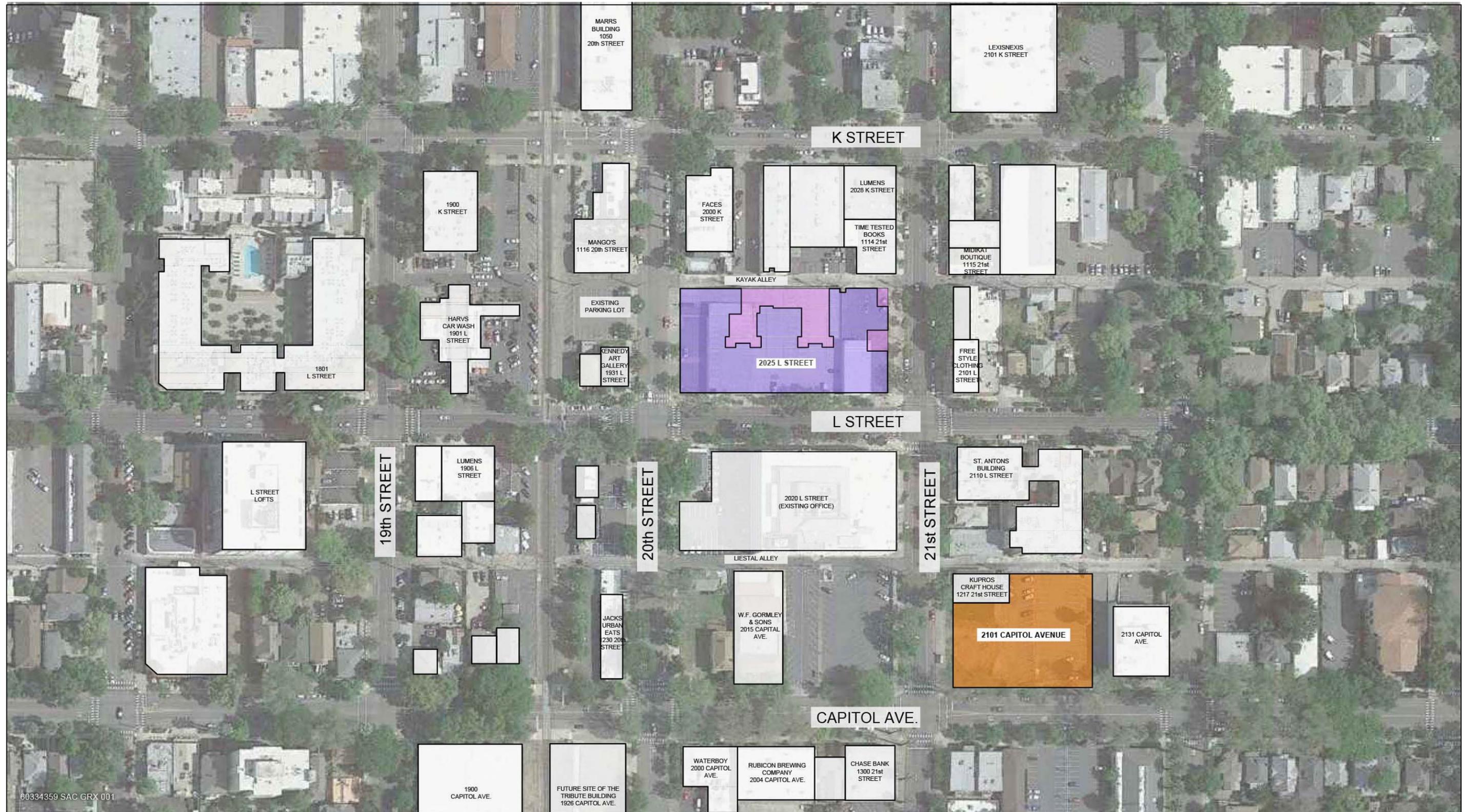
2101 CAPITOL AVENUE

This project component would be located on the northeast corner of 21st Street and Capitol Avenue. The existing surface parking lot would be replaced with a six-level structure. The structure would include approximately 13,000 square feet of retail / commercial space and parking for the retail on the ground floor. The structure would include an additional five levels of parking above the ground floor. The existing restaurant, occupied by “Kupros Craft House” would remain in its current location.



Source: Data provided by Sacramento County in 2014

Exhibit 1. Vicinity Map



Source: Provided by Investments in 2014

Exhibit 2. Project Location



Source: Provided by Pappas Investments in 2014

Exhibit 3. Conceptual Design of the Proposed 2025 L Street Component of the Project

The replacement parking would serve the existing 2020 L Street offices, which are currently served by the two-story parking garage to be demolished on the 2025 L Street property. This new parking would also replace the existing surface parking on the site. In the evenings, parking spaces in the structure would also be available for public use. The parking garage would be accessed via the alley located between L Street and Capitol Avenue, where deliveries for the proposed retail development would also be routed. Retail patrons would access parking from Capitol Avenue midway between 21st and 22nd Streets. Exhibit 4 illustrates the design of the proposed structure at 2101 Capitol Avenue.

REQUESTED ENTITLEMENTS

The City's discretionary approvals/actions that would be considered for the proposed project include, but are not limited to, the following:

- ▶ General Plan Amendment to change about 0.16 acre of land designated for Traditional Neighborhood Medium to Urban Corridor Low (2101 Capitol Avenue only) (see Exhibit 5)
- ▶ Rezone for about 0.406 acre from R-O (Residential-Office) to C-2 (General Commercial) (2101 Capitol Avenue only) (see Exhibit 5)
- ▶ Conditional Use Permit for a retail store exceeding 40,000 gross square feet (2025 L Street only)
- ▶ Tentative Map (2025 L Street only)
- ▶ Variance to deviate from the signage allowed (both properties)¹
- ▶ Site Plan and Design Review for new construction in the Central City Design Review area with deviations including height over 65 feet (both properties), potentially open space deviations (2025 L Street only), a deviation to waive a wall requirement to separate a commercial use from a residentially zoned parcel, and potentially other deviations from relevant design standards and guidelines

Review of the proposed project by the Planning and Design Commission would be conducted as a part of the environmental review and entitlements process. The proposed project entitlements would ultimately require approval by the City Council.

Other public agencies whose approval would be required include, but are not necessarily limited to:

- ▶ Sacramento Metropolitan Air Quality Management District (SMAQMD)—issues the Authority to Construct/Permit to Operate pursuant to SMAQMD Regulation 2 (Rule 201 et seq.)
- ▶ State Water Resources Control Board (SWRCB)/Central Valley Regional Water Quality Control Board (RWQCB)—issues Construction Storm Water Discharge Permits

¹ The variance to deviate from the signage allowed for the 2010 Capitol Avenue property may be processed as a separate application.

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Source: Provided by Pappas Investments in 2014

Exhibit 4. Conceptual Design of the Proposed 2101 Capitol Avenue Component of the Project



60334359 SAC GRX 004

Source: Provided by Pappas Investments in 2014

Exhibit 5. Proposed General Plan Land Use Designation and Zoning Changes

Section III - ENVIRONMENTAL CHECKLIST

EVALUATION OF ENVIRONMENTAL IMPACTS

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

INTRODUCTION

The California Environmental Quality Act (CEQA) requires the Lead Agency to examine the effects of a project on the physical conditions that exist within the area that would be affected by the proposed project. CEQA also requires a discussion of any inconsistency between the proposed project and applicable adopted general plans and regional plans.

An inconsistency between the proposed project and an adopted plan for land use change in a community would not constitute a physical change in the environment. When a proposed project diverges from an adopted plan, however, it may affect planning in the community for infrastructure and services, and the new demands generated by the proposed project may result in later physical changes in response to the proposed project, resulting in indirect effects.

In the same manner, the fact that a project brings new people or demand for housing to a community does not, by itself, change the physical conditions. An increase in population may, however, generate changes in retail demand or demand for governmental services, and the demand for housing may generate new activity in residential development. Physical environmental impacts that could result from implementing the proposed project are discussed in the appropriate technical sections of an environmental document.

This section of the Initial Study identifies the applicable land use designations, plans and policies, and permissible densities and intensities of use, and discusses any inconsistencies between these plans and the proposed project. This section also discusses agricultural and forestry resources and the effect of the proposed project on these resources.

LAND USE

The project site has been designated as Urban Corridor Low and Traditional Neighborhood Medium in the 2030 General Plan, and is zoned General Commercial (C-2) and Residential Office (RO). The 2035 General Plan has been drafted, and does not propose changes to the applicable land uses or development standards on the project site.

The Urban Corridor Low designation provides for a mix of horizontal and vertical mixed-use development and single-use commercial and residential development including retail, service, office, and residential uses; gathering places such as plazas, courtyards, or parks; and compatible public and quasi-public uses. The Urban Corridor Low designation allows buildings between two and six stories in height, an allowable density of 20 to 110 units per acre, and a floor area ratio (FAR) of between 0.3 and 3.0. Since the project proposes commercial and mixed-use development, it is anticipated that only the FAR standard would apply (not the residential density standard).

The Traditional Neighborhood Medium provides for higher-intensity, medium-density housing and neighborhood-support uses including small-lot, single-family dwellings, duplexes, triplexes, townhomes, second units, apartments and condominiums, limited neighborhood-serving commercial on lots two acres or less, and compatible public and quasi-public uses. This designation allows a density of 8 to 21 units per acre and a maximum FAR of 1.5. Since the project proposes commercial and mixed-use

development, it is anticipated that only the FAR standard would apply (not the residential density standard).

The proposed amendment extends the existing Urban Corridor Low designation to accommodate a project that will provide parking to serve existing commercial and office uses. Also, the commercial component of the project will provide neighborhood services.

Approval of the proposed project would include redesignation of approximately 0.160 acre of the 2101 Capitol Avenue property from Traditional Neighborhood Medium to Urban Corridor Low, and rezone of approximately 0.406 acre of the 2101 Capitol Avenue property from RO to C-2.

The project site is located in an urbanized portion of the midtown Sacramento community. The project site is currently developed with surface parking, a parking deck, and a two-story office building currently being used as storage. Development of the site as proposed would alter the existing landscape, but the project site has been designated for urban development in the 2030 General Plan and the Planning and Development Code. Although the proposed development would require a change in the General Plan designation and zoning, these changes would extend designations (Urban Corridor Low and C-2) that are currently used for part of the 2101 Capitol Avenue property to the entire site. The proposed development is consistent with these planning designations.

KEY APPLICABLE POLICIES

As a part of this Initial Study, the City has identified the primary applicable policies from the 2030 General Plan that will guide review of the proposed project, which are listed below.

2030 General Plan Key Urban Form Guidelines

The following are key General Plan urban form characteristics envisioned for the Urban Corridor Low that pertain to the proposed project:

- ▶ More intense mixed-use development at intersections with stepped down residential uses in between
- ▶ Building heights highest at major intersections and lower when adjacent to neighborhoods unless near a major intersection
- ▶ Building façades and entrances directly addressing the street
- ▶ Buildings with pedestrian-oriented uses such as outdoor cafes located at the street level
- ▶ Integrated (vertical and horizontal) residential uses along the corridors
- ▶ Parking located to the side or behind buildings, or accommodated in parking structures
- ▶ Attractive pedestrian streetscape, with sidewalks designed to accommodate pedestrian traffic, that includes appropriate landscaping, lighting, and pedestrian amenities/facilities
- ▶ Public and semi-public outdoor spaces such as plazas, courtyards, and sidewalk cafes

2030 General Plan Key Policies

Goal LU 2.1 City of Neighborhoods. Maintain a city of diverse, distinct, and well-structured neighborhoods that meet the community's needs for complete, sustainable, and high-quality living environments, from the historic downtown core to well-integrated new growth areas.

- ▶ **LU 2.1.4 General Plan Density Regulations for Mixed-Density Development Projects.** Where a developer proposes a multi-parcel development project with more than one residential density or FAR, the applicable density or FAR range of the General Plan Land Use Designation shall be applied to the net developable area of the entire project site rather than individual parcels within the site. Some parcels may be zoned for densities/intensities that exceed the maximum allowed density/intensity of the project site's Land Use Designation, provided that the net density of the project
- ▶ **LU 2.1.5 Neighborhood Centers.** The City shall promote the development of strategically located (e.g., accessible to surrounding neighborhoods) mixed-use neighborhood centers that accommodate local-serving commercial, employment, and entertainment uses; provide diverse housing opportunities; are within walking distance of surrounding residents; and are efficiently served by transit.
- ▶ **LU 2.1.6 Neighborhood Enhancement.** The City shall promote infill development, redevelopment, rehabilitation, and reuse efforts that contribute positively (e.g., architectural design) to existing neighborhoods and surrounding areas.

Goal LU 6.1 Corridors. Support the development of major circulation corridors that balance their vehicular function with a vibrant mix of uses that contribute to meeting local and citywide needs for retail, services, and housing and provide pedestrian-friendly environments that serve as gathering places for adjacent neighborhoods.

- ▶ **Policy LU 6.1.1 Mixed-Use Corridors.** The City shall create or improve mixed-use corridors by requiring compact development patterns that are oriented to and frame the street, establish a safe and comfortable environment for walking, and avoid encroachment upon adjacent residential areas.
- ▶ **Policy LU 6.1.2 Transformed Corridors.** The City shall facilitate the transformation of major thoroughfares dominated by auto-oriented strip commercial uses to include a broader mix of uses, both horizontal and vertical, that provides opportunities for medium- and higher-density housing, while also addressing local and citywide demand for retail and services.
- ▶ **Policy LU 6.1.4 Efficient Parcel Utilization.** The City shall promote the aggregation of small and irregular shaped parcels along corridors into larger development sites to facilitate their redevelopment.
- ▶ **Policy LU 6.1.5 Corridor Uses.** The City shall encourage residential, mixed-use, retail, service commercial, and other pedestrian oriented development along mixed-use corridors to orient to the front of properties with entries and stoops fronting the street.

- ▶ **Policy LU 6.1.6 Higher Intensity Nodes.** The City shall generally direct higher-intensity land uses and taller buildings to major intersections along arterial roads to facilitate access, enhance transit service, and promote physical differentiation along the corridor.
- ▶ **Policy LU 6.1.7 Conversion to Residential.** The City shall support proposals to convert nonresidential properties along mixed-use corridors, between major intersections, to residential or mixed-use residential uses.
- ▶ **Policy LU 6.1.8 Sidewalks and Pedestrian Amenities.** The City shall require that sidewalks along mixed-use corridors are wide enough to accommodate significant pedestrian traffic and the integration of public amenities and landscaping.
- ▶ **Policy LU 6.1.12 Visual and Physical Character.** The City shall promote development patterns and streetscape improvements that transform the visual and physical character of typical automobile-oriented corridors by:
 - Enhancing the definition of the corridor by locating buildings at the back of the sidewalk, and establishing a consistent street wall
 - Introducing taller buildings that are in scale with the wide, multi-lane street corridors
 - Locating off-street parking behind or between buildings (rather than between building and street)
 - Reducing visual clutter by regulating the number, size and design quality of signs
 - Removing utility poles and under-grounding overhead wires
 - Adding street trees

REGIONAL PLANNING

The Sacramento Area Council of Governments (SACOG) adopted the “Blueprint” in 2004, a regional vision for growth through 2050 that promotes compact, mixed-use development and more transit choices as an alternative to low-density development. As a part of the Blueprint, seven principles were developed, along with a Preferred Scenario, which illustrates on a map the consensus for regional growth through 2050.

The project is consistent with SACOG’s place types, as embodied in the Blueprint Scenario. The project site is identified as Attached Residential, Employment Focus Mixed-Use Center or Corridor, and Retail on the Blueprint Preferred Scenario (SACOG 2004a). The Attached Residential place type anticipates townhomes, condominiums, apartments, and mixed-use development in two- to five-story buildings between 16 and 100 units per acre. The Retail place type anticipates 50 employees per acre on average and the Employment Focus Mixed-Use Center or Corridor anticipates a mix of compact housing (in three- to six-story buildings), retail, and office development (SACOG 2004b).

The proposed project is also consistent with the Blueprint Growth Principles, which accompany the regional vision for growth through 2050. Blueprint Principles include (SACOG 2004c):

1. Transportation Choices: Developments should be designed to encourage people to sometimes walk, ride bicycles, ride the bus, ride light rail, take the train, or carpool. Use of Blueprint growth concepts for land use and right-of-way design would encourage use of these modes of travel and the remaining auto trips would be, on average, shorter.

2. Mixed-Use Developments: Buildings homes and shops, entertainment, office, and even light industrial uses near each other can create active, vital neighborhoods. This mixture of uses can be either in a vertical arrangement (mixed in one building) or horizontal (with a combination of uses in close proximity). These types of projects function as local activity centers, contributing to a sense of community, where people tend to walk or bike to destinations and interact more with each other. Separated land uses, on the other hand, lead to the need to travel more by automobile because of the distance between uses. Mixed land uses can occur at many scales. Examples include: a housing project located near an employment center, a small shopping center located within a residential neighborhood, and a building with ground floor retail and apartments or condominiums on the upper floor(s).

3. Compact Development: Creating environments that are more compactly built and use space in an efficient but aesthetic manner can encourage more walking, biking, and public transit use, and shorten automobile trips.

4. Housing Choice and Diversity: Providing a variety of places where people can live – apartments, condominiums, townhouses, and single-family detached homes on varying lot sizes – creates opportunities for the variety of people who need them: families, singles, seniors, and people with special needs. This issue is of special concern for the people with very low-, low-, and moderate-income, for whom finding housing close to work is challenging. By providing a diversity of housing options, more people have a choice.

5. Use of Existing Assets: In urbanized areas, development on infill or vacant lands, intensification of the use of underutilized parcels (for example, more development on the site of a low-density retail strip shopping center), or redevelopment can make better use of existing public infrastructure. This can also include rehabilitation and reuse of historic buildings, denser clustering of buildings in suburban office parks, and joint use of existing public facilities such as schools and parking garages.

6. Quality Design: The design details of any land use development - such as the relationship to the street, setbacks, placement of garages, sidewalks, landscaping, the aesthetics of building design, and the design of the public right-of-way (the sidewalks, connected streets and paths, bike lanes, the width of streets) - are all factors that can influence the attractiveness of living in a compact development and facilitate the ease of

walking and biking to work or neighborhood services. Good site and architectural design is an important factor in creating a sense of community and a sense of place.

7. Natural Resources Conservation: This principle encourages the incorporation of public use open space (such as parks, town squares, trails, and greenbelts) within development projects, over and above state requirements; along with wildlife and plant habitat preservation, agricultural preservation, and promotion of environment-friendly practices such as energy efficient design, water conservation and stormwater management, and shade trees to reduce the ground temperatures in the summer. In addition to conserving resources and protecting species, this principle improves overall quality of life by providing places for everyone to enjoy the outdoors with family outings and by creating a sense of open space.

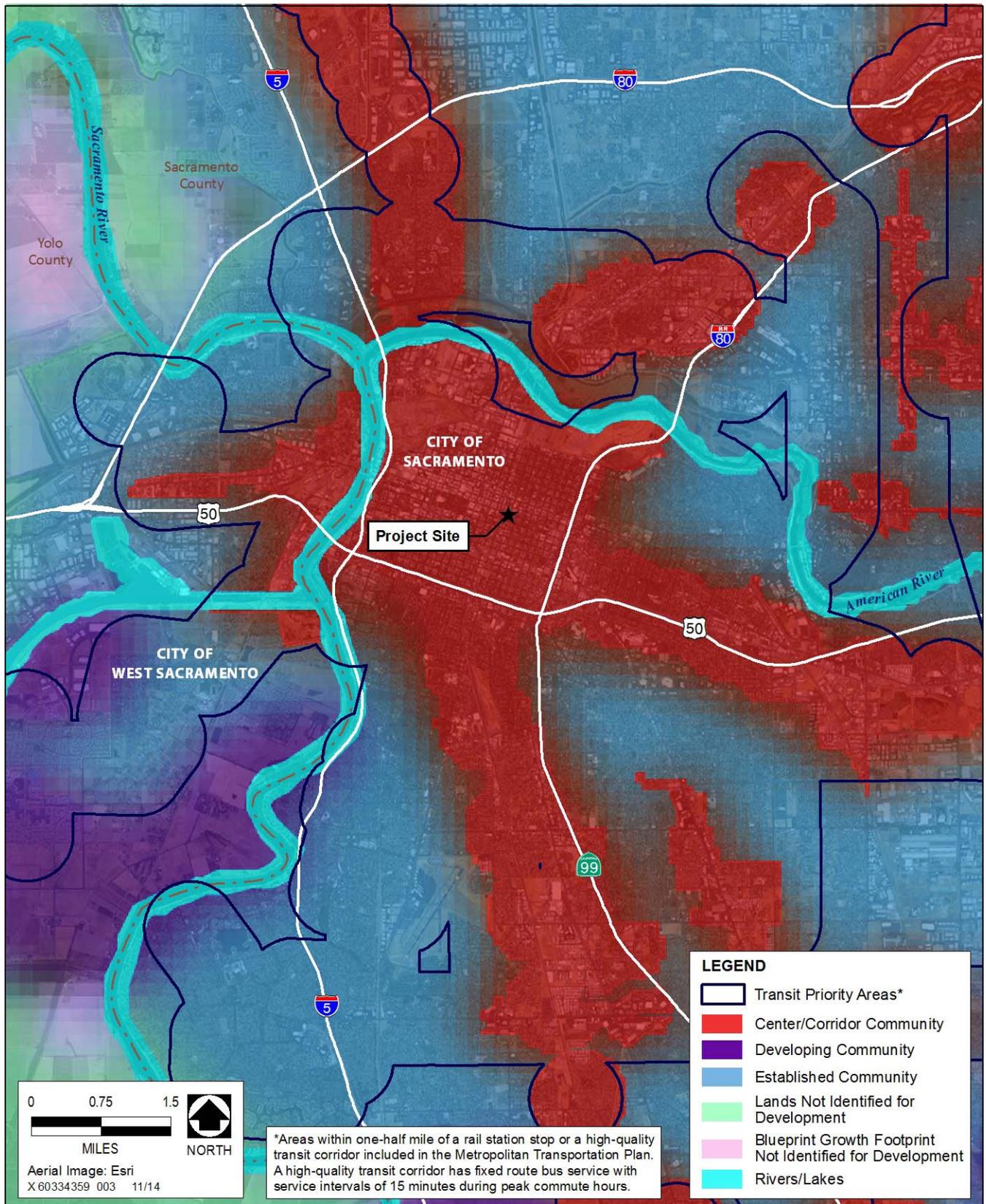
The project proposes mixed-use development and is located in an area with transit, bicycle, and pedestrian transportation options. The project proposes relatively compact development and is in an area with existing and proposed compact development. The project proposes use of existing assets by proposing development of vacant and underutilized lands served by existing infrastructure.

The Preferred Blueprint Scenario was incorporated into SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for 2035, the long-range transportation plan for the region. The MTP/SCS designates the project site as a Center and Corridor Community and a Transit Priority Area (TPA) (see Exhibit 6). A Center and Corridor Community is typically

“...higher density and more mixed than surrounding land uses. Centers and Corridors are identified in local plans as historic downtowns, main streets, commercial corridors, rail station areas, central business districts, town centers, or other high density destinations. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region. Some have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more supportive of walking and bicycling than other Community Types” (SACOG 2011a:32).

A TPA is within 0.5 mile of a major transit stop (existing or planned light rail, street car, or train station) or an existing or planned high-quality transit corridor (with fixed route bus service at intervals of no longer than 15 minutes during peak commute hours) (SACOG 2011a:46).

The relatively compact and mixed-use character of the vicinity of the project site places existing and proposed residents in proximity to jobs and commercial services. This, along with the presence of transit, makes more walking, bicycling, and transit trips practical, eliminating some vehicle trips. Given the character of the project area, trips that do occur by automobile would be relatively short. The proposed project's location and design would help to reduce vehicle miles traveled (VMT) and associated physical environment effects (i.e., noise, air pollutant emissions, and greenhouse gas emissions).



Source: SACOG 2011a

Exhibit 6. SACOG Community Types and Transit Priority Areas

The reduction in VMT associated with the location and urban design environment of the project site has been demonstrated through the travel demand analysis that SACOG performed to support the MTP/SCS. The regional VMT per capita in 2008 was estimated to be 26 miles per day. For the traffic analysis zones that include the project site, the average per-capita VMT in 2008 was approximately 7 to 8 miles per day. In 2035, forecast regional average per-capita VMT is 24 miles per day, whereas the project site and vicinity would have an average of approximately 4 to 7 miles per day (SACOG 2011b:84).

AGRICULTURAL AND FORESTRY RESOURCES

The project site does not contain soils designated as Important Farmland (i.e., Prime Farmland, Unique Farmland or Farmland of Statewide Importance) (NRCS 2014). The site is not zoned for agricultural uses, and there are no Williamson Act contracts that affect the project site. No existing agricultural or timber harvest uses are located on or in the vicinity of the project site. There are no areas on the project site that qualify as forest lands or timberlands, and no Timberland Production Zone designations. Development of the site would result in no impacts on agricultural or forestry resources

TOPIC AREAS TO BE ADDRESSED IN A FOCUSED ENVIRONMENTAL IMPACT REPORT

A Focused EIR will be prepared for the proposed project, to address topics with the potential for significant environmental impacts. The topics which will be addressed in the Focused EIR include:

- ▶ Aesthetics
- ▶ Air Quality
- ▶ Cultural Resources
- ▶ Energy
- ▶ Greenhouse Gas Emissions
- ▶ Land Use and Planning (discussion)
- ▶ Population and Housing (discussion)
- ▶ Noise and Vibration
- ▶ Traffic/Transportation
- ▶ Mandatory Findings of Significance (not fully addressed in this Initial Study)

These topics are not addressed further in this Initial Study.

BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
2. Biological Resources				
Would the project:				
A) Create a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B) Result in substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal species?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The project site is located in midtown Sacramento and has been previously developed with residential and commercial uses since approximately 1895. The 2025 L Street property is currently developed with a parking garage, paved surface parking lots, and a two-story office building currently being used for storage. Street trees are present in linear planting strips, along with landscaped beds, along 20th and 21st streets.

The 2101 Capitol Avenue site is occupied by a paved surface parking lot and a barren area with sparse cover of ruderal (i.e., weedy) vegetation. Landscaped beds and street trees are present along 21st Street and Capitol Avenue and two palm trees are present within the existing parking lot.

Vegetation on the project site is comprised entirely of ornamental landscaping and there are no native plant communities or natural habitats present. There are no wetlands or waterways on or adjacent to the project site and no sensitive plant communities. Habitat on the project site is classified as urban, according to the California Department of Fish and Wildlife's (CDFW's) California Wildlife Habitat Relationship System (Mayer and Laudenslayer 1988).

According to a tree inventory conducted for the proposed project, there are a total of 24 trees of 13 different species on the project site (Sierra Nevada Arborists 2014).² One of these trees is native, a 6-inch diameter at breast height (DBH) valley oak (*Quercus lobata*); the remaining trees are nonnative landscape trees. The most abundant tree species on the project site is elm (*Ulmus* spp.) with six trees. Trident maple (*Acer buergeranum*) is the second most abundant with three trees. Other tree species

² The tree inventory prepared for the proposed project includes two trees along Capitol Avenue between 20th and 21st and four trees on the west side of 21st Street between L Street and Capitol Avenue. These areas are not part of the project site. This Initial Study focuses on trees on the project site that could be affected by the implementation of the project.

present include sweet gum (*Liquidambar styraciflua*), Modesto ash (*Fraxinus velutina 'modesto'*), and southern magnolia (*Magnolia grandiflora*). Most of the trees on site (all but four) have a DBH of 6 inches or greater and would be considered mature. However, none of the trees present qualify as Heritage Trees, which the City defines as any tree with a trunk circumference of 100 or more inches and of good quality in terms of health, vigor, and conformity for its species. All but two of the on-site trees are considered “City Street Tees” because they are growing within the public street rights-of-way.

Plant species present in the landscaped beds include bigleaf periwinkle (*Vinca major*), English ivy (*Hedera helix*), golden euonymus (*Euonymus fortunei*), and privet (*Ligustrum sp.*). Ruderal vegetation observed at the 2101 Capitol Avenue property includes Italian rye (*Festuca perenne*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), wheat (*Triticum aestivum*), and prickly lettuce (*Lactuca serriola*). No special-status plant species are located on the project site.

Urban landscapes, such as the project study area, typically provide low-value habitat for most wildlife species because of an overall lack of vegetative cover and high levels of human disturbance. Wildlife on the project site is dominated by species that have adapted to human activity and the urban landscape setting. Some of the species observed on the site by AECOM biologists include house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), bushtit (*Psaltriparus minimus*), American goldfinch (*Carduelis tristis*), American crow (*Corvus branchyrhychos*), American robin (*Turdus migratorius*), rock pigeon (*Columba livia*), northern mockingbird (*Mimus polyglottos*), black phoebe (*Sayornis nigricans*), yellow-rumped warbler (*Setophaga coronata*), Cooper’s hawk (*Accipiter cooperi*), and gray squirrel (*Sciurus griseus*). Other wildlife species that may use the developed and disturbed habitats present on or immediately adjacent to the project site include brown rat (*Rattus norvegicus*), Virginia opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*), which are known to occur in the midtown Sacramento area.

STANDARDS OF SIGNIFICANCE

For purposes of this Initial Study, an impact would be significant if any of the following conditions or potential thereof, would result with implementation of the proposed project:

- ▶ creation of a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected;
- ▶ substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal; or
- ▶ affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands).

For the purposes of this Initial Study, “special-status” has been defined to include those species, which are:

- ▶ listed as endangered or threatened under the federal Endangered Species Act (ESA) (or formally proposed for, or candidates for, listing);

- ▶ listed as endangered or threatened under the California Endangered Species Act (CESA) (or proposed for listing);
- ▶ designated as endangered or rare, pursuant to California Fish and Game Code (Section 1901);
- ▶ designated as fully protected, pursuant to California Fish and Game Code (Sections 3511, 4700, or 5050);
- ▶ designated as species of concern by U.S. Fish and Wildlife Service (USFWS), or as species of special concern to California Department of Fish and Wildlife (CDFW);
- ▶ plants or animals that meet the definition of rare or endangered under CEQA.

ANSWERS TO CHECKLIST QUESTIONS

2 (A)

Based on the Phase I Environmental Site Assessment conducted by Wallace Kuhl & Associates (Wallace Kuhl), there is no known hazardous materials contamination on either project site. Wallace Kuhl noted, however, that a gasoline station may have been located at either project site prior to 1950, and therefore it is possible that previously unknown underground storage tanks (USTs) or contaminated soil from gasoline spills could be encountered during project-related construction activities. Disposal of waste, soil, and other materials from the demolition of existing buildings and excavation for underground parking and building foundations will be required to comply with City and State requirements and be directed to appropriate disposal facilities, as described in the “Hazards and Hazardous Materials” section of this Initial Study.

Construction dewatering may be required where groundwater levels are shallow. The project applicant will be required to prepare a memorandum of understanding (MOU) with the City of Sacramento related to the proposed dewatering activities and file a notice of intent with the Central Valley RWQCB to obtain coverage under Order R5-2013-074 or an Individual National Pollutant Discharge Elimination System (NPDES) Permit or waste discharge requirement (WDR) for construction dewatering activities. Along with the notice of intent and the MOU, the project applicant would prepare a site-specific construction dewatering plan to ensure the project is authorized under the proper permit. If contaminated groundwater was encountered during construction activities, the permittee would be required to consult with the Central Valley RWQCB to determine the specific permit terms, disposal methods, and/or the types of treatment. The permit terms, disposal methods, types of treatment, and other aspects of this existing requirement are designed to avoid public and environmental hazards. Therefore, compliance with the above regulations would minimize potential exposure of the environment to contaminated groundwater (if it was encountered).

The project site is within a currently developed urban area that supports residential, retail, and commercial uses. No project uses are anticipated that would involve the use of significant quantities of hazardous materials. Retail and commercial services (such as restaurants and grocers) proposed at the project site could involve relatively small quantities of toxic materials. However, these businesses must comply with State regulations cited in “Hazards and Hazardous Materials” related to use,

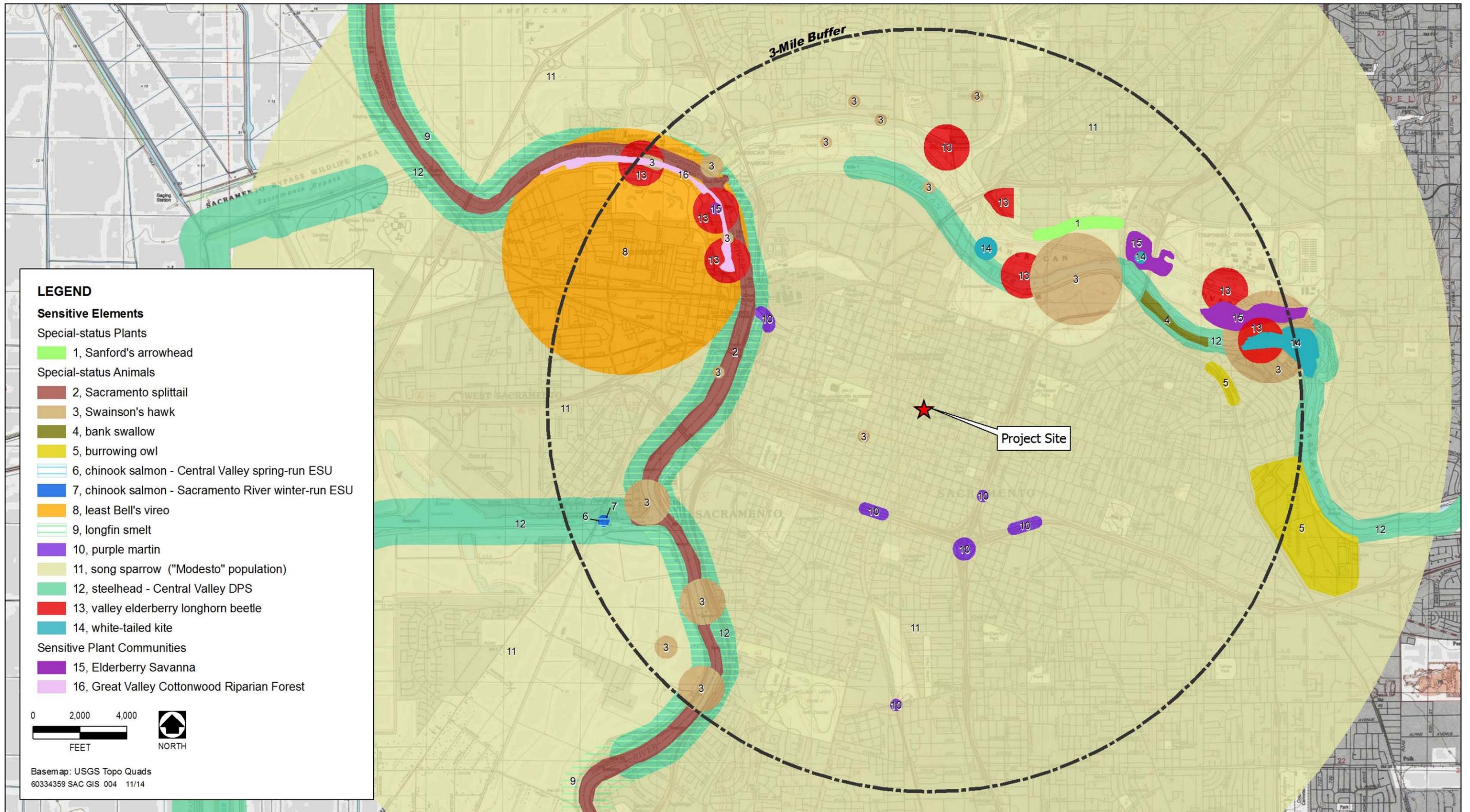
handling, and worker safety. While project development could result in an increase in air, water, and soil pollutants generated at the project site, this increase is not anticipated to be substantial and will be required to be in compliance with federal, State, and local policies designed to minimize the potential impacts on plant or animal populations from this incremental increase in pollutants. In addition, project-specific mitigation measures proposed in “Hazards and Hazardous Materials” would reduce all potential impacts related to the release or exposure of hazards or hazardous materials to a less-than-significant level and there would be no hazard to plant or animal communities in the project study area or elsewhere. Therefore, this impact would be **less than significant**. No mitigation measures would be required.

2 (B)

A search of the California Natural Diversity Database (CNDDDB) identified occurrence records for 16 threatened or endangered wildlife species and three threatened or endangered plant species in the Sacramento East and nine surrounding quadrangles. The distribution of CNDDDB occurrence records within 3 miles of the project site are shown in Exhibit 7. Most of these species are associated with wetland, aquatic, or riparian habitats that do not exist on the project site. Two endangered or threatened wildlife species known to occur in the project vicinity that are not restricted to wetland, aquatic, or riparian habitats are valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) and Swainson’s hawk (*Buteo swainsonii*). There are no elderberry shrubs on or near the project site that could support valley elderberry longhorn beetle and this species is not discussed further.

Swainson’s hawk, a species listed as threatened under CESA, will occasionally nest in urban areas if there is a suitable nest tree and the site is within 2 miles of foraging habitat (England et al. 1995 in Estep 2009a). Swainson’s hawks typically nest in tall trees (around 50 feet tall on average) that provide a panoramic view of the hawk’s territory, have dense enough foliage to visually protect the nest from disturbances, and are within 2 miles of foraging habitat (Estep 1989; Anderson et al. 2007). Most urban nest trees are ornamental pines (*Pinus* spp.), redwoods (*Sequoia sempervirens*, *S. gigantea*), or native valley oaks (England et al. 1995 in Estep 2009a; Estep, pers. comm., 2007a). Suitable foraging habitat consists of alfalfa, disked fields, fallow fields, dry-land pasture, beets, tomatoes, irrigated pasture, grains, other row crops, and uncultivated grasslands (Estep 1989; Estep, pers. comm., 2007b; Estep 2009a). These habitats are not located on or near the project site. A limited amount of potential foraging habitat is present within approximately 2 miles of the project site at the Downtown Railyards site, vacant lots on the banks of the Sacramento River, at Sutter’s Landing Regional Park, and along the American River Parkway.

Although there are five large, tall elm trees on the project site, Swainson’s hawks are unlikely to nest on the project site because these trees are in poor to fair condition and lack the dense canopy structure preferred by this species. The remaining trees are smaller and do not provide panoramic views of the surrounding landscape and therefore would not be preferred for nesting. Swainson’s hawks are visually oriented and require large, wide-open spaces and visibility from the nest (Estep, pers. comm., 2007a; Estep 2009b). There are no trees on or adjacent to the project site that provide the appropriate size, structure, and visibility to make suitable nest sites for Swainson’s hawk. Additionally, suitable foraging habitat within approximately 2 miles of the site is very limited. Reproductive success decreases for Swainson’s hawks as distance from foraging habitat increases and Swainson’s hawks nesting in urban



Source: CNDDDB 2014

Exhibit 7. CNDDB Occurrences

areas have been shown to have lower reproductive success than those nesting in rural areas. Therefore, urban settings, such as the project study area, are considered low-quality nesting habitat (England et al. 1995; England et al. 1997) and this species is not expected to nest on or adjacent to the project site.

The project site does not support native plant communities or natural habitats and does not provide suitable habitat for any threatened or endangered species of plant or animal. Therefore, project implementation would not result in direct effects to any listed species. Project implementation would not result in substantial degradation of the quality of the environment and therefore would not result in indirect effects that could reduce the habitat of any threatened or endangered plant or animal species or cause a threatened or endangered plant or animal population to drop below self-sustaining levels.

2 (C)

A search of the CNDDDB identified occurrence records for 25 wildlife species and 14 plant species that are not listed as threatened or endangered under the federal ESA or CESA, but are California species of special concern or otherwise meet the definition of special status. The distribution of CNDDDB occurrence records for special-status species and sensitive plant communities within 3 miles of the project site is shown in Exhibit 7. Most of these records are from the Sacramento and American rivers and are for species associated with aquatic or riparian habitats that do not occur on the project site.

The project site does not contain sensitive plant communities or suitable habitat for special-status plant species known to occur in the region. The majority of special-status wildlife species known to occur within the larger nine-quadrangle search area have no potential to occur on the project site because they are also associated with habitats that are not present on the project site (e.g., vernal pools, freshwater marsh, or other aquatic or riparian habitats). Additionally, species associated with grassland habitats, such as American badger (*Taxidea taxus*), northern harrier (*Circus cyaneus*), grasshopper sparrow (*Ammodramus savannarum*), and burrowing owls (*Athene cunicularia*) would not be expected to use the project site because there is no open grassland habitat present. There are no burrows or open, friable ground available for burrowing owls or badgers. Western red bat is the only special-status bat species that has been documented in the project study area. This species roosts primarily in the foliage of riparian trees near open areas for foraging. This type of habitat is not present. There are no suitable structures present for special-status bat species that use human-made structures, such as pallid bat (*Antrozus pallida*). AECOM biologists toured the on-site structures, and observed that the structures on site do not contain crevices or cavities where bats could roost.

White-tailed kite (*Elanus leucurus*), a fully protected species under the California Fish and Game Code, will sometimes nest in urban areas. However, when it does nest in urban areas, it is generally at the edge of urban areas near agricultural fields or grassland foraging habitats or within urban parks. They most often build their nests near the tops of trees (generally 20 to 100 feet above ground) with dense canopies (CDFW 2005). None of the trees on the project site have the height and dense canopy structure that would protect this species from surrounding human disturbances. This species rarely nests more than 0.5-mile from its preferred foraging habitats. Preferred foraging habitat in the Central Valley includes alfalfa and other hay crops, irrigated pastures, sugar beets, and tomatoes (Erichsen et al. 1994; Estep, pers. comm., 2014), but they also forage in dry pastures, annual grasslands, open oak

woodlands, rice stubble fields, seasonal wetlands, marsh edges, and occasionally in orchards (Estep, pers. comm., 2014). None of these habitats occur on or adjacent to the project site or within 0.5 mile of the project site. Therefore, this species is not expected to occur on the project site.

Although special-status raptors or other special-status birds are not expected to occur, migratory birds and raptors protected under the Migratory Bird Treaty Act (MBTA) and Section 3503 of the California Fish and Game Code could nest in trees on or adjacent to the project site and could be disturbed by construction activities conducted during the bird nesting season, which is generally considered to be February 15-September 15. Project construction would result in direct removal of 17 trees from the project site. Tree removal and ground disturbances associated with project construction could result in the direct loss or destruction of active nests of birds protected under the MBTA or California Fish and Game Code. Project construction could also result in disturbance of breeding birds, causing nest abandonment by the adults and subsequent mortality of chicks and eggs. While loss of some nests of common migratory bird species (e.g., northern mockingbird, house sparrow) would not be considered a significant impact under CEQA because it would not result in a substantial effect on their populations locally or regionally, destruction of any migratory bird or raptor nest is a violation of the MBTA and Section 3503 of the California Fish and Game Code. The potential loss of an active nest or mortality of chicks and eggs of common raptor species and migratory birds would be an effect on other species of special concern to agencies or natural resource organizations. Although this is a developed urban site, and for the reasons outlined above, there is a very low likelihood of any impact, out of an abundance of caution, the City has identified a mitigation measure (listed below) to reduce these potential impacts to a **less-than-significant** level. No further mitigation is required.

The project site contains 24 trees, of which 22 trees are designated as City Street Trees protected under Chapter 12.56 of the City's Code. Construction of the proposed project is expected to result in the removal of a total of 17 trees, of which 15 are City Street Trees with an aggregate DBH of 183 inches (Sierra Nevada Arborists 2014).³ The City's policy is to retain trees whenever feasible and a permit is required to remove City Street Trees that cannot feasibly be retained. The removal of Heritage Trees and City Street Trees would be considered a significant impact requiring mitigation. Implementation of the mitigation measures listed below would reduce these potential impacts to a **less-than-significant** level.

MITIGATION MEASURES

The following mitigation measures shall be implemented by the project applicant to reduce potential impacts on nesting raptors and migratory birds to a less-than-significant level:

- ▶ Bio-1: If tree removal or construction activities on the project site are to begin during the nesting season for raptors or other protected bird species in the region (generally February 15-September 15), a qualified biologist shall be retained by the project applicant to conduct preconstruction surveys in areas of suitable nesting habitat for common raptors and other bird species protected by the MBTA or California Fish and Game Code located within 500 feet of project activity. Surveys

³ A total of 17 trees would be removed as a part of implementation of the project and two of the trees that would be removed are in the parking lot of the 2101 Capitol Avenue property and are not City Street Trees.

shall be conducted no more than 10 days before tree removal or ground disturbance is expected to occur.

- If no active nests are found, no further mitigation is required. If active nests are found, the construction contractor shall avoid impacts on such nests by establishing a no-disturbance buffer around the nest. The appropriate buffer size for all nesting birds shall be determined by a qualified biologist, but shall extend at least 50 feet from the nest. Buffer size will vary depending on site-specific conditions, the species of nesting bird, nature of the project activity, the extent of existing disturbance in the area, visibility of the disturbance from the nest site, and other relevant circumstances.
- No construction activity shall occur within the buffer area of an active nest until a qualified biologist confirms that the chicks have fledged and are no longer dependent on the nest, or the nesting cycle has otherwise completed. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. The qualified biologist shall determine the status of the nest at least weekly during the nesting season. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance shall be increased until the agitated behavior ceases.
- ▶ Bio-2: The project applicant shall comply with tree permit requirements in effect at the time of project approval for removal, pruning, or soil disturbance within the canopy dripline of a Heritage or City Street Tree. In addition, the following measures shall be implemented to reduce impacts from the removal of City Street Trees:
 - City Street Trees to be removed for construction purposes having a DBH of 6 inches or greater shall be replaced with the same number of 24-inch box size trees. City Street Trees to be removed having a DBH less than 6 inches shall be replaced with the same number of 15-gallon size trees (as required under City Code Section 12.56.090 based on the sizes of the City Street Trees to be removed). Replacement trees for City Street Trees shall be replanted within the City right-of-way in coordination with the City's Urban Forester. If replacement trees for City Street Trees cannot be accommodated in the City's right-of-way, they shall be planted on site and incorporated into the project landscape plan or be planted at another off-site location at the City's direction.
 - Replacement plantings shall consist of shade tree species approved by the City Urban Forestry Director.
 - Tree planting shall comply with the City's landscaping requirements (City Code Sections 17.612.010 and 17.612.040).
 - Canopy or root pruning of any retained City Street Trees to accommodate construction shall be conducted according to applicable ANSI A300 tree pruning standards and International Society of Arboriculture best management practices.

- All City Street Trees shall be protected from construction-related impacts pursuant to Sacramento City Code Section 12.64.040 (Heritage Trees) and Section 12.56.060 (City Street Trees). Full details of tree protection measures are available in the arborist report for the project (Sierra Nevada Arborists 2014), included as Appendix 1.

FINDINGS

All additional significant environmental effects of the proposed project relating to biological resources are less than significant or can be reduced to a less-than-significant level with implementation of mitigation measures.

GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
4. Geology and Soils				
Would the project allow a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The project site is located in the Sacramento Valley, which forms the northern portion of the Great Valley geomorphic province of California. The Great Valley is bounded on the west by the Great Valley fault zone and the Coast Ranges and on the east by the Sierra Nevada and the Foothills Fault zone. Relatively few faults in the Great Valley have been active during the last 11,700 years (i.e., Holocene time). The closest faults to the project site with evidence of displacement during Holocene time are the Dunnigan Hills Fault (approximately 35 miles to the northwest) and the Cleveland Hills Fault (approximately 60 miles to the north). In general, active faults are located along the western margin of the Central Valley (e.g., the Great Valley Fault) and within the Coast Ranges (Jennings 1994).

Engineering design and construction of buildings and other infrastructure in California is governed primarily by the California Building Standards Code (CBC). The State Earthquake Protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by earthquakes. The CBC requires an evaluation of seismic design that falls into Categories A–F (where F requires the most earthquake-resistant design) for structures designed for a project site. The CBC philosophy focuses on “collapse prevention,” meaning that structures are designed to prevent collapse for the maximum level of ground shaking that could reasonably be expected to occur at a specific site. Chapter 16 of the CBC specifies exactly how each seismic design category is to be determined on a site-specific basis, through the site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls. This chapter regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For Seismic Design Categories D, E, and F, Chapter 18 requires these same analyses plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires measures such as ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these as a part of structural design. The potential for liquefaction and soil strength loss must be evaluated for site-specific

peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions. Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18.

Finally, Appendix Chapter J of the CBC regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

STANDARDS OF SIGNIFICANCE

For the purposes of this Initial Study, an impact is considered significant if it allows the proposed project to be built that would either introduce geologic or seismic hazards by allowing the construction of the proposed project on such a site without protection against those hazards.

ANSWERS TO CHECKLIST QUESTION

Surface ground rupture along faults is generally limited to a linear zone a few yards wide. Since there are no active faults mapped across or in the vicinity of the project site, nor is the project site located within an Alquist-Priolo Earthquake Special Study Zone, fault ground rupture is unlikely (California Geological Survey 2012; Jennings 1994).

Geotechnical reports have been prepared by Wallace Kuhl for both the 2025 L Street and 2101 Capitol Avenue properties (see Appendix 2). Both reports contain the results of the site-specific seismic design parameters calculated by Wallace Kuhl, as required by the 2013 CBC (Wallace Kuhl & Associates 2014a:3-4, 2014b:3-4). The results of these calculations indicate that both sites fall into CBC seismic design category D. The analyses required by the CBC for this seismic design category (e.g., liquefaction, settlement, unstable soils, and expansive soils) are contained in the geotechnical reports and are discussed in further detail below. Both geotechnical reports contain site-specific engineering design and construction recommendations in accordance with the CBC to reduce potential damage from strong seismic ground shaking. The project applicant is required by law to comply with the CBC requirements, including site-specific engineering design and construction recommendations in the geotechnical reports.

Wallace Kuhl indicated that, because the 2101 Capitol Avenue property is primarily underlain by low to medium plasticity silts and clays, which are typically not susceptible to liquefaction, the liquefaction potential at this site is low (Wallace Kuhl & Associates 2014b:2-4).

Based on the soil conditions at the 2025 L Street property, Wallace Kuhl performed a site-specific liquefaction analysis for this site. The results of this analysis predicted that the entire soil profile at the 2025 L Street property would likely be subject to liquefaction. The worst-case estimate of total and differential post-liquefaction settlement was calculated to be approximately 6 inches of total seismically induced settlement. Wallace Kuhl anticipates that approximately 3 inches of differential settlement would occur across 50 feet, or the shortest dimension of the structure, whichever is less (Wallace Kuhl & Associates 2014a:2-5).

The geotechnical reports contain detailed recommendations for support of the proposed structures using any of one of the following systems (Wallace Kuhl & Associates 2014a:15-21, 2014b:15-21):

- ▶ an alternative foundation system, such as shallow foundations supported on an improved subgrade (i.e., Geopier® rammed aggregate piers [RAPs]);
- ▶ drilled, auger cast-in-place piles; or
- ▶ drilled cast-in-place reinforced concrete piers.

The geotechnical reports contain appropriate recommendations for project design that would be reviewed by the City engineers and implemented, as appropriate. Engineering design and construction of the proposed structures is required by law to adhere to the requirements of the CBC.

At the 2025 L Street property, Wallace Kuhl determined that the near-surface soils—which consist of granular silts and sands—are not considered expansive. At the 2101 Capitol Avenue property, Wallace Kuhl determined that the near-surface soils—which consist of granular silts—are also not considered expansive.

Compliance with existing regulations would ensure that the potential for damage to project-related facilities from geologic or soil hazards, including surface fault rupture, seismic shaking, liquefaction, settlement, and unstable soils is a less-than-significant impact.

MITIGATION MEASURES

None.

FINDINGS

The proposed project would have less-than-significant impacts relating to geology and soils. No mitigation measures would be required.

HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
5. Hazards and Hazardous Materials				
Would the project:				
A) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL AND REGULATORY SETTING

Federal regulations and regulations adopted by SMAQMD apply to the identification and treatment of hazardous materials during demolition and construction activities. Failure to comply with these regulations respecting asbestos may result in a Notice of Violation and civil penalties under State and/or federal law, in addition to possible action by the U.S. Environmental Protection Agency (EPA) under federal law.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT RULE 902 AND COMMERCIAL STRUCTURES

The work practices and administrative requirements of Rule 902 apply to all commercial renovations and demolitions where the amount of Regulated Asbestos-Containing Material (RACM) is greater than:

- ▶ 260 linear feet of RACM on pipes,
- ▶ 160 square feet of RACM on other facility components, or
- ▶ 35 cubic feet of RACM that could not be measured otherwise.

The administrative requirements of Rule 902 apply to any demolition of commercial structures, regardless of the amount of RACM.

Federal law covers a number of different activities involving asbestos, including demolition and renovation of structures (40 Code of Federal Regulations Section 61.145).

ASBESTOS SURVEYS

To determine the amount of RACM in a structure, Rule 902 requires that a survey be conducted prior to demolition or renovation unless:

- ▶ the structure is otherwise exempt from the rule (residential structures or structures with very small quantities of “suspect material”), or
- ▶ any material that has a propensity to contain asbestos (so-called "suspect material") is treated as if it is RACM.

Surveys must be done by a licensed asbestos consultant and require laboratory analysis. Asbestos consultants are listed in the phone book under "Asbestos Consultants." Large industrial facilities may use non-licensed employees if those employees are trained by EPA.

REMOVAL PRACTICES, REMOVAL PLANS/NOTIFICATION, AND DISPOSAL

If the survey shows that there are asbestos-containing materials present, SMAQMD recommends leaving it in place.

If it is necessary to disturb the asbestos as part of a renovation, remodel, repair, or demolition, the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal-OSHA) and the Contractors State License Board require a licensed asbestos abatement contractor be used to remove the asbestos-containing material.

There are specific disposal requirements in Rule 902 for friable asbestos-containing material, including disposal at a licensed landfill. If the material is non-friable asbestos, any landfill willing to accept asbestos-containing material may be used to dispose of the material.

STANDARDS OF SIGNIFICANCE

For the purposes of this Initial Study, an impact is considered significant if the proposed project would:

- ▶ expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- ▶ expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials; or
- ▶ expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

ANSWERS TO CHECKLIST QUESTIONS

5 (A)

Wallace Kuhl was retained by the project applicant to prepare a Phase I Environmental Site Assessment (Phase I ESA) for both the 2025 L Street and 2101 Capitol Avenue properties. These ESAs are included in Appendix 3 of this Initial Study. As part of the Phase I ESAs, Wallace Kuhl performed a review of pertinent Sanborn maps, which indicated that the 2025 L Street property was previously developed with residences by 1895, then an auto shop and a paint shop by 1915. By the 1950s, several of the residences had been demolished and the project site contained a restaurant, awning factory, machine shop, an automotive repair facility, and potentially a gasoline station. By 1957, all structures had been removed from the central portion of the site and it was being used for parking.

Additionally, a dwelling along 21st Street had been redeveloped into a restaurant. By 1965, the central portion had become a “two-deck parking garage,” and an office building had been erected on the southeastern portion of the site (Wallace Kuhl & Associates 2013a:10–11).

Wallace Kuhl’s review of Sanborn maps for the 2101 Capitol Avenue property indicated that the site was developed with residential structures between 1895 and 1950. A structure at 2101 Capitol Avenue was constructed around 1950 and was used as a commercial property throughout its history. This building has been demolished. A records search indicated that between 1928 and 1950, a Shell service station may have been located on the 2101 Capitol Avenue property (Wallace Kuhl & Associates 2013b:9–10).

Wallace Kuhl contracted with Environmental Data Resources to perform a search of over 30 regulatory agency databases that contain information pertaining to known hazardous materials contamination. Neither property included in the project site was listed on any of the databases. The database search results did indicate that several facilities with leaking USTs were located within 0.25 mile of each property included in the project site. However, all of these facilities have completed the agency-required cleanup actions, the regulatory status of these sites indicated that no further action was required, and therefore Wallace Kuhl concluded that none of these sites posed an environmental hazard for the proposed project (Wallace Kuhl & Associates 2013b:14–16, 2013b:16–18).

Based on search results indicating that a gasoline station may have been located on either or both of the project sites prior to 1950, and on the fact that previously unknown USTs containing gasoline were encountered during construction of the 2020 L Street building, Wallace Kuhl performed a preliminary screening for potential soil vapor encroachment for both the 2025 L Street and the 2101 Capitol Avenue properties (positive results from this screening would indicate the presence of contaminated soil or groundwater). This screening included identification of any known or suspected contaminated properties surrounding or upgradient of the project sites and a test to evaluate potential chemicals of concern. The results of this screening analysis were negative for both project site properties, indicating that vapor encroachment conditions either do not or are not likely to exist (Wallace Kuhl & Associates 2013a:18, 2013b:16).

Although no definitive evidence of contaminated soil at either project site was obtained during the performance of the Phase I ESAs, Wallace Kuhl noted in its conclusions to the Phase I ESAs that a gasoline station may have been located at either project site prior to 1950, and therefore it is possible that previously unknown USTs or contaminated soil from gasoline spills could be encountered during project-related construction activities. This impact would be reduced to a **less-than-significant** level with mitigation described below.

5 (B)

An asbestos survey of the interior portions of the storage building was prepared by HB&T Environmental, Inc. (HB&T) and included in the Phase I ESA prepared by Wallace Kuhl. During the survey, sheetrock and joint compound, black floor mastic, and gray transite window panels were identified as asbestos-containing building materials. HB&T and Wallace Kuhl recommended that the identified materials be removed by a licensed asbestos abatement contractor prior to any renovations

or demolition (Wallace Kuhl & Associates 2013a:16). Furthermore, given the age of on-site structures (i.e., constructed prior to 1965), it is likely that lead-based paint may have been used.

The storage building at 2025 L Street was constructed around 1950 and has been used as a commercial property throughout its history. Given the age of this structure, it is likely that asbestos and/or lead-based paint may have been used.

However, compliance with SMAQMD Rule 902 would be required as a part of the proposed project for actions related to asbestos-containing materials. Rule 902 includes health-based standards, guidance for renovations and demolition, special requirements for demolition, waste disposal requirements, testing and recordkeeping procedures, hazard posting requirements, and other measures to avoid adverse health effects. Other existing regulations (e.g., 8 CCR Sections 1529 and 1532.1) address demolition or salvage of structures where lead or materials containing lead are present; removal or encapsulation of materials containing lead; new construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead; lead contamination/emergency cleanup; transportation, disposal, storage, or containment of lead or materials containing lead on the location at which construction activities are performed, and maintenance operations associated with construction activities. California requires asbestos and lead abatement to be performed and monitored by contractors with appropriate certifications from Cal-OSHA, which has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and preparation of emergency action and fire prevention plans. Cal-OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos must be conducted according to Cal-OSHA standards. Therefore, compliance with these regulations would address any adverse effects related to worker safety associated with building demolition where asbestos or lead materials are present, and this impact would be **less than significant**.

5 (C)

As indicated in the geotechnical reports prepared by Wallace Kuhl (Wallace Kuhl & Associates 2014a, 2014b), construction dewatering would likely be required at both project sites. Where groundwater levels tend to be shallow, dewatering is sometimes necessary during construction to keep trenches or excavations free of standing water when improvements or foundations/footings are installed.

As discussed previously, a search of over 30 regulatory agency databases indicated neither project site was listed as having any evidence of contaminated groundwater. The database search results indicated that several facilities with leaking underground storage tanks were located within 0.25 mile of each project site. However, all of these facilities have completed the agency-required cleanup actions, the regulatory status of these sites indicated that no further action was required, and therefore Wallace Kuhl concluded that none of these sites posed an environmental hazard for the proposed project (Wallace Kuhl & Associates 2013a:16–18; 2013b:14–16). Based on search results indicating that a gasoline station may have been located on either or both of the project sites prior to 1950, and on the fact that previously unknown USTs containing gasoline were encountered during construction of the

2020 L Street building, Wallace Kuhl performed a preliminary screening for potential soil vapor encroachment for both the 2025 L Street and the 2101 Capitol Avenue properties. The results of this screening analysis were negative for both project sites, indicating that vapor encroachment conditions either do not or are not likely to exist (Wallace Kuhl & Associates 2013a:18, 2013b:16).

Before the start of earthmoving activities, the project applicant will be required by existing regulations to prepare an MOU with the City of Sacramento related to the proposed dewatering activities. The project applicant must also file a notice of intent with the Central Valley RWQCB to obtain coverage for construction dewatering activities under Order R5-2013-074, an Individual NPDES Permit, or a WDR. Along with the notice of intent and the MOU, the project applicant would prepare a site-specific construction dewatering plan, to ensure the project is authorized under the proper permit. If contaminated groundwater were encountered during construction activities, the permittee is required to consult with the Central Valley RWQCB to determine the specific permit terms, disposal methods, and/or the types of treatment. Therefore, compliance with the above regulations would minimize potential exposure of construction workers and the environment to contaminated groundwater (if it was encountered), and this impact is considered **less than significant**.

MITIGATION MEASURES

The following mitigation measures shall be implemented by the project applicant to reduce potential impacts on hazards to a less-than-significant level:

- ▶ Haz-1: In the event that excavation or construction of the proposed project reveals evidence of soil contamination, USTs, or other environmental concerns, work shall stop in the area of potential contamination by the project applicant's contractor and the type and extent of contamination shall be identified by a Registered Environmental Assessor or other qualified professional, retained by the project applicant. A report shall be prepared by a Registered Environmental Assessor or other qualified professional to identify specific measures to take to protect worker and public health and safety and specify measures to identify, manage, and remediate wastes. Site preparation or construction activities shall not recommence within the contaminated areas until remediation is complete and a "no further action" letter is obtained from the appropriate regulatory agency. The plan shall include the following:
 - Preconstruction training of workers to identify potentially hazardous materials.
 - Identification of air monitoring procedures and parameters and/or physical observations (soil staining, odors, or buried material) to be used to identify potential contamination.
 - Procedures for temporary cessation of construction activity and evaluation of the level of environmental concern if potential contamination is encountered.
 - Procedures for limiting access to the contaminated area to properly trained personnel.
 - Procedures for notification and reporting, including internal management and local agencies (fire department, Sacramento County Environmental Management Department,), as needed.

- A worker health and safety plan for excavation of contaminated soil, including soils management, dust control, air monitoring, and other relevant measures.
- Procedures for characterizing and managing excavated soils in accordance with CCR Title 14 and Title 22.
- Procedures for certification of completion of remediation.

FINDINGS

Impacts of the proposed project relating to hazards are less than significant or can be reduced to a less-than-significant level with implementation of mitigation measures.

HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
6. Hydrology and Water Quality				
Would the project:				
A) Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B) Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

STORMWATER

The City operates two different systems for stormwater collection and conveyance. The older Central City area is served by a system in which sanitary sewage and storm drainage are collected and conveyed in the same system of pipelines, referred to as the Combined Sewer System (CSS). The CSS is regulated under its own NPDES permit. The project site is located in an area served by the CSS.

CONSTRUCTION DEWATERING

Project construction would require dewatering. Where groundwater levels tend to be shallow, dewatering is sometimes necessary during construction to keep trenches or excavations free of standing water when improvements or foundations/footings are installed. Clean or relatively pollutant-free water that poses little or no risk to water quality may be discharged directly to surface water under certain conditions. The Central Valley RWQCB (2013) has adopted a general NPDES permit for temporary and short-term discharges of small volumes of wastewater from certain construction-related activities (General Dewatering Permit). Permit conditions for the discharge of these types of wastewater to surface waters are specified in the General Order for Dewatering and Other Low Threat Discharges to Surface Waters (Order No. R5-2013-0074, NPDES No. CAG995001).

Discharges may be covered by the General Dewatering Permit if (1) the average dry-weather discharge does not exceed 0.25 million gallons per day or (2) the discharge does not exceed 4 months in duration. Construction dewatering, well development water, pump/well testing, and miscellaneous dewatering/low-threat discharges are among the types of discharges that may be covered by the General Dewatering Permit. The General Dewatering Permit also specifies standards for testing, monitoring, and reporting; receiving-water limitations; and discharge prohibitions.

If dewatering activities would exceed 4 months in duration, a project-specific permit from the Central Valley RWQCB is required. Furthermore, where dewatering activities would occur in areas of contaminated groundwater or intermix with contaminated soil, the permittee is required to consult with the Central Valley RWQCB to determine the specific permit terms, disposal methods, and/or the types of treatment.

CONSTRUCTION SITE RUNOFF MANAGEMENT

In accordance with NPDES regulations, to minimize the potential effects of construction runoff on receiving-water quality, the State requires that the project applicant for any construction activity affecting 1 acre or more obtain coverage from the SWRCB under a General Construction Activity Stormwater Permit (Construction General Permit), Order No. 2009-0009-DWQ, NPDES No. CAS000002, effective July 1, 2010. The applicant for a Construction General Permit must prepare and implement a SWPPP. The SWPPP must include best management practices (BMPs) to reduce construction effects on receiving-water quality by implementing erosion and sediment control measures and reducing or eliminating nonstormwater discharges. Examples of construction BMPs typically included in SWPPPs include using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment-control devices, such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutant discharges to drainage systems or receiving waters.

CITY OF SACRAMENTO DEPARTMENT OF UTILITIES ENGINEERING SERVICES POLICY No. 0001

All groundwater discharges to the CSS or the separate sewer system are regulated by the City's Department of Utilities pursuant to Department of Utilities Engineering Services Policy No. 0001, adopted as Resolution No. 92-439 by the Sacramento City Council. Groundwater discharges to the City's sewer system are defined as construction dewatering discharges, foundation or basement dewatering discharges, treated or untreated contaminated groundwater cleanup discharges, and uncontaminated groundwater discharges.

Project construction would include dewatering. In addition to the State requirements described above, the City requires that any temporary and short-term discharge be permitted, or an approved MOU for long-term discharges be established, between the discharger and the City. Short-term limited discharges of 7 days or less must be approved through the City's Department of Utilities by an approval letter. Long-term discharges of greater than 7 days must be approved through the City's Department of Utilities and the Director of the Department of Utilities through an MOU process. The MOU must specify the type of groundwater discharge, flow rates, and discharge system design. It also must include a City-approved contaminant assessment of the proposed groundwater discharge indicating tested levels of constituents. In addition, the MOU must provide a City-approved effluent monitoring plan to ensure that contaminant levels remain in compliance with State standards or with levels approved by the Sacramento Regional County Sanitation District and Central Valley RWQCB.

CITY OF SACRAMENTO CONSTRUCTION SITE STORMWATER CONTROLS

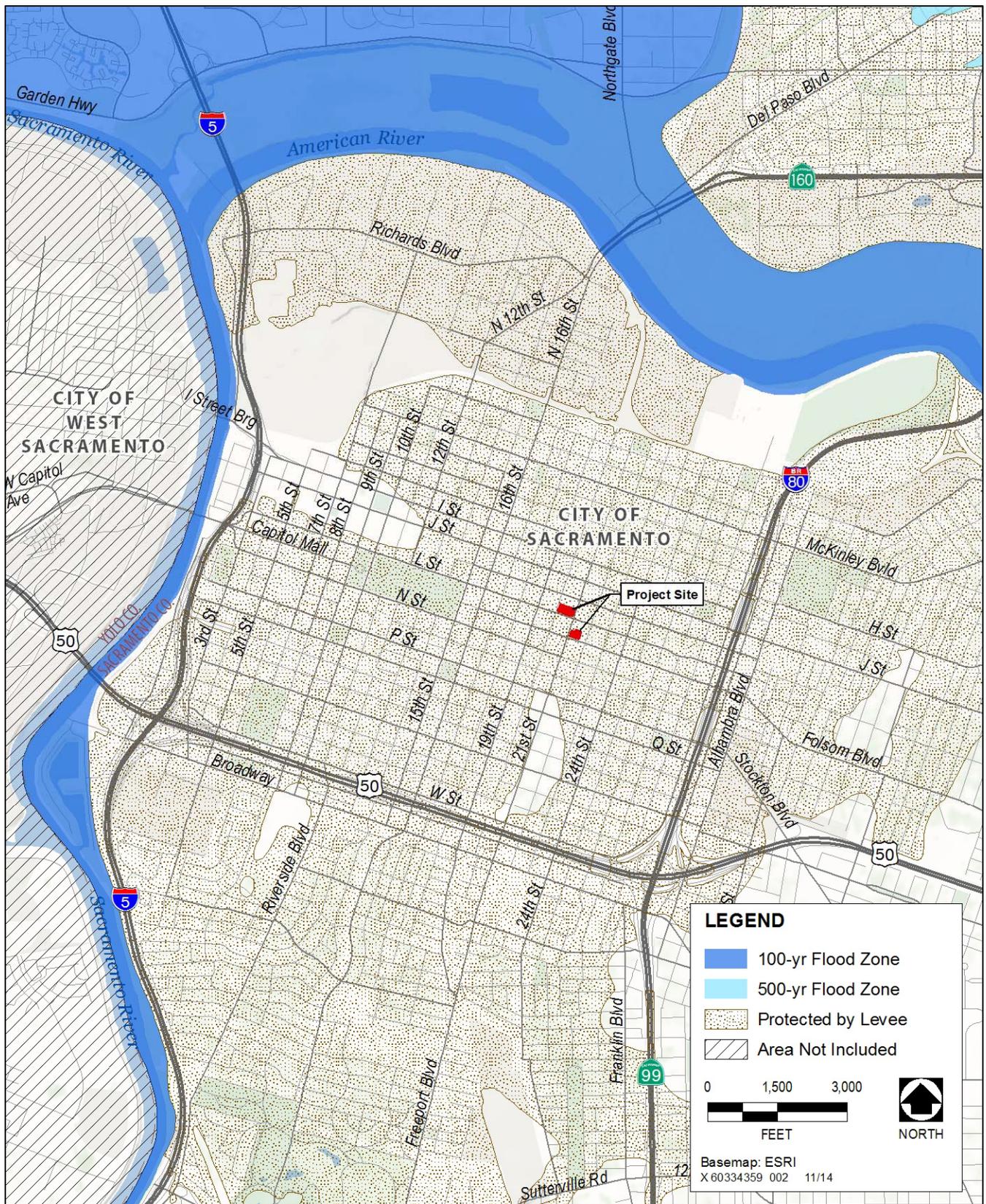
The City's Grading, Erosion, and Sediment Control Ordinance (Chapter 15.88 of the Sacramento City Code) applies to projects where 50 cubic yards or more of soil is excavated and/or disposed. This ordinance requires preparation of a grading plan, erosion and sediment control plan, and post-construction erosion and sediment control plan with BMPs, which must be approved by the City. In addition, the City's Stormwater Management and Discharge Control Ordinance (Chapter 13.16 of the Sacramento City Code) requires that projects take steps to minimize and contain sediment and pollutants in stormwater discharges from construction sites.

To support ongoing maintenance and upgrade efforts, the City has adopted the CSS Development Fee. Projects subject to the CSS Development Fee are not subject to the other City Sewer Development Fee. This fee is designed to address costs associated with an increase in wastewater flows. This fee is based on the proposed project use and the calculated equivalent single-family dwelling (ESD) units that would be generated. The fee is currently charged at a rate of \$126.70 per ESD for first 25 ESD and \$3,161.79 per ESD for each additional ESD. Credit is given for existing uses (City of Sacramento 2014a).

FLOOD HAZARDS

The project site is located within the Sacramento River Watershed, approximately 1.2 miles south of the American River and approximately 1.5 miles east of the Sacramento River. The topography on the project site is nearly flat, with an elevation of approximately 20 feet above mean sea level.

The most recent Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), revised in 2013, identifies the project site as being located in a 100-year floodplain in an area protected by levees from the 1 percent annual chance flood (Exhibit 8). The project site is also located in the Folsom Dam failure inundation area (SACOG 2011c: Figure 11.6). High-water levels commonly occur along the Sacramento and American rivers in the winter and early spring months as a result of increased flows from stormwater runoff and/or snowmelt. An extensive system of dams, levees, overflow weirs, drainage pumping stations, and flood control bypass channels are located on and adjacent to the Sacramento and American rivers, and their respective tributaries, to protect the area from regional flooding. Many of these facilities are maintained by the City; the U.S. Army Corps of Engineers (USACE); the Sacramento Area Flood Control Agency (SAFCA); and/or by other federal, state, or local agencies. SAFCA is working toward ensuring a minimum 100-year level of flood protection throughout the region as quickly as possible, while simultaneously improving the region's flood protection infrastructure to achieve a 200-year or greater level of protection over time. The flood control network controls water flows by regulating the amount of water passing through a particular reach of the river. Urban runoff flows are directed into this system by the City via two systems: (1) conveyance to the Sacramento River and American River through sumps, pipelines, and treatment facilities; or (2) conveyance by the City's CSS, along with sewage, to the Sacramento Regional Wastewater Treatment Plant (SRWTP) located near the city of Elk Grove.



Source: FEMA 2013

Exhibit 8. Floodplain Map

FEMA imposes building regulations on development within flood hazard areas depending on the potential for flooding in each area. Building regulations are incorporated into the municipal code of jurisdictions participating in the National Flood Insurance Program (NFIP). Section 15.104, “Floodplain Management Regulations,” of the Sacramento City Code includes requirements for compliance with the federal regulations. Furthermore, the City is a signatory to the Sacramento County Local Hazard Mitigation Plan (Sacramento County 2011), which contains emergency procedures that would be implemented in the event of levee or dam failure. A dam evacuation plan incorporating California Office of Emergency Services dam evacuation requirements is part of the Local Hazard Mitigation Plan. Furthermore, the County works to prepare businesses and residents for emergencies or disasters that could significantly affect the greater community. In this capacity, the Office of Emergency Services provides training and public information with respect to natural disasters, such as flooding or wildfire, and human-made disasters, such as hazardous material releases or acts of terrorism. The City’s Comprehensive Flood Management Plan (CFMP) is an implementation tool for preparing for a major flood event to reduce potential loss and significant economic loss caused by extensive property damage. The CFMP addresses the protection of public safety through emergency preparedness, interior drainage, risk communication, protection of critical facilities, and development guidelines (City of Sacramento 1996).

STANDARDS OF SIGNIFICANCE

For purposes of this Initial Study, impacts to hydrology and water quality may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of general plan policies or mitigation from the General Plan Master EIR:

- ▶ substantially degrade water quality and violate any water quality objectives set by the SWRCB, due to increases in sediments and other contaminants generated by construction and/or development of the proposed project; or
- ▶ substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

ANSWERS TO CHECKLIST QUESTIONS

6 (A)

Project implementation would result in earthmoving activities throughout the 1.21-acre 2025 L Street property and the 0.68-acre 2101 Capitol Avenue property. Construction activities for the project—specifically grading, staging, stockpiling, trenching, and foundation excavation—would expose soils to erosive forces and could transport sediment into the drainage system (and ultimately into the nearby Sacramento River), if not managed properly. Such sediment transport could increase turbidity, degrade water quality, and result in siltation to local waterways. The runoff could cause erosion and increased sedimentation and transport of pollutant sources to storm drain systems and water courses away from the project area. The potential exists for releases of chemicals typically present at most construction sites, including fuels, oils, paints, and solvents. Sediment transport caused by erosion and transport of construction-related wastes have the potential to temporarily degrade existing water quality and

beneficial uses by altering the dissolved oxygen content, temperature, pH, suspended sediment and turbidity levels, or nutrient content, or by causing toxic effects in the aquatic environment. Therefore, if uncontrolled, project-related construction activities could violate water quality standards or result in substantial erosion or siltation.

The proposed project would also involve deep foundation work (drilling of piles or piers) that could extend approximately 26–28 feet below the ground surface (bgs). The results of soil borings conducted by Wallace Kuhl indicate that groundwater at the project sites ranges from 18–20 feet bgs (Wallace Kuhl & Associates 2014a:2, 2014b:2). Therefore, drilling for piles or piers would result in contact with groundwater, and construction dewatering activities would be required.

After development, impervious surfaces would be similar to existing conditions on the project site (e.g., rooftops, sidewalks, driveways, streets, parking lots). Impervious surfaces can hinder infiltration, which can result in more runoff during rain events. Stormwater runoff can be a source of surface-water pollution that can include sediments, which, in addition to being contaminants in their own right, transport other contaminants, such as trace metals, nutrients, and hydrocarbons that adsorb suspended sediment particles. Sediment, organic contaminants, nutrients, trace metals, pathogens, and oil and grease compounds are common urban runoff pollutants. The amount of impervious surface area at the 2101 Capitol Avenue property is expected to increase by approximately 12 percent, while the amount of impervious surface area is expected to decrease by approximately 2 percent at the 2025 L Street property after implementation of the proposed project.

The City is a signatory member of the Sacramento Stormwater Quality Partnership (SSQP) as part of its regional NPDES permit. Before the start of earthmoving activities, the project applicant is required to submit a final drainage plan and pollutant source control program to the City demonstrating to the satisfaction of the Community Development Department that the proposed project is in compliance with: (1) the SSQP's NPDES permit and (2) the SSQP's Stormwater Quality Improvement Plan (SSQP 2009). The final drainage plan would include an accurate calculation of pre-project and post-project runoff for the final design scenario that accurately evaluates potential changes to runoff, pipeline sizing based on alignments, and finalized BMPs that include a defined maintenance program. The project applicant is also required to also prepare and submit erosion and sediment control and engineering plans and specifications for pollution prevention and control to the City's Community Development Department. The contents of each plan must be consistent with the requirements of Chapter 15.88 of the Sacramento City Code.

As required by local and State regulations, before the start of earthmoving activities, the project applicant would prepare an MOU with the City of Sacramento, and would file a notice of intent with the Central Valley RWQCB to obtain coverage under Order R5-2013-074 or an Individual NPDES Permit or WDR, for construction dewatering activities. Along with the notice of intent and the MOU, the project applicant would prepare a site-specific construction dewatering plan to ensure the project is authorized under the proper permit (Central Valley RWQCB 2013).

Finally, compliance with the Stormwater Quality Improvement Plan also requires stormwater quality treatment and/or BMPs in project design for both construction and operation. Post-construction stormwater quality controls for new development require the use of source-control runoff reduction and

treatment control measures set forth in the Sacramento Region Stormwater Quality Design Manual (SSQP 2014). This includes the use of treatment-control measures (e.g., stormwater planters), and good housekeeping practices (e.g., spill prevention, proper storage measures, and cleanup procedures). Prior to construction and ground-disturbing activities, the project applicant must also prepare a pollutant source control program for the proposed project's operational phase to control water quality pollutants on the project site. This program must include components such as recycling, street sweeping, storm drain cleaning, household hazardous waste collection, waste minimization, prevention of spills, and effective management of public trash collection areas that must be implemented throughout the life of the proposed project.

Therefore, through compliance with the above regulations, the proposed project would not violate any WDRs, exceed water quality objectives, or result in substantial erosion or siltation, nor would it substantially degrade water quality, during project construction or operation. Therefore, the impact is considered **less than significant**.

6 (B)

The most current FEMA FIRM, revised in 2013, identifies the project site as being located in a 100-year floodplain in an area protected by levees from the 1 percent annual chance flood (Exhibit 8). The project site is also located in the Folsom Dam failure inundation area (SACOG 2011c:Figure 11.6).

Section 15.104, "Floodplain Management Regulations," of the Sacramento City Code includes requirements for compliance with the FEMA regulations. Furthermore, the City is a signatory to the Sacramento County Local Hazard Mitigation Plan (Sacramento County 2011), which contains emergency procedures that would be implemented in the event of levee or dam failure. The City's CFMP addresses the protection of public safety through emergency preparedness, interior drainage, risk communication, protection of critical facilities, and development guidelines (City of Sacramento 1996). While the proposed project would increase the number of new residents and commercial uses exposed to flood hazards at the project site, flood risks due to failure of a levee or dam would be similar to the risks under existing conditions, except that a greater number of residents would potentially be affected if flooding were to occur. The project site is located in an area already developed with existing residential and commercial uses, and existing procedures and structures are in place to provide protection from flood-related loss, injury, or death. SAFCA is working toward ensuring a minimum 100-year level of flood protection throughout the region as quickly as possible, while simultaneously improving the region's flood protection infrastructure to achieve a 200-year or greater level of protection over time. This impact would be **less than significant**.

MITIGATION MEASURES

None required.

FINDINGS

The proposed project would have less-than-significant impacts relating to hydrology and water quality.

PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
8. Public Services				
Would the project result in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2030 General Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

FIRE

The Sacramento Fire Department (SFD) provides fire protection services to the entire City, which encompasses approximately 98 square miles. In addition, SFD serves three contract areas that occupy 47 square miles immediately adjacent to the City boundaries within the unincorporated county. SFD is staffed by more than 500 firefighters and administrative staff members. On a daily basis, the department’s equipment includes 24 fire engines, eight ladder trucks, one heavy rescue, and 13 medic units at 24 fire stations, which are divided into three battalions (SFD 2014). The department also has one swift-water rescue team, three rescue-boat companies, two hazardous-materials response teams, and support vehicles, such as wildland fire engines and air compressor units that are cross-staffed with fire engine/truck personnel.

According to the 2030 General Plan Master EIR, SFD’s goal is for its first-responding company, which provides fire suppression and paramedic services, to arrive within a 4-minute response time 90 percent of the time and medic units to arrive within 8 minutes 90 percent of the time. In case of a fire, the goal is for the first-responding company to arrive within a 4-minute response time 90 percent of the time and an additional 10 responders to arrive within 8 minutes 90 percent of the time. Locating fire stations according to 1.5 mile-radius service areas typically allows responders to arrive on a call within these response-time goals (City of Sacramento 2009a).

POLICE

The Sacramento Police Department (SPD) is principally responsible for providing police protection services within the jurisdictional limits of the City of Sacramento. In addition, the Sacramento County Sheriff’s Department, California Highway Patrol, University of California Davis Medical Center Police Department, and Regional Transit Police Department support SPD to provide police protection in the greater Sacramento area. In 2013, SPD responded to approximately 626,000 calls for service (SPD 2013).

According to the 2013 Annual Report, SPD was staffed in 2013 by 880 full-time and part-time employees, of whom 606 were sworn officers (SPD 2013). The department uses a variety of data—geographic information system (i.e., GIS)—based data, call and crime frequency information, and

records of available personnel—to rebalance its deployment on an annual basis to meet the changing demands of the City. According to the 2030 General Plan Master EIR, SPD maintains an internal goal of 2.0 to 2.5 sworn police officers per 1,000 City residents and one civilian support staff member per two sworn officers (City of Sacramento 2009a). Based on the most current information the ratio of sworn officers per 1,000 residents is 1.28, which is below SPD’s internal goal (SPD 2013; Department of Finance 2014).

Patrol and specialized teams are deployed from three substations serving four command areas: North, Central, East, and South. The project site is within Police District 3 (SPD 2013). First response to the project site would be provided by SPD Central Command, which serves Downtown, Midtown, the Richards Boulevard corridor, and the Railyards. Central Command is located at 300 Richards Boulevard, approximately 2.7 miles northwest of the project site.

SCHOOLS

The project site is located within the Sacramento City Unified School District (SCUSD) boundaries. The SCUSD area covers the Central City area eastward to the Sacramento City limits. SCUSD operates more than 70 schools throughout Sacramento. SCUSD includes traditional elementary, middle, and high schools, as well as charter school facilities and other programs. The 2013–2014 SCUSD enrollment was approximately 47,000 students (California Department of Education [CDE] 2014).

Based on maps showing SCUSD 2013–2014 school attendance boundaries, students at the project site would have the option to attend Theodore Judah Elementary School (approximately 2 miles east of the project site), Sutter Middle School (approximately 1 mile east of the project site), and C. K. McClatchy High School (approximately 2 miles south of the project site).

STANDARDS OF SIGNIFICANCE

The proposed project would add population and structures that would require provision of public services. However, the project is included in the envelope of assumptions used for the 2030 General Plan and its Master EIR. For the purposes of this Initial Study, an impact would be considered significant if the proposed project resulted in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2030 General Plan.

ANSWERS TO CHECKLIST QUESTION

Fire Protection

Existing fire protection services would be available to serve the project site. First-response service to the project site would be provided by Fire Station #2, which is located at 1229 I Street, approximately 0.8 mile northwest of the project site. Additional fire services to the project site could be provided by Fire Station #1, which is located at 624 Q Street (1.5 miles west of the project site), and Fire Station #5, which is located at 731 Broadway (2.1 miles southwest of the project site). If these stations are not available to respond, other stations would respond nearby, depending on the situation. In addition

mutual-aid agreements are in place with neighboring fire departments (West Sacramento Fire, Sacramento Metro Fire, and Cosumnes Fire).

According to the SFD, existing facilities and equipment are adequate to serve the proposed project and would not result in the need for new fire stations or the expansion of existing stations and would not require new equipment (Tunson, pers. comm., 2014). This impact would be **less than significant**.

Police Protection

The proposed project would increase the resident population by approximately 254 people (based on 141 units and an average household size of 1.8). The proposed project would not require construction or expansion of new police protection facilities (Wann, pers. comm., 2014). This impact would be **less than significant**.

School Facilities

As shown in Table 1, Theodore Judah Elementary School, Sutter Middle School, and C. K. McClatchy High School have estimated remaining capacities of 282 students, 285 students, and 490 students, respectively. It should be noted that SCUSD has a policy of open enrollment and can provide families with multiple public school choices to consider sending their children to school. SCUSD attendance boundaries are subject to change to accommodate school overcrowding and changes in facility use.

Table 1. Sacramento City Unified School District Enrollment, 2014-2015				
School Name	Grades	Enrollment	Design Capacity	Estimated Remaining Capacity
Theodore Judah Elementary School	K–6	577	859	282
Sutter Middle School	7–8	1,118	1,403	285
C. K. McClatchy High School	9–12	2,285	2,775	490

Note: Student enrollment in the district changes daily as more students enroll and others leave; therefore, Table 4.10-1 does not necessarily reflect exact current enrollment.
Sources: CDE 2014; SCUSD 2012

As shown in Tables 1 and 2, the 37 students that would be generated by the 141 multi-family residential units included in the proposed project could be accommodated within the remaining capacities of the neighborhood schools. This impact would be **less than significant**. Pursuant to Section 65995(3)(h) of the California Government Code, the payment of statutory fees “...is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization.”

Grade Level	Multi-family (Students per Dwelling Unit)	Total Students
Elementary (K–6)	0.19	27
Middle (7–8)	0.03	4
High (9–12)	0.04	<u>6</u>
Total Students	–	37

Source: SCUSD 2012:7

MITIGATION MEASURES

None required.

FINDINGS

The proposed project would less-than-significant impacts relating to public services.

RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
9. Recreation				
Would the project:				
A) Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B) Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2030 General Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The City’s Department of Parks and Recreation maintains more than 3,178 acres of parkland, including 1,716 developed acres; manages 222 parks and recreation facilities, parkways, and open space sites; maintains more than 88 miles of bike trails and 14 miles of jogging and walking paths within City-managed parks; and operates more than 17 aquatic facilities (swimming pools, play pools, and wading pools), nine dog parks, 13 skateboard parks, and 18 community centers and neighborhood centers (City of Sacramento 2014c).

The City of Sacramento Parks and Recreation Master Plan 2005–2010 (PRMP) guides park development in the city. As identified in the PRMP, the service ratio goal for citywide/regionally serving parks is 8 acres per 1,000 residents, and the service ratio goal for neighborhood/community-serving parks is 5 acres per 1,000 residents (City of Sacramento Department of Parks and Recreation 2009). The City’s 2035 General Plan Update is proposing to lower the service level goal to 1.75 acres of neighborhood and community parks and recreational facilities per 1,000 population in the Central City, if adopted (City of Sacramento 2014b).

The Sacramento City Code provides standards and formulas for the dedication of parkland and in-lieu fees (Title 16, Chapter 16.64) and imposes a park development fee on development within the City (Title 18, Chapter 18.44) for both residential and non-residential development. Fees collected pursuant to Chapter 18.44 are used primarily to finance the construction of park and recreational facilities. The park fees are assessed on landowners who develop property to provide funds for neighborhood or community parks required to meet the needs of, and address the impacts caused by, the additional new population residing or employed on the property as a result of the development.

STANDARDS OF SIGNIFICANCE

For purposes of this Initial Study, impacts to recreational resources are considered significant if the proposed project would do either of the following:

- ▶ cause or accelerate substantial physical deterioration of existing area parks or recreational facilities;
or
- ▶ create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2030 General Plan.

9 (A) AND 9 (B)

Chapter 16.64.030 of the Sacramento City Code describes a formula for determining the amount of buildable parkland required for subdivision approvals in the City. According to this formula, the project would generate the need for between approximately 1.5 acres of buildable parkland (141 new dwelling units multiplied by 0.0105 for each multiple-family dwelling unit). This formula was developed, based on information from the U.S. Census, to produce 5 acres of parkland for every thousand residents (see Section 16.14.030 of the City Code). According to the City Code, this requirement can be met through dedication of parkland, through payment of an in-lieu fee determined to be sufficient to purchase the same amount of parkland based on an appraisal, or through a combination of dedication and payment of an in-lieu fee. The City's Department of Parks and Recreation estimated that a Quimby fee of \$444,150 for park dedication and a Park Development Impact Fee of \$507,794 would be required for the proposed project based on current rates, which are subject to periodic updates.

However, the 2035 General Plan identifies a new policy of 1.75 acres of neighborhood and community parks and recreational facilities per 1,000 residents in the Central City. According to this policy, the project would generate lower demand for parkland or payment of in-lieu fees pursuant to Chapter 16.64 of the Sacramento City Code. According to the last technical update to the City's Parks and Recreation Master Plan, existing parkland exceeds the 2035 General Plan policy for the Central City, providing approximately 1.8 acres of neighborhood- and community-serving parkland per 1,000 residents (City of Sacramento 2009c:Table 8).

Because existing regulations would require dedication of parkland and/or payment of fees to satisfy park needs and avoid adverse effects related to demand for parks, this impact would be **less than significant**.

MITIGATION MEASURES

None required.

FINDINGS

The proposed project would have less-than-significant environmental impacts relating to recreation.

UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
11. Utilities and Service Systems				
Would the project:				
A) Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B) Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The City of Sacramento is the water purveyor for the proposed project. The City's water supply is obtained from three sources:

- ▶ surface water from the American River,
- ▶ surface water from the Sacramento River, and
- ▶ groundwater from the North American and South American Subbasins.

Under its current permits to divert water from the Sacramento River, the City may divert up to 225 cubic feet per second (cfs), or an annual limit of 81,800 acre-feet per year (afy) (City of Sacramento 2011:4-3). In addition, the City has four water rights permits authorizing diversions of up to 589,000 afy of American River water. In 1957, the City entered into a water rights settlement agreement with the U.S. Bureau of Reclamation regarding diversions from the American River (City of Sacramento 2011:4-4). Under the settlement agreement, the City agreed to limit its diversions from the American River and scale up to the maximum diversion of 245,000 afy by the year 2030 (City of Sacramento 2011:4-5). Table 4.12 1 shows the settlement contract's maximum diversion schedule from 2010 to 2035. The City had a total of 227,500 afy of potable water supplies in 2010; this total is anticipated to increase to 326,800 afy by 2035.

Most of the water supplied to the city is surface water. The balance is obtained from groundwater extracted from the North American and South American Subbasins of the Sacramento Valley Groundwater Basin.

The City's Department of Utilities provides wastewater collection services in Sacramento. The City uses a CSS that provided both sewage and storm drainage services to more than 24,000 parcels in downtown, midtown, Land Park, and East Sacramento. The system, established in the 1800s, collected sewage and stormwater in the same pipe.

Wastewater flows are ultimately transported to the Sacramento Regional Wastewater Treatment Plant (SRWWTP) for treatment and discharge. The SRWWTP is located in the city of Elk Grove and is owned and managed by Sacramento Regional County Sanitation District (SRCSD). Currently, the SRWWTP has an NPDES permit issued by the Central Valley RWQCB for discharge of up to 181 million gallons per day (mgd) of treated effluent into the Sacramento River. As of 2013, the SRWTP receives and treats an average of 119 mgd (SRCSD 2013).

The project site is served by existing water transmission lines and stormwater/sewer collection mains and the project would connect to this existing infrastructure and would not require any off-site improvements to serve project demands.

The 2025 L Street portion of the project proposes to construct a 12" water line extension from an existing water line located at the intersection of 21st and L streets to the intersection of 20th Street and the alley between K and L streets. The proposed water line will connect to an existing 12" water line located at the intersection of 21st and L streets and an existing 8" water line located in the alley between K and L streets along the northern edge of the project site. This water line extension is designed to provide adequate fire flow (RSC Engineering 2014). Domestic water demand can be adequately addressed by connecting to the existing water lines adjacent to the project site and water service will be enhanced by a proposed extension of the 12" water main (RSC Engineering 2014). Existing infrastructure is also adequate to address domestic water demand and fire flow for the 2101 Capitol Avenue portion of the project site (RSC Engineering 2014). The 2101 Capitol Avenue portion of the project site would connect to an existing 8" water line in 21st Street adjacent to the site (RSC Engineering 2014).

The existing combined sewer and stormwater systems adjacent to the project site is adequate to address demand associated with both the 2025 L Street and 2101 Capitol Avenue portions of the proposed project (RSC Engineering 2014).

The 2101 Capitol Avenue portion of the project site would connect to an existing sewer and storm drain line in the alley between L Street and Capitol Avenue. The 2025 L Street portion of the project proposes to connect storm drainage from the roof to the existing 12" line in L Street or the 27" line in 20th Street or a combination of the two. For sanitary sewer service to the 2025 L Street portion of the project, all existing adjacent lines are proposed to be used. The Whole Foods Market grease trap and a portion of the market facilities are proposed to connect to the existing 8' line in the alley. A portion of the market is also proposed to sewer to the 27" line in 20th Street. For the proposed multi-family residential units approximately 50% of the units are planned to sewer to the 12" line in L Street and the other approximately 50% is proposed to connect to the existing 8" line in the alley between L and K streets or the 27" line in 20th Street. The existing 8" line in the alley between L and K streets is large enough to service 50% of the proposed multi-family residential units and the existing 8" line in the alley between L and K streets discharges to the 27" line in 20th Street. The existing 12" line in L Street discharges to the 27" line in 20th Street (RSC Engineering 2014).

Existing City regulations require 500 cubic feet/acre of underground detention storage for every acre of impervious surface added as a part of proposed projects. There would be a net decrease of approximately 457 square feet in impervious area for the 2025 L Street portion of the project, so the

City's detention requirement would not apply in this location (RSC Engineering 2014). For the 2101 Capitol Avenue portion of the project, there is a net increase in impervious area of approximately 3,276 square feet, and therefore, this existing City regulation would be applicable. For the overall project, there is a net increase of 2,819 square feet of impervious area, which would require 32.4 cubic feet of detention storage $((2,819/43,560)*500=32.4)$. To conform to this requirement, the project proposes to place an underground pipe near the proposed structure at 2101 Capitol Avenue that will drain to the combined sewer in the alley. The amount of detention depends on the diameter and length of the pipe and different combinations could be used. For example, to achieve the required 34.2 cubic feet of detention, 11 linear feet of 24" pipe could be used.

Solid waste collection services in Sacramento, including residential and a small portion of commercial garbage pickup, recycling, and yard waste hauling, are provided by the City's Recycling and Solid Waste Division. In 2012, the City disposed of a total of 401,445 tons of solid waste (CalRecycle 2012). Most refuse collected by the City is transported to the Sacramento Recycling and Transfer Station and, ultimately, to the Lockwood Regional Landfill in Sparks, Nevada. The Sacramento Recycling and Transfer Station, which is owned and operated by BLT Enterprises, is limited to accepting 2,500 tons per day (tpd) of solid waste (CalRecycle 2014a). The Lockwood Regional Landfill is owned and operated by a private firm, Waste Management Inc., and is the primary location for the disposal of waste by the City. The landfill has a total maximum permitted capacity of 302.5 million cubic yards and has approximately 270 million cubic yards of available capacity (NDEP Bureau of Waste Management 2013). The anticipated closure date of the Lockwood Regional Landfill is approximately 2113 (Applied Soil Water Technologies 2011).

Waste is also processed at the North Area Recovery Station, which is owned and operated by Sacramento County and is limited to accepting 2,400 tpd (CalRecycle 2014b). Waste brought to this station is transported to the Kiefer Landfill. Sacramento County owns and operates the Kiefer Landfill, and the landfill is the primary solid waste disposal facility in the county. The Kiefer Landfill is classified as a Class III municipal solid waste landfill facility and is permitted to accept general residential, commercial, and industrial refuse for disposal, including municipal solid waste, construction and demolition debris, green materials, agricultural debris, and other nonhazardous designated debris. The landfill is permitted to accept a maximum of 10,800 tpd of solid waste and currently has a permitted capacity of approximately 117 million cubic yards. The closure date of the Kiefer Landfill is anticipated to be approximately 2064 (CalRecycle 2014c).

STANDARDS OF SIGNIFICANCE

For the purposes of this Initial Study, an impact would be considered significant if the proposed project would:

- ▶ result in the determination that adequate capacity is not available to serve the proposed project's demand in addition to existing commitments; or
- ▶ require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts.

ANSWERS TO CHECKLIST QUESTIONS

11 (A)

Implementation of the proposed project would result in an increased demand for water supplies. The City of Sacramento is the water purveyor for the proposed project, and water supply for the proposed project would be provided by the American and Sacramento Rivers. The City's 2010 Urban Water Master Plan (UWMP) addressed water supply and demand and water supply reliability for the City's service area. Future water demands were calculated based on projected water demands for all the development projected and analyzed in the 2030 General Plan. The City's water supplies are expected to exceed water demands during normal, single-dry, and multiple-dry years through 2035. Based on the number of new residential units, and the number of employees and square footage of additional non-residential uses, the proposed project does not meet the definition of a project from Section 10912 of the California Water Code. Therefore, no Water Supply Assessment is required.⁴ The 2025 L Street portion of the project would have an average daily domestic demand of approximately 65,772 gallons per day (gpd) and the 2101 Capitol Avenue portion of the project would have an average daily demand of approximately 1,300 gpd (RSC Engineering 2014). Fire flow demand for the 2025 L Street portion of the project is estimated to be 4,000 gallons per minute (gpm) for a four-hour duration and fire flow demand for the 2101 Capitol Avenue portion of the project is estimated to be 2,000 gpm for a four-hour duration.

Existing City regulations require submittal, review, and compliance with City standards for water conveyance. The project applicant would be required to submit a water conveyance infrastructure improvement plan that depicts the locations and appropriate sizes of all required conveyance infrastructure, in conjunction with other site-specific improvement plans. Proposed on-site water facilities would be required to be designed and sized to provide adequate service to the project site for the amount and type of proposed development, based on the City's Standards and Specifications for Public Construction (June 2007), and the Standards and Specifications for Public Construction Addendum No. 2 (April 2012), or the most current versions of this plan. Based on existing City standards, the water conveyance infrastructure would be required to be designed to satisfy the more critical of the two following conditions, as determined by the City's Department of Utilities: (1) at maximum-day peak-hour demand, the operating or "residual" pressure at all water service connections shall be at least 30 pounds per square inch; or (2) at average maximum-day demand plus fire flow, the operating or "residual" pressure in the area of the fire shall not be less than 20 pounds per square inch. The project is required to demonstrate there are adequate fire flow demands for the project, based on a water supply test that measures pounds per square inch of pressure at the final point of connection. Existing City regulations require that a final water conveyance infrastructure improvement plan is approved by the Department of Utilities before approval of the final subdivision map and issuance of building permits. In addition, the project is required to pay applicable water connection fees based on

⁴ Using the City's Water Supply Assessment worksheet, the project could generate water demand of approximately 27 afy. The project proposes 141 dwelling units and the City's water demand estimate is 0.15 AFY per dwelling unit. The Whole Foods component portion of the project includes approximately 80 employees per shift. The 2101 Capitol Avenue component could generate a maximum of approximately 67 employees (based on the SACOG estimate of up to 98.63 employees per acre for the Mixed-Use Employment Focus Place Type). The City estimates water demand for non-residential uses of approximately 0.04 AFY per employee.

tap and meter size, as determined by the Department of Utilities, before building permits are issued. This impact would be **less than significant**.

Wastewater flows would ultimately be transported to the SRWWTP for treatment and discharge. The SRWWTP has a current design capacity of 181 mgd average dry-weather flow, and the plant currently treats 119 mgd average dry-weather flow (as of 2013). Project-related wastewater flows combined with the current average dry-weather flow (119 mgd) would not approach the treatment plant's current design capacity of 181 mgd average dry-weather flow under either development scenario. The project would generate average flow of approximately 54,784 gpd for the 2025 L Street portion of the project and 1,040 gpd for the 2101 Capitol Avenue portion of the project.⁵

Existing City regulations require submittal, review, and compliance with City standards for wastewater conveyance facilities on-site. The project applicant will be required to submit a wastewater infrastructure improvement plan that depicts the locations and appropriate sizes of all required conveyance infrastructure in conjunction with other site-specific improvement plans. Proposed on-site wastewater facilities are required to be designed and sized to provide adequate service to the project site for the amount and type of proposed development, based on City design standards. A final wastewater infrastructure improvement plan is also required to be approved by the Department of Utilities before approval of the final subdivision map and issuance of building permits. In addition, the project applicant would be required to, as applicable, mitigate CSS impacts pursuant to the Combined Sewer System Development Fee Program, as verified by the Department of Utilities, before building permits are issued. Chapter 13.08 of the City Code regulates discharges to the sewer service system; establishes standards and review requirements for sewer and storm drain facilities; and identifies that rates, fees, and charges for sewer service and storm drain service are established and will be updated from time to time by ordinance or resolution of the City Council. To support ongoing maintenance and upgrade efforts designed to ensure ongoing capacity with infill development throughout the Central City area, the City has adopted the Combined Sewer System Development Fee. This fee is designed to address costs associated with an increase in wastewater flows. This fee is based on the proposed project use and the calculated ESD units that would be generated.

Implementation of the proposed project would result in an increase in impervious surfaces on the 2101 Capitol Avenue property, and a slight decrease in impervious surfaces on the 2025 L Street property, with an overall increase in impervious surfaces of approximately 3,276 square feet (RSC Engineering 2014). The proposed project would be required to comply with the City Department of Utilities' "Do No Harm" policy per section 11 (Storm Drainage Design Standards) of the City's Design and procedures Manual. This impact would be **less than significant**.

Implementation of the proposed project would generate temporary and short-term debris and waste during construction. Construction of the proposed project would require demolition of the existing parking garage, adjacent two-story building, existing surface parking lots, and some trees. The 2013 CALGreen Code (Title 24, Part 11 of the California Code of Regulations) requires all construction

⁵ The project would generate a total demand of approximately 0.05 mgd based on data used for previous City infill projects (City of Sacramento 2003). This assumes that each equivalent single-family dwelling unit (ESD) generates demand of 400 gallons per day, that a market (assuming garbage disposal) has a demand of approximately 0.6 of an ESD per 1,000 square feet, that retail has a demand of approximately 0.2 of an ESD per 1,000 square feet, and that multi-family dwellings have a demand of approximately 0.75 of an ESD per dwelling unit.

contractors to reduce construction waste and demolition debris by 50%. Code requirements include preparing a construction waste management plan that identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on-site or mixed; and identifying diversion facilities where the materials collected will be taken. The Code also specifies that the amount of materials diverted should be calculated by weight or volume, but not by both (California Building Standards Commission 2013). In addition, the 2013 CALGreen Code requires that 100% of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

The residential generation rate is 1.1 tons per dwelling unit per year and the non-residential rate is 10.8 pounds per employee per day (City of Sacramento 2008:6.11-71). Assuming 141 dwelling units and approximately 147 employees, the project could generate approximately 445 tons per year of solid waste. Existing City regulations require all contractors to comply with the Construction and Demolition Debris Recycling Ordinance (Title 8, Chapter 8.124 of the Sacramento City Code) by reducing project waste entering landfill facilities by 50% by weight through recycling. The City requires contractors prepare a waste management plan that identifies the sources of recyclable materials, outlines a recycling method (i.e., self-separation or mixed recovery), and identifies a self-haul or franchise waste hauler. The waste management plan must be submitted to and approved by City's Solid Waste Services before a building permit is issued. Adhering to these requirements would minimize the total volume of demolition and construction waste that would be sent to a landfill, but would not avoid sending such waste to landfills entirely. The majority of landfilled waste would be delivered to the Lockwood Regional Landfill or Kiefer Landfill. Construction and demolition waste could also potentially be delivered to L and D Landfill, Yolo County Central Landfill, or the Forward Landfill. Combined, these landfills have a large volume of landfill capacity available to serve the proposed project during construction. Because of the remaining capacity at and expected life spans of the Lockwood Regional Landfill and Kiefer Landfill, combined with the continued use of the existing transfer stations and development of at least one new transfer station in the north area, along with application of existing regulations, the project would not require the construction of new solid waste facilities or the expansion of existing facilities. The impact is considered **less than significant**.

Sacramento Municipal Utility District (SMUD) would provide electrical service to the proposed project, and Pacific Gas and Electric Company (PG&E) would provide natural gas. The project site is in an area with existing utility service and neither PG&E nor SMUD has indicated that substantial new facilities would be required. This impact would be **less than significant**.

11 (B)

The project site is located in a developed area of the Central City. Utility lines, including water, sewer, storm sewer, natural gas, and electricity, are present on or adjacent to the project site. No new off-site utilities infrastructure would be required to serve the proposed project. Impacts of on-site utilities improvements are analyzed throughout this Initial Study and will be analyzed for relevant environmental topics in a Focused EIR.

MITIGATION MEASURES

None required.

FINDINGS

The proposed project would have less-than-significant impacts relating to utilities and service systems.

MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. Mandatory Findings of Significance				
A) Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<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 that 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"/>
<small>Authority: Public Resources Code Sections 21083, 21083.5. Reference: Government Code Sections 65088.4. Public Resources Code Sections 21080, 21083.5, 21095; <i>Eureka Citizens for Responsible Govt. v. City of Eureka</i> (2007) 147 Cal.App.4th 357; <i>Protect the Historic Amador Waterways v. Amador Water Agency</i> (2004) 116 Cal.App.4th at 1109; <i>San Franciscans Upholding the Downtown Plan v. City and County of San Francisco</i> (2002) 102 Cal.App.4th 656.</small>				

ANSWERS TO CHECKLIST QUESTIONS

12 (A)

Urban landscapes, such as the project study area, typically provide low-value habitat for most wildlife species because of an overall lack of vegetative cover and high levels of human disturbance. Wildlife on the project site is dominated by species that have adapted to human activity and the urban landscape setting. As a result, the project would have little to no impact to the habitat of a fish or wildlife species, a fish or wildlife population, or a plant or animal community, as illustrated in the body of this Initial Study. The proposed project would have the potential to affect protected bird species if nests were encountered in trees proposed for removal. These impacts would be less than significant with implementation of mitigation measures/applicant minimization measures. The Focused EIR for this project will include a detailed evaluation of the potential to affect cultural resources, including examples of major periods of California history and prehistory. The “potentially significant” box is checked in the table above since the City will include analysis and reporting on cultural resources as a part of an EIR.

12 (B)

The proposed project's geology, hazards, hydrology, and biological resource impacts are generally localized and specific to the project site. Utilities, recreation, and public services impacts would be less than significant and the proposed project falls within the buildout assumptions included in the 2030 General Plan, resulting in no new cumulative impacts in these issue areas. The Focused EIR will include analysis of aesthetics, air quality, cultural resources, greenhouse gas emissions, noise and vibration, and transportation/traffic. The City will include a discussion of land use and planning and population and housing, as well. The "potentially significant" box above is checked to indicate that cumulative impacts related to these topic areas will be studied in an EIR.

12 (C)

The proposed project would not have significant adverse effects on humans related to the issue areas addressed in this Initial Study. The Focused EIR will include analysis of aesthetics, air quality, cultural resources, greenhouse gas emissions, noise and vibration, and transportation/traffic. The "potentially significant" box above is checked to indicate that adverse impacts to humans related to these topic areas will be studied in an EIR.

Section IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by the proposed project.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Hydrology and Water Quality |
| <input checked="" type="checkbox"/> Air Quality | <input type="checkbox"/> Hazards |
| <input type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Noise and Vibration |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Public Services |
| <input checked="" type="checkbox"/> Energy | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Geology and Soils | <input checked="" type="checkbox"/> Transportation/Circulation |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Utilities and Service Systems |
| <input checked="" type="checkbox"/> Land Use and Planning | <input checked="" type="checkbox"/> Population and Housing |
| <input type="checkbox"/> None Identified | |

Section V - DETERMINATION

On the basis of the Initial Study:

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project **COULD** have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **MAY** have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **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.

Signature	Date
Printed Name	Title
Agency	

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APPENDIX 1

Arborist Report

APPENDIX 2

Geotechnical Reports

APPENDIX 3

Phase I Environmental Site Assessments

APPENDIX 1

Arborist Report

APPENDIX 1

Arborist Report

**ARBORIST REPORT
AND
TREE INVENTORY SUMMARY**

**2025 L Street
MIXED USE PROJECT
City of Sacramento, California**

Prepared for:

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Mr. Thad Johnson
2020 L Street, 5th Floor
Sacramento, California 95811**

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**SIERRA NEVADA ARBORISTS
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Rio Linda, California 95673**

September 13, 2014

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COPYRIGHT STATEMENT

This consultant's report, dated September 13, 2014, is for the exclusive and confidential use of LVP Revocable Trust concerning potential improvements to the 2025 L Street Mixed Use Project in the City of Sacramento, California. Any use of this report, the accompanying appendices, or portions thereof, other than for project review and approval by appropriate governmental authorities, shall be subject to and require the written permission of Sierra Nevada Arborists. Unauthorized modification, distribution and/or use of this report, including the data or portions thereof contained within the accompanying appendices, is strictly prohibited.

QUALIFICATION STATEMENT

Sierra Nevada Arborists is a fully insured, Sacramento-based arboriculture consulting firm founded in January of 1998 by its Principal, Edwin E. Stirtz. Mr. Stirtz is an ISA Certified Arborist, and a member of the American Society of Consulting Arborists and International Society of Arboriculture. In addition, Mr. Stirtz is a member of the Association of Environmental Professionals. Mr. Stirtz possesses in excess of 33 years of experience in horticulture and arboriculture, both maintenance and construction, and has spent the last 24 years as a consulting and preservation specialist in the Sacramento and surrounding regions.

INTRODUCTION

Sierra Nevada Arborists is pleased to present to LVP Revocable Trust the Arborist Report and Tree Inventory Summary for the trees located within and around the 2025 L Street Mixed Use Project area which includes portions of 3 separate city blocks bounded by 20th Street on the west, K Street L Street Alley on the north, 21st Street on the east, Capital Avenue on the south as well as the quarter block(2001 Capital Ave.) at the north east corner of Capital Avenue and 21st Street of in the City of Sacramento, California. The inventory summary is separated by two major components of the project – 2025 L St and 2020 L St Parking Garage located at 2001 Capital Ave. This Arborist Report and Tree Inventory Summary memorializes tree data obtained by Edwin E. Stirtz, ISA Certified Arborist WE-0510A, at the time of initial field reconnaissance and inventory efforts on November 8, 2013 and again on September 12, 2014.

SCOPE OF INVENTORY EFFORT

On November 8, 2013, and September 12, 2014 Sierra Nevada Arborists visited the 2025 L Street Mixed Use Project site located in the City of Sacramento, California. The purpose of these field reconnaissance effort was to identify, inventory and evaluate the current structure and vigor of all street trees located on the perimeter of the project sites, as well as any “Heritage Trees” found within the proposed project boundaries. As you may know, the City of Sacramento Tree Protection Ordinance defines a “Heritage Tree” as:

1. Any tree of any species with a trunk circumference of one hundred inches or more (i.e. 31.82" DBH)¹, which is of good quality in terms of health, vigor of growth and conformity to generally accepted horticultural standards of shape and location for its species;
2. Any native *Quercus* species, *Aesculus californica* (California Buckeye) or *Platanus racemosa* (California Sycamore) having a circumference of thirty-six inches or greater (i.e. 11.45" DBH) when a single trunk, or a cumulative circumference of thirty-six inches or greater when a multi-trunk;
3. Any tree thirty-six inches in circumference or greater in a riparian zone. The riparian zone is measured from the center line of the water course to thirty feet beyond the high water line; or
4. Any tree, grove of trees or woodland trees designated by resolution of the City Council to be of special historical or environmental value or of significant community benefit.

(Sacramento Municipal Code, Title 12, Chapter 12.64: Heritage Trees.)

¹ “Diameter at breast height” has been calculated by use of the following formula: circumference measured four and one-half feet above ground level divided by 3.142.

In conjunction with our field identification and inventory effort, Sierra Nevada Arborists was asked to memorialize field findings in an Initial Arborist Report and Tree Inventory Summary which may be submitted to the City of Sacramento as a part of the technical studies in support of the development application for the proposed project area.

METHODOLOGY

Visual Inspection Method

During our field reconnaissance and inventory effort Sierra Nevada Arborists conducted a visual review from ground level of the trees on the perimeter of the project site (“Street Trees”), as well as any “Heritage Trees” within the proposed project boundaries as delineated on the Improvement Plans for the project prepared by RSC Engineers. The trees which met the defined criteria have been identified in the field by affixing to the tree’s trunk a round, pre-stamped metal numbering tag bearing numbers 401-459. The tree numbers utilized in this report and accompanying Tree Inventory Summary correspond to the tree tag which is affixed to the tree in the field and as they appear on the project improvement plans.

At the time of our field identification and inventory effort specific data was gathered for each tagged tree including the tree’s species, diameter and dripline measurements, and an assessment was made of the tree’s root crown/collar, trunk, limbs and foliage. Utilizing this data the tree’s overall structural condition and vigor were separately assessed ranging from “good”¹ to “poor” based upon the observed characteristics noted within the tree and the Arborist’s best professional judgment. Ratings are subjective and are dependent upon both the structure and vigor of the tree. The vigor rating considers factors such as the size, color and density of the foliage; the amount of deadwood within the canopy; bud viability; evidence of wound closure; and the presence or evidence of stress, disease, nutrient deficiency and insect infestation. The structural rating reflects the root crown, trunk and branch configuration; canopy balance; the presence of included bark, weak crotches and other structural defects and decay and the potential for structural failure. Finally, notable characteristics were documented and *initial* recommendations on a tree-by-tree basis were made which logically followed the observed characteristics noted within the trees at the time of our field inventory effort. The initial recommendations are based on the assumption that the tree would be introduced into a developed environment and may require maintenance, or may not be suitable for retention within a post-development setting. The initial recommendations have been augmented with additional information derived during a review of the improvement plans.

¹It should be noted that there were no trees observed within the project boundaries which fell within the criteria of a “good” rating. A complete description of the terms and ratings utilized in this Report and accompanying Inventory Summary are found on pages 9-10.

SUMMARY OF INVENTORY EFFORT

Field reconnaissance and inventory efforts found 30 trees within the proposed project area. There were no on site trees which qualified as a “Heritage” Tree based on either species or DBH, nevertheless two Date Palms located at 2001 Capital Ave were included in the inventory summary in order to document their size and condition. Subsequently 28 of the trees included in the Tree Inventory Summary are City Street Trees. Composition of the 30 inventoried trees included the following species and accompanying aggregate diameter inches:

SPECIES DIVERSITY		
Common Name	Qty	Aggregate Diameter Inches
Canary Island Date Palm	2	58
Carob	1	26
Chinese Elm	2	47
Chinese Hackberry	2	34
Coast Live Oak	1	13
Elm	6	248
Flowering Pear	1	10
Holly Oak	1	10
Little Leaf Linden	1	2
Liquid Ambar	4	60
Modesto Ash	2	58
Southern Magnolia	2	27
Trident Maple	3	16
Valley Oak	1	6

Initial Recommended Removals

At this time none (0) of the 30 inventoried trees have been recommended for removal from the project area due to the nature and extent of defects, compromised health and/or structural instability noted at the time of field inventory efforts. There are 17 trees with an aggregate diameter inches of 241 that will require removal to facilitate construction activities.

It should be noted that some of the inventoried trees within the proposed project area are trees which will require periodic/seasonal monitoring to assess the trees’ ongoing structural integrity. At this time it is recommended that these trees be monitored and thoroughly inspected by a qualified ISA Certified Arborist on at least an annual basis to keep abreast of the trees’ changing condition(s) and to assess the trees’ ongoing structural integrity and potential for hazard in a developed environment.

Another consideration concerning tree removal during a significant “Redevelopment” project is the suitability of certain undesirable species for retention around or within the project area. Problematic or high maintenance cost trees have been considered for removal at this time in an effort to eliminate the liability and/or expense associated with retaining and maintaining these trees.

CONSTRUCTION IMPACT ASSESSMENT

This Arborist Report and Tree Inventory Summary is intended to provide to LVP Revocable Trust and other members of the development team a detailed *pre-construction review* of the species, size, and current structure and vigor of the trees within and/or overhanging the proposed project area. At this time we have made recommendations for tree removal or pruning based on perceived impacts associated with improvements as depicted on the plans.

The nature of construction activities in the downtown area is unique since the buildings are typically multi stories and some require significant excavations for basements or underground parking. Unfortunately these excavations typically result in root loss to significant levels for street trees located around a projects perimeter. Additionally canopy pruning can also be significant, particularly to larger mature trees.

When considering these impacts and reviewing the overall makeup of the trees surrounding the project since none of the trees qualify for Heritage status nor are any “good specimens” the decision was made to remove all the trees surrounding 2025 L Street. Conversely for the 2020 L Street Parking Garage the trees are generally larger and may be retained with canopy pruning, so none of these street trees are currently proposed for removal.

GENERAL COMMENTS AND ARBORISTS’ DISCLAIMER

The City of Sacramento regulates both the removal of protected “heritage trees” and “street trees” and the encroachment of construction activities within their driplines. Therefore, a tree permit and/or additional development authorization should be obtained from the City of Sacramento prior to the removal of any trees within the proposed project area. All terms and conditions of the tree permit and/or other Conditions of Approval are the sole and exclusive responsibility of the project owner. It should be noted that prior to final inspection written verification from an ISA Certified Arborist may be required certifying the approved removal activities and/or implementation of other Conditions of Approval outlined for the retained trees on the site. ***Sierra Nevada Arborists cannot provide written Certification of Compliance unless we have been provided with a copy of the approved site development plans, applicable permits and/or Conditions of Approval, and are on site to monitor and observe regulated activities during the course of construction.*** Therefore, it will be necessary for the project owner to notify Sierra Nevada Arborists well in advance (at least 72-hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Please bear in mind that implementation of the recommendations provided within this initial report will help to reduce adverse impacts of construction on the retained trees; however,

implementation of any recommendations should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees***. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Since trees are living organisms their structure and vigor constantly change over time, and they are not immune to changes in site conditions or seasonal variations in the weather. Further, conditions are often hidden within the tree and/or below ground. Arborists and other tree care professionals cannot guarantee that a tree will be healthy and/or safe under all circumstances or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To maintain trees in a developed, populated area is to accept some degree of risk and the only way to eliminate all risk associated with trees would be to eliminate all of the trees. Sierra Nevada Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength which can even take down a tree with a structurally sound and vigorous appearance.

Finally, the trees preserved within and/or overhanging the proposed project area may experience a physical environment different from the pre-construction environment. As a result, tree health and structural stability should be regularly monitored. Occasional pruning, fertilization, mulching, pest management, replanting and/or irrigation may be required. In addition, ***provisions for monitoring both tree health and structural stability following construction must be made a priority***. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, ***the future management plan must include an annual inspection*** to keep abreast of the trees' changing condition(s) and to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

Thank you for allowing Sierra Nevada Arborists to assist you with this initial review. Please feel free to give me a call if you have any questions or require additional information and/or clarification.

Sincerely,



Edwin E. Stirtz
ISA Certified Arborist WE-0510A
Member, American Society of Consulting Arborists

EES
Enclosures

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownership to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
4. The consultant shall not be required to give a deposition and/or attend court by reason of this report unless subsequent contractual arrangements are made for in advance, including payment of an additional fee for such services according to our standard fee schedule, adjusted yearly, and terms of the subsequent contract of engagement.
5. Loss or alteration of any part of this report invalidates the entire report. Ownership of any documents produced passes to the Client only when all fees have been paid.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant.
7. Neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media, without the prior expressed written or verbal consent of the consultant, particularly as to value conclusions, identity of the consultant, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant as stated in his qualifications.
8. This report and any values expressed herein represent the opinion of the consultant and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. Sketches, diagrams, graphs, drawings and photographs within this report are intended as visual aids and are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by other consultants is for coordination and ease of

reference. Inclusion of such information does not constitute a representation by the consultant as to the sufficiency or accuracy of the information.

10. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without laboratory analysis, dissection, excavation, probing or coring, unless otherwise stated.
11. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
12. This report is based on the observations and opinions of Edwin E. Stirtz, and does not provide guarantees regarding the future performance, health, vigor, structural stability or safety of the plants described herein. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the trees on or adjacent to this project site, their future demise and/or any damage which may result therefrom.
13. The information contained within this report is true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals.
14. The legal description, dimensions, and areas herein are assumed to be correct. No responsibility is assumed for matters that are legal in nature.
15. Any changes to an established tree's environment can cause its decline, death and/or structural failure.

DEFINITIONS AND RATINGS

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species Identification:	Scientific and common species name.
Diameter (“DBH”):	This is the trunk diameter measured at breast height (industry standard 4.5 feet above ground level).
Dripline radius (“DLR”):	A radius equal to the horizontal distance from the trunk of the tree to the end of the farthest most branch tip prior to any cutting. When depicted on a map, the dripline will appear as an irregularly shaped circle that follows the contour of the tree’s branches as seen from overhead.
Protected Zone:	A circle equal to the largest radius of a protected tree’s dripline plus 1 foot. (May also be called the critical root zone.)
Root Crown:	Assessment of the root crown/collar area located at the base of the trunk of the tree at soil level.
Trunk:	Assessment of the tree’s main trunk from ground level generally to the point of the primary crotch structure.
Limbs:	Assessment of both smaller and larger branching, generally from primary crotch structure to branch tips.
Foliage:	Tree’s leaves.
Overall Condition:	Describes overall condition of the tree in terms of structure and vigor.
Recommendation:	Pre-development recommendations based upon observed characteristics noted at the time of the initial field inventory effort.
Obscured:	Occasionally some portion of the tree may be obscured from visual inspection due to the presence of dense vegetation which, during the course of inspection for the initial arborist report, prevented a complete evaluation of the tree. In these cases, if the tree is to be retained on site the vegetation should be removed to allow for a complete assessment of the tree prior to making final decisions regarding the suitability for retention.

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TREE CONDITION RATING CRITERIA

RATING TERM	ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR
Good	No apparent injuries, decay, cavities or evidence of hollowing; no anchoring roots exposed; no indications of infestation or disease	No apparent injuries, decay, cavities or evidence of hollowing; no codominant attachments or multiple trunk attachments are observed; no indications of infestation or disease	No apparent injuries, decay, cavities or evidence of hollowing; below average amount of dead limbs or twigs; no major limb failures or included bark; callus growth is vigorous	Leaf size, color and density are typical for the species; buds are normal in size, viable, abundant and uniform throughout the canopy; annual seasonal growth increments are average or above average; no insect or disease infestations/ infections evident	No apparent structural defects; no weak crotches; no excessively weighted branches and no significant cavities or decay	Tree appears healthy and has little or no significant deadwood; foliage is normal and healthy
Fair	Small to moderate injuries, decay, cavities or hollowing may be evident but are not currently affecting the overall structure; some evidence of infestation or disease may be present but is not currently affecting the tree's structure	Small to moderate injuries, decay, cavities or hollowing may be evident; codominant branching or multiple trunk attachments or minor bark inclusion may be observed; some infestation or disease may be present but not currently affecting the tree's structure	Small to moderate injuries, decay or cavities may be present; average or above average dead limbs or twigs may be present; some limb failures or bark inclusion observed; callus growth is average	Leaf size, color and density are typical or slightly below typical for the species; buds are normal or slightly sparse with potentially varied viability, abundance and distribution throughout the canopy; annual seasonal growth increments are average or slightly below average; minor insect or disease infestation/infection may be present	Minor structural problems such as weak crotches, minor wounds and/or cavities or moderate amount of excessive weight; non-critical structural defects which can be mitigated through pruning, cabling or bracing	Tree appears stressed or partially damaged; minimal vegetative growth since previous season; moderate amount of deadwood, abnormal foliage and minor lesions or cambium dieback
Poor	Moderate to severe injuries, decay, cavities or hollowing may be evident and are affecting the overall structure; presence of infestation or disease may be significant and affecting the tree's structure	Moderate to severe injuries, decay, cavities or hollowing may be evident and are affecting the tree's structure; presence of infestation or disease may be significant and affecting the tree's structure	Severe injuries, decay or cavities may be present; major deadwood, twig dieback, limb failures or bark inclusion observed; callus growth is below average	Leaf size, color and density are obviously abnormal; buds are obviously abnormal or absent; annual seasonal growth is well below average for the species; insect or disease problems may be severe	Obvious major structural problems which cannot be corrected with mitigation; potential for major limb, trunk or root system failure is high; significant decay or dieback may be present	Tree health is declining; no new vegetative growth; large amounts of deadwood; foliage is severely abnormal

The ratings "good to fair" and "fair to poor" are used to describe trees that fall between the described major categories and have elements of both

**GENERAL PROTECTION GUIDELINES
FOR TREES PLANNED FOR PRESERVATION**

Great care must be exercised when work is conducted upon or around protected trees. The purpose of these General Protection Measures is to provide guidelines to protect the health of the affected protected trees. These guidelines apply to all encroachments into the protected zone of a protected tree, and may be incorporated into tree permits and/or other Conditions of Approval as deemed appropriate by the applicable governing body.

- ◆ A circle with a radius measurement from the trunk of the tree to the tip of its longest limb, plus one foot, shall constitute the critical root zone protection area of each protected tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each protected tree. Removing limbs that make up the dripline does not change the protected area.
- ◆ Any protected trees on site which require pruning shall be pruned by an ISA Certified Arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute (ANSI) A300 pruning standards, ANSI Standard 2133.1-2000 regarding safety practices, and the International Society of Arboriculture (ISA) “Tree Pruning Guidelines” and Best Management Practices.
- ◆ Prior to initiating construction, temporary protective fencing shall be installed at least one foot outside the root protection zone of the protected trees in order to avoid damage to the tree canopies and root systems. Fencing shall be installed in accordance with the approved fencing plan prior to the commencement of any grading operations or such other time as determined by the review body. The developer shall contact the Project Arborist and the Planning Department for an inspection of the fencing prior to commencing construction activities on site.
- ◆ Signs shall be installed on the protective fence in four (4) equidistant locations around each individual protected tree. The size of each sign must be a minimum of two (2) feet by two (2) feet and must contain the following language:

**WARNING: THIS FENCE SHALL NOT BE REMOVED OR RELOCATED
WITHOUT WRITTEN AUTHORIZATION FROM THE CITY OF
SACRAMENTO**

Once approval has been obtained from the City of Sacramento protective fencing shall remain in place throughout the entire construction period and shall not be removed, relocated, taken down or otherwise modified in whole or in part without prior written authorization from the Agency, or as deemed necessary by the Project Arborist to facilitate approved activities within the root protection zone.

- ◆ Any removal of paving or structures (i.e. demolition) that occurs within the dripline of a protected tree shall be done under the direct supervision of the Project Arborist. To the maximum extent feasible, demolition work within the dripline protection area of the protected tree shall be performed by hand. If the Project Arborist determines that it is not feasible to perform some portion(s) of this work by hand, then the smallest/lightest weight equipment that will adequately perform the demolition work shall be used.
- ◆ No signs, ropes, cables (except those which may be installed by an ISA Certified Arborist to provide limb support) or any other items shall be attached to the protected trees. Small metallic numbering tags for the purpose of identification in preparing tree reports and inventories shall be allowed.
- ◆ No vehicles, construction equipment, mobile homes/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of protected trees.
- ◆ Drainage patterns on the site shall not be modified so that water collects, stands or is diverted across the dripline of any protected tree.
- ◆ No trenching shall be allowed within the driplines of protected trees, except as specifically approved by the Planning Department as set forth in the project's Conditions of Approval and/or approved tree permit. If it is absolutely necessary to install underground utilities within the dripline of a protected tree the utility line within the protected zone shall be "bored and jacked" or performed utilizing hand tools to avoid root injury under the direct supervision of the Project Arborist.
- ◆ Grading within the protected zone of a protected tree shall be minimized. Cuts within the protected zone shall be maintained at less than 20% of the critical root zone area. Grade cuts shall be monitored by the Project Arborist. Any damaged roots encountered shall be root pruned and properly treated as deemed necessary by the Project Arborist.
- ◆ Minor roots less than one (1) inch in diameter encountered during approved excavation and/or grading activities may be cut, but damaged roots shall be traced back and cleanly cut behind any split, cracked or damaged area as deemed necessary by the Project Arborist.
- ◆ Major roots greater than one (1) inch in diameter encountered during approved excavation and/or grading activities may not be cut without approval of the Project Arborist. Depending upon the type of improvement being proposed, bridging techniques or a new site design may need to be employed to protect the roots and the tree.

- ◆ Cut faces, which will be exposed for more than 2-3 days, shall be covered with dense burlap fabric and watered to maintain soil moisture at least on a daily basis (or possibly more frequently during summer months). If any native ground surface fabric within the protected zone must be removed for any reason, it shall be replaced within forty-eight (48) hours.
- ◆ If fills exceed 1 foot in depth up to 20% of the critical root zone area, aeration systems may serve to mitigate the presence of the fill materials as determined by the Project Arborist.
- ◆ When fill materials are deemed necessary on two or three sides of a tree it is critical to provide for drainage away from the critical root zone area of the tree (particularly when considering heavy winter rainfalls). Overland releases and subterranean drains dug outside the critical root zone area and tied directly to the main storm drain system are two options.
- ◆ In cases where a permit has been approved for construction of a retaining wall(s) within the protected zone of a protected tree the applicant will be required to provide for immediate protection of exposed roots from moisture loss during the time prior to completion of the wall. The retaining wall within the protected zone of the protected tree shall be constructed within seventy-two (72) hours after completion of grading within the root protection zone.
- ◆ The construction of impervious surfaces within the dripline of a protected tree shall be minimized. When necessary, a piped aeration system shall be installed under the direct supervision of the Project Arborist.
- ◆ Preservation devices such as aeration systems, tree wells, drains, special paving and cabling systems must be installed in conformance with approved plans and certified by the Project Arborist.
- ◆ No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the dripline of a protected tree. An above ground drip irrigation system is recommended. An independent low-flow drip irrigation system may be used for establishing drought-tolerant plants within the protected zone of a protected tree. Irrigation shall be gradually reduced and discontinued after a two (2) year period.
- ◆ All portions of permanent fencing that will encroach into the protected zone of a protected tree shall be constructed using posts set no closer than ten (10) feet on center. Posts shall be spaced in such a manner as to maximize the separation between the tree trunks and the posts in order to reduce impacts to the tree(s).
- ◆ Landscaping beneath native oak trees may include non-plant materials such as bark mulch, wood chips, boulders, etc. Planting live material under protected native oak trees is generally discouraged, and is not recommended within six (6) feet of the trunk

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of a native oak tree with a diameter a breast height (DBH) of eighteen (18) inches or less, or within ten (10) feet of the trunk of a native oak tree with a DBH of more than eighteen (18) inches. The only plant species which shall be planted within the dripline of native oak trees are those which are tolerant of the natural, semi-arid environs of the tree(s).

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TREE#	COMMON NAME	SPECIES	DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						Status	NOTABLE CHARACTERISTICS	RECOMMENDATIONS
					ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
Capital Avenue (between 20th St. & 21st St.) - Parking Garage for 2020 L St.													
401	Chinese Hackberry	<i>(Celtis chinensis)</i>	32	35	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		May require pruning for construction clearance
402	Flowering Pear	<i>(Pyrus calleryana)</i>	10	14	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		May require pruning for construction clearance
20TH Street (between K St. and L St.) - 2025 L St. Mixed Use													
416	Southern Magnolia	<i>(Magnolia grandiflora)</i>	13	16	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
417	Southern Magnolia	<i>(Magnolia grandiflora)</i>	14	15	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree	Slightly above average amount of deadwood	Requires removal to facilitate construction activities
L Street (between 20th St. and 21st St.) - 2025 Mixed Use													
425	Coast Live Oak	<i>(Quercus agrifolia)</i>	10	13	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
426	Liquid Ambar	<i>(Liquidambar styraciflua)</i>	18	17	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
427	Modesto Ash	<i>(Fraxinus velutina 'modesto')</i>	31	32	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair	Street Tree	Callusing trunk wound east & west side from grade to 5' above grade with sluffing bark; decay not apparent	Requires removal to facilitate construction activities
428	Liquid Ambar	<i>(Liquidambar styraciflua)</i>	8	15	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
429	Valley Oak	<i>(Quercus lobata)</i>	6	17	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
430	Chinese Hackberry	<i>(Celtis chinensis)</i>	2	4	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
431	Modesto Ash	<i>(Fraxinus velutina 'modesto')</i>	27	33	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
21st Street (between K St. and L St.) - 2025 L St. Mixed Use													
432	Trident Maple	<i>(Acer buergeranum)</i>	8	15	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
433	Trident Maple	<i>(Acer buergeranum)</i>	3	5	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
434	Trident Maple	<i>(Acer buergeranum)</i>	5	12	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
435	Holly Oak	<i>(Quercus illex)</i>	10	17	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
436	Carob	<i>(Ceratonia siliqua)</i>	26	25	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair	Street Tree	Callusing trunk wound northwest side 2-3' above grade; minor interior decay	Requires removal to facilitate construction activities

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21st Street (between L St. & Capital Ave.) - Parking Garage for 2020 L St.													
440	Elm	<i>(Ulnus sp)</i>	39	32	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	Street Tree	Callusing trunk wounds various locations at the point of old limb attachments; moderate interior decay	Inspect annually
441	Chinese Elm	<i>(Ulmus parvifolia)</i>	24	44	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		None at this time
442	Liquid Ambar	<i>(Liquidambar styraciflua)</i>	21	22	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		None at this time
443	Liquid Ambar	<i>(Liquidambar styraciflua)</i>	13	15	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		None at this time
2001 Capital Avenue at 21st Street - Parking Garage for 2020 L St.													
444	Elm	<i>(Ulnus sp)</i>	51	40	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	Street Tree	Callusing wounds various locations on root crown and buttress roots; trunk wound southeast side 10' above grade at point of old limb attachment; moderate interior decay and hollowing	Requires pruning for construction/building clearance, Recommend annual inspection by an ISA Certified Arborist to monitor structural condition
445	Elm	<i>(Ulnus sp)</i>	38	30	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires pruning for construction/building clearance
452	Elm	<i>(Ulnus sp)</i>	36	26	Obscured	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	Street Tree	Root collar obscured by ivy, old callousing/calloused pruning wounds various locations throughout canopy with minor to moderate decay, moderate sprout growth	Requires pruning for construction/building clearance
453	Elm	<i>(Ulnus sp)</i>	38	29	Obscured	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	Street Tree	Root collar obscured by ivy, old callousing/calloused pruning wounds various locations throughout canopy with minor to moderate decay, moderate sprout growth	Requires pruning for construction/building clearance
454	Indeterminable				NA	NA	NA	NA	NA	NA	Street Tree	#15 size container which is dead	Remove
455	Little Leaf Linden	<i>(Tilia cordata)</i>	2	6	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree		Requires removal to facilitate construction activities
456	Elm	<i>(Ulnus sp)</i>	46	39	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	Street Tree	Old callousing/calloused pruning wounds various locations throughout canopy with minor to moderate decay, moderate sprout growth	May require pruning for construction/building clearance
457	Canary Island Date Palm	<i>(Phoenix canariensis)</i>	29	12	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair	Street Tree	Located in Parking Lot; Moderate sweep in lower trunk	Requires removal to facilitate construction activities

LVP Revocable Trust
2025 L St. Mixed Use Project
 Tree Inventory Summary
 City of Sacramento

458	Canary Island Date Palm	<i>(Phoenix canariensis)</i>	29	12	Fair	Fair	Fair	Fair	Fair	Fair	Street Tree	<i>Located</i> in Parking Lot	Requires removal to facilitate construction activities
459	Chinese Elm	<i>(Ulmus parvifolia)</i>	23	25	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair	Street Tree	Old callousing/calloused pruning wounds various locations throughout canopy with minor to moderate decay	May require pruning for construction clearance

14 Trees and 181 aggregate diameter inches for 2025 L St Mixed Use Project
16 Trees and 730 aggregate diameter inches for Parking Garage for 2020 L St. Project
30 Total Trees and 911 aggregate diameter inches for 2025 L St. Mixed Use Project
14 Tree Removals and 181 aggregate diameter inches for 2025 L St Project
3 Tree Removals at 60 aggregate diameter inches for Parking Garage for 2020 L St. Project
17 Total Trees and 241 aggregate diameter inches for 2025 L St. Mixed Use Project

APPENDIX 2

Geotechnical Reports

APPENDIX 2

Geotechnical Reports

Geotechnical Engineering Report

L STREET MIXED USE

WKA No. 9955.01

January 27, 2014

Prepared For:

LVP Revocable Trust
2020 L Street, 5th Floor
Sacramento, California 95811

Geotechnical Engineering Report

L STREET MIXED USE

Sacramento, California

WKA No. 9955.01

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Geotechnical Engineering Report
L STREET MIXED USE
Sacramento, California
WKA No. 9955.01

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Geotechnical Engineering Report

L STREET MIXED USE

L Street between 20th and 21st Streets

Sacramento, California

WKA No. 9955.01

January 27, 2014

INTRODUCTION

We have completed a geotechnical engineering investigation for the proposed mixed use development on the north side of L Street between 20th and 21st Streets in Sacramento, California. The purposes of our work have been to explore the existing site, soil and groundwater conditions beneath the proposed improvement areas and to provide geotechnical engineering conclusions and recommendations for the design and construction of the proposed improvements. This report represents the results of our work.

Work Scope

Our scope of work has included the following tasks:

1. site reconnaissance;
2. review of aerial photographs and available historical groundwater contour maps;
3. subsurface exploration, including the drilling and sampling of two (2) test borings to maximum depths of approximately 50 to 51 feet below the existing ground surface;
4. bulk sampling of near-surface soils;
5. laboratory testing of selected soil samples;
6. engineering analyses, and;
7. preparation of this report.

Our evaluation was performed in general accordance with our *Geotechnical Engineering Services Proposal* dated September 10, 2013.

Figures and Attachments

A Vicinity Map showing the location of the site is included as Figure 1. Figure 2 shows the approximate locations of the borings relative to existing site features. The Logs of Soil Borings are presented as Figures 3 and 4. An explanation of the symbols and classification system used on the logs appears on Figure 5. Appendix A contains general information regarding the

field investigation, descriptions of the field exploration and laboratory testing programs, and the results of laboratory tests that do not appear on the Logs of Soil Borings.

Proposed Development

We understand the project will consist of the demolition of the existing parking structure and the design and construction of a new mixed-use development consisting of one- to two-stories of below-grade parking and seven stories of mixed-use development. The above-grade portion of the development will include additional parking levels, retail space, and apartments. Associated development is anticipated to consist of exterior concrete flatwork and underground utilities.

FINDINGS

Site Description

The project site is located on the north side of L Street between 20th and 21st Streets in Sacramento, California. The site is currently occupied by a two-story, at-grade parking structure with an adjoining office building and asphalt concrete surface parking. Associated development includes concrete flatwork and landscaping.

Our review of historic aerial photographs obtained for the *Phase 1 Environmental Site Assessment* (ESA) dated September 23, 2013 prepared by our firm indicates that the site was developed with residences from at least 1895 to at least 1965 and has been developed with a parking structure since at least 1965. Several structures are noted east and west of the existing parking structure on aerial photographs from until at least 1981. The structures are not seen in an aerial photograph from 1993 and were presumably demolished prior to 1993. Our review of the Phase 1 ESA indicates the demolished buildings were residential from at least 1915 to at least 1980 and were used for commercial purposes since at least 1991.

Subsurface Soil Conditions

Two (2) exploratory borings were performed on November 23, 2013 at the approximate locations indicated on Figure 2. The soil conditions at the borings generally consist of about 26 to 28 feet of interbedded sand and silt layers overlying relative dense gravels extending about 42 to 44 feet below the existing ground surface. The gravels are underlain by relatively dense silts extending to the explored 50 to 51 foot depths of the borings.



At the completion of our drilling activities, the test borings were grouted to the surface with a slurry of neat cement and water, as required by the permit issued by the County of Sacramento Environmental Management Department.

For soil conditions at the specific boring locations, please refer to the boring logs contained on Figures 3 and 4.

Groundwater

Groundwater was encountered about 18 feet below the ground surface at the boring locations during and immediately after the drilling operations. Based on our experience in the area, groundwater is anticipated to be as high as about 15 feet below the existing ground surface at the site.

CONCLUSIONS

Seismic Code Parameters – 2013 CBC/ASCE 7-10

We understand the design of the structures will be performed using the 2013 CBC. The 2013 edition of the CBC references American Society of Civil Engineers (ASCE) Standard 7-10 for seismic design. The following seismic parameters were determined based on the site latitude and longitude using the public domain computer program developed by the United States Geological Survey (USGS).

2013 CBC/ASCE 7-10 Seismic Design Parameters

Latitude: 38.5746° N Longitude: 121.4801° W	ASCE 7-10 Table/Figure	2013 CBC Table/Figure	Factor/ Coefficient	Value
Short-Period MCE at 0.2s	Figure 22-1	Figure 1613.3.1(1)	S _S	0.667 g
1.0s Period MCE	Figure 22-2	Figure 1613.3.1(2)	S ₁	0.291 g
Soil Class	Table 20.3-1	Section 1613.3.2	Site Class	D*
Site Coefficient	Table 11.4-1	Table 1613.3.3(1)	F _a	1.266
Site Coefficient	Table 11.4-2	Table 1613.3.3(2)	F _v	1.817
Adjusted MCE Spectral Response Parameters	Equation 11.4-1	Equation 16-37	S _{MS}	0.845 g
	Equation 11.4-2	Equation 16-38	S _{M1}	0.529 g
Design Spectral Acceleration Parameters	Equation 11.4-3	Equation 16-39	S _{DS}	0.563 g
	Equation 11.4-4	Equation 16-40	S _{D1}	0.3531 g



Latitude: 38.5746° N Longitude: 121.4801° W	ASCE 7-10 Table/Figure	2013 CBC Table/Figure	Factor/ Coefficient	Value
Seismic Design Category	Table 11.6-1	Section 1613.3.5(1)	Occupancy I to IV	D
	Table 11.6-2	Section 1613.3.5(2)	Occupancy I to IV	D

* Assumes the structure is supported on foundation system situated on or extending to the relatively dense gravels below the site.

Liquefaction Potential

Liquefaction is a soil strength loss phenomenon that typically occurs in loose, saturated cohesionless sands as a result of strong ground shaking during earthquakes. The potential for liquefaction at a site is usually determined based on the results of a subsurface soil investigation and the groundwater conditions beneath the site. Hazards to structures associated with liquefaction include shallow and deep foundation bearing capacity failure, lateral spreading of soil, and differential settlement of soils below foundations, all of which can contribute to structural damage or collapse.

The results of our subsurface soil exploration at the site indicate the underlying soils generally consist of about 26 to 28 feet of relatively loose sandy silts overlying relatively dense gravels extending to depths of about 42 to 44 feet below the existing ground surface. Historical high groundwater is indicated to be about 15 feet below the existing ground surface. Based on the soil and groundwater conditions at the site, a liquefaction analysis to determine factors of safety against liquefaction was performed.

Liquefaction Analysis and Results

We performed a liquefaction analysis of data obtained from the blow counts measured in the borings performed for this investigation. The borings were analyzed using LiqIT (version 4.7) and the liquefaction analyses were performed utilizing the NCERR methodology. A design static groundwater level of approximately 15 feet below existing ground surface was used in our analysis based on our review of historic groundwater levels at the site. A peak ground acceleration (PGA) of 0.227 g was used in the liquefaction analysis based on Equation 11.8-1 of ASCE 7-10. A mode magnitude earthquake of 6.6 was used for this analysis using the 2008 USGS National Seismic Hazard Mapping Project (NSHMP) Probabilistic Seismic Hazard Analysis (PSHA) Interactive Deaggregation web site.



The results of the liquefaction analyses indicate factors of safety against liquefaction below 1.3 and that the majority of the soil profile may be susceptible to liquefaction.

Seismically Induced Settlement

Post-liquefaction settlement calculations within LiqIT are performed using the methodology of Ishihara and Yoshimine (1992).

Given the results of our analysis performed for this investigation, the worst-case estimate of total and differential post-liquefaction settlement is calculated to be about six (6) inches total seismic induced settlement. Based on the soil conditions encountered at the borings and our previous work at the site, we anticipate about three (3) inches of differential settlement across 50 feet, or the shortest dimension of the structure, whichever is less. These estimates of post-liquefaction seismic settlements represent free-field ground settlement, not settlement of the structures.

Bearing Capacity

Based upon our field and laboratory testing and the results of our liquefaction analysis, it is our opinion that undisturbed native soils overlying the gravel layer are not capable of supporting the planned structures and associated improvements unless the structures are supported on an alternative foundation system, such as shallow foundations supported on an improved subgrade (i.e., Geopier® rammed aggregate piers [RAPs]) or a deep foundation system consisting of driven, precast concrete piles (driven piles); drilled, auger cast-in-place piles; or drilled cast-in-place reinforced concrete piers. However, we anticipate noise and vibrations associated with the construction of driven piles at the site will exceed those typically tolerated for projects within close proximity to existing structures such as those adjacent to the site. Therefore, driven piles will not be considered for this project at this time due to noise pollution, disturbances due to vibrations, and other factors associated with construction of driven piles.

If the proposed structure will extend about 25 feet below the ground surface, consideration may be given to supporting the structure on shallow foundations supported on the relatively dense gravel layer. The gravel layer was encountered about 24 to 26 feet below the existing ground surface at the boring locations.

The selection of the most appropriate foundation system or systems will depend on the actual loads and configurations (i.e., above grade, below-grade, partially below-grade, etc.) of the structures, the acceptable amount of settlement for the structure, and the construction



constraints (i.e., vibrations, noise, equipment access, etc.). A discussion of each foundation type is provided as follows.

Specific recommendations for the various foundation systems are provided in the Foundations section of this report.

Conventional Shallow Foundations

Conventional foundations extending to the top of the relatively dense gravel layer encountered about 26 to 28 feet below the ground surface at the boring locations could be used to support the parking garage provided the recommendations of this report are carefully followed. However, conventional shallow foundations at the site will require dewatering during construction and should be accounted for in the construction schedule and budget.

We anticipate total settlements on the order of one inch and differential settlements on the order of ½-inch for conventional foundations. Minimizing settlement between the below grade portions and at-grade portions of the proposed structure will be a significant concern. Deepening foundations beneath the at-grade portions of the proposed structure will help mitigate differential settlements of the proposed structure. Foundations should be at or near the same elevation.

Shallow Foundations Supported on Geopier® RAPs

Based on the available information, we conclude that shallow foundations supported on an improved subgrade consisting of Geopier® RAPs would be appropriate for support of the proposed improvements. The Geopier® system uses a drilled shaft backfilled with compacted aggregate base to improve subgrade stability and reduce settlements within the treated area. The Geopier® system should be designed by a professional engineer in the State of California that is qualified and experienced in Geopier® rammed aggregate pier design.

Drilled Auger Cast-in-Place Piles

Based on the soil conditions encountered at the site, deep foundations consisting of auger cast-in-place (ACIP) piles extending into the relatively dense gravel layer are considered feasible at the site. Auger cast-in-place piles have been used as an alternative to driven piling to reduce detrimental vibration, noise, and other problems associated with driving piles, and can achieve similar bearing, uplift, and lateral resistance of the driven piles.



We anticipate total settlements on the order of ½-inch and differential settlements on the order of ¼-inch for ACIP pile foundations. A contingency plan for loading and off-hauling soil cuttings from the ACIP should be considered in the construction plans and schedule.

Drilled, Cast-in-Place, Reinforced Concrete Piers

Drilled, cast-in-place, reinforced concrete piers (drilled piers) could be used to support the structure. Drilled piers will likely extend below the groundwater table during construction and will require wet construction techniques (i.e., casing and/or drilling slurry). We anticipate drilled piers will extend to the top of the gravel layer encountered about 26 to 28 feet below the ground surface at the boring locations.

We anticipate total settlements on the order of ½-inch and differential settlements of ¼-inch. The use of drilled piers also would provide increased uplift and lateral resistance for the structure.

The construction costs, plan, and schedule should include loading and off-hauling soil cuttings from the drilled pier construction.

Soil Expansion Potential

The near-surface soils encountered at the borings generally consist of granular silts and sands, that are not considered expansive. Therefore, special reinforcement of foundations and floor slabs, or special moisture conditioning during site grading to resist or control soil expansion pressures, are not considered necessary on this project.

Pavement Subgrade Quality

Laboratory testing of bulk samples obtained at the site indicates the near-surface soils are relatively good quality materials for support of asphalt concrete and concrete pavements. A Resistance value (R-value) of 61 was obtained on a composite bulk soil samples obtained from the upper three feet of soil at boring location D2. The results of the R-value testing are included on Figure A3 attached.

Material Suitability

The existing on-site materials are considered suitable for use as engineered fill, provided they are free of significant quantities of organics, rubble and deleterious debris, and at a suitable moisture content to achieve the recommended compaction.



Soils beneath existing pavement and slab areas and irrigated areas will likely be at an elevated moisture content regardless of the time of construction and will require drying before compaction or use as fill.

Existing pavements and flatwork (asphalt concrete and concrete) within areas to be demolished, if any, may be broken up and pulverized for use as fill. Asphalt and Portland cement concrete rubble may be used as fill provided it is processed into fragments less than three inches in largest dimension, is mixed with soil to form a compactable mixture, and is approved by the Owner.

The existing aggregate base encountered below the asphalt concrete and concrete surfaces is considered suitable for reuse as engineered fill. Consideration may also be given to reusing the existing aggregate base as aggregate base or subbase. However, additional laboratory testing would be required to verify the material meets the requirements for Caltrans Class 2 aggregate base or subbase.

Excavation Conditions

Based on the information obtained during the field exploration and our local experience, we anticipate the soils at the site will be readily excavatable with conventional earthmoving and trenching equipment. However, larger equipment may be required to remove existing below-grade structures at the site from previous developments and the existing structures (e.g., previous foundations, concrete slabs, etc.). Based on the results of our subsurface exploration, the soils across the site may be classified as Type B soils in accordance with the Occupational Safety and Health (OSHA) classification system.

In general, we anticipate the on-site soils will likely remain stable at near-vertical inclinations without significant caving for relatively short periods (i.e., less than one day) during utility and foundation construction. However, excavations extending into saturated and/or disturbed soils will likely require excavation bracing or shoring to control sloughing and caving for utilities and casing will be required for RAP and/or drilled pier excavations. Excavations deeper than five feet should be sloped or braced in accordance with current OSHA regulations.

Temporarily sloped excavations should be constructed no steeper than a one horizontal to one vertical (1:1) inclination. Temporary slopes likely will stand at this inclination for the short-term duration of construction, provided significant pockets of loose and/or saturated granular soils are not encountered that could slough into excavations.



The contractor must provide a safely sloped excavation or an adequately constructed and braced shoring system in accordance with federal, state and local safety regulations for individuals working in an excavation that may expose them to the danger of moving ground. If material is stored or heavy equipment is operated near an excavation, stronger shoring must be used to resist the extra pressure due to the superimposed loads.

Groundwater

Based on our subsurface exploration and review of groundwater information in the vicinity of the site, a permanent groundwater level of about 15 feet should be used in design of the proposed structure. The permanent groundwater table should not be a significant factor in site development for excavations less than about 15 feet below the existing ground surface. However, it is likely that perched groundwater may be encountered in excavations from rainfall, surface run-off, irrigation, or seepage from perched groundwater sources, especially if construction begins in the winter and early spring months.

For excavations extending less than about 15 feet below the existing ground surface standard sump pit and pumping procedures should be adequate to control localized groundwater. If Geopier® RAPs, ACIP piles, or drilled piers are used for foundation support, the RAP or pile/pier contractor should provide proper equipment and materials to handle the anticipated groundwater depths.

Dewatering of excavations deeper than about 15 feet below the existing ground surface should be anticipated, although the groundwater elevation will vary depending on seasonal rainfall. Temporary dewatering will be necessary to maintain a relatively dry excavation and to limit disturbances to the subgrade at the bottom of the excavation. The groundwater should be temporarily lowered to at least two feet below the bottom of excavations. The spacing interval(s) and depth for dewatering operations will depend on the rate and volume of groundwater flow experienced and should be determined in the field by the dewatering contractor. Note that the dewatering design should take into account the effect dewatering operations will have on the adjacent improvements.

Groundwater levels should be expected to fluctuate throughout the year based on variations in precipitation, temperature, evaporation, run-off, and other factors. The groundwater levels discussed herein, and indicated on the boring logs, represent the conditions at the time the measurements were obtained. The actual groundwater levels at the time of construction may vary.



Seasonal Water

Infiltrating surface run-off water from seasonal moisture during the winter and spring months will create saturated surface soil conditions. It is probable that grading operations attempted following the onset of winter rains and prior to prolonged drying periods will be hampered by high soil moisture contents. Such soils, intended for use as engineered fill, will require a prolonged period of dry weather and aeration or chemical treatment to reach a moisture content suitable for proper compaction.

In addition, soils located beneath existing pavements, slabs, and flatwork, will likely be at elevated moisture contents regardless of the time of year of construction and also require drying. Wet soils should be anticipated and considered in the construction schedule for this project.

Preliminary Soil Corrosion Potential

A sample of near-surface soil was submitted to Sunland Analytical Lab for testing to determine pH, chloride and sulfate concentrations, and resistivity to help evaluate the potential for corrosive attack upon buried structures. Results of the soil corrosivity tests are summarized below; copies of the test results are attached as Figure A4.

SUMMARY OF CORROSION TEST RESULTS						
Sample Location	Test Depth (feet)	USCS Soil Type	pH	Chloride Content (ppm)	Sulfate Content (ppm)	Resistivity (ohm-cm)
D1	1 to 3	SM	8.02	219.3	323.8	860

The California Department of Transportation Corrosion Technology Section, Office of Materials and Foundations, *Corrosion Guidelines Version 1.0, September 2003*, considers a site to be corrosive to foundation elements if one or more of the following conditions exists for the representative soil and/or water samples taken: has a chloride concentration greater than or equal to 500 ppm, sulfate concentration greater than or equal to 2000 ppm, or the pH is 5.5 or less. The corrosivity test results suggest that the site soils are not highly corrosive to exposed reinforced concrete. The low resistivity may indicate an increased potential for corrosion of buried metal. Table 4.3.1 – *Requirement for Concrete Exposed to Sulfate-Containing Solutions*, American Concrete Institute (ACI) 318, Section 4.3, as referenced in section 1904A.3 of the 2007 CBC, indicates the sulfate exposure for the samples tested is *Negligible*. Ordinary Type I-II Portland cement is considered suitable for use on this project, assuming a minimum concrete cover is maintained over the reinforcement.



Wallace-Kuhl & Associates are not corrosion engineers. Therefore, if it is desired to further define the soil corrosion potential at the site a corrosion engineer should be consulted.

RECOMMENDATIONS

General

The recommendations presented below are appropriate for typical construction in the late spring through fall months. The on-site soils likely will be saturated by rainfall in the winter and early spring months, and will not be compactable without drying by aeration or chemical treatment to dry the soils. Should the construction schedule require work during wet conditions, additional recommendations can be provided, as conditions dictate.

Soils under existing pavements or slabs and irrigated areas will be wet regardless of the time of year of construction.

Site preparation should be accomplished in accordance with the provisions of this report and the appended guide specifications. A representative of the Geotechnical Engineer should be present during site grading to evaluate compliance with our recommendations and the guide specifications. The Geotechnical Engineer of Record referenced herein should be considered the Geotechnical Engineer that is retained to provide geotechnical engineering observation and testing services during construction.

Site Preparation

Proposed structural areas of the site should be cleared of existing structures, pavements, flatwork, below-grade structures, vegetation, debris, and other deleterious materials to expose undisturbed native soils or relatively dense existing fill as determined by our representative. Where practical, the clearing should extend a minimum of five feet beyond the limits of the structural areas of the site.

Existing underground utilities within the proposed structural areas should be completely removed and/or relocated as necessary. Utilities to be abandoned outside the structural areas should be removed or properly plugged (i.e., fully grouted provided the abandoned utility is situated at least 2½ feet below the final subgrade level to reduce the potential for localized "hard spots"). All trees/large brush designated for removal should include the entire rootball and roots ½-inch or larger in size. Depressions resulting from removal of underground



structures (e.g. foundations, utilities, etc.) should be cleaned of loose soil and properly backfilled in accordance with the recommendations of this report.

The existing pavements and flatwork (asphalt concrete and concrete) that are not incorporated into the new design should be broken up and removed from the site. Pulverized asphalt and Portland cement concrete rubble may be used as fill below the structures and pavements provided they are processed into fragments less than three inches in largest dimension and mixed with soil to form a compactable mixture.

Surface vegetation and organic soils should be removed from the construction areas by stripping. Strippings should be hauled off-site or placed in landscape areas a minimum of five feet from proposed structural areas of the site (e.g., buildings, pavements, sidewalks, etc.).

Subgrade Preparation

Following the site clearing operations, surfaces to receive fill and at-grade areas should be scarified to a depth of at least 12 inches, moisture conditioned to at least the optimum moisture content, and be compacted to at least 90 percent relative compaction. Relative compaction should be based on the maximum dry density as determined in accordance with the American Society of Testing and Materials (ASTM) D1557 Test Method.

Soils beneath existing pavement and slab areas and irrigated areas will likely be at an elevated moisture content regardless of the time of construction and will require drying before compaction or use as fill.

Compaction operations should be performed in the presence of the Geotechnical Engineer's representative who will evaluate the performance of the subgrade under compactive load and identify loose or unstable soils that could require additional subgrade preparation.

Engineered Fill Construction

Any fill placed within the construction area should be an approved material, free of significant quantities of organics, oversized rubble, or other deleterious materials. The fill should be spread in level layers not exceeding nine inches in loose thickness and compacted to a minimum of 90 percent of the maximum dry density. Maximum dry densities shall be determined in accordance with ASTM D1557.



Engineered fill should be moisture conditioned to at least the optimum moisture content and maintained in that condition.

The on-site soils encountered at the boring locations are considered suitable for use as engineered fill provided they are free of rubble and organic concentrations and are at a compactable moisture content. Imported fill should be an approved compactable granular material, have an Expansion Index of 20 or less, a Resistance value of at least 30 when used within the upper three feet of pavement subgrades, and be free of particles larger than three inches in maximum dimension. The contractor also should supply appropriate documentation for imported fill materials indicating the materials are free of known contamination and have corrosion characteristics within acceptable limits. Our firm must approve import material before being transported to the project site.

The upper six inches of pavement subgrade should be moisture conditioned to at least the optimum moisture content and compacted to no less than 95 percent relative compaction, regardless of whether final subgrade is achieved by excavation, filling or left at existing grade. Final pavement subgrade processing and compaction should be performed after completion of underground utilities and must be stable under construction traffic prior to aggregate base placement.

Permanent excavation and fill slopes should be constructed no steeper than two horizontal to one vertical (2:1), and should be vegetated as soon as practical following grading to minimize erosion. Slopes should be over-built and cutback to design grades and inclinations.

Site preparation should be accomplished in accordance with the recommendations of this report. We recommend the Geotechnical Engineer's representative be present during site preparation and all grading operations to observe and test the fill to verify compliance with the recommendations of this report and the job specifications.

Utility Trench Backfill

Bedding and initial backfill for utility construction should conform with the pipe manufacturer's recommendations and applicable sections of the governing agency standards. General trench backfill should consist of engineered fill backfilled in maximum nine-inch thick loose lifts with each lift compacted to at least 90 percent of the maximum dry density as determined by ASTM D1557. Utility trench backfill within the upper six inches of the final subgrade within pavement areas should be compacted to at least 95 percent of the maximum dry density.



We recommend that all underground utility trenches aligned nearly parallel with existing or new foundations be at least five feet from the foundations, wherever possible. If this is not practical, the trenches should not encroach on a zone extending at a one horizontal to one vertical (1:1) inclination below the foundations.

It is likely that materials excavated from trenches will be at elevated moisture contents and will require significant aeration or a period of drying to reach a compactable moisture content. We recommend bid documents contain a unit price for the removal and drying of saturated soils, or replacement with approved import soils.

Foundation Design Alternatives

We recommend that our office be given the opportunity to review final grading plans, foundation plans and specifications to determine if the intent of our recommendations has been properly implemented into those documents.

The proposed structure may be supported upon continuous and/or isolated spread foundations bearing on the relatively dense gravels, on a Geopier® RAP improved subgrade, or a deep foundation system consisting of drilled ACIP piles or drilled piers. Alternative foundations may be considered at the site and will be evaluated on a case-by-case basis.

Recommendations for each type of foundation system have been provided. Combination foundation systems (i.e. shallow foundations used with deep foundations) may be acceptable; however, the structure must be designed to accommodate some differential settlement due to the varying support characteristics of the foundations and elastic properties of various bearing strata. The intent of this recommendation is to minimize differential settlement between the two foundation types.

Our recommendations for shallow spread foundations, drilled ACIP piles, and driven piles are provided in the following sections. Preliminary recommendations for shallow foundations supported on a Geopier® RAP improved subgrade are also provided.

Shallow Spread Foundations (If Structure Contains Basement)

If the proposed structure will contain a basement, the structure may be supported upon continuous and/or isolated spread foundations extending to and the relatively dense gravel layer which was encountered about 26 to 28 feet below the ground surface at the boring locations. Shallow foundations should be embedded at least two (2) feet below lowest adjacent



soil grade. Lowest adjacent soil grade is defined as the surface upon which the first floor slab is placed, or the exterior grade, whichever is lower. Continuous foundations should maintain a minimum width of 18 inches and isolated spread foundations should be at least 36 inches in plan dimension. Foundations so established may be sized for maximum allowable soil bearing pressures of 4000 pounds per square foot (psf) for dead plus live loads, with a 1/3 increase for total loads including the short-term effects of wind or seismic forces. The weight of the foundation concrete extending below lowest adjacent soil grade may be disregarded in sizing computations.

Increased bearing capacity can be achieved by increasing the embedment depth of the foundations into the relatively dense gravels. For every additional foot of embedment below the lowest adjacent soil grade into the relatively dense gravels, the allowable bearing capacity may be increased by 1500 psf for dead plus live loads with a 1/3 increase for short-term effects of wind or seismic forces. The allowable dead plus live load capacity may be increased to a maximum of 7500 psf at an embedment depth of five feet below soil grade.

Continuous foundations should be reinforced with a minimum of two No. 4 reinforcing bars, placed one each near the top and bottom, to provide structural continuity and to allow the foundations the ability to span isolated soil irregularities. The structural engineer should evaluate the need for additional reinforcement based on anticipated structural loads.

Lateral resistance of foundations may be computed using an allowable friction factor of 0.30, which may be multiplied by the vertical load on the foundation. Additional lateral resistance may be assumed to develop against the vertical face of the foundations and may be computed using a "passive" lateral earth pressure equal to an equivalent fluid pressure of 350 psf per foot of depth. These two modes of resistance should not be added unless the frictional component is reduced by 50 percent, since full mobilization of the passive resistance requires some horizontal movement, which significantly diminishes the frictional resistance.

We recommend that all foundation excavations be observed by our representative prior to placement of reinforcement and concrete to verify firm bearing materials are exposed.

Shallow Foundations on Geopier® Rammed Aggregate Piers

We anticipate a Geopier® RAP system could provide adequate support for the proposed structure supported on continuous and/or isolated spread foundations or a mat foundation. A qualified RAP contractor licensed in the State of California should be contacted directly to provide final recommendations for the Geopier® RAP system, including allowable capacities and settlements.



Continuous and/or isolated spread foundations bearing on a Geopier® RAP improved subgrade should extend at least 18 inches below the lowest adjacent soil grade of the structure pad. For this project, the pad subgrade is the surface on which aggregate materials (i.e., aggregate base below slab areas of the structures or capillary break materials within proposed building areas) are placed. Isolated spread foundations should be at least 18 inches wide.

Preliminary design information indicates allowable rammed aggregate pier capacities of 85 kips and a bearing capacity of 6000 psf for dead plus live load can be achieved on Geopier® RAPs. The RAP layout and final bearing pressures and cell capacities will depend on the actual loading conditions for each structure and should be determined by the RAP designer and should include an appropriate factor of safety. The weight of foundation concrete extending below adjacent soil grade may be disregarded in sizing computations.

Uplift resistance can be provided using ground improvement equipped with a steel uplift anchor and can provide about 35 kips of allowable uplift.

We recommend that all foundations be reinforced to provide structural continuity, reduce cracking and permit spanning of local soil irregularities. The project structural engineer should determine final foundation reinforcement. However, as a minimum, we recommend continuous foundations contain at least four No. 4 reinforcing bars, placed two each near the top and bottom of the foundation.

Preliminary resistance to lateral foundation displacement for conventional foundations supported on RAPs may be computed using an allowable friction factor of 0.45, which may be multiplied by the effective vertical load on each foundation. Additional lateral resistance may be computed using an allowable passive earth pressure of 350 psf per foot of depth. These two modes of resistance should not be added unless the frictional value is reduced by 50 percent since full mobilization of these resistances typically occurs at different degrees of horizontal movement.

Auger Cast-in-Place (ACIP) Concrete Piles

The proposed structure also may be supported upon ACIP concrete piles. ACIP concrete piles are installed using special equipment equipped with hollow-stem augers. Once the pile hole has been drilled, grout/concrete is injected under pressure through the auger to displace the soil and provide positive contact with the surrounding soils. Reinforcement is placed into the grouted shaft after withdrawal of the auger.



Piles for the structure should extend to a minimum of approximately two feet into the relatively dense gravels, which were encountered at depths of about 26 to 28 feet below the ground surface at the boring locations. Drilled ACIP concrete piles may be designed utilizing the following maximum allowable loads per pile with appropriate factor of safety (F.S.) as summarized in the table below as follows:

ALLOWABLE ACIP PILE CAPACITIES					
Loading Conditions		18-inch Diameter		24-inch Diameter	
		Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
Axial Compression	DL (F.S. = 3)	80	240	140	420
	DL + LL (F.S. = 2)	120	240	210	420
	Total Load (F.S. = 1.5)	160	240	280	420
Axial Uplift (Tension)	Total Load (F.S. = 1.5)	40	60	70	105

Reductions in pile capacity for consideration of group action are unnecessary, provided piles are spaced no closer (center-to-center) than three times the diameter of the pile.

The indicated uplift pile capacity is based upon the assumption that the piles will be properly reinforced to transfer pullout forces to the pile tip.

Lateral loading information was not available at the time this report was prepared. The lateral resistance of individual piles and the passive resistance of the pile cap against the soil can be combined to provide lateral resistance. For preliminary design purposes, 18-inch ACIP piles can be assumed to provide an allowable lateral resistance of five (5) tons and 24-inch ACIP piles can be assumed to provide an allowable lateral resistance of 10 tons. Both lateral resistance values are based on a pile deflection of one-inch. Resistance to lateral loads for ACIP piles can be determined and presented in a supplemental report using a lateral pile analysis program when final size design information is known and if required to further aid in the structural design.

The weight of pile cap concrete extending below grade and the weight of each pile may be disregarded in determinations of the net compressive load transmitted to the supporting soil.



Concurrent lateral resistance derived in friction between the slab and the supporting subgrade layer may be computed using an allowable friction factor of 0.30 at the interface between the slab and the subgrade.

A pile load test program will be necessary to determine the correct length of the ACIP piles to achieve the specified capacities. Additional load testing could be performed during construction, where as-built pile dimensions differ from the recommended dimensions, which could result from refusal to auger penetration in denser/stiffer soils beneath this site.

Drilled Cast-in-Place Concrete Piers

Drilled, cast-in-place piers (drilled piers) may be used to support the proposed structure. Drilled piers should be at least 24 inches in diameter and extend to at least two (2) feet into the relatively dense gravels encountered about 26 to 28 feet below the ground surface at the boring locations. Piers so established may be designed based on an allowable end bearing capacity of 6000 psf for dead plus live loads. We recommend that adjacent piers be constructed no closer than three pier diameters apart, as measured between centers of the piers. Drilled pier foundations should be structurally isolated from any adjacent concrete flatwork by a felt strip or similar material.

Due to the anticipated depth of groundwater and the required drilled pier depths, the contractor should be prepared to construct the drilled piers using wet drilling methods (i.e., casing, slurry, etc.).

Uplift resistance of the pier foundations may be computed assuming the following resisting forces, where applicable: 1) the unit weight of foundation concrete (150 pound per cubic foot); and, 2) shearing resistance of 350 psf applied over the shaft area of the pier. Increased uplift resistance can be achieved by increasing the diameter of the pier or increasing the depth of the embedment depth.

It will be essential that our representative be present during pier drilling operations to verify compliance with our recommendations and the job specifications.

Lateral resistance of drilled piers can also be evaluated by determining the shear, moment and deflection of the pier using a computer model of the pier and soil (i.e. LPILE). Such an analysis is beyond the current scope of this evaluation and can be accomplished after the dimensions of the piers and loading conditions are known, if desired.



The bottom of the pier excavations should be free of loose or disturbed soils prior to placement of the concrete. Cleaning of the bearing surface may be done mechanically with the bellows bucket, but should be verified by the geotechnical engineer prior to concrete placement.

Reinforcement and concrete should be placed in the pier excavations as soon as possible after excavation is completed to reduce the potential of sidewall caving into the excavations. Excessive sloughing of the sidewalls during pier construction is anticipated for piers extending deeper than about 10 feet below the existing ground surface. Therefore, we recommend that the pier contractor be prepared to case the pier holes or use drilling fluid (slurry) if conditions require.

To reduce lateral movement of the drilled shafts, it is necessary to place the concrete for the drilled shafts in intimate contact with the surrounding soil. Any voids or enlargements in the shafts due to over-excavation or temporary casing installation shall be filled with concrete at the time the shaft concrete is placed.

If the drilled piers are constructed in the "dry" (with dry being less than two inches of water at the base of the excavation), the concrete may be placed by the free-fall method, using a short hopper or back-chute to direct the concrete flow out of the truck into a vertical stream of flowing concrete with a relatively small diameter. The stream is directed to avoid hitting the sides of the excavation or any reinforcing cages. For the free-fall method of concrete placement, we recommend the concrete mix be designed with a slump of five to seven inches.

In general, we anticipate the drilled pier excavations will be relatively dry for pier excavations extending less than about 15 feet below the existing ground surface. For excavations extending deeper than about 15 feet below the existing ground surface we anticipate groundwater will be encountered which cannot be controlled such that more than six (6) inches of water accumulates at the bottom of the pier excavation. After it is confirmed that the excess water cannot be removed from the caisson excavation by bailing or with pumps, concrete should be placed using a tremie. For concrete placed using the tremie method, a slump of six to eight (8) inches, and a maximum aggregate size of $\frac{3}{4}$ -inch is recommended. The required slump should be obtained by using plasticizers or water-reducing agents. Addition of water on-site to establish the recommended slump should not be allowed.

When extracting temporary casings or tremie methods from the excavation, care should be taken to maintain a head of concrete to prevent infiltration of water and soil into the shaft area. The head of concrete should always be greater than the head of water trapped outside the pier or tremie, taking into account the differences in unit weights of concrete and water.



We estimate total settlement for drilled pier foundations using the recommended maximum net allowable bearing pressure and allowable capacities presented above, will be less than one (1) inch. Differential settlements may be as much as the total settlement between individual pier elements. The settlement estimates are based on the available soil information, our experience with similar structures and soil conditions, and field verification of suitable bearing soils during foundation construction.

Pile Load Testing Program

If ACIP are used for support of the structure, a pile loading testing program conducted prior to installation of production piles will be necessary to determine and verify the appropriate length of pile to achieve the **ultimate capacity** of the piles. The pile load test program should include both static load tests and pile driving analyzer (PDA) tests. The purpose of the PDA testing for the pre-construction piles would be to develop a correlation between the static load test results and the PDA testing that would be used during the construction of production piles in lieu of "quick" load tests. The advantage of PDA testing over the "quick" load pile testing is the savings in time to set up the load test frame that typically takes three to five days, and a "quick" load test program often takes about eight hours per pile to complete

Static Load Testing

The pile load test frame and supply of the personnel and equipment necessary to conduct the load tests should be constructed in accordance with the latest version of ASTM Test Method D1143 for compressive loads, ASTM Test Method D3689 for tensile loads, and ASTM Test Method D3966 for lateral loads as delineated in the *Guide Specifications for Auger Cast Piles* provided as Appendix B.

One test pile should be cast-in-place to reach minimum tip elevations of at least 30 feet below the ground surface and at least two (2) feet into the gravel stratum. Additional test piles will be required if multiple pile sizes are used in the design or if alternate pile capacities are being considered. The reaction system should be capable of resisting forces from tests on the test piles in axial compression and tension as specified in the previous Allowable Pile Capacities table. We intend to test the test pile in compression and tension, and to perform a lateral load test between adjacent piles. The pile may be loaded to failure in any of the test configurations.

Submittals for the load testing frame, hydraulic pumps, hydraulic jacks, dial indicators, and calibration documentation must be provided by the pile contractor in accordance with the project plans and specifications.



Prior to beginning load tests, the pile concrete should achieve a minimum compressive strength of 4000 pounds per square inch when tested in accordance with ASTM C109. Construction activities must be restricted during the load-testing program. Construction activities may proceed during the set up of the load frame and installation of the test piles. Excessive vibration of the ground near the load test can cause movement of the test frame and the sensitive pile deflection measurement devices.

Final pile construction criteria will be determined from the results of the load-testing program. It is intended that the pile load test setup will be located outside the location of any permanent pile caps or grade beams, and that the test piles and reaction piles will be abandoned upon completion of the testing.

Pile Driving Analyzer Testing

Following the static load testing program, the test pile will be subjected to PDA testing, provided the pile is not damaged during the static load testing. PDA testing involves instrumenting piles and recording the response of the pile during dynamic loading. PDA testing consists of dropping a heavy weight from a certain height on to the pile head and monitoring the response of the pile. The capacity of the piles can be computed from the analyses of the PDA test.

Additional PDA testing will be performed during construction of production piles, in the event that as-built pile dimensions differ from the recommended dimensions, which could result from refusal to auger penetration or in random areas across the site to verify that the earth materials are supporting the piles as indicated by the load test program.

Surveillance/Protection

We recommend that photographic and written records be kept of both the pre-existing condition and new damage (if any) sustained by improvements in and around the site. The elevation of sidewalks and buildings adjacent to the construction site should be measured prior to construction activities. The elevations of selected survey points should be measured on a weekly basis during the initial stages of construction. Elevation of improvements and photographs should include basic data for determining the validity of claims lodged by nearby property owners or tenants.



Below-Grade Walls and Drainage

Foundations for below-grade walls may be designed and constructed as noted in the Foundation Design section of this report. The walls may be designed for an "active" earth pressure of 50 psf per foot of wall height, assuming the wall is free to rotate. If the wall is restrained at the top, or is rigid enough so that it does not rotate sufficiently to reach the active earth pressure condition, a higher lateral "at rest" earth pressure of 70 psf per foot of wall height should be used for design of rigid walls. These values do not include the effect of hydrostatic forces and assume the wall backfill is fully drained or that free water cannot collect behind the walls. Lateral resistance may be computed using an allowable passive earth pressure of 250 psf per foot of depth.

If the walls are designed to include the effects of hydrostatic forces, active and at rest pressures would increase to 90 pcf and 100 pcf, respectively, to include the effect of hydrostatic pressures. Passive pressures below the groundwater table can be evaluated using 185 pcf.

Retaining walls could experience additional surcharge loading if equipment is stored within a 1:1 projection from the bottom of the excavation. Surcharge loading under these circumstances will need to be evaluated on a case-by-case basis.

Based on recent research (Lew, et al. 2010), the seismic increment of earth pressure may be neglected if the maximum ground acceleration is 0.4 g or less. Our analysis indicates the maximum ground acceleration will be about 0.23 g; therefore, the seismic increment of earth pressure may be neglected. Earth pressures due to seismic loading may be evaluated using a total active earth pressure of 50 psf per foot of wall height and a total passive earth pressure of 200 psf per foot of wall height. The resultant active force should be applied at 1/3 times the height of the retaining wall, measured from the bottom of the wall.

Wall drainage should consist of a drainage blanket of Class 2 permeable material (Caltrans Specification Section 68-1.025) at least one foot wide extending from the base of wall to within one foot of the top of the wall. The top foot above the drainage layer should consist of engineered fill placed in accordance with the recommendations of this report. Perforated pipe should be provided at the base of the wall to collect accumulated water. Drain pipes, if used, should slope to discharge at no less than a one percent fall to a suitable sump system or drainage facilities. Open-graded ½- to ¾-inch crushed rock may be used in lieu of the Class 2 permeable material, if the rock and drain pipe are completely enveloped in an approved non-woven geotextile filter fabric. Alternatively, geotextile drainage composites such as



MiraDRAIN® may be used in lieu of the drain rock layer. If used, geocomposite drain panels should be installed in accordance with the manufacturer's recommendations.

If efflorescence (discoloration of the wall face) or moisture penetration of the wall is not acceptable, waterproofing measures should be applied to the back face of the wall. A specialist in protection against moisture penetration should be consulted to determine specific waterproofing measures.

Structural backfill materials for retaining walls should be placed and compacted as noted in the Engineered Fill Construction section of this report. Pea gravel and crushed rock are not considered suitable backfill materials for retaining walls.

Interior Grade Slab Support

The interior concrete slabs-on-grade can be supported upon the soil subgrade prepared in accordance with the recommendations in this report and maintained in that condition. Slabs-on-grade that will be used for vehicle support should be designed in accordance with the recommendations provided in the Pavement Design section of this report.

Interior slab-on-grade concrete slabs that will not be used for vehicle support should be at least four inches thick and, as a minimum, contain chaired No. 3 reinforcing bars on 18-inch center-on-center spacing, located at mid-slab depths. All reinforcing should be located at mid-slab depth. This slab reinforcement is suggested as a guide "minimum" only for crack control; final reinforcement and joint spacing should be determined by the structural engineer. Wheel loads from forklifts, storage of palletized materials, cranes, etc., anticipated during construction should be considered in the design of the slab-on-grade floors.

Conventional floor slabs may be underlain by a layer of free-draining gravel serving as a deterrent to migration of capillary moisture. If used, the gravel layer should be at least four inches thick and graded such that 100 percent passes a one-inch sieve and no appreciable amount passes a No. 4 sieve. Additional moisture protection may be provided by placing a water vapor retarder (at least 10-mils thick) directly over the gravel. If used, the water vapor retarder should meet or exceed that standard specification as outlined in ASTM E1745.

Floor slab construction practice over the past 25 years or more has included placement of a thin layer of sand over the vapor retarder membrane. The intent of the sand is to aid in the proper curing of the slab concrete. However, recent debate over excessive moisture vapor emissions from floor slabs includes concern of water trapped within the sand. As a consequence, we



consider use of the sand layer as optional. The concrete curing benefits should be weighed against efforts to reduce slab moisture vapor transmission.

The recommendations presented above should reduce significant soils-related cracking of slab-on-grade floors. Also important to the performance and appearance of a Portland cement concrete slab is the quality of the concrete, the workmanship of the concrete contractor, the curing techniques utilized and spacing of control joints.

Floor Slab Moisture Penetration Resistance

It is likely the floor slab subgrade soils will become saturated at some time during the life of the structure, especially when slabs are constructed during the wet season and when constantly wet ground or poor drainage conditions exist adjacent to structures. For this reason, it should be assumed that all interior slabs, particularly those intended for moisture-sensitive floor coverings or materials, require protection against moisture or moisture vapor penetration. Standard practice includes placing a layer of rock and a vapor retarder membrane (and possibly a layer of sand) as discussed above. Recommendations contained in this report concerning foundation and floor slab design are presented as minimum requirements only from the geotechnical engineering standpoint.

Use of sub-slab gravel and a vapor retarder membrane will not "moisture proof" the slab, nor does it assure that slab moisture vapor transmission levels will be low enough to prevent damage to floor coverings or other building components. It is emphasized that we are not slab moisture proofing or moisture protection experts. The sub-slab gravel and vapor retarder membrane simply offer a first line of defense against soil-related moisture. If increased protection against moisture vapor penetration of the slab is desired, a concrete moisture protection specialist should be consulted. It is commonly accepted that maintaining the lowest practical water-cement ratio in the slab concrete is one of the most effective ways to reduce future moisture vapor penetration of the completed slab.

Exterior Concrete Flatwork

Exterior concrete flatwork may be constructed directly on the prepared soil subgrade prepared and compacted in accordance with the recommendations of this report. A four-inch layer of aggregate base could be used as a leveling course under flatwork if necessary, compacted to not less than 95 percent relative compaction.

Flatwork should be at least four inches thick and reinforced for crack control. Reinforcement should include, as a minimum, chaired No. 3 rebar located on maximum 18-inch centers, both



ways, throughout slabs. Accurate and consistent location of the reinforcement at mid-slab is essential to its performance and the risk of uncontrolled drying shrinkage slab cracking is increased if the reinforcement is not properly located within the slab.

Uniform moisture conditioning of subgrade soils is important to reduce the risk of non-uniform moisture withdrawal from the concrete and the possibility of plastic shrinkage cracks. Practices recommended by the Portland Cement Association (PCA) for proper placement and curing of concrete should be followed during exterior concrete flatwork construction. Flatwork should be independent of the building foundations and felt strips should be used to separate concrete slabs from building foundations.

The architect or civil engineer should determine the final thickness, strength, reinforcement, and joint spacing of exterior slab-on-grade concrete. Exterior flatwork next to landscaped areas should be thickened to twice the slab thickness for a width of at least 12 inches to help support lawn mowing equipment and other maintenance equipment.

Exterior flatwork should be constructed independent of the building foundations. Isolated column foundations should be structurally separated from adjacent flatwork by the placement of a layer of felt, or other appropriate material, between the flatwork and foundations. Practices recommended by the Portland Cement Association (PCA) for proper placement and curing of concrete should be followed during exterior concrete flatwork construction.

Exterior flatwork that will be traversed by vehicles or heavy equipment should be designed in accordance with the recommendations provided in the Pavement Design section of this report.

Pavement Design

We are providing several alternative pavement designs based on the soil conditions encountered at the site, the results of laboratory testing previously obtained at the site, and our experience.

The procedures used to design the pavement sections are in general conformance with the "Flexible Pavement Structural Design Guide for California Cities and Counties" dated January 1979, and the *California Highway Design Manual, Sixth Edition*. Laboratory testing of the on-site soils indicates an R-value of 61 was obtained on the near-surface soils at the site. Based on our experience with similar soil conditions and the variability of the near-surface soils, an R-value of 40 is considered appropriate for design of pavements at the site.



PAVEMENT DESIGN ALTERNATIVES				
R-value = 40				
Traffic Index (TI)	Traffic Condition	Type B Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)	Portland Cement Concrete (inches)
4.5	Automobile Parking Only	2½*	4	--
		--	4	4
7.0	Entrance/Exit Driveways & Traffic Lanes	3	9	--
		4*	7	--
		--	4	6

* = Asphalt thickness includes Caltrans Factor of Safety.

We emphasize that the performance of the pavement is critically dependent upon adequate and uniform compaction of the subgrade soils, including utility trench backfill within the limits of the pavements. The upper six inches of untreated pavement subgrade should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D1557. Aggregate base materials should be compacted to at least 95 percent of the maximum dry density. Class 2 aggregate base should conform to Section 26 of the Caltrans Standard Specifications.

It has been our experience that pavement failures may occur where a non-uniform or disturbed subgrade soil condition is created. Subgrade disturbances can result if pavement subgrade preparation is performed prior to underground utility construction and/or if a significant time period passes between subgrade preparation and placement of aggregate base. Therefore, we recommend that final pavement subgrade preparation (i.e. scarification, moisture conditioning, and compaction) be performed just prior to aggregate base placement.

We suggest that concrete slabs be constructed with thickened edges at least two inches plus the slab thickness and 36 inches wide in accordance with American Concrete Institute (ACI) design standards. Reinforcing for concrete pavement crack control, if desired, should consist of No. 3 reinforcing bars placed on maximum 18-inch centers each way throughout the slab.

Reinforcement must be located at mid-slab depth to be effective. Portland cement concrete should achieve a minimum compressive strength of 3500 psi at 28 days. Concrete curing and joint spacing and details should conform to current PCA and ACI guidelines.



We suggest considering the use of full depth curbs where pavements abut landscaping. The curbs should extend to at least the surface of the soil subgrade. Weep holes also could be provided at storm drain drop inlets, located at the subgrade-base interface, to allow water to drain from beneath the pavements.

Site Drainage

Site drainage should be accomplished to provide positive drainage of surface water away from the proposed structures and prevent ponding of water adjacent to foundations. The subgrade adjacent to the proposed structures should be sloped away from foundations at a minimum two percent gradient for at least 10 feet, where possible. We recommend consideration be given to connecting all roof drains to non-perforated rigid pipes which are connected to available drainage features to convey water away from the structure, or discharging the drains onto paved surfaces that slope away from the foundations. Ponding of surface water should not be allowed adjacent to the proposed structures or pavements.

Observation and Testing of Earthwork Construction

Site preparation should be accomplished in accordance with the recommendations of this report. Representatives of the Geotechnical Engineer should be present during site preparation and all grading operations to observe and test the fill to verify compliance with our recommendations and the job specifications. These services are beyond the scope of work authorized for this investigation.

Additional Services

We recommend that our firm be retained to review the final plans and specifications to determine if the intent of our recommendations has been implemented in those documents.

LIMITATIONS

Our recommendations are based upon the information provided regarding the proposed project, combined with our analysis of site conditions revealed by the field exploration and laboratory testing programs. We have used prudent engineering judgment based upon the information provided and the data generated from our investigation.



This report has been prepared in substantial compliance with generally accepted geotechnical engineering practices that exist in the area of the project at the time the report was prepared. No warranty, either express or implied, is provided.

If the proposed construction is modified or re-sited; or, if it is found during construction that subsurface conditions differ from those we encountered at our boring locations, we should be afforded the opportunity to review the new information or changed conditions to determine if our conclusions and recommendations must be modified.

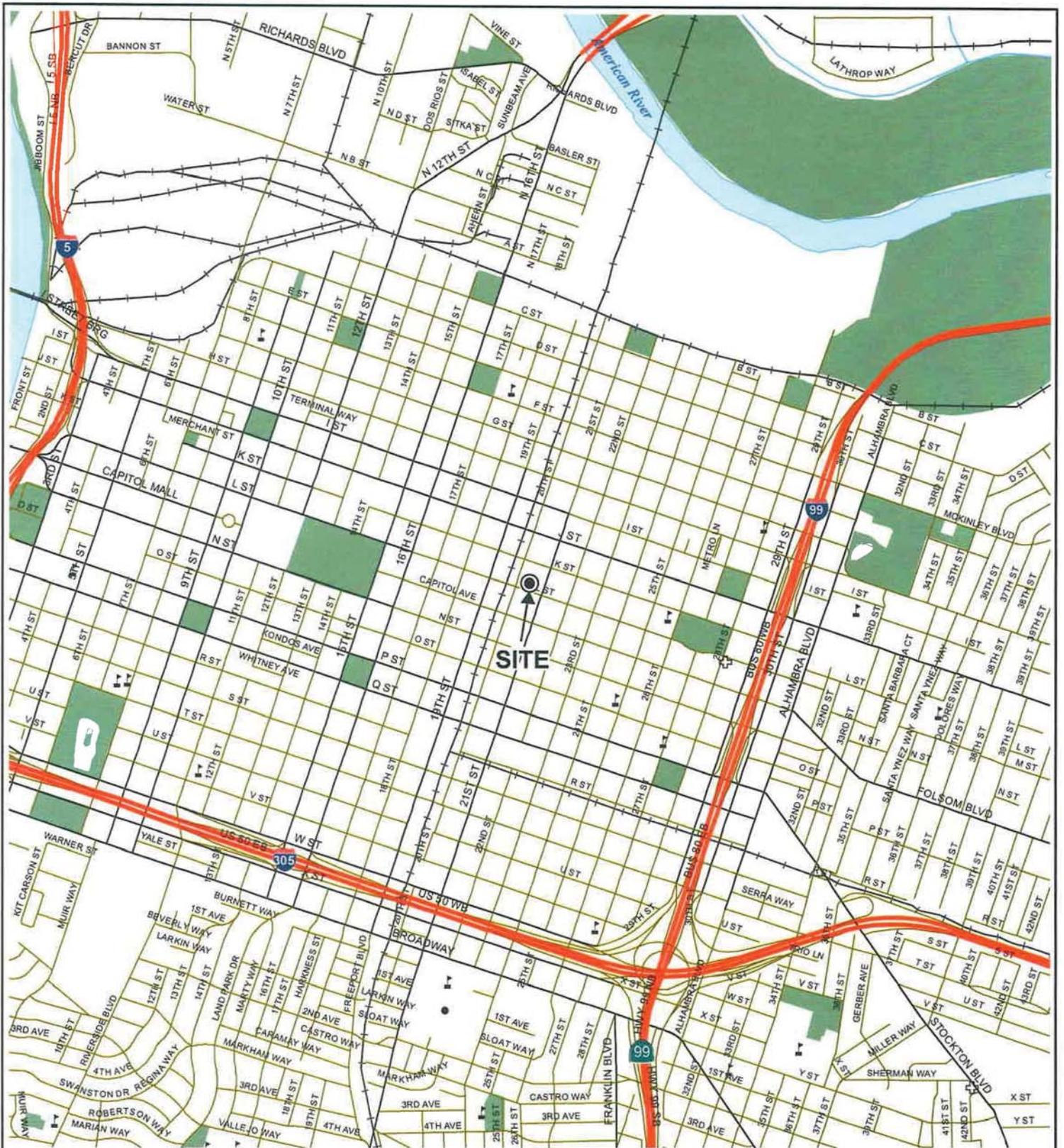
We emphasize that this report is applicable only to the proposed construction and the investigated site, and should not be utilized for construction on any other site. The conclusions and recommendations of this report are considered valid for a period of two years. If design is not completed and construction has not started within two years of the date of this report, the report must be reviewed and updated if necessary.

Wallace - Kuhl & Associates

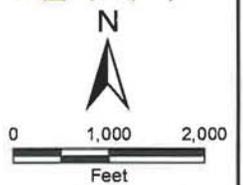


Matthew S. Moyneur
Senior Engineer





Street data courtesy of Sacramento County.
 Hydrography courtesy of the U.S. Geological Survey
 acquired from the GIS Data Depot, December, 2007.
 Projection: NAD 83, California State Plane, Zone II



VICINITY MAP
L STREET MIXED USE
 Sacramento, California

FIGURE 1	
DRAWN BY	TJC
CHECKED BY	MSM
PROJECT MGR	MSM
DATE	1/14
WKA NO. 9955.01	



Adapted from a Google Earth aerial photograph,
 dated August 14, 2013.
 Projection: NAD 83, California State Plane, Zone II

Legend

◆ Approximate soil boring location



SITE PLAN
L STREET MIXED USE
 Sacramento, California

FIGURE 2

DRAWN BY	TJC
CHECKED BY	MSM
PROJECT MGR	MSM
DATE	1/14

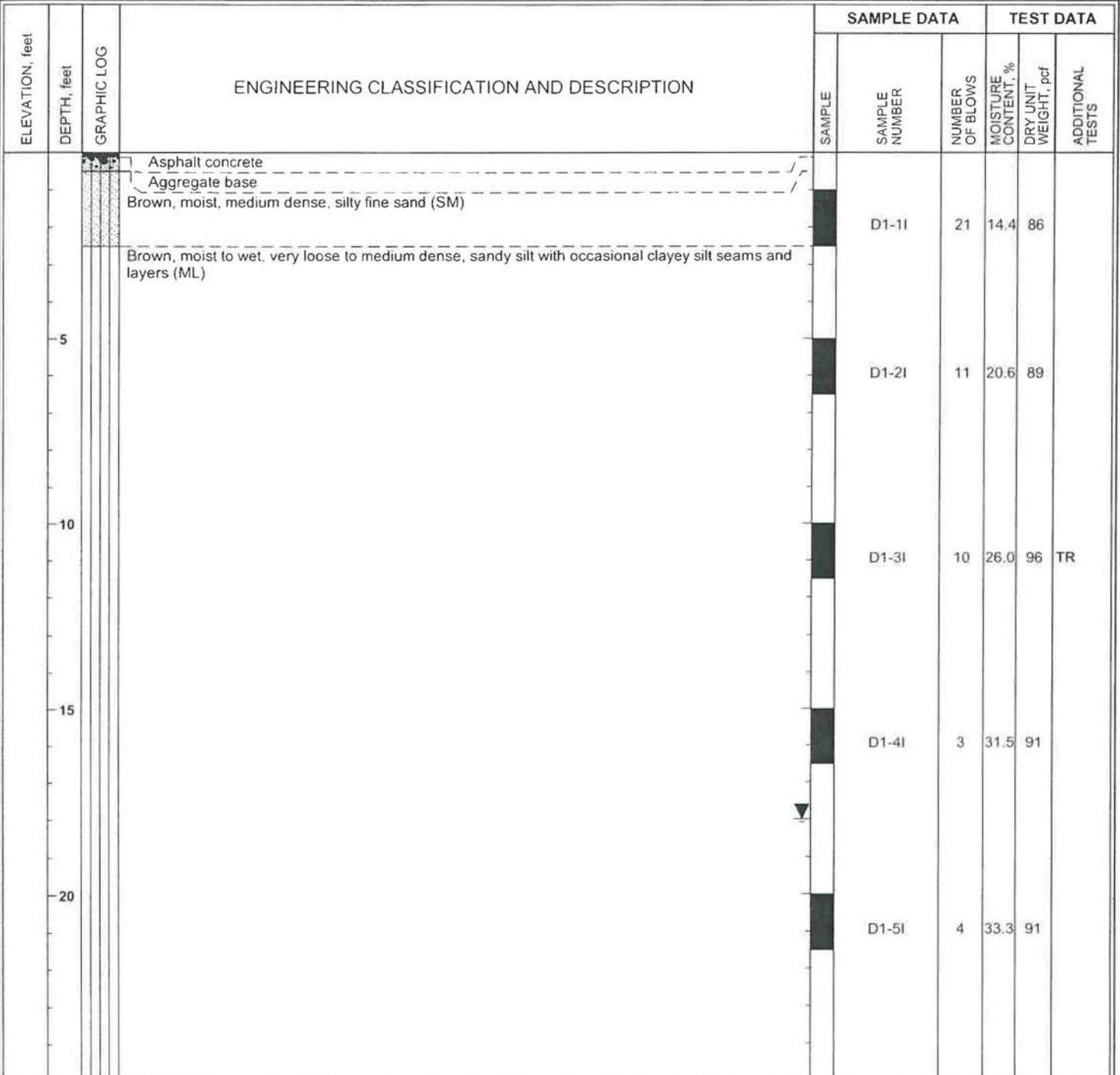
WKA NO. 9955.01

Project: L Street Mixed Use
 Project Location: Sacramento, California
 WKA Number: 9955.01

LOG OF SOIL BORING D1

Sheet 1 of 2

Date(s) Drilled	11/23/13	Logged By	GJF	Checked By	MSM
Drilling Method	Hollow Stem Auger	Drilling Contractor	V&W Drilling, Inc.	Total Depth of Drill Hole	50.0 feet
Drill Rig Type	CME-75	Diameter(s) of Hole, inches	8"	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	18.0	Sampling Method(s)	California Modified	Drill Hole Backfill	Cement Grout
Remarks				Driving Method and Drop	140-lb automatic hammer; 30-inch drop



BORING LOG_9955.01 - L STREET MIXED USE.GPJ_WKA_GDT_1/27/14 11:29 AM

Project: L Street Mixed Use
 Project Location: Sacramento, California
 WKA Number: 9955.01

LOG OF SOIL BORING D1

Sheet 2 of 2

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA			TEST DATA		
				SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
					D1-6I	29			
	30		Gray brown, wet, very dense, silty sandy gravel (GM)		D1-7I	50/5"			
	35								
	40								
	45		Brown, wet, dense, sandy silt (ML)		D1-8I	38			
	50		Boring terminated at 50 feet below existing site grade. Groundwater was encountered about 18 feet below the ground surface during drilling and about 18 feet below the ground surface immediately after drilling.						

BORING LOG 9955.01 - L STREET MIXED USE.GPJ WKA.GDT 1/27/14 11:29 AM

Project: L Street Mixed Use
 Project Location: Sacramento, California
 WKA Number: 9955.01

LOG OF SOIL BORING D2

Sheet 1 of 2

Date(s) Drilled	11/23/13	Logged By	GJF	Checked By	MSM
Drilling Method	Hollow Stem Auger	Drilling Contractor	V&W Drilling, Inc.	Total Depth of Drill Hole	51.0 feet
Drill Rig Type	CME-75	Diameter(s) of Hole, inches	8"	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	18.0	Sampling Method(s)	California Modified	Drill Hole Backfill	Cement Grout
Remarks				Driving Method and Drop	140-lb automatic hammer; 30-inch drop

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA			TEST DATA		
				SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Asphalt concrete Aggregate base						
			Brown, moist to wet, very loose to medium dense, sandy silt with occasional sand and clay seams and layers (ML)						
5					D2-11	17	23.9	88	
					D2-21	19	21.2	96	
10					D2-31	9	25.5	92	
					D2-41	2	28.5	94	
15									
20					D2-51	1	34.8	88	

BORING LOG 9955.01 - L STREET MIXED USE.GPJ_WKA.GDT 1/21/14 1:16 PM

Project: L Street Mixed Use
 Project Location: Sacramento, California
 WKA Number: 9955.01

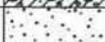
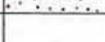
LOG OF SOIL BORING D2

Sheet 2 of 2

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA			TEST DATA		
				SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Gray brown, wet, very dense to dense, silty sandy gravel (GM)		D2-6I	55			
30					D2-7I	50/3"			
35					D2-8I	48			
40									
45			Light brown, wet, very stiff, clayey silt (ML)		D2-9I	33	53.0	57	TR
50					D2-10I	50/4"	24.4	100	
			Boring terminated at 51 feet below existing site grade. Groundwater was encountered about 18 feet below the ground surface during drilling and about 18 feet below the ground surface immediately after drilling.						

BORING LOG: 9955.01 - L STREET MIXED USE.GPJ_WKA.GDT 1/27/14 1:16 PM

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS	SYMBOL	CODE	TYPICAL NAMES	
COARSE GRAINED SOILS <small>(More than 50% of soil > no. 200 sieve size)</small>	GRAVELS			
	GW		Well graded gravels or gravel - sand mixtures, little or no fines	
	GP		Poorly graded gravels or gravel - sand mixtures, little or no fines	
	GM		Silty gravels, gravel - sand - silt mixtures	
	GC		Clayey gravels, gravel - sand - clay mixtures	
	SANDS			
	SW		Well graded sands or gravelly sands, little or no fines	
	SP		Poorly graded sands or gravelly sands, little or no fines	
FINE GRAINED SOILS <small>(50% or more of soil < no. 200 sieve size)</small>	SILTS & CLAYS			
	<u>LL < 50</u>			
	ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	
	CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
	OL		Organic silts and organic silty clays of low plasticity	
	SILTS & CLAYS			
	<u>LL ≥ 50</u>			
	MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
	CH		Inorganic clays of high plasticity, fat clays	
	OH		Organic clays of medium to high plasticity, organic silty clays, organic silts	
HIGHLY ORGANIC SOILS		PI		Peat and other highly organic soils
ROCK		RX		Rocks, weathered to fresh
FILL		FILL		Artificially placed fill material

OTHER SYMBOLS

	= Drive Sample: 2-1/2" O.D. Modified California sampler
	= Drive Sampler: no recovery
	= SPT Sampler
	= Initial Water Level
	= Final Water Level
	= Estimated or gradational material change line
	= Observed material change line
<u>Laboratory Tests</u>	
PI	= Plasticity Index
EI	= Expansion Index
UCC	= Unconfined Compression Test
TR	= Triaxial Compression Test
GR	= Gradational Analysis (Sieve)
K	= Permeability Test

GRAIN SIZE CLASSIFICATION

CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL coarse (c) fine (f)	3" to No. 4	76.2 to 4.76
	3" to 3/4"	76.2 to 19.1
	3/4" to No. 4	19.1 to 4.76
SAND coarse (c) medium (m) fine (f)	No. 4 to No. 200	4.76 to 0.074
	No. 4 to No. 10	4.76 to 2.00
	No. 10 to No. 40	2.00 to 0.420
	No. 40 to No. 200	0.420 to 0.074
SILT & CLAY	Below No. 200	Below 0.074



UNIFIED SOIL CLASSIFICATION SYSTEM

L STREET MIXED USE

Sacramento, California

FIGURE 5

DRAWN BY	TJC
CHECKED BY	MSM
PROJECT MGR	MSM
DATE	1/14

WKA NO. 9955.01

APPENDICES



APPENDIX A
Field and Laboratory Testing



APPENDIX A

A. GENERAL INFORMATION

The performance of a geotechnical engineering investigation for the proposed L Street Mixed Use project, to be constructed on the north side of L Street between 20th and 21st Streets in Sacramento, California was authorized by Steve Vannatta on November 20, 2013. Authorization was for an investigation as described in our proposal letter dated September 10, 2013, sent to our client LVP Revocable Trust, whose address is 2020 L Street, 5th Floor, Sacramento, California 95811; telephone (916) 447-7100; facsimile (916) 447-7112.

B. FIELD EXPLORATION

Two (2) borings were drilled at the site on November 23, 2013, at the approximate locations indicated on Figure 2 utilizing a CME-75 truck-mounted drill rig. The borings were drilled to maximum depths of approximately 50 to 51 feet below existing site grades using eight-inch (8") diameter, hollow-stem helical augers. At various intervals, relatively undisturbed soil samples were recovered with a 2½-inch O.D., 2-inch I.D., modified California sampler driven by an automatic 140-pound hammer freely falling 30 inches. The number of blows of the hammer required to drive the 18-inch long sampler each six-inch (6") interval was recorded. The sum of the blows required to drive the sampler the lower 12-inch interval, or portion thereof, is designated the penetration resistance or "blow count" for that particular drive.

The samples were retained in two-inch (2") diameter by six-inch (6") long thin-walled brass tubes contained within the sampler. Immediately after recovery, the soils in the tubes were visually classified by the field engineer and the ends of the tubes were sealed to preserve the natural moisture contents. All samples were taken to our laboratory for soil classification and selection of samples for testing.

The Logs of Soil Borings, Figures 3 and 4, contain descriptions of the soils encountered at each boring location. A Boring Legend explaining the Unified Soil Classification System and the symbols used on the logs is contained on Figure 5.

C. LABORATORY TESTING

Selected undisturbed samples of the soils were tested to determine dry unit weight (ASTM D2937), natural moisture content (ASTM D2216) and shear strength by triaxial strength testing (ASTM D4767). The results of the moisture/density tests are included



on the boring logs at the depth each sample was obtained. The results of the shear strength testing are presented on Figures A1 and A2.

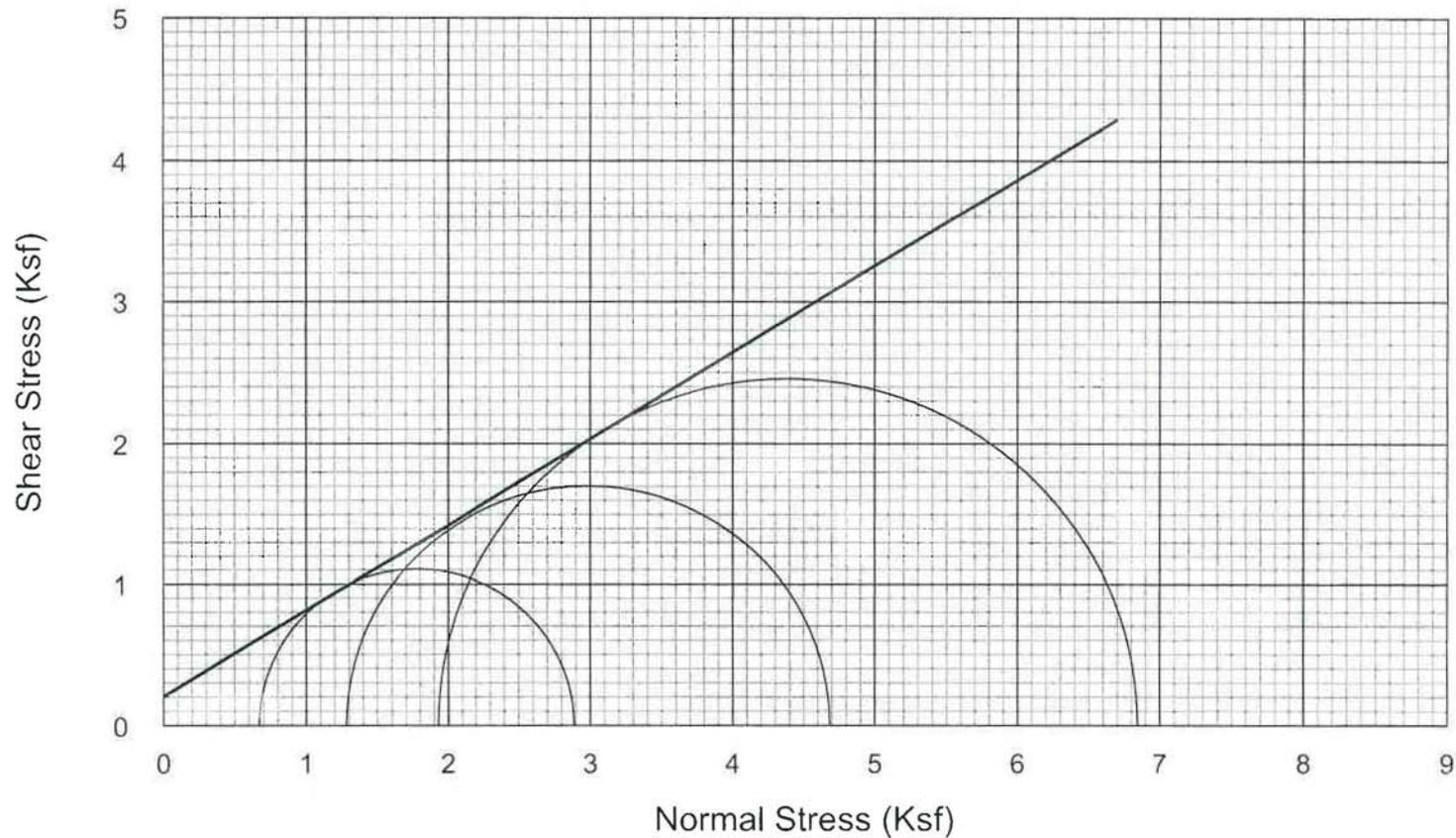
A bulk sample of the anticipated pavement subgrade soil was subjected to Resistance-value ("R-value") testing in accordance with California Test 301. The results of the R-value test, which were used in the pavement design, are presented on Figure A3.

A composite sample of near-surface soil was submitted to Sunland Analytical of Rancho Cordova, California, for corrosivity testing in accordance with California Test (CT) Nos. 643 (Modified Small Cell), CT 422 and CT 417. Copies of the analytical results are presented on Figure A4.



TRIAXIAL COMPRESSION TEST

ASTM D4767



SAMPLE NO. : D1-3I

SAMPLE CONDITION : Undisturbed

SAMPLE DESCRIPTION : Brown, sandy silt

DRY DENSITY (PCF) : 96
 INITIAL MOISTURE (%) : 26.0
 FINAL MOISTURE (%) : 26.9

ANGLE OF INTERNAL FRICTION (ϕ) : 31°
 COHESION (PSF) : 203

TRIAXIAL COMPRESSION TEST RESULTS

L STREET MIXED USE

Sacramento, California

FIGURE A1

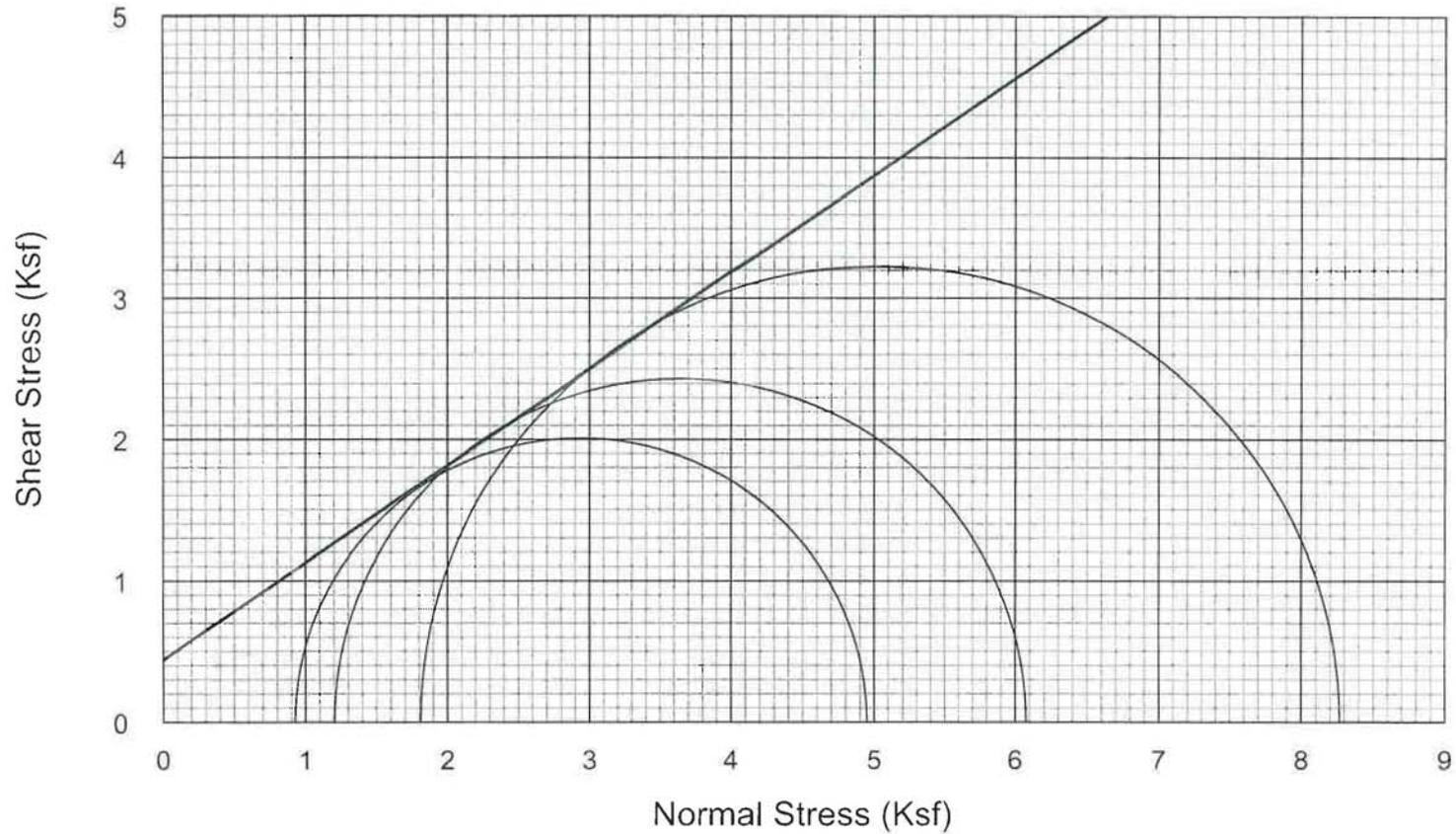
DRAWN BY	TJC
CHECKED BY	MSM
PROJECT MGR	MSM
DATE	1/14

WKA NO. 9955.01



TRIAXIAL COMPRESSION TEST

ASTM D4767



SAMPLE NO.: D2-91

SAMPLE CONDITION: Undisturbed

SAMPLE DESCRIPTION: Light brown, clayey silt

DRY DENSITY (PCF): 67
 INITIAL MOISTURE (%): 53.0
 FINAL MOISTURE (%): 53.4

ANGLE OF INTERNAL FRICTION (ϕ): 34°
 COHESION (PSF): 438



TRIAXIAL COMPRESSION TEST RESULTS

L STREET MIXED USE
 Sacramento, California

FIGURE A2

DRAWN BY	TJC
CHECKED BY	MSM
PROJECT MGR	MSM
DATE	1/14

WKA NO. 9955.01

RESISTANCE VALUE TEST RESULTS

(California Test 301)

MATERIAL DESCRIPTION: Brown, sandy silt

LOCATION: D2 (1'-3')

Specimen No.	Dry Unit Weight (pcf)	Moisture @ Compaction (%)	Exudation Pressure (psi)	Expansion Pressure		R Value
				(dial)	(psf)	
1	114	14.9	185	18	78	29
2	116	13.7	316	52	225	64
3	118	12.7	402	60	260	69

R-Value at 300 psi exudation pressure = 61



RESISTANCE VALUE TEST RESULTS

L STREET MIXED USE

Sacramento, California

FIGURE A3

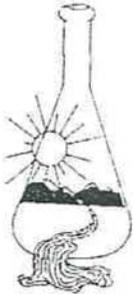
DRAWN BY TJC

CHECKED BY MSM

PROJECT MGR MSM

DATE 1/14

WKA NO. 9955.01



Sunland Analytical

11353 Pyrites Way, Suite 4
Rancho Cordova, CA 95670
(916) 852-8557

Date Reported 12/13/2013
Date Submitted 12/10/2013

To: Matt Moyneur
Wallace-Kuhl & Assoc.
3050 Industrial Blvd.
West Sacramento, CA 95691

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 9955.01-L ST MIX USE Site ID : D1-BULK 1-3 FT.
Thank you for your business.

* For future reference to this analysis please use SUN # 66074-136782.

EVALUATION FOR SOIL CORROSION

Soil pH	8.02		
Minimum Resistivity	0.86 ohm-cm	(x1000)	
Chloride	219.3 ppm	00.02193	%
Sulfate	323.8 ppm	00.03238	%

METHODS

pH and Min. Resistivity CA DOT Test #643
Sulfate CA DOT Test #417, Chloride CA DOT Test #422



CORROSION TEST RESULTS

L STREET MIXED USE
Sacramento, California

FIGURE A4

DRAWN BY	TJC
CHECKED BY	MSM
PROJECT MGR	MSM
DATE	1/14

WKA NO. 9955.01

APPENDIX B
Guide Specifications for Auger Cast Piles



APPENDIX B
GUIDE SPECIFICATIONS FOR AUGER CAST PILES
L STREET MIXED USE
Sacramento, California
WKA No. 9955.01

PART 1: GENERAL

1.1 SUMMARY

- A. This Section includes construction of compression and tension auger cast piles, where shown on contract drawings and specified herein.
- B. The Contractor shall furnish all labor, materials, tools, and equipment necessary for designing, furnishing, installing, inspecting and testing augered cast-in-place piles, and shall remove and dispose spoils generated by pile construction.

1.2 WORK NOT INCLUDED UNDER THIS SECTION

- A. Concrete pile caps: Section _____.
- B. Excavations: Section _____.
- C. Shoring and bracing of earth banks: Section _____.
- D. Dewatering: Section _____.

1.3 REFERENCE STANDARDS

- A. Requirements, abbreviations and acronyms for reference standards are defined in Section _____.
- B. American Concrete Institute (ACI)
 - 1. ACI 305 - Hot Weather Concreting.
 - 2. ACI 306 - Cold Weather Concreting.
 - 3. ACI 315 - Details and Detailing of Concrete Reinforcement.
- C. American Society for Testing and Materials (ASTM) latest editions
 - 1. ASTM A615 - Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
 - 2. ASTM C33 - Concrete Aggregates.
 - 3. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field
 - 4. ASTM C109 - Test Method for Compressive Strength of Hydraulic Cement Mortars.
 - 5. ASTM C150 - Portland Cement.
 - 6. ASTM C618 - Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.
 - 7. ASTM C939 - Test Method for Flow of Grout for Preplaced - Aggregate Concrete (Flow Cone Method)
 - 8. ASTM C942 - Test Method for Compressive Strength of Grouts for Preplaced-Aggregate Concrete in the Laboratory.
 - 9. ASTM D1143 - Test Method for Piles Under Static Axial Compressive Load.
 - 10. ASTM D3689 - Test Method for Individual Piles Under Static Axial Tensile Load.
 - 11. ASTM D3966 - Test Method for Piles Under Lateral Loads.



1.4 PROTECTION

- A. Adequate protection measures shall be provided to protect workers and passers-by at the site. Streets and adjacent property shall be fully protected throughout the operations.
- B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Any construction review of the Contractor's performance conducted by the Geotechnical Engineer is not intended to include review of the adequacy of the Contractor's safety measures, in, on or near the construction site.
- D. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- E. Surface drainage provisions shall be made during the period of construction in a manner to avoid creating a nuisance to adjacent areas.
- F. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance.

1.5 EXISTING SITE CONDITIONS

Piling Contractor shall inspect the site and related conditions prior to commencing his/her portion of the work. If unshown active utilities are encountered during the work, the Architect shall be promptly notified for instructions. Failure to notify will make the Contractor liable for damage to these utilities arising from Contractor's operations subsequent to the discovery of such unshown utilities.

1.6 GEOTECHNICAL ENGINEERING REPORT

- A. A *Geotechnical Engineering Report* (WKA No. 9955.01, dated January 27, 2014), has been prepared by Wallace - Kuhl & Associates, Geotechnical Engineers of West Sacramento, California; telephone (916) 372-1434; facsimile (916) 372-2565. That report is available for review at the office of Wallace - Kuhl & Associates.
- B. The Piling Contractor shall submit in writing to the Architect and/or Structural Engineer, all applicable information as listed in Subsection 1.7 - Submittals for review and approval, in addition to the above experience record.
- C. The Owner does not guarantee that the information contained in the Geotechnical Engineering Report is correct nor that the conditions revealed at the actual boring locations will be continuous over the entire site. This report was prepared for purposes of design only. Making the report available to contractors shall not be construed in any way as a waiver of this position. The Piling Contractor shall be responsible for any conclusions he/she may draw from this report. Should the Contractor prefer not to assume such risk, he/she is under obligation to employ their own experts to analyze available information and/or to make their own tests upon which to base their conclusions.

1.7 SUBMITTALS

Submit the following according to Conditions of the Construction Contract and Division 1 Specifications, for Owner's approval.



- A. Shop Drawings: Shall clearly indicate but not be limited to:
1. Description of the pile drilling and grouting equipment and procedures to be utilized in installations.
 2. Proposed pile grout design mix and description of materials to be used in sufficient detail to indicate their compliance with the specifications and either;
 - a. Laboratory tests of trial mixes made with the proposed mix, or
 - b. Laboratory tests of the proposed mix used on previous projects.
 3. A pile layout plan referenced to the structural plans including a numbering system capable of identifying each individual pile, and indicating pile cutoff elevations.
 4. A dimensioned sketch of the pile load test arrangements, including sizes of primary members, data on testing and measuring equipment including required jack and gauge calibrations, load cell and professional engineer seal certifying the adequacy of the reaction frames.
 5. Fabrication and installation schedule covering test pile installation, pile testing, and production pile installation, with excavation schedule for pile cap and finished subgrades by area.
 6. Qualifications of pile installation construction personnel, supervisor, and technician.
- B. Records
1. The Contractor shall submit a pile design report indicating construction methods and materials that will be utilized to install piles of the specified compression and tension capacity, meeting the criteria of this specification and the Contract Drawings. The report shall be prepared and sealed by a Professional Engineer licensed in the state of California.
 2. The Contractor shall provide a Technician for each pile rig responsible for observing the auger construction, grout batching, and grouting operations and preparing installation records. The Contractor's inspector shall submit an installation record for each pile not later than two (2) days after installation is completed. The report shall include but not be limited to:
 - a. Project name and number
 - b. Name of contractor
 - c. Pile number
 - d. Pile location, date and time of installation
 - e. Design pile capacity, compression or tension
 - f. Pile diameter
 - g. Tip elevation
 - h. Cut off elevation
 - i. Elevation of butt
 - j. Drilling elevation
 - k. Rate of advancement of auger and rotation speed
 - l. Quantity of grout placed as compared to the theoretical volume for each pile, in five-foot (5') depth increments, and total for pile
 - m. Grout pressures
 - n. Pile reinforcing steel
 - o. Grout flow cone test report
 - p. Any unusual occurrences observed during pile installation, and pile deviation from vertical



3. The grout quantity shall be determined by recording grout pump displacement or by other acceptable means; the pile installation record shall reveal the observed measure and quantity.
 4. Load test reports shall be in accordance with the applicable ASTM Standards.
 5. Grout compression test reports.
- C. Hazardous Materials Notification: In the event no alternative product or material is available that does not contain asbestos, PCB or other hazardous materials as determined by the Owners' Authorized Representative, a "Material Safety Data Sheet" (MSDS) equivalent to OSHA Form 20 shall be submitted for that proposed product or material prior to installation.
- D. Asbestos and PCB Certification: After completion of installation, but prior to Substantial Completion, Contractor shall certify in writing that products and materials installed, and processes used, do not contain asbestos or polychlorinated biphenyls (PCB), using format in Section ____/Closeout Procedures.

1.8 DELIVERY, HANDLING, STORAGE

Comply with General Conditions and Section 01600/Product Requirements.

1.9 WARRANTY

Comply with General Conditions and Section ____/Product Requirements.

PART 2: PRODUCTS

2.1 QUALITY ASSURANCE

- A. The work of this section shall be performed by a company specialized in auger cast pile work with a minimum of five (5) years of documented successful experience, and shall be performed by skilled workers thoroughly experienced in the necessary crafts. Contractor shall submit evidence of successful installation of augered cast-in-place piles under similar job and subsurface conditions, including a job supervisor who shall have a minimum of three (3) years of method specific experience.
- B. Work shall comply with all Municipal, State and Federal regulations regarding safety, including the requirements of the Williams-Steiger Occupational Safety and Health Act of 1970.

2.2 MATERIALS

- A. Portland Cement: conforming to ASTM C150.
- B. Mineral Admixture: Mineral admixture, if used, shall be fly ash or natural pozzolan which possesses the property of combining with the lime liberated during the process of hydration of Portland cement to form compounds containing cementitious properties, conforming to ASTM C618, Class C or Class F.
- C. Fluidifier conforming to ASTM C937, except that expansion shall not exceed 4%.
- D. Water: Potable, fresh, clean and free of sewage, oil, acid, alkali, salts or organic matter.
- E. Fine Aggregate: Conforming to ASTM C33.



F. Grout Mixes:

1. The grout shall consist of Portland cement, sand and water, and may also contain a mineral admixture and approved fluidifier.
 - a. The components shall be proportioned and mixed to produce a grout capable of maintaining the solids in suspension, which may be pumped without difficulty and which will penetrate and fill open voids in the adjacent soils.
 - b. These materials shall be proportioned to produce a hardened grout which will achieve the design strength within twenty-eight (28) days.
 - c. The design grout strength at twenty-eight (28) days for this project shall be a minimum four thousand pounds per square inch (4000 psi).
2. All materials shall be accurately measured by volume or weight as they are fed to the mixer.
 - a. Time of mixing shall be not less than one minute at the site.
 - b. If agitated continuously, the grout may be held in the mixer or agitator for a period not exceeding two and one-half (2½) hours at grout temperatures below seventy degrees Fahrenheit (70°F) and for a period not exceeding one hundred degrees Fahrenheit (100°F).
 - c. Grout shall not be placed when its temperature exceeds one hundred degrees Fahrenheit (100°F).
3. Protect grout from physical damage or reduced strength, which could be caused by frost, freezing actions or low temperatures or from damage during high temperatures in accordance with ACI 305/306.
4. The grout shall be tested by making a minimum of six, two-inch (2") diameter by four-inch (4") tall cylinders for each day during which piles are placed.
 - a. A set of six (6) cylinders shall consist of two (2) cylinders tested at seven (7) days, and two (2) cylinders tested at twenty-eight (28) days. Two (2) cylinders shall be held in reserve.
 - b. Test cylinders shall be cured and tested in accordance with ASTM C109.
 - c. Cylinder specimens shall be cast and cured in accordance with ASTM C31.
 - d. Cylinder specimens may be restrained from expansion as described in ASTM C942.
5. Test the flow of grout for each pile and batch of grout. Maintain grout fluidity between fifteen (15) and twenty-five (25) seconds through a three-quarters inch (¾") diameter grout cone.

G. Steel Reinforcing:

1. Minimum reinforcing steel assemblies are shown on the Contract Drawings. Assemblies shall be detailed and fabricated in accordance with the manual of Standard Practice for Detailing Reinforced Concrete Structures (ACI 315).
2. Reinforcing shall conform to the requirements of ASTM A615, Grade 60.
3. All reinforcing bar shall be epoxy coated, including bars installed for contractor convenience. Wire ties do not require epoxy coating.
4. Contractor shall provide labor, materials, and method for coating cut ends and repairing holidays in epoxy coating.
5. Acceptable materials and methods shall be provided to facilitate proper centering of all steel reinforcing installed.
6. Bars may be bent in place, provided epoxy coating at all bends is inspected, flaked coating is removed by wire brush, and holidays in coating are repaired.



7. A corrugated metal pipe sleeve shall be provided for each pile equal to the diameter of the auger, to define the pile butt and permit cut-off to specified elevations.

2.3 EQUIPMENT

A. Augering Equipment:

1. The auger flighting shall be continuous from the auger head to the top of auger without gaps or other breaks.
2. The auger flighting shall be uniform in diameter throughout its length and shall be the diameter specified for the piles less a maximum of three percent (3%). The hole through which the grout is pumped during the placement of the pile shall be located at the bottom of the auger head below the bar containing the cutting teeth.
3. Augers over forty feet (40') in length shall contain a middle support guide.
4. The piling leads shall be prevented from rotating by a stabilizing arm or by firmly placing the bottom of the leads into the ground or by some other acceptable means.
5. Leads shall be marked at one-foot (1') intervals to facilitate measurement of auger penetration.
6. Auger hoisting equipment shall be provided that will enable the auger to be rotated while being withdrawn.

B. Mixing and Pumping Equipment:

1. Only approved pumping and mixing equipment shall be used in the preparation and handling of the grout.
 - a. Provide a screen to remove over-size particles at the pump inlet.
 - b. All oil or other rust inhibitor shall be removed from mixing drums and grout pumps before each use.
 - c. All materials shall be such as to produce a homogeneous grout of the desired consistency and strength.
2. The grout pump shall be a positive displacement pump capable of developing displacement pressures at the pump of three hundred fifty pounds per square inch (350 psi) or higher.
 - a. The grout pump shall be provided with a pressure gauge in clear view of the equipment operator.
 - b. The grout pump shall be calibrated at the beginning of the work and periodically during the work to determine the volume of grout pumped per stroke, under operating pressure.
 - c. A positive method for automatic counting of grout pump strokes shall be provided. Such methods may include digital or mechanical stroke counters or other acceptable methods.
 - d. A second pressure gauge, if required, shall be provided close to the auger rig where it can be readily observed by the inspector, if required.

PART 3: EXECUTION

3.1 EXAMINATION

- A. The Contractor is responsible for supporting pile drilling equipment and concrete grout batching and delivery equipment. Equipment shall be supported on timber



mats or gravel fill work platforms, if necessary for safety and stability, and to prevent damage.

- B. The Contractor shall examine the areas and evaluate conditions under which piles are to be installed and shall include measures for the proper and timely completion of the work in the construction methods and pile design.

3.2 AUGER CAST PILE SYSTEM DESCRIPTION

A. Augered Pressure Grouted Piles

1. Pressure grouted piles shall be made by drilling a continuous-flight, hollow-shaft auger into the ground to the design pile depth, or until refusal criteria is satisfied. The volume of soil extracted shall not be greater than the volume of the steel auger stem inserted.
2. Grout shall be injected through the auger shaft as the auger is being withdrawn. First develop a five-foot (5') plug at the bottom of the auger flights, then inject sufficient grout volume to fill the augered hole one point one five (1.15) times its neat dimension, or more. Grout volumes shall be logged by depth during withdrawal.
3. Post-grouting through a special grout tube for capacity increase is permitted, given these methods are used in the test piles, and consistently throughout the entire work for this project. Post-grouting may be used for compression and tension capacity. Post-grout pressures must be sufficient to open grout portals and cause fracture and flow. Grout volumes and pressures shall be recorded and used as a measure to demonstrate pile compliance with the design and pile load test criteria.

B. Augered Displacement Pressure Grouted Piles

1. Augered Displacement Pressure Grouted piles shall be made by rotating a specialized auger capable of displacing soil surrounding the auger, with minimal soils returned to the ground surface to reach the design pile depth, or until specified refusal criteria is satisfied.
2. Grout shall be injected through the auger shaft as the auger is being withdrawn in such a way as to exert a positive upward grout pressure on the auger, as well as a positive lateral pressure on the soil surrounding the pile.

C. Alternatives

1. Alternative pile types which meet the compression and tension pile criteria given on the drawings may be substituted for augered pressure-grouted pile systems described in this Section.
2. Alternative pile installation systems must be capable of achieving the specified compression and tension, and shall provide a working lateral capacity of eight tons (8).

3.3 PILE DESIGN

- A. The ultimate capacity of eighteen inch (18") diameter compression piles shall be greater than two hundred forty tons (240) in axial compression and greater than sixty (60) tons in axial tension or the ultimate capacity of twenty four inch (24") diameter compression piles shall be greater than four hundred twenty (420) tons in axial compression and greater than one hundred five (105) tons in axial tension. Both tension and compression piles shall achieve an ultimate lateral capacity of five (5) tons for eighteen inch (18") diameter piles or ten (10) tons for twenty four inch (24") diameter piles. The allowable design capacities of all piles shall be determined by dividing the ultimate capacity by the appropriate factor of



safety as provided in the Geotechnical Engineering Report. Load Testing performed under Part 3.4 of this section shall confirm the ultimate capacity of the piles.

- B. Pile design shall be performed by the Contractor and demonstrated by load test before installation of production piles. All piles shall meet the criteria specified on the Contract Drawings.
- C. The design shall be described in a pile design report. This report shall indicate variances, if any, from the reinforcing steel specified or the requirements of this section, and shall demonstrate that the design meets or exceeds the specified performance in tension, compression, and bending. The Contractor shall submit design calculations for the proposed piles demonstrating compression and tensile capacity.

3.4 LOAD TESTING

- A. Pre-construction Pile Load Tests:
 - 1. Install and test one (1) compression pile, one (1) tension pile, and one (1) lateral load test pile, at the locations shown on the plans or approved alternate location to verify the construction methods and pile capacity. Test piles and reaction piles shall be installed outside of pile cap locations.
 - 2. The Contractor shall provide complete testing materials and equipment as required, install test and reaction piles and perform the load tests only in the presence of the Owner.
 - 3. The pile test reaction frame shall be capable of safely sustaining two hundred fifty (250) tons in axial compression and one hundred (100) tons in axial tension (uplift) for eighteen inch (18") diameter piles or four hundred thirty (430) tons in axial compression and one hundred ten (110) tons in axial tension (uplift) for eighteen inch (24") diameter piles.
 - 4. Preconstruction Pile Load tests shall be performed using ASTM's Quick Test Methods.
 - 5. One successful compression pile load test shall be performed in accordance with ASTM D1143.
 - 6. One successful tension pile load test shall be performed in accordance with ASTM D3689.
 - 7. One lateral pile load test to five (5) tons for eighteen inch (18") diameter piles or ten (10) tons for twenty four inch (24") ultimate load shall be performed in accordance with ASTM D3966.

3.5 INSTALLATION

- A. Tolerance
 - 1. Piles shall be located where shown on drawings or where otherwise directed by the Engineer.
 - a. Pile centers shall be located to an accuracy of three inches ($\pm 3"$).
 - b. Vertical piles shall be plumb within two percent (2%).
 - c. Battered piles shall be installed to within four percent (4%) of the specified batter as determined by the angle from horizontal.
- B. Adjacent Piles
 - 1. Adjacent piles within ten feet (10'), center-to-center, shall not be installed within twenty-four (24) hours of each other.
 - 2. Within pile caps, piles adjacent within four (4) pile diameters center-to-center, shall not be installed within twenty-four (24) hours of each other.



C. Installation Procedure

1. The length and drilling criteria of production piles will be as defined in the Contractor's design and as demonstrated by the successful pile load tests. Advance and rotate the auger at a continuous rate that prevents removal of excess soil.
2. Stop advancement after reaching the required depth or refusal criteria.
3. The hole in the bottom of the auger shall be closed with a suitable plug while advancing into the ground. The plug shall be removed by grout pressure or mechanically with the reinforcing bar.
4. At the start of pumping grout, raise the auger from six inches (6") to twelve inches (12") and after the grout pressure builds up sufficiently, re-drill the auger to the previously established tip elevation.
5. Maintain a head of at least fifteen feet (15') of grout on the auger flighting above the injection point during auger withdrawal.
 - a. Positive rotation of the auger shall be maintained at least until placement of the grout.
 - b. Rate of grout injection and rate of auger withdrawal from the soil shall be coordinated so as to maintain at all times the minimum grout head.
 - c. The total volume of grout shall be at least one hundred fifteen percent (115%) of the theoretical volume for each pile.
 - d. After grout is flowing at the ground surface from the auger flighting, the rate of grout injection and auger withdrawal shall be coordinated so that there is a constant grout flow at the surface.
 - e. If pumping grout is interrupted for any reason, the contractor shall reinsert the auger by drilling at least five feet (5') below the depth of the auger where the interruption occurred, and re-grout while withdrawing the auger from that depth.
6. If less than one hundred fifteen percent (115%) of the theoretical volume of grout is placed in any five foot (5') increment (until the grout head on the auger flighting reaches the ground surface), the pile increment shall be reinstalled by advancing the auger ten feet (10') or to the bottom of the pile if that is less, followed by controlled removal and grout injection.
7. Spoil material that accumulates around the auger during injection of the grout shall be promptly cleared away.
8. A steel corrugated metal pipe (CMP) sleeve shall be placed at the top of each pile to a depth of one and one half feet (1½') below the pile cutoff elevation.

D. Obstructions and Damaged Piles

1. If non-augerable material is encountered above the desired tip elevation, the pile shall be completed to the depth of the non-augerable material in accordance with these Specifications. Such short piles shall be included for payment, if completed and included within the foundation. If required by the Engineer, additional adjacent piles shall be placed. Additional piles shall also be included in the total number of piles for payment.
2. Damaged piles, and piles installed outside the required installation tolerances, will not be accepted.



3. Cut off and abandon rejected piles after installation, and replace with new piles. Cutoff shall be at a sufficient depth to avoid transfer of load from the structure to the abandoned pile.
 4. Piles located within ten feet (10') of existing structures shall be installed in one continuous operation. Re-stroking piles during construction due to auger obstructions or difficulty in installation of reinforcement cages will not be allowed. The structural engineer shall be consulted in the event that replacement piles are required.
- E. Cutting-Off
1. Adjust the tops of pile to the cut-off elevations where piles are constructed from a work platform above final subgrade, by removing fresh grout from the top of the pile after the CMP sleeve is in place.
 2. Cut off hardened grout and the CMP shell down to final cutoff point after initial set has occurred for all piles in a single cap, or within 15 ft of any pile in a spaced pattern.
- F. Disposal
1. The Contractor shall remove and dispose all spoils and grout off site.
 2. The Contractor shall determine if any excavated material is contaminated, and if any contaminated material is encountered it shall be disposed of in a method acceptable to all governmental authorities having jurisdiction.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Each compression pile and each tension pile successfully installed in accordance with the Contractor's design and using the methods and practices of the approved test piles, cut off at the proper elevation, including steel reinforcing, and all records and grout testing specified, shall be considered a single unit price item. Pile design, materials testing, and the Contractor's inspection are considered incidental to construction and shall not be separately measured for payment. Damaged piles and piles installed outside the required installation tolerances will not be measured for payment. Short piles caused by obstructions and meeting the requirements of Part 3.5D shall be measured for payment.
- B. Each successful compression, tension and lateral pre-construction load test performed, including load frame and/or reaction piles, test pile, testing, and load test report, shall be considered a single unit price item.
- C. Each successful compression, tension and lateral construction quick load test performed, including load frame and/or reaction piles, test pile, testing, and load test report, shall be considered a single unit price item.

4.2 PAYMENT

- A. Each compression pile and each tension pile, approved and accepted by the Owner, shall be paid at the unit price indicated on the bid form.
- B. Each successful pile load test, approved and accepted by the Owner, shall be paid at the unit prices indicated on the bid form.

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Geotechnical Engineering Report
21ST STREET AND CAPITAL AVENUE MIXED USE
WKA No. 9957.01
January 31, 2014

Prepared For:
LVP Revocable Trust
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Sacramento, California 95811

Geotechnical Engineering Report
21ST STREET AND CAPITOL AVENUE MIXED USE
 Sacramento, California
 WKA No. 9957.01

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Geotechnical Engineering Report
21ST STREET AND CAPITOL AVENUE MIXED USE
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21ST STREET AND CAPITOL AVENUE MIXED USE

NE Corner of 21st Street and Capitol Avenue

Sacramento, California

WKA No. 9957.01

January 31, 2014

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INTRODUCTION

We have completed a geotechnical engineering investigation for the proposed mixed use development northeasterly of the corner of 21st Street and Capitol Avenue in Sacramento, California. The purposes of our work have been to explore the existing site, soil and groundwater conditions beneath the proposed improvement areas and to provide geotechnical engineering conclusions and recommendations for the design and construction of the proposed improvements. This report represents the results of our work.

Work Scope

Our scope of work has included the following tasks:

1. site reconnaissance;
2. review of aerial photographs and available historical groundwater contour maps;
3. subsurface exploration, including the drilling and sampling of two (2) test borings to maximum depths of approximately 28 to 33 feet below the existing ground surface;
4. bulk sampling of near-surface soils;
5. laboratory testing of selected soil samples;
6. engineering analyses, and;
7. preparation of this report.

Our evaluation was performed in general accordance with our *Geotechnical Engineering Services Proposal* dated September 10, 2013.

Figures and Attachments

A Vicinity Map showing the location of the site is included as Figure 1. Figure 2 shows the approximate locations of the borings relative to existing site features. The Logs of Soil Borings are presented as Figures 3 and 4. An explanation of the symbols and classification system used on the logs appears on Figure 5. Appendix A contains general information regarding the field investigation, descriptions of the field exploration and laboratory testing programs, and the results of laboratory tests that do not appear on the Logs of Soil Borings. Appendix B contains

guide specifications for construction of auger cast piles for use in preparing contract documents.

Proposed Development

We understand the project will consist of the design and construction of a new two-story, slab-on-grade mixed use development. Associated development is anticipated to consist of exterior concrete flatwork and underground utilities.

FINDINGS

Site Description

The project site is located on the east side of 21st Street between Capitol Avenue and the L Street Capitol Avenue Alley in Sacramento, California. The site is currently occupied by vacant property and asphalt concrete surface parking. Previous residential structures at the southwest end of the site were recently demolished in 2013. The site is bound to the south by Capitol Avenue; to the west by 21st Street; to the west by asphalt concrete parking, beyond which is a commercial building; and, to the north by an existing multi-story residential structure, beyond which is the L Street Capitol Avenue Alley.

Our review of historic aerial photographs indicates the east side of the site was previously covered in residential structures until it was used as asphalt concrete parking after 1960 and before 1968. The residential structures that were recently demolished appear to have occupied the site since at least 1937.

Subsurface Soil Conditions

Two (2) exploratory borings were performed on December 9, 2013 at the approximate locations indicated on Figure 2. The soil conditions at the borings generally consist of about 15 to 25 feet of relatively loose silt layers overlying about seven (7) to 13 feet of stiff clays with interbedded silt layers. The stiff clays are underlain by relative dense gravels extending to the explored 28 to 33 foot depths of the borings.

At the completion of our drilling activities, the test borings were grouted to the surface with a slurry of neat cement and water, as required by the permit issued by the County of Sacramento Environmental Management Department.



For soil conditions at the specific boring locations, please refer to the boring logs contained on Figures 3 and 4.

Groundwater

Groundwater was encountered about 20 feet below the ground surface at the boring locations during and immediately after the drilling operations. Based on our experience in the area, groundwater is anticipated to be as high as about 15 feet below the existing ground surface at the site.

CONCLUSIONS

Seismic Code Parameters – 2013 CBC/ASCE 7-10

We understand the design of the structures will be performed using the 2013 California Building Code (CBC). The 2013 edition of the CBC references American Society of Civil Engineers (ASCE) Standard 7-10 for seismic design. The following seismic parameters were determined based on the site latitude and longitude using the public domain computer program developed by the United States Geological Survey (USGS).

2013 CBC/ASCE 7-10 Seismic Design Parameters

Latitude: 38.5735° N Longitude: 121.4801° W	ASCE 7-10 Table/Figure	2013 CBC Table/Figure	Factor/ Coefficient	Value
Short-Period MCE at 0.2s	Figure 22-1	Figure 1613.3.1(1)	S _s	0.668 g
1.0s Period MCE	Figure 22-2	Figure 1613.3.1(2)	S ₁	0.291 g
Soil Class	Table 20.3-1	Section 1613.3.2	Site Class	D
Site Coefficient	Table 11.4-1	Table 1613.3.3(1)	F _a	1.266
Site Coefficient	Table 11.4-2	Table 1613.3.3(2)	F _v	1.817
Adjusted MCE Spectral Response Parameters	Equation 11.4-1	Equation 16-37	S _{MS}	0.845 g
	Equation 11.4-2	Equation 16-38	S _{M1}	0.530 g
Design Spectral Acceleration Parameters	Equation 11.4-3	Equation 16-39	S _{DS}	0.564 g
	Equation 11.4-4	Equation 16-40	S _{D1}	0.353 g



Latitude: 38.5735° N Longitude: 121.4801° W	ASCE 7-10 Table/Figure	2013 CBC Table/Figure	Factor/ Coefficient	Value
Seismic Design Category	Table 11.6-1	Section 1613.3.5(1)	Occupancy I to IV	D
	Table 11.6-2	Section 1613.3.5(2)	Occupancy I to IV	D

Liquefaction Potential

Liquefaction is a soil strength loss phenomenon that typically occurs in loose, saturated cohesionless sands as a result of strong ground shaking during earthquakes. The potential for liquefaction at a site is usually determined based on the results of a subsurface soil investigation and the groundwater conditions beneath the site. Hazards to structures associated with liquefaction include shallow and deep foundation bearing capacity failure, lateral spreading of soil, and differential settlement of soils below foundations, all of which can contribute to structural damage or collapse.

The soil conditions encountered at the borings indicates the site is primarily underlain by low to medium plasticity silts and clays below the groundwater, which are typically not susceptible to liquefaction. Therefore, it is our opinion that saturated, loose cohesionless soils likely do not exist in significant thickness beneath the groundwater, and therefore the potential for liquefaction of the soils occurring at the site is very low.

Bearing Capacity

Based upon our field and laboratory testing, it is our opinion that the loose, undisturbed native soils overlying the stiff clays and gravel layer are not capable of supporting the planned structures and associated improvements unless the structures are supported on an alternative foundation system, such as shallow foundations supported on an improved subgrade (i.e., excavation and recompaction of the soils as a uniform engineered fill to a specified depth or Geopier® rammed aggregate piers [RAPs]) or a deep foundation system consisting of driven, precast concrete piles (driven piles); drilled, auger cast-in-place piles; or drilled cast-in-place reinforced concrete piers. However, we anticipate noise and vibrations associated with the construction of driven piles at the site will exceed those typically tolerated for projects within close proximity to existing structures such as those adjacent to the site. Therefore, driven piles will not be considered for this project at this time due to noise pollution, disturbances due to vibrations, and other factors associated with construction of driven piles.



The selection of the most appropriate foundation system or systems will depend on the actual loads and configurations (i.e., above grade, below-grade, partially below-grade, etc.) of the structures, the acceptable amount of settlement for the structure, and the construction constraints (i.e., vibrations, noise, equipment access, etc.). A discussion of each foundation type is provided as follows.

Specific recommendations for the various foundation systems are provided in the Foundations section of this report.

Shallow Foundations Supported on Engineered Fill

Excavation and recompaction of the soils as a uniform engineered fill to a depth of five (5) feet below the bottom of the foundations or at least five (5) feet below the existing ground surface, whichever is deeper, is considered suitable for support of the proposed two-story building. Engineered fill should be placed and compacted in accordance with the recommendations of this report.

Shallow Foundations Supported on Geopier® RAPs

Based on the available information, we conclude that shallow foundations supported on an improved subgrade consisting of Geopier® RAPs would be appropriate for support of the proposed improvements. The Geopier® system uses a drilled shaft backfilled with compacted aggregate base to improve subgrade stability and reduce settlements within the treated area. The Geopier® system should be designed by a professional engineer in the State of California that is qualified and experienced in Geopier® rammed aggregate pier design.

Drilled Auger Cast-in-Place Piles

Based on the soil conditions encountered at the site, deep foundations consisting of auger cast-in-place (ACIP) piles extending into the relatively dense gravel layer encountered about 28 to 32 feet below the ground surface at the boring locations are considered feasible at the site. ACIP piles have been used as an alternative to driven piling to reduce detrimental vibration, noise, and other problems associated with driving piles, and can achieve similar bearing, uplift, and lateral resistance of the driven piles.

We anticipate total settlements on the order of ½-inch and differential settlements on the order of ¼-inch for ACIP pile foundations. A contingency plan for loading and off-hauling soil cuttings from the ACIP should be considered in the construction plans and schedule.



Drilled, Cast-in-Place, Reinforced Concrete Piers

Drilled, cast-in-place, reinforced concrete piers (drilled piers) could be used to support the structure. Drilled piers will likely extend below the groundwater table during construction and will require wet construction techniques (i.e., casing and/or drilling slurry). We anticipate drilled piers will extend about 25 to 30 feet below the existing ground surface based on the soil conditions encountered at the boring locations.

We anticipate total settlements on the order of ½-inch and differential settlements of ¼-inch. The use of drilled piers also would provide increased uplift and lateral resistance for the structure.

The construction costs, plan, and schedule should include loading and off-hauling soil cuttings from the drilled pier construction.

Soil Expansion Potential

The near-surface soils encountered at the borings generally consist of granular silts that are not considered expansive. Therefore, special reinforcement of foundations and floor slabs, or special moisture conditioning during site grading to resist or control soil expansion pressures, are not considered necessary on this project.

Pavement Subgrade Quality

Laboratory testing of bulk samples obtained at the site indicates the near-surface soils are relatively good quality materials for support of asphalt concrete and concrete pavements. A Resistance value (R-value) of 60 was obtained on a composite bulk soil samples obtained from the upper three feet of soil at boring location D2. The results of the R-value testing are included on Figure A3 attached.

Material Suitability

The existing on-site materials are considered suitable for use as engineered fill, provided they are free of significant quantities of organics, rubble and deleterious debris, and at a suitable moisture content to achieve the recommended compaction.

Soils beneath existing pavement and slab areas and irrigated areas will likely be at an elevated moisture content regardless of the time of construction and will require drying before compaction or use as fill.



Existing pavements and flatwork (asphalt concrete and concrete) within areas to be demolished, if any, may be broken up and pulverized for use as fill. Asphalt and Portland cement concrete rubble may be used as fill provided it is processed into fragments less than three inches in largest dimension, is mixed with soil to form a compactable mixture, and is approved by the Owner.

The existing aggregate base encountered below the asphalt concrete and concrete surfaces is considered suitable for reuse as engineered fill. Consideration may also be given to reusing the existing aggregate base as aggregate base or subbase. However, additional laboratory testing would be required to verify the material meets the requirements for Caltrans Class 2 aggregate base or subbase.

Excavation Conditions

Based on the information obtained during the field exploration and our local experience, we anticipate the soils at the site will be readily excavatable with conventional earthmoving and trenching equipment. However, larger equipment may be required to remove existing below-grade structures at the site from previous developments and the existing structures (e.g., previous foundations, concrete slabs, etc.). Based on the results of our subsurface exploration, the soils across the site may be classified as Type B soils in accordance with the Occupational Safety and Health (OSHA) classification system.

In general, we anticipate the on-site soils will likely remain stable at near-vertical inclinations without significant caving for relatively short periods (i.e., less than one day) during utility and foundation construction. However, excavations extending into saturated and/or disturbed soils will likely require excavation bracing or shoring to control sloughing and caving for utilities and casing will be required for RAP and/or drilled pier excavations. Excavations deeper than five feet should be sloped or braced in accordance with current OSHA regulations.

Temporarily sloped excavations should be constructed no steeper than a one horizontal to one vertical (1:1) inclination. Temporary slopes likely will stand at this inclination for the short-term duration of construction, provided significant pockets of loose and/or saturated granular soils are not encountered that could slough into excavations.

The contractor must provide a safely sloped excavation or an adequately constructed and braced shoring system in accordance with federal, state and local safety regulations for individuals working in an excavation that may expose them to the danger of moving ground. If material is stored or heavy equipment is operated near an excavation, stronger shoring must be used to resist the extra pressure due to the superimposed loads.



Groundwater

Based on our subsurface exploration and review of groundwater information in the vicinity of the site, a permanent groundwater level of about 15 feet should be used in design of the proposed structure. The permanent groundwater table should not be a significant factor in site development for excavations less than about 15 feet below the existing ground surface. However, it is likely that perched groundwater may be encountered in excavations from rainfall, surface run-off, irrigation, or seepage from perched groundwater sources, especially if construction begins in the winter and early spring months.

For excavations extending less than about 15 feet below the existing ground surface standard sump pit and pumping procedures should be adequate to control localized groundwater. If Geopier® RAPs, ACIP piles, or drilled piers are used for foundation support, the RAP or pile/pier contractor should provide proper equipment and materials to handle the anticipated groundwater depths.

Dewatering of excavations deeper than about 15 feet below the existing ground surface should be anticipated, although the groundwater elevation will vary depending on seasonal rainfall. Temporary dewatering will be necessary to maintain a relatively dry excavation and to limit disturbances to the subgrade at the bottom of the excavation. The groundwater should be temporarily lowered to at least two feet below the bottom of excavations. The spacing interval(s) and depth for dewatering operations will depend on the rate and volume of groundwater flow experienced and should be determined in the field by the dewatering contractor. Note that the dewatering design should take into account the effect dewatering operations will have on the adjacent improvements.

Groundwater levels should be expected to fluctuate throughout the year based on variations in precipitation, temperature, evaporation, run-off, and other factors. The groundwater levels discussed herein, and indicated on the boring logs, represent the conditions at the time the measurements were obtained. The actual groundwater levels at the time of construction may vary.

Seasonal Water

Infiltrating surface run-off water from seasonal moisture during the winter and spring months will create saturated surface soil conditions. It is probable that grading operations attempted following the onset of winter rains and prior to prolonged drying periods will be hampered by high soil moisture contents. Such soils, intended for use as engineered fill, will require a prolonged period of dry weather and aeration or chemical treatment to reach a moisture content suitable for proper compaction.



In addition, soils located beneath existing pavements, slabs, and flatwork, will likely be at elevated moisture contents regardless of the time of year of construction and also require drying. Wet soils should be anticipated and considered in the construction schedule for this project.

Preliminary Soil Corrosion Potential

A sample of near-surface soil was submitted to Sunland Analytical Lab for testing to determine pH, chloride and sulfate concentrations, and resistivity to help evaluate the potential for corrosive attack upon buried structures. Results of the soil corrosivity tests are summarized below; copies of the test results are attached as Figure A5.

SUMMARY OF CORROSION TEST RESULTS						
Sample Location	Test Depth (feet)	USCS Soil Type	pH	Chloride Content (ppm)	Sulfate Content (ppm)	Resistivity (ohm-cm)
D1	1 to 3	ML	8.19	12.9	26.7	4290

The California Department of Transportation Corrosion Technology Section, Office of Materials and Foundations, *Corrosion Guidelines Version 1.0, September 2003*, considers a site to be corrosive to foundation elements if one or more of the following conditions exists for the representative soil and/or water samples taken: has a chloride concentration greater than or equal to 500 ppm, sulfate concentration greater than or equal to 2000 ppm, or the pH is 5.5 or less. The corrosivity test results suggest that the site soils are not highly corrosive to exposed reinforced concrete. The low resistivity may indicate an increased potential for corrosion of buried metal. Table 4.3.1 – *Requirement for Concrete Exposed to Sulfate-Containing Solutions*, American Concrete Institute (ACI) 318, Section 4.3, as referenced in section 1904A.3 of the 2007 CBC, indicates the sulfate exposure for the samples tested is *Negligible*. Ordinary Type I-II Portland cement is considered suitable for use on this project, assuming a minimum concrete cover is maintained over the reinforcement.

Wallace-Kuhl & Associates are not corrosion engineers. Therefore, if it is desired to further define the soil corrosion potential at the site a corrosion engineer should be consulted.



RECOMMENDATIONS

General

The recommendations presented below are appropriate for typical construction in the late spring through fall months. The on-site soils likely will be saturated by rainfall in the winter and early spring months, and will not be compactable without drying by aeration or chemical treatment to dry the soils. Should the construction schedule require work during wet conditions, additional recommendations can be provided, as conditions dictate.

Soils under existing pavements or slabs and irrigated areas will be wet regardless of the time of year of construction.

Site preparation should be accomplished in accordance with the provisions of this report and the appended guide specifications. A representative of the Geotechnical Engineer should be present during site grading to evaluate compliance with our recommendations and the guide specifications. The Geotechnical Engineer of Record referenced herein should be considered the Geotechnical Engineer that is retained to provide geotechnical engineering observation and testing services during construction.

Site Preparation

Based on the relatively loose nature of the near-surface soils, we conclude the existing soils at the site are not considered suitable for shallow foundation support of the proposed two-story structure unless the subgrade soils are improved or the structure is supported on a deep foundation system. Therefore, site preparation will depend on the specific foundation system chosen. A discussion of the site preparation required for each support option is provided below.

Regardless of the support option chosen, the site should be cleared of existing pavements, flatwork, below-grade structures, vegetation, debris, and other deleterious materials to expose undisturbed native soils. Where practical, the clearing should extend a minimum of five feet beyond the limits of the proposed structural areas of the site. Underground utilities within the proposed construction areas should be completely removed, rerouted, or properly abandoned (i.e., fully grouted provided the abandoned utility is situated at least 2½ feet below the final subgrade level to reduce the potential for localized "hard spots"). Depressions resulting from removal of underground utilities should be cleaned of loose soil and properly backfilled in accordance with the recommendations of this report.



The existing pavements and flatwork (asphalt concrete and concrete) that are not incorporated into the new design should be broken up and removed from the site. Pulverized asphalt and Portland cement concrete rubble may be used as fill below the structures and pavements provided they are processed into fragments less than three inches in largest dimension and mixed with soil to form a compactable mixture.

Soils beneath existing pavement and slab areas and irrigated areas will likely be at an elevated moisture content regardless of the time of construction and will require drying before compaction or use as fill.

Building Pads Supporting Shallow Foundations – Excavation and Recomposition

Shallow foundations are considered suitable for support of the structure if the building pad, and the area extending at least five feet horizontally beyond the proposed exterior edge of foundations, *are excavated to a depth of at least five feet below the bottom of the foundations or at least five feet below the existing ground surface, whichever is deeper.* Following excavation operations, areas to receive fill should be scarified to a depth of at least 12 inches, moisture conditioned to at least the optimum moisture content, and compacted to at least 90 percent relative compaction. Relative compaction should be based on the maximum dry density as determined in accordance with the ASTM D1557 Compaction Test. Compaction operations should be performed in the presence of our representative who will evaluate the performance of the subgrade under compactive load and identify loose or unstable soils that could require additional excavation and/or compaction.

If the exposed subgrade is disturbed and/or wet, a layer of coarse crushed aggregate may be required at the base of the overexcavation to provide a stable working surface on which to place and compact backfill. The crushed aggregate should be placed in lifts no greater than 1-foot in thickness and then worked into the subgrade with the back-end of the backhoe bucket. The required thickness of this stabilization layer will depend on the severity of the disturbed condition. If the crushed aggregate stabilization layer exceeds 9 inches in thickness, we recommend an additional layer of Class 2 aggregate base be used to cap the coarse aggregate to reduce the potential for migration of overlying sand fill into the voids of the coarse aggregate.

Alternatively, consideration may be given to placing a layer of geogrid reinforcement (Tensar® BX 1200 or better) across the entire excavation (i.e., the entire building footprint plus five feet beyond the outer edges of the exterior foundations). The geogrid should be covered with a 6-inch thick lift of an approved granular, graded, compactable import soil. Class 2 aggregate



base or Class 3 aggregate subbase (*Caltrans Standard Specifications*) compacted to at least 90 percent relative compaction at no less than the optimum moisture content are considered suitable for this purpose.

The excavation should be restored to grade with engineered fill in accordance with the recommendations provided in the Engineered Fill Construction section of this report.

Compaction operations should be performed in the presence of the Geotechnical Engineer's representative who will evaluate the performance of the subgrade under compactive load and identify loose or unstable soils that could require additional subgrade preparation.

Building Pads Supporting Shallow Foundations – Geopier® Rammed Aggregate Piers

An alternative to excavation and recompaction of soils beneath the building pad would be to use a ground improvement system consisting of Geopier® RAPs. The Geopier® system uses a drilled shaft backfilled with compacted aggregate base to improve subgrade stability and reduce settlements within the treated area. The Geopier® system should be designed by a professional engineer in the State of California that is qualified and experienced in Geopier® rammed aggregate pier design.

Building Pads Supported on a Deep Foundation

If a deep foundation system will be used for building support, the building pad areas should be scarified to a depth of at least 12 inches, moisture conditioned to at least the optimum moisture content and compacted to at least 90 percent of the ASTM D1557 maximum dry density. Any construction debris or subsurface structures encountered during excavation or cross-ripping activities should be removed. The excavation should be restored to grade with engineered fill compacted in accordance with the recommendations provided in the Engineered Fill Construction section of this report.

Pavements

Regardless of the foundation system chosen, we recommend pavement areas be scarified to a depth of at least 12 inches, moisture conditioned to at least the optimum moisture content and compacted to at least 90 percent of the ASTM D1557 maximum dry density. Any construction debris or subsurface structures encountered during excavation or scarification activities should be removed. The excavation should be restored to grade with engineered fill compacted in



accordance with the recommendations provided in the Engineered Fill Construction section of this report.

Engineered Fill Construction

Any fill placed within the construction area should be an approved material, free of significant quantities of organics, oversized rubble, or other deleterious materials. The fill should be spread in level layers not exceeding nine inches in loose thickness and compacted to a minimum of 90 percent of the maximum dry density. Maximum dry densities shall be determined in accordance with ASTM D1557.

Engineered fill should be moisture conditioned to at least the optimum moisture content and maintained in that condition.

The on-site soils encountered at the boring locations are considered suitable for use as engineered fill provided they are free of rubble and organic concentrations and are at a compactable moisture content. Imported fill should be an approved compactable granular material, have an Expansion Index of 20 or less, a Resistance value of at least 30 when used within the upper three feet of pavement subgrades, and be free of particles larger than three inches in maximum dimension. The contractor also should supply appropriate documentation for imported fill materials indicating the materials are free of known contamination and have corrosion characteristics within acceptable limits. Our firm must approve import material before being transported to the project site.

The upper six inches of pavement subgrade should be moisture conditioned to at least the optimum moisture content and compacted to no less than 95 percent relative compaction, regardless of whether final subgrade is achieved by excavation, filling or left at existing grade. Final pavement subgrade processing and compaction should be performed after completion of underground utilities and must be stable under construction traffic prior to aggregate base placement.

Permanent excavation and fill slopes should be constructed no steeper than two horizontal to one vertical (2:1), and should be vegetated as soon as practical following grading to minimize erosion. Slopes should be over-built and cutback to design grades and inclinations.

Site preparation should be accomplished in accordance with the recommendations of this report. We recommend the Geotechnical Engineer's representative be present during site preparation and all grading operations to observe and test the fill to verify compliance with the recommendations of this report and the job specifications.



Utility Trench Backfill

Bedding and initial backfill for utility construction should conform with the pipe manufacturer's recommendations and applicable sections of the governing agency standards. General trench backfill should consist of engineered fill backfilled in maximum nine-inch thick loose lifts with each lift compacted to at least 90 percent of the maximum dry density as determined by ASTM D1557. Utility trench backfill within the upper six inches of the final subgrade within pavement areas should be compacted to at least 95 percent of the maximum dry density.

We recommend that all underground utility trenches aligned nearly parallel with existing or new foundations be at least five feet from the foundations, wherever possible. If this is not practical, the trenches should not encroach on a zone extending at a one horizontal to one vertical (1:1) inclination below the foundations.

It is likely that materials excavated from trenches will be at elevated moisture contents and will require significant aeration or a period of drying to reach a compactable moisture content. We recommend bid documents contain a unit price for the removal and drying of saturated soils, or replacement with approved import soils.

Foundation Design Alternatives

We recommend that our office be given the opportunity to review final grading plans, foundation plans and specifications to determine if the intent of our recommendations has been properly implemented into those documents.

The proposed structure may be supported upon continuous and/or isolated spread foundations on an improved subgrade (i.e., properly placed and compacted engineered fill or a Geopier® RAP improved subgrade) or a deep foundation system consisting of drilled ACIP piles or drilled piers. Alternative foundations may be considered at the site and will be evaluated on a case-by-case basis.

Recommendations for each type of foundation system have been provided. Combination foundation systems (i.e. shallow foundations on an improved subgrade used with deep foundations) may be acceptable; however, the structure must be designed to accommodate some differential settlement due to the varying support characteristics of the foundations and elastic properties of various bearing strata. The intent of this recommendation is to minimize differential settlement between the two foundation types.



Our recommendations for shallow spread foundations on an improved subgrade, drilled ACIP piles, and drilled piers are provided in the following sections.

Shallow Foundations on Engineered Fill

Continuous and/or isolated spread foundations bearing on properly prepared engineered fill should extend at least 18 inches below the lowest adjacent soil grade of the properly prepared building pad. For this project, the pad soil grade is the surface on which capillary break materials are placed. Continuous foundations should be at least 12 inches wide; isolated spread foundations should be at least 18 inches wide. Foundations so established may be sized for maximum allowable soils bearing pressures of 3000 psf for dead plus live loads and 4000 psf for all loads, including wind or seismic forces. The weight of foundation concrete extending below adjacent soil grade may be disregarded in sizing computations.

We recommend that all foundations be reinforced to provide structural continuity, reduce cracking and permit spanning of local soil irregularities. The project structural engineer should determine foundation reinforcement. However, as a minimum, we recommend continuous foundations contain at least two No. 4 reinforcing bars, placed one each near the top and bottom of the foundation.

Resistance to lateral foundation displacement for conventional foundations may be computed using an allowable friction factor of 0.30, which may be multiplied by the effective vertical load on each foundation. Additional lateral resistance may be computed using an allowable passive earth pressure of 300 psf per foot of depth. These two modes of resistance should not be added unless the frictional value is reduced by 50 percent since full mobilization of these resistances typically occurs at different degrees of horizontal movement.

We estimate total settlement for shallow footing foundations using the recommended maximum net allowable bearing pressure presented above, should be one inch or less. Differential settlements are estimated to be about one-half the total settlement. These settlement estimates are based on the available boring information, our experience with similar structures and soil conditions, and field verification of suitable bearing soils by our firm during foundation construction.

Shallow Foundations on Geopier® Rammed Aggregate Piers

We anticipate a Geopier® RAP system could provide adequate support for the proposed structure supported on continuous and/or isolated spread foundations or a mat foundation. A qualified RAP contractor licensed in the State of California should be contacted directly to



provide final recommendations for the Geopier® RAP system, including allowable capacities and settlements.

Continuous and/or isolated spread foundations bearing on a Geopier® RAP improved subgrade should extend at least 18 inches below the lowest adjacent soil grade of the structure pad. For this project, the pad subgrade is the surface on which aggregate materials (i.e., aggregate base below slab areas of the structures or capillary break materials within proposed building areas) are placed. Isolated spread foundations should be at least 18 inches wide.

Preliminary design information indicates allowable rammed aggregate pier capacities of 85 kips and a bearing capacity of 6000 psf for dead plus live load can be achieved on Geopier® RAPs. The RAP layout and final bearing pressures and cell capacities will depend on the actual loading conditions for each structure and should be determined by the RAP designer and should include an appropriate factor of safety. The weight of foundation concrete extending below adjacent soil grade may be disregarded in sizing computations.

Uplift resistance can be provided using ground improvement equipped with a steel uplift anchor and can provide about 35 kips of allowable uplift.

We recommend that all foundations be reinforced to provide structural continuity, reduce cracking and permit spanning of local soil irregularities. The project structural engineer should determine final foundation reinforcement. However, as a minimum, we recommend continuous foundations contain at least four No. 4 reinforcing bars, placed two each near the top and bottom of the foundation.

Preliminary resistance to lateral foundation displacement for conventional foundations supported on RAPs may be computed using an allowable friction factor of 0.45, which may be multiplied by the effective vertical load on each foundation. Additional lateral resistance may be computed using an allowable passive earth pressure of 350 psf per foot of depth. These two modes of resistance should not be added unless the frictional value is reduced by 50 percent since full mobilization of these resistances typically occurs at different degrees of horizontal movement.

Auger Cast-in-Place (ACIP) Concrete Piles

The proposed structure also may be supported upon ACIP concrete piles. ACIP concrete piles are installed using special equipment equipped with hollow-stem augers. Once the pile hole has been drilled, grout/concrete is injected under pressure through the auger to displace the



soil and provide positive contact with the surrounding soils. Reinforcement is placed into the grouted shaft after withdrawal of the auger.

Piles for the structure should extend to a minimum of approximately two feet into the relatively dense gravels, which were encountered at depths of about 28 to 32 feet below the ground surface at the boring locations. Drilled ACIP concrete piles may be designed utilizing the following maximum allowable loads per pile with appropriate factor of safety (F.S.) as summarized in the table below as follows:

ALLOWABLE ACIP PILE CAPACITIES					
Loading Conditions		18-inch Diameter		24-inch Diameter	
		Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
Axial Compression	DL (F.S. = 3)	80	240	140	420
	DL + LL (F.S. = 2)	120	240	210	420
	Total Load (F.S. = 1.5)	160	240	280	420
Axial Uplift (Tension)	Total Load (F.S. = 1.5)	40	60	70	105

Reductions in pile capacity for consideration of group action are unnecessary, provided piles are spaced no closer (center-to-center) than three times the diameter of the pile.

The indicated uplift pile capacity is based upon the assumption that the piles will be properly reinforced to transfer pullout forces to the pile tip.

Lateral loading information was not available at the time this report was prepared. The lateral resistance of individual piles and the passive resistance of the pile cap against the soil can be combined to provide lateral resistance. For preliminary design purposes, 18-inch ACIP piles can be assumed to provide an allowable lateral resistance of five (5) tons and 24-inch ACIP piles can be assumed to provide an allowable lateral resistance of 10 tons. Both lateral resistance values are based on a pile deflection of one-inch. Resistance to lateral loads for ACIP piles can be determined and presented in a supplemental report using a lateral pile analysis program when final size design information is known and if required to further aid in the structural design.



The weight of pile cap concrete extending below grade and the weight of each pile may be disregarded in determinations of the net compressive load transmitted to the supporting soil.

Concurrent lateral resistance derived in friction between the slab and the supporting subgrade layer may be computed using an allowable friction factor of 0.30 at the interface between the slab and the subgrade.

A pile load test program will be necessary to determine the correct length of the ACIP piles to achieve the specified capacities. Additional load testing could be performed during construction, where as-built pile dimensions differ from the recommended dimensions, which could result from refusal to auger penetration in denser/stiffer soils beneath this site.

Drilled Cast-in-Place Concrete Piers

Drilled, cast-in-place piers (drilled piers) may be used to support the proposed structure. Drilled piers should be at least 24 inches in diameter and extend to at least 25 feet below the existing ground surface into the relatively stiff clays encountered about 15 to 23 below the ground surface at the boring locations. Piers so established may be designed based on an allowable end bearing capacity of 4000 psf for dead plus live loads with a 1/3 increase for short-term effects of wind or seismic forces. We recommend that adjacent piers be constructed no closer than three pier diameters apart, as measured between centers of the piers. Drilled pier foundations should be structurally isolated from any adjacent concrete flatwork by a felt strip or similar material.

Increased bearing capacity can be achieved by increasing the embedment depth of the foundations into the relatively dense gravels. Specifically, drilled piers extending to the relatively dense gravels encountered about 28 to 32 feet below the ground surface at the boring locations can be designed based on an allowable end bearing capacity of 6000 psf for dead plus live loads with a 1/3 increase for short-term effects of wind or seismic forces.

Due to the anticipated depth of groundwater and the required drilled pier depths, the contractor should be prepared to construct the drilled piers using wet drilling methods (i.e., casing, slurry, etc.).

Uplift resistance of the pier foundations may be computed assuming the following resisting forces, where applicable: 1) the unit weight of foundation concrete (150 pound per cubic foot); and, 2) shearing resistance of 350 psf applied over the shaft area of the pier. Increased uplift



resistance can be achieved by increasing the diameter of the pier or increasing the depth of the embedment depth.

It will be essential that our representative be present during pier drilling operations to verify compliance with our recommendations and the job specifications.

Lateral resistance of drilled piers can also be evaluated by determining the shear, moment and deflection of the pier using a computer model of the pier and soil (i.e. LPILE). Such an analysis is beyond the current scope of this evaluation and can be accomplished after the dimensions of the piers and loading conditions are known, if desired.

The bottom of the pier excavations should be free of loose or disturbed soils prior to placement of the concrete. Cleaning of the bearing surface may be done mechanically with the belling bucket, but should be verified by the geotechnical engineer prior to concrete placement.

Reinforcement and concrete should be placed in the pier excavations as soon as possible after excavation is completed to reduce the potential of sidewall caving into the excavations. Excessive sloughing of the sidewalls during pier construction is anticipated for piers extending deeper than about 10 feet below the existing ground surface. Therefore, we recommend that the pier contractor be prepared to case the pier holes or use drilling fluid (slurry) if conditions require.

To reduce lateral movement of the drilled shafts, it is necessary to place the concrete for the drilled shafts in intimate contact with the surrounding soil. Any voids or enlargements in the shafts due to over-excavation or temporary casing installation shall be filled with concrete at the time the shaft concrete is placed.

If the drilled piers are constructed in the "dry" (with dry being less than two inches of water at the base of the excavation), the concrete may be placed by the free-fall method, using a short hopper or back-chute to direct the concrete flow out of the truck into a vertical stream of flowing concrete with a relatively small diameter. The stream is directed to avoid hitting the sides of the excavation or any reinforcing cages. For the free-fall method of concrete placement, we recommend the concrete mix be designed with a slump of five to seven inches.

In general, we anticipate the drilled pier excavations will be relatively dry for pier excavations extending less than about 15 feet below the existing ground surface. For excavations extending deeper than about 15 feet below the existing ground surface we anticipate groundwater will be encountered which cannot be controlled such that more than six (6) inches of water accumulates at the bottom of the pier excavation. After it is confirmed that the excess



water cannot be removed from the caisson excavation by bailing or with pumps, concrete should be placed using a tremie. For concrete placed using the tremie method, a slump of six to eight (8) inches, and a maximum aggregate size of ¾-inch is recommended. The required slump should be obtained by using plasticizers or water-reducing agents. Addition of water on-site to establish the recommended slump should not be allowed.

When extracting temporary casings or tremie methods from the excavation, care should be taken to maintain a head of concrete to prevent infiltration of water and soil into the shaft area. The head of concrete should always be greater than the head of water trapped outside the pier or tremie, taking into account the differences in unit weights of concrete and water.

We estimate total settlement for drilled pier foundations using the recommended maximum net allowable bearing pressure and allowable capacities presented above, will be less than one (1) inch. Differential settlements may be as much as the total settlement between individual pier elements. The settlement estimates are based on the available soil information, our experience with similar structures and soil conditions, and field verification of suitable bearing soils during foundation construction.

Pile Load Testing Program

If ACIP are used for support of the structure, a pile loading testing program conducted prior to installation of production piles will be necessary to determine and verify the appropriate length of pile to achieve the **ultimate capacity** of the piles. The pile load test program should include both static load tests and pile driving analyzer (PDA) tests. The purpose of the PDA testing for the pre-construction piles would be to develop a correlation between the static load test results and the PDA testing that would be used during the construction of production piles in lieu of "quick" load tests. The advantage of PDA testing over the "quick" load pile testing is the savings in time to set up the load test frame that typically takes three to five days, and a "quick" load test program often takes about eight hours per pile to complete

Static Load Testing

The pile load test frame and supply of the personnel and equipment necessary to conduct the load tests should be constructed in accordance with the latest version of ASTM Test Method D1143 for compressive loads, ASTM Test Method D3689 for tensile loads, and ASTM Test Method D3966 for lateral loads as delineated in the *Guide Specifications for Auger Cast Piles* provided as Appendix B.



One test pile should be cast-in-place to reach minimum tip elevations of at least 30 feet below the ground surface and at least two (2) feet into the gravel stratum. Additional test piles will be required if multiple pile sizes are used in the design or if alternate pile capacities are being considered. The reaction system should be capable of resisting forces from tests on the test piles in axial compression and tension as specified in the previous Allowable Pile Capacities table. We intend to test the test pile in compression and tension, and to perform a lateral load test between adjacent piles. The pile may be loaded to failure in any of the test configurations.

Submittals for the load testing frame, hydraulic pumps, hydraulic jacks, dial indicators, and calibration documentation must be provided by the pile contractor in accordance with the project plans and specifications.

Prior to beginning load tests, the pile concrete should achieve a minimum compressive strength of 4000 pounds per square inch when tested in accordance with ASTM C109. Construction activities must be restricted during the load-testing program. Construction activities may proceed during the set up of the load frame and installation of the test piles. Excessive vibration of the ground near the load test can cause movement of the test frame and the sensitive pile deflection measurement devices.

Final pile construction criteria will be determined from the results of the load-testing program. It is intended that the pile load test setup will be located outside the location of any permanent pile caps or grade beams, and that the test piles and reaction piles will be abandoned upon completion of the testing.

Pile Driving Analyzer Testing

Following the static load testing program, the test pile will be subjected to PDA testing, provided the pile is not damaged during the static load testing. PDA testing involves instrumenting piles and recording the response of the pile during dynamic loading. PDA testing consists of dropping a heavy weight from a certain height on to the pile head and monitoring the response of the pile. The capacity of the piles can be computed from the analyses of the PDA test.

Additional PDA testing will be performed during construction of production piles, in the event that as-built pile dimensions differ from the recommended dimensions, which could result from refusal to auger penetration or in random areas across the site to verify that the earth materials are supporting the piles as indicated by the load test program.



Surveillance/Protection

We recommend that photographic and written records be kept of both the pre-existing condition and new damage (if any) sustained by improvements in and around the site. The elevation of sidewalks and buildings adjacent to the construction site should be measured prior to construction activities. The elevations of selected survey points should be measured on a weekly basis during the initial stages of construction. Elevation of improvements and photographs should include basic data for determining the validity of claims lodged by nearby property owners or tenants.

Below-Grade Walls and Drainage

Foundations for below-grade walls, if any, may be designed and constructed as noted in the Foundation Design section of this report. The walls may be designed for an "active" earth pressure of 50 psf per foot of wall height, assuming the wall is free to rotate. If the wall is restrained at the top, or is rigid enough so that it does not rotate sufficiently to reach the active earth pressure condition, a higher lateral "at rest" earth pressure of 70 psf per foot of wall height should be used for design of rigid walls. These values do not include the effect of hydrostatic forces and assume the wall backfill is fully drained or that free water cannot collect behind the walls. Lateral resistance may be computed using an allowable passive earth pressure of 250 psf per foot of depth.

If the walls are designed to include the effects of hydrostatic forces, active and at rest pressures would increase to 90 pcf and 100 pcf, respectively, to include the effect of hydrostatic pressures. Passive pressures below the groundwater table can be evaluated using 185 pcf.

Retaining walls could experience additional surcharge loading if equipment is stored within a 1:1 projection from the bottom of the excavation. Surcharge loading under these circumstances will need to be evaluated on a case-by-case basis.

Based on recent research (Lew, et al. 2010), the seismic increment of earth pressure may be neglected if the maximum ground acceleration is 0.4 g or less. Our analysis indicates the maximum ground acceleration will be about 0.23 g; therefore, the seismic increment of earth pressure may be neglected. Earth pressures due to seismic loading may be evaluated using a total active earth pressure of 50 psf per foot of wall height and a total passive earth pressure of 200 psf per foot of wall height. The resultant active force should be applied at 1/3 times the height of the retaining wall, measured from the bottom of the wall.



Wall drainage should consist of a drainage blanket of Class 2 permeable material (Caltrans Specification Section 68-1.025) at least one foot wide extending from the base of wall to within one foot of the top of the wall. The top foot above the drainage layer should consist of engineered fill placed in accordance with the recommendations of this report. Perforated pipe should be provided at the base of the wall to collect accumulated water. Drain pipes, if used, should slope to discharge at no less than a one percent fall to a suitable sump system or drainage facilities. Open-graded ½- to ¾-inch crushed rock may be used in lieu of the Class 2 permeable material, if the rock and drain pipe are completely enveloped in an approved non-woven geotextile filter fabric. Alternatively, geotextile drainage composites such as

MiraDRAIN[®] may be used in lieu of the drain rock layer. If used, geocomposite drain panels should be installed in accordance with the manufacturer's recommendations.

If efflorescence (discoloration of the wall face) or moisture penetration of the wall is not acceptable, waterproofing measures should be applied to the back face of the wall. A specialist in protection against moisture penetration should be consulted to determine specific waterproofing measures.

Structural backfill materials for retaining walls should be placed and compacted as noted in the Engineered Fill Construction section of this report. Pea gravel and crushed rock are not considered suitable backfill materials for retaining walls.

Interior Grade Slab Support

The interior concrete slabs-on-grade can be supported upon the soil subgrade prepared in accordance with the recommendations in this report and maintained in that condition. Slabs-on-grade that will be used for vehicle support should be designed in accordance with the recommendations provided in the Pavement Design section of this report.

Interior slab-on-grade concrete slabs that will not be used for vehicle support should be at least four inches thick and, as a minimum, contain chaired No. 3 reinforcing bars on 18-inch center-on-center spacing, located at mid-slab depths. All reinforcing should be located at mid-slab depth. This slab reinforcement is suggested as a guide "minimum" only for crack control; final reinforcement and joint spacing should be determined by the structural engineer. Wheel loads from forklifts, storage of palletized materials, cranes, etc., anticipated during construction should be considered in the design of the slab-on-grade floors.



Conventional floor slabs may be underlain by a layer of free-draining gravel serving as a deterrent to migration of capillary moisture. If used, the gravel layer should be at least four inches thick and graded such that 100 percent passes a one-inch sieve and no appreciable amount passes a No. 4 sieve. Additional moisture protection may be provided by placing a water vapor retarder (at least 10-mils thick) directly over the gravel. If used, the water vapor retarder should meet or exceed that standard specification as outlined in ASTM E1745.

Floor slab construction practice over the past 25 years or more has included placement of a thin layer of sand over the vapor retarder membrane. The intent of the sand is to aid in the proper curing of the slab concrete. However, recent debate over excessive moisture vapor emissions from floor slabs includes concern of water trapped within the sand. As a consequence, we consider use of the sand layer as optional. The concrete curing benefits should be weighed against efforts to reduce slab moisture vapor transmission.

The recommendations presented above should reduce significant soils-related cracking of slab-on-grade floors. Also important to the performance and appearance of a Portland cement concrete slab is the quality of the concrete, the workmanship of the concrete contractor, the curing techniques utilized and spacing of control joints.

Floor Slab Moisture Penetration Resistance

It is likely the floor slab subgrade soils will become saturated at some time during the life of the structure, especially when slabs are constructed during the wet season and when constantly wet ground or poor drainage conditions exist adjacent to structures. For this reason, it should be assumed that all interior slabs, particularly those intended for moisture-sensitive floor coverings or materials, require protection against moisture or moisture vapor penetration. Standard practice includes placing a layer of rock and a vapor retarder membrane (and possibly a layer of sand) as discussed above. Recommendations contained in this report concerning foundation and floor slab design are presented as minimum requirements only from the geotechnical engineering standpoint.

Use of sub-slab gravel and a vapor retarder membrane will not "moisture proof" the slab, nor does it assure that slab moisture vapor transmission levels will be low enough to prevent damage to floor coverings or other building components. It is emphasized that we are not slab moisture proofing or moisture protection experts. The sub-slab gravel and vapor retarder membrane simply offer a first line of defense against soil-related moisture. If increased protection against moisture vapor penetration of the slab is desired, a concrete moisture protection specialist should be consulted. It is commonly accepted that maintaining the lowest



practical water-cement ratio in the slab concrete is one of the most effective ways to reduce future moisture vapor penetration of the completed slab.

Exterior Concrete Flatwork

Exterior concrete flatwork may be constructed directly on the prepared soil subgrade prepared and compacted in accordance with the recommendations of this report. A four-inch layer of aggregate base could be used as a leveling course under flatwork if necessary, compacted to not less than 95 percent relative compaction.

Flatwork should be at least four inches thick and reinforced for crack control. Reinforcement should include, as a minimum, chaired No. 3 rebar located on maximum 18-inch centers, both ways, throughout slabs. Accurate and consistent location of the reinforcement at mid-slab is essential to its performance and the risk of uncontrolled drying shrinkage slab cracking is increased if the reinforcement is not properly located within the slab.

Uniform moisture conditioning of subgrade soils is important to reduce the risk of non-uniform moisture withdrawal from the concrete and the possibility of plastic shrinkage cracks. Practices recommended by the Portland Cement Association (PCA) for proper placement and curing of concrete should be followed during exterior concrete flatwork construction. Flatwork should be independent of the building foundations and felt strips should be used to separate concrete slabs from building foundations.

The architect or civil engineer should determine the final thickness, strength, reinforcement, and joint spacing of exterior slab-on-grade concrete. Exterior flatwork next to landscaped areas should be thickened to twice the slab thickness for a width of at least 12 inches to help support lawn mowing equipment and other maintenance equipment.

Exterior flatwork should be constructed independent of the building foundations. Isolated column foundations should be structurally separated from adjacent flatwork by the placement of a layer of felt, or other appropriate material, between the flatwork and foundations. Practices recommended by the Portland Cement Association (PCA) for proper placement and curing of concrete should be followed during exterior concrete flatwork construction.

Exterior flatwork that will be traversed by vehicles or heavy equipment should be designed in accordance with the recommendations provided in the Pavement Design section of this report.



Pavement Design

We are providing several alternative pavement designs based on the soil conditions encountered at the site, the results of laboratory testing previously obtained at the site, and our experience.

The procedures used to design the pavement sections are in general conformance with the "Flexible Pavement Structural Design Guide for California Cities and Counties" dated January 1979, and the *California Highway Design Manual, Sixth Edition*. Laboratory testing of the on-site soils indicates an R-value of 60 was obtained on the near-surface soils at the site. Based on our experience with similar soil conditions and the variability of the near-surface soils, an R-value of 40 is considered appropriate for design of pavements at the site.

PAVEMENT DESIGN ALTERNATIVES				
R-value = 40				
Traffic Index (TI)	Traffic Condition	Type B Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)	Portland Cement Concrete (inches)
4.5	Automobile Parking Only	2½*	4	--
		--	4	4
7.0	Entrance/Exit Driveways	3	9	--
		4*	7	--
		--	4	6

* = Asphalt thickness includes Caltrans Factor of Safety.

We emphasize that the performance of the pavement is critically dependent upon adequate and uniform compaction of the subgrade soils, including utility trench backfill within the limits of the pavements. The upper six inches of untreated pavement subgrade should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D1557. Aggregate base materials should be compacted to at least 95 percent of the maximum dry density. Class 2 aggregate base should conform to Section 26 of the Caltrans Standard Specifications.

It has been our experience that pavement failures may occur where a non-uniform or disturbed subgrade soil condition is created. Subgrade disturbances can result if pavement subgrade preparation is performed prior to underground utility construction and/or if a significant time period passes between subgrade preparation and placement of aggregate base. Therefore, we



recommend that final pavement subgrade preparation (i.e. scarification, moisture conditioning, and compaction) be performed just prior to aggregate base placement.

We suggest that concrete slabs be constructed with thickened edges at least two inches plus the slab thickness and 36 inches wide in accordance with American Concrete Institute (ACI) design standards. Reinforcing for concrete pavement crack control, if desired, should consist of No. 3 reinforcing bars placed on maximum 18-inch centers each way throughout the slab.

Reinforcement must be located at mid-slab depth to be effective. Portland cement concrete should achieve a minimum compressive strength of 3500 psi at 28 days. Concrete curing and joint spacing and details should conform to current PCA and ACI guidelines.

We suggest considering the use of full depth curbs where pavements abut landscaping. The curbs should extend to at least the surface of the soil subgrade. Weep holes also could be provided at storm drain drop inlets, located at the subgrade-base interface, to allow water to drain from beneath the pavements.

Site Drainage

Site drainage should be accomplished to provide positive drainage of surface water away from the proposed structures and prevent ponding of water adjacent to foundations. The subgrade adjacent to the proposed structures should be sloped away from foundations at a minimum two percent gradient for at least 10 feet, where possible. We recommend consideration be given to connecting all roof drains to non-perforated rigid pipes which are connected to available drainage features to convey water away from the structure, or discharging the drains onto paved surfaces that slope away from the foundations. Ponding of surface water should not be allowed adjacent to the proposed structures or pavements.

Observation and Testing of Earthwork Construction

Site preparation should be accomplished in accordance with the recommendations of this report. Representatives of the Geotechnical Engineer should be present during site preparation and all grading operations to observe and test the fill to verify compliance with our recommendations and the job specifications. These services are beyond the scope of work authorized for this investigation.



Additional Services

We recommend that our firm be retained to review the final plans and specifications to determine if the intent of our recommendations has been implemented in those documents.

LIMITATIONS

Our recommendations are based upon the information provided regarding the proposed project, combined with our analysis of site conditions revealed by the field exploration and laboratory testing programs. We have used prudent engineering judgment based upon the information provided and the data generated from our investigation.

This report has been prepared in substantial compliance with generally accepted geotechnical engineering practices that exist in the area of the project at the time the report was prepared. No warranty, either express or implied, is provided.

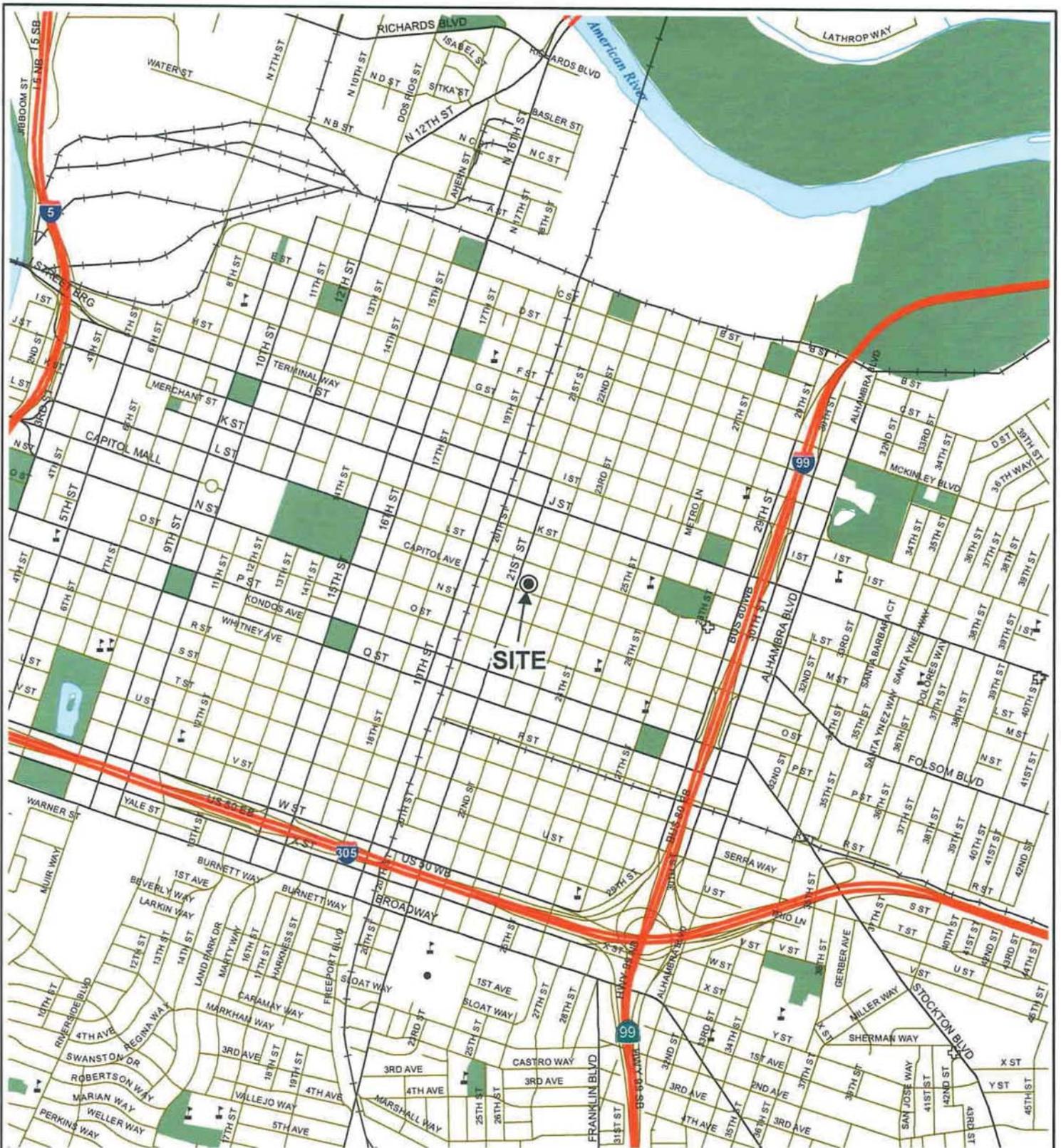
If the proposed construction is modified or re-sited; or, if it is found during construction that subsurface conditions differ from those we encountered at our boring locations, we should be afforded the opportunity to review the new information or changed conditions to determine if our conclusions and recommendations must be modified.

We emphasize that this report is applicable only to the proposed construction and the investigated site, and should not be utilized for construction on any other site. The conclusions and recommendations of this report are considered valid for a period of two years. If design is not completed and construction has not started within two years of the date of this report, the report must be reviewed and updated if necessary.

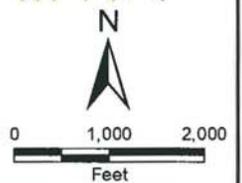
Wallace - Kuhl & Associates


Matthew S. Moynour
Senior Engineer





Street data courtesy of Sacramento County.
 Hydrography courtesy of the U.S. Geological Survey
 acquired from the GIS Data Depot, December, 2007.
 Projection: NAD 83, California State Plane, Zone II



VICINITY MAP

21ST AND CAPITOL AVENUE MIXED USE
 Sacramento, California



FIGURE 1

DRAWN BY	TJC
CHECKED BY	MSM
PROJECT MGR	MSM
DATE	1/14

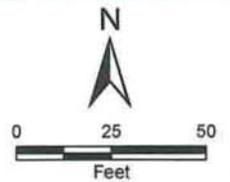
WKA NO. 9957.01



Adapted from a Google Earth aerial photograph, dated August 14, 2013.
 Projection: NAD 83, California State Plane, Zone II

Legend

◆ Approximate soil boring location



SITE PLAN

21ST AND CAPITOL AVENUE MIXED USE

Sacramento, California

FIGURE 2

DRAWN BY	TJC
CHECKED BY	MSM
PROJECT MGR	MSM
DATE	1/14
WKA NO. 9957.01	



Project: 21st and Capitol Ave (NE Corner)
 Project Location: Sacramento, California
 WKA Number: 9957.01P

LOG OF SOIL BORING D1

Sheet 1 of 1

Date(s) Drilled	12/9/13	Logged By	GJF	Checked By	MSM
Drilling Method	Hollow Stem Auger	Drilling Contractor	V&W Drilling, Inc.	Total Depth of Drill Hole	33.2 feet
Drill Rig Type	CME-55	Diameter(s) of Hole, inches	8"	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	20.0	Sampling Method(s)	California Modified	Drill Hole Backfill	Cement Grout
Remarks				Driving Method and Drop	140-lb automatic hammer; 30-inch drop

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA			TEST DATA		
				SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Dark brown, moist, very loose to loose, sandy silt (ML)		D1-1I	3	25.8	62	
5					D1-2I	10	19.4	83	
10					D1-3I	6	28.1	93	TR
15			Brown, moist to wet, stiff, clayey silt (ML)		D1-4I	10	29.0	94	
20					D1-5I	14	25.5	100	
25			Brown, wet, very stiff, silty clay (CL)		D1-6I	36			
30			Brown, wet, very stiff, clayey silt (ML)		D1-7I	34			
			Brown, wet, medium dense, sandy silt (ML)		D1-8I	50/2"			
			Gray brown, wet, very dense, silty sandy gravel (GM)						
Boring terminated at 33 feet below existing site grade. Groundwater was encountered about 20 feet below the ground surface during and immediately after the drilling operations.									

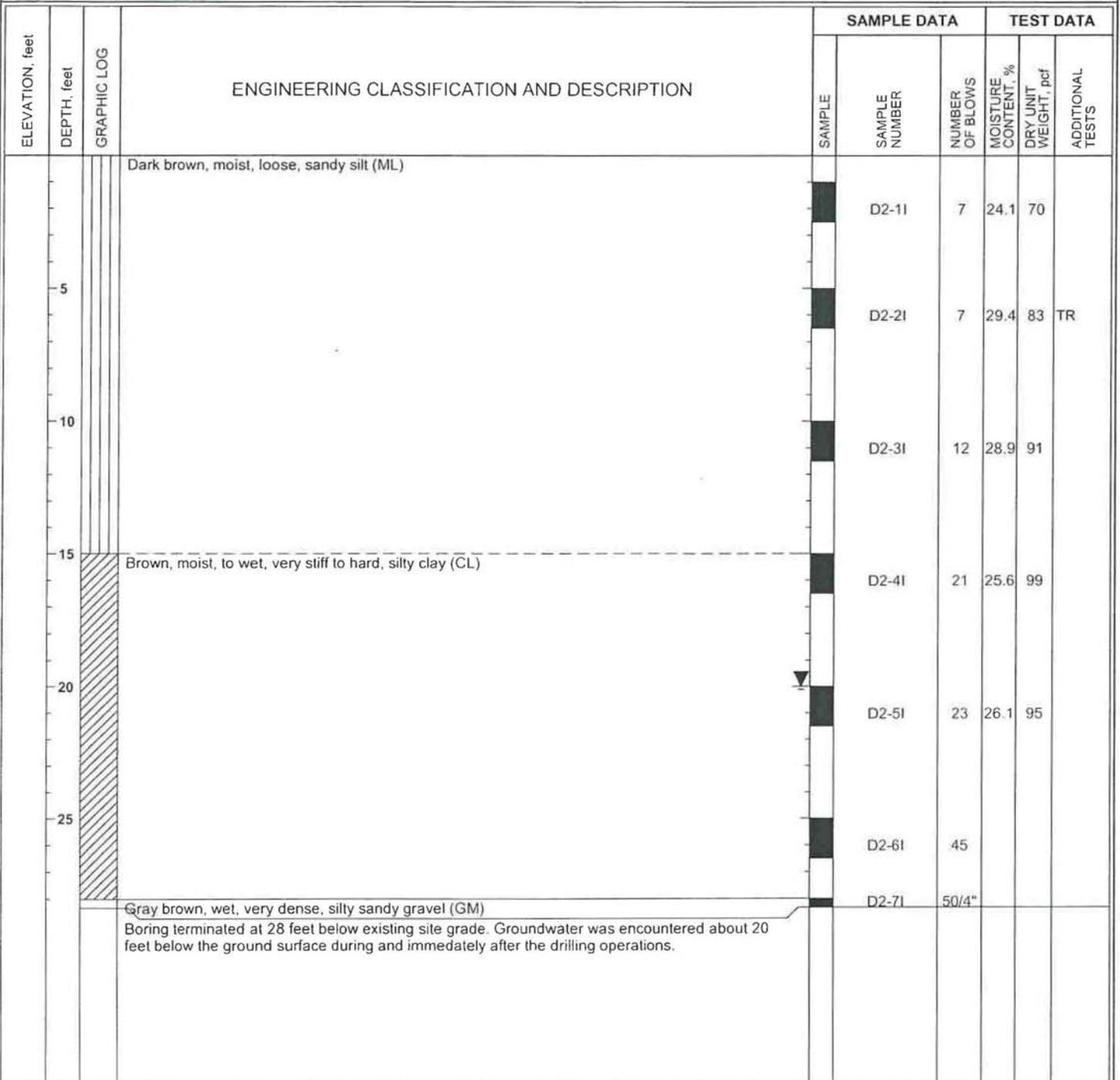
BORING LOG 9957.01P--21ST AND CAPITOL AVE (NE CORNER).GPJ WKA.GDT 1/31/14 1:15 PM

Project: 21st and Capitol Ave (NE Corner)
 Project Location: Sacramento, California
 WKA Number: 9957.01P

LOG OF SOIL BORING D2

Sheet 1 of 1

Date(s) Drilled	12/9/13	Logged By	GJF	Checked By	MSM
Drilling Method	Hollow Stem Auger	Drilling Contractor	V&W Drilling, Inc.	Total Depth of Drill Hole	28.3 feet
Drill Rig Type	CME-55	Diameter(s) of Hole, inches	8"	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	20.0	Sampling Method(s)	California Modified	Drill Hole Backfill	Cement Grout
Remarks				Driving Method and Drop	140-lb automatic hammer; 30-inch drop



BORING LOG: 9957.01P--21ST AND CAPITOL AVE (NE CORNER).GPJ WKA.GDT 1/31/14 1:15 PM

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS	SYMBOL	CODE	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of soil > no. 200 sieve size)	<u>GRAVELS</u>		
	GW		Well graded gravels or gravel - sand mixtures, little or no fines
	GP		Poorly graded gravels or gravel - sand mixtures, little or no fines
	GM		Silty gravels, gravel - sand - silt mixtures
	GC		Clayey gravels, gravel - sand - clay mixtures
	<u>SANDS</u>		
	SW		Well graded sands or gravelly sands, little or no fines
	SP		Poorly graded sands or gravelly sands, little or no fines
FINE GRAINED SOILS (50% or more of soil < no. 200 sieve size)	<u>SILTS & CLAYS</u>		
	<u>LL < 50</u>		
	ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
	CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	OL		Organic silts and organic silty clays of low plasticity
	<u>SILTS & CLAYS</u>		
	<u>LL ≥ 50</u>		
MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
CH		Inorganic clays of high plasticity, fat clays	
OH		Organic clays of medium to high plasticity, organic silty clays, organic silts	
HIGHLY ORGANIC SOILS	Pt		Peat and other highly organic soils
ROCK	RX		Rocks, weathered to fresh
FILL	FILL		Artificially placed fill material

OTHER SYMBOLS

	= Drive Sample: 2-1/2" O.D. Modified California sampler
	= Drive Sampler: no recovery
	= SPT Sampler
	= Initial Water Level
	= Final Water Level
	= Estimated or gradational material change line
	= Observed material change line
<u>Laboratory Tests</u>	
PI = Plasticity Index	
EI = Expansion Index	
UCC = Unconfined Compression Test	
TR = Triaxial Compression Test	
GR = Gradational Analysis (Sieve)	
K = Permeability Test	

GRAIN SIZE CLASSIFICATION

CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL coarse (c) fine (f)	3" to No. 4 3" to 3/4"	76.2 to 4.76 76.2 to 19.1
	3/4" to No. 4	19.1 to 4.76
SAND coarse (c) medium (m) fine (f)	No. 4 to No. 200	4.76 to 0.074
	No. 4 to No. 10	4.76 to 2.00
	No. 10 to No. 40 No. 40 to No. 200	2.00 to 0.420 0.420 to 0.074
SILT & CLAY	Below No. 200	Below 0.074



UNIFIED SOIL CLASSIFICATION SYSTEM
 21ST AND CAPITOL AVENUE MIXED USE
 Sacramento, California

FIGURE 5

DRAWN BY	TJC
CHECKED BY	MSM
PROJECT MGR	MSM
DATE	1/14
WKA NO. 9957.01	

APPENDICES



APPENDIX A
Field and Laboratory Testing



APPENDIX A

A. GENERAL INFORMATION

The performance of a geotechnical engineering investigation for the proposed 21st Street and Capitol Avenue Mixed Use development in Sacramento, California was authorized by Steve Vannatta on November 20, 2013. Authorization was for an investigation as described in our proposal letter dated September 10, 2013, sent to our client LVP Revocable Trust, whose address is 2020 L Street, 5th Floor, Sacramento, California 95811; telephone (916) 447-7100; facsimile (916) 447-7112.

B. FIELD EXPLORATION

Two (2) borings were drilled at the site on December 9, 2013, at the approximate locations indicated on Figure 2 utilizing a CME-75 truck-mounted drill rig. The borings were drilled to maximum depths of approximately 28 to 33 feet below existing site grades using eight-inch (8") diameter, hollow-stem helical augers. At various intervals, relatively undisturbed soil samples were recovered with a 2½-inch O.D., 2-inch I.D., modified California sampler driven by an automatic 140-pound hammer freely falling 30 inches. The number of blows of the hammer required to drive the 18-inch long sampler each six-inch (6") interval was recorded. The sum of the blows required to drive the sampler the lower 12-inch interval, or portion thereof, is designated the penetration resistance or "blow count" for that particular drive.

The samples were retained in two-inch (2") diameter by six-inch (6") long thin-walled brass tubes contained within the sampler. Immediately after recovery, the soils in the tubes were visually classified by the field engineer and the ends of the tubes were sealed to preserve the natural moisture contents. All samples were taken to our laboratory for soil classification and selection of samples for testing.

The Logs of Soil Borings, Figures 3 and 4, contain descriptions of the soils encountered at each boring location. A Boring Legend explaining the Unified Soil Classification System and the symbols used on the logs is contained on Figure 5.

C. LABORATORY TESTING

Selected undisturbed samples of the soils were tested to determine dry unit weight (ASTM D2937), natural moisture content (ASTM D2216) and shear strength by triaxial strength testing (ASTM D4767). The results of the moisture/density tests are included



on the boring logs at the depth each sample was obtained. The results of the shear strength testing are presented on Figures A1 and A2.

A bulk sample of the anticipated pavement subgrade soil was subjected to Resistance-value ("R-value") testing in accordance with California Test 301. The results of the R-value test, which were used in the pavement design, are presented on Figure A3.

A composite sample of near-surface soil was submitted to Sunland Analytical of Rancho Cordova, California, for corrosivity testing in accordance with California Test (CT) Nos. 643 (Modified Small Cell), CT 422 and CT 417. Copies of the analytical results are presented on Figure A4.



APPENDIX B
Guide Specifications for Auger Cast Piles



APPENDIX B
GUIDE SPECIFICATIONS FOR AUGER CAST PILES
21ST STREET AND CAPITOL AVENUE MIXED USE
Sacramento, California
WKA No. 9957.01

PART 1: GENERAL

1.1 SUMMARY

- A. This Section includes construction of compression and tension auger cast piles, where shown on contract drawings and specified herein.
- B. The Contractor shall furnish all labor, materials, tools, and equipment necessary for designing, furnishing, installing, inspecting and testing augered cast-in-place piles, and shall remove and dispose spoils generated by pile construction.

1.2 WORK NOT INCLUDED UNDER THIS SECTION

- A. Concrete pile caps: Section _____.
- B. Excavations: Section _____.
- C. Shoring and bracing of earth banks: Section _____.
- D. Dewatering: Section _____.

1.3 REFERENCE STANDARDS

- A. Requirements, abbreviations and acronyms for reference standards are defined in Section _____.
- B. American Concrete Institute (ACI)
 - 1. ACI 305 - Hot Weather Concreting.
 - 2. ACI 306 - Cold Weather Concreting.
 - 3. ACI 315 - Details and Detailing of Concrete Reinforcement.
- C. American Society for Testing and Materials (ASTM) latest editions
 - 1. ASTM A615 - Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
 - 2. ASTM C33 - Concrete Aggregates.
 - 3. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field
 - 4. ASTM C109 - Test Method for Compressive Strength of Hydraulic Cement Mortars.
 - 5. ASTM C150 - Portland Cement.
 - 6. ASTM C618 - Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.
 - 7. ASTM C939 - Test Method for Flow of Grout for Preplaced - Aggregate Concrete (Flow Cone Method)
 - 8. ASTM C942 - Test Method for Compressive Strength of Grouts for Preplaced-Aggregate Concrete in the Laboratory.
 - 9. ASTM D1143 - Test Method for Piles Under Static Axial Compressive Load.
 - 10. ASTM D3689 - Test Method for Individual Piles Under Static Axial Tensile Load.
 - 11. ASTM D3966 - Test Method for Piles Under Lateral Loads.



1.4 PROTECTION

- A. Adequate protection measures shall be provided to protect workers and passers-by at the site. Streets and adjacent property shall be fully protected throughout the operations.
- B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Any construction review of the Contractor's performance conducted by the Geotechnical Engineer is not intended to include review of the adequacy of the Contractor's safety measures, in, on or near the construction site.
- D. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- E. Surface drainage provisions shall be made during the period of construction in a manner to avoid creating a nuisance to adjacent areas.
- F. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance.

1.5 EXISTING SITE CONDITIONS

Piling Contractor shall inspect the site and related conditions prior to commencing his/her portion of the work. If unshown active utilities are encountered during the work, the Architect shall be promptly notified for instructions. Failure to notify will make the Contractor liable for damage to these utilities arising from Contractor's operations subsequent to the discovery of such unshown utilities.

1.6 GEOTECHNICAL ENGINEERING REPORT

- A. A *Geotechnical Engineering Report* (WKA No. 9957.01, dated January 31, 2014), has been prepared by Wallace - Kuhl & Associates, Geotechnical Engineers of West Sacramento, California; telephone (916) 372-1434; facsimile (916) 372-2565. That report is available for review at the office of Wallace - Kuhl & Associates.
- B. The Piling Contractor shall submit in writing to the Architect and/or Structural Engineer, all applicable information as listed in Subsection 1.7 - Submittals for review and approval, in addition to the above experience record.
- C. The Owner does not guarantee that the information contained in the Geotechnical Engineering Report is correct nor that the conditions revealed at the actual boring locations will be continuous over the entire site. This report was prepared for purposes of design only. Making the report available to contractors shall not be construed in any way as a waiver of this position. The Piling Contractor shall be responsible for any conclusions he/she may draw from this report. Should the Contractor prefer not to assume such risk, he/she is under obligation to employ their own experts to analyze available information and/or to make their own tests upon which to base their conclusions.

1.7 SUBMITTALS

Submit the following according to Conditions of the Construction Contract and Division 1 Specifications, for Owner's approval.



- A. Shop Drawings: Shall clearly indicate but not be limited to:
1. Description of the pile drilling and grouting equipment and procedures to be utilized in installations.
 2. Proposed pile grout design mix and description of materials to be used in sufficient detail to indicate their compliance with the specifications and either;
 - a. Laboratory tests of trial mixes made with the proposed mix, or
 - b. Laboratory tests of the proposed mix used on previous projects.
 3. A pile layout plan referenced to the structural plans including a numbering system capable of identifying each individual pile, and indicating pile cutoff elevations.
 4. A dimensioned sketch of the pile load test arrangements, including sizes of primary members, data on testing and measuring equipment including required jack and gauge calibrations, load cell and professional engineer seal certifying the adequacy of the reaction frames.
 5. Fabrication and installation schedule covering test pile installation, pile testing, and production pile installation, with excavation schedule for pile cap and finished subgrades by area.
 6. Qualifications of pile installation construction personnel, supervisor, and technician.
- B. Records
1. The Contractor shall submit a pile design report indicating construction methods and materials that will be utilized to install piles of the specified compression and tension capacity, meeting the criteria of this specification and the Contract Drawings. The report shall be prepared and sealed by a Professional Engineer licensed in the state of California.
 2. The Contractor shall provide a Technician for each pile rig responsible for observing the auger construction, grout batching, and grouting operations and preparing installation records. The Contractor's inspector shall submit an installation record for each pile not later than two (2) days after installation is completed. The report shall include but not be limited to:
 - a. Project name and number
 - b. Name of contractor
 - c. Pile number
 - d. Pile location, date and time of installation
 - e. Design pile capacity, compression or tension
 - f. Pile diameter
 - g. Tip elevation
 - h. Cut off elevation
 - i. Elevation of butt
 - j. Drilling elevation
 - k. Rate of advancement of auger and rotation speed
 - l. Quantity of grout placed as compared to the theoretical volume for each pile, in five-foot (5') depth increments, and total for pile
 - m. Grout pressures
 - n. Pile reinforcing steel
 - o. Grout flow cone test report
 - p. Any unusual occurrences observed during pile installation, and pile deviation from vertical



3. The grout quantity shall be determined by recording grout pump displacement or by other acceptable means; the pile installation record shall reveal the observed measure and quantity.
 4. Load test reports shall be in accordance with the applicable ASTM Standards.
 5. Grout compression test reports.
- C. Hazardous Materials Notification: In the event no alternative product or material is available that does not contain asbestos, PCB or other hazardous materials as determined by the Owners' Authorized Representative, a "Material Safety Data Sheet" (MSDS) equivalent to OSHA Form 20 shall be submitted for that proposed product or material prior to installation.
- D. Asbestos and PCB Certification: After completion of installation, but prior to Substantial Completion, Contractor shall certify in writing that products and materials installed, and processes used, do not contain asbestos or polychlorinated biphenyls (PCB), using format in Section ____/Closeout Procedures.

1.8 DELIVERY, HANDLING, STORAGE

Comply with General Conditions and Section 01600/Product Requirements.

1.9 WARRANTY

Comply with General Conditions and Section ____/Product Requirements.

PART 2: PRODUCTS

2.1 QUALITY ASSURANCE

- A. The work of this section shall be performed by a company specialized in auger cast pile work with a minimum of five (5) years of documented successful experience, and shall be performed by skilled workers thoroughly experienced in the necessary crafts. Contractor shall submit evidence of successful installation of augered cast-in-place piles under similar job and subsurface conditions, including a job supervisor who shall have a minimum of three (3) years of method specific experience.
- B. Work shall comply with all Municipal, State and Federal regulations regarding safety, including the requirements of the Williams-Steiger Occupational Safety and Health Act of 1970.

2.2 MATERIALS

- A. Portland Cement: conforming to ASTM C150.
- B. Mineral Admixture: Mineral admixture, if used, shall be fly ash or natural pozzolan which possesses the property of combining with the lime liberated during the process of hydration of Portland cement to form compounds containing cementitious properties, conforming to ASTM C618, Class C or Class F.
- C. Fluidifier conforming to ASTM C937, except that expansion shall not exceed 4%.
- D. Water: Potable, fresh, clean and free of sewage, oil, acid, alkali, salts or organic matter.
- E. Fine Aggregate: Conforming to ASTM C33.



F. Grout Mixes:

1. The grout shall consist of Portland cement, sand and water, and may also contain a mineral admixture and approved fluidifier.
 - a. The components shall be proportioned and mixed to produce a grout capable of maintaining the solids in suspension, which may be pumped without difficulty and which will penetrate and fill open voids in the adjacent soils.
 - b. These materials shall be proportioned to produce a hardened grout which will achieve the design strength within twenty-eight (28) days.
 - c. The design grout strength at twenty-eight (28) days for this project shall be a minimum four thousand pounds per square inch (4000 psi).
2. All materials shall be accurately measured by volume or weight as they are fed to the mixer.
 - a. Time of mixing shall be not less than one minute at the site.
 - b. If agitated continuously, the grout may be held in the mixer or agitator for a period not exceeding two and one-half (2½) hours at grout temperatures below seventy degrees Fahrenheit (70°F) and for a period not exceeding one hundred degrees Fahrenheit (100°F).
 - c. Grout shall not be placed when its temperature exceeds one hundred degrees Fahrenheit (100°F).
3. Protect grout from physical damage or reduced strength, which could be caused by frost, freezing actions or low temperatures or from damage during high temperatures in accordance with ACI 305/306.
4. The grout shall be tested by making a minimum of six, two-inch (2") diameter by four-inch (4") tall cylinders for each day during which piles are placed.
 - a. A set of six (6) cylinders shall consist of two (2) cylinders tested at seven (7) days, and two (2) cylinders tested at twenty-eight (28) days. Two (2) cylinders shall be held in reserve.
 - b. Test cylinders shall be cured and tested in accordance with ASTM C109.
 - c. Cylinder specimens shall be cast and cured in accordance with ASTM C31.
 - d. Cylinder specimens may be restrained from expansion as described in ASTM C942.
5. Test the flow of grout for each pile and batch of grout. Maintain grout fluidity between fifteen (15) and twenty-five (25) seconds through a three-quarters inch (¾") diameter grout cone.

G. Steel Reinforcing:

1. Minimum reinforcing steel assemblies are shown on the Contract Drawings. Assemblies shall be detailed and fabricated in accordance with the manual of Standard Practice for Detailing Reinforced Concrete Structures (ACI 315).
2. Reinforcing shall conform to the requirements of ASTM A615, Grade 60.
3. All reinforcing bar shall be epoxy coated, including bars installed for contractor convenience. Wire ties do not require epoxy coating.
4. Contractor shall provide labor, materials, and method for coating cut ends and repairing holidays in epoxy coating.
5. Acceptable materials and methods shall be provided to facilitate proper centering of all steel reinforcing installed.
6. Bars may be bent in place, provided epoxy coating at all bends is inspected, flaked coating is removed by wire brush, and holidays in coating are repaired.



7. A corrugated metal pipe sleeve shall be provided for each pile equal to the diameter of the auger, to define the pile butt and permit cut-off to specified elevations.

2.3 EQUIPMENT

A. Augering Equipment:

1. The auger flighting shall be continuous from the auger head to the top of auger without gaps or other breaks.
2. The auger flighting shall be uniform in diameter throughout its length and shall be the diameter specified for the piles less a maximum of three percent (3%). The hole through which the grout is pumped during the placement of the pile shall be located at the bottom of the auger head below the bar containing the cutting teeth.
3. Augers over forty feet (40') in length shall contain a middle support guide.
4. The piling leads shall be prevented from rotating by a stabilizing arm or by firmly placing the bottom of the leads into the ground or by some other acceptable means.
5. Leads shall be marked at one-foot (1') intervals to facilitate measurement of auger penetration.
6. Auger hoisting equipment shall be provided that will enable the auger to be rotated while being withdrawn.

B. Mixing and Pumping Equipment:

1. Only approved pumping and mixing equipment shall be used in the preparation and handling of the grout.
 - a. Provide a screen to remove over-size particles at the pump inlet.
 - b. All oil or other rust inhibitor shall be removed from mixing drums and grout pumps before each use.
 - c. All materials shall be such as to produce a homogeneous grout of the desired consistency and strength.
2. The grout pump shall be a positive displacement pump capable of developing displacement pressures at the pump of three hundred fifty pounds per square inch (350 psi) or higher.
 - a. The grout pump shall be provided with a pressure gauge in clear view of the equipment operator.
 - b. The grout pump shall be calibrated at the beginning of the work and periodically during the work to determine the volume of grout pumped per stroke, under operating pressure.
 - c. A positive method for automatic counting of grout pump strokes shall be provided. Such methods may include digital or mechanical stroke counters or other acceptable methods.
 - d. A second pressure gauge, if required, shall be provided close to the auger rig where it can be readily observed by the inspector, if required.

PART 3: EXECUTION

3.1 EXAMINATION

- A. The Contractor is responsible for supporting pile drilling equipment and concrete grout batching and delivery equipment. Equipment shall be supported on timber



mats or gravel fill work platforms, if necessary for safety and stability, and to prevent damage.

- B. The Contractor shall examine the areas and evaluate conditions under which piles are to be installed and shall include measures for the proper and timely completion of the work in the construction methods and pile design.

3.2 AUGER CAST PILE SYSTEM DESCRIPTION

A. Augered Pressure Grouted Piles

1. Pressure grouted piles shall be made by drilling a continuous-flight, hollow-shaft auger into the ground to the design pile depth, or until refusal criteria is satisfied. The volume of soil extracted shall not be greater than the volume of the steel auger stem inserted.
2. Grout shall be injected through the auger shaft as the auger is being withdrawn. First develop a five-foot (5') plug at the bottom of the auger flights, then inject sufficient grout volume to fill the augered hole one point one five (1.15) times its neat dimension, or more. Grout volumes shall be logged by depth during withdrawal.
3. Post-grouting through a special grout tube for capacity increase is permitted, given these methods are used in the test piles, and consistently throughout the entire work for this project. Post-grouting may be used for compression and tension capacity. Post-grout pressures must be sufficient to open grout portals and cause fracture and flow. Grout volumes and pressures shall be recorded and used as a measure to demonstrate pile compliance with the design and pile load test criteria.

B. Augered Displacement Pressure Grouted Piles

1. Augered Displacement Pressure Grouted piles shall be made by rotating a specialized auger capable of displacing soil surrounding the auger, with minimal soils returned to the ground surface to reach the design pile depth, or until specified refusal criteria is satisfied.
2. Grout shall be injected through the auger shaft as the auger is being withdrawn in such a way as to exert a positive upward grout pressure on the auger, as well as a positive lateral pressure on the soil surrounding the pile.

C. Alternatives

1. Alternative pile types which meet the compression and tension pile criteria given on the drawings may be substituted for augered pressure-grouted pile systems described in this Section.
2. Alternative pile installation systems must be capable of achieving the specified compression and tension, and shall provide a working lateral capacity of eight tons (8).

3.3 PILE DESIGN

- A. The ultimate capacity of eighteen inch (18") diameter compression piles shall be greater than two hundred forty tons (240) in axial compression and greater than sixty (60) tons in axial tension or the ultimate capacity of twenty four inch (24") diameter compression piles shall be greater than four hundred twenty (420) tons in axial compression and greater than one hundred five (105) tons in axial tension. Both tension and compression piles shall achieve an ultimate lateral capacity of five (5) tons for eighteen inch (18") diameter piles or ten (10) tons for twenty four inch (24") diameter piles. The allowable design capacities of all piles shall be determined by dividing the ultimate capacity by the appropriate factor of



safety as provided in the Geotechnical Engineering Report. Load Testing performed under Part 3.4 of this section shall confirm the ultimate capacity of the piles.

- B. Pile design shall be performed by the Contractor and demonstrated by load test before installation of production piles. All piles shall meet the criteria specified on the Contract Drawings.
- C. The design shall be described in a pile design report. This report shall indicate variances, if any, from the reinforcing steel specified or the requirements of this section, and shall demonstrate that the design meets or exceeds the specified performance in tension, compression, and bending. The Contractor shall submit design calculations for the proposed piles demonstrating compression and tensile capacity.

3.4 LOAD TESTING

- A. Pre-construction Pile Load Tests:
 - 1. Install and test one (1) compression pile, one (1) tension pile, and one (1) lateral load test pile, at the locations shown on the plans or approved alternate location to verify the construction methods and pile capacity. Test piles and reaction piles shall be installed outside of pile cap locations.
 - 2. The Contractor shall provide complete testing materials and equipment as required, install test and reaction piles and perform the load tests only in the presence of the Owner.
 - 3. The pile test reaction frame shall be capable of safely sustaining two hundred fifty (250) tons in axial compression and one hundred (100) tons in axial tension (uplift) for eighteen inch (18") diameter piles or four hundred thirty (430) tons in axial compression and one hundred ten (110) tons in axial tension (uplift) for eighteen inch (24") diameter piles.
 - 4. Preconstruction Pile Load tests shall be performed using ASTM's Quick Test Methods.
 - 5. One successful compression pile load test shall be performed in accordance with ASTM D1143.
 - 6. One successful tension pile load test shall be performed in accordance with ASTM D3689.
 - 7. One lateral pile load test to five (5) tons for eighteen inch (18") diameter piles or ten (10) tons for twenty four inch (24") ultimate load shall be performed in accordance with ASTM D3966.

3.5 INSTALLATION

- A. Tolerance
 - 1. Piles shall be located where shown on drawings or where otherwise directed by the Engineer.
 - a. Pile centers shall be located to an accuracy of three inches ($\pm 3"$).
 - b. Vertical piles shall be plumb within two percent (2%).
 - c. Battered piles shall be installed to within four percent (4%) of the specified batter as determined by the angle from horizontal.
- B. Adjacent Piles
 - 1. Adjacent piles within ten feet (10'), center-to-center, shall not be installed within twenty-four (24) hours of each other.
 - 2. Within pile caps, piles adjacent within four (4) pile diameters center-to-center, shall not be installed within twenty-four (24) hours of each other.



C. Installation Procedure

1. The length and drilling criteria of production piles will be as defined in the Contractor's design and as demonstrated by the successful pile load tests. Advance and rotate the auger at a continuous rate that prevents removal of excess soil.
2. Stop advancement after reaching the required depth or refusal criteria.
3. The hole in the bottom of the auger shall be closed with a suitable plug while advancing into the ground. The plug shall be removed by grout pressure or mechanically with the reinforcing bar.
4. At the start of pumping grout, raise the auger from six inches (6") to twelve inches (12") and after the grout pressure builds up sufficiently, re-drill the auger to the previously established tip elevation.
5. Maintain a head of at least fifteen feet (15') of grout on the auger flighting above the injection point during auger withdrawal.
 - a. Positive rotation of the auger shall be maintained at least until placement of the grout.
 - b. Rate of grout injection and rate of auger withdrawal from the soil shall be coordinated so as to maintain at all times the minimum grout head.
 - c. The total volume of grout shall be at least one hundred fifteen percent (115%) of the theoretical volume for each pile.
 - d. After grout is flowing at the ground surface from the auger flighting, the rate of grout injection and auger withdrawal shall be coordinated so that there is a constant grout flow at the surface.
 - e. If pumping grout is interrupted for any reason, the contractor shall reinsert the auger by drilling at least five feet (5') below the depth of the auger where the interruption occurred, and re-grout while withdrawing the auger from that depth.
6. If less than one hundred fifteen percent (115%) of the theoretical volume of grout is placed in any five foot (5') increment (until the grout head on the auger flighting reaches the ground surface), the pile increment shall be reinstalled by advancing the auger ten feet (10') or to the bottom of the pile if that is less, followed by controlled removal and grout injection.
7. Spoil material that accumulates around the auger during injection of the grout shall be promptly cleared away.
8. A steel corrugated metal pipe (CMP) sleeve shall be placed at the top of each pile to a depth of one and one half feet (1½') below the pile cutoff elevation.

D. Obstructions and Damaged Piles

1. If non-augerable material is encountered above the desired tip elevation, the pile shall be completed to the depth of the non-augerable material in accordance with these Specifications. Such short piles shall be included for payment, if completed and included within the foundation. If required by the Engineer, additional adjacent piles shall be placed. Additional piles shall also be included in the total number of piles for payment.
2. Damaged piles, and piles installed outside the required installation tolerances, will not be accepted.



3. Cut off and abandon rejected piles after installation, and replace with new piles. Cutoff shall be at a sufficient depth to avoid transfer of load from the structure to the abandoned pile.
 4. Piles located within ten feet (10') of existing structures shall be installed in one continuous operation. Re-stroking piles during construction due to auger obstructions or difficulty in installation of reinforcement cages will not be allowed. The structural engineer shall be consulted in the event that replacement piles are required.
- E. Cutting-Off
1. Adjust the tops of pile to the cut-off elevations where piles are constructed from a work platform above final subgrade, by removing fresh grout from the top of the pile after the CMP sleeve is in place.
 2. Cut off hardened grout and the CMP shell down to final cutoff point after initial set has occurred for all piles in a single cap, or within 15 ft of any pile in a spaced pattern.
- F. Disposal
1. The Contractor shall remove and dispose all spoils and grout off site.
 2. The Contractor shall determine if any excavated material is contaminated, and if any contaminated material is encountered it shall be disposed of in a method acceptable to all governmental authorities having jurisdiction.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Each compression pile and each tension pile successfully installed in accordance with the Contractor's design and using the methods and practices of the approved test piles, cut off at the proper elevation, including steel reinforcing, and all records and grout testing specified, shall be considered a single unit price item. Pile design, materials testing, and the Contractor's inspection are considered incidental to construction and shall not be separately measured for payment. Damaged piles and piles installed outside the required installation tolerances will not be measured for payment. Short piles caused by obstructions and meeting the requirements of Part 3.5D shall be measured for payment.
- B. Each successful compression, tension and lateral pre-construction load test performed, including load frame and/or reaction piles, test pile, testing, and load test report, shall be considered a single unit price item.
- C. Each successful compression, tension and lateral construction quick load test performed, including load frame and/or reaction piles, test pile, testing, and load test report, shall be considered a single unit price item.

4.2 PAYMENT

- A. Each compression pile and each tension pile, approved and accepted by the Owner, shall be paid at the unit price indicated on the bid form.
- B. Each successful pile load test, approved and accepted by the Owner, shall be paid at the unit prices indicated on the bid form.

//



APPENDIX 3

Phase I Environmental Site Assessments

APPENDIX 3

Phase I Environmental Site Assessments

Phase I Environmental Site Assessment
GORMLEY AND BROWN PROPERTY
2101 and 2117 Capitol Avenue/1223 21st Street
Sacramento, California
WKA No. 9758.01
June 13, 2013

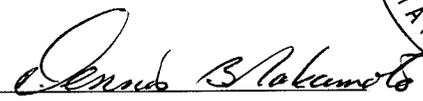
Prepared for:
Ms. Merrilee Margetts
Pappas Investments
2020 L Street 5th Floor
Sacramento, California 95811

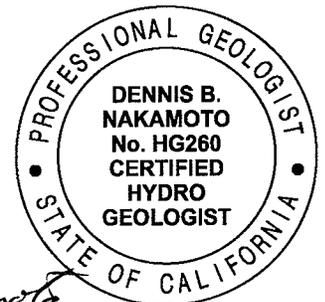
Phase I Environmental Site Assessment
GORMLEY AND BROWN PROPERTY
2101 and 2117 Capitol Avenue/1223 21st Street
Sacramento, California
WKA No. 9758.01
June 13, 2013

Wallace-Kuhl & Associates (WKA), on behalf of the Pappas Investments, prepared this Phase I Environmental Site Assessment for the Gormley and Brown Property located at 2101 and 2117 Capitol Avenue and 1223 21st Street, Sacramento, California. We declare that, to the best of our professional knowledge and belief, the report reviewer meets the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312 and have the "specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312." Resumes of the key staff who prepared this report are included in Appendix A.

WALLACE-KUHL & ASSOCIATES


Nancy M. Malaret
Project Environmental Scientist


Dennis B. Nakamoto, P.G., C.E.G., C.H.G.
Senior Hydrogeologist



Phase I Environmental Site Assessment

GORMLEY AND BROWN PROPERTY

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Phase I Environmental Site Assessment
GORMLEY AND BROWN PROPERTY

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Attached CD contains: EDR[®] Reports: (Radius Map Report, Aerial Photographic Decade Package, Historical Topographic Maps, Sanborn Map Search), and Phase I ESA, Gormley and Brown Property (WKA No. 9758.01 dated June 13, 2013).



Phase I Environmental Site Assessment
GORMLEY AND BROWN PROPERTY

EXECUTIVE SUMMARY

The purpose of this Phase 1 Environmental Site Assessment (ESA) was to assess the Gormley and Brown Property (herein referred to as site) for evidence of Recognized Environmental Conditions (RECs) resulting from current and/or former site activities. The site is located at 2101 and 2117 Capitol Avenue and 1223 21st Street, Sacramento, California (Figures 1, 2, 3, and 4) and is comprised of approximately 0.65 acres of land developed with two buildings and asphalt parking lots having Sacramento County Assessor's Parcel Numbers (APNs): 007-0151-025, -026, and -027 (Figure 3). The following presents a list of observations and findings identified during the preparation of this report:

- The historical land use research dating back to the late 1800s revealed that the site was undeveloped with residential structures by 1895. The site was primarily residential from at least 1895 to at least 1950. The structure at 1223 21st Street appears to have been constructed by 1915 and has been used for commercial purposes since at least 1928. The structure at 2101 Capitol Avenue was constructed by 1950 and has always been used as offices.
- The existing buildings were constructed by 1950. Given the age of the existing development on the site, there is a high likelihood that asbestos containing building materials and lead-based paints were used in construction and maintenance of the site buildings.
- According to the 1928 City Directory, 1227 21st Street, which could have been on the site, was listed as "M Shell Co of Calif serv sta". A building permit for 1227 21st was located that indicated a sign was installed at the address in 1948. The Sanborn Maps and aerial photographs do not provide coverage during this timeframe. No additional information regarding this facility was located during this investigation.
- An approximate 18-inch pipe was observed to the north of the site building. The pipe appears to be connected to the stormwater/sewer system, however, standing water was observed in the pipe.
- The site is located within an area protected from the 100-year regulatory flood by a levee system, as designated by the Federal Emergency Management Agency (FEMA). The floodplain map is provided on the CD attached to the back cover of this report.
- Given the documentation reviewed concerning the neighboring agency listed facilities, none of the facilities reviewed is likely to have a negative impact on the site. Based on



the completion of the vapor encroachment condition (VEC) screening matrix, WKA concludes a VEC can be ruled out because a VEC does not or is not likely to exist.

- An auto service station was noted on the 1915 Sanborn Map on the southern adjoining property, across Capitol Avenue. Three underground storage tanks were noted in the street to the west of the property, under 21st Street. No additional information was located for this facility.

WKA has performed this ESA in conformance with the scope and limitations of ASTM Standard Practice E 1527-05 for the Gormley and Brown Property.

This assessment has revealed no RECs in connection with the site except the following:

- On-site concerns were noted from the potential presence of a gasoline station at 1227 21st Street, which could have been located at the site.
- Off-site concerns were noted from the gasoline station noted on the adjoining property in the 1915 Sanborn Map.



Phase I Environmental Site Assessment
GORMLEY AND BROWN PROPERTY

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment (ESA) was to evaluate the Gormley and Brown Property (herein referred to as site) for evidence of potential Recognized Environmental Conditions (RECs) resulting from current and/or former site activities as defined by the American Society of Testing and Materials (ASTM) Standard E 1527-05 (ASTM, 2005).

According to the ASTM, “this practice is intended to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner, contiguous property owner, or bona fide prospective purchaser* limitations on CERCLA [Comprehensive Environmental Response, Compensation and Liability Act] liability (hereinafter, the “*landowner liability protections*,” or “*LLPs*”): that is, the practice that constitutes “*all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice” as defined at 42 U.S.C. §9601(35)(B).”

This ESA has been performed in general conformance with the ASTM Standard E 1527-05 and the scope and limitations defined in Wallace-Kuhl & Associates (WKA) proposal, 3PR13087, dated May 15, 2013.

1.2 Scope of Services

WKA has completed this ESA for the site shown on Figures 1 through 3. Mr. John Pappas with Pappas Investments authorized WKA to proceed with this assessment on May 24, 2013 through a signed WKA Environmental Services Agreement.

The scope of this assessment included the following:

- Conduct a site reconnaissance for visual evidence of surface contamination and potential sources of subsurface contamination;
- Conduct a visual inspection of the adjoining properties for evidence of RECs
- Conduct interviews with the following, as available:
 - Key site manager,
 - Major occupants,



- Past and present owners, operators,
- Government and/or agency personnel, and,
- Inquiries conducted at abandoned sites may include interviews with owners or occupants of neighboring or nearby properties;
- Conduct a records review, which will include the following:
 - Physical setting documents to determine regional geology, general soil information, and local and regional groundwater conditions,
 - Historical information, including but not limited to, Sanborn maps, topographic maps, aerial photographs, ownership records, building department records, local street directories, zoning and land use records, and prior assessments, as available,
 - Environmental records, including federal, state, tribal, and county regulatory agency lists that will help identify RECs on the site and the adjoining properties, and,
 - Based on the outcome of the database search, review of specific regulatory agency files for identified contaminated facilities in order to evaluate whether the listed facilities are hazardous materials threats to the site;
- Conduct a preliminary screen for vapor encroachment conditions on the site per ASTM E2600-10;
- Review of the completed *ASTM E 1527-05 User Questionnaire (Questionnaire)* regarding Recorded Environmental Liens, activity and use limitations (AULs), relationship of the purchase price to the fair market value of the site, and any specialized knowledge of the site;
- Review of environmental liens and AULs reports, as provided; and
- Prepare a final report of the results of the ESA.

1.3 Special Terms and Conditions

No special terms or conditions to the WKA Professional Services Agreement or the WKA scope of services were requested or performed during the preparation of this report. Pappas Investments did not authorize WKA to conduct a search for environmental liens and AULs.

1.4 User Provided Information

WKA provided Pappas Investments a copy of the User Questionnaire and the Helpful Documents checklist. Pappas Investments returned the documents after they were completed



by Ms. Merrilee Margetts, Project Manager for Pappas Investments. Discussion regarding her responses is provided in the following section. A copy of the completed questionnaire is included in Appendix B.

In summary, Ms. Margetts was not aware of any records of environmental liens or AULs currently recorded against the site. Ms. Margetts stated she does not possess specialized knowledge or experience related to the site. Ms. Margetts stated that she is not aware of any obvious indicators that point to the presence or likely presence of contamination at the site.

Ms. Margetts was not aware of any existing "Helpful Documents" as defined in Section 10.8.1 of the ASTM Standard as noted on the "Helpful Documents Checklist" included in Appendix B.



2.0 SITE DESCRIPTION

2.1 Site and Vicinity General Characteristics

The site is located at 2101 and 2117 Capitol Avenue and 1223 21st Street in Sacramento, California (Figures 1 and 2). The site is comprised of Sacramento County Assessor's Parcel Numbers (APNs) 007-0151-025, -026, and -027, totaling approximately 0.65 acres of land developed with two buildings and asphalt parking lots (Figure 3). Surrounding land use consisted of office buildings, retail stores, and residences.

The existing buildings were constructed by 1952. Given the age of the existing development on the site, there is a high likelihood that asbestos containing building materials and lead-based paints were used in construction and maintenance of the site buildings.

2.2 Site Reconnaissance

A visual site reconnaissance was conducted by WKA on June 10, 2013. Figures 5a and 5b provides color photographs of the site taken during the site reconnaissance.

On the day of field reconnaissance the site was developed with a one-story commercial building, a two-story office building and associated asphalt parking lot. A hair salon currently occupies the one-story commercial structure. The two-story office building is currently vacant. A partially uncovered 18-inch concrete pipe was observed on the north side of the two-story site building. The pipe appears to receive water from gutters on the building and should connect to the stormwater/sewer system. Standing water was observed in the concrete pipe at the time of the inspection. The eastern portion of the site is developed with an asphalt parking lot.

2.2.1 Municipal Infrastructure and Utilities

Sacramento Municipal Utility District (SMUD) provides electricity to the site. Pacific Gas and Electric (PG&E) provides natural gas to the site. The City of Sacramento provides potable water. Sacramento Regional County Sanitation District provides sanitary sewer service to the site.

2.3 Adjoining Properties

The site is bounded to the north by Kupro's Bistro and residences. The site is bounded on the east by a parking lot and office building. Capitol Avenue followed by apartment buildings is located to the south of the site. 21st Street followed by a parking lot and commercial buildings is located to the east of the site.



3.0 INTERVIEWS

Interviews with various persons familiar with the site vicinity, including representatives of public agencies, were conducted for the purpose of identifying past and present uses, which may have contributed to RECs on the site. Results of those interviews are discussed in the following sections.

3.1 Owner or Key Site Manager

WKA provided Pappas Investments with a site owner questionnaire. The questionnaire was completed by Mr. Christopher Brown and returned to WKA via Pappas Investments. Mr. Brown stated that the property has been in his family for 60 to 70 years. According to Mr. Brown, the site was used as residential and offices. He stated that the site is currently developed with an office building, a hair salon, and parking lot. Mr. Brown is not aware of any aboveground or underground storage tanks, wells, or septic systems located at the site. He said that he had not "seen or heard of a service station on that corner or those properties in my lifetime." Mr. Brown stated that electricity is provided by SMUD, natural gas is provided by PG&E, and City of Sacramento provides potable water and sanitary sewer. Mr. Brown is not aware of environmental liens that have been recorded for the site. He stated that a Phase I ESA was recently conducted for the site and that Mr. Ken Turton would provide a copy to WKA.

3.2 Occupants (Multi-family or Major)

The structure on APN 007-0151-026 is not occupied. The structure on APN 07-0151-025 is occupied by a hair salon; however, WKA did not interview the owner.

3.3 Past and Present Owners, Operators, and/or Occupants

No information regarding past owners was received by WKA during completion of this report.

3.4 State and/or Local Government Officials

WKA interviewed Ms. Susan Genovese, Sacramento County Environmental Management Department (SCEMD), regarding any regulatory files available for the site and surrounding facilities. According to Ms. Genovese, all SCEMD files are available for review on the website. Information reviewed on the SCEMD website is provided in Section 4.3.



3.5 Abandoned Properties

As referenced in 40 CFR Part 312, in the case of inquiries conducted at “abandoned properties,” as defined in §312.23(d), “where there is evidence of potential unauthorized uses of the site or evidence of uncontrolled access to the site, the environmental professional’s inquiry must include interviewing one or more (as necessary) owners or occupants of neighboring or nearby properties from which it appears possible to have observed uses of, or releases at, such abandoned properties...” No evidence of potential unauthorized uses, or evidence of uncontrolled access to the site was observed. The site is not considered an abandoned property and therefore, WKA did not interview owners or occupants of neighboring properties.



4.0 RECORDS REVIEW

The purpose of the records review is to obtain and review information concerning the current and historical use of the site and adjoining properties that would help identify the presence of RECs in connection with the site. The records review included review and discussion of the following, as available:

- Physical Setting Source(s);
- Historical Use Information; and,
- Environmental Record Sources.

4.1 Physical Setting Source(s)

The site is depicted on the 1992 United States Geological Survey (USGS) 7.5 Minute topographic map of the *Sacramento East, California Quadrangle* as being located with an area of dense development. The site is located within Section 6, Township 8 North, Range 5 East, Mount Diablo Base and Meridian, at an elevation of approximately +20 feet relative to mean sea level (msl).

4.1.1 Regional and Local Geology

The site is located on the Great Valley geomorphic province of California, a large, elongate, northwest-trending structural trough, generally constrained to the west by the Coast Ranges and to the east by the foothills of the Sierra Nevada Range (Norris and Webb, 1990). The Great Valley consists of two valleys lying end-to-end, with the Sacramento Valley to the north and the San Joaquin Valley to the south.

The Sacramento and San Joaquin Valleys have been filled to their present elevations with thick sequences of sediment derived from both marine and continental sources. The sedimentary deposits range in thickness from relatively thin deposits along the eastern valley edge to more than 25,000 feet in the south central portion of the Great Valley (Norris and Webb, 1990). The sedimentary geologic formations of the Great Valley province vary in age from Jurassic to Quaternary, with the older deposits being primarily marine in origin. Younger sediments are continentally derived and were typically deposited in lacustrine, fluvial, and alluvial environments with their main source being the Sierra Nevada Range.

The 1981 USGS *Geologic Map of the Sacramento Quadrangle, California*, shows the site to be underlain by Levee and Channel Deposits consisting of relatively recent deposits of active stream channels and their natural levees as well as adjacent broad alluvial fans.



4.1.2 Soil Survey

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) has created a web-based service for accessing soil information. According to the NRCS Web Soil Survey (WSS) the majority of the near-surface soils on the site consist of Urban land (USDA, 2013). A copy of the soil report is included on the attached CD.

4.1.3 Regional and Local Groundwater

The site is located within the California Department of Water Resources (DWR) defined Sacramento Valley Groundwater Basin of the Sacramento River Hydrologic Region. WKA searched data on the DWR website and found no DWR monitored groundwater wells within one-half mile of the site (DWR, 2013).

WKA also searched the State Water Resources Control Board's (SWRCB) GeoTracker website for quarterly groundwater monitoring reports completed for facilities in the immediate vicinity of the site. A cluster of groundwater monitoring wells are located the Former Shell Service Station, 1601 L Street, located approximately 0.4 miles west-northwest of the site. Depth to groundwater ranges from 12 to 20 feet below ground surface at the facility. The direction of groundwater flow was reported to be to the southwest.

4.2 Historical Use Information

Historical information was reviewed to develop a history of the previous uses of the site and surrounding area, in order to evaluate the site and adjoining properties for evidence of RECs. Standard historical sources reviewed during the preparation of this report included the following, as available:

- Sanborn® Maps;
- Topographic Maps;
- Oil and Gas Well Maps;
- Aerial Photographs;
- Ownership Records;
- Building Department Records;
- Local Street Directories;
- Zoning and Land Use Records;
- Other Historical Sources; and,
- Prior Assessments.

Discussion of these historical sources is provided in the following sections.



4.2.1 Sanborn® Maps

Sanborn® Maps with coverage of the site were obtained through Environmental Data Resources, Inc. (EDR®). EDR® is a national commercial provider of environmental database information. Sanborn® Maps are detailed drawings of site development, and were typically used by fire insurance companies to determine site fire insurability. Sanborn® Maps with coverage of the site dated 1895, 1915, 1950, 1952, 1957, 1960, 1964, 1965, 1966, 1968, and 1970 were available for review (EDR®, 2013a). Copies of the Sanborn® Maps compiled by EDR® with coverage of the site are included on the CD attached to the back cover of this report.

1895 - Four dwellings are noted along Capitol Avenue on the site. Three dwellings are noted on the northern adjoining properties. A dwelling is noted on the eastern adjoining property. Five dwellings are noted on the southern adjoining properties. Vacant land is noted to the west. Sutter Grammar School is noted to the northwest.

1915 – An additional dwelling and flats are noted on the southwestern portion of the site. The flats appear to be the existing building located along 21st Street. Three additional dwellings and an apartment building are noted on the northern adjoining properties. An auto service station, with three underground storage tanks located in the street, is noted on the southern adjoining property. Three dwellings are noted on the western adjoining property.

1950 – The existing office building is noted on the southwestern portion of the site. The existing building located adjacent to the north of the site is noted. The auto service station is no longer noted to the south, and four apartment buildings are noted.

1952 – Only three dwellings are noted along Capitol Avenue. No other significant changes are noted for the site vicinity.

1957, 1960 – No significant changes are noted for the site or vicinity.

1964 – Only two dwellings are noted along Capitol Avenue. No other significant changes are noted.

1965, 1966 – The site is not depicted. No significant changes are noted for the area to the west of the site.

1968, 1970 – One dwelling remains along Capitol Avenue. No other significant changes noted.



4.2.2 Topographic Maps

Historical USGS topographic maps with coverage of the site and outlying land areas were reviewed. Topographic maps with coverage of the site dated 1893, 1902, 1911, 1949, 1954, 1967, 1975, 1980, and 1992 were available for review (EDR[®], 2013b). Copies of the topographic maps compiled by EDR[®] with coverage of the site are included on the CD attached to the back cover of this report. Table 1 notes the changes in the vicinity of the site.

Table 1		
Year	Scale	Observations
1893	1:125,000	The site is located within a developed portion of Sacramento; however, individual site features are not discernible due to the scale of the map.
1902	1:62,500	The site is located within a developed portion of Sacramento; however, individual site features are not discernible due to the scale of the map.
1911	1:31,680	The site is located within a developed portion of Sacramento; however, individual site features are not discernible due to the scale of the map.
1949	1:24,000	The site and vicinity are noted as being in an area of dense development. Individual features are not depicted.
1954	1:62,500	The site and vicinity are noted as being in an area of dense development. Individual features are not depicted.
1967	1:24,000	The site and vicinity are noted as being in an area of dense development. Individual features are not depicted.
1975	1:24,000	The site and vicinity are noted as being in an area of dense development. Individual features are not depicted.
1980	1:24,000	The site and vicinity are noted as being in an area of dense development. Individual features are not depicted.
1992	1:24,000	The site and vicinity are noted as being in an area of dense development. Individual features are not depicted.

4.2.3 Oil and Gas Well Maps

Review of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website showed that the site is not located in a designated natural gas field. No DOGGR wells are located on or within at least one mile of the site (DOGGR, 2013).



4.2.4 Aerial Photographs

Historical aerial photographs of the site and general vicinity were compiled by EDR®. Photographs covering the years 1937, 1947, 1952, 1966, 1971, 1981, 1993, 1998, 2005, 2006, 2009, 2010, and 2012 were available for review (EDR®, 2013c). Table 2 notes the changes on the property and in the vicinity.

Table 2		
Year	Scale	Observations
1937	1" = 500'	Site: Several structures are visible along Capitol Avenue. One structure is visible along 21 st Street. North: A structure is visible adjacent to the north followed by several structure to the north of L Street Alley. East: Several structures are visible. South: Structures are visible; however, tree canopies prevent discerning building features. West: Structures are visible.
1947	1" = 500'	Due to the poor resolution of the photo and the scale, individual features are not discernible.
1952	1" = 500'	Site: The existing structure on the southwestern portion of the site is visible. Several residential structures are visible along Capitol Avenue. North: No significant changes noted. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.
1966	1" = 500'	Due to the poor resolution of the photo and the scale, individual features are not discernible.
1971	1" = 500'	Site: The site appears to be in its existing configuration with two structures on the western portion and asphalt parking to the east. North: No significant changes noted. East: One residential structure followed by an office building is visible. South: Three buildings and a parking lot are visible. West: A parking lot is visible.
1981	1" = 500'	No significant changes are noted for the site or its vicinity.
1993	1" = 500'	Due to the poor resolution of the photo and the scale, individual features are not discernible.
1998	1" = 500'	No significant changes are noted for the site or its vicinity.



Year	Scale	Observations
2005	1" = 500'	No significant changes are noted for the site or its vicinity.
2006	1" = 500'	No significant changes are noted for the site or its vicinity.
2009	1" = 500'	No significant changes are noted for the site or its vicinity.
2010	1" = 500'	No significant changes are noted for the site or its vicinity.
2012	1" = 500'	No significant changes are noted for the site or its vicinity.

4.2.5 Ownership Records

Ownership information was obtained through ParcelQuest®, an on-line distributor of "Assessor-Direct property information throughout the State of California." The ownership entity for APN 007-0151-027 was listed as "Brown Christopher W Dougherty Cathleen". The ownership entity for APNs 007-0151-025 and -026 was listed as "Gormley John F". (ParcelQuest®, 2013).

4.2.6 Building Department Records

WKA reviewed building permits on the City of Sacramento Search for Building Permits website and the City of Sacramento Records Library. WKA searched for the current street addresses as well as historical addresses for the site. The permits reviewed were for signs, remodels, repairs, and the demolition of a single-family residence. One building permit was located for 1227 21st Street dated in 1948 for a sign. The business that was operating at the address is not provided on the building permit. No indications of underground storage tanks for the site were located during the review of building permits. Copies of the permits are provided on the CD attached to the back cover of this report.

4.2.7 Local Street Directories

Local street directories with coverage of the site and adjoining properties were obtained from EDR® (EDR®, 2013d). These documents contain business listings based on street number identifiers. The site address of 1223 21st Street was listed as residential from at least 1920 to at least 1923, as a cabinetmaker, picture frame, and repair shop from at least 1928 to at least 1947, and was Morebeck Florist from at least 1952 to at least 2010. The site address of 2101 Capitol



Avenue was listed as MacBride Realty from at least 1952 to at least 1980, as American Equities Financial Corp in 1991, and the California Hispanic Commission from at least 1995 to 2007. The site address of 2117 Capitol Avenue was listed as residential from at least 1942 to at least 1975. In 1928, 1227 21st Street, which could have been on the site, was listed as "M Shell Co of Calif serv sta". In 1966, 2103 Capitol Avenue, which could have been on the site, was listed as Clary Norwalk Service Gas. A copy of the EDR[®] City Directory (EDR[®], 2013d) is provided on the CD attached to the back cover of this report.

4.2.8 Zoning and Land Use Records

APN 007-0151-025 is zoned "BBA00A" commercial mixed. APN 007-0151-026 is zoned "CAB0BA" office mixed. APN 007-0151-027 is zoned "BFH00B" parking lot. (ParcelQuest, 2013).

The site is located within an area protected from the 100-year regulatory flood by a levee system, as designated by the Federal Emergency Management Agency (FEMA). The floodplain map is provided on the CD attached to the back cover of this report.

4.2.9 Other Historical Sources

Review of additional historical sources was not warranted in order for the Environmental Professional to make a determination as to evidence of potential RECs on the site.

4.2.10 Prior Assessments

WKA was provided a copy of a Phase I ESA Report prepared for the site in May 2013 by Analytical Environmental Services (AES). At the time of the Phase I ESA, the site was developed with a one-story commercial building, a vacant two-story office building, and asphalt parking lots. AES noted that the Lorenzo S Norwalk Service facility was reported in the EDR Report as having been located at 2103 West Capitol Avenue. AES noted that the facility would have been located across Capitol Avenue. According to AES, "no records of LUST, spills, or violations have been noted on the Lorenzo S Norwalk Service site, and therefore, it is not likely that a material risk to human health and the environment exists at the Subject Property." AES concluded that no recognized environmental conditions were identified for the site "that would likely pose a significant impact to the environmental integrity of the Subject Property."



4.3 Environmental Record Sources

4.3.1 Regulatory Agency Databases

EDR[®] was contacted to provide a summary of facilities listed on regulatory agency databases (EDR[®], 2013e). Table 3 summarizes the researched ASTM required *Standard Environmental Record Sources*, as well as several *Additional Environmental Record Sources*, as defined in Sections 8.2.1 and 8.2.2 of the ASTM Standard. For additional reference, the Executive Summary of the EDR[®] report is included in Appendix C. A copy of the entire EDR[®] report is included on the CD attached to the back cover of this report.

Table 3			
	<i>EDR Listed Database</i>	<i>ASTM E 1527-05 Search Distance</i>	No. of Facilities Listed (within Search Radius)
Federal			
Federal NPL Site List	<i>NPL</i>	1-mile	0
Federal Delisted NPL Site List	<i>Delisted NPL</i>	1/2-mile	0
Federal CERCLIS List	<i>CERCLIS</i>	1/2-mile	0
Federal CERCLIS NFRAP Site List	<i>CERCLIS NFRAP</i>	1/2-mile	0
Federal RCRA CORRACTS Facilities	<i>CORRACTS</i>	1-mile	0
Federal RCRA Generators List:			
Small Quantity and Large Quantity Generators	<i>RCRA SQG</i>	site & adjoining	0
	<i>RCRA LQG</i>		0
Landfills and Solid Waste Management	<i>RCRA TSDf</i>	1/2-mile	0
Federal Institutional Control / Engineering Control Registries	<i>US ENG Controls</i>	site only	0
	<i>US INST Controls</i>		0
Federal ERNS List	<i>ERNS</i>	site only	0
State			
State-equivalent NPL (Hist. Cal-Sites)	<i>Hist. Cal-Sites</i>	1-mile	5
State-equivalent CERCLIS	<i>RESPONSE</i>	1/2-mile	1
State Landfill and/or Solid Waste Disposal Site	<i>SWF/LF (SWIS)</i>	1/2-mile	0
	<i>WMUDS/SWAT</i>		0
State Leaking Underground Storage	<i>LUST- Reg 5</i>	1/2-mile	27
Tribal Leaking Underground Storage	<i>Indian LUST</i>	1/2-mile	0
State Registered Underground Storage	<i>UST</i>	site & adjoining	0
Tribal Registered Underground	<i>Indian UST</i>	site & adjoining	0
State Registered Aboveground	<i>AST</i>	site & adjoining	0
State Institutional Control Registries	<i>DEED</i>	site only	0
State Voluntary Cleanup Sites	<i>VCP</i>	1/2-mile	0



Table 3			
	<i>EDR Listed Database</i>	<i>ASTM E 1527-05 Search Distance</i>	No. of Facilities Listed (within Search Radius)
Additional Environmental Record Sources			
Hazardous Waste & Substances Sites	<i>CORTESE</i>	1/2-mile	1
DTSC EnviroStor (includes Cal-Sites)	<i>EnviroStor</i>	1-mile	24
SLIC	<i>SLIC - Reg 5</i>	1/2-mile	0
Cleaner Facilities	<i>Drycleaners</i>	1/4-mile	1
HAZNET	<i>HAZNET</i>	1/4-mile	0
Local - County			
Sacramento County Contaminated	<i>Sac Co CS</i>	1/2-mile	25
Sacramento County Master List	<i>Sac Co ML</i>	1/2-mile	56

Regulatory information reviewed concerning the site, adjoining properties, and the nearest facility in each cardinal direction identified within its respective ASTM search distance is detailed below.

The Lorenzo S Norwalk Service facility, 2103 West Capitol Avenue, was reportedly located 0.03 miles west-southwest of the site. The facility is listed as a Historic Auto Station by EDR. EDR located a listing for the facility in the 1957 City Directory. The address 2103 West Capitol Avenue is currently a West Sacramento address. Capitol Avenue in Sacramento does not carry an east of west designation. WKA reviewed Sanborn maps from the years 1950, 1952, 1957, 1960, 1964, and 1968. The existing office building is noted on the Sanborn maps. No indication of a gasoline station is noted on the Sanborn maps. WKA researched the facility address on the SCEMD and Regional Water Quality Control Board's (RWQCB) GeoTracker website. Based on the Sanborn map review, this facility was not located on or adjoining the site.

Harv's Car Wash, 1901 L Street, was reportedly located approximately 0.18 miles northwest of the site. The facility is listed on the RWQCB's Leaking Underground Storage Tank (LUST) database. According to a SCEMD letter, dated February 3, 1998, the facility received a no further action status. Based on the information reviewed during this investigation, this facility is not suspected of negatively impacting the site at this time.

The William Sweigard facility, 1830 L Street, was reportedly located approximately 0.19 miles west of the site. The facility is listed on the RWQCB's LUST database. According to a RWQCB letter, dated September 24, 1998, the facility received a no further action status.



Based on the information reviewed during this investigation, this facility is not suspected of negatively impacting the site at this time.

The Harris Property, 1725 23rd Street, was reportedly located approximately 0.4 miles south of the site. The facility is listed on the RWQCB's LUST database. According to a SCEMD letter, dated July 10, 2012, the facility received a no further action status. Based on the information reviewed during this investigation, this facility is not suspected of negatively impacting the site at this time.

The Sutter Medical Center Expansion, 2730 L Street, is reportedly located approximately 0.45 miles east-northeast of the site. The facility is listed on the RWQCB's LUST database. According to information on the RWQCB's GeoTracker website, an area of stained soils was encountered during construction activities that were likely associated with a former underground heating oil storage tank. Soil and groundwater samples collected at the facility indicated low concentrations of total petroleum hydrocarbons. Based on the distance from the facility to the site, this facility is not suspected of negatively impacting the site at this time.

4.3.2 Preliminary Screen for Vapor Encroachment Conditions

WKA conducted a preliminary screening for vapor encroachment conditions (VEC) beneath the site using the Tier 1 vapor encroachment screening evaluation¹. The Tier I screening included performing a *Search Distance Test* to identify if there are any known or suspect contaminated properties surrounding or upgradient of the site within specific search radii, and a *Chemicals of Concern (COC) Test* (for those known or suspect contaminated properties identified within the *Search Distance Test*) to evaluate whether or not COC are likely to be present. The Vapor Encroachment Screening Matrix is included in Appendix D.

Based on the completion of the VEC-screening matrix, a VEC can be ruled out because a VEC does not or is not likely to exist.

4.3.3 Environmental Lien Search

Pappas Investments did not authorize WKA to conduct a search for environmental liens and AULs. Mr. Christopher Brown, site owner, was not aware of any environmental liens that have been recorded for the site.

¹ The Preliminary Screen for Vapor Encroachment Conditions was based on the guidelines presented in the ASTM E 2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions.



5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Data Gaps

The time intervals between the Standard Historical Sources (i.e., topographic maps, aerial photographs, other historical sources) exceeded the ASTM minimum five-year period. However, the use of the site appears unchanged within the time gaps, and therefore, research of the site use during the time gaps is not required by the ASTM Standard (Refer to *Section 8.3.2.1 – Intervals* of the ASTM E 1527-05 standard).

It is the opinion of WKA that no significant data gaps were identified during the preparation of this report that affects the ability of the Environmental Professional to identify RECs on the site.

5.2 Conclusions

- The historical land use research dating back to the late 1800s revealed that the site was undeveloped with residential structures by 1895. The site was primarily residential from at least 1895 to at least 1950. The structure at 1223 21st Street appears to have been constructed by 1915 and has been used for commercial purposes since at least 1928. The structure at 2101 Capitol Avenue was constructed by 1950 and has always been used as offices.
- The existing buildings were constructed by 1950. Given the age of the existing development on the site, there is a high likelihood that asbestos containing building materials and lead-based paints were used in construction and maintenance of the site buildings.
- According to the 1928 City Directory, 1227 21st Street, which could have been on the site, was listed as "M Shell Co of Calif serv sta". A building permit for 1227 21st was located that indicated a sign was installed at the address in 1948. The Sanborn Maps and aerial photographs do not provide coverage during this timeframe. No additional information regarding this facility was located during this investigation.
- An approximate 18-inch pipe was observed to the north of the site building. The pipe appears to be connected to the stormwater/sewer system, however, standing water was observed in the pipe.
- The site is located within an area protected from the 100-year regulatory flood by a levee system, as designated by the Federal Emergency Management Agency (FEMA). The floodplain map is provided on the CD attached to the back cover of this report.
- Given the documentation reviewed concerning the neighboring agency listed facilities, none of the facilities reviewed is likely to have a negative impact on the site. Based on



the completion of the vapor encroachment condition (VEC) screening matrix, WKA concludes a VEC can be ruled out because a VEC does not or is not likely to exist.

- An auto service station was noted on the 1915 Sanborn Map on the southern adjoining property, across Capitol Avenue. Three underground storage tanks were noted in the street to the west of the property, under 21st Street. No additional information was located for this facility.

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-05 for the Gormley and Brown Property. Any exceptions to, or deletions from, this practice are described in Section 5.4 of this report. This assessment has revealed no evidence of RECs in connection with the site, except the following:

- On-site concerns were noted from the potential presence of a gasoline station at 1227 21st Street, which could have been located at the site.
- Off-site concerns were noted from the gasoline station noted on the adjoining property in the 1915 Sanborn Map.

A full copy of this ESA report, in a .pdf format, is included on the attached CD.

5.3 Recommendations

Based on the conclusions presented and the documentation contained herein, WKA makes the following recommendations:

- WKA recommends that if visual or physical evidence of underground storage tanks is encountered during construction activities that WKA be provided an opportunity to evaluate whether the observed evidence is indicative of the potential presence of hydrocarbon impacts from storage tanks that may have formerly been present at the site and whether the evidence warrants revision of the findings and conclusions presented in this report.
- WKA recommends that the 18-inch pipe located to the north of the building be investigated to determine if it is connected to the stormwater/sewer system and that any blockages be removed.
- WKA recommends that if the site buildings will be remodeled or demolished that asbestos containing building materials and lead-based paint surveys be conducted by a certified inspector prior to any work.



5.4 Exceptions and/or Deletions

No exceptions or deletions from the ASTM E 1527-05 standard were made during the performance of this ESA.

5.5 Additional Services

Non-scope considerations, such as assessment for naturally occurring asbestos (NOA), wetlands evaluation, indoor air quality, laboratory testing of the soils and groundwater beneath the site for environmental contaminants (such as agricultural-related pesticides, termiticides, polychlorinated biphenyls [PCBs], or arsenic and lead), and assessments for asbestos containing materials and lead-based paint were not included or requested as part of this ESA. Additionally, this ESA included conducting a Tier 1 vapor encroachment screening in accordance with the *ASTM E 2600-10 Vapor Encroachment Screening on Property Involved in Real Estate Transactions*.



6.0 LIMITATIONS

The statements and conclusions in this report are based upon the scope of work described above and on observations made only on the date of the field reconnaissance, June 10, 2013. Work was performed using a degree of skill consistent with that of competent environmental consulting firms performing similar work in the area. Information regarding the site that is *publicly available* and *practically reviewable*, as described in the ASTM standard, was obtained. Additional research or receipt of information regarding the site that was not disclosed or available to WKA during this assessment may result in revision of the conclusions. The conclusions in this report should be reevaluated if site conditions change. No recommendation is made as to the suitability of the site for any purpose. The results of this assessment do not preclude the possibility that materials currently or in the future defined as hazardous are present on the site, nor do the results of this work guarantee the potability of groundwater beneath the site. This report is applicable only to the investigated site and should not be used for any other property. No warranty is expressed or implied.

This report is viable for one year from the publication date of the report provided the following components are updated within 180 days of the date of purchase or (for transactions not involving an acquisition) the date of the intended transaction:

- Interviews with current owners/occupants and/or in order to identify changes in site conditions or uses since the publication date of this report
- Searches for recorded environmental cleanup liens
- Visual inspection of the site and of adjoining properties with emphasis on changes in conditions or uses since the publication date of this report
- A current review of federal, state, tribal and county databases
- The declaration by the environmental professional responsible for the assessment.

Environmental Site Assessments completed more than one year prior to the date of purchase must be reviewed and updated in order for the *Environmental Site Assessment* to be considered valid per Section 4.6 (*Continued Viability of Environmental Site Assessment*), and Sections 4.7 and 8.4 (*Prior Assessment Usage*) of the ASTM E 1527-05 Standard.



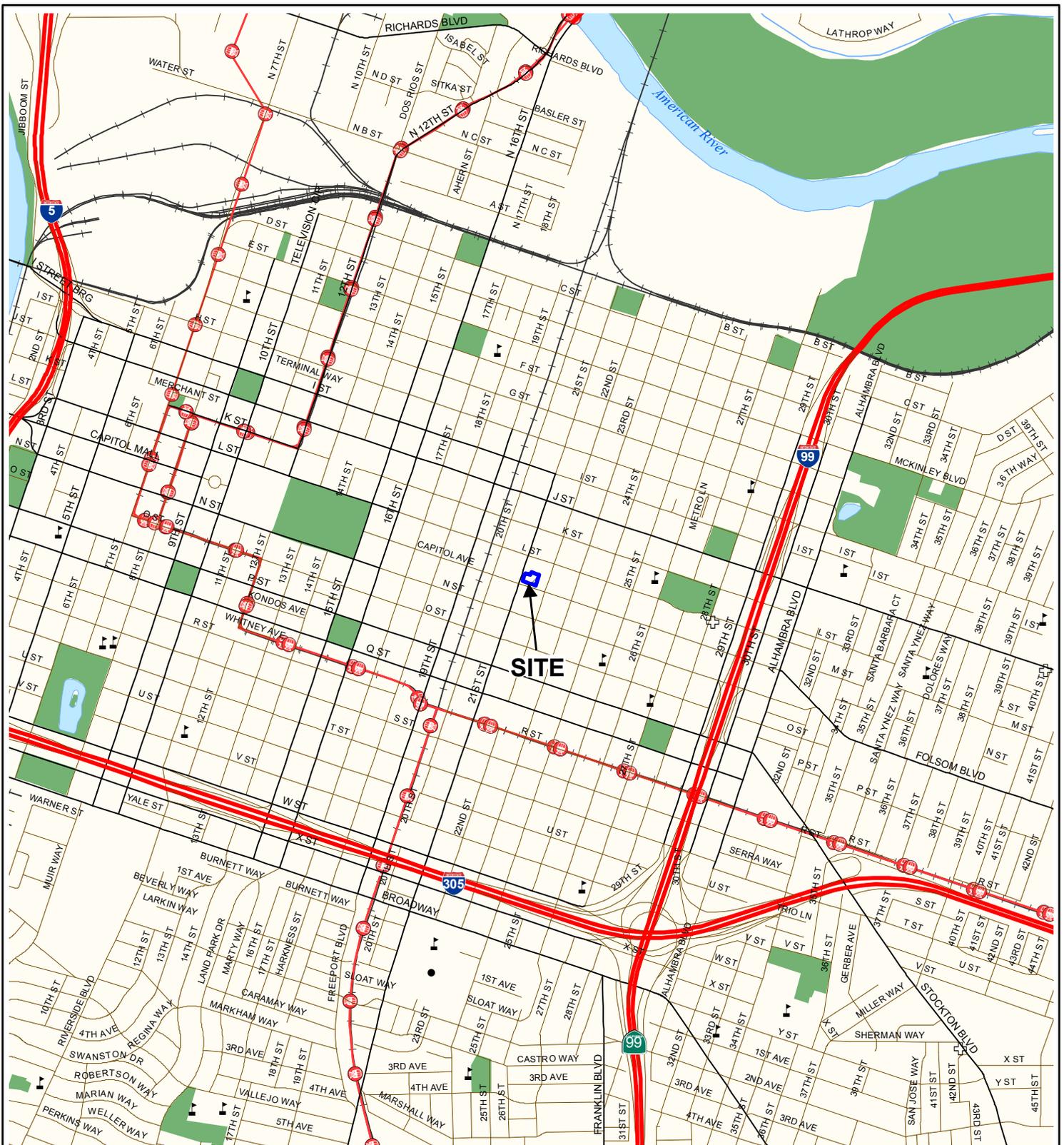
7.0 REFERENCES

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 - 2013c. *The EDR Aerial Photo Decade Package Report Gormley and Brown Property, 2101 Capitol Avenue, Sacramento, California, Inquiry Number 3618098.5*, Milford, Connecticut, (May 31, 2013).
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FIGURES



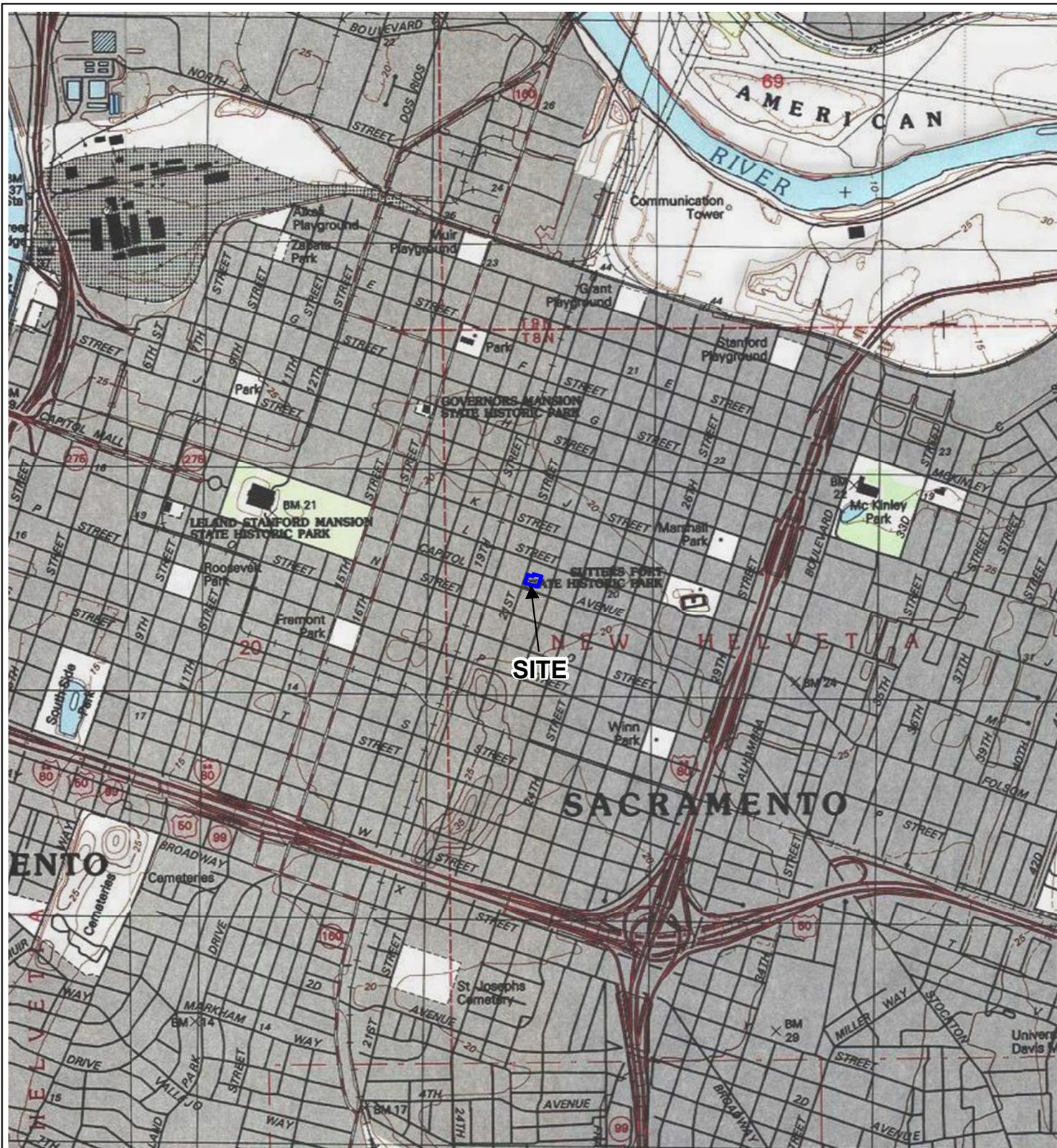


Street data courtesy of Sacramento County.
 Hydrography courtesy of the U.S. Geological Survey
 acquired from the GIS Data Depot, December, 2007.
 Projection: NAD 83, California State Plane, Zone II

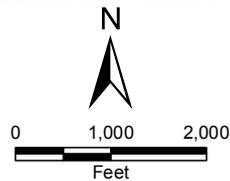


VICINITY MAP
GORMLEY AND BROWN PROPERTY
 2101 & 2117 Capitol Avenue/1223 21st Street
 Sacramento, California

FIGURE 1	
DRAWN BY	TJC
CHECKED BY	NMM
PROJECT MGR	DBN
DATE	6/13
WKA NO. 9758.01	



Adapted from U.S. Geological Survey 7.5 minute topographic map of the Sacramento East quadrangle, California, 1980.
 Projection: NAD 83, California State Plane, Zone II

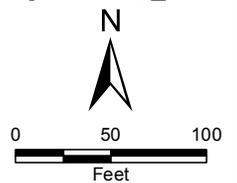


TOPOGRAPHIC MAP
GORMLEY AND BROWN PROPERTY
 2101 & 2117 Capitol Avenue/1223 21st Street
 Sacramento, California

FIGURE 2	
DRAWN BY	TJC
CHECKED BY	NMM
PROJECT MGR	DBN
DATE	6/13
WKA NO. 9758.01	

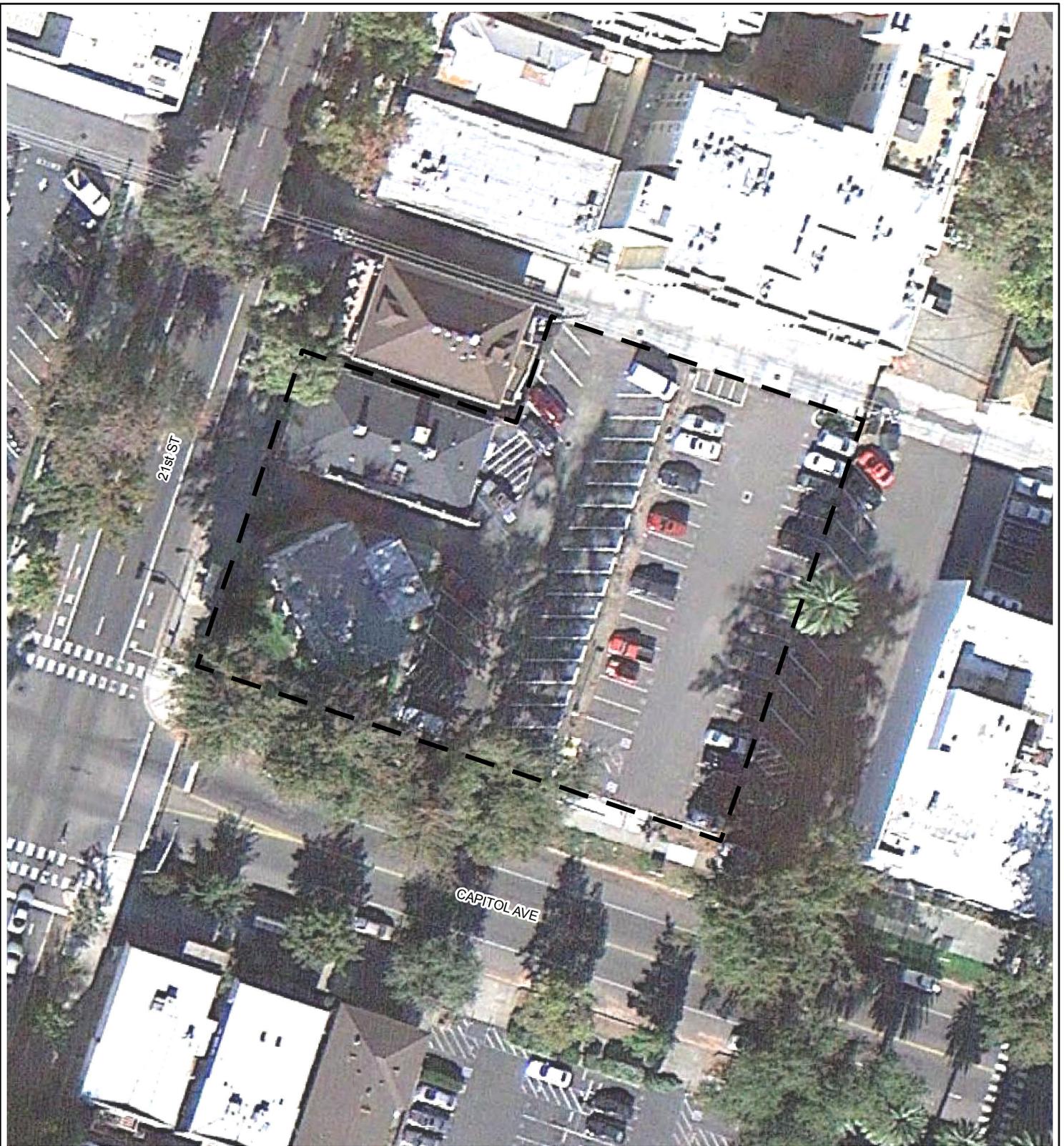


Adapted from the Sacramento County Assessor's
 Map Book 007, Page 015.
 Projection: NAD 83, California State Plane, Zone II

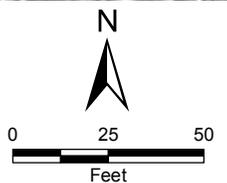


PARCEL MAP
GORMLEY AND BROWN PROPERTY
 2101 & 2117 Capitol Avenue/1223 21st Street
 Sacramento, California

FIGURE 3	
DRAWN BY	TJC
CHECKED BY	NMM
PROJECT MGR	DBN
DATE	6/13
WKA NO. 9758.01	



Adapted from a Google Earth aerial photograph, dated October 31, 2011.
 Projection: NAD 83, California State Plane, Zone II



AERIAL SITE MAP
GORMLEY AND BROWN PROPERTY
 2101 & 2117 Capitol Avenue/1223 21st Street
 Sacramento, California

FIGURE 4	
DRAWN BY	TJC
CHECKED BY	NMM
PROJECT MGR	DBN
DATE	6/13
WKA NO. 9758.01	



Looking northeast at the building located at 1223 21st Street.



Looking at the general view of the hair salon located in 1223 21st Street.



Looking northeast at the building located at 2101 Capitol Avenue.



Looking at the general view of the interior of 2101 Capitol Avenue.



COLOR PHOTOGRAPHS
 GORMLEY AND BROWN PROPERTY
 Sacramento, California

FIGURE 5a	
DRAWN BY	NMM
CHECKED BY	DBN
PROJECT MGR	DBN
DATE	6/13
WKA NO. 9758.01	



Looking at the location of the 18-inch concrete pipe to the north of 2101 Capitol Avenue.



Looking at the interior of the 18-inch concrete pipe.



Looking west between the two site buildings.



Looking north at the general view of the eastern portion of the site.



COLOR PHOTOGRAPHS
GORMLEY AND BROWN PROPERTY
 Sacramento, California

FIGURE 5b	
DRAWN BY	NMM
CHECKED BY	DBN
PROJECT MGR	DBN
DATE	6/13
WKA NO. 9758.01	

APPENDIX A
RESUMES



NANCY M. MALARET
PROJECT ENVIRONMENTAL SCIENTIST

Ms. Malaret has been employed in the environmental field since 2003. She graduated from University of California, Davis with a degree in Hydrologic Science.

Ms. Malaret worked for the Florida Department of Health for four years. She assisted with the coordination of sampling potable water wells throughout the state of Florida. Ms. Malaret used GIS mapping techniques to identify private potable wells located near commercial and industrial facilities that may have contaminated the groundwater. She coordinated the sampling of the wells and the analysis of water samples collected. She worked with the Florida Department of Environmental Protection to place filters on the private wells with contaminated water. Ms. Malaret also worked with the Health Assessment Team at the Florida Department of Health. She conducted human health risk assessments based on groundwater and soil data collected during contamination assessments of industrial facilities. Ms. Malaret used the Agency for Toxic Substances and Disease Registry's Public Health Assessment Guidelines to evaluate resident's risk of illness from exposure to contaminated groundwater and surface soils. Ms. Malaret used Risk Assistant software to determine dose estimates and compared the results with toxicological studies. Ms. Malaret's human health risk assessments focused on sites with Volatile Organic Compounds, Semi-volatile Organic Compounds, and metals contamination.

Ms. Malaret has six years of experience in due diligence. Her Phase I Environmental Site Assessment experience includes wooded, rural, and urban properties. Her investigations have involved multiple parcel sites with extensive history, large-scale residential subdivisions, office buildings, gasoline stations, dry cleaners, and heavy equipment manufacturing and repair facilities. Ms. Malaret has conducted multiple corridor assessments along roadways being prepared for expansion or improvements. She also conducted a Hazardous, Toxic, and Radioactive Waste Assessment for the United States Army Corps of Engineers on a 20-mile stretch of the St. Johns River in Jacksonville, Florida. Ms. Malaret conducted soil and groundwater sampling associated with Phase II Environmental Site Assessments. Ms. Malaret coordinated long-term groundwater sampling events for sites with residual petroleum contamination.

Ms. Malaret has worked with communities impacted by contamination, local, state, and federal government agencies, banks and developers.

Moody Property, Vacaville, CA: Ms. Malaret managed the Phase I Environmental Site Assessment of a 38.5-acre property of undeveloped land located in Vacaville to support the redevelopment of the property into a residential development.

Mercantile Property, Rancho Cordova, CA: Ms. Malaret managed the Phase I Environmental Site Assessment of a 4.1-acre property developed with a commercial building. Evaluation of regulatory facilities within the site vicinity included the former Aerojet Facility.

Woodmere Property, Folsom, CA: Ms. Malaret managed the Phase I Environmental Site Assessment of a 2.5-acre property developed with an office building. Historical research of the property included evaluating former mining operations at the site.

HIGHER EDUCATION:

University of California, Davis
Bachelor of Science, Hydrologic Science (1999)

DENNIS B. NAKAMOTO

SENIOR HYDROGEOLOGIST

Mr. Nakamoto has 33 years experience in the fields of environmental consulting, groundwater studies, site characterization, remediation construction oversight, and regulatory compliance. As Senior Hydrogeologist, Mr. Nakamoto manages projects and mentors professionals regarding studies of anthropogenic and naturally occurring constituents including: petroleum hydrocarbons, metals, chlorinated hydrocarbons, pesticides and herbicides, and asbestos in soil and groundwater. His projects include studies of soil, soil vapor, and groundwater contaminants with focus on human health risk assessment and identification of environmental risk assessment, groundwater resource and supply with focus on well design, well rehabilitation and aquifer characterization. Mr. Nakamoto is experienced in implementing remediation actions from excavation and disposal to insitu treatment. Mr. Nakamoto is experienced in the interpretation of downhole geophysical data from surveys including, electric logs, gamma and natural gamma logs, neutron logs, and acoustic logs. He is experienced in the groundwater well drilling methods and the application of well construction methods, including some applications from the petroleum industry. He has groundwater extraction well designs have successfully addressed issues such as excessive sand production, selective screen intervals to exclude undesirable groundwater quality and corrosive aquifer conditions.

SELECTED PROJECT EXPERIENCE

Risk Based Cleanup, Future Sacred Heart Elementary School, Sacramento, California: Mr. Nakamoto worked on behalf of Catholic Health Care West, Sacramento Diocese and the Sacred Heart Parish to establish appropriate soil remediation goals for lead, chlordane, and dieldrin in soil at the future Sacred Heart Elementary School site. He represented Sacred Heart Parish in negotiations with Catholic Health Care West to identify appropriate site characterization and mitigation efforts. He represented Sacred Heart Parish in meetings with the California Department of Toxic Substances Control to establish statistically derived risk-based values to determine site-specific cleanup levels for the chemicals present in soil. Mr. Nakamoto also represented the project during City of Sacramento Council meetings and Community Relations Building meetings. He provided technical oversight, on behalf of Sacred Heart Parish and Catholic Health Care West, of site remediation activities, including disposal of RCRA hazardous wastes.

Brownfield Development, Prospective Purchaser Agreement, Sacramento, California: Mr. Nakamoto served as the lead environmental consultant that successfully negotiated a 2006 Prospective Purchaser Agreement (PPA) between the Central Valley Regional Water Quality Control Board (CVRWQCB) and Signature Properties for a residential development proposed within the area of large-scale groundwater contamination. Negotiations with the PPA required focused consensus building and close coordination with CVRWQCB staff and counsel.

Preliminary Endangerment Assessment, Rancho Cordova, California: Mr. Nakamoto assisted a Land Developer in successfully securing

DTSC approval of a Preliminary Endangerment Assessment (PEA) on land proposed for residential development in Rancho Cordova, California. His detailed analyses of data demonstrated that variability of metal concentrations in selected soil samples were not representative of the actual metal concentrations in site soil. This demonstration allowed DTSC to concur that soil within the property did not pose a threat to the residential development.

Phase I ESA, Oroville, California: Mr. Nakamoto completed a Phase I ESA for Thermalito Union School District, Oroville, California that revealed the proposed school site historically supported agricultural and automotive repair facility activities. Based on initial ESA findings, DTSC approved Mr. Nakamoto's recommendation to include analyzing soil samples for pesticide residues and metals in surface soil as a part of the ESA. This resulted in the District saving considerable time and expense.

7th Street Extension, Sacramento, CA: Performed Environmental Oversight Authority monitoring for the \$25 million project connecting downtown Sacramento to the Richards Boulevard (North Sacramento area) by extending 7th Street across the former Sacramento Locomotive Works Yard, a former Superfund property. One element of this project was the below grade crossing at the Union Pacific Railroad track line. Excavation at this location revealed the presence of material suspected to be foundry slag. Laboratory analysis of carefully selected samples showed the material was not foundry slag. Other issues resolved during this project included handling and discharge of groundwater from dewatering activities and participation in the community relations team activities.

Federal Courthouse Building, Sacramento, CA: Served as EOA for this project, which was the first development of the former Sacramento Locomotive Works Yard Superfund Site. Closely coordinated with the City of Sacramento, DTSC, Union Pacific Railroad Company, and the Project managers, General Services Administration. During this project, several areas of concern were studied that included:

- ♦ Leaking Underground Storage Tanks
- ♦ Features deemed of Archeological interest
- ♦ Presence of Stoddard's solvent in soil
- ♦ Presence of oil containing total and soluble metal concentrations exceeding California thresholds for hazardous wastes

Fire Station Number 5 Replacement, City of Sacramento, CA: The initial project involved preparation and implementation of a work plan for characterizing an historic landfill previously identified as lying beneath a portion of the station property. Construction of the new Fire Station building required that a portion of the historic landfill be excavated. Soil sample analyses revealed total and soluble lead concentrations in soil at some locations exceeded hazardous thresholds established by either California or Federal standards.

Preliminary Endangerment Assessments – Various Locations (CA):

Adelane High School Parking Lot, Roseville: Former residential property where weathering of paint surfaces had resulted in the presence of lead containing paint chip in soil. Laboratory analysis of soil samples confirmed the vertical and lateral distribution of lead containing paint chips in soil. Excavation activities allowed for removal of the impacted soil for appropriate disposal.

Eureka School Assessment, Granite Bay – PEA performed to address the potential presence of

HIGHER EDUCATION:

University of California, Davis, California
B.S. Geology (1977)

pesticide residues in soil historically operated as an olive orchard. Close coordination with DTSC, regarding planning the sample collection plan, allowed for DTSC determination that the property posed no threat to the proposed use as a school facility.

Thermalito Union School District, Oroville – The initial Environmental Site Assessment (ESA) activities revealed the proposed school site was historically supported agricultural and automotive repair facility activities. Based on presenting initial ESA findings, DTSC approved expanding the ESA scope to include analyzing soil samples for pesticide residues and metals in surface soil. Completing the sampling and analysis activities concurrent with the ESA resulted in the District saving considerable time and expense.

Railroad Transportation Facilities, Various Locations (CA, NV): Conducted studies of soil and groundwater contamination at various railroad facilities operated by the Southern Pacific Transportation Company and the Union Pacific Railroad Company. These sites were located throughout California and Nevada. Studies regarding compliance with the Toxic Pits Cleanup Act (TPCA), as well as studies of railroad contamination, resulted in properties being designated Superfund properties. Contaminants at these properties included:

- ♦ Bunker Oil and its related carcinogenic compounds related to storage tank operations
- ♦ Metal contamination related to metal works and refinishing activities
- ♦ Soil pH and contaminated related to lead acid battery maintenance activities
- ♦ Chlorinated solvents related to industrial cleaning activities
- ♦ Asbestos related to locomotive rehabilitation activities

PROFESSIONAL REGISTRATIONS:

California
Professional Geologist No. 3863, California,
Certified Engineering Geologist No. 1353
Certified Hydrogeologist No. 260

Oregon
Professional Geologist and an Engineering
Geologist No. E 1535

Wyoming
Professional Geologist No. PG 2157

APPENDIX B
ASTM E 1527-05 User Questionnaire
and Helpful Documents Checklist



**E 1527-05 USER QUESTIONNAIRE
GROMLEY AND BROWN PROPERTIES**

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"), the *user*² must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

(1.) Have you performed a search for environmental cleanup liens and AULs, as described under *User Obligations* in the attached proposal, for the *property*? *NO*

(2.) Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law? *NO*

(3.) Are you aware of any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? *NO*

(4.) As the *user* of the report, do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Surrounding properties are office, retail and homes

(5.) Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present on the *property*? *yes*

(6.) Are you aware of commonly known or reasonably ascertainable information about the *property* that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

(a.) Do you know the past uses of the *property*? *office* If so, what were they?

(b.) What, if any, specific chemicals are present or once were present at the *property*?

² User, as defined in the ASTM Standard is "the party seeking to use Practice E 1527 to complete an environmental site assessment of the property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The user has specific obligations for completing a successful application of this practice as outline in Section 6 [of the ASTM Standard]."



E 1527-05 USER QUESTIONNAIRE (cont.)
GROMLEY AND BROWN PROPERTIES

Questions 6 continued:

(c.) What, if any, spills or other chemical releases have taken place at the *property*?

(d.) What, if any, environmental cleanups have taken place at the *property*?

(7.) As the *user* of this ESA, based on your knowledge and experience related to the *property* are there any obvious indicators that point to the presence or likely presence of contamination at the *property*?

Nothing obvious

COMPLETION:

I have completed this User Questionnaire to the best of my knowledge and provided all information to the environmental professional as of the following date:

Completed by: Merrilee Mangels

Date: 5/23/13

Title: Project Manager

Signature: Merrilee Mangels

Phone Number: 916-447-7100

Relationship to the Site (i.e., owner, lender, property manager): _____



**HELPFUL DOCUMENTS
GROMLEY AND BROWN PROPERTIES**

Are you aware of any of the below-listed reports, as they relate specifically to the property?

___ Yes X No (if yes, please check all that apply):

- Environmental Site Assessment reports (Phase I ESA, Asbestos sampling reports, etc.)
- Environmental Compliance Audit reports
- Geotechnical Reports
- Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits)
- Registrations for underground or above ground storage tanks
- Registrations for underground injection systems
- Material Safety Data Sheets
- Community Right-to-Know plan
- Safety Plan
- Reports regarding Hydrogeologic conditions on the property or surrounding area
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property
- Hazardous waste generator notices, or reports
- Environmental Impact Reports (draft and/or final)
- Risk assessments
- Recorded AULs

If any of the above listed documents are available, will copies be provided to WKA for review?

_____ Yes _____ No

Completed by: _____

Date: _____

Title: _____

Signature: _____



APPENDIX C
EDR[®] Radius Map Report Executive Summary

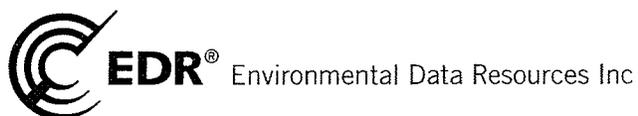


Gromley and Brown Property

2101 Capitol Avenue
Sacramento, CA 95816

Inquiry Number: 3618098.2s
May 28, 2013

The EDR Radius Map™ Report with GeoCheck®



440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2101 CAPITOL AVENUE
SACRAMENTO, CA 95816

COORDINATES

Latitude (North):	38.5732000 - 38° 34' 23.52"
Longitude (West):	121.4794000 - 121° 28' 45.84"
Universal Transverse Mercator:	Zone 10
UTM X (Meters):	632465.6
UTM Y (Meters):	4270305.0
Elevation:	22 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	38121-E4 SACRAMENTO EAST, CA
Most Recent Revision:	1980

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2012
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls
LUCIS..... Land Use Control Information System

Federal ERNS list

ERNS..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST..... Active UST Facilities
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land
FEMA UST..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties

EXECUTIVE SUMMARY

INDIAN VCP..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs
SCH..... School Property Evaluation Program
Toxic Pits..... Toxic Pits Cleanup Act Sites
CDL..... Clandestine Drug Labs
US HIST CDL..... National Clandestine Laboratory Register

Local Land Records

LIENS 2..... CERCLA Lien Information
LIENS..... Environmental Liens Listing
DEED..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
CHMIRS..... California Hazardous Material Incident Report System
LDS..... Land Disposal Sites Listing
MCS..... Military Cleanup Sites Listing
SPILLS 90..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites
FUDS..... Formerly Used Defense Sites
CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
UMTRA..... Uranium Mill Tailings Sites
US MINES..... Mines Master Index File
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS..... Section 7 Tracking Systems
ICIS..... Integrated Compliance Information System
PADS..... PCB Activity Database System
MLTS..... Material Licensing Tracking System
RADINFO..... Radiation Information Database

EXECUTIVE SUMMARY

FINDS.....	Facility Index System/Facility Registry System
RAATS.....	RCRA Administrative Action Tracking System
RMP.....	Risk Management Plans
UIC.....	UIC Listing
NPDES.....	NPDES Permits Listing
CUPA Listings.....	CUPA Resources List
WIP.....	Well Investigation Program Case List
ENF.....	Enforcement Action Listing
HAZNET.....	Facility and Manifest Data
EMI.....	Emissions Inventory Data
INDIAN RESERV.....	Indian Reservations
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
MWMP.....	Medical Waste Management Program Listing
COAL ASH DOE.....	Steam-Electric Plant Operation Data
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
HWT.....	Registered Hazardous Waste Transporter Database
HWP.....	EnviroStor Permitted Facilities Listing
Financial Assurance.....	Financial Assurance Information Listing
LEAD SMELTERS.....	Lead Smelter Sites
2020 COR ACTION.....	2020 Corrective Action Program List
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
PRP.....	Potentially Responsible Parties
WDS.....	Waste Discharge System
EPA WATCH LIST.....	EPA WATCH LIST
US FIN ASSUR.....	Financial Assurance Information
PCB TRANSFORMER.....	PCB Transformer Registration Database
PROC.....	Certified Processors Database

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in *bold italics* are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

EXECUTIVE SUMMARY

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 02/12/2013 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TRIBUTE PARTNERS LLC	1926 CAPITOL AVE	W 1/8 - 1/4 (0.131 mi.)	I30	18

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/12/2013 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
UC DAVIS MEDICAL GROUP CAPITOL	2000 O STREET	SW 1/8 - 1/4 (0.221 mi.)	T104	61
KITS CAMERAS 1 HOUR NO 107	2200 J ST	NNE 1/8 - 1/4 (0.224 mi.)	AB110	65
WOODARD FICETTI CLEANERS	2201 J ST	NNE 1/8 - 1/4 (0.226 mi.)	AB118	71

State- and tribal - equivalent NPL

RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the RESPONSE list, as provided by EDR, and dated 03/13/2013 has revealed that there are 6 RESPONSE sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KEN'S BUFF & PLATING	1816 21ST ST	SSW 1/4 - 1/2 (0.466 mi.)	AO180	170
D T S C CAL EPA	2809 S ST	SSE 1/2 - 1 (0.720 mi.)	AU202	260
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ORCHARD SUPPLY CO OF SACRAMENT	1731 17TH ST	WSW 1/2 - 1 (0.513 mi.)	AR192	217
16TH STREET PLATING	1826 16TH STREET	WSW 1/2 - 1 (0.533 mi.)	AS193	240
FONT'S PROPERTY	1822 16TH STREET	WSW 1/2 - 1 (0.533 mi.)	AS194	244
PALM IRON WORKS	1515 S STREET	WSW 1/2 - 1 (0.688 mi.)	AT199	256

EXECUTIVE SUMMARY

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 03/13/2013 has revealed that there are 24 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WOODWARD CLEANERS AND DRYER Status: Refer: Other Agency	2201 J STREET	NNE 1/8 - 1/4 (0.226 mi.)	AB115	68
FORMER RED FEATHER DRY CLEANER Status: Refer: Other Agency	2500 J STREET	ENE 1/4 - 1/2 (0.356 mi.)	154	120
VALLEY GRAPHIC ARTS Status: Inactive - Needs Evaluation	1711 18TH ST	SW 1/4 - 1/2 (0.433 mi.)	169	148
KEN'S BUFF & PLATING Status: Backlog	1816 21ST ST	SSW 1/4 - 1/2 (0.466 mi.)	AO180	170
CHROME CRAFT Status: Refer: RWQCB	1819 23RD ST	S 1/4 - 1/2 (0.484 mi.)	AQ187	196
MCCURRY COMPANIES Status: No Further Action	1231 K ST	WNW 1/2 - 1 (0.711 mi.)	201	259
D T S C CAL EPA Status: Active	2809 S ST	SSE 1/2 - 1 (0.720 mi.)	AU202	260
A-1 PAINTERS & DECORATORS Status: Refer: Other Agency	2816 S ST	SSE 1/2 - 1 (0.725 mi.)	AU203	278
AMERICAN PLATING WORKS Status: Inactive - Needs Evaluation	2822 S STREET	SSE 1/2 - 1 (0.728 mi.)	AU204	280
ALHAMBRA DRY CLEANERS Status: Refer: Other Agency	1000 ALHAMBRA BLVD	E 1/2 - 1 (0.766 mi.)	205	281
CALIFORNIA ANALYTICAL LABS. Status: No Further Action	401 N 16TH ST.	NNW 1/2 - 1 (0.806 mi.)	206	285
MERLINO'S Status: Refer: Other Agency	3200 FOLSOM BLVD	ESE 1/2 - 1 (0.864 mi.)	207	286
ARROW CURTAIN AND DRAPERY CLEA Status: Refer: Other Agency	3301 FOLSOM BOULEVARD	ESE 1/2 - 1 (0.917 mi.)	AV209	295
BOULEVARD FRENCH LAUNDRY & CLE Status: Refer: Other Agency	3315 FOLSOM BLVD.	ESE 1/2 - 1 (0.929 mi.)	AV210	296
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MERCURY CLEANERS Status: Refer: Other Agency	1419 16TH ST	W 1/4 - 1/2 (0.423 mi.)	AK168	146
ORCHARD SUPPLY CO OF SACRAMENT Status: Active	1731 17TH ST	WSW 1/2 - 1 (0.513 mi.)	AR192	217

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
16TH STREET PLATING Status: Certified	1826 16TH STREET	WSW 1/2 - 1 (0.533 mi.)	AS193	240
FONT'S PROPERTY Status: Certified	1822 16TH STREET	WSW 1/2 - 1 (0.533 mi.)	AS194	244
A-1 PLATING CO. (INACTIVE #3) Status: Inactive - Needs Evaluation	1721 16TH ST.	WSW 1/2 - 1 (0.564 mi.)	195	248
ALTA PLATING INCORPORATED Status: Refer: RWQCB	1733 S ST.	SW 1/2 - 1 (0.589 mi.)	196	249
BENVENUTTI PROPERTY Status: Refer: Other Agency	1500 Q ST	WSW 1/2 - 1 (0.592 mi.)	197	254
YOUR CLEANERS (INACTIVE #242) Status: Refer: Other Agency	1924 16TH ST.	SW 1/2 - 1 (0.680 mi.)	198	255
PALM IRON WORKS Status: Certified	1515 S STREET	WSW 1/2 - 1 (0.688 mi.)	AT199	256
CADA WAREHOUSE REDEVELOPMENT P Status: Certified	1108 R STREET	W 1/2 - 1 (0.902 mi.)	208	289

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 03/18/2013 has revealed that there are 27 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MID-TOWN OFFICE CENTER Status: Completed - Case Closed	2020 J ST	NNE 1/8 - 1/4 (0.220 mi.)	X98	57
MAYFLOWER MOVING COMPANY Status: Completed - Case Closed	908 20TH ST	N 1/4 - 1/2 (0.307 mi.)	AG150	91
CARL INDERKUM Status: Completed - Case Closed	1616 20TH ST	SW 1/4 - 1/2 (0.322 mi.)	152	102
THE SACRAMENTO BEE Status: Open - Verification Monitoring	2100 Q STREET	SSW 1/4 - 1/2 (0.346 mi.)	153	105
FOULKS PROPERTIES Status: Completed - Case Closed	1701 K ST	NW 1/4 - 1/2 (0.358 mi.)	155	121
CHEAPER LIQUOR/CUSTOMER CO Status: Completed - Case Closed	809 20TH ST	N 1/4 - 1/2 (0.371 mi.)	156	124
HARRIS PROPERTY	1725 23RD STREET	S 1/4 - 1/2 (0.403 mi.)	AH160	130
HARRIS PROPERTY Status: Completed - Case Closed	1725 23RD ST	S 1/4 - 1/2 (0.403 mi.)	AH161	131
SHRA Status: Completed - Case Closed	1622 K ST	NW 1/4 - 1/2 (0.413 mi.)	AJ164	141
1622 K STREET	1622 K STREET	NW 1/4 - 1/2 (0.413 mi.)	AJ165	144
FISHER TILE & MARBLE INC Status: Completed - Case Closed	1800 23 RD ST	S 1/4 - 1/2 (0.441 mi.)	AL171	151

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SUTTER MEDICAL CENTER EXPANSIO Status: Open - Assessment & Interim Remedial Action	2730 L ST	ESE 1/4 - 1/2 (0.457 mi.)	173	155
FORMER CHEVRON STATION #3-0205 Status: Completed - Case Closed	1530 L ST	WNW 1/4 - 1/2 (0.463 mi.)	AM174	158
FORMER FIRESTONE SERVICE CENTE	1531 L STREET	WNW 1/4 - 1/2 (0.463 mi.)	AM175	163
FORMER FIRESTONE SERVICE CENTE Status: Completed - Case Closed	1531 L ST	WNW 1/4 - 1/2 (0.463 mi.)	AM176	163
15TH & L INVESTORS	1501 L STREET	WNW 1/4 - 1/2 (0.465 mi.)	AN177	167
15TH & L INVESTORS Status: Completed - Case Closed	1501 L ST	WNW 1/4 - 1/2 (0.465 mi.)	AN178	167
CONSOLIDATED ELECTRIC Status: Completed - Case Closed	1800 24TH ST	S 1/4 - 1/2 (0.470 mi.)	AP181	177
TARPIN/RIOS WAREHOUSE Status: Completed - Case Closed	1731 25TH ST	SSE 1/4 - 1/2 (0.477 mi.)	182	179
PACIFIC BELL Status: Open - Site Assessment	1821 24TH STREET	S 1/4 - 1/2 (0.483 mi.)	AP185	191
VOGEL FAMILY INVESTMENTS Status: Completed - Case Closed	1630 I ST	NNW 1/4 - 1/2 (0.485 mi.)	188	201
TARNASKY RESIDENCE Status: Completed - Case Closed	630 22ND ST	NNE 1/4 - 1/2 (0.494 mi.)	189	202
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HARV'S CAR WASH Status: Completed - Case Closed	1901 L ST	NW 1/8 - 1/4 (0.188 mi.)	P74	41
WILLIAM SWEIGARD Status: Completed - Case Closed	1830 L ST	WNW 1/8 - 1/4 (0.194 mi.)	S79	47
CAPITOL PLAZA RETIREMENT Status: Completed - Case Closed	1812-1820 L ST	WNW 1/4 - 1/2 (0.252 mi.)	AE148	89
FORMER SHELL SERVICE STATION	1601 L STREET	WNW 1/4 - 1/2 (0.410 mi.)	AI162	135
SHELL OIL PRODUCTS US 170736 Status: Open - Remediation	1601 L ST	WNW 1/4 - 1/2 (0.410 mi.)	AI163	136

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 03/18/2013 has revealed that there are 7 SLIC sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
THE SACRAMENTO BEE Facility Status: Open - Inactive	2100 Q STREET	SSW 1/4 - 1/2 (0.346 mi.)	153	105
FORMER RED FEATHER DRY CLEANER Facility Status: Open - Inactive	2500 J STREET	ENE 1/4 - 1/2 (0.356 mi.)	154	120
SHRA Facility Status: Open - Inactive	1622 K ST	NW 1/4 - 1/2 (0.413 mi.)	AJ164	141
CHROME CRAFT	1819 23RD ST	S 1/4 - 1/2 (0.484 mi.)	AQ186	196
CHROME CRAFT Facility Status: Open - Remediation	1819 23RD ST	S 1/4 - 1/2 (0.484 mi.)	AQ187	196

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
19TH AND Q STREETS BROWNFIELD Facility Status: Open - Site Assessment	1700 19TH ST	SW 1/4 - 1/2 (0.388 mi.)	157	127
MERCURY CLEANERS Facility Status: Open - Site Assessment	1419 16TH ST	W 1/4 - 1/2 (0.423 mi.)	AK168	146

Sacramento Co. CS: List of sites where unauthorized releases of potentially hazardous materials have occurred.

A review of the Sacramento Co. CS list, as provided by EDR, and dated 02/04/2013 has revealed that there are 25 Sacramento Co. CS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MAYFLOWER MOVING COMPANY Date Closed: 05/20/2011	908 20TH ST	N 1/4 - 1/2 (0.307 mi.)	AG150	91
CARL INDERKUM Date Closed: 03/17/1993	1616 20TH ST	SW 1/4 - 1/2 (0.322 mi.)	152	102
THE SACRAMENTO BEE FOULKS PROPERTIES Date Closed: 03/07/1997	2100 Q STREET 1701 K ST	SSW 1/4 - 1/2 (0.346 mi.) NW 1/4 - 1/2 (0.358 mi.)	153 155	105 121
CHEAPER LIQUOR/CUSTOMER CO SCHAAP-BRENNER TIRE CENTER HARRIS PROPERTY SHRA Date Closed: 06/14/2006	809 20TH ST 17TH/J ST 1725 23RD ST 1622 K ST	N 1/4 - 1/2 (0.371 mi.) NW 1/4 - 1/2 (0.398 mi.) S 1/4 - 1/2 (0.403 mi.) NW 1/4 - 1/2 (0.413 mi.)	156 159 AH161 AJ164	124 130 131 141
SHRA Date Closed: 11/03/1994	1617 K ST	NW 1/4 - 1/2 (0.418 mi.)	AJ166	144
FISCHER TILE & MARBLE INC SUTTER MEDICAL CENTER EXPANSIO FORMER CHEVRON STATION #3-0205 FORMER FIRESTONE SERVICE CENTE Date Closed: 12/14/2006	1800 23RD ST 2730 L ST 1530 L ST 1531 L ST	S 1/4 - 1/2 (0.441 mi.) ESE 1/4 - 1/2 (0.457 mi.) WNW 1/4 - 1/2 (0.463 mi.) WNW 1/4 - 1/2 (0.463 mi.)	AL170 173 AM174 AM176	149 155 158 163
15TH & L INVESTORS CONSOLIDATED ELECTRIC Date Closed: 03/25/1996	1501 L ST 1800 24TH ST	WNW 1/4 - 1/2 (0.465 mi.) S 1/4 - 1/2 (0.470 mi.)	AN178 AP181	167 177
TARPIN/RIOS WAREHOUSE Date Closed: 11/08/1993	1731 25TH ST	SSE 1/4 - 1/2 (0.477 mi.)	182	179
PACIFIC BELL CHROME CRAFT VOGEL FAMILY INVESTMENTS Date Closed: 05/20/1999	1821 24TH STREET 1819 23RD ST 1630 I ST	S 1/4 - 1/2 (0.483 mi.) S 1/4 - 1/2 (0.484 mi.) NNW 1/4 - 1/2 (0.485 mi.)	AP185 AQ187 188	191 196 201
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HARV'S CAR WASH Date Closed: 02/03/1998	1901 L ST	NW 1/8 - 1/4 (0.188 mi.)	P74	41
WILLIAM SWEIGARD CAPITOL PLAZA RETIREMENT BARBER'S AUTO SHOP 19TH AND Q STREETS BROWNFIELD	1830 L ST 1812 L ST 1116 18TH ST 1700 19TH ST	WNW 1/8 - 1/4 (0.194 mi.) WNW 1/4 - 1/2 (0.251 mi.) NW 1/4 - 1/2 (0.274 mi.) SW 1/4 - 1/2 (0.388 mi.)	S79 AE147 149 157	47 89 90 127

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>SHELL OIL PRODUCTS US 170736</i>	<i>1601 L ST</i>	<i>WNW 1/4 - 1/2 (0.410 mi.)</i>	<i>AI163</i>	<i>136</i>

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 12/10/2012 has revealed that there are 7 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>1610 17TH STREET</i>	<i>1610 17TH STREET</i>	<i>WSW 1/4 - 1/2 (0.441 mi.)</i>	<i>172</i>	<i>153</i>
<i>KEN'S BUFF & PLATING</i>	<i>1816 21ST STREET</i>	<i>SSW 1/4 - 1/2 (0.466 mi.)</i>	<i>AO179</i>	<i>169</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>ENTERPRISE FACILITY</i>	<i>1412 16TH STREET,1401-1</i>	<i>W 1/4 - 1/2 (0.395 mi.)</i>	<i>158</i>	<i>128</i>
<i>MERCURY CLEANERS</i>	<i>1419 16TH STREET</i>	<i>W 1/4 - 1/2 (0.423 mi.)</i>	<i>AK167</i>	<i>144</i>
<i>EAST END GATEWAY PROPERTY 1</i>	<i>1517-1531 N STREET</i>	<i>W 1/4 - 1/2 (0.481 mi.)</i>	<i>183</i>	<i>181</i>
<i>CADA PROPERTIES SITE 4</i>	<i>1601 16TH</i>	<i>WSW 1/4 - 1/2 (0.481 mi.)</i>	<i>184</i>	<i>186</i>
<i>CADA PROPERTIES SITE 222</i>	<i>BLOCK 222 BOUNDED BY O</i>	<i>W 1/4 - 1/2 (0.498 mi.)</i>	<i>190</i>	<i>204</i>

Local Lists of Hazardous waste / Contaminated Sites

HIST Cal-Sites: Formerly known as ASPIS, this database contains both known and potential hazardous substance sites. The source is the California Department of Toxic Substance Control. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

A review of the HIST Cal-Sites list, as provided by EDR, and dated 08/08/2005 has revealed that there are 5 HIST Cal-Sites sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>D T S C CAL EPA</i>	<i>2809 S ST</i>	<i>SSE 1/2 - 1 (0.720 mi.)</i>	<i>AU202</i>	<i>260</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>ORCHARD SUPPLY COMPANY</i>	<i>1731 17TH STREET</i>	<i>WSW 1/2 - 1 (0.513 mi.)</i>	<i>AR191</i>	<i>210</i>
<i>16TH STREET PLATING</i>	<i>1826 16TH STREET</i>	<i>WSW 1/2 - 1 (0.533 mi.)</i>	<i>AS193</i>	<i>240</i>
<i>FONTS PROPERTY</i>	<i>1822 16TH STREET</i>	<i>WSW 1/2 - 1 (0.533 mi.)</i>	<i>AS194</i>	<i>244</i>
<i>PALM IRON WORKS</i>	<i>1515 S STREET</i>	<i>WSW 1/2 - 1 (0.688 mi.)</i>	<i>AT200</i>	<i>258</i>

EXECUTIVE SUMMARY

Local Lists of Registered Storage Tanks

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 3 CA FID UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>WOODARD FICETTI CLEANERS</i>	<i>2201 J ST</i>	<i>NNE 1/8 - 1/4 (0.226 mi.)</i>	<i>AB118</i>	<i>71</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>HARV'S CAR WASH</i>	<i>1901 L ST</i>	<i>NW 1/8 - 1/4 (0.188 mi.)</i>	<i>P75</i>	<i>45</i>
<i>PROTECTION SERVICES DIVISION</i>	<i>1908 O ST</i>	<i>WSW 1/8 - 1/4 (0.240 mi.)</i>	<i>AF143</i>	<i>86</i>

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 4 HIST UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>WOODARD FICETTI CLEANERS</i>	<i>2201 J ST</i>	<i>NNE 1/8 - 1/4 (0.226 mi.)</i>	<i>AB118</i>	<i>71</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>HARV'S CAR WASH</i>	<i>1901 L ST</i>	<i>NW 1/8 - 1/4 (0.188 mi.)</i>	<i>P74</i>	<i>41</i>
<i>OLD PERSONNEL BLDG.</i>	<i>1922 "O" STREET</i>	<i>SW 1/8 - 1/4 (0.224 mi.)</i>	<i>AA108</i>	<i>64</i>
<i>PROTECTION SERVICES DIVISION</i>	<i>1908 O ST</i>	<i>WSW 1/8 - 1/4 (0.240 mi.)</i>	<i>AF142</i>	<i>86</i>

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 4 SWEEPS UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>VACANT</i>	<i>2101 K ST</i>	<i>N 1/8 - 1/4 (0.142 mi.)</i>	<i>J39</i>	<i>24</i>
<i>WOODARD FICETTI CLEANERS</i>	<i>2201 J ST</i>	<i>NNE 1/8 - 1/4 (0.226 mi.)</i>	<i>AB118</i>	<i>71</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>HARV'S CAR WASH</i>	<i>1901 L ST</i>	<i>NW 1/8 - 1/4 (0.188 mi.)</i>	<i>P74</i>	<i>41</i>
<i>PROTECTION SERVICES DIVISION</i>	<i>1908 O ST</i>	<i>WSW 1/8 - 1/4 (0.240 mi.)</i>	<i>AF143</i>	<i>86</i>

EXECUTIVE SUMMARY

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 02/12/2013 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HOWARD AND SONS AUTOMOTIVE	1900 L ST	NW 1/8 - 1/4 (0.187 mi.)	P73	39

CA BOND EXP. PLAN: Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

A review of the CA BOND EXP. PLAN list, as provided by EDR, and dated 01/01/1989 has revealed that there is 1 CA BOND EXP. PLAN site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ORCHARD SUPPLY COMPANY	1731 17TH STREET	WSW 1/2 - 1 (0.513 mi.)	AR191	210

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 04/01/2013 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KEN'S BUFF & PLATING	1816 21ST ST	SSW 1/4 - 1/2 (0.466 mi.)	AO180	170

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 15 HIST CORTESE sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MID-TOWN OFFICE CENTER	2020 J ST	NNE 1/8 - 1/4 (0.220 mi.)	X98	57
LAWRENCE MAYFLOWER MOVING	908914 20TH	N 1/4 - 1/2 (0.310 mi.)	AG151	102
CARL INDERKUM	1616 20TH ST	SW 1/4 - 1/2 (0.322 mi.)	152	102
THE SACRAMENTO BEE	2100 Q STREET	SSW 1/4 - 1/2 (0.346 mi.)	153	105
FOULKS PROPERTIES	1701 K ST	NW 1/4 - 1/2 (0.358 mi.)	155	121
CHEAPER LIQUOR/CUSTOMER CO	809 20TH ST	N 1/4 - 1/2 (0.371 mi.)	156	124
FORMER CHEVRON STATION #3-0205	1530 L ST	WNW 1/4 - 1/2 (0.463 mi.)	AM174	158
CONSOLIDATED ELECTRIC	1800 24TH ST	S 1/4 - 1/2 (0.470 mi.)	AP181	177
TARPIN/RIOS WAREHOUSE	1731 25TH ST	SSE 1/4 - 1/2 (0.477 mi.)	182	179
PACIFIC BELL	1821 24TH STREET	S 1/4 - 1/2 (0.483 mi.)	AP185	191
VOGEL FAMILY INVESTMENTS	1630 I ST	NNW 1/4 - 1/2 (0.485 mi.)	188	201

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>TARNASKY RESIDENCE</i>	630 22ND ST	NNE 1/4 - 1/2 (0.494 mi.)	189	202
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>HARV'S CAR WASH</i>	1901 L ST	NW 1/8 - 1/4 (0.188 mi.)	P74	41
<i>WILLIAM SWEIGARD</i>	1830 L ST	WNW 1/8 - 1/4 (0.194 mi.)	S79	47
<i>CAPITOL PLAZA RETIREMENT</i>	1812-1820 L ST	WNW 1/4 - 1/2 (0.252 mi.)	AE148	89

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there are 2 Notify 65 sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>Not reported</i>	2100 BROADWAY	SSW 1/2 - 1 (0.987 mi.)	212	301
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>WONDER MINI MARKET & GAS</i>	2025 BROADWAY	SSW 1/2 - 1 (0.982 mi.)	211	297

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial laundrers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 12/11/2012 has revealed that there is 1 DRYCLEANERS site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WOODARD-FICETTI CLEANERS	2201 J ST	NNE 1/8 - 1/4 (0.226 mi.)	AB116	70

Sacramento Co. ML: Sacramento County Master List. Any business that has hazardous materials on site - hazardous materials storage sites, underground storage tanks, waste generators.

A review of the Sacramento Co. ML list, as provided by EDR, and dated 02/04/2013 has revealed that there are 56 Sacramento Co. ML sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
JAMES D COYLE DDS	2201 CAPITOL AVE, #100	SE 0 - 1/8 (0.057 mi.)	7	10
W.F. GORMLEY & SON	2015 CAPITOL AV	W 0 - 1/8 (0.093 mi.)	C12	12
A & A AUTO BODY & PAINT WORKS	1926 CAPITOL AVE	W 1/8 - 1/4 (0.131 mi.)	I31	21
VACANT	2101 K ST	N 1/8 - 1/4 (0.142 mi.)	J39	24
HARRY WONG, DDS	2327 L ST #204	E 1/8 - 1/4 (0.159 mi.)	K46	27
CUEVAS & RAMOS PROF DENTAL COR	2327 L ST 203	E 1/8 - 1/4 (0.159 mi.)	K47	27
ROBERT A EVANS, DDS	2327 L ST #201	E 1/8 - 1/4 (0.159 mi.)	K48	28
JAMES H MUCCI, DDS	2327 L ST #202	E 1/8 - 1/4 (0.159 mi.)	K49	28
GEORGE A BECKER, DDS	2327 L ST #102	E 1/8 - 1/4 (0.159 mi.)	K50	29
CALIFORNIA CUSTOM CASTINGS	2327 L ST 101	E 1/8 - 1/4 (0.159 mi.)	K51	29
CYNTHIA STUART, DDS	2331 L ST	E 1/8 - 1/4 (0.162 mi.)	K53	30

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KARL B ROSS DDS	2331 L ST	E 1/8 - 1/4 (0.162 mi.)	K54	31
IPS PRINTING, INC	2020 K ST	NNW 1/8 - 1/4 (0.163 mi.)	N55	31
WORLDWIDE AUTO ELECTRIC	1930 K ST	NNW 1/8 - 1/4 (0.192 mi.)	R76	45
ST CHARLES APARTMENTS	1305 24TH ST	ESE 1/8 - 1/4 (0.208 mi.)	88	52
GARTH W COLLINS DDS	2409 L ST, #2	E 1/8 - 1/4 (0.220 mi.)	W93	54
GARRY J BARONE DDS	2409 L ST, #4	E 1/8 - 1/4 (0.220 mi.)	W94	55
JEROME J DABY DDS	2409 L ST, #3	E 1/8 - 1/4 (0.220 mi.)	W95	55
DOUGLAS A GEDESTAD DDS	2409 L ST, #1	E 1/8 - 1/4 (0.220 mi.)	W96	56
VERIZON WIRELESS - 21ST & J ST	2100 J ST	NNE 1/8 - 1/4 (0.220 mi.)	X97	56
MID-TOWN OFFICE CENTER	2020 J ST	NNE 1/8 - 1/4 (0.220 mi.)	X98	57
MIDTOWN PHOTO	2127 J ST	NNE 1/8 - 1/4 (0.220 mi.)	X99	59
A L WATKINS, DC	2115 J ST #105	NNE 1/8 - 1/4 (0.221 mi.)	X103	60
SACRAMENTO NEWS & REVIEW	1015 20TH ST	N 1/8 - 1/4 (0.223 mi.)	Z106	63
DON I KENNEDY, DDS	2415 L ST	E 1/8 - 1/4 (0.224 mi.)	W107	63
RITZ CAMERAS	2200 J ST 107	NNE 1/8 - 1/4 (0.224 mi.)	AB109	64
WOODWARD CLEANERS AND DRYER	2201 J STREET	NNE 1/8 - 1/4 (0.226 mi.)	AB115	68
WOODARD FICETTI CLEANERS	2201 J ST	NNE 1/8 - 1/4 (0.226 mi.)	AB118	71
PATRICK R, LITTLE, ATTNEY	2209 J ST	NNE 1/8 - 1/4 (0.227 mi.)	AB119	74
RICHARD A SILVA DDS	1111 24TH ST 202	E 1/8 - 1/4 (0.233 mi.)	AC122	75
MATTHEW A KORN, DDS	1111 24TH ST #201	E 1/8 - 1/4 (0.233 mi.)	AC123	76
MARK A WIEST, DDS	1111 24TH ST #103	E 1/8 - 1/4 (0.233 mi.)	AC124	76
RICK MATHEWS DDS	1111 24TH ST 102	E 1/8 - 1/4 (0.233 mi.)	AC125	77
R BOWLES DDS & M WIEST DDS	1111 24TH ST, #103	E 1/8 - 1/4 (0.233 mi.)	AC126	77
LELAND H LEE DDS	1111 24TH ST 201	E 1/8 - 1/4 (0.233 mi.)	AC127	78
DAVID C SORENSEN DDS	1111 24TH ST 204	E 1/8 - 1/4 (0.233 mi.)	AC128	78
STEPHEN M CASAGRANDE DDS	1111 24TH ST 203	E 1/8 - 1/4 (0.233 mi.)	AC129	79
TERRY ADAIR DDS	1111 24TH ST 101	E 1/8 - 1/4 (0.233 mi.)	AC130	79
ARDEN L KWONG DDS	2430 L ST	E 1/8 - 1/4 (0.234 mi.)	W133	82
WESSLER BODY & PAINT SHOP	2011 J ST	N 1/8 - 1/4 (0.239 mi.)	Z140	85
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
JEFFREY C VERNON DDS	2131 CAPITOL AVE, #300	SSW 0 - 1/8 (0.022 mi.)	A1	8
RYE DENTAL GROUP	2131 CAPITOL AVE 100	SSW 0 - 1/8 (0.022 mi.)	A2	8
HERBERT H HOOPER, DDS	2131 CAPITOL AV #300	SSW 0 - 1/8 (0.022 mi.)	A3	9
ESTATES CP LLC	2020 L STREET	NW 0 - 1/8 (0.105 mi.)	G18	13
IRISH COPY BUSINESS SERVICES	2020 N ST	WSW 1/8 - 1/4 (0.136 mi.)	H34	22
DUFFY'S TRANSFER	1928 L ST	NW 1/8 - 1/4 (0.143 mi.)	L42	25
BEARINGS SUPPLY CO INC	1906 L ST	NW 1/8 - 1/4 (0.174 mi.)	P61	33
CARLSON ASSOCIATES	1415 20TH ST	SW 1/8 - 1/4 (0.176 mi.)	Q63	34
AMERICAN GRAFFITI	1306 19TH ST 1/2	W 1/8 - 1/4 (0.182 mi.)	O68	36
STEVEN P YUNGE DDS	2125 O ST	SSW 1/8 - 1/4 (0.184 mi.)	70	37
HOWARD AND SONS AUTOMOTIVE	1900 L ST	NW 1/8 - 1/4 (0.187 mi.)	P73	39
HARV'S CAR WASH	1901 L ST	NW 1/8 - 1/4 (0.188 mi.)	P74	41
WILLIAM SWEIGARD	1830 L ST	WNW 1/8 - 1/4 (0.194 mi.)	S79	47
PAUL'S AUTOMOTIVE, INC	1922 O ST	SW 1/8 - 1/4 (0.225 mi.)	AA113	68
<i>Not reported</i>	1912 O ST	WSW 1/8 - 1/4 (0.233 mi.)	AA131	80
PROTECTION SERVICES DIVISION	1908 O ST	WSW 1/8 - 1/4 (0.240 mi.)	AF143	86

EXECUTIVE SUMMARY

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 42 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
VARGAS MOTOR SERVICE	1930 CAPITOL AVE	W 1/8 - 1/4 (0.130 mi.)	I28	18
JERUE L J	1928 CAPITOL AVE	W 1/8 - 1/4 (0.130 mi.)	I29	18
Not reported	1926 CAPITOL AVE	W 1/8 - 1/4 (0.131 mi.)	I32	21
BROWN & CAMERON	1102 21ST ST	N 1/8 - 1/4 (0.136 mi.)	J35	23
EDWARDS ALBT	2101 K ST	N 1/8 - 1/4 (0.142 mi.)	J38	23
BROWN & CAMERON	2030 K ST	N 1/8 - 1/4 (0.160 mi.)	N52	30
ARGANTI LOUIS REAR	2015 K ST	NNW 1/8 - 1/4 (0.168 mi.)	N56	32
MILLER G A	1027 21ST ST	N 1/8 - 1/4 (0.177 mi.)	64	35
WORLD WIDE AUTO ELECTRIC	1930 K STREET	NNW 1/8 - 1/4 (0.192 mi.)	R77	46
JONES O G	1417 23RD ST	SSE 1/8 - 1/4 (0.194 mi.)	80	49
GOLSONG W A	1515 21ST ST	SSW 1/8 - 1/4 (0.225 mi.)	111	66
Not reported	1116 24TH ST	E 1/8 - 1/4 (0.225 mi.)	AC114	68
MC FARLANE JOHN	2030 J ST	N 1/8 - 1/4 (0.232 mi.)	AD121	75
SHELL CO OF CALIF	2031 J ST	N 1/8 - 1/4 (0.234 mi.)	AD132	82
JENNINGS AUTO SERVICE	2010 J ST	N 1/8 - 1/4 (0.237 mi.)	Z136	83
WESSLER H S	2011 J ST	N 1/8 - 1/4 (0.239 mi.)	Z139	85
Not reported	2274 J ST	NE 1/8 - 1/4 (0.243 mi.)	145	88
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LORENZO S NORWALK SERVICE	2103 W CAPITOL AV	WSW 0 - 1/8 (0.034 mi.)	A4	9
BAGGY S SERVICE	2100 L ST	N 0 - 1/8 (0.064 mi.)	B8	10
L ST SERVICE STATION	1201 21ST ST	N 0 - 1/8 (0.065 mi.)	B9	11
MARTIN R M	1330 21ST ST	SW 0 - 1/8 (0.077 mi.)	11	11
ALLEN R W	1130 21ST ST	N 0 - 1/8 (0.098 mi.)	D13	12
SALA JOHN	2113 N ST	SSW 0 - 1/8 (0.105 mi.)	F16	13
DE MARTINI ROY	1230 20TH ST	WNW 0 - 1/8 (0.105 mi.)	E17	13
DE MARTINI ROY & SON	1216 20TH ST	WNW 0 - 1/8 (0.106 mi.)	E19	15
GRIMES R A	1114 21ST ST	N 0 - 1/8 (0.110 mi.)	D23	16
LINDSTROM R L	2010 L ST	NW 0 - 1/8 (0.111 mi.)	G24	17
PARSONS L E	1112 21ST ST	N 0 - 1/8 (0.114 mi.)	D25	17
SAUNDERS A H	2031 N ST	SW 1/8 - 1/4 (0.130 mi.)	H27	18
LACKSTROM R W	1416 21ST ST	SSW 1/8 - 1/4 (0.147 mi.)	M43	26
SMITH E A	1430 21ST ST	SSW 1/8 - 1/4 (0.155 mi.)	M44	26
SUPERIOR AUTOMOTIVE SERVICE	1415 20TH ST	SW 1/8 - 1/4 (0.176 mi.)	Q62	34
HARVEY AUTO TOP & GLASS CO	1309 19TH ST	W 1/8 - 1/4 (0.179 mi.)	O66	35
SPEEDOMETER SERVICE	1209 19TH ST	WNW 1/8 - 1/4 (0.182 mi.)	P67	35
INDERBITZEN CHAS	1214 19TH ST	NW 1/8 - 1/4 (0.186 mi.)	P71	37

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HOWARD & SONS	1900 L STREET	NW 1/8 - 1/4 (0.187 mi.)	P72	38
C & D SERVICE	1830 L STREET	WNW 1/8 - 1/4 (0.194 mi.)	S78	47
LOVE A A	2031 O ST	SW 1/8 - 1/4 (0.200 mi.)	T81	50
HARRIS & JOHNNIE	2019 O ST	SW 1/8 - 1/4 (0.203 mi.)	T85	51
VALLEY AUTO SERVICE	1515 20TH AVE	SW 1/8 - 1/4 (0.219 mi.)	T92	54
Not reported	1922 O ST	SW 1/8 - 1/4 (0.225 mi.)	AA112	67
MILLER GEO H GARAGE	1806 CAPITOL AVE	WNW 1/8 - 1/4 (0.249 mi.)	146	88

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 41 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LEE S HAND LAUNDRY	2001 CAPITOL AVE	W 0 - 1/8 (0.104 mi.)	C15	13
BALDWIN G A	2201 N ST	S 0 - 1/8 (0.116 mi.)	26	17
SMART W H	1316 23RD ST	SE 1/8 - 1/4 (0.133 mi.)	33	22
DAVIS L A	2131 K ST	NNE 1/8 - 1/4 (0.140 mi.)	36	23
Not reported	2301 L ST	E 1/8 - 1/4 (0.141 mi.)	K37	23
ARTUS GEO	2008 K ST	NNW 1/8 - 1/4 (0.169 mi.)	N57	32
ARTUS GEO	2011 K ST	NNW 1/8 - 1/4 (0.169 mi.)	N58	32
YEE WM	1907 CAPITOL AVE	WNW 1/8 - 1/4 (0.170 mi.)	O59	33
STEEN HENRY	2007 K ST	NNW 1/8 - 1/4 (0.171 mi.)	N60	33
BLUE E E	2322 K ST	ENE 1/8 - 1/4 (0.201 mi.)	U82	50
MIRO MRS HONORINE	2328 K ST	ENE 1/8 - 1/4 (0.205 mi.)	U86	51
HORN S DRY CLEANERS & LAUNDRY	2330 K STREET	ENE 1/8 - 1/4 (0.206 mi.)	U87	52
DUCHEZ JEROME	1016 23RD ST	NE 1/8 - 1/4 (0.218 mi.)	V90	53
DUCHEZ JEROME	1016 23D ST	NE 1/8 - 1/4 (0.220 mi.)	V100	59
DUCHEZ JEROME	1016 23D PHONE MAIN 3	NE 1/8 - 1/4 (0.220 mi.)	V101	60
WOODARD D R	2125 J ST	NNE 1/8 - 1/4 (0.220 mi.)	X102	60
WOODARD CLEANERS & DYERS	2201 J ST	NNE 1/8 - 1/4 (0.226 mi.)	AB117	70
SUNDELL GERTRUDE MRS	2016 J ST	N 1/8 - 1/4 (0.235 mi.)	Z134	83
OSTROM M L	2017 J ST	N 1/8 - 1/4 (0.237 mi.)	Z137	84
DIAMOND CLEANERS	2009 J ST	N 1/8 - 1/4 (0.239 mi.)	Z141	85
FOGEL LEOLA M	2005 J ST	N 1/8 - 1/4 (0.240 mi.)	Z144	88

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
FONG L H	1207 21ST ST	NNW 0 - 1/8 (0.050 mi.)	B5	9
QWONG J Y	1205 21ST ST	N 0 - 1/8 (0.055 mi.)	B6	10
DECETIS JULIUS	2105 L ST	N 0 - 1/8 (0.065 mi.)	B10	11
LEE S HAND LAUNDRY	1223 20TH ST	WNW 0 - 1/8 (0.103 mi.)	E14	12
CAPITOL LAUNDERETT	1115 20TH ST	NNE 0 - 1/8 (0.106 mi.)	D20	15
CAPITOL LAUNDERETTE	1115 21ST ST	NNE 0 - 1/8 (0.106 mi.)	D21	15
TWENTY-FIRST STREET LAUNDRY	1400 21ST ST	SSW 0 - 1/8 (0.109 mi.)	F22	15
HICKEY S HAND LAUNDRY	1114 20TH ST	NNW 1/8 - 1/4 (0.143 mi.)	40	25
HARRY S LAUNDRY	1927 L ST	NW 1/8 - 1/4 (0.143 mi.)	L41	25

EXECUTIVE SUMMARY

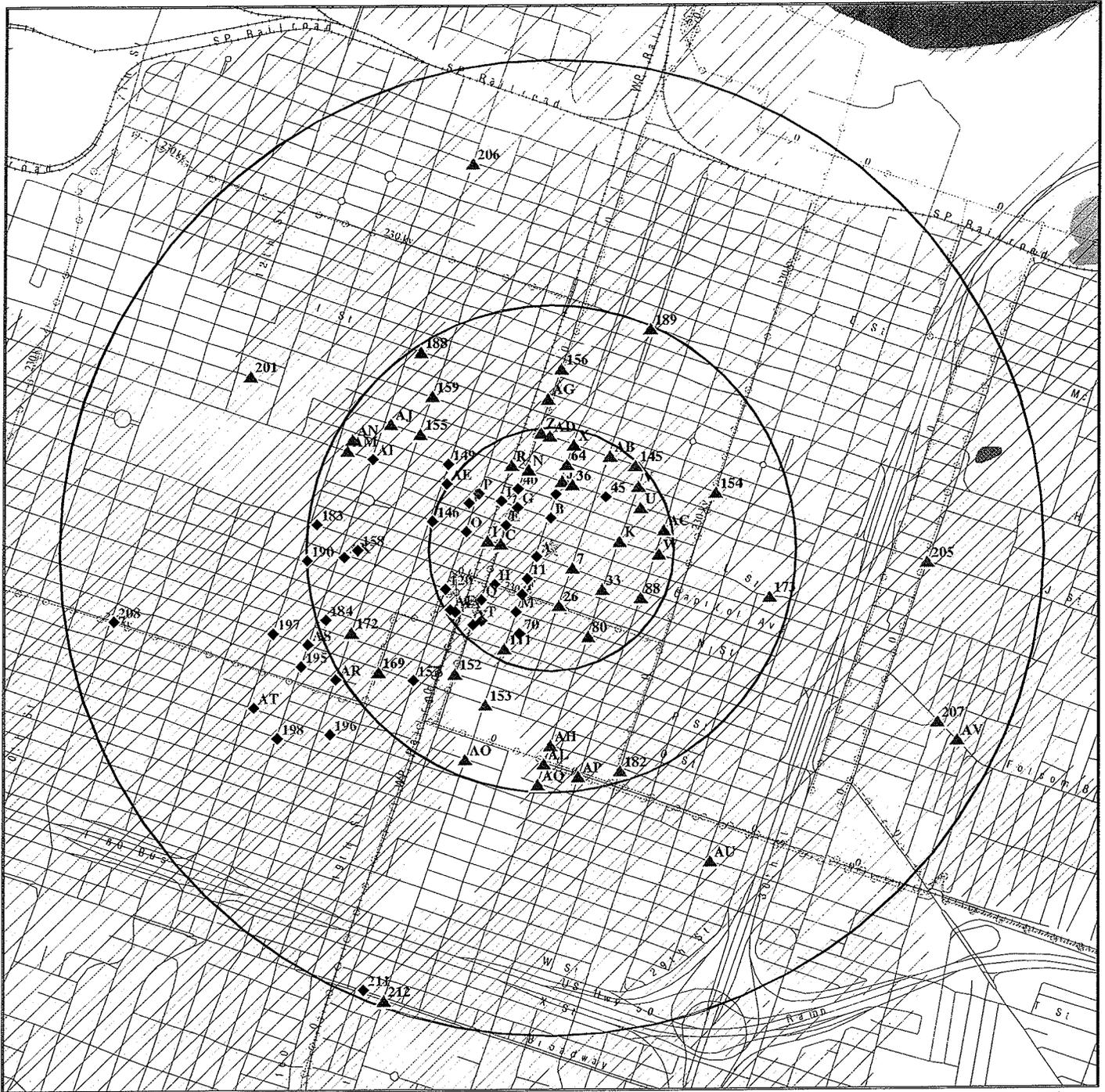
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	2226 K ST	NE 1/8 - 1/4 (0.156 mi.)	45	27
CAPITOL & NINETEENTH STREET SE	1901 CAPITOL AVE	WNW 1/8 - 1/4 (0.178 mi.)	O65	35
OCK LEE LAUNDRY	1306 19TH ST	W 1/8 - 1/4 (0.183 mi.)	O69	37
MASON S LAUNDRY	2030 O ST	SW 1/8 - 1/4 (0.202 mi.)	T83	50
MASON-CASCADE LAUNDRY	2028 O ST	SW 1/8 - 1/4 (0.202 mi.)	T84	51
OLD TAVERN CLEANERS	1505 20TH ST	SW 1/8 - 1/4 (0.215 mi.)	T89	53
CASCADE LAUNDRY	1515 20TH PHONE MAIN	SW 1/8 - 1/4 (0.219 mi.)	T91	54
CASCADE LAUNDRY	1515 20TH ST	SW 1/8 - 1/4 (0.222 mi.)	Y105	62
TOY LAUNDERETTE	1415 19TH ST	WSW 1/8 - 1/4 (0.230 mi.)	120	75
OLD TAVERN CLEANERS	1510 20TH ST	SW 1/8 - 1/4 (0.237 mi.)	Y135	83
Not reported	1830 L ST	WNW 1/8 - 1/4 (0.238 mi.)	AE138	84

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 40 records.

<u>Site Name</u>	<u>Database(s)</u>
CAMP CONNELL	FID,SWEEPS UST
TAFT	SWEEPS UST
PG&E GAS PLANT SACRAMENTO 206 2A	CERCLIS-NFRAP
STATE OFFICE BUILDING # 819	LUST
LOT X CITY OF SACRAMENTO PROPERTY	CS SACRAMENTO,LUST
LOT X CITY OF SACRAMENTO DEVELOPME	LUST
UNION PACIFIC BANNON STREET PARCEL	VCP,ENVIROSTOR
BOULEVARD	HIST UST
BUELLTON	HIST UST
COLFAX	HIST UST
PACHECO PASS	HIST UST
GRIZZLY CREEK REDWOODS S.P.	HIST UST
MAYS-TAHOE VLY	HIST UST
KEEN CAMP	HIST UST
MIDWAY	HIST UST
BUCKHORN	HIST UST
CHESTER	HIST UST
ADIN	HIST UST
DESERT CENTER	HIST UST
DOWNIEVILLE	HIST UST
INYOKERN	HIST UST
LEBEC	HIST UST
PLATINA	HIST UST
LONGBARN	HIST UST
PINEHURST	HIST UST
RIVERSIDE ELEVATORS	AST
SACRAMENTO-YOLO MOSQUITO & VECTOR	SLIC
SACRAMENTO-YOLO MOSQUITO & VECTOR	SLIC
CALTRANS NORTHGATE MAINT. STATION	SLIC
STATE CAPITOL	ML SACRAMENTO
CITY OF SACTO - SUTTER'S LANDING	ML SACRAMENTO
VERIZON WIRELESS - SAC BEE	ML SACRAMENTO
DOWNTOWN PLAZA NORTH MALL	ML SACRAMENTO
SACRAMENTO RAILYARD	ML SACRAMENTO
ANGEL WAREHOUSE INC	ML SACRAMENTO
BARNETT INC	ML SACRAMENTO
CAMPUS RECYCLING CENTER	CS SACRAMENTO
CALTRANS	CS SACRAMENTO
SACRAMENTO SIGNAL DEPOT (J09CA0924	ENVIROSTOR
L STREET SITE - #1830	ENVIROSTOR

OVERVIEW MAP - 3618098.2s



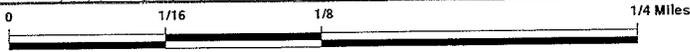
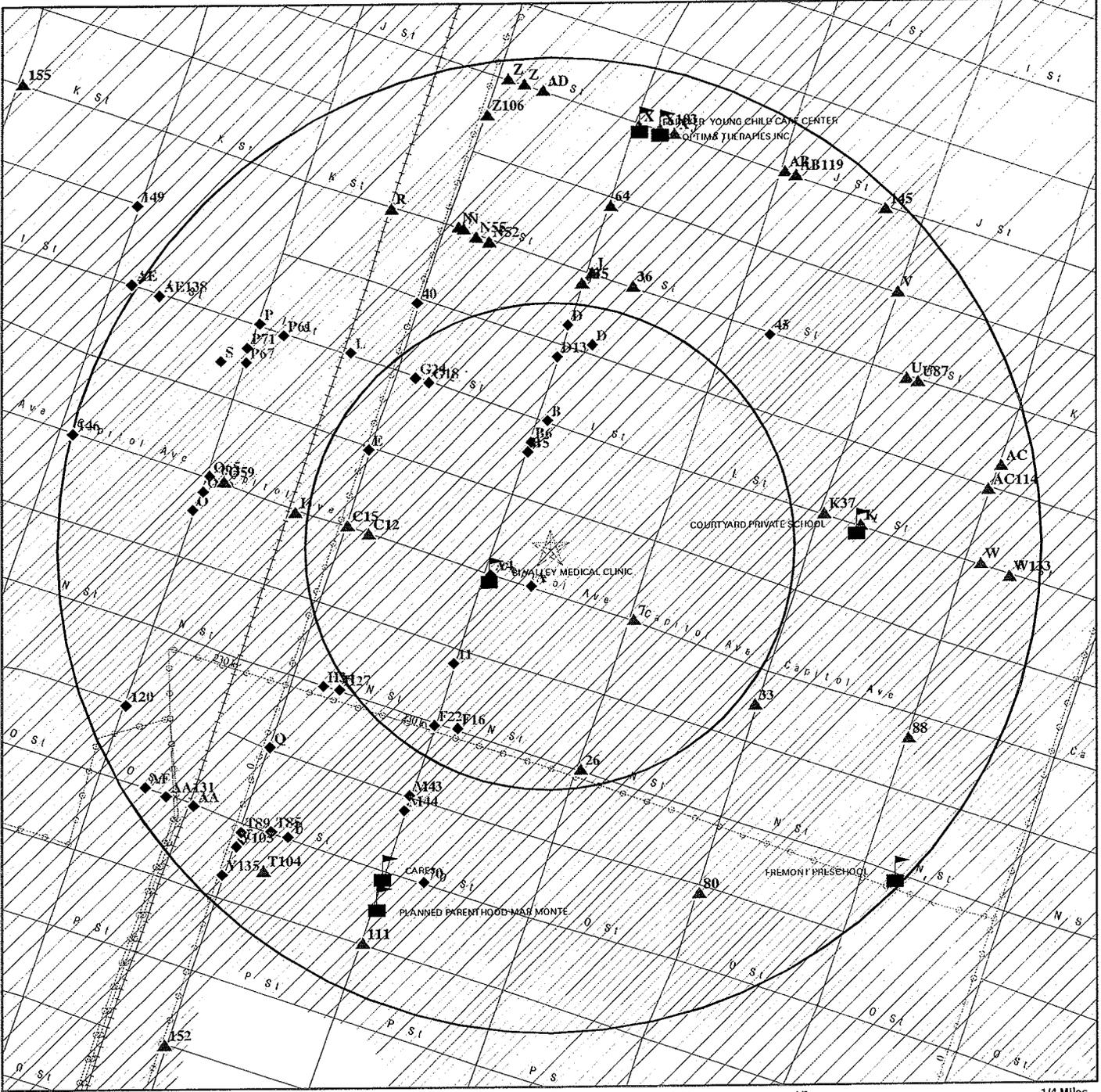
- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Gromley and Brown Property
 ADDRESS: 2101 Capitol Avenue
 Sacramento CA 95816
 LAT/LONG: 38.5732 / 121.4794

CLIENT: Wallace - Kuhl & Associates
 CONTACT: Nancy Malaret
 INQUIRY #: 3618098.2s
 DATE: May 28, 2013 8:05 pm

DETAIL MAP - 3618098.2s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- ⚡ Sensitive Receptors
- ☑ National Priority List Sites
- ☑ Dept. Defense Sites
- ☑ Indian Reservations BIA
- ⚡ Power transmission lines
- ⚡ Oil & Gas pipelines from USGS
- ☑ 100-year flood zone
- ☑ 500-year flood zone
- ☑ Areas of Concern



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

<p>SITE NAME: Gromley and Brown Property ADDRESS: 2101 Capitol Avenue Sacramento CA 95816 LAT/LONG: 38.5732 / 121.4794</p>	<p>CLIENT: Wallace - Kuhl & Associates CONTACT: Nancy Malaret INQUIRY #: 3618098.2s DATE: May 28, 2013 8:07 pm</p>
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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site List</i>								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	1	NR	NR	NR	1
RCRA-SQG	0.250		0	3	NR	NR	NR	3
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL RESPONSE</i>								
RESPONSE	1.000		0	0	1	5	NR	6
<i>State- and tribal - equivalent CERCLIS ENVIROSTOR</i>								
ENVIROSTOR	1.000		0	1	5	18	NR	24
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		0	3	24	NR	NR	27

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500		0	0	7	NR	NR	7
Sacramento Co. CS	0.500		0	2	23	NR	NR	25
INDIAN LUST	0.500		0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal voluntary cleanup sites</i>								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	7	NR	NR	7
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	5	NR	5
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
<i>Local Lists of Registered Storage Tanks</i>								
CA FID UST	0.250		0	3	NR	NR	NR	3
HIST UST	0.250		0	4	NR	NR	NR	4
SWEEPS UST	0.250		0	4	NR	NR	NR	4
<i>Local Land Records</i>								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
<i>Records of Emergency Release Reports</i>								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	1	NR	1
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	0	1	NR	NR	1
HIST CORTESE	0.500		0	3	12	NR	NR	15
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	0	2	NR	2
DRYCLEANERS	0.250		0	1	NR	NR	NR	1
WIP	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Sacramento Co. ML	0.250		6	50	NR	NR	NR	56
HAZNET	TP		NR	NR	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		11	31	NR	NR	NR	42
EDR US Hist Cleaners	0.250		9	32	NR	NR	NR	41

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

APPENDIX D

Preliminary Screen for Vapor Encroachment Conditions Matrix



Screen for Vapor Encroachment Conditions Matrix
GORMLEY AND BROWN PROPERTIES
WKA No. 9758.01

Phase I ESA Screen for Vapor Encroachment Conditions (VEC) matrix includes a (1) **Search Radius Test**, (2) **Chemicals of Concern Test (COC)**, and (3) a **Critical Distance Test**^[1].

(1) Search Radius Test: Are there any known or suspect contaminated sites in the primary area of concern within the corresponding search radii? (if yes, see attached Table A).

Yes **No** If No, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If Yes, then:

(2) Chemicals of Concern^[2] **Test:** Are COC likely to be present within the area of concern for those known or suspect contaminated sites identified based on the Search Distance Test?

Yes **No** If No, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If Yes, then:

If Yes, check all COC that apply on attached Table B.

(3) Critical Distance Test A plume test to determine whether or not COC in the contaminated plume(s) may be within the critical distance.

(3a) Is information related to the contaminated(s) plume available (i.e. isoconcentration maps, site drawings, etc.)?
Yes **No**

(3b) If **No**, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If **Yes**, then:

(3c) Is the site less than 100 feet to the nearest edge of a contaminated [non-petroleum hydrocarbon] plume(s)?
Yes **No**

(3d) Is the site less than 30 feet to the nearest edge of a dissolved petroleum hydrocarbon plume(s)?
Yes **No**

If the distance from the nearest edge of a contaminated plume to the nearest existing or planned structure on the site is less than 100 feet for non-petroleum hydrocarbon COC, or less than 30 feet for dissolved petroleum hydrocarbons, then it is presumed that a VEC *currently* exists beneath the site. If the distance from the nearest edge of the contaminated plume is greater than or equal to 100 feet for non-petroleum hydrocarbons, or 30 feet for dissolved petroleum hydrocarbon chemicals of concern, then it is presumed unlikely that a VEC *currently* exists beneath the site.

(4) Is it likely that a VEC *currently* exists beneath the site?

Yes **No** If Yes, then recommend performing a full scope VEC assessment according to ASTM E 2600-10.

[1] Based on guidance presented in the ASTM E 2600-10 Standard.

[2] Chemical(s) of concern (COC): See attached table for typical chemicals of concern (as presented in Appendix X6.1 of the ASTM E 2600-10 Standard).

Phase I Environmental Site Assessment

20TH-21ST ON L STREET PROPERTY

Sacramento, California

WKA No. 9955.02

December 10, 2013

Prepared for:

Mr. Brad Grondona

Pappas Investments

2020 L Street 5th Floor

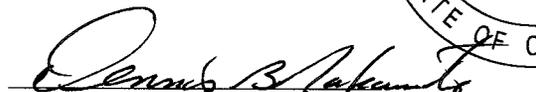
Sacramento, California 95811

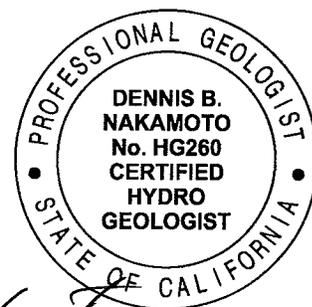
Phase I Environmental Site Assessment
20TH-21ST ON L STREET PROPERTY
Sacramento, California
WKA No. 9955.02
December 10, 2013

Wallace-Kuhl & Associates (WKA), on behalf of the Pappas Investments, prepared this Phase I Environmental Site Assessment for the 20th-21st on L Street Property located along L Street between 20th and 21st Streets in Sacramento, California. We declare that, to the best of our professional knowledge and belief, the report reviewer meets the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312 and has the "specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312." Resumes of the key staff who prepared this report are included in Appendix A.

WALLACE•KUHLL & ASSOCIATES


Nancy M. Malaret
Project Environmental Scientist


Dennis B. Nakamoto, P.G., C.E.G., C.HG.
Senior Hydrogeologist



Phase I Environmental Site Assessment

20TH-21ST ON L STREET PROPERTY

WKA No. 9955.02

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Phase I Environmental Site Assessment

20TH-21ST ON L STREET PROPERTY

WKA No. 9955.02

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- C EDR[®] Radius Map Report Executive Summary
- D Preliminary Screen for Vapor Encroachment Conditions Matrix

Attached CD contains: EDR[®] Reports: (Radius Map Report, Aerial Photographic Decade Package, Historical Topographic Maps, Sanborn Map Search), and Phase I ESA, 20th-21st on L Street Property (WKA No. 9955.02 dated December 10, 2013).



Phase I Environmental Site Assessment
20TH-21ST ON L STREET PROPERTY
WKA No. 9955.02

EXECUTIVE SUMMARY

The purpose of this Phase I Environmental Site Assessment (ESA) was to assess the 20th-21st on L Street Property (herein referred to as site) for evidence of Recognized Environmental Conditions (RECs) resulting from current and/or former site activities. The site is located along L Street between 20th and 21st Streets in Sacramento, California (Figures 1, 2, 3, and 4) and is comprised of approximately 1.1 acres developed with at least two structures and associated asphalt parking lots having Sacramento County Assessor's Parcel Numbers (APNs) 007-0086-012, -018, -021, and -022 (Figure 3). The following presents a list of observations and findings identified during the preparation of this report:

- The historical land use research dating back to the late 1800s revealed that the site was developed with a residence in 1895. The 1915 Sanborn Map shows the site was developed with several residences and a structure that was labeled as "Auto Repair" and "Paint Shop". The 1950 Sanborn Map shows the site was developed with residences, stores, and the building formerly shown as "Auto Repair" is now shown as "Restaurants". The 1957 Sanborn Map shows the central portion of the site cleared of buildings and labeled as a parking lot. The site has been developed with its current configuration of parking lots, a parking garage, and office building since at least 1965.
- An asbestos containing building materials survey conducted on the site building in 2010 indicated the presence of asbestos in the building materials.
- The site is located within a 100-year regulatory floodplain, as designated by the Federal Emergency Management Agency (FEMA).
- Given the documentation reviewed concerning the neighboring agency listed facilities, none of the facilities reviewed is likely to have a negative impact on the site. Based on the completion of the vapor encroachment condition (VEC) screening matrix, WKA concludes a VEC can be ruled out because a VEC does not or is not likely to exist.

WKA has performed this ESA in conformance with the scope and limitations of ASTM Standard Practice E 1527-05 for the 20th-21st on L Street Property.

This assessment has revealed no RECs in connection with the site except the following:

- On-site concerns were noted from the operations of an automotive repair facility identified on the 1915 Sanborn Map.



Phase I Environmental Site Assessment
20TH-21ST ON L STREET PROPERTY
WKA No. 9955.02

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment (ESA) was to evaluate the 20th-21st on L Street Property (herein referred to as site) for evidence of potential Recognized Environmental Conditions (RECs) resulting from current and/or former site activities as defined by the American Society of Testing and Materials (ASTM) Standard E 1527-05 (ASTM, 2005).

According to the ASTM, “this practice is intended to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner*, *contiguous property owner*, or *bona fide prospective purchaser* limitations on CERCLA [Comprehensive Environmental Response, Compensation and Liability Act] liability (hereinafter, the “*landowner liability protections*,” or “*LLPs*”): that is, the practice that constitutes “*all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice” as defined at 42 U.S.C. §9601(35)(B).”

This ESA has been performed in general conformance with the ASTM Standard E 1527-05 and the scope and limitations defined in Wallace-Kuhl & Associates (WKA) proposal, 3PR13240, dated November 15, 2013.

1.2 Scope of Services

WKA has completed this ESA for the site shown on Figures 1 through 3. Mr. John Pappas with Pappas Investments authorized WKA to proceed with this assessment on November 18, 2013 through a signed WKA Environmental Services Agreement.

The scope of this assessment included the following:

- Conduct a site reconnaissance for visual evidence of surface contamination and potential sources of subsurface contamination;
- Conduct a visual inspection of the adjoining properties for evidence of RECs
- Conduct interviews with the following, as available:
 - Key site manager,



- Major occupants,
- Past and present owners, operators,
- Government and/or agency personnel, and,
- Inquiries conducted at abandoned sites may include interviews with owners or occupants of neighboring or nearby properties;
- Conduct a records review, which will include the following:
 - Physical setting documents to determine regional geology, general soil information, and local and regional groundwater conditions,
 - Historical information, including but not limited to, Sanborn maps, topographic maps, aerial photographs, ownership records, building department records, local street directories, zoning and land use records, and prior assessments, as available,
 - Environmental records, including federal, state, tribal, and county regulatory agency lists that will help identify RECs on the site and the adjoining properties, and,
 - Based on the outcome of the database search, review of specific regulatory agency files for identified contaminated facilities in order to evaluate whether the listed facilities are hazardous materials threats to the site;
- Conduct a preliminary screen for vapor encroachment conditions on the site per ASTM E2600-10;
- Review of the completed *ASTM E 1527-05 User Questionnaire (Questionnaire)* regarding Recorded Environmental Liens, activity and use limitations (AULs), relationship of the purchase price to the fair market value of the site, and any specialized knowledge of the site;
- Review of environmental liens and AULs reports, as provided; and
- Prepare a final report of the results of the ESA.

1.3 Special Terms and Conditions

No special terms or conditions to the WKA Professional Services Agreement or the WKA scope of services were requested or performed during the preparation of this report. Pappas Investments did not authorize WKA to conduct a search for environmental liens and AULs.



1.4 User Provided Information

WKA provided Pappas Investments a copy of the User Questionnaire and the Helpful Documents checklist. The documents were returned after they were completed by Ms. Merrilee Margetts, Project Manager. Discussion regarding her responses is provided in the following section. A copy of the completed questionnaire is included in Appendix B.

In summary, Ms. Margetts was not aware of any records of environmental liens or AULs currently recorded against the site. Ms. Margetts stated she does not possess specialized knowledge or experience related to the site. Ms. Margetts stated that she is not aware of any obvious indicators that point to the presence or likely presence of contamination at the site. According to Ms. Margetts, the site is currently developed with an office building, parking garage, and parking lot. She stated that she does not have any knowledge regarding the site prior to 1991.

Ms. Margetts was aware of existing "Helpful Documents" as defined in Section 10.8.1 of the ASTM Standard as noted on the "Helpful Documents Checklist" included in Appendix B. This report is an Asbestos Survey, dated April 29, 2010, prepared by HB&T Environmental, Inc. Ms. Margetts provided a copy of the report to WKA, with discussion regarding the report presented in Section 4.2.10.



2.0 SITE DESCRIPTION

2.1 Site and Vicinity General Characteristics

The site is located along the north side of L Street between 20th and 21st Streets in Sacramento, California (Figures 1 and 2). The site is comprised of Sacramento County Assessor's Parcel Numbers (APNs) 007-0086-012, -018, -021, and -022, totaling approximately 1.1 acres of land developed with an office building, a parking garage, and a parking lot (Figure 3). Surrounding land use consisted of office buildings.

The existing building located at 2025 L Street was constructed in 1957. Given the age of the existing development on the site, it is likely that asbestos containing building materials and lead-based paints were used in construction of the site building. Pappas Investments provided WKA a copy of an Asbestos Survey, see Section 4.2.10 for a summary of the report.

2.2 Site Reconnaissance

A visual site reconnaissance was conducted by WKA on December 3, 2013. Figures 5a and 5b provide color photographs of the site taken during the site reconnaissance.

On the day of field reconnaissance the site was developed with a two-story office building, two asphalt parking lots, and a two-deck parking garage. The asphalt parking lots are located on the eastern and western portions of the site. The two-deck parking garage is located on the central portion of the site and the two-story office building is located adjacent to the east of the parking garage. A storage cage is located in the northwestern portion of the ground floor of the parking garage. Several one-gallon and five-gallon containers of paint were observed in the storage cage. All containers were closed and appeared to be in good condition. No evidence of spills or leaks was noted in the vicinity of the paint containers. The office building has been vacant since at least 1991.

2.2.1 Municipal Infrastructure and Utilities

Sacramento Municipal Utility District (SMUD) provides electricity to the site. The City of Sacramento provides potable water and sanitary sewer service. High-voltage, pole-mounted electrical transmission lines and six pole-mounted transformers were observed along the northern property boundary. The pole-mounted transformers appeared to be in good condition. No evidence of spills or leaks was observed in the vicinity of the transformers.



2.3 Adjoining Properties

The site is bounded to the north the K Street L Street Alley followed by commercial and retail businesses. 21st Street, followed by a bar, two restaurants, and a clothing consignment store. L Street followed by two office buildings and an asphalt parking lot is located to the south of the site. 20th Street followed by an art gallery and a parking lot is located to the west of the site.



3.0 INTERVIEWS

Interviews with various persons familiar with the site vicinity, including representatives of public agencies, were conducted for the purpose of identifying past and present uses, which may have contributed to RECs on the site. Results of those interviews are discussed in the following sections.

3.1 Owner or Key Site Manager

WKA provided Ms. Merrilee Margetts with a copy of a site owner questionnaire, which she completed and returned. According to Ms. Margetts, the site was acquired in 1990 by the LVP Revocable Trust. She stated that the site was developed with parking lots, a parking structure, and an office building prior to LVP Revocable Trust's ownership. Ms. Margetts is not aware of any fill dirt that has been imported to the site. She stated that, to the best of her knowledge, no underground or aboveground storage tanks, wells, or septic systems have been located at the site. Ms. Margetts is not aware of any previous Phase I ESAs or other assessment reports for the site. She stated that she is not aware of any environmental liens associated with the site.

WKA interviewed Mr. Mark Haw, Property Manager, regarding the site. He stated that the office building was built in 1957 and that it has been vacant since 1991. According to Mr. Haw, the office building was formerly occupied by a state agency and used as offices. He stated that an asbestos survey had been completed for the site and that all asbestos containing building materials would be removed prior to planned renovations. Mr. Haw stated that the paint containers located in the storage cage of the parking structure are for painting over graffiti. He said that, to the best of his knowledge, no spills of fuel or oils from vehicles have occurred, other than small drips.

3.2 Occupants (Multi-family or Major)

The site is not occupied.

3.3 Past and Present Owners, Operators, and/or Occupants

No information regarding past owners was received by WKA during completion of this report.

3.4 State and/or Local Government Officials

WKA interviewed Ms. Susan Genovese, Sacramento County Environmental Management Department (SCEMD), regarding any regulatory files available for the site and surrounding



facilities. According to Ms. Genovese, all SCEMD files are available for review on the SCEMD website. Information reviewed on the SCEMD website is provided in Section 4.3.

3.5 Abandoned Properties

As referenced in 40 CFR Part 312, in the case of inquiries conducted at “abandoned properties,” as defined in §312.23(d), “where there is evidence of potential unauthorized uses of the site or evidence of uncontrolled access to the site, the environmental professional’s inquiry must include interviewing one or more (as necessary) owners or occupants of neighboring or nearby properties from which it appears possible to have observed uses of, or releases at, such abandoned properties...” No evidence of potential unauthorized uses, or evidence of uncontrolled access to the site was observed. The site is not considered an abandoned property and therefore, WKA did not interview owners or occupants of neighboring properties.



4.0 RECORDS REVIEW

The purpose of the records review is to obtain and review information concerning the current and historical use of the site and adjoining properties that would help identify the presence of RECs in connection with the site. The records review included review and discussion of the following, as available:

- Physical Setting Source(s);
- Historical Use Information; and,
- Environmental Record Sources.

4.1 Physical Setting Source(s)

The site is depicted on the 1992 United States Geological Survey (USGS) 7.5 Minute topographic map of the *Sacramento East, California Quadrangle* as being located within an area of dense development. The site is located within Section 6, Township 8 North, Range 5 East, Mount Diablo Base and Meridian, at an elevation of approximately +20 feet relative to mean sea level (msl).

4.1.1 Regional and Local Geology

The site is located on the Great Valley geomorphic province of California, a large, elongate, northwest-trending structural trough, generally constrained to the west by the Coast Ranges and to the east by the foothills of the Sierra Nevada Range (Norris and Webb, 1990). The Great Valley consists of two valleys lying end-to-end, with the Sacramento Valley to the north and the San Joaquin Valley to the south.

The Sacramento and San Joaquin Valleys have been filled to their present elevations with thick sequences of sediment derived from both marine and continental sources. The sedimentary deposits range in thickness from relatively thin deposits along the eastern valley edge to more than 25,000 feet in the south central portion of the Great Valley (Norris and Webb, 1990). The sedimentary geologic formations of the Great Valley province vary in age from Jurassic to Quaternary, with the older deposits being primarily marine in origin. Younger sediments are continentally derived and were typically deposited in lacustrine, fluvial, and alluvial environments with their main source being the Sierra Nevada Range.

The 1981 USGS *Geologic Map of the Sacramento Quadrangle, California*, shows the site to be underlain by Levee and Channel deposits consisting relatively recent deposits of active stream channels and their natural levees as well as adjacent broad alluvial fans.



4.1.2 Soil Survey

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) has created a web-based service for accessing soil information. According to the NRCS Web Soil Survey (WSS) the majority of the near-surface soils on the site consist of Urban land (USDA, 2013). A copy of the soil report is included on the attached CD.

4.1.3 Regional and Local Groundwater

The site is located within the California Department of Water Resources (DWR) defined Sacramento Valley Groundwater Basin of the Sacramento River Hydrologic Region. WKA searched data on the DWR website and found no DWR monitored groundwater wells within one-half mile of the site (DWR, 2013).

WKA also searched the State Water Resources Control Board's (SWRCB) GeoTracker website for quarterly groundwater monitoring reports completed for facilities in the immediate vicinity of the site. No facilities are located within one-half mile of the site.

4.2 Historical Use Information

Historical information was reviewed to develop a history of the previous uses of the site and surrounding area, in order to evaluate the site and adjoining properties for evidence of RECs. Standard historical sources reviewed during the preparation of this report included the following, as available:

- Sanborn® Maps;
- Topographic Maps;
- Oil and Gas Well Maps;
- Aerial Photographs;
- Ownership Records;
- Building Department Records;
- Local Street Directories;
- Zoning and Land Use Records;
- Other Historical Sources; and,
- Prior Assessments.

Discussion of these historical sources is provided in the following sections.



4.2.1 Sanborn® Maps

Sanborn® Maps with coverage of the site were obtained through Environmental Data Resources, Inc. (EDR®). EDR® is a national commercial provider of environmental database information. Sanborn® Maps are detailed drawings of site development, and were typically used by fire insurance companies to determine site fire insurability. Sanborn® Maps with coverage of the site dated 1895, 1915, 1950, 1952, 1957, 1960, 1964, 1965, 1966, 1968, and 1970 were available for review (EDR®, 2013a). Copies of the Sanborn® Maps compiled by EDR® with coverage of the site are included on the CD attached to the back cover of this report.

1895 – The site is developed with one residence on the northwestern corner, two residences on the south-central portion, and four residences on the eastern and southeastern portions of the site. Residences are noted to the north, east, and west of the site. Sutter Grammar School and vacant land is located to the south of the site. An alley is noted adjacent to the north of the site. 21st Street is noted adjacent to the east of the site, L Street is noted adjacent to the south of the site, and 20th Street is noted adjacent to the west of the site.

1915 – Four additional residences are noted on the site. A structure labeled as “Auto Shop” and “Paint Shop” is noted on the northwestern portion of the site. Additional residences are noted to the north, east, south, and west of the site.

1950 – Two structures labeled as stores are noted on the southwestern portion of the site. The building labeled as “Auto Shop” and “Paint Shop” is now labeled as a “Restaurant”. Two residences have been removed from the south-central portion of the site. The southeastern corner has been redeveloped into a restaurant and three stores. The eastern portion of the northern adjoining property has been redeveloped into an awning factory, a machine shop, a gasoline station, and automotive repair facility. The southeastern adjoining property has been redeveloped with a gasoline station, automotive repair facility, and store. The school on the southern adjoining property is labeled as “Administration Building Sacramento Public Schools”. The western adjoining property has been redeveloped into stores, a lodge, and dance hall.

1952 – No significant changes are noted for the site. The school administration building on the southern adjoining property appears to be removed.

1957 – All structures have been removed from the central portion of the site and it is labeled as “Parking”. A dwelling along 21st Street has been redeveloped into a restaurant. The gasoline station on the northern adjoining property has been redeveloped into an office. The eastern portion of the southern adjoining property has been developed with an office building.



1960 – No significant changes are noted for the site or the adjoining properties.

1964 – No significant changes are noted.

1965 – The central portion of the site is noted as a “two deck-parking garage”. A structure on the southeastern portion of the site is labeled as offices. The western portion of the northern adjoining property has been redeveloped with a parking lot and restaurant.

1966 – No significant changes are noted.

1968 – No significant changes are noted for the site. The southeastern adjoining property has been redeveloped as a restaurant. The northern portion of the western adjoining property has been redeveloped into a parking lot.

1970 – No significant changes are noted.

4.2.2 Topographic Maps

Historical USGS topographic maps with coverage of the site and outlying land areas were reviewed. Topographic maps with coverage of the site dated 1893, 1902, 1911, 1949, 1954, 1967, 1975, 1980, and 1992 were available for review (EDR[®], 2013b). Copies of the topographic maps compiled by EDR[®] with coverage of the site are included on the CD attached to the back cover of this report. Table 1 notes the changes in the vicinity of the site.

Year	Scale	Observations
1893	1:125,000	The site and vicinity are located within a developed portion of Sacramento; however, the scale of the map does not allow for the identification of individual features.
1902	1:62,500	The site and vicinity are located within a developed portion of Sacramento; however, the scale of the map does not allow for the identification of individual features.
1911	1:31,680	The site and vicinity are located within a developed portion of Sacramento; however, the scale of the map does not allow for the identification of individual features.
1949	1:24,000	The site and vicinity are located within an area of dense development and individual features are not depicted.
1954	1: 24,000	No significant changes noted.



Table 1		
Year	Scale	Observations
1967	1:24,000	No significant changes noted.
1975	1:24,000	No significant changes noted.
1980	1:24,000	No significant changes noted.
1992	1:24,000	No significant changes noted.

4.2.3 Oil and Gas Well Maps

Review of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website showed that the site is not located in a designated natural gas field. No DOGGR wells are located on or within at least one mile of the site (DOGGR, 2013).

4.2.4 Aerial Photographs

Historical aerial photographs of the site and general vicinity were compiled by EDR[®]. Photographs covering the years 1937, 1947, 1957, 1964, 1971, 1981, 1993, 1998, 2005, 2006, 2009, 2010, and 2012 were available for review (EDR[®], 2013c). Table 2 notes the changes on the property and in the vicinity.

Table 2		
Year	Scale	Observations
1937	1" = 500'	Site: Seven residential structures are visible. North: The K Street L Street Alley followed by several residential structures and one commercial structure is visible. East: 21 st Street followed by several residential structures is visible. South: L Street followed by several residential structures and the school is visible. West: 20 th Street followed by several residential structures is visible.
1947	1" = 500'	Site: No significant changes noted. North: A gasoline station canopy is visible on the northeastern portion of the northern adjoining property. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.



Table 2		
Year	Scale	Observations
1957	1" = 500'	Site: Structures have been removed from the central portion of the site and a parking lot is visible. North: A commercial-type structure is visible on the northeastern corner of the northern adjoining property. East: No significant changes noted. South: The existing office building and parking lot are visible. West: No significant changes noted.
1964	1" = 500'	Site: No significant changes noted. North: No significant changes noted. East: A gasoline station is visible on the southeastern adjoining property. South: No significant changes noted. West: No significant changes noted.
1971	1" = 500'	Site: The existing parking garage is visible. North: No significant changes noted. East: A commercial-type structure is visible in the location of the former gasoline station. South: No significant changes noted. West: No significant changes noted.
1981	1" = 500'	Site: No significant changes noted. North: No significant changes noted. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.
1993	1" = 500'	Site: No significant changes noted. North: No significant changes noted. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.
1998	1" = 500'	Site: Structures along 21 st Street appear to have been removed. North: No significant changes noted. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.
2005	1" = 500'	Site: No significant changes noted. North: No significant changes noted. East: The property to the southeast has been redeveloped with a commercial-type structure. South: No significant changes noted. West: No significant changes noted.



Table 2		
Year	Scale	Observations
2006	1" = 500'	Site: No significant changes noted. North: No significant changes noted. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.
2009	1" = 500'	Site: No significant changes noted. North: No significant changes noted. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.
2010	1" = 500'	Site: No significant changes noted. North: No significant changes noted. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.
2012	1" = 500'	Site: No significant changes noted. North: No significant changes noted. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.

4.2.5 Ownership Records

Ownership information was obtained through ParcelQuest®, an on-line distributor of "Assessor-Direct property information throughout the State of California." The ownership entity for the site was listed as "LVP Revocable Trust" (ParcelQuest®, 2013).

4.2.6 Building Department Records

Building permits were researched through the City of Sacramento Records Library website. WKA researched the existing address and historical addresses identified on Sanborn Maps. Over 50 permits were available for the site. The permit dates ranged from 1916 to 1979 and were issued for new construction, remodels, reroofing of buildings, and demolition. Copies of the building permits are provided on the CD attached to the back cover of this report.



4.2.7 Local Street Directories

Local street directories with coverage of the site and adjoining properties were obtained from EDR[®] (EDR[®], 2013d). These documents contain business listings based on street number identifiers. WKA reviewed city directory listings for the current site address and historical addresses identified on the Sanborn Maps. Listings for the site addresses included residential, restaurant, and office listings. A copy of the EDR[®] City Directory (EDR[®], 2013d) is provided on the CD attached to the back cover of this report.

4.2.8 Zoning and Land Use Records

APN 007-0086-012 is zoned "CBC008" office, APNs 007-0086-018, 007-0086-021, and 007-0086-022 are zoned "BFH004" parking lot, "BFI006" parking lot, and "BFH00A" parking lot, respectively, (Sacramento County, 2013).

The site is located within an area protected from the 100-year regulatory floodplain by levees, as designated by the Federal Emergency Management Agency (FEMA). The floodplain map is provided on the CD attached to the back cover of this report.

4.2.9 Other Historical Sources

Review of additional historical sources was not warranted in order for the Environmental Professional to make a determination as to evidence of potential RECs on the site.

4.2.10 Prior Assessments

WKA was provided a copy of an Asbestos Survey, dated April 29, 2010, prepared by HB&T Environmental, Inc. (HB&T) for the building located at 2025 L Street. The HB&T asbestos containing building materials survey was limited to the interior portions of the building. Fifteen bulk samples were collected from the building and sixteen discrete materials, for a total of 31 samples, were analyzed in a laboratory. Sheetrock and joint compound, black floor mastic, and gray transite window panels were identified as asbestos containing building materials. HB&T recommended that prior to any renovations or demolition that the identified materials be removed by a licensed and DOSH registered asbestos abatement contractor.



4.3 Environmental Record Sources

4.3.1 Regulatory Agency Databases

EDR[®] was contacted to provide a summary of facilities listed on regulatory agency databases (EDR[®], 2013e). Table 3 summarizes the researched ASTM required *Standard Environmental Record Sources*, as well as several *Additional Environmental Record Sources*, as defined in Sections 8.2.1 and 8.2.2 of the ASTM Standard. For additional reference, the Executive Summary of the EDR[®] report is included in Appendix C. A copy of the entire EDR[®] report is included on the CD attached to the back cover of this report.

Table 3			
	<i>EDR Listed Database</i>	<i>ASTM E 1527-05 Search Distance</i>	No. of Facilities Listed (within Search Radius)
Federal			
Federal NPL Site List	<i>NPL</i>	1-mile	0
Federal Delisted NPL Site List	<i>Delisted NPL</i>	1/2-mile	0
Federal CERCLIS List	<i>CERCLIS</i>	1/2-mile	0
Federal CERCLIS NFRAP Site List	<i>CERCLIS NFRAP</i>	1/2-mile	0
Federal RCRA CORRACTS Facilities List	<i>CORRACTS</i>	1-mile	0
Federal RCRA Generators List:			
Small Quantity and Large Quantity Generators	<i>RCRA SQG</i>	site & adjoining	0
	<i>RCRA LQG</i>		0
Landfills and Solid Waste Management Units	<i>RCRA TSDf</i>	1/2-mile	0
Federal Institutional Control / Engineering Control Registries	<i>US ENG Controls</i>	site only	0
	<i>US INST Controls</i>		0
Federal ERNS List	<i>ERNS</i>	site only	0
State			
State-equivalent NPL (Hist. Cal-Sites)	<i>Hist. Cal-Sites</i>	1-mile	6
State-equivalent CERCLIS	<i>RESPONSE</i>	1/2-mile	7
State Landfill and/or Solid Waste Disposal Site	<i>SWF/LF (SWIS)</i>	1/2-mile	0
	<i>WMUDS/SWAT</i>		0
State Leaking Underground Storage Tanks	<i>LUST- Reg 5 Geotracker</i>	1/2-mile	22
Tribal Leaking Underground Storage Tanks	<i>Indian LUST</i>	1/2-mile	0
State Registered Underground Storage Tanks	<i>UST</i>	site & adjoining	0
Tribal Registered Underground Storage Tanks	<i>Indian UST</i>	site & adjoining	0
State Registered Aboveground Storage Tanks	<i>AST</i>	site & adjoining	0
State Institutional Control Registries	<i>DEED</i>	site only	0
State Voluntary Cleanup Sites	<i>VCP</i>	1/2-mile	0



Table 3			
	<i>EDR Listed Database</i>	<i>ASTM E 1527-05 Search Distance</i>	No. of Facilities Listed (within Search Radius)
Additional Environmental Record Sources			
Hazardous Waste & Substances Sites List	<i>CORTESE</i>	1/2-mile	0
DTSC EnviroStor (includes Cal-Sites)	<i>EnviroStor</i>	1-mile	30
SLIC	<i>SLIC - Reg 5</i>	1/2-mile	5
Cleaner Facilities	<i>Drycleaners</i>	1/4-mile	1
HAZNET	<i>HAZNET</i>	1/4-mile	51
Local - County			
Sacramento County Contaminated Sites	<i>Sac Co CS</i>	1/2-mile	21
Sacramento County Master List	<i>Sac Co ML</i>	1/2-mile	44

Review of the EDR[®] report indicates the site is not listed on any of the EDR[®] databases. Regulatory information reviewed concerning the nearest facility in each cardinal direction identified within its respective ASTM search distance is detailed below.

Harv's Car Wash, 1901 L Street, is located on the eastern adjoining property. The facility is listed on the Regional Water Quality Control Board's (RWQCB) Leaking Underground Storage Tank (LUST) database. According to a SCEMD letter, dated February 3, 1998, the facility received a no further action status. Based on the information reviewed during this investigation, this facility is not suspected of negatively impacting the site at this time.

The William Sweigard facility, 1830 L Street, was reportedly located approximately 0.16 miles west of the site. The facility is listed on the RWQCB's LUST database. According to a RWQCB letter, dated September 24, 1998, the facility received a no further action status. Based on the information reviewed during this investigation, this facility is not suspected of negatively impacting the site at this time.

The Midtown Office Center facility, 2020 J Street, was reportedly located approximately 0.13 miles northeast of the site. The facility is listed on the RWQCB's LUST database. According to the RWQCB Geotracker website, the facility received a no further action status on March 19, 1996. Based on the information reviewed during this investigation, this facility is not suspected of negatively impacting the site at this time.

The St. Anton Property, 2110 L Street, was located on the southeastern adjoining property, across the intersection of 21st Street and L Street. The facility was not identified in the EDR report; however, review of the Sanborn Maps indicated the presence of a gasoline station on



the property. WKA searched for the facility address on the Sacramento County Environmental Management Department's (SCEMD) Records website and located information regarding an underground storage tank (UST) at the facility. According to a Summary "Closure" Report, dated October 28, 2004, prepared by Ramcon Engineering and Environmental Contracting, two 2,000-gallon USTs were uncovered at the facility during construction activities. Ramcon removed both USTs and collected confirmation samples from the floors of both excavation pits and from two soil stockpiles from the excavations. Laboratory analytical results of the confirmation soil samples collected from the floors of the excavation pits and one of the stockpiles indicated that all concentrations were below laboratory reporting limits. Concentrations of gasoline, xylene, and ethylbenzene were detected in the sample collected from the other stockpile. SCEMD approved the use of the stockpiled soils as backfill. According to a SCEMD letter, dated October 29, 2004, the facility received a no further action status. Based on the information reviewed during this investigation, this facility is not suspected of negatively impacting the site at this time.

4.3.2 Preliminary Screen for Vapor Encroachment Conditions

WKA conducted a preliminary screening for vapor encroachment conditions (VEC) beneath the site using the Tier 1 vapor encroachment screening evaluation¹. The Tier I screening included performing a *Search Distance Test* to identify if there are any known or suspect contaminated properties surrounding or upgradient of the site within specific search radii, and a *Chemicals of Concern (COC) Test* (for those known or suspect contaminated properties identified within the *Search Distance Test*) to evaluate whether or not COC are likely to be present. The Vapor Encroachment Screening Matrix is included in Appendix D.

Based on the completion of the VEC-screening matrix, a VEC can be ruled out because a VEC does not or is not likely to exist.

4.3.3 Environmental Lien Search

Pappas Investments did not authorize WKA to conduct a search for environmental liens and AULs. Ms. Merrilee Margetts, Pappas Investments, was not aware of any environmental liens that have been recorded for the site.

¹ The Preliminary Screen for Vapor Encroachment Conditions was based on the guidelines presented in the ASTM E 2600-10 *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*.



5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Data Gaps

The time intervals between the Standard Historical Sources (i.e., topographic maps, aerial photographs, other historical sources) exceeded the ASTM minimum five-year period. However, the use of the site appears unchanged within the time gaps, and therefore, research of the site use during the time gaps is not required by the ASTM Standard (Refer to *Section 8.3.2.1 – Intervals* of the ASTM E 1527-05 standard).

It is the opinion of WKA that no significant data gaps were identified during the preparation of this report that affects the ability of the Environmental Professional to identify RECs on the site.

5.2 Conclusions

- The historical land use research dating back to the late 1800s revealed that the site was developed with a residence in 1895. The 1915 Sanborn Map shows the site was developed with several residences and a structure that was labeled as “Auto Repair”. The 1950 Sanborn Map shows the site was developed with residences, stores, and the building formerly shown as “Auto Repair” and “Paint Shop” is now shown as “Restaurants”. The 1957 Sanborn Map shows the central portion of the site cleared of buildings and labeled as a parking lot. The site has been developed with its current configuration of parking lots, a parking garage, and office building since at least 1965.
- An asbestos containing building materials survey conducted on the site building in 2010 indicated the presence of asbestos in the building materials.
- The site is located within a 100-year regulatory floodplain, as designated by the Federal Emergency Management Agency (FEMA).
- Given the documentation reviewed concerning the neighboring agency listed facilities, none of the facilities reviewed is likely to have a negative impact on the site. Based on the completion of the vapor encroachment condition (VEC) screening matrix, WKA concludes a VEC can be ruled out because a VEC does not or is not likely to exist.

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-05 for the 20th-21st on L Street Property. Any exceptions to, or deletions from, this practice are described in Section 5.4 of this report. This assessment has revealed no evidence of RECs in connection with the site except the following:



- On-site concerns were noted from the operations of an automotive repair facility and the paint facility identified on the 1915 Sanborn Map.

A full copy of this ESA report, in a .pdf format, is included on the attached CD.

5.3 Recommendations

Based on the conclusions presented and the documentation contained herein, WKA makes the following recommendations:

- WKA recommends that it be provided an opportunity to review new information indicating that a soil disturbing activity has encountered previously undetected evidence of a chemical release from the operations of an automotive repair facility or paint facility that formerly occupied the site. WKA will determine whether the new information warrants revision of the findings and conclusions presented in this report.

5.4 Exceptions and/or Deletions

No exceptions or deletions from the ASTM E 1527-05 standard were made during the performance of this ESA.

5.5 Additional Services

Non-scope considerations, such as assessment for naturally occurring asbestos (NOA), wetlands evaluation, indoor air quality, laboratory testing of the soils and groundwater beneath the site for environmental contaminants (such as agricultural-related pesticides, termiticides, polychlorinated biphenyls [PCBs], or arsenic and lead), and assessments for asbestos containing materials and lead-based paint were not included or requested as part of this ESA. Additionally, this ESA included conducting a Tier 1 vapor encroachment screening in accordance with the *ASTM E 2600-10 Vapor Encroachment Screening on Property Involved in Real Estate Transactions*.



6.0 LIMITATIONS

The statements and conclusions in this report are based upon the scope of work described above and on observations made only on the date of the field reconnaissance, December 3, 2013. Work was performed using a degree of skill consistent with that of competent environmental consulting firms performing similar work in the area. Information regarding the site that is *publicly available and practically reviewable*, as described in the ASTM standard, was obtained. Additional research or receipt of information regarding the site that was not disclosed or available to WKA during this assessment may result in revision of the conclusions. The conclusions in this report should be reevaluated if site conditions change. No recommendation is made as to the suitability of the site for any purpose. The results of this assessment do not preclude the possibility that materials currently or in the future defined as hazardous are present on the site, nor do the results of this work guarantee the potability of groundwater beneath the site. This report is applicable only to the investigated site and should not be used for any other property. No warranty is expressed or implied.

This report is viable for one year from the publication date of the report provided the following components are updated within 180 days of the date of purchase or (for transactions not involving an acquisition) the date of the intended transaction:

- Interviews with current owners/occupants and/or in order to identify changes in site conditions or uses since the publication date of this report
- Searches for recorded environmental cleanup liens
- Visual inspection of the site and of adjoining properties with emphasis on changes in conditions or uses since the publication date of this report
- A current review of federal, state, tribal and county databases
- The declaration by the environmental professional responsible for the assessment.

Environmental Site Assessments completed more than one year prior to the date of purchase must be reviewed and updated in order for the *Environmental Site Assessment* to be considered valid per Section 4.6 (*Continued Viability of Environmental Site Assessment*), and Sections 4.7 and 8.4 (*Prior Assessment Usage*) of the ASTM E 1527-05 Standard.



7.0 REFERENCES

- ASTM International. 2005. American Society for Testing and Materials, ASTM Standard E 1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania (November 2005).
- ASTM International. 2010. American Society for Testing and Materials, ASTM Standard E 2600-10, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania (June 2010).
- Environmental Data Resources, Inc. (EDR[®]):
- 2013a. *Certified Sanborn Map Report, 20th-21st Street on L Street Property, 2025 L Street, Sacramento, California, Inquiry Number 3793649.3*, Milford, Connecticut, (November 22, 2013).
 - 2013b. *The EDR Historical Topographic Map Report, 20th-21st Street on L Street Property, 2025 L Street, Sacramento, California, Inquiry Number 3793649.4*, Milford, Connecticut, (November 22, 2013).
 - 2013c. *The EDR Aerial Photo Decade Package Report 20th-21st Street on L Street Property, 2025 L Street, Sacramento, California, Inquiry Number 3793649.5*, Milford, Connecticut, (November 26, 2013).
 - 2013d. *The EDR City Directory Abstract 20th-21st Street on L Street Property, 2025 L Street, Sacramento, Inquiry Number 3793649.6*, Milford, Connecticut, (November 22, 2013).
 - 2013e. *The EDR Radius Map Report with GeoCheck, 20th-21st Street on L Street Property, 2025 L Street, Sacramento, California, Inquiry Number 3793649.2s*, Milford, Connecticut, (November 22, 2013).
- Norris, R. M., Webb, R. W., 1990, *Geology of California* Second Edition, John Wiley and Sons, Inc. New York.
- ParcelQuest, 2013, Detail Report Property Address: 2025 L Street, Sacramento, CA, Retrieved [November 2013] from the World Wide Web: <<http://www.parcelquest.com/>>.
- State of California, Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), *DOGGR On-line Mapping System (DOMS), District 6, Northern California* <<http://maps.conservation.ca.gov/doms/index.html>> (December 2013).
- United States Department of Agriculture, Natural Resources Conservation Service, *Web Soil Survey*, <http://soils.usda.gov/technical/classification/osd/index.html> (December 2013).

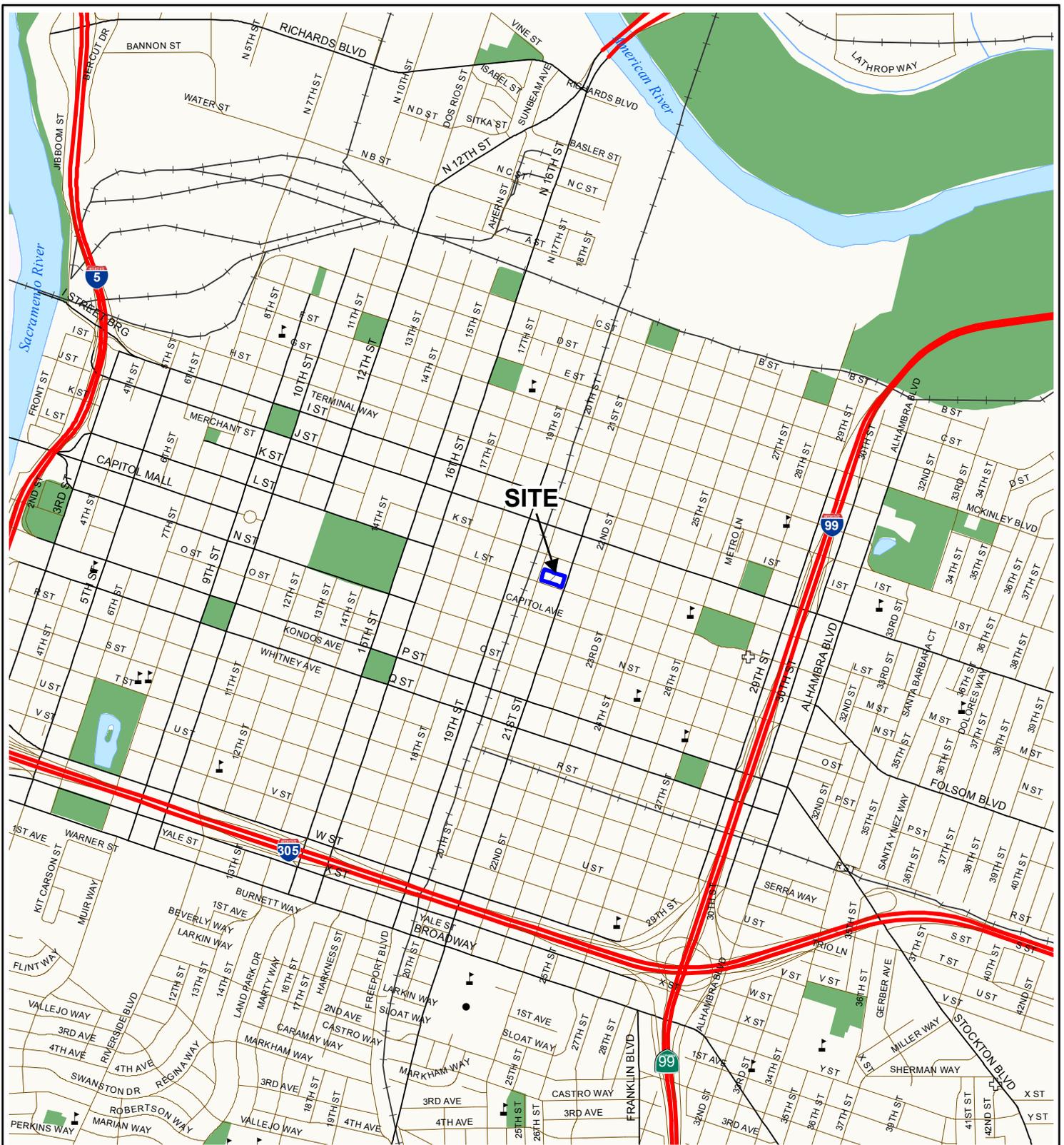


Wagner, D.L., et al, State of California Department of Mines and Geology, 1981, *Geologic Map of the Sacramento Valley and Sierra Foothills, California* [map]. 1:250,000, Regional Geologic Map Series, Map No. 1A (Geology). Capitol Heights, MD: William Heintz Map Corporation.

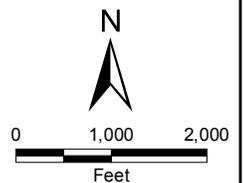


FIGURES



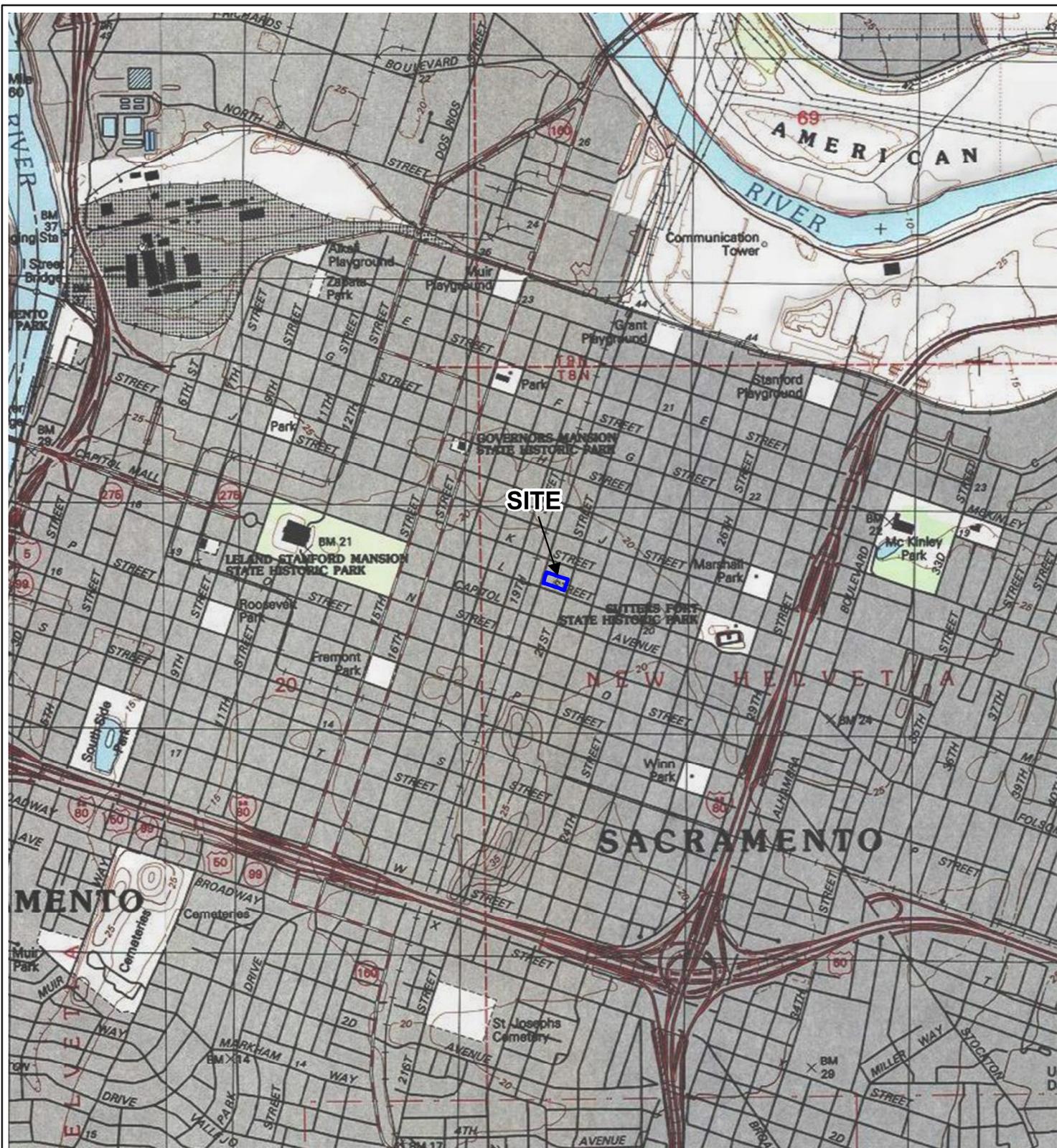


Street data courtesy of Sacramento County.
 Hydrography courtesy of the U.S. Geological Survey
 acquired from the GIS Data Depot, December, 2007.
 Projection: NAD 83, California State Plane, Zone II

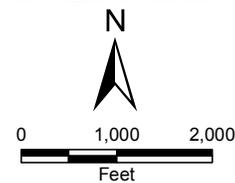


VICINITY MAP
20TH - 21ST ON L STREET PROPERTY
 Sacramento, California

FIGURE 1	
DRAWN BY	TJC
CHECKED BY	NMM
PROJECT MGR	DBN
DATE	12/13
WKA NO. 9955.02	



Adapted from U.S. Geological Survey 7.5 minute topographic maps of the Sacramento East and Sacramento West quadrangles, California, 1980. Projection: NAD 83, California State Plane, Zone II

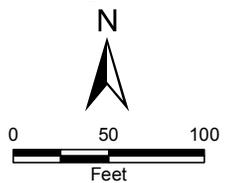


TOPOGRAPHIC MAP
20TH - 21ST ON L STREET PROPERTY
 Sacramento, California

FIGURE 2	
DRAWN BY	TJC
CHECKED BY	NMM
PROJECT MGR	DBN
DATE	12/13
WKA NO. 9955.02	



Adapted from the Sacramento County Assessor's
 Map Book 007, Page 008.
 Projection: NAD 83, California State Plane, Zone II

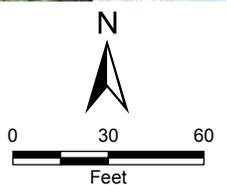


PARCEL MAP
 20TH - 21ST ON L STREET PROPERTY
 Sacramento, California

FIGURE 3	
DRAWN BY	TJC
CHECKED BY	NMM
PROJECT MGR	DBN
DATE	12/13
WKA NO. 9955.02	



Adapted from a Google Earth aerial photograph,
 dated August 14, 2013.
 Projection: NAD 83, California State Plane, Zone II



AERIAL SITE MAP
 20TH - 21ST ON L STREET PROPERTY
 Sacramento, California

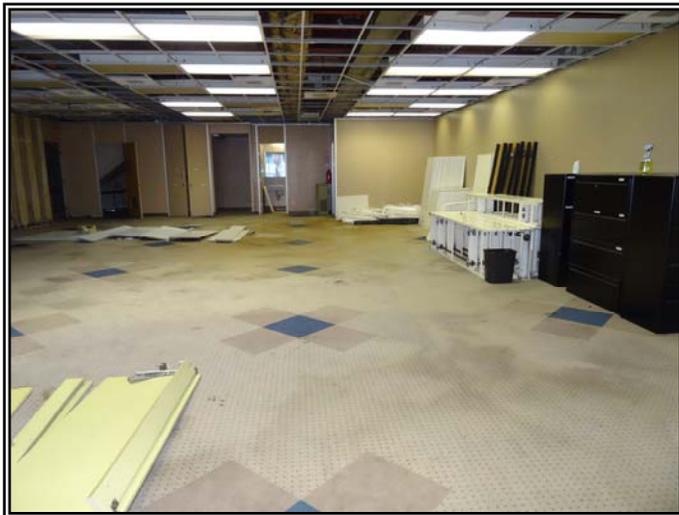
FIGURE 4	
DRAWN BY	TJC
CHECKED BY	NMM
PROJECT MGR	DBN
DATE	12/13
WKA NO. 9955.02	



Looking northeast at the general view of the parking garage on the central portion of the site.



Looking northwest at the two-story office building on the southeastern portion of the site.



Looking at the general view of the interior of the office building.



Looking at the general view of the interior of the office building.



Looking at the storage of paint in the parking garage.



Looking at the storage cage in the parking garage.



Looking at the interior of the parking garage.



Looking north at the parking lot on the eastern portion of the site.



COLOR PHOTOGRAPHS
 20TH - 21ST ON L STREET PROPERTY
 Sacramento, California

FIGURE 5b	
DRAWN BY	NMM
CHECKED BY	DBN
PROJECT MGR	DBN
DATE	12/13
WKA NO. 9955.02	

APPENDIX A
RESUMES



NANCY M. MALARET
PROJECT ENVIRONMENTAL SCIENTIST

Ms. Malaret has been employed in the environmental field since 2003. She graduated from University of California, Davis with a degree in Hydrologic Science.

Ms. Malaret worked for the Florida Department of Health for four years. She assisted with the coordination of sampling potable water wells throughout the state of Florida. Ms. Malaret used GIS mapping techniques to identify private potable wells located near commercial and industrial facilities that may have contaminated the groundwater. She coordinated the sampling of the wells and the analysis of water samples collected. She worked with the Florida Department of Environmental Protection to place filters on the private wells with contaminated water. Ms. Malaret also worked with the Health Assessment Team at the Florida Department of Health. She conducted human health risk assessments based on groundwater and soil data collected during contamination assessments of industrial facilities. Ms. Malaret used the Agency for Toxic Substances and Disease Registry's Public Health Assessment Guidelines to evaluate resident's risk of illness from exposure to contaminated groundwater and surface soils. Ms. Malaret used Risk Assistant software to determine dose estimates and compared the results with toxicological studies. Ms. Malaret's human health risk assessments focused on sites with Volatile Organic Compounds, Semi-volatile Organic Compounds, and metals contamination.

Ms. Malaret has six years of experience in due diligence. Her Phase I Environmental Site Assessment experience includes wooded, rural, and urban properties. Her investigations have involved multiple parcel sites with extensive history, large-scale residential subdivisions, office buildings, gasoline stations, dry cleaners, and heavy equipment manufacturing and repair facilities. Ms. Malaret has conducted multiple corridor assessments along roadways being prepared for expansion or improvements. She also conducted a Hazardous, Toxic, and Radioactive Waste Assessment for the United States Army Corps of Engineers on a 20-mile stretch of the St. Johns River in Jacksonville, Florida. Ms. Malaret conducted soil and groundwater sampling associated with Phase II Environmental Site Assessments. Ms. Malaret coordinated long-term groundwater sampling events for sites with residual petroleum contamination.

Ms. Malaret has worked with communities impacted by contamination, local, state, and federal government agencies, banks and developers.

Moody Property, Vacaville, CA: Ms. Malaret managed the Phase I Environmental Site Assessment of a 38.5-acre property of undeveloped land located in Vacaville to support the redevelopment of the property into a residential development.

Mercantile Property, Rancho Cordova, CA: Ms. Malaret managed the Phase I Environmental Site Assessment of a 4.1-acre property developed with a commercial building. Evaluation of regulatory facilities within the site vicinity included the former Aerojet Facility.

Woodmere Property, Folsom, CA: Ms. Malaret managed the Phase I Environmental Site Assessment of a 2.5-acre property developed with an office building. Historical research of the property included evaluating former mining operations at the site.

HIGHER EDUCATION:

University of California, Davis
Bachelor of Science, Hydrologic Science (1999)

DENNIS B. NAKAMOTO

SENIOR HYDROGEOLOGIST

Mr. Nakamoto has 33 years experience in the fields of environmental consulting, groundwater studies, site characterization, remediation construction oversight, and regulatory compliance. As Senior Hydrogeologist, Mr. Nakamoto manages projects and mentors professionals regarding studies of anthropogenic and naturally occurring constituents including: petroleum hydrocarbons, metals, chlorinated hydrocarbons, pesticides and herbicides, and asbestos in soil and groundwater. His projects include studies of soil, soil vapor, and groundwater contaminants with focus on human health risk assessment and identification of environmental risk assessment, groundwater resource and supply with focus on well design, well rehabilitation and aquifer characterization. Mr. Nakamoto is experienced in implementing remediation actions from excavation and disposal to insitu treatment. Mr. Nakamoto is experienced in the interpretation of downhole geophysical data from surveys including, electric logs, gamma and natural gamma logs, neutron logs, and acoustic logs. He is experienced in the groundwater well drilling methods and the application of well construction methods, including some applications from the petroleum industry. He has groundwater extraction well designs have successfully addressed issues such as excessive sand production, selective screen intervals to exclude undesirable groundwater quality and corrosive aquifer conditions.

SELECTED PROJECT EXPERIENCE

Risk Based Cleanup, Future Sacred Heart Elementary School, Sacramento, California: Mr. Nakamoto worked on behalf of Catholic Health Care West, Sacramento Diocese and the Sacred Heart Parish to establish appropriate soil remediation goals for lead, chlordane, and dieldrin in soil at the future Sacred Heart Elementary School site. He represented Sacred Heart Parish in negotiations with Catholic Health Care West to identify appropriate site characterization and mitigation efforts. He represented Sacred Heart Parish in meetings with the California Department of Toxic Substances Control to establish statistically derived risk-based values to determine site-specific cleanup levels for the chemicals present in soil. Mr. Nakamoto also represented the project during City of Sacramento Council meetings and Community Relations Building meetings. He provided technical oversight, on behalf of Sacred Heart Parish and Catholic Health Care West, of site remediation activities, including disposal of RCRA hazardous wastes.

Brownfield Development, Prospective Purchaser Agreement, Sacramento, California: Mr. Nakamoto served as the lead environmental consultant that successfully negotiated a 2006 Prospective Purchaser Agreement (PPA) between the Central Valley Regional Water Quality Control Board (CVRWQCB) and Signature Properties for a residential development proposed within the area of large-scale groundwater contamination. Negotiations with the PPA required focused consensus building and close coordination with CVRWQCB staff and counsel.

Preliminary Endangerment Assessment, Rancho Cordova, California: Mr. Nakamoto assisted a Land Developer in successfully securing

DTSC approval of a Preliminary Endangerment Assessment (PEA) on land proposed for residential development in Rancho Cordova, California. His detailed analyses of data demonstrated that variability of metal concentrations in selected soil samples were not representative of the actual metal concentrations in site soil. This demonstration allowed DTSC to concur that soil within the property did not pose a threat to the residential development.

Phase I ESA, Oroville, California: Mr. Nakamoto completed a Phase I ESA for Thermalito Union School District, Oroville, California that revealed the proposed school site historically supported agricultural and automotive repair facility activities. Based on initial ESA findings, DTSC approved Mr. Nakamoto's recommendation to include analyzing soil samples for pesticide residues and metals in surface soil as a part of the ESA. This resulted in the District saving considerable time and expense.

7th Street Extension, Sacramento, CA: Performed Environmental Oversight Authority monitoring for the \$25 million project connecting downtown Sacramento to the Richards Boulevard (North Sacramento are) by extending 7th Street across the former Sacramento Locomotive Works Yard, a former Superfund property. One element of this project was the below grade crossing at the Union Pacific Railroad track line. Excavation at this location revealed the presence of material suspected to be foundry slag. Laboratory analysis of carefully selected samples showed the material was not foundry slag. Other issues resolved during this project included handling and discharge of groundwater from dewatering activities and participation in the community relations team activities.

Federal Courthouse Building, Sacramento, CA: Served as EOA for this project, which was the first development of the former Sacramento Locomotive Works Yard Superfund Site. Closely coordinated with the City of Sacramento, DTSC, Union Pacific Railroad Company, and the Project managers, General Services Administration. During this project, several areas of concern were studied that included:

- ♦ Leaking Underground Storage Tanks
- ♦ Features deemed of Archeological interest
- ♦ Presence of Stoddard's solvent in soil
- ♦ Presence of oil containing total and soluble metal concentrations exceeding California thresholds for hazardous wastes

Fire Station Number 5 Replacement, City of Sacramento, CA: The initial project involved preparation and implementation of a work plan for characterizing an historic landfill previously identified as lying beneath a portion of the station property. Construction of the new Fire Station building required that a portion of the historic landfill be excavated. Soil sample analyses revealed total and soluble lead concentrations in soil at some locations exceeded hazardous thresholds established by either California or Federal standards.

Preliminary Endangerment Assessments – Various Locations (CA):

Adelane High School Parking Lot, Roseville: Former residential property where weathering of paint surfaces had resulted in the presence of lead containing paint chip in soil. Laboratory analysis of soil samples confirmed the vertical and lateral distribution of lead containing paint chips in soil. Excavation activities allowed for removal of the impacted soil for appropriate disposal.

Eureka School Assessment, Granite Bay – PEA performed to address the potential presence of

HIGHER EDUCATION:

University of California, Davis, California
B.S. Geology (1977)

pesticide residues in soil historically operated as an olive orchard. Close coordination with DTSC, regarding planning the sample collection plan, allowed for DTSC determination that the property posed no threat to the proposed use as a school facility.

Thermalito Union School District, Oroville – The initial Environmental Site Assessment (ESA) activities revealed the proposed school site was historically supported agricultural and automotive repair facility activities. Based on presenting initial ESA findings, DTSC approved expanding the ESA scope to include analyzing soil samples for pesticide residues and metals in surface soil. Completing the sampling and analysis activities concurrent with the ESA resulted in the District saving considerable time and expense.

Railroad Transportation Facilities, Various Locations (CA, NV): Conducted studies of soil and groundwater contamination at various railroad facilities operated by the Southern Pacific Transportation Company and the Union Pacific Railroad Company. These sites were located throughout California and Nevada. Studies regarding compliance with the Toxic Pits Cleanup Act (TPCA), as well as studies of railroad contamination, resulted in properties being designated Superfund properties. Contaminants at these properties included:

- ♦ Bunker Oil and its related carcinogenic compounds related to storage tank operations
- ♦ Metal contamination related to metal works and refinishing activities
- ♦ Soil pH and contaminated related to lead acid battery maintenance activities
- ♦ Chlorinated solvents related to industrial cleaning activities
- ♦ Asbestos related to locomotive rehabilitation activities

PROFESSIONAL REGISTRATIONS:

California
Professional Geologist No. 3863, California,
Certified Engineering Geologist No. 1353
Certified Hydrogeologist No. 260

Oregon
Professional Geologist and an Engineering
Geologist No. E 1535

Wyoming
Professional Geologist No. PG 2157

APPENDIX B
ASTM E 1527-05 User Questionnaire
and Helpful Documents Checklist



E 1527-05 USER QUESTIONNAIRE
20th-21st ON L STREET PROPERTY

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"), the *user*² must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

(1.) Have you performed a search for environmental cleanup liens and AULs, as described under *User Obligations* in the attached proposal, for the *property*? *NO*

(2.) Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law? *NO*

(3.) Are you aware of any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? *NO*

(4.) As the *user* of the report, do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

office building & parking lot / garage

(5.) Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present on the *property*? *N/A*

(6.) Are you aware of commonly known or reasonably ascertainable information about the *property* that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

(a.) Do you know the past uses of the *property*? If so, what were they?

used as above since our purchase in 1991, no prior knowledge of property uses.

(b.) What, if any, specific chemicals are present or once were present at the *property*?

nothing that I know of.

² User, as defined in the ASTM Standard is "the party seeking to use Practice E 1527 to complete an environmental site assessment of the property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The user has specific obligations for completing a successful application of this practice as outline in Section 6 [of the ASTM Standard]."



E 1527-05 USER QUESTIONNAIRE (cont.)
20th-21st ON L STREET PROPERTY

Questions 6 continued:

(c.) What, if any, spills or other chemical releases have taken place at the *property*?

None that I am aware of.

(d.) What, if any, environmental cleanups have taken place at the *property*?

None that I am aware of.

(7.) As the user of this ESA, based on your knowledge and experience related to the *property* are there any obvious indicators that point to the presence or likely presence of contamination at the *property*? *NO*

COMPLETION:

I have completed this User Questionnaire to the best of my knowledge and provided all information to the environmental professional as of the following date:

Completed by: *Merrilee Margitt* *Merrilee Margitt*

Date: *11/19/13*

Title: *Project Manager*

Signature: *Merrilee Margitt*

Phone Number: *916-447-7100*

Relationship to the Site (i.e., owner, lender, property manager): *project manager*



HELPFUL DOCUMENTS
20th-21st ON L STREET PROPERTY

Are you aware of any of the below-listed reports, as they relate specifically to the property?

X Yes ___ No (if yes, please check all that apply):

- Environmental Site Assessment reports (Phase I ESA, Asbestos sampling reports, etc.)
- Environmental Compliance Audit reports
- Geotechnical Reports
- Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits)
- Registrations for underground or above ground storage tanks
- Registrations for underground injection systems
- Material Safety Data Sheets
- Community Right-to-Know plan
- Safety Plan
- Reports regarding Hydrogeologic conditions on the property or surrounding area
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property
- Hazardous waste generator notices, or reports
- Environmental Impact Reports (draft and/or final)
- Risk assessments
- Recorded AULs

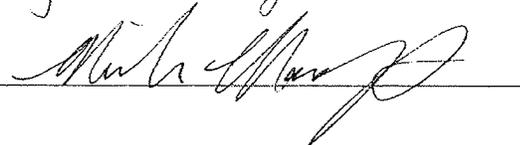
If any of the above listed documents are available, will copies be provided to WKA for review?

X Yes ___ No

Completed by Merrilee Margetts

Date: 11/19/13

Title: Project Manager

Signature: 



APPENDIX C
EDR[®] Radius Map Report Executive Summary



20th-21st on L Street Property

2025 L Street
Sacramento, CA 95811

Inquiry Number: 3793649.2s
November 22, 2013

The EDR Radius Map™ Report with GeoCheck®



440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
 Please contact EDR at 1-800-352-0050
 with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2025 L STREET
SACRAMENTO, CA 95811

COORDINATES

Latitude (North): 38.5747000 - 38° 34' 28.92"
Longitude (West): 121.4801000 - 121° 28' 48.36"
Universal Tranverse Mercator: Zone 10
UTM X (Meters): 632401.9
UTM Y (Meters): 4270470.5
Elevation: 21 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 38121-E4 SACRAMENTO EAST, CA
Most Recent Revision: 1980

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year: 2012
Source: USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls
LUCIS..... Land Use Control Information System

Federal ERNS list

ERNS..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST..... Active UST Facilities
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land
FEMA UST..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties

EXECUTIVE SUMMARY

INDIAN VCP..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs
SCH..... School Property Evaluation Program
Toxic Pits..... Toxic Pits Cleanup Act Sites
CDL..... Clandestine Drug Labs
US HIST CDL..... National Clandestine Laboratory Register

Local Land Records

LIENS 2..... CERCLA Lien Information
LIENS..... Environmental Liens Listing
DEED..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
CHMIRS..... California Hazardous Material Incident Report System
LDS..... Land Disposal Sites Listing
MCS..... Military Cleanup Sites Listing

Other Ascertainable Records

RCRA NonGen / NLR..... RCRA - Non Generators
DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites
FUDS..... Formerly Used Defense Sites
CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
UMTRA..... Uranium Mill Tailings Sites
US MINES..... Mines Master Index File
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS..... Section 7 Tracking Systems
ICIS..... Integrated Compliance Information System
PADS..... PCB Activity Database System
MLTS..... Material Licensing Tracking System
RADINFO..... Radiation Information Database

EXECUTIVE SUMMARY

FINDS.....	Facility Index System/Facility Registry System
RAATS.....	RCRA Administrative Action Tracking System
RMP.....	Risk Management Plans
UIC.....	UIC Listing
NPDES.....	NPDES Permits Listing
Cortese.....	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings.....	CUPA Resources List
Notify 65.....	Proposition 65 Records
WIP.....	Well Investigation Program Case List
ENF.....	Enforcement Action Listing
EMI.....	Emissions Inventory Data
INDIAN RESERV.....	Indian Reservations
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
MWMP.....	Medical Waste Management Program Listing
COAL ASH DOE.....	Steam-Electric Plant Operation Data
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
HWT.....	Registered Hazardous Waste Transporter Database
HWP.....	EnviroStor Permitted Facilities Listing
Financial Assurance.....	Financial Assurance Information Listing
LEAD SMELTERS.....	Lead Smelter Sites
2020 COR ACTION.....	2020 Corrective Action Program List
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
PRP.....	Potentially Responsible Parties
WDS.....	Waste Discharge System
EPA WATCH LIST.....	EPA WATCH LIST
US FIN ASSUR.....	Financial Assurance Information
PCB TRANSFORMER.....	PCB Transformer Registration Database
PROC.....	Certified Processors Database

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

EXECUTIVE SUMMARY

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 07/11/2013 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TRIBUTE PARTNERS LLC	1926 CAPITOL AVE	SW 0 - 1/8 (0.125 mi.)	O63	42

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 07/11/2013 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KITS CAMERAS 1 HOUR NO 107	2200 J ST	ENE 1/8 - 1/4 (0.180 mi.)	AA111	70
WOODARD FICETTI CLEANERS	2201 J ST	ENE 1/8 - 1/4 (0.181 mi.)	AA118	79
JAY STREET AUTOMOTIVE	2321 JAY ST	ENE 1/8 - 1/4 (0.236 mi.)	AM192	127

State- and tribal - equivalent NPL

RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the RESPONSE list, as provided by EDR, and dated 09/05/2013 has revealed that there are 7 RESPONSE sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KEN'S BUFF AND PLATING	1816 21ST STREET	SSW 1/2 - 1 (0.552 mi.)	236	262
D T S C CAL EPA	2809 S ST	SSE 1/2 - 1 (0.829 mi.)	AZ247	290
UNION PACIFIC RAILROAD - NORTH	1324 NORTH A ST	N 1/2 - 1 (0.976 mi.)	BB255	324

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ORCHARD SUPPLY CO	1731 17TH ST	SW 1/2 - 1 (0.545 mi.)	AW232	223
16TH STREET PLATING	1826 16TH STREET	WSW 1/2 - 1 (0.547 mi.)	AX234	254
FONT'S PROPERTY	1822 16TH STREET	WSW 1/2 - 1 (0.547 mi.)	AX235	258
PALM IRON WORKS	1515 S STREET	SW 1/2 - 1 (0.712 mi.)	AY243	282

EXECUTIVE SUMMARY

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 09/05/2013 has revealed that there are 30 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
L STREET SITE - #1830 Status: Refer: RWQCB	1830 L STREET	W 1/8 - 1/4 (0.164 mi.)	X101	65
WOODARD-FICETTI CLEANERS & DRY Status: Refer: Other Agency	2201 J ST	ENE 1/8 - 1/4 (0.181 mi.)	AA117	77
FORMER RED FEATHER DRY CLEANER Status: Refer: Other Agency	2500 J STREET	E 1/4 - 1/2 (0.375 mi.)	210	152
VALLEY GRAPHICS ARTS & ENGRAVE Status: Inactive - Needs Evaluation	1711 18TH STREET	SW 1/4 - 1/2 (0.474 mi.)	227	205
ORCHARD SUPPLY COMPANY/WORLD O Status: No Further Action	THE BUILDING AT THE ORC	SW 1/2 - 1 (0.520 mi.)	231	220
KEN'S BUFF AND PLATING Status: Backlog	1816 21ST STREET	SSW 1/2 - 1 (0.552 mi.)	236	262
CHROME CRAFT Status: Refer: RWQCB	1819 23RD ST	S 1/2 - 1 (0.587 mi.)	238	269
MCCURRY COMPANIES Status: No Further Action	1231 K ST	WNW 1/2 - 1 (0.630 mi.)	240	275
ALTA PLATING INCORPORATED Status: Refer: RWQCB	1733 S ST.	SW 1/2 - 1 (0.635 mi.)	241	276
CALIFORNIA ANALYTICAL LABS. Status: No Further Action	401 N 16TH ST.	N 1/2 - 1 (0.697 mi.)	242	281
ONE HOUR MARTINIZING Status: Refer: Other Agency	1000 ALHAMBRA BLVD	E 1/2 - 1 (0.814 mi.)	246	286
D T S C CAL EPA Status: Active	2809 S ST	SSE 1/2 - 1 (0.829 mi.)	AZ247	290
A-1 PAINTERS, DECORATORS & PAP Status: Refer: Other Agency	2816 S STREET	SSE 1/2 - 1 (0.834 mi.)	AZ248	308
AMERICAN PLATING WORKS Status: Inactive - Needs Evaluation	2822 S STREET	SSE 1/2 - 1 (0.837 mi.)	AZ249	310
SMUD NORTH CITY SUBSTATION Status: Inactive - Needs Evaluation	20TH AND NORTH B STREET	NNE 1/2 - 1 (0.922 mi.)	253	319
SPURGEON CLEANING & DYEING Status: Refer: Other Agency	3200 FOLSOM BLVD	ESE 1/2 - 1 (0.945 mi.)	254	320
UNION PACIFIC RAILROAD - NORTH Status: Active	1324 NORTH A ST	N 1/2 - 1 (0.976 mi.)	BB255	324

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NORTH 12TH STREET SOCIAL SERVI Status: Inactive - Action Required	1221 N A ST., 1223 N A	N 1/2 - 1 (0.983 mi.)	BB257	349
ARROW CURTAIN AND DRAPERY CLEA Status: Refer: Other Agency	3301 FOLSOM BOULEVARD	ESE 1/2 - 1 (0.998 mi.)	258	350
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MERCURY CLEANERS Status: Refer: Other Agency	1419 16TH STREET	WSW 1/4 - 1/2 (0.402 mi.)	AV219	172
ORCHARD SUPPLY CO Status: Active	1731 17TH ST	SW 1/2 - 1 (0.545 mi.)	AW232	223
16TH STREET PLATING Status: Certified	1826 16TH STREET	WSW 1/2 - 1 (0.547 mi.)	AX234	254
FONTS PROPERTY Status: Certified	1822 16TH STREET	WSW 1/2 - 1 (0.547 mi.)	AX235	258
A-1 PLATING CO. (INACTIVE #3) Status: Inactive - Needs Evaluation	1721 16TH ST.	SW 1/2 - 1 (0.584 mi.)	237	268
1500 Q STREET SITE Status: Refer: Other Agency	1500 Q STREET	WSW 1/2 - 1 (0.596 mi.)	239	274
PALM IRON WORKS Status: Certified	1515 S STREET	SW 1/2 - 1 (0.712 mi.)	AY243	282
YOUR CLEANERS (INACTIVE #242) Status: Refer: Other Agency	1924 16TH ST.	SW 1/2 - 1 (0.715 mi.)	245	285
CADA WAREHOUSE REDEVELOPMENT P Status: Certified	1108 R STREET	WSW 1/2 - 1 (0.888 mi.)	250	311
MATHER MIL AF (J09CA0012) Status: No Further Action	0.62 ACRE IN THE CITY O	W 1/2 - 1 (0.894 mi.)	BA251	317
MATHER STORAGE ANX (J09CA0081) Status: Inactive - Needs Evaluation		W 1/2 - 1 (0.894 mi.)	BA252	318

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 09/16/2013 has revealed that there are 22 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HARV'S CAR WASH Status: Completed - Case Closed	1901 L ST	W 0 - 1/8 (0.110 mi.)	J44	27
SWEIGARD PROPERTY Status: Completed - Case Closed	1830 L ST	W 1/8 - 1/4 (0.130 mi.)	P71	48
MID-TOWN OFFICE CENTER Status: Completed - Case Closed	2020 J ST	NE 1/8 - 1/4 (0.139 mi.)	N84	54
CAPITOL PLAZA RETIREMENT Status: Completed - Case Closed	1812-1820 L ST	W 1/8 - 1/4 (0.178 mi.)	X109	69

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LAWRENCE MAYFLOWER MOVING & ST Status: Completed - Case Closed	908 20TH ST	N 1/8 - 1/4 (0.206 mi.)	AG143	92
NIELLO CHEVROLETE Status: Completed - Case Closed	1701 K ST	WNW 1/4 - 1/2 (0.266 mi.)	AQ201	133
CHEAPER LIQUOR #142 Status: Completed - Case Closed	809 20TH ST	NNE 1/4 - 1/2 (0.273 mi.)	202	136
1622 K STREET Status: Completed - Case Closed	1622 K STREET	WNW 1/4 - 1/2 (0.324 mi.)	AS204	140
1622 K STREET	1622 K STREET	WNW 1/4 - 1/2 (0.324 mi.)	AS205	143
FORMER SHELL SERVICE STATION	1601 L STREET	WNW 1/4 - 1/2 (0.337 mi.)	AT207	144
SHELL OIL PRODUCTS US 170736 Status: Open - Eligible for Closure	1601 L ST	WNW 1/4 - 1/2 (0.337 mi.)	AT208	144
WAREHOUSE (VACANT) Status: Completed - Case Closed	1630 I ST	NW 1/4 - 1/2 (0.379 mi.)	211	153
15TH & L INVESTORS	1501 L STREET	WNW 1/4 - 1/2 (0.388 mi.)	AU212	155
15TH & L INVESTORS Status: Completed - Case Closed	1501 L STREET	WNW 1/4 - 1/2 (0.388 mi.)	AU213	155
FORMER FIRESTONE SERVICE CENTE	1531 L STREET	WNW 1/4 - 1/2 (0.391 mi.)	AU214	157
FORMER FIRESTONE SERVICE CENTE Status: Completed - Case Closed	1531 L STREET	WNW 1/4 - 1/2 (0.391 mi.)	AU215	158
FORMER CHEVRON #3-0205 Status: Completed - Case Closed	1530 L ST	WNW 1/4 - 1/2 (0.391 mi.)	216	161
TED WILLAIM'S GARAGE Status: Completed - Case Closed	1616 20TH ST	SSW 1/4 - 1/2 (0.392 mi.)	217	167
TARNASKY RESIDENCE Status: Completed - Case Closed	630 22ND ST	NE 1/4 - 1/2 (0.422 mi.)	220	174
SACRAMENTO BEE Status: Completed - Case Closed	2100 Q STREET	SSW 1/4 - 1/2 (0.433 mi.)	221	175
UNOCAL #5382 Status: Completed - Case Closed	1600 H ST	NNW 1/4 - 1/2 (0.448 mi.)	224	198
KRAUS REVOCABLE TRUST Status: Completed - Case Closed	1431 L STREET	WNW 1/4 - 1/2 (0.469 mi.)	226	203

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 09/16/2013 has revealed that there are 5 SLIC sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
1622 K STREET Facility Status: Open - Inactive	1622 K STREET	WNW 1/4 - 1/2 (0.324 mi.)	AS204	140
FORMER RED FEATHER DRY CLEANER Facility Status: Open - Inactive	2500 J STREET	E 1/4 - 1/2 (0.375 mi.)	210	152
SACRAMENTO BEE Facility Status: Open - Site Assessment	2100 Q STREET	SSW 1/4 - 1/2 (0.433 mi.)	221	175
19TH AND Q STREETS BROWNFIELD Facility Status: Open - Site Assessment	1700 19TH ST	SSW 1/4 - 1/2 (0.444 mi.)	223	197

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MERCURY CLEANERS Facility Status: Open - Site Assessment	1419 16TH STREET	WSW 1/4 - 1/2 (0.402 mi.)	AV219	172

Sacramento Co. CS: List of sites where unauthorized releases of potentially hazardous materials have occurred.

A review of the Sacramento Co. CS list, as provided by EDR, and dated 05/03/2013 has revealed that there are 21 Sacramento Co. CS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HARV'S CAR WASH Date Closed: 02/03/1998	1901 L ST	W 0 - 1/8 (0.110 mi.)	J44	27
SWEIGARD PROPERTY	1830 L ST	W 1/8 - 1/4 (0.130 mi.)	P71	48
CAPITOL PLAZA RETIREMENT	1812 L ST	W 1/8 - 1/4 (0.177 mi.)	X106	67
BARBER'S SHOP AUTOMOTIVE	1116 18TH ST	WNW 1/8 - 1/4 (0.187 mi.)	AB123	83
LAWRENCE MAYFLOWER MOVING & ST Date Closed: 05/20/2011	908 20TH ST	N 1/8 - 1/4 (0.206 mi.)	AG143	92
NIELLO CHEVROLETE Date Closed: 03/07/1997	1701 K ST	WNW 1/4 - 1/2 (0.266 mi.)	AQ201	133
CHEAPER LIQUOR #142	809 20TH ST	NNE 1/4 - 1/2 (0.273 mi.)	202	136
SCHAAP-BRENNER TIRE CENTER	17TH/J ST	NW 1/4 - 1/2 (0.295 mi.)	203	140
1622 K STREET Date Closed: 06/14/2006	1622 K STREET	WNW 1/4 - 1/2 (0.324 mi.)	AS204	140
SHRA Date Closed: 11/03/1994	1617 K ST	WNW 1/4 - 1/2 (0.329 mi.)	AS206	143
SHELL OIL PRODUCTS US 170736	1601 L ST	WNW 1/4 - 1/2 (0.337 mi.)	AT208	144
WAREHOUSE (VACANT) Date Closed: 05/20/1999	1630 I ST	NW 1/4 - 1/2 (0.379 mi.)	211	153
15TH & L INVESTORS	1501 L STREET	WNW 1/4 - 1/2 (0.388 mi.)	AU213	155
FORMER FIRESTONE SERVICE CENTE Date Closed: 12/14/2006	1531 L STREET	WNW 1/4 - 1/2 (0.391 mi.)	AU215	158
FORMER CHEVRON #3-0205	1530 L ST	WNW 1/4 - 1/2 (0.391 mi.)	216	161
TED WILLAIM'S GARAGE Date Closed: 03/17/1993	1616 20TH ST	SSW 1/4 - 1/2 (0.392 mi.)	217	167
SACRAMENTO BEE	2100 Q STREET	SSW 1/4 - 1/2 (0.433 mi.)	221	175
19TH AND Q STREETS BROWNFIELD	1700 19TH ST	SSW 1/4 - 1/2 (0.444 mi.)	223	197
UNOCAL #5382 Date Closed: 10/12/2004	1600 H ST	NNW 1/4 - 1/2 (0.448 mi.)	224	198
KRAUS REVOCABLE TRUST	1431 L STREET	WNW 1/4 - 1/2 (0.469 mi.)	226	203
SACRAMENTO CONVENTION CENTER	1100 14TH ST	WNW 1/4 - 1/2 (0.493 mi.)	230	219

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

EXECUTIVE SUMMARY

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 06/24/2013 has revealed that there are 6 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
1610 17TH STREET	1610 17TH STREET	SW 1/4 - 1/2 (0.460 mi.)	225	201
CADA PROPERTIES SITE 4	1601 16TH	WSW 1/4 - 1/2 (0.488 mi.)	229	214
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ENTERPRISE FACILITY	1412 16TH STREET,1401-1	WSW 1/4 - 1/2 (0.372 mi.)	209	150
MERCURY CLEANERS	1419 16TH STREET	WSW 1/4 - 1/2 (0.402 mi.)	AV218	170
EAST END GATEWAY PROPERTY 1	1517-1531 N STREET	W 1/4 - 1/2 (0.443 mi.)	222	192
CADA PROPERTIES SITE 222	BLOCK 222 BOUNDED BY O	WSW 1/4 - 1/2 (0.477 mi.)	228	207

Local Lists of Hazardous waste / Contaminated Sites

HIST Cal-Sites: Formerly known as ASPIS, this database contains both known and potential hazardous substance sites. The source is the California Department of Toxic Substance Control. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

A review of the HIST Cal-Sites list, as provided by EDR, and dated 08/08/2005 has revealed that there are 6 HIST Cal-Sites sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
D T S C CAL EPA	2809 S ST	SSE 1/2 - 1 (0.829 mi.)	AZ247	290
SP-PURITY OIL	1324 A STREET	N 1/2 - 1 (0.976 mi.)	BB256	338
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ORCHARD SUPPLY COMPANY	1731 17TH STREET	SW 1/2 - 1 (0.545 mi.)	AW233	247
16TH STREET PLATING	1826 16TH STREET	WSW 1/2 - 1 (0.547 mi.)	AX234	254
FONTS PROPERTY	1822 16TH STREET	WSW 1/2 - 1 (0.547 mi.)	AX235	258
PALM IRON WORKS	1515 S STREET	SW 1/2 - 1 (0.712 mi.)	AY244	284

Local Lists of Registered Storage Tanks

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 4 CA FID UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HARV'S CAR WASH	1901 L ST	W 0 - 1/8 (0.112 mi.)	J47	34
LAWRENCE MOVING & STORAGE CO.	912 020TH ST	NNW 1/8 - 1/4 (0.178 mi.)	V108	68
WOODARD FICETTI CLEANERS	2201 J ST	ENE 1/8 - 1/4 (0.181 mi.)	AA118	79
JOHN ELLIS GARAGE	910 19TH ST	N 1/8 - 1/4 (0.234 mi.)	AO190	125

EXECUTIVE SUMMARY

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 4 HIST UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>HARV'S CAR WASH</i>	<i>1901 L ST</i>	<i>W 0 - 1/8 (0.110 mi.)</i>	<i>J44</i>	<i>27</i>
<i>WOODARD FICETTI CLEANERS</i>	<i>2201 J ST</i>	<i>ENE 1/8 - 1/4 (0.181 mi.)</i>	<i>AA118</i>	<i>79</i>
<i>LAWRENCE MOVING & STORAGE CO.</i>	<i>912-20TH. STREET</i>	<i>N 1/8 - 1/4 (0.201 mi.)</i>	<i>AG139</i>	<i>90</i>
<i>JOHN ELLIS AND SON</i>	<i>910-19TH ST</i>	<i>N 1/8 - 1/4 (0.234 mi.)</i>	<i>AO189</i>	<i>125</i>

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>VACANT</i>	<i>2101 K ST</i>	<i>ENE 0 - 1/8 (0.108 mi.)</i>	<i>I37</i>	<i>23</i>
<i>HARV'S CAR WASH</i>	<i>1901 L ST</i>	<i>W 0 - 1/8 (0.110 mi.)</i>	<i>J44</i>	<i>27</i>
<i>LAWRENCE MOVING & STORAGE CO.</i>	<i>912 020TH ST</i>	<i>NNW 1/8 - 1/4 (0.178 mi.)</i>	<i>V108</i>	<i>68</i>
<i>WOODARD FICETTI CLEANERS</i>	<i>2201 J ST</i>	<i>ENE 1/8 - 1/4 (0.181 mi.)</i>	<i>AA118</i>	<i>79</i>
<i>JOHN ELLIS GARAGE</i>	<i>910 19TH ST</i>	<i>N 1/8 - 1/4 (0.234 mi.)</i>	<i>AO190</i>	<i>125</i>

Other Ascertainable Records

CA BOND EXP. PLAN: Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

A review of the CA BOND EXP. PLAN list, as provided by EDR, and dated 01/01/1989 has revealed that there is 1 CA BOND EXP. PLAN site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>ORCHARD SUPPLY COMPANY</i>	<i>1731 17TH STREET</i>	<i>SW 1/2 - 1 (0.545 mi.)</i>	<i>AW233</i>	<i>247</i>

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 13 HIST CORTESE sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>HARV'S CAR WASH</i>	<i>1901 L ST</i>	<i>W 0 - 1/8 (0.110 mi.)</i>	<i>J44</i>	<i>27</i>
<i>SWEIGARD PROPERTY</i>	<i>1830 L ST</i>	<i>W 1/8 - 1/4 (0.130 mi.)</i>	<i>P71</i>	<i>48</i>
<i>MID-TOWN OFFICE CENTER</i>	<i>2020 J ST</i>	<i>NE 1/8 - 1/4 (0.139 mi.)</i>	<i>N84</i>	<i>54</i>
<i>CAPITOL PLAZA RETIREMENT</i>	<i>1812-1820 L ST</i>	<i>W 1/8 - 1/4 (0.178 mi.)</i>	<i>X109</i>	<i>69</i>
<i>LAWRENCE MAYFLOWER MOVING</i>	<i>908914 20TH</i>	<i>N 1/8 - 1/4 (0.209 mi.)</i>	<i>AG148</i>	<i>105</i>
<i>NIELLO CHEVROLETE</i>	<i>1701 K ST</i>	<i>WNW 1/4 - 1/2 (0.266 mi.)</i>	<i>AQ201</i>	<i>133</i>

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CHEAPER LIQUOR #142	809 20TH ST	NNE 1/4 - 1/2 (0.273 mi.)	202	136
WAREHOUSE (VACANT)	1630 I ST	NW 1/4 - 1/2 (0.379 mi.)	211	153
FORMER CHEVRON #3-0205	1530 L ST	WNW 1/4 - 1/2 (0.391 mi.)	216	161
TED WILLAIM'S GARAGE	1616 20TH ST	SSW 1/4 - 1/2 (0.392 mi.)	217	167
TARNASKY RESIDENCE	630 22ND ST	NE 1/4 - 1/2 (0.422 mi.)	220	174
SACRAMENTO BEE	2100 Q STREET	SSW 1/4 - 1/2 (0.433 mi.)	221	175
UNOCAL #5382	1600 H ST	NNW 1/4 - 1/2 (0.448 mi.)	224	198

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 09/10/2013 has revealed that there is 1 DRYCLEANERS site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WOODARD-FICETTI CLEANERS	2201 J ST	ENE 1/8 - 1/4 (0.181 mi.)	AA119	82

Sacramento Co. ML: Sacramento County Master List. Any business that has hazardous materials on site - hazardous materials storage sites, underground storage tanks, waste generators.

A review of the Sacramento Co. ML list, as provided by EDR, and dated 05/03/2013 has revealed that there are 44 Sacramento Co. ML sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ESTATES CP LLC	2020 L STREET	SW 0 - 1/8 (0.031 mi.)	A1	8
IPS PRINTING, INC	2020 K ST	N 0 - 1/8 (0.056 mi.)	D14	14
DUFFY'S TRANSFER	1928 L ST	W 0 - 1/8 (0.065 mi.)	F26	18
IQ TECH	1930 K ST	NNW 0 - 1/8 (0.083 mi.)	H32	21
BEARINGS SUPPLY CO INC	1906 L ST	W 0 - 1/8 (0.098 mi.)	J34	22
VACANT	2101 K ST	ENE 0 - 1/8 (0.108 mi.)	I37	23
W.F. GORMLEY & SON	2015 CAPITOL AV	SSW 0 - 1/8 (0.110 mi.)	K43	27
HARV'S CAR WASH	1901 L ST	W 0 - 1/8 (0.110 mi.)	J44	27
HOWARD AND SONS AUTOMOTIVE	1900 L ST	W 0 - 1/8 (0.111 mi.)	J45	31
SACRAMENTO NEWS & REVIEW	1015 20TH ST	N 0 - 1/8 (0.118 mi.)	M56	39
A & A AUTO BODY & PAINT WORKS	1926 CAPITOL AVE	SW 0 - 1/8 (0.125 mi.)	O62	41
HERBERT H HOOPER, DDS	2131 CAPITOL AV #300	SSE 1/8 - 1/4 (0.127 mi.)	L65	45
RYE DENTAL GROUP	2131 CAPITOL AVE 100	SSE 1/8 - 1/4 (0.127 mi.)	L66	45
JEFFREY C VERNON DDS	2131 CAPITOL AVE, #300	SSE 1/8 - 1/4 (0.127 mi.)	L70	47
SWEIGARD PROPERTY	1830 L ST	W 1/8 - 1/4 (0.130 mi.)	P71	48
WESSLER BODY & PAINT SHOP	2011 J ST	N 1/8 - 1/4 (0.136 mi.)	M80	53
VERIZON WIRELESS - 21ST & J ST	2100 J ST	NE 1/8 - 1/4 (0.139 mi.)	N83	54
MID-TOWN OFFICE CENTER	2020 J ST	NE 1/8 - 1/4 (0.139 mi.)	N84	54
A L WATKINS, DC	2115 J ST #105	NE 1/8 - 1/4 (0.145 mi.)	N86	57
MIDTOWN PHOTO	2127 J ST	NE 1/8 - 1/4 (0.148 mi.)	T89	58
JAMES D COYLE DDS	2201 CAPITOL AVE, #100	SSE 1/8 - 1/4 (0.162 mi.)	W97	62
AMERICAN GRAFFITI	1306 19TH ST 1/2	WSW 1/8 - 1/4 (0.166 mi.)	S102	66
RITZ CAMERAS	2200 J ST 107	ENE 1/8 - 1/4 (0.180 mi.)	AA114	74
WOODARD-FICETTI CLEANERS & DRY	2201 J ST	ENE 1/8 - 1/4 (0.181 mi.)	AA117	77
WOODARD FICETTI CLEANERS	2201 J ST	ENE 1/8 - 1/4 (0.181 mi.)	AA118	79
PATRICK R, LITTLE, ATTNEY	2209 J ST	ENE 1/8 - 1/4 (0.185 mi.)	AA122	83

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BARBER'S SHOP AUTOMOTIVE	1116 18TH ST	WNW 1/8 - 1/4 (0.187 mi.)	AB123	83
IRISH COPY BUSINESS SERVICES	2020 N ST	SSW 1/8 - 1/4 (0.191 mi.)	AC129	87
MS MC CAULEY	912 20TH ST	N 1/8 - 1/4 (0.201 mi.)	AG140	91
SIRLIN PHOTOGRAPHERS	2020 I ST	NNE 1/8 - 1/4 (0.212 mi.)	AK153	107
BOWERS FLOOR COVERING	1801 CAPITOL AV	W 1/8 - 1/4 (0.214 mi.)	AH154	107
CALIFORNIA CUSTOM CASTINGS	2327 L ST 101	ESE 1/8 - 1/4 (0.218 mi.)	AF159	109
GEORGE A BECKER, DDS	2327 L ST #102	ESE 1/8 - 1/4 (0.218 mi.)	AF160	110
ROBERT A EVANS, DDS	2327 L ST #201	ESE 1/8 - 1/4 (0.218 mi.)	AF161	110
JAMES H MUCCI, DDS	2327 L ST #202	ESE 1/8 - 1/4 (0.218 mi.)	AF162	111
CUEVAS & RAMOS PROF DENTAL COR	2327 L ST 203	ESE 1/8 - 1/4 (0.218 mi.)	AF163	111
HARRY WONG, DDS	2327 L ST #204	ESE 1/8 - 1/4 (0.218 mi.)	AF168	115
KARL B ROSS DDS	2331 L ST	ESE 1/8 - 1/4 (0.221 mi.)	AF173	118
CYNTHIA STUART, DDS	2331 L ST	ESE 1/8 - 1/4 (0.221 mi.)	AF174	118
SIERRA RESEARCH INC	1801 J ST	NW 1/8 - 1/4 (0.227 mi.)	AJ181	121
CARLSON ASSOCIATES	1415 20TH ST	SSW 1/8 - 1/4 (0.231 mi.)	AN182	122
ATLAS BLUE PRINT	915 19TH ST	N 1/8 - 1/4 (0.231 mi.)	AO185	123
JOHN ELLIS AND SON	910 19TH ST	N 1/8 - 1/4 (0.234 mi.)	AO188	124
METRO PRINTING & COPY CENTER	2314 J ST	ENE 1/8 - 1/4 (0.247 mi.)	AR199	132

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, and dated 12/31/2012 has revealed that there are 51 HAZNET sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
INVERNESS MANAGEMENT LLC	2020 L ST FL 5	SW 0 - 1/8 (0.031 mi.)	A2	9
LOUIE J PAPPAS & COULA DBA PAP	2020 L ST	SW 0 - 1/8 (0.031 mi.)	A3	9
IPS PRINTING INC	2020 K ST	N 0 - 1/8 (0.056 mi.)	D13	14
ST ANTON BUILDING LP	2110 L ST	SE 0 - 1/8 (0.058 mi.)	C16	15
MOGAVERO NOTESTINE ASSOCIATES	2012 K STREET	ENE 0 - 1/8 (0.069 mi.)	E27	19
2101 K STREET INVESTORS, LTD	2101 K STREET	ENE 0 - 1/8 (0.108 mi.)	I36	23
STATE NET	2101 K ST	ENE 0 - 1/8 (0.108 mi.)	I39	24
1X 2101 K STREET INVESTERS LTM	2101 K ST	ENE 0 - 1/8 (0.108 mi.)	I40	25
F. FREDRICK BROWN GENERAL PART	2101 K ST	ENE 0 - 1/8 (0.108 mi.)	I41	25
IPA-CALIFORNIA JOURNAL	2101 K ST	ENE 0 - 1/8 (0.108 mi.)	I42	26
WASHINGTON MUTUAL	1300 21ST ST	S 0 - 1/8 (0.117 mi.)	L51	36
WASHINGTON MUTUAL	1300 21ST ST	S 0 - 1/8 (0.117 mi.)	L52	37
WASHINGTON MUTUAL BANK	1300 - 21ST STREET	S 0 - 1/8 (0.117 mi.)	L53	37
SACRAMENTO NEWS & REVIEW	1015 20TH STREET	N 0 - 1/8 (0.118 mi.)	M55	38
BI-VALLEY MED.CLINIC	2100 CAPITOL AVENUE	S 0 - 1/8 (0.118 mi.)	L57	39
MIDTOWN BUILDING INVESTMENTS A	1008-1014 21ST ST	NE 0 - 1/8 (0.123 mi.)	N58	40
TRIBUTE PARTNERS LLC	1926 CAPITOL AVE	SW 0 - 1/8 (0.125 mi.)	O63	42
TRIBUTE PARTNERS LLC	1926 CAPITOL AVE	SW 0 - 1/8 (0.125 mi.)	O64	44
HERBERT HOOPER	2131 CAPITOL AVE	SSE 1/8 - 1/4 (0.127 mi.)	L67	46
DR SINDER S RYE DDS	2131 CAPITOL AVE STE 10	SSE 1/8 - 1/4 (0.127 mi.)	L68	46
JEFFREY C. VERNON DDS	2131 CAPITOL AVE 300	SSE 1/8 - 1/4 (0.127 mi.)	L69	47
CA ASSOCIATION OF HEALTH FACIL	2201 K STREET	E 1/8 - 1/4 (0.134 mi.)	R74	51
EXECUTIVE SUITE HAIR SALON	2215 K ST	E 1/8 - 1/4 (0.143 mi.)	R85	56
MIDTOWN PHOTO	2127 J STREET	NE 1/8 - 1/4 (0.148 mi.)	T90	58

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<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MIDTOWN PHOTO	2127 J STREET	NE 1/8 - 1/4 (0.148 mi.)	T91	60
BOULDER ASSOCIATES INC	1331 21ST ST	S 1/8 - 1/4 (0.161 mi.)	U95	61
JAMES COYLE DDS	2201 CAPITOL AVE	SSE 1/8 - 1/4 (0.162 mi.)	W98	62
KITS CAMERAS #107	2200 J ST	ENE 1/8 - 1/4 (0.180 mi.)	AA112	72
RITZ/KITS CAMERA #968	2200 J ST	ENE 1/8 - 1/4 (0.180 mi.)	AA113	73
WOODARD-FICETTI CLEANERS	2201 J ST	ENE 1/8 - 1/4 (0.181 mi.)	AA116	76
BARBERS SHOP AUTOMOTIVE	1116 18TH ST	WNW 1/8 - 1/4 (0.187 mi.)	AB124	84
IMPERIAL THRIFT AND LOAN ASSN	1116 18TH ST	WNW 1/8 - 1/4 (0.187 mi.)	AB125	84
ALI MOHAMMED	920 21ST ST	NNE 1/8 - 1/4 (0.187 mi.)	127	86
BUSINESS JOURNAL THE	1401 21ST STREET	S 1/8 - 1/4 (0.194 mi.)	AE132	88
SACRAMENTO HOUSING & REDEVELOP	1820 CAPITOL AVE	WSW 1/8 - 1/4 (0.200 mi.)	AH138	90
CENTER APRAPRASE MINISTRIES	1228 23RD ST	SE 1/8 - 1/4 (0.204 mi.)	141	91
SACRAMENTO HOUSING & REDEV AGE	1107 23RD ST STE 904	E 1/8 - 1/4 (0.208 mi.)	AI144	103
SACRAMENTO HOUSING & REDEVELOP	1107 23RD ST STE 801	E 1/8 - 1/4 (0.208 mi.)	AI145	103
SACRAMENTO HOUSING & REDEVELOP	1107 23RD ST STE 904	E 1/8 - 1/4 (0.208 mi.)	AI146	104
SACRAMENTO HOUSING	1107 23RD ST APT 808	E 1/8 - 1/4 (0.208 mi.)	AI147	104
HARRY WONG DDS	2327 L ST STE 204	ESE 1/8 - 1/4 (0.218 mi.)	AF164	112
GEORGE A BECKER DDS	2327 L ST	ESE 1/8 - 1/4 (0.218 mi.)	AF165	113
CUEVAS & RAMOS PROF DENTAL COR	2327 L STREET STE 203	ESE 1/8 - 1/4 (0.218 mi.)	AF166	114
DR JAMES H. MUCCI DDS	2327 L STREET SUITE 202	ESE 1/8 - 1/4 (0.218 mi.)	AF167	115
WESTERN STATES DENTAL INC	2327 L ST, #101	ESE 1/8 - 1/4 (0.218 mi.)	AF169	116
JAM VENTURES LLC	2327 L ST	ESE 1/8 - 1/4 (0.218 mi.)	AF170	117
KARL B ROSS DDS	2331 L ST. #A	ESE 1/8 - 1/4 (0.221 mi.)	AF175	119
ATLAS BLUEPRINT & REPRO INC	915 19TH ST	N 1/8 - 1/4 (0.231 mi.)	AO184	122
JAY STREET AUTOMOTIVE	2321 JAY ST	ENE 1/8 - 1/4 (0.236 mi.)	AM192	127
DIGIDEX LLC	1424 21ST ST	S 1/8 - 1/4 (0.238 mi.)	AP193	130
DIGIDEX LLC	1424 21ST ST	S 1/8 - 1/4 (0.238 mi.)	AP194	130

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 49 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LINDSTROM R L	2010 L ST	WSW 0 - 1/8 (0.035 mi.)	A4	11
ALLEN R W	1130 21ST ST	E 0 - 1/8 (0.042 mi.)	B6	11
GRIMES R A	1114 21ST ST	E 0 - 1/8 (0.046 mi.)	B7	12
PARSONS L E	1112 21ST ST	ENE 0 - 1/8 (0.048 mi.)	B8	13
L ST SERVICE STATION	1201 21ST ST	SE 0 - 1/8 (0.050 mi.)	C9	13
BAGGY S SERVICE	2100 L ST	SE 0 - 1/8 (0.051 mi.)	C10	13

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BROWN & CAMERON	2030 K ST	N 0 - 1/8 (0.054 mi.)	D12	14
ARGANTI LOUIS REAR	2015 K ST	N 0 - 1/8 (0.059 mi.)	D17	16
BROWN & CAMERON	1102 21ST ST	ENE 0 - 1/8 (0.063 mi.)	E24	18
DE MARTINI ROY & SON	1216 20TH ST	SW 0 - 1/8 (0.076 mi.)	G28	19
DE MARTINI ROY	1230 20TH ST	SW 0 - 1/8 (0.082 mi.)	G30	20
WORLD WIDE AUTO ELECTRIC	1930 K STREET	NNW 0 - 1/8 (0.083 mi.)	H31	20
MILLER G A	1027 21ST ST	NE 0 - 1/8 (0.099 mi.)	35	23
EDWARDS ALBT	2101 K ST	ENE 0 - 1/8 (0.108 mi.)	I38	24
HOWARD & SONS	1900 L STREET	W 0 - 1/8 (0.111 mi.)	J46	33
INDERBITZEN CHAS	1214 19TH ST	W 0 - 1/8 (0.116 mi.)	J49	35
SPEEDOMETER SERVICE	1209 19TH ST	W 0 - 1/8 (0.117 mi.)	J50	35
LORENZO S NORWALK SERVICE	2103 W CAPITOL AV	S 0 - 1/8 (0.118 mi.)	L54	38
VARGAS MOTOR SERVICE	1930 CAPITOL AVE	SW 0 - 1/8 (0.124 mi.)	O59	40
JERUE L J	1928 CAPITOL AVE	SW 0 - 1/8 (0.124 mi.)	O60	40
Not reported	1926 CAPITOL AVE	SW 0 - 1/8 (0.125 mi.)	O61	41
C & D SERVICE	1830 L STREET	W 1/8 - 1/4 (0.130 mi.)	P72	50
MC FARLANE JOHN	2030 J ST	NNE 1/8 - 1/4 (0.133 mi.)	Q73	50
JENNINGS AUTO SERVICE	2010 J ST	N 1/8 - 1/4 (0.134 mi.)	M76	51
SHELL CO OF CALIF	2031 J ST	NNE 1/8 - 1/4 (0.134 mi.)	Q77	52
WESSLER H S	2011 J ST	N 1/8 - 1/4 (0.136 mi.)	M79	52
HARVEY AUTO TOP & GLASS CO	1309 19TH ST	WSW 1/8 - 1/4 (0.157 mi.)	S94	61
GREGORY & MC KINLEY	1911 J ST	NNW 1/8 - 1/4 (0.161 mi.)	V96	61
MARTIN R M	1330 21ST ST	S 1/8 - 1/4 (0.163 mi.)	U99	64
BERRY C L REAR	1821 K ST	NW 1/8 - 1/4 (0.177 mi.)	Z107	68
KARBOWSKI THEO	1819 K ST	NW 1/8 - 1/4 (0.178 mi.)	Z110	70
WRIGHT BRAKE SHOP	915 20TH ST	N 1/8 - 1/4 (0.182 mi.)	Y120	82
Not reported	1116 18TH ST	WNW 1/8 - 1/4 (0.187 mi.)	AB126	85
SAUNDERS A H	2031 N ST	SSW 1/8 - 1/4 (0.189 mi.)	AC128	86
RICO S AUTOMOTIVE SERVICE	911 20TH ST	N 1/8 - 1/4 (0.192 mi.)	Y131	87
ARNOLD THOS	1215 18TH ST	W 1/8 - 1/4 (0.196 mi.)	AD133	88
SALA JOHN	2113 N ST	S 1/8 - 1/4 (0.197 mi.)	AE135	89
MILLER GEO H GARAGE	1806 CAPITOL AVE	WSW 1/8 - 1/4 (0.209 mi.)	AH149	105
CENTRAL TRANSMISSION SUPPLY IN	1830 J STREET	NNW 1/8 - 1/4 (0.209 mi.)	AJ150	105
BROWN ROBT	2020 I ST	NNE 1/8 - 1/4 (0.212 mi.)	AK152	106
TRIANGLE	2000 I ST	N 1/8 - 1/4 (0.216 mi.)	AG156	108
Not reported	2274 J ST	ENE 1/8 - 1/4 (0.220 mi.)	AM172	117
GALYEAN & DUNCAN REAR	1808 J ST	NW 1/8 - 1/4 (0.222 mi.)	AJ177	119
SUPERIOR AUTOMOTIVE SERVICE	1415 20TH ST	SSW 1/8 - 1/4 (0.231 mi.)	AN183	122
LACKSTROM R W	1416 21ST ST	S 1/8 - 1/4 (0.234 mi.)	AP186	123
ELLIS JOHN	910 19TH ST	N 1/8 - 1/4 (0.234 mi.)	AO191	126
HOVLAND E G	2300 J ST	ENE 1/8 - 1/4 (0.239 mi.)	AM195	131
SMITH E A	1430 21ST ST	S 1/8 - 1/4 (0.241 mi.)	AP196	131
DANA L V	1731 K ST	WNW 1/8 - 1/4 (0.244 mi.)	AQ198	132

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 44 EDR US

EXECUTIVE SUMMARY

Hist Cleaners sites within approximately 0.25 miles of the target property.

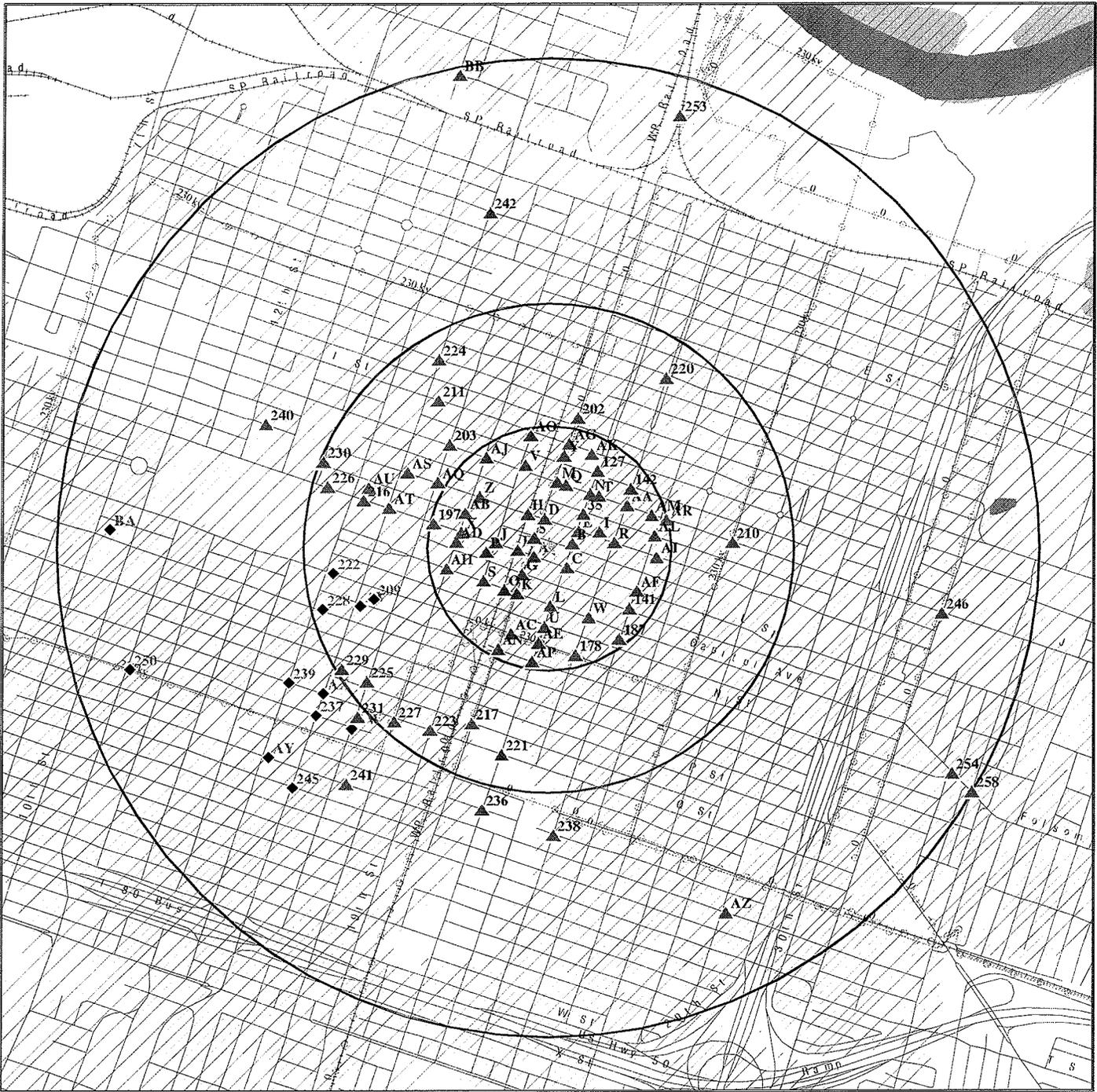
<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HICKEY S HAND LAUNDRY	1114 20TH ST	NW 0 - 1/8 (0.038 mi.)	5	11
DECETIS JULIUS	2105 L ST	SE 0 - 1/8 (0.053 mi.)	C11	13
QWONG J Y	1205 21ST ST	SSE 0 - 1/8 (0.057 mi.)	C15	15
ARTUS GEO	2008 K ST	N 0 - 1/8 (0.059 mi.)	D18	16
CAPITOL LAUNDERETT	1115 20TH ST	E 0 - 1/8 (0.060 mi.)	B19	16
CAPITOL LAUNDERETTE	1115 21ST ST	E 0 - 1/8 (0.060 mi.)	B20	17
ARTUS GEO	2011 K ST	N 0 - 1/8 (0.060 mi.)	D21	17
FONG L H	1207 21ST ST	SSE 0 - 1/8 (0.061 mi.)	C22	17
STEEN HENRY	2007 K ST	N 0 - 1/8 (0.062 mi.)	D23	17
HARRY S LAUNDRY	1927 L ST	W 0 - 1/8 (0.064 mi.)	F25	18
LEE S HAND LAUNDRY	1223 20TH ST	SW 0 - 1/8 (0.078 mi.)	G29	19
DAVIS L A	2131 K ST	ENE 0 - 1/8 (0.086 mi.)	I33	22
LEE S HAND LAUNDRY	2001 CAPITOL AVE	SW 0 - 1/8 (0.112 mi.)	K48	35
SUNDELL GERTRUDE MRS	2016 J ST	N 1/8 - 1/4 (0.134 mi.)	M75	51
OSTROM M L	2017 J ST	N 1/8 - 1/4 (0.136 mi.)	M78	52
DIAMOND CLEANERS	2009 J ST	N 1/8 - 1/4 (0.136 mi.)	M81	53
FOGEL LEOLA M	2005 J ST	N 1/8 - 1/4 (0.137 mi.)	M82	53
YEE WM	1907 CAPITOL AVE	WSW 1/8 - 1/4 (0.145 mi.)	S87	57
WOODARD D R	2125 J ST	NE 1/8 - 1/4 (0.148 mi.)	T88	58
Not reported	2226 K ST	E 1/8 - 1/4 (0.151 mi.)	R92	60
CAPITOL & NINETEENTH STREET SE	1901 CAPITOL AVE	WSW 1/8 - 1/4 (0.151 mi.)	S93	60
Not reported	1830 L ST	W 1/8 - 1/4 (0.163 mi.)	X100	64
OCK LEE LAUNDRY	1306 19TH ST	WSW 1/8 - 1/4 (0.167 mi.)	S103	66
MACIEL A B	927 20TH ST	N 1/8 - 1/4 (0.171 mi.)	Y104	67
HAGEMAN L M	923 20TH ST	N 1/8 - 1/4 (0.173 mi.)	Y105	67
WOODARD CLEANERS & DYERS	2201 J ST	ENE 1/8 - 1/4 (0.181 mi.)	AA115	75
BR OFFICE	1802 L ST	W 1/8 - 1/4 (0.184 mi.)	X121	82
WING S LAUNDRY & CLEANERS	1209 18TH ST	W 1/8 - 1/4 (0.191 mi.)	AD130	87
TWENTY-FIRST STREET LAUNDRY	1400 21ST ST	S 1/8 - 1/4 (0.196 mi.)	AE134	89
Not reported	2301 L ST	ESE 1/8 - 1/4 (0.198 mi.)	AF136	89
MEE LEE LAUNDRY	914 20TH ST	N 1/8 - 1/4 (0.198 mi.)	AG137	89
ST CYR U A	924 22ND ST	NE 1/8 - 1/4 (0.206 mi.)	142	92
COIN-O-MATIC LAUNDRY	1802 CAPITOL AVE	WSW 1/8 - 1/4 (0.211 mi.)	AH151	106
DUCHEZ JEROME	1016 23RD ST	E 1/8 - 1/4 (0.216 mi.)	AL155	108
DUCHEZ JEROME	1016 23D ST	E 1/8 - 1/4 (0.217 mi.)	AL157	109
DUCHEZ JEROME	1016 23D PHONE MAIN 3	E 1/8 - 1/4 (0.217 mi.)	AL158	109
SOCIETY CLEANERS	2001 I ST	N 1/8 - 1/4 (0.218 mi.)	AG171	117
BLUE E E	2322 K ST	E 1/8 - 1/4 (0.221 mi.)	AI176	119
BALDWIN G A	2201 N ST	SSE 1/8 - 1/4 (0.224 mi.)	178	120
MIRO MRS HONORINE	2328 K ST	E 1/8 - 1/4 (0.225 mi.)	AI179	120
HORN S DRY CLEANERS & LAUNDRY	2330 K STREET	E 1/8 - 1/4 (0.227 mi.)	AI180	121
SMART W H	1316 23RD ST	SE 1/8 - 1/4 (0.234 mi.)	187	124
WILLIE S LAUNDRY	1726 L STREET	WNW 1/8 - 1/4 (0.243 mi.)	197	131
SPEED WASH	2314 J STREET	ENE 1/8 - 1/4 (0.247 mi.)	AR200	133

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 26 records.

<u>Site Name</u>	<u>Database(s)</u>
BOULEVARD	HIST UST
BUELLTON	HIST UST
COLFAX	HIST UST
PACHECO PASS	HIST UST
GRIZZLY CREEK REDWOODS S.P.	HIST UST
MAYS-TAHOE VLY	HIST UST
KEEN CAMP	HIST UST
MIDWAY	HIST UST
CHESTER	HIST UST
BUCKHORN	HIST UST
ADIN	HIST UST
DESERT CENTER	HIST UST
DOWNIEVILLE	HIST UST
INYOKERN	HIST UST
LEBEC	HIST UST
PLATINA	HIST UST
SIMMLER	HIST UST
LONGBARN	HIST UST
TAHOE CITY	HIST UST
PINEHURST	HIST UST
TOPAZ INSPECTION STATION	HIST UST
TRINITY CENTER	HIST UST
REDDAWAY TRUCKING	HAZNET
CALTRANS D-3/CONSTR/03-3M3404	HAZNET
SACRAMENTO REGIONAL TRANSIT DIST	HAZNET
SACRAMENTO NATIVE AMERICAN HEALTH	HAZNET

OVERVIEW MAP - 3793649.2s



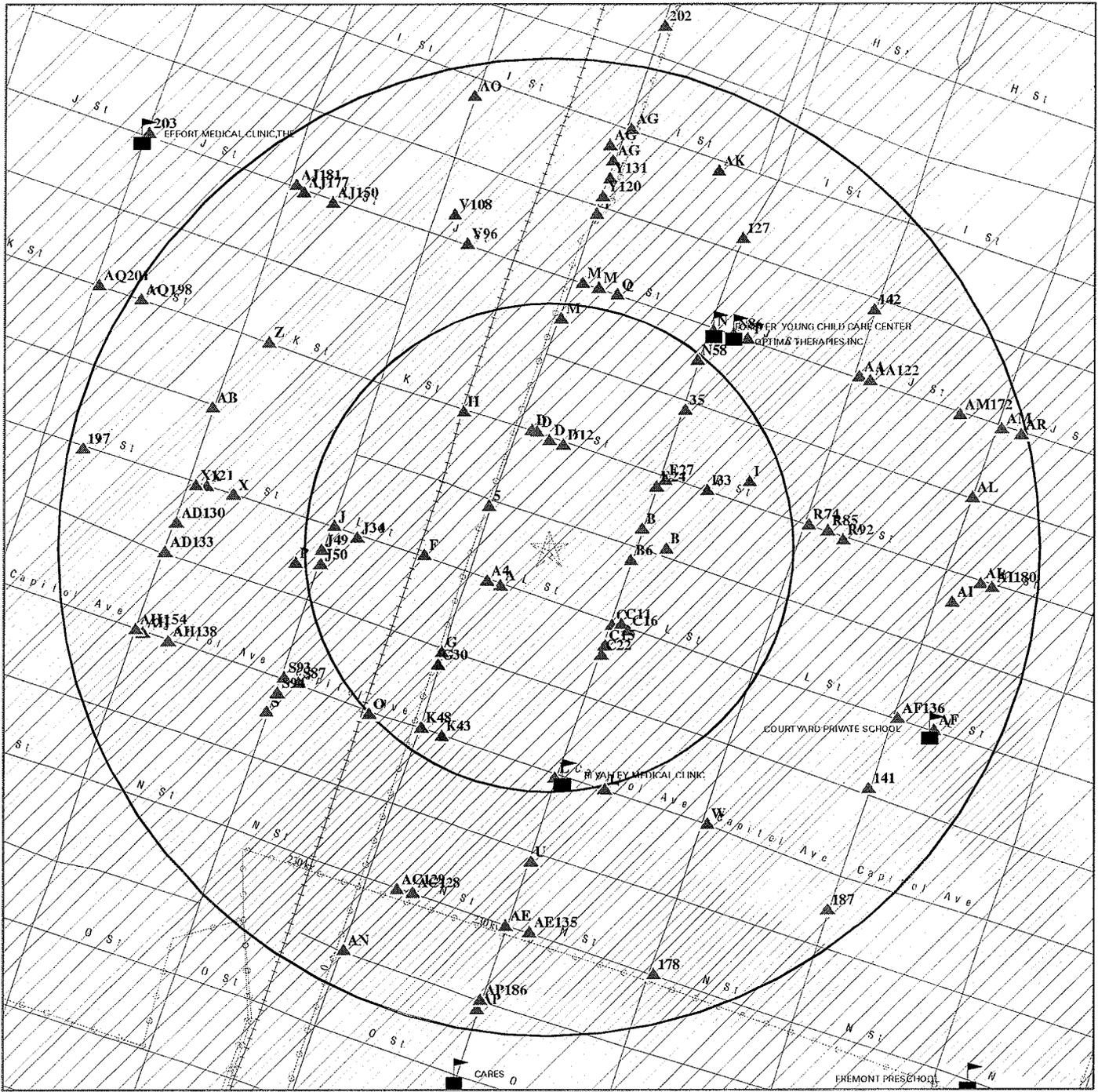
- ☆ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 20th-21st on L Street Property
 ADDRESS: 2025 L Street
 Sacramento CA 95811
 LAT/LONG: 38.5747 / 121.4801

CLIENT: Wallace - Kuhl & Associates
 CONTACT: Nancy Malaret
 INQUIRY #: 3793649.2s
 DATE: November 22, 2013 1:11 pm

DETAIL MAP - 3793649.2s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- ⚡ Sensitive Receptors
- ☒ National Priority List Sites
- ☒ Dept. Defense Sites

- ☒ Indian Reservations BIA
- ⚡ Power transmission lines
- ⚡ Oil & Gas pipelines from USGS
- ☒ 100-year flood zone
- ☒ 500-year flood zone

☒ Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 20th-21st on L Street Property
 ADDRESS: 2025 L Street
 Sacramento CA 95811
 LAT/LONG: 38.5747 / 121.4801

CLIENT: Wallace - Kuhl & Associates
 CONTACT: Nancy Malaret
 INQUIRY #: 3793649.2s
 DATE: November 22, 2013 1:13 pm

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
<u>STANDARD ENVIRONMENTAL RECORDS</u>								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS NFRAP site List</i>								
CERC-NFRAP	0.250		0	0	NR	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		0	3	NR	NR	NR	3
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL</i>								
RESPONSE	1.000		0	0	0	7	NR	7
<i>State- and tribal - equivalent CERCLIS</i>								
ENVIROSTOR	1.000		0	2	3	25	NR	30
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		1	4	17	NR	NR	22

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
SLIC	0.500		0	0	5	NR	NR	5
Sacramento Co. CS	0.500		1	4	16	NR	NR	21
INDIAN LUST	0.500		0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
UST	0.250		0	0	NR	NR	NR	0
AST	TP		NR	NR	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal voluntary cleanup sites</i>								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	6	NR	NR	6
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
ODI	TP		NR	NR	NR	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	6	NR	6
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
<i>Local Lists of Registered Storage Tanks</i>								
CA FID UST	0.250		1	3	NR	NR	NR	4
HIST UST	0.250		1	3	NR	NR	NR	4
SWEEPS UST	0.250		2	3	NR	NR	NR	5
<i>Local Land Records</i>								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	TP		NR	NR	NR	NR	NR	0
<i>Records of Emergency Release Reports</i>								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	1	NR	1
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		1	4	8	NR	NR	13
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
DRYCLEANERS	0.250		0	1	NR	NR	NR	1
WIP	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Sacramento Co. ML	0.250		11	33	NR	NR	NR	44
HAZNET	0.250		18	33	NR	NR	NR	51
EMI	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		21	28	NR	NR	NR	49
EDR US Hist Cleaners	0.250		13	31	NR	NR	NR	44

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

APPENDIX D

Preliminary Screen for Vapor Encroachment Conditions Matrix



Screen for Vapor Encroachment Conditions Matrix
20TH-21ST ON L STREET
WKA No. 94955.02

Phase I ESA Screen for Vapor Encroachment Conditions (VEC) matrix includes a (1) **Search Radius Test**, (2) **Chemicals of Concern Test (COC)**, and (3) a **Critical Distance Test**^[1].

(1) Search Radius Test: Are there any known or suspect contaminated sites in the primary area of concern within the corresponding search radii? (if yes, see attached Table A).

Yes No

If No, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If Yes, then:

(2) Chemicals of Concern^[2] **Test:** Are COC likely to be present within the area of concern for those known or suspect contaminated sites identified based on the Search Distance Test?

Yes No

If No, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If Yes, then:

If Yes, check all COC that apply on attached Table B.

(3) Critical Distance Test A plume test to determine whether or not COC in the contaminated plume(s) may be within the critical distance.

(3a) Is information related to the contaminated(s) plume available (i.e. isoconcentration maps, site drawings, etc.)?

Yes No

(3b) If **No**, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If **Yes**, then:

(3c) Is the site less than 100 feet to the nearest edge of a contaminated [non-petroleum hydrocarbon] plume(s)?

Yes No

(3d) Is the site less than 30 feet to the nearest edge of a dissolved petroleum hydrocarbon plume(s)?

Yes No

If the distance from the nearest edge of a contaminated plume to the nearest existing or planned structure on the site is less than 100 feet for non-petroleum hydrocarbon COC, or less than 30 feet for dissolved petroleum hydrocarbons, then it is presumed that a VEC *currently* exists beneath the site. If the distance from the nearest edge of the contaminated plume is greater than or equal to 100 feet for non-petroleum hydrocarbons, or 30 feet for dissolved petroleum hydrocarbon chemicals of concern, then it is presumed unlikely that a VEC *currently* exists beneath the site.

(4) Is it likely that a VEC *currently* exists beneath the site?

Yes No

If Yes, then recommend performing a full scope VEC assessment according to ASTM E 2600-10.

[1] Based on guidance presented in the ASTM E 2600-10 Standard.

[2] Chemical(s) of concern (COC): See attached table for typical chemicals of concern (as presented in Appendix X6.1 of the ASTM E 2600-10 Standard).

TO: Teresa Haenggi, Associate Planner
Community Development Department

FROM: William Wann, Police Sergeant
Sacramento Police Department

DATE: 12/23/2014

SUBJECT: File P14-045 Site Plan Review and CPTED recommendations

Based upon the submitted Conditional Use Permit petition, the Sacramento Police Department recommends the following conditions:

1. Exterior lighting shall be white light (e.g. metal halide, LED, fluorescent, or induction) using cut off or full cut off fixtures to limit glare and light trespass. Exterior lighting shall be maintained and operational and shall meet IESNA standards (including alley and loading dock areas).
2. Parking garages shall be lit with indirect white light to reduce shadows.
3. All landscaping shall follow the two foot six foot rule. All landscaping should be ground cover, two feet or less and lower tree canopies should be above six feet. This increases natural surveillance and eliminates hiding areas within the landscape. Tree canopies should not interfere with or block lighting. This creates shadows and areas of concealment.
4. The landscaping plan shall allow for proper illumination and visibility regarding lighting and surveillance cameras through the maturity of trees and shrubs.
5. Grocery business shall be equipped with a monitored burglary alarm system with private security response.
6. Recorded Video Assessment and Surveillance System (VASS) shall be employed. One system shall cover residential units and garage (2025 L Street) One system shall cover Whole Foods, garage, streets, sidewalks, and alleys. One system shall cover

garage (2020 L Street).

7. Cameras and VASS storage shall be digital high definition or better.

8. VASS storage shall be kept off-site or in a secured area accessible only to management.

9. VASS shall support standard MPEG formats.

10. VASS shall be capable of storing no less than 30 days worth of activity.

11. Manager with access to VASS storage shall be able to respond within 30 minutes during business hours.

12. Manager shall have the ability to transfer recorded data to another medium (e.g. DVD, thumb drive, etc.).

13. Cameras shall be equipped with low light capability, auto iris and auto focus.

14. VASS shall provide comprehensive coverage of:

- all points of sale
- safe(s)
- manager's office(s)
- areas of ingress and egress
- hallways
- alcohol placement areas
- parking areas
- loading areas
- areas not clearly visible from public streets
- coverage of all four (4) exterior sides of the property
- adjacent public rights of way

15. Sales of beer and malt beverages shall be in quantities of not less than a six-pack.

16. Sales of wine shall be in containers of at least 750 ml.

17. Wine coolers, whether made for wine or malt products, shall not be sold in quantities of less than factory packs of four.

18. Distilled spirits shall be sold in containers of at least 200 ml.

19. Windows shall remain uncluttered to allow for natural surveillance.

20. No public pay phones/telephones shall be allowed on the premises.

21. No coin operated games or video machines shall be allowed on the premises.
22. The applicant is responsible for reasonably controlling the conduct of persons on the site and shall immediately disperse loiterers.
23. All dumpsters shall be kept locked.
24. Any graffiti painted or marked upon the premises or on any adjacent area under the control of the applicant shall be removed or painted over within 72 hours of being applied.
25. The applicant shall be responsible for the daily removal of all litter from the site and adjacent rights of way.
26. During construction, the applicant shall enclose the entire perimeter of the project with a chain link fence with necessary construction gates to be locked after normal construction hours.
27. During construction, the location shall be monitored by security after normal construction hours during all phases of construction.
28. During construction, adequate security lighting shall be provided to illuminate vulnerable equipment and materials. Lighting shall be white light with full cut off fixtures.
29. All stairwells shall be well lit and shall have windows for natural surveillance.

Dana Mahaffey

From: Lynne Stevenson <l Stevenson249@gmail.com>
Sent: Monday, December 22, 2014 3:34 PM
To: Dana Mahaffey
Subject: Comm on NOP 2025 L 2101 Capitol Ave

December 22, 2014

Dear Ms. Mahaffey:

Thank you for the opportunity to review the Notice of Preparation of an Environmental Impact Report (EIR) for the 2015 L Street/2101 Capitol Avenue Mixed-Use Project, City of Sacramento. I am a nearby resident of Midtown and so am particularly interested in the proposed project. I have the following comments on both the project and the scope of the analysis in the EIR:

1. Based on the heights of the buildings, I believe that the proposed heights (six stories) of the two structures are excessive, especially on Capitol Avenue. Among the reasonable range of alternatives, please evaluate the effects of structures that are only four stories in height.
2. Construction and use of these two structures could have significant effects on local residents. In the EIR, please include detailed quantitative analyses of the effects of the project on local traffic numbers and flow, levels of noise, and availability of public services.
3. In the EIR, please discuss the potential effects of the project on local property values and taxes. Also, indicate whether the proposed building on L Street would offer any low-income housing.

Please add my name to the mailing list (email) for future correspondence related to this project. I am particularly interested in reviewing the draft and final EIR's.

Sincerely,

Lynne Stevenson
2316 Capitol Avenue, #7
Sacramento, California 95816

Central Valley Regional Water Quality Control Board

17 December 2014

Dana Mahaffey
City of Sacramento
300 Richards Boulevard
Sacramento, CA 95811

CERTIFIED MAIL
7014 2120 0001 3978 3798

COMMENTS TO NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, 2025 L STREET / 2101 CAPITOL AVENUE MIXED-USED PROJECT, SCH# 2014112053, SACRAMENTO COUNTY

Pursuant to the State Clearinghouse's 21 November 2014 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Notice of Preparation for the Draft Environment Impact Report* for the 2025 L Street / 2101 Capital Avenue Mixed-Used Project Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program.

There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory

Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

If you have questions regarding these comments, please contact me at (916) 464-4684 or tcleak@waterboards.ca.gov.



Trevor Cleak
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento



December 4, 2014

Ms. Dana Mahaffey, Associate Planner
City of Sacramento, Community Development
Environmental Planning Services
300 Richards Blvd., 3rd Floor
Sacramento, CA 95811

Subject: Notice of Preparation of an Environmental Impact Report and Scoping Meeting for the 2025 L Street / 2101 Capitol Avenue Mixed-Use Project

Dear Ms. Mahaffey:

Sacramento Regional County Sanitation District (Regional San) has reviewed the Notice of Availability of an Environmental Impact Report for the 2025 L Street and 2101 Capitol Avenue Mixed-Use project and has the following comments.

The City of Sacramento's (City) local sewer collection system provides service and conveyance to the Sacramento Regional Wastewater Treatment Plant (SRWTP) for treatment and disposal. Conveyance will be provided via City Sump 2, Sump 2A and the Regional San City Interceptor system. Cumulative impacts of the proposed project will need to be quantified by the project proponents to ensure wet and dry weather capacity limitations within Sump 2, Sump 2A and the City Interceptor system are not exceeded.

On March 13, 2013, Regional San approved the Wastewater Operating Agreement between Regional San and the City. The following flow limitations are outlined in this agreement:

<i>Service Area</i>	<i>Flow Rate (MGD)</i>
<i>Combined Flows from Sump 2 and Sump 2A</i>	<i>60</i>
<i>Combined flows from Sumps 2, 2A, 21, 55, and 119</i>	<i>98</i>
<i>Total to City Interceptor of combined flows from Sumps 2, 2A, 21, 55, 119, and five trunk connections</i>	<i>108.5</i>

Customers receiving service from Regional San are responsible for paying the appropriate rates and fees as outlined within the latest Regional San ordinances. Fees for connecting to the sewer system are set up to recover the capital investment of sewer and treatment facilities that serve new customers.

Regional San is not a land-use authority. Projects identified within Regional San planning documents are based on growth projections identified by land-use authorities. Onsite and offsite impacts associated with constructing sanitary sewers facilities to provide service must be included in subsequent environmental impact reports.

The SRWTP provides secondary treatment using an activated sludge process. Incoming wastewater flows through mechanical bar screens through a primary sedimentation process. This allows most of the heavy organic solids to settle to the bottom of the tanks. These solids are later delivered to the digesters. Next, oxygen is added to the wastewater to grow naturally occurring microscopic organisms, which consume the organic particles in the wastewater. These organisms eventually settle on the bottom of the secondary clarifiers.

Main Office

10060 Goethe Road
Sacramento, CA 95827-3553
Tel: 916.876.6000
Fax: 916.876.6160

Treatment Plant

8521 Laguna Station Road
Elk Grove, CA 95758-9550
Tel: 916.875.9000
Fax: 916.875.9068

Board of Directors

Representing:

County of Sacramento

County of Yolo

City of Citrus Heights

City of Elk Grove

City of Folsom

City of Rancho Cordova

City of Sacramento

City of West Sacramento

Prabhakar Somavarapu

District Engineer

Ruben Robles

Director of Operations

Christoph Dobson

Director of Policy & Planning

Karen Stoyanowski

Director of Internal Services

Joseph Maestretti

Chief Financial Officer

Claudia Goss

Public Affairs Manager

www.srcsd.com

Clean water pours off the top of these clarifiers and is chlorinated, removing any pathogens or other harmful organisms that may still exist. Chlorine disinfection occurs while the wastewater travels through a two mile "outfall" pipeline to the Sacramento River, near the town of Freeport, California. Before entering the river, sulfur dioxide is added to neutralize the chlorine.

The design of the SRWTP and collection system was balanced to have SRWTP facilities accommodate some of the wet weather flows while minimizing idle SRWTP facilities during dry weather. The SRWTP was designed to accommodate some wet weather flows while the storage basins and interceptors were designed to accommodate the remaining wet weather flows.

A NPDES Discharge Permit was issued to Regional San by the Central Valley Regional Water Quality Control Board (Water Board) in December 2010. In adopting the new Discharge Permit, the Water Board required Regional San to meet significantly more restrictive treatment levels over its current levels. Regional San believed that many of these new conditions go beyond what is reasonable and necessary to protect the environment, and appealed the permit decision to the State Water Resources Control Board (State Board). In December 2012, the State Board issued an Order that effectively upheld the Permit. As a result, Regional San filed litigation in California Superior Court. Regional San and the Water Board agreed to a partial settlement in October 2013 to address several issues and a final settlement on the remaining issues were heard by the Water Board in August 2014. Regional San has begun the necessary activities, studies and projects to meet the permit conditions. The new treatment facilities to achieve the permit and settlement requirements must be completed by May 2021 for ammonia and nitrate and May 2023 for the pathogen requirements

Regional San currently owns and operates a 5-mgd Water Reclamation (WRF) that has been producing Title 22 tertiary recycled since 2003. The WRF is located within the SRWTP property in Elk Grove. A portion of the recycled water is used by Regional San at the SRWTP and the rest is wholesaled to the Sacramento County Water Agency (SCWA). SCWA retails the recycled water, primarily for landscape irrigation use, to select customers in the City of Elk Grove. It should be noted that Regional San currently does not have any planned facilities that could provide recycled water to the proposed project or its vicinity. Additionally, Regional San is not a water purveyor and any potential use of recycled water in the project area must be coordinated between the key stakeholders, e.g. land use jurisdictions, water purveyors, users, and the recycled water producers.

If you have any questions regarding these comments, please contact me at (916) 876-6104.

Sincerely,



Robb Armstrong
Regional San Development Services & Plan Check

Cc: SASD Development Services, Michael Meyer, Sarena Moore

From: [Teresa Haengg](#)
To: [Dana Mahaffey](#); [Evan Compton](#); [Luis Sanchez](#); [Bruce Monighan](#); jwiley@taylor-wiley.com; thead@pappasinvestments.com
Subject: FW: The 2025 L Street/2101 Capitol Avenue Mixed-use Project
Date: Thursday, December 11, 2014 9:17:17 AM

Here is another correspondence regarding the Whole Foods project.

-----Original Message-----

From: Diane Heinzer [<mailto:dianeheinzer@sbcglobal.net>]
Sent: Wednesday, December 10, 2014 6:59 PM
To: Teresa Haengg
Subject: The 2025 L Street/2101 Capitol Avenue Mixed-use Project

I am the manager and a member of the 2130 L Street LLC and the Pease Conservatory of Music LLC and also live in the flat on the top floor of our 115 year old St. Anne Victorian on the corner of 22nd and L Streets. We support the plans for the construction of the 2025 L Street project.

We conditionally support the addition of the parking structure of 2101 Capital Avenue Mixed-use Project because of the great need for additional parking in our area of midtown which is severely impacted by the entertainment venues, including our own. Our customers and audience members have great difficulty finding street parking, especially on the weekends when we have performances. This structure will be within easy walking distance. I understand from the scoping meeting that we attended today, that the plan of Pappas Investments is to have parking available to the public after 6 p.m. on weeknights and all day on Saturdays and Sundays. This will relieve much of the over-crowding of street parking and I'm sure our clients will make use of the parking structure.

However, we are concerned about the entrance & exit of cars on to the alley which enters 22nd street and 21st Street. It would be much safer for pedestrians on 22nd and 21st Streets if the entrance and exit of the parking structure were to a street, either Capitol Ave or 21st Street. Ever since St Anton's built the entrance and exit to their parking area for the residents of their apartments, and other parking lots have been built with access to the alley, it has been much more risky walking across the alley on 22nd and 21st Streets. With the increased number of cars in a six story parking structure on the same plot of land that is now being used for those cars, the potential danger to pedestrians is alarming.

We encourage the Planning Commission to consider the safety of the many pedestrians on 22nd and 21st streets and order the design of the 2101 Capital Ave. parking to NOT have entrances or exits for cars on the alley. Please note that cars exiting from other parking structures cross sidewalks from either a stop at the pay stall or very slowly. The cars currently coming from the existing parking lots are accelerating down the alley by the time they cross the sidewalk, even though the drivers cannot see pedestrians approaching from the other side of a home or a building. It is already dangerous, and the proposed increase of alley traffic could be really harmful.

Diane Heinzer,

2130 L Street, 916 446-4618

To: City of Sacramento Planning and Design Commission

Date: December 10, 2014

Subject: Whole Foods Mixed Use Project

Dear Commissioners,

This letter is meant to address the Whole Foods mixed use building and associated parking garage, on L Street and Capitol Avenue respectively. Though this letter critical in tone, this is not at all to be construed as opposition to the development concept or project as a whole. The following is a list of certain aspects that should be considered as this project navigates the entitlement process.

- 1) **Project** – This project will be a great asset for midtown and the entire central city. Adding additional residents is crucial for the continued revival of the central city. Mixed use, multi-family buildings provide opportunities for many people at once to enjoy what the central city has to offer. The addition of another grocer also helps bring a further sense of community to the area.
- 2) **Design** – The design of 2001 L Street emulates the 2020 L Street office building across the street very closely. While the design is average to good, the City should seriously question whether to encourage such design uniformity. Urban neighborhoods are unique in many regards, but especially with respect to the diversity in architectural style and design. This collage of architecture should be encouraged, and the uniformity of suburban sameness rejected. Contemporary and unique architecture should be encouraged for all projects.

As designed, 2001 L Street also appears disjointed from the perspective of the pedestrian. With retail, then parking, then units above, the design as seen from the street would appear as layers of fragmented uses instead of a seamless single building. Care should be taken with respect to both this concern and expressing a unique design.

- 3) **Layout Between Two Sites** – As proposed, the project seems a bit disjointed. First, 2001 L Street combines four different aspects onto one half block; the Whole Foods store, parking for the store, residential units, and parking for those units. Second, 2101 Capitol Avenue, as described in the staff report, has parking for the 2020 L Street office building, across from the Whole Foods mixed use building. A question for the applicant should be why the office parking and residential uses weren't considered at each other's respective addresses. Consolidating all parking (Whole Foods and 2020L) at the 2001 L Street site, along with the store, would make for a more cohesive design with only two uses on the site (store and parking). This would also eliminate the need for underground parking at this site, speeding construction of both the Whole Foods and office parking by requiring reduced excavation.

The same would be true for residential units over retail at 2101 Capitol Avenue and would also fit much better in context with that corner. This could possibly make for simpler construction (a plus for the applicant), similar to other recent mixed use buildings in the central city. Separating an intense use such as a grocery store would also have benefits for the future residents. Additionally, these future residents would still only be a block or less from the Whole Foods. It would also be much more user friendly for office users to have parking directly across the street.

- 4) Access** – I am in agreement with Walk Sacramento regarding switching the residential and Whole Foods parking access. Though as stated earlier, if the residential units were moved to 2101 Capitol Avenue, a single parking access point would only be needed for 2001 L Street. Having only one entry/exit would simplify the design and make access safer for all users.

As currently designed, 2101 Capitol Avenue only has one retail space, with parking egress mid-block. These particular designs are dangerous to pedestrians and bicycles, as vehicles often have to pull out onto the sidewalk and bike lane ROW space to see down the street. I have personally experienced over-zealous drivers entering/exiting from these mid-block entry points and have had too many close calls. The alley should be the only entry/exit point for parking, with mid-block driveways discouraged to reduce pedestrian and bicycle conflicts. Also, stand-alone parking just for the retail portion would seem to be over-committing to actual demand. Street parking, along with the surface lot across 21st Street would be more than adequate to serve demand. This space would be better used as a second retail space, making the Capitol Avenue streetscape more appealing as well. Additionally, if the residential were to be moved to 2101 Capitol Avenue as mentioned above, the existing alley access points for both deliveries and occupants could be maintained, although residents might presumably have underground parking as currently proposed for 2001 L Street (instead of ramps going up).

The overall concern with this project, while a great and welcome concept, is that it receives a “rubber stamp”. While this is not a pointed comment at any particular body or individual, continued diligence in critique of this and other project’s design and layout is needed in the face of increased developer interest in our central city. The Planning and Design Commission has done a wonderful job in reviewing projects as we come out of the development lows of the last recession and the residents of the City of Sacramento will be grateful in the years to come for your continued attentiveness to these issues. I hope these critiques and comments are helpful in your review and deliberations.

Regards,

Michael Hanebutt

CC: Steve Hansen, Teresa Haenggi, Evan Compton

From: Samara Palko <samarapalko@gmail.com>
Date: December 9, 2014 at 9:02:57 PM PST
To: Samara Palko <samarapalko@gmail.com>
Subject: Fwd: 2101 Capitol Ave

We, Samara and Peter Palko owners of 1212 22nd Street, along with neighborhood residents are in *opposition* to the proposal to construct a six level parking structure on the corner of 21st Street and Capitol Avenue addressed as **2101 Capitol Avenue**. We are in opposition of, ‘A General Plan Amendment of 0.16 acres from Traditional Neighborhood Medium to Urban Corridor Low; a Rezone of 0.406 acres from Residential Office to General Commercial’ and ‘A Site Plan and Design Review with deviations; and a Variance for Signage’.

A primary point of opposition is this Midtown area is currently a mixed use neighborhood. We feel that zoning it as a traditional neighborhood is appropriate and this zoning is part of the fabric of the neighborhood. There are family homes and apartments surrounding the proposed location and building a garage will not add to the livability of this area. The retail on the bottom floor will bring commerce, people, and businesses together during the week day much as the State office buildings do in downtown. But after the work day/week is done an empty garage will not serve any neighborhood purpose. The addition of a parking structure to a highly residential neighborhood will negatively impact the quality of life for its’ residents. A much better use of this space should include market rate apartment homes on the top floors.

Another reason for opposition to the proposed project is the developer—never once—did any outreach to the immediate stakeholders in the area. We pride ourselves in raising a family, building community between residents and businesses. The lack of outreach by the developer indicates a lack of care for longtime residents that have made this area a highly desirable neighborhood for residents and business.

It would be greatly appreciated if any further development on the **2101 Capitol Avenue** project include input and/or a neighborhood outreach plan so that we can work together on our neighborhood community. There are many variables that need to be considered if a parking structure of this size is built. Proper understanding of risks this poses to the neighborhood need to be considered. A list of considerations should include, but not be limited to, proper street and alley lighting, tree scape/landscape, proper pedestrian/yield or stop signs visible when exiting the alley onto 21st and 22nd. This block is very high pedestrian with both residents and businesses. Safety measures need to be in place to support such an area. Housing on the property should also be considered so that it creates residents that are invested in the livability and safety of the building and neighborhood community.

Samara and Peter Palko

From: [Dana Mahaffey](#)
To: [Gerken, Matthew](#)
Subject: FW: Comment on EIR for Whole Foods project
Date: Monday, December 01, 2014 9:36:29 AM

First NOP comment.

-----Original Message-----

From: Amelia McLear [<mailto:amelianeufeld@gmail.com>]
Sent: Sunday, November 30, 2014 3:56 PM
To: Dana Mahaffey
Subject: Comment on EIR for Whole Foods project

Hello,

My husband and I are homeowners about one block away from the Whole Foods/2025 L Street project.

We are in full support of this project. Not only will it clean up and enliven a block in midtown that is basically not contributing anything positive to the fabric of our neighborhood, but it will also provide a much-needed grocery and prepared food option for us that is within walking distance. We are looking forward to the added amenity of this grocery store as well as the improvement to that block of L Street, which will hopefully encourage additional development and improvement of other vacant lots/parking lots around Midtown, cleaning up the blight and other eyesores.

We do not believe that there will be significantly more traffic as L Street is already a major traffic corridor for people who commute to work downtown, and many of the store's customers will likely be walking or riding their bikes.

Sincerely,
Aaron and Amelia McLear

Sent from my iPhone

Gerken, Matthew

From: Dana Mahaffey <DMahaffey@cityofsacramento.org>
Sent: Monday, December 01, 2014 1:27 PM
To: Gerken, Matthew
Subject: FW: 2025 L St./2101 Capitol Ave. NOP
Attachments: 2025 L Street 2101 Capitol Ave NOP.pdf; ATT00001.htm

We have a minor edit to make to the NOP.

From: Scott Lichtig [<mailto:>] **Sent:** Monday, December 01, 2014 1:04 PM
To: Dana Mahaffey
Subject: 2025 L St./2101 Capitol Ave. NOP

Good afternoon, Ms. Mahaffey-

I have a question about the City's NOP for the 2025 L St./2101 Capitol Ave. Project (Midtown Whole Foods and Parking Structure). The NOP states that the Project Location is 2025 L St. (future Whole Foods site) and 2101 Capitol Ave. (future 6-story parking garage). However, in the NOP, there are multiple references to a property at 2021 Capitol Ave., including:

- General Plan Amendment to change 0.16 acres of land designated for Traditional Neighborhood Medium to Urban Corridor Low (2021 Capitol Avenue only)
- Rezone for 0.406 acres from R-O (Residential-Office) to C-2 (General Commercial) (2021 Capitol Avenue only)
- Variance to deviate from the signage allowed (both properties) and no wall between residential and non-residential development (2021 Capitol Avenue only)

I am confused as to why these changes are being proposed at 2021 Capitol Ave., a property that is not within the Project Location and seemingly has no other relationship to the proposed developments. Can you please help me understand how 2021 Capitol Ave. is part of this Project?

Thank you very much for your time.

Sincerely,

Scott J. Lichtig Phone:

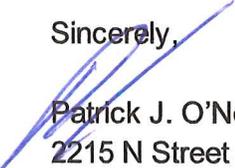
Monday, November 24, 2014

Dana Mahaffey, Associate Planner
City of Sacramento, Community Development Dept.
Environmental Planning Service
300 Richards Blvd, 3rd Floor
Sacramento, CA 95811-0218

Dear Dana,

I have received your communication regarding the 2025 L Street / 2101 Capitol Avenue "Whole Foods" project. Unfortunately, I am not able to make the meeting scheduled for 12.10.2014. However, I do wish to offer my FULL SUPPORT for the project. Whole Foods will be a welcome addition to the landscape of Midtown Sacramento.

Sincerely,


Patrick J. O'Neill
2215 N Street
Sacramento, CA 95816
916.492.0628

2025 L Street/2101 Capitol Ave. Mixed use Project (P14-045)
ENVIRONMENTAL IMPACT REPORT (EIR) NOTICE OF PREPARATION (NOP)

COMMENT FORM

Date: December 10, 2014

Please provide the following information if you wish to receive Notice of Availability of the Draft EIR and to document the author of comments received. Thank you.

Name: DANIEL (CARPENTERS)

Email: _____

Address: 4421 PELL DR, SAC

Organization: _____

Please provide us with your written comments by **January 5, 2015**. Comments on the NOP may be sent to:

Dana Mahaffey, Associate Planner
City of Sacramento
Community Development Department
300 Richards Blvd, Third Floor
Sacramento, CA 95811

Email: dmahaffey@cityofsacramento.org
Questions: Phone: (916) 808-2762

You may attach additional pages to this form and/or you may submit your written comments separately. Written comments on the scope of the EIR will be acknowledged in the Draft EIR and will be considered in preparation of the document.

- I feel it is important to make sure responsible
contractors that pay AREA STANDARD wages and Benefits
(on all their JOBS ALL THE TIME) PERFORM THIS WORK.
Anything less not only hurts WORKERS AND THEIR FAMILIES
BUT ALSO HURTS our community. That being said I am
looking forward to the project and hope it the best of
SUCCESS.

January 6, 2015

Dana Mahaffey, Associate Planner
City of Sacramento Community Development Department
300 Richards Blvd, Third Floor
Sacramento CA 95811
DMahaffey@cityofsacramento.org

**RE: THE 2025 L STREET / 2101 CAPITOL AVENUE MIXED-USE PROJECT
(SAC201401515)**

Ms. Mahaffey,

The Sacramento Metropolitan Air Quality Management District (The District) thanks the City of Sacramento for the opportunity to comment on the proposed project to construct a mixed use project and parking garage in the Midtown District of the Central City. The District is required by law to "represent the citizens of the Sacramento district in influencing the decisions of other public and private agencies whose actions may have an adverse impact on air quality within the Sacramento district."¹ We offer our comments in that spirit.

Construction Emissions

Construction of the project may result in significant emissions of criteria pollutants and precursors of primary concern. These emissions should be discussed, quantified, and disclosed in the manner described in Chapter 3 of the District's "CEQA Guide to Air Quality Assessment."² Should the project exceed District thresholds, we recommend that construction mitigation be adopted as part of the mitigation monitoring and reporting plan (Attachment).

With respect to greenhouse gas emissions generated from the construction of the project, these emissions should be discussed, quantified, and disclosed in the manner described in Chapter 6 of the District's "CEQA Guide to Air Quality Assessment." Per the guidance, the District recommends that GHG emissions be minimized during the

¹ California Health and Safety Code §40961

² <http://www.airquality.org/ceqa/ceqaguideupdate.shtml>

construction phase utilizing the District’s “Guidance for Construction GHG Emissions Reductions.”³

Operational Criteria Emissions

Operation of the project may result in significant emissions of criteria pollutants and precursors of primary concern. These emissions should be discussed, quantified, and disclosed in the manner described in Chapter 4 of the District’s “CEQA Guide to Air Quality Assessment.”⁴ Should the project exceed District thresholds, we recommend that a District verified Air Quality Mitigation Plan be adopted as part of the mitigation monitoring and reporting plan.

Greenhouse Gas Emissions

Operation of the project may result in an increase in Greenhouse Gas emissions. These emissions should be discussed, quantified, and disclosed in the manner described in Chapter 6 of the District’s “CEQA Guide to Air Quality Assessment.” The proponents should also discuss the project’s consistency with existing Greenhouse Gas reduction plans, such as the Metropolitan Transportation Plan/Sustainable Communities Strategy, the California Air Resources Board Scoping Plan and the City of Sacramento Climate Action Plan.

Permitted and Unpermitted sources of Toxic Air Contaminants

The City should make a concerted effort to disclose potential TAC-related health impacts from locating sources of TAC emissions in close proximity to existing or future planned receptors (e.g., gasoline dispensing facilities subject to District permits and non-permitted sources of TACs such as high traffic volume roadways), and locating receptors in close proximity to an existing or future planned source of TAC emissions.

Permitted sources can be identified using ARB’s Community Health Air Pollution Information System (CHAPIS) and supplemented using the EPA’s Toxics Release Inventory Explorer search tools. For more information, refer to Chapter 5 of our CEQA Guide.

General comments

To summarize, the District requests that the City consider construction and operational emissions, as well as toxic air contaminants. All projects are subject to SMAQMD rules in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling (916) 874-4800.

³ <http://www.airquality.org/ceqa/cequguideupdate/Ch6ConstructionMitMeasures.pdf>

⁴ <http://www.airquality.org/ceqa/ceqaguideupdate.shtml>

The SMAQMD thanks the City of Sacramento for the opportunity to comment on this project. If you have additional questions or require further assistance, please contact me at pphilley@airquality.org or (916) 874-4882.

Sincerely,

A handwritten signature in cursive script that reads "Paul Philley".

Paul Philley, AICP
Associate Air Quality Planner/Analyst
Sacramento Metropolitan Air Quality Management District
777 12th Street, 3rd Floor
Sacramento, CA 95814

Attachment: Construction Mitigation (Basic and Enhanced)
Attachment: SMAQMD Rules & Regulations Statement

BASIC CONSTRUCTION EMISSION CONTROL PRACTICES

The following practices are considered feasible for controlling fugitive dust from a construction site. Control of fugitive dust is required by District Rule 403 and enforced by District staff.

- **Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.**
- **Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.**
- **Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.**
- **Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).**
- **All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.**

The following practices describe exhaust emission control from diesel powered fleets working at a construction site. California regulations limit idling from both on-road and off-road diesel powered equipment. The California Air Resources Board enforces the idling limitations.

- **Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.**

Although not required by local or state regulation, many construction companies have equipment inspection and maintenance programs to ensure work and fuel efficiencies.

- **Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.**

Lead agencies may add these emission control practices as Conditions of Approval (COA) or include in a Mitigation Monitoring and Reporting Program (MMRP).

ENHANCED EXHAUST CONTROL PRACTICES

1. The project representative shall submit to the lead agency and District a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project.
 - The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment.
 - The project representative shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.
 - This information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment.
 - The District's [Equipment List](#) Form can be used to submit this information.
 - The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.
2. The project representative shall provide a plan for approval by the lead agency and District demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent California Air Resources Board (ARB) fleet average.
 - This plan shall be submitted in conjunction with the equipment inventory.
 - Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and /or other options as they become available.
 - The District's [Construction Mitigation Calculator](#) can be used to identify an equipment fleet that achieves this reduction.
3. The project representative shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour.
 - Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately.

Enhanced Exhaust Control Practices

- **Non-compliant equipment will be documented and a summary provided to the lead agency and District monthly.**
 - **A visual survey of all in-operation equipment shall be made at least weekly.**
 - **A monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.**
- 4. The District and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this mitigation shall supercede other District, state or federal rules or regulations.**

SMAQMD Rules & Regulations Statement (revised 3/12)

*The following statement is recommended as standard condition of approval or construction document language for **all** development projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):*

All projects are subject to SMAQMD rules in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration. Other general types of uses that require a permit include, but are not limited to dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities, storage or any other construction activity to prevent airborne dust from leaving the project site.

Rule 414: Water Heaters, Boilers and Process Heaters Rated Less Than 1,000,000 BTU PER Hour. The developer or contractor is required to install water heaters (including residence water heaters), boilers or process heaters that comply with the emission limits specified in the rule.

Rule 417: Wood Burning Appliances. This rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 460: Adhesives and Sealants. The developer or contractor is required to use adhesives and sealants that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

Naturally Occurring Asbestos: The developer or contractor is required to notify SMAQMD of earth moving projects, greater than 1 acre in size in areas “Moderately Likely to Contain Asbestos” within eastern Sacramento County. Asbestos Airborne Toxic Control Measures, Section 93105 & 93106 contain specific requirements for surveying, notification, and handling soil that contains naturally occurring asbestos.

From: [Dana Mahaffey](mailto:Dana.Mahaffey)
To: [Gerken, Matthew](mailto:Gerken.Matthew)
Cc: [Teresa Haenggj](mailto:Teresa.Haenggj)
Subject: FW: Notice of Prep of an Environmental Impact Report for 2025 L St/21st Street
Date: Tuesday, January 06, 2015 9:18:48 AM

From: Kschlaich@aol.com [mailto:Kschlaich@aol.com]
Sent: Monday, January 05, 2015 4:01 PM
To: Dana Mahaffey
Cc: rexshark@aol.com
Subject: Notice of Prep of an Environmental Impact Report for 2025 L St/21st Street

Mark and Kimberly Schlaich
Trustees, Mark and Kimberly Schlaich Trust
1188 Kaski Lane, Concord CA 94518
Building owners: 1215 21st Street, Sacramento CA 95811

Dana Mahaffey
Associate Planner
City of Sacramento
Community Development
Department Environmental Planning Services
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811-0218
(916)808-2762 Direct
DMahaffey@cityofsacramento.org

Re: Notice of Preparation of an Environmental Impact Report for the 2025 L St/2101 Capitol Ave mixed-use project.

Dear Ms. Mahaffey:

We are writing to voice our concerns for the integrity of the alley that runs next to our building at 1215 21st Street, Mid town Sacramento, which might be affected by the future development at 2025 L Street. We are hoping you will take into consideration our interests to protect the small alley and carefully review the plans for the parking garage intended to build there and consider how the extra cars will be entering and exiting the parking structure. Already with the new condo building there is extra wear and tear and increased traffic and we hope you will protect the alley for all concerned.

Thank you so much,
Mark and Kimberly Schlaich



**SACRAMENTO AREA
BICYCLE ADVOCATES**

909 12th St, Ste. 116
Sacramento, CA 95814

sacbike.org
saba@sacbike.org
916 444-6600

January 5, 2015

Dana Mahaffey, Associate Planner
City of Sacramento, Community Development Department
Environmental Planning Services
300 Richards Boulevard, Third Floor
Sacramento, CA 95811-0218
DMahaffey@cityofsacramento.org

Subject: Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for 2025 L Street/2101 Capitol Avenue Mixed-Use Project (P14-045)

Dear Ms. Mahaffey:

Thank you for the opportunity to comment on the subject NOP.

To assist the City of Sacramento in achieving the goals of its Climate Action Plan, every project should make it possible for its residents, employees, and visitors to safely and conveniently take more trips by bicycle. Therefore the proposed project will cause a significant adverse effect on the environment if it will not adequately provide access by bicycle. Adequacy of bicycle access requires:

- Adequate bicycle parking – The project must comply with the City of Sacramento's requirements for short-term and long-term bicycle parking. The bicycle parking must be located where it is secure from theft and vandalism as well as easily accessible to customers, employees, and residents traveling from all directions without creating conflicts with vehicle traffic or pedestrians (especially at corners, driveways and crosswalks) and without requiring illegal or unsafe bicycling behavior (e.g., wrong-way or sidewalk riding).

The proposed project includes a large number of residential units and a grocery store that will likely attract many customers and employees to use bicycles because of its location in a bicycle-friendly neighborhood. We encourage the project to go beyond the basic requirements by providing bicycle parking that is noteworthy as an amenity of the project and therefore a selling point to potential residents and business occupants. For example, a state-of-the-art "bike station" can be included in the project to give secure, indoor, 24-hour access to residents, employees and long-term visitors. Such a facility might also provide tools and supplies for minor bike repairs and servicing (e.g., flat repairs, tire inflation), and could even become a neighborhood amenity for those traveling by bicycle. Successful models operate in Long Beach, Santa Monica, Berkeley, San Francisco and other California communities.

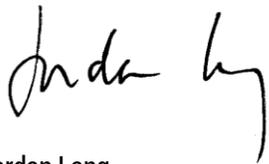
- Adequate bicycle access to the project site – The project is located adjacent to and near several important routes for bike access in midtown Sacramento: 20th Street is an important north-south low-stress route for bicycles because of its low traffic volumes and vehicle speeds, while Capitol Avenue is an important low-stress bicycle east-west route through midtown. It will be critical that the project not increase traffic stressors for bicyclists along these routes.

The subject EIR therefore must address these two dimensions of adequate bicycle access.

SABA works to ensure that bicycling is safe, convenient, and desirable for everyday transportation. Bicycling is the healthiest, cleanest, cheapest, quietest, most energy efficient, and least congesting form of transportation.

Thank you for considering our comments.

Sincerely,

A handwritten signature in black ink that reads "Jordan Lang". The signature is written in a cursive, flowing style.

Jordan Lang
Project Analyst

CC: Paul Philley, SMAQMD (pphilley@airquality.org)
Ed Cox, City of Sacramento Alternative Modes Coordinator (ecox@cityofsacramento.org)

Michael Hooper
The Hooper Family Revocable Trust
2131 Capitol Avenue, Suite 305
Sacramento, CA 95608
(916) 955-1955
1michaelhooper@gmail.com

January 5, 2015

Dana Mahaffey
Associate Planner
City of Sacramento
Community Development
Department Environmental Planning Services
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811-0218
(916)808-2762 Direct
DMahaffey@cityofsacramento.org

Re: Notice of Preparation of an Environmental Impact Report for the 2025 L St/2101 Capitol Ave mixed-use project.

Dear Ms. Mahaffey:

Thank you for allowing input regarding the above referenced project. For the past 30 years, we have owned 2131 Capitol Avenue, which is adjacent to the 2101 Capitol Avenue portion of the project. We are very concerned with several aspects of the project, particularly with regard to traffic.

The proposed plan provides parking for 420 vehicles. Most of the parking is for the 2020 L Street office building, replacing their existing parking to make way for the Whole Foods building. If all 420 vehicles access the garage at the beginning of the work day, the same 420 vehicles exit the building at the end of the day, plus the potential for multiple exit and reentry trips during the day, one can reasonably anticipate over 1,000 daily excursions into the narrow alley. 23 of the parking spaces are allocated to the retail use of the project, exit into the alley. It is reasonable to assume these spaces would be cycled throughout the day as different users frequent the building. The alley was not designed anticipating this volume of use. The alley originally serviced residences, which is still the case for the remaining residences. The alley is

already subjected to significant traffic problems, which have increased in recent years. Directing another 1000 plus vehicles into the narrow alley only serves to exacerbate these serious problems.

The existing General Plan Use is "Traditional Neighborhood Medium" and Zoning for "Residential Office." This alley is unable to accommodate the proposed 6 floors of parking and retail use. Approximately 12 years ago, the construction of a 5-story apartment complex added significant traffic to the alley. The previous use of the apartment complex directed most of the traffic, to and from L Street, not the alley. Now all of the apartment complex's traffic uses the alley via two roll up doors, as depicted on the attached photo.

According to our discussions with the developer, the original plans for 2101 Capitol included a Capitol Avenue entrance to the upper level parking structure, toward the East end. They claim a City Department (public works, perhaps) requested the plans to be redesigned so as to require all upper level parking to both enter and exit through the narrow alley on the North side of the building. We fear their "solution" only creates a worse problem.

The 5-story apartment complex is immediately North of the proposed alley entrances. The tenant parking includes 2 roll-up doors into the alley. The normally closed doors already require a significant delay to enter or exit the apartment project. A significant delay occurs for these doors to open, at times creating gridlock if other vehicles are in the alley as the doors are opening. The photo exhibits for the apartment entrances show not only the two roll up doors, but also a photo of the regular waste removal trucks, which access the alley. Removal of the apartment complex's receptacle requires the truck driver to exit the truck, access the roll up door, relocate the "dumpster" to the front of the truck, access the trucks cab to empty the dumpster, then the driver must exit the truck again to relocate the dumpster inside the apartment. This process has personally inconvenienced me many times over the years, as the alley is gridlocked from 21st Street to 22nd Street. The tenants from the apartments are blocked, as are users of our building. Considering an additional 1,000 car using an already impacted alley, only worsens a very serious traffic problem.

The proposed project also includes a recessed loading dock accessed from the alley, which is 40 feet in depth. The proposed loading dock for the Whole Foods site at 2525 L Street proposes a 65 foot recessed dock, which

accommodates a standard tractor-trailer. The proposed design will cause the alley to be blocked when the most common tractor-trailer vehicle utilizes the loading dock. The developer proposes that tenants require vendors mandate the third party truckers of their vendors to use smaller than typical delivery vehicles. However, not all deliveries are UPS or FedEx vans. My personal experience with UPS or FedEx is their practice of double parking. This is no exception in this alley currently. They already double park, and with over 1,000 potential exits and or entrances, the result is unacceptable. Additionally, should a third party delivery trucker, unbound by the developer's lease arrangement with the tenants, utilize a common tractor trailer rig, the problem is even far more amplified. The solution of mandating what type of vehicles an unrelated third party can utilize for deliveries is impractical, unreasonable and practically unenforceable. Clearly, we are creating a gridlock environment in the alley if the entrances and exits for the 6-story garage utilize the alley, compounded by the loading dock design.

In summary, the present plan to use the alley for the vast majority of the 420 vehicle capacity garage has not been well thought out and will create a real traffic problem in the alley, impacting all users on the block.

Hopefully, the design will be changed to eliminate this gridlock.

Thank you for your consideration of our concerns.

Respectfully,

Michael Hooper
Hooper Family Trust

Exhibits attached

Exhibit: Double parking entrances for apartments utilizing alley



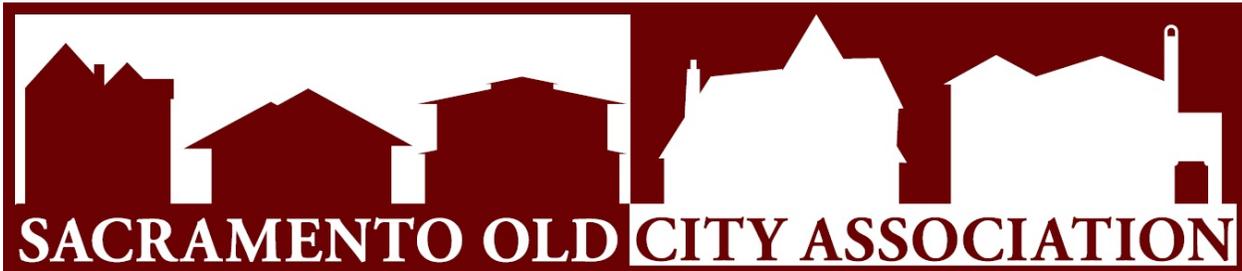
Exhibit: Waste Management truck utilizing alley



Exhibit for East Elevation



Note: 2131 "shadow" in red, depicts visual of proposed 2101 Capitol garage



Sacramento Old City Association - PO Box 162140, Sacramento CA 95816 – (916)202-4815 – info@sacoldcity.org

Dana Mahaffey, Associate Planner
City of Sacramento Community Development Department
Environmental Planning Services
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811-0218

RE: 2025 L Street/2101 Capitol Avenue Mixed-Use Project Public Scoping

The SOCA Board would like to provide the following public comments regarding the proposed project referenced above in response to the Notice of Preparation for an EIR.

First, consider as a project alternative the relocation of the proposed apartments (currently planned for 2025 L Street) to 2101 Capitol, and the parking structure (currently proposed for 2101 Capitol) to 2025 L Street, leaving the Whole Foods in its proposed location. This relocation addresses several potential concerns. 2025 L Street is a location closer to existing nightclub and nightlife uses (on 20th & K Street, 20th & L Street and 21st & I Street) that are potentially incompatible with residential uses in adjacent buildings. Locating the parking structure across from the building that will utilize the parking during the day, and where regional visitors can more easily park in close proximity to nightclubs and restaurants in the evening, provides greater convenience for those using the parking structure. Locating the apartment building and its integral parking at 21st and Capitol, a quieter corner more adjacent to nearby residential uses and offices that are quiet after 5 PM, is a location more conducive to residential use. Locating an apartment building on this block also limits the effects of noise and light from the parking garage into the adjacent residential neighborhood. Using this space for high-density residential instead of commercial parking may also eliminate the need for a General Plan amendment to convert the existing underlying land category from Traditional Neighborhood Medium to Urban Corridor. Creating an EIR requires consideration of project alternatives, and this scenario could provide one of the potential alternatives, or an alternate plan that would fit better into the existing neighborhood, limiting effects on both the existing residential neighborhood and the existing nightlife/nightclub district, serving both better.

Second, the ground-floor retail of the parking structure must be programmed and activated. Several other parking structures in downtown/midtown Sacramento have ground floor retail spaces, but they are used solely for storage or allowed to remain vacant, in violation of the intended purpose of these ground floor retail spaces to mitigate the effects of large parking structures and activate central city streets via commercial uses.

Third, as a mitigation measure to limit displacement of existing businesses and communities, the applicant should work with the Sacramento LGBT Center to establish a “Lavender Heights” historic district in the neighborhood adjacent to the project area, potentially including landscape improvements, street lights and banners, pedestrian crossings, and a historic context statement to identify sites and locations in the nearby neighborhood relevant to Sacramento’s LGBT history. SOCA has experience with nomination of historic districts and landmarks, and would be happy to work with the applicant and the LGBT Center to pursue this effort.

William Burg
President, SOCA Board of Directors

Teresa Haenggi

From: Darlene Little <dardarl711@gmail.com>
Sent: Friday, January 09, 2015 12:23 PM
To: Teresa Haenggi
Subject: Re: project P14-045

Thank you for speaking with me this morning. I will be meeting with my family this weekend and will send you a note with all our concerns.

One of our primary concerns is the six story mixed use building to include 141 residential dwellings as well as a six story parking garage. Changing the zoning from a traditional neighborhood in our opinion would be detrimental to the historical neighborhood surrounding the proposed structure. The proposed deviations including height, open space and others that will add to the noise, pollution (including animal excrement), traffic (automobile as well as bicycle), and peaceful enjoyment of an existing historical district. In addition the recent expansion of Sutter Hospital and the proposed development of the new sports arena on both ends of L Street has already far exceeded the current design of the existing L Street corridor. Those two projects alone have already and will continue to impact this neighborhood. A development of this magnitude and further expansion in this corridor will destroy this neighborhood and any other remaining surrounding downtown neighborhoods.

I implore you to consider the magnitude of the negative impact of a project of this size in this neighborhood.

Sent from my iPad

On Jan 8, 2015, at 11:29 AM, Teresa Haenggi <THaenggi@cityofsacramento.org> wrote:

Ms. Little,

We are still in the process of reviewing the project, so you still have an opportunity to provide feedback on the project. It would be best to provide your comments soon so the applicant can try to address your concerns.

Thank you for contacting me.

Teresa Haenggi
Associate Planner
Community Development Department
300 Richards Blvd.
Sacramento, CA 95811
(916) 808-7554

-----Original Message-----

From: Darlene Little [<mailto:dardarl711@gmail.com>]

Sent: Thursday, January 08, 2015 11:24 AM

To: Teresa Haenggj

Subject: project P14-045

Unfortunately I was out of town during the holidays and did not receive information concerning this development until now. Please advise of the status of this project so I may be afforded the opportunity to oppose it.

Sent from my iPad