City of
SACRAMENTO
Community Development

300 Richards Blvd., 3rd Floor
Sacramento, CA 95811

Help Line: 916-264-5011
CityofSacramento.org/dsd

MITIGATED NEGATIVE DECLARATION

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

Natomas Fountains (P16-012) - The proposed project involves the construction and operation of buildings that would house approximately 115,960 square feet (sf) of retail, restaurant, and other commercial uses on the project site. The specific future users of the commercial buildings have not been determined at this time.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required.

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892), and the Sacramento City Code.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m. The document is also available on the CDD website at: http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports

Environmental Services Manager, City of Sacramento,
California, a municipal corporation

By: _____

City of
SACRAMENTO

NATOMAS FOUNTAINS [P16-012]

FINAL INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

This Initial Study has been prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, pursuant to the California Environmental Quality Act (Public Resources Code Section 21000 *et seq*.), CEQA Guidelines (Title 14, Section 15000 *et seq*. of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

Revisions have been made to this Initial Study which are staff-initiated for clarification purposes only and do not affect the adequacy of the environmental analysis contained in this Initial Study. Text changes are shown in ~~strike through~~ and double underline format. Pursuant to CEQA Guidelines Section 15073.5, new information has been added to provide updated information and clarification where no new or additional impacts are identified. No recirculation of the mitigated negative declaration is required.

ORGANIZATION OF THE INITIAL STUDY

This Initial Study is organized into the following sections:

SECTION I - BACKGROUND: Provides summary background information about the project name, location, sponsor, and the date this Initial Study was completed.

SECTION II - PROJECT DESCRIPTION: Includes a detailed description of the proposed project.

SECTION III - ENVIRONMENTAL CHECKLIST AND DISCUSSION: Reviews proposed project and states whether the project would have additional significant environmental effects (project-specific effects).

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Identifies which environmental factors were determined to have additional significant environmental effects.

SECTION V - DETERMINATION: States whether environmental effects associated with development of the proposed project are significant, and what, if any, added environmental documentation may be required.

REFERENCES CITED: Identifies source materials that have been consulted in the preparation of the Initial Study.

COMMENT LETTERS: Comment letters received and responses to comments.

SECTION I - BACKGROUND

Project Name and File Number:	Natomas Fountains (P16-012)
Project Location:	North of the Truxel Road/Gateway Park Boulevard intersection in North Natomas
Project Applicant:	Ethan Conrad Properties, Inc. 1300 National Drive Sacramento, CA 95834 Attn: Ethan Conrad (916) 779-1000
Project Planner:	Arwen Wacht Community Development Department 300 Richards Boulevard, Third Floor Sacramento, CA 95811 awacht@cityofsacramento.org
Environmental Planner:	Dana Mahaffey, Associate Planner Community Development Department 300 Richards Boulevard, Third Floor Sacramento, CA 95811 dmahaffey@cityofsacramento.org
Date Initial Study Completed:	August 16, 2016

This Initial Study was prepared in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) and CEQA Guidelines (Title 14, Section 15000 et seq. of the California Code of Regulations). The Lead Agency is the City of Sacramento.

The City has prepared the attached Initial Study to identify any potential project-specific significant environmental effects and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance, if any.

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. Written comments should be sent at the earliest possible date, but no later than the 30-day review period ending September 16, 2016.

Please send written responses to:

Dana Mahaffey
Community Development Department
City of Sacramento
300 Richards Blvd, 3rd Floor
Sacramento, CA 95811
Direct Line: (916) 808-2762

dmahaffey@cityofsacramento.org

SECTION II - PROJECT DESCRIPTION

INTRODUCTION

The proposed project is the construction and operation of a retail center on an approximately 12-acre property located in the North Natomas neighborhood, within the City of Sacramento. This initial study (IS) has been prepared to evaluate the environmental effects of this project and to ensure compliance under the California Environmental Quality Act (CEQA). The City of Sacramento is the lead agency responsible for CEQA compliance.

PROJECT LOCATION

The project site is located in Sacramento, California, approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe. Sacramento is a major transportation hub, the point of intersection of transportation routes that connect Sacramento to the San Francisco Bay area to the west, the Sierra Nevada Mountain Range and Nevada to the east, Los Angeles to the south, and Oregon and the Pacific Northwest to the north. The City is bisected by a number of major freeways including Interstate 5 (I-5) that traverses the state from north to south; Interstate 80 (I-80), which provides an east-west connection between San Francisco and Reno; and U.S. Highway 50 which provides an east-west connection between Sacramento and South Lake Tahoe. Figure 1 shows the location of the project site in the Sacramento region.

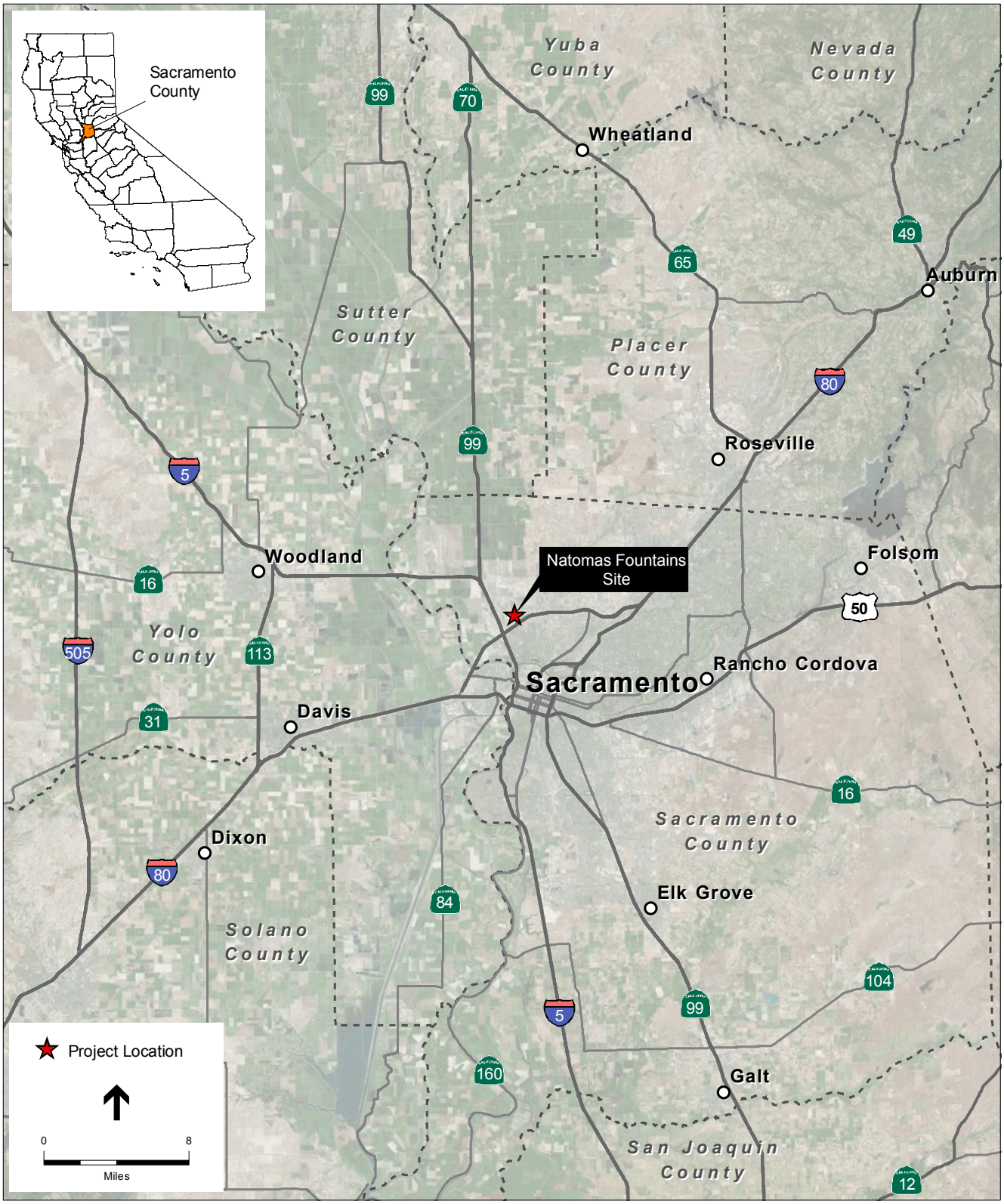
The project site is generally bounded by the Raley's Natomas Distribution Center to the north, Gateway Park Boulevard to the east, the East Drainage Canal and Truxel Road to the west, and an existing retail center bordering Gateway Park Boulevard and Truxel Road to the south. Figure 2 and Figure 3 illustrate the proposed project location in Sacramento's Natomas Basin.

Nearby commercial and retail centers include the Natomas Marketplace to the south of the project site across Truxel Road, the Promenade at Sacramento Gateway shopping center to the east across Gateway Park Boulevard, and the commercial shopping center immediately south of the project site.

The project site is within the Coral Business Center Planned Unit Development (PUD) and is currently designated as Employment Center Mid Rise on the City of Sacramento 2035 General Plan Land Use and Urban Form Diagram.

The project site is zoned EC-50-PUD: Employment Center (EC), with an average employment density of 50 employees per net acre, as defined in section 17.216.430 of the Sacramento Planning and Development Code. The EC zone is intended to provide a flexible zone for employment-generating uses in a pedestrian-friendly setting with ample open space.

The EC zone also provides for a variety of supporting uses, including retail, residential, and light industrial. Additional detail on site zoning is provided in Section III, Land Use, Population and Housing, Agricultural Resources, and Energy. The project site was originally zoned for industrial uses. In 1994, the City of Sacramento Planning Commission amended the Coral Business Center Planned Unit Development (PUD), moving the EC-50 zoning designation from Parcel 3, the present site of the Coca-Cola bottling facility, north of the project site, to Parcel 1, which includes the project site and the adjacent parcel to the south. In addition, Parcel 3 was given the MRD-20-PUD (Manufacturing, Research and Development) zoning designation. The EC-50 zoning designation allows for a designated percentage of employment center-supporting retail, which was developed in the adjacent property to the south of the project site.



SOURCE: i-cubed, 1999; ESRI, 2012; ESA, 2015

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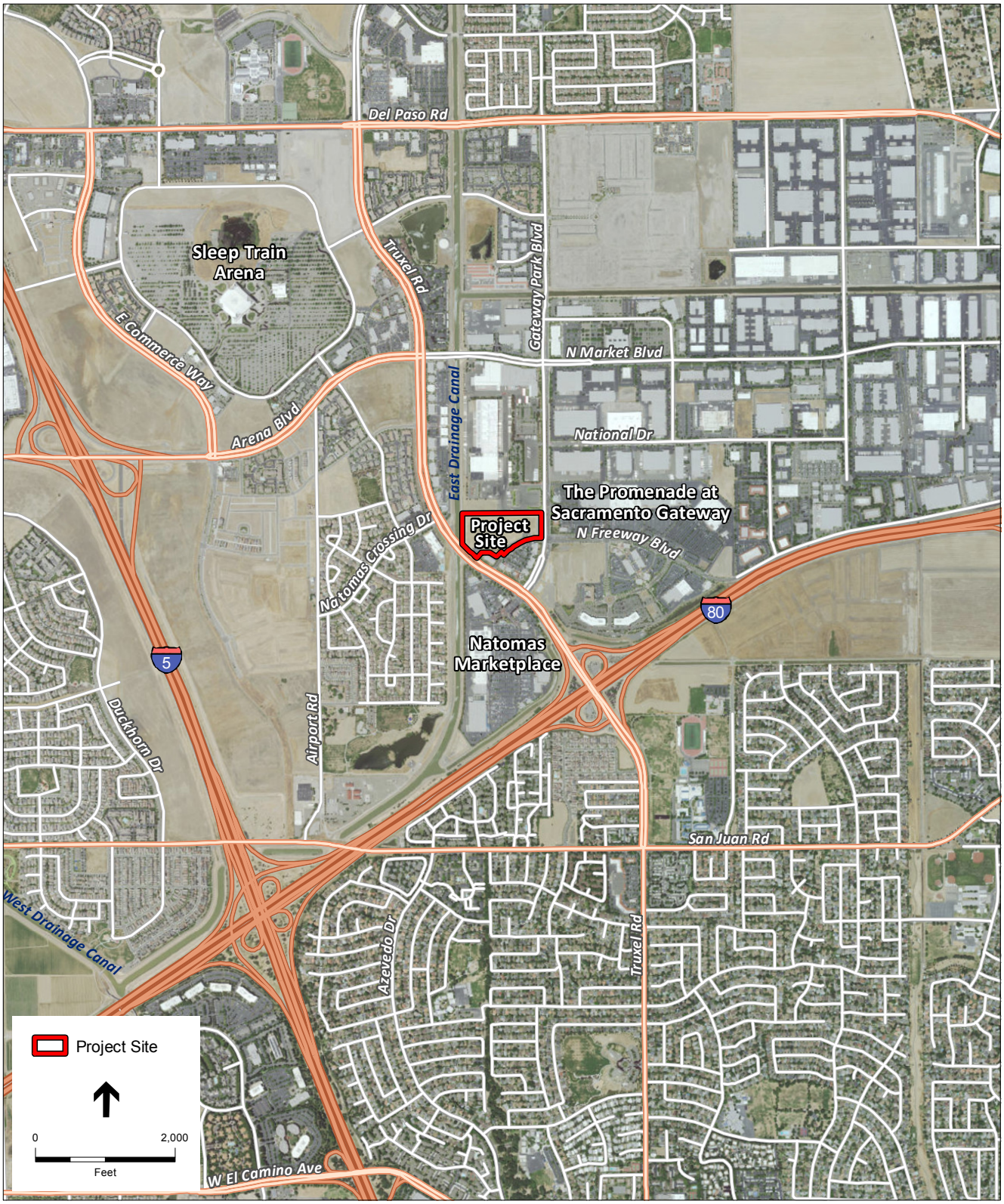
Figure 1

Regional Location



SOURCE: USDA, 2014; ESRI, 2012; ESA, 2015

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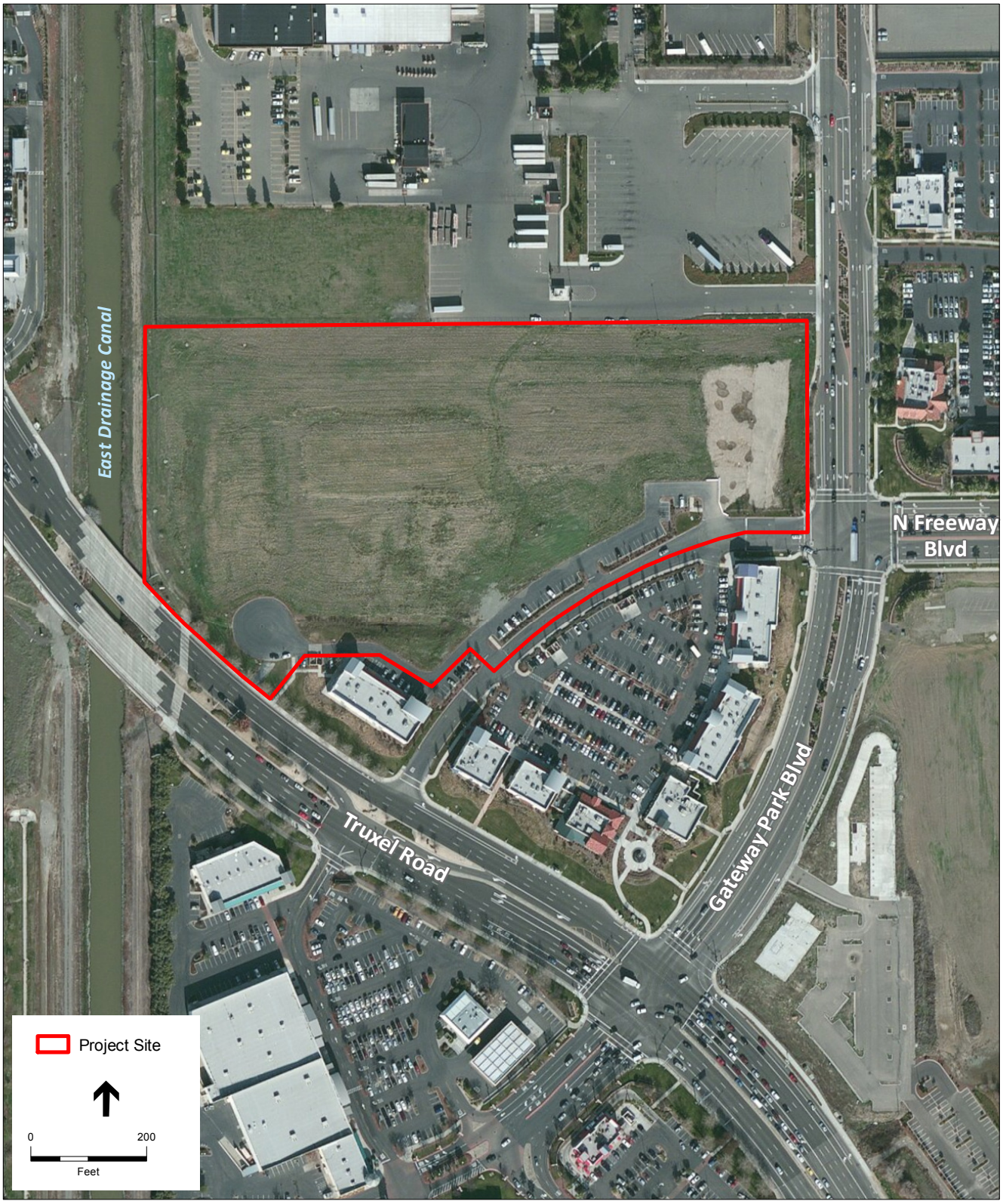
Figure 2

Project Vicinity



SOURCE: USDA, 2014; ESA, 2015

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Figure 3

Existing Project Site

Primary access to the project site is provided by the Gateway Park Boulevard/North Freeway Boulevard driveway intersection. Access to the project site is also available from northbound Truxel Road via a right-in right-out driveway. Access to eastbound and westbound I-80 is available via Truxel Road, south of the project site. Access to I-5 is available via Arena Boulevard, northwest of the project site and via I-80, to the southwest of the project site.

Gateway Park Boulevard serves as the eastern boundary of the project site, running north from Truxel Road to North Bend Drive. Gateway Park Boulevard provides connectivity between Truxel Road and I-80 traffic and retail uses along North Freeway Boulevard and residential areas north of North Market Boulevard.

Truxel Road serves as a portion of the western boundary of the project site, running north/south between South Natomas and North Natomas. Truxel Road provides connectivity between south Natomas residential areas, retail and mixed use areas along I-80, and residential and mixed uses north of the project site.

The East Drainage Canal serves as the western boundary of the project site. The East Drainage Canal runs the length of North Natomas and provides conveyance and drainage for North Natomas drainage basins and agricultural operations to the north of Elkhorn Boulevard, eventually draining into the Sacramento River near the Willow Creek neighborhood to the southwest of the project site.

The southern boundary of the project site is a driveway that runs southwest from the Gateway Park Boulevard/North Freeway Boulevard intersection to a right-in, right-out driveway at Truxel Road. The driveway provides access to the retail area that lines the northern corner of the Truxel Road/Gateway Park Boulevard intersection.

The project site is currently undeveloped. In December of 2008, the Flood Insurance Rate Maps (FIRM) for the Natomas Basin were reclassified by the Federal Emergency Management Agency (FEMA). The area, which includes the project site, was reclassified as within the 100-year flood hazard zone (AE Zone) after the U.S. Army Corps of Engineers (USACE) decertified the levee system protecting the Natomas Basin. The remap required that all new construction or substantial improvements to structures had to meet a 33-foot base flood elevation requirement. Prior to the USACE decertification, the Sacramento Area Flood Control Agency (SAFCA) implemented the Natomas Levee Improvement Program (NLIP) to upgrade the levee system protecting the Natomas Basin. Construction of the NLIP began in 2007. However, the remap limited construction to the extent that it served as a de facto building moratorium. Thus, the project site remained vacant.

In April 2015, FEMA approved an A99 flood zone designation for the Natomas Basin. An A99 designation is an interim flood zone designation that does not diminish the risk consideration for the flood zone, but allows construction in the area if certain conditions are met.

PROJECT DESCRIPTION

The proposed project involves the construction and operation of buildings that would house approximately 115,960 square feet (sf) of retail, restaurant, and other commercial uses on the project site (see Figure 4). Table 1 describes the proposed square footage of each structure and anticipated usage type for the proposed project. The specific future users of the commercial buildings have not been determined at this time.

The proposed structures would be single story measuring to a height no greater than 40 feet (ft), as measured from the ground to the highest point. Building setbacks would include a 38 ft setback from Gateway Park Boulevard and a 55 ft setback from Truxel Road. Proposed structures would cover approximately 21 percent of the 12.54-acre site.

TABLE 1.
NATOMAS FOUNTAINS PROPOSED USES

Structure	Proposed Use		Space (SF)	Percent
Building A	Retail		18,000	15.5 %
Building B	50% Retail / 50% Restaurant		13,200	11.4 %
Building C	Anchor Tenant (Retail)		28,980	25.0 %
Building D	Retail		10,000	8.6 %
Building E	Retail		10,000	8.6 %
Building F	Restaurant		6,000	5.2 %
Building G	50% Retail / 50% Restaurant		7,200	6.2 %
Building H	50% Retail / 50% Restaurant		7,200	6.2 %
Building I	50% Retail / 50% Restaurant		7,150	6.2 %
Building J	Restaurant		8,230	7.1 %
Total	**Retail** **50% Retail / 50% Restaurant** **Restaurant**	**66,980 sf** **34,750 sf** **14,230 sf**	**115,960**	**100.0 %**

Project site configuration would be divided into a large grouping of approximately 86,180 sf of space, with retail spaces ranging from 6,000 sf to 29,980 sf, and four standalone structures situated along the eastern and southern sections of the site, ranging in size from 7,150 sf to 8,230 sf. The large grouping of retail space in the northern two quadrants of the project site would be oriented for south-facing frontage, with logistical facilities such as trash enclosures and delivery entrances located on the northern, backsides of those structures. The standalone retail and restaurant structures on the project site would likely be oriented to provide frontage to the project site interior where parking facilities would be located.

Vehicle Access

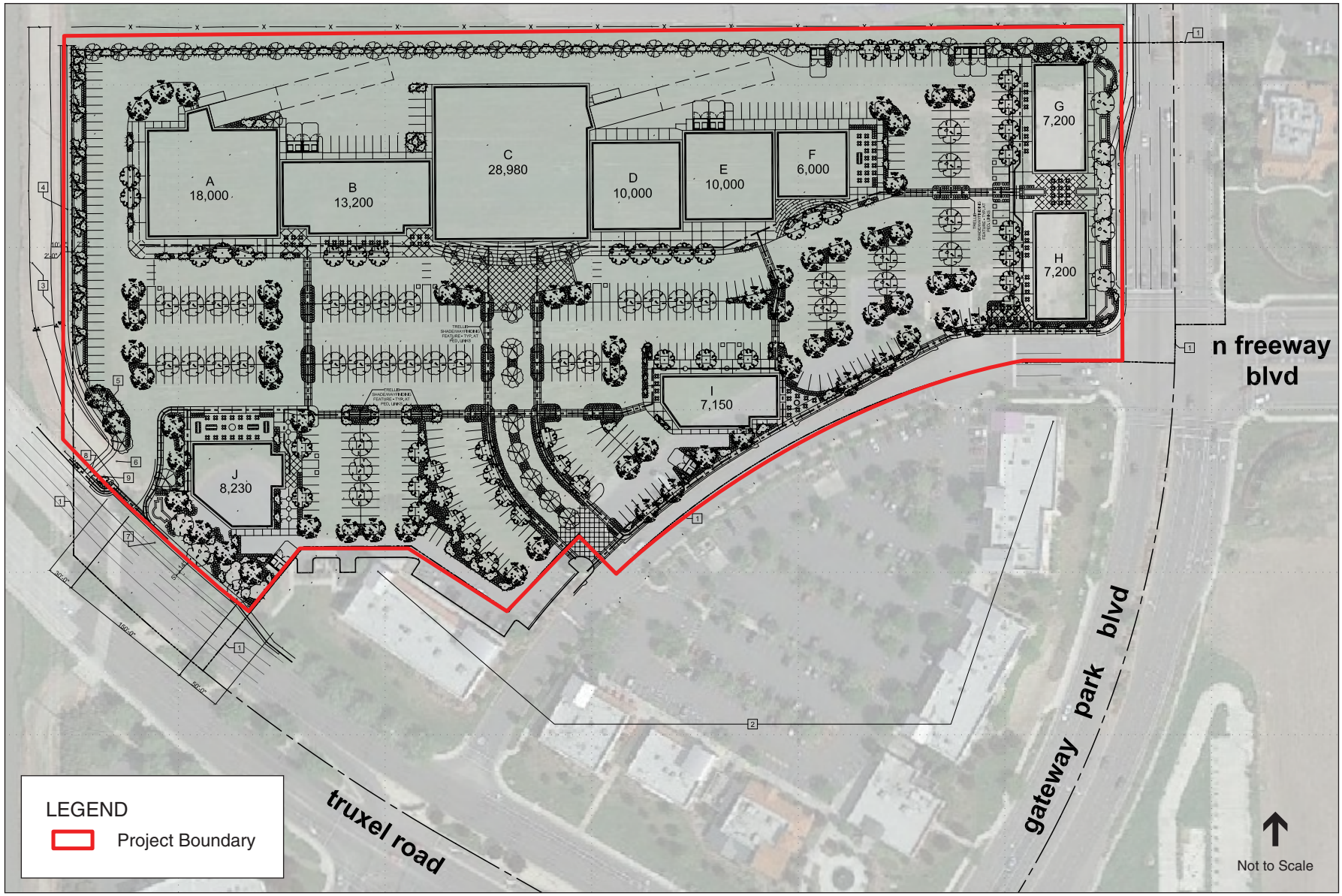
The project site is currently accessible from the retail center driveway to the south of the project site that can be accessed from the intersection of Gateway Park Boulevard/North Freeway Boulevard and a right-in/right-out driveway at Truxel Road. The project site would be accessible from multiple points along the retail center driveway, and an additional right-in/right-out driveway and deceleration lane would be constructed at Truxel Road at the southwest corner of the project site.

Internal vehicle circulation would be provided by parking aisles along all sides of the main grouping of retail/restaurant structures. A central driveway would provide connectivity between the central driveway and the main grouping of retail structures. Parking lot aisles and driveways would provide access to the four standalone structures, driveway access at Truxel Road, and provide additional access to the existing retail center driveway.

Freight and solid waste management services would access the project site via the existing and proposed project driveways and access logistical facilities at the rear, on the north side, of the main grouping of retail space.

Pedestrian Access

Pedestrian connections would be provided along the Truxel Road and Gateway Park Boulevard frontages, and internally to and from the existing retail to the south of the project site.



SOURCE: Pull Architecture, Inc., 2016

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Figure 4
Project Site Layout

Bicycle Access

Bicycle access would be maintained for the existing Class II bike lanes along Truxel Road and Gateway Park Boulevard. Appropriate signage and lane-striping would be implemented where Class II bike lanes intersect the new proposed project driveway on Truxel Road. The proposed project would construct approximately 790 feet of Class I bike trail on the unpaved access road that runs along the east side of the East Drainage Canal, directly adjacent to the project site.

Site Design

Exterior Lighting

Onsite security lighting would be provided in the parking lot and on the exterior of buildings. Proposed outdoor lighting fixtures would include downward-shielding for overhead light fixtures and low-intensity exterior lighting to minimize fugitive light. Lighting mounted to buildings would be for safety and security purposes and would also be angled downward to provide targeted illumination and prevent fugitive light from illuminating adjacent areas.

Landscaping

Onsite landscaping would consist of turf areas along the street frontages, interspersed with trees and shrubs (see Figure 4). Within the project site, parking aisles and building frontages would be lined with planter boxes with trees and shrubs. The eastern, western and southwestern boundaries of the project site would have landscape buffering along the sidewalks and canal, to provide visual buffering from adjacent uses. The landscaped area along Truxel Road would include water features at the proposed driveway and decorative boulders set in grass, amidst trees and turf. Landscaping would be designed to meet California Assembly Bill (AB) 1881, Executive Order B-29-15, and the City's Model Water Efficient Landscape Ordinance.

Signs

The proposed project would include the construction of illuminated signs that would be consistent with the character of adjacent retail and restaurant land uses. Anticipated signs would include pedestals along the main project driveway, at project driveway entrances along Truxel Road and Gateway Boulevard and on storefronts and buildings fronting the adjacent streets.

Operations

The project site would be anticipated to operate during standard retail or restaurant hours, consistent with business hours of adjacent retail areas including the Natomas Marketplace to the south and the Promenade at Sacramento Gateway retail center to the east of the project site. Business hours for retail tenants within the project site would be anticipated to range from 9:00 a.m. to 11:00 p.m. Restaurant business hours would be anticipated to range from 7:00 a.m. to 10:00 p.m.

Retail and restaurant businesses within the project site would be anticipated to receive regular weekly deliveries, typically loading and unloading from large freight trucks for large retailers and smaller freight trucks for restaurants. The loading area for the retail buildings would dip below grade and would be shielded by six-foot high block walls.

Primary service vehicle access for heavy duty/large delivery trucks to the site would be from the proposed Truxel Road right-in/right-out driveway. Service vehicles would not be permitted to access the project site from the retail center driveway along the southern perimeter of the project site or from existing driveway accesses along Gateway Park Boulevard and Truxel Road.

Project Construction

Construction of the large group of commercial structures, standalone retail/restaurant structures, and site improvements is expected to occur in a single phase. Site preparation will include the removal of five city trees, to provide a clear area for the construction of the right-in/right-out driveway and deceleration lane along Truxel Road and filling of the drainage feature in the southern portion of the project site.

The applicant would implement numerous Best Management Practices (BMPs) to minimize construction impacts from noise, vibration, light, dust, sedimentation and erosion, and general disturbances to sensitive receptors and sensitive resources. Construction activities would be scheduled during normally acceptable hours in accordance with the City's noise ordinances.

The exact type and number of construction equipment would be based on the contractor's judgement and what equipment is reasonably necessary to complete the project using industry standard means and methods. Typical vehicles that are expected to be used include but are not limited to: scrapers, backhoes, skip loaders, water trucks, generators, and other miscellaneous equipment. Construction duration would be anticipated to last approximately up to 13 months.

ENTITLEMENTS

The project requires the following planning approvals from the City of Sacramento:

- Development Agreement
- General Plan Amendment to re-designate the site from Employment Center Mid Rise to Regional Commercial Center;
- Rezone from Employment Center (EC-50-PUD) to Shopping Center (SC-PUD);
- PUD Schematic Plan Amendment of the Coral Business Center PUD to designate this site for commercial use.
- Site Plan and Design Review for conceptual review of the proposed commercial development

The proposed project would also require the following actions by entities other than the City:

- Granting of a construction activity stormwater permit from the Central Valley Regional Water Quality Control Board (CVRWQCB)
- Granting of a 401 Water Quality Certification from the CVRWQCB.
- Pending the Outcome of a Formal Wetland Delineation, Granting of a 404 Wetland Permit by the U.S. Army Corps of Engineers.

ATTACHMENTS

Figure 1 – Regional Location
Figure 2 – Project Vicinity
Figure 3 – Existing Project Site
Figure 4 – Project Site Layout
Figure 5 – City of Sacramento 2035 General Plan Land Use
Figure 6 – Existing and Proposed Zoning
Figure 3-1 – Habitats
Figure 3-2 – Special Status Species Occurrences within a 5-mile Radius
Figure 8-1 – Noise Measurement Locations
Figure 13-1 – Southbound Truxel Road Improvements Proposed in Mitigation Measure 13-1

Appendix A – Air Quality Data
Appendix B – Lists of Regionally-Occurring Special-Status Species
Appendix C – Natomas Fountains Project Cultural Resources Inventory Report
Appendix D – Final Transportation Impact Study for the Natomas Fountains Project

SECTION III – ENVIRONMENTAL CHECKLIST AND DISCUSSION

LAND USE, POPULATION AND HOUSING, AGRICULTURAL RESOURCES AND ENERGY

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 project. CEQA also requires a discussion of any inconsistency between the proposed project and applicable general plans and regional plans.

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

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.

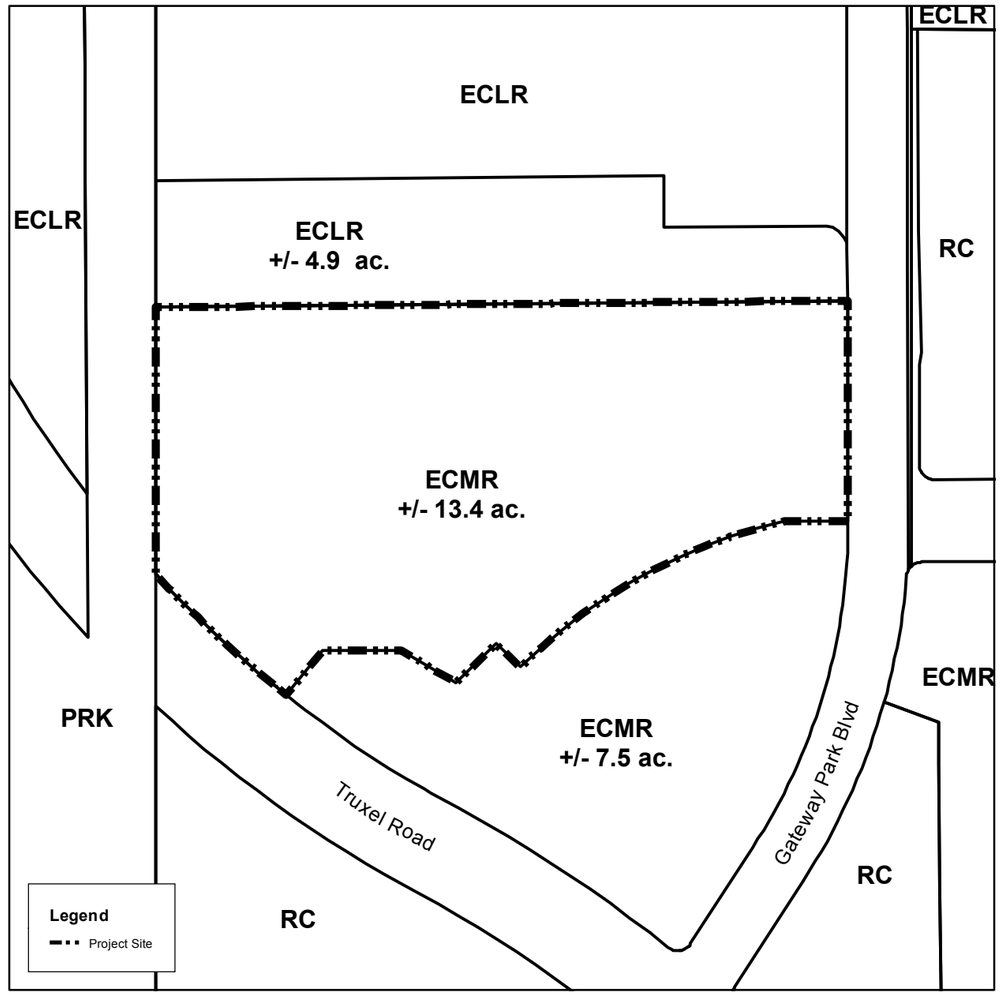
This section of the initial study identifies the applicable land use designations, plans and policies, and permissible densities and intensities of use, and discusses any inconsistencies between these plans and the proposed project. This section also discusses agricultural resources and the effect of the project on these resources. In addition, this section discusses energy and the project impact on energy facilities, policies, and other such resources.

Discussion

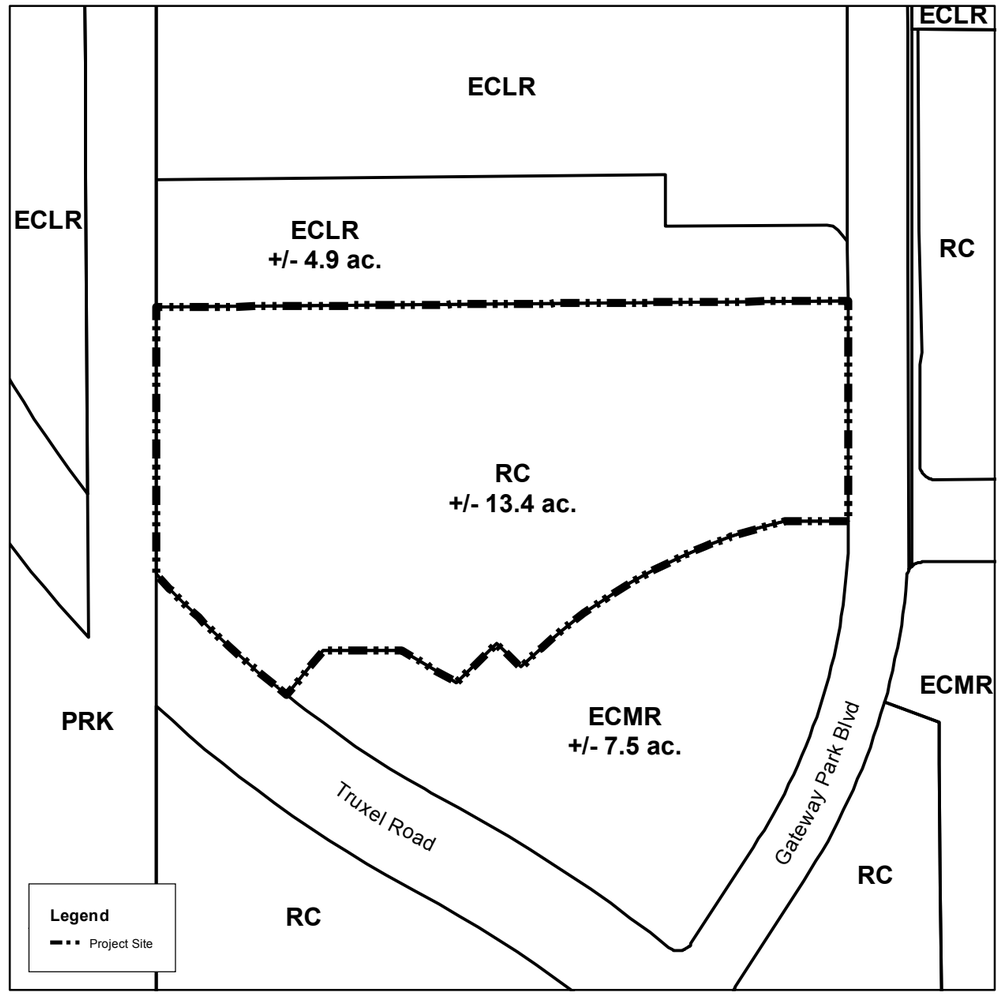
Land Use

The project site is within the Coral Business Center Planned Unit Development (PUD). The Coral Business Center encompasses approximately 76 acres and is one of the first major business centers in North Natomas. The property is divided into three parcels. Parcel 1 (26 acres) is designated for office, support retail, and hotel uses and is located on the southern end of the PUD. Parcel 2 (28 acres) is designated for the Raley's Distribution Center and is located on the central portion of the PUD. Parcel 3 (22 acres) is designated for the Sacramento Coca-Cola Bottling Facility and Warehouse and office uses and is located on the northern parcel of the PUD. The Coral Business Center PUD was designated by the City Council on December 11, 1990 (P90-157). In 1994, the City Planning Commission amended the PUD schematic to reverse the land uses on Parcels 1 and 3 of the PUD so the Coca-Cola Bottling Facility and Warehouse was to be located on the northern Parcel 3 and office uses were to be located on the southern Parcel 1 (P93-179). On November 18, 1997, the City Council adopted Resolution No. 97-640, which amended the Coral Business Center PUD Schematic Plan and Guidelines, to allow a hotel and other retail uses, as well as office uses on Parcel 1 of the PUD, which allowed for development of the existing restaurant and retail uses in the southern portion of Parcel 1, at the northern corner of Truxel Road and Gateway Boulevard. The project site makes up the northern portion of Parcel 1, as was originally established by the PUD.

The project site is located in an urbanized area of Sacramento on a vacant parcel. Figure 5 shows the existing and proposed City of Sacramento General Plan land use designations for the project site and other parcels in the project vicinity. The project site is designated as Employment Center Mid Rise. The



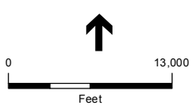
Existing Land Use



Proposed Land Use

SUMMARY TABLE

LAND USE CODE	LAND USE	EXISTING	PROPOSED	DIFFERENCE
RC	Regional Commercial	0.0	13.4	+13.4
ECMR	Employment Center Mid-rise	20.9	7.5	-13.4
ECMR	Employment Center Low-rise	4.9	4.9	0.0
TOTAL		25.8	25.8	

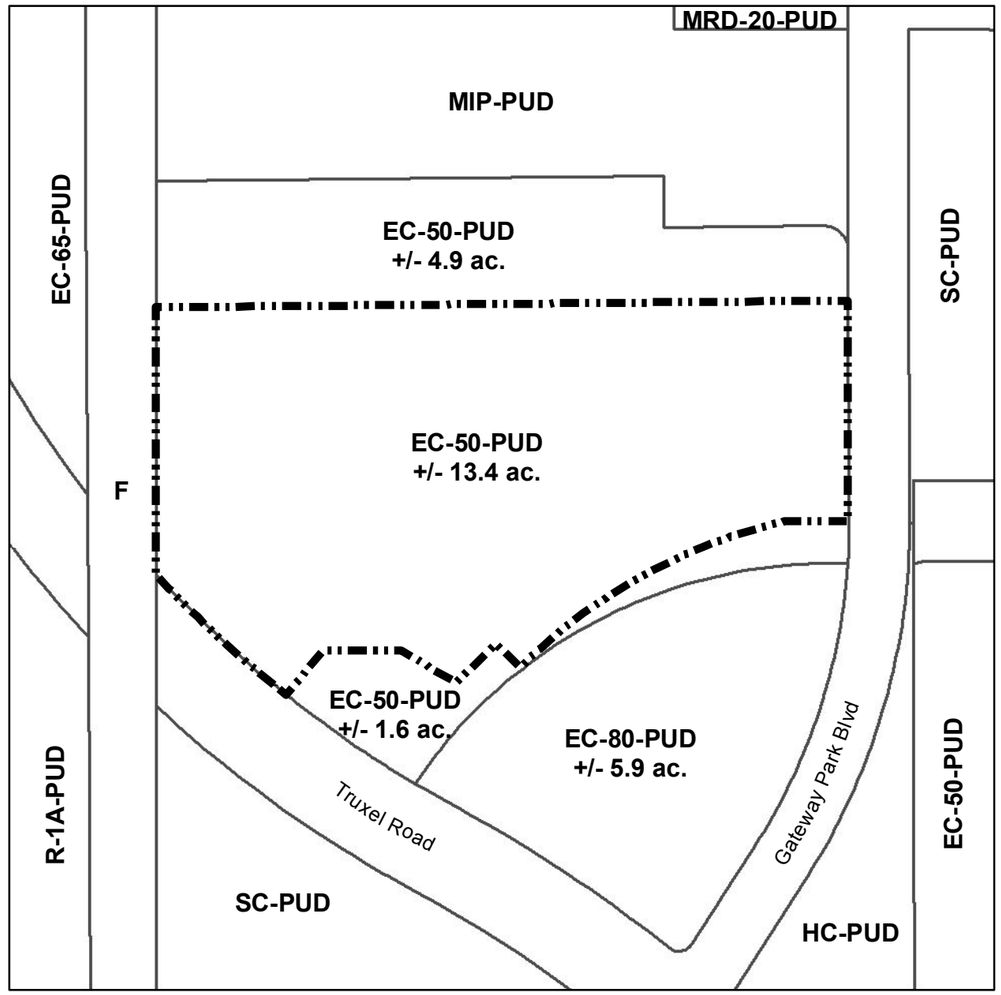


SOURCE: City of Sacramento, 2016; ESA, 2016

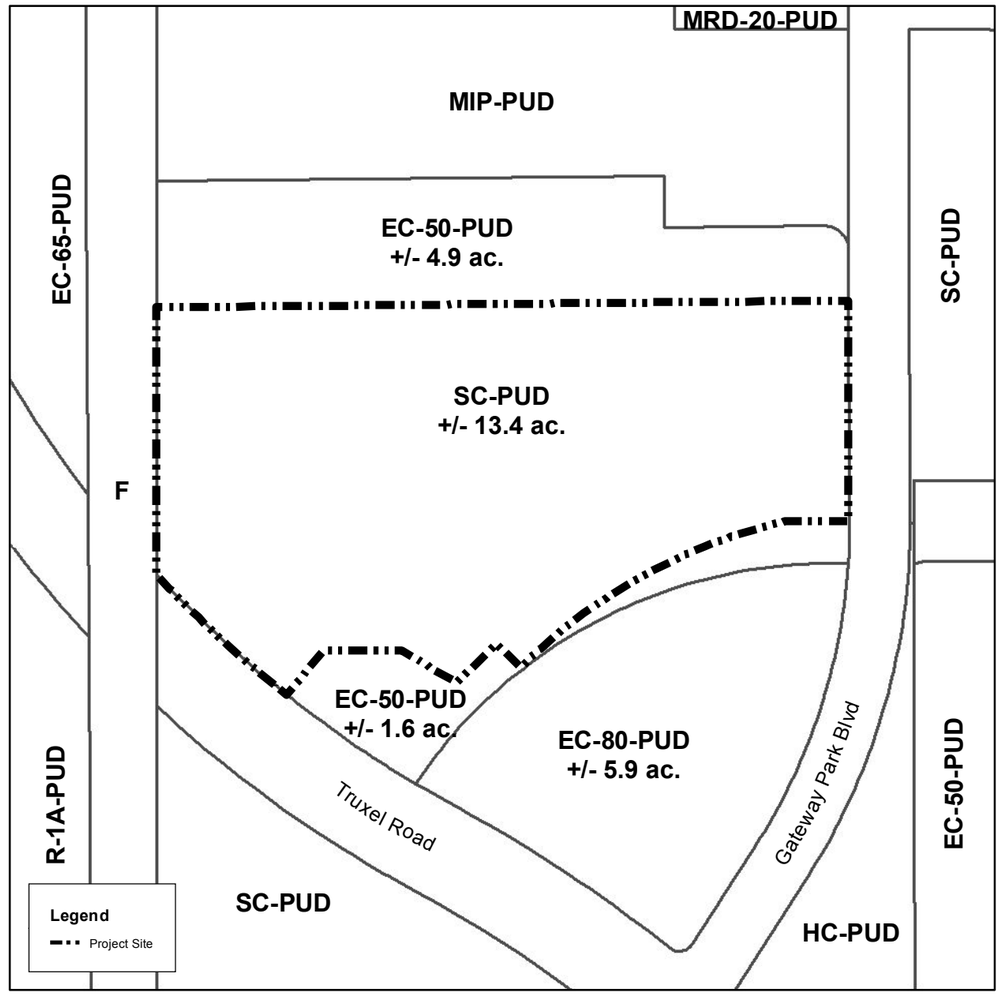
Natomas Fountains . 150409

Figure 5

City of Sacramento 2035 General Plan Land Use



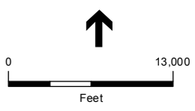
Existing Zoning



Proposed Zoning

SUMMARY TABLE

ZONING CODE	ZONING	EXISTING	PROPOSED	DIFFERENCE
SC-PUD	Shopping Center - Planned Unit Development	0.0	13.4	+13.4
EC-50-PUD	Employment Center - Planned Unit Development	19.9	6.5	-13.4
EC-80-PUD	Employment Center - Planned Unit Development	5.9	5.9	0.0
TOTAL		25.8	25.8	



SOURCE: City of Sacramento, 2016; ESA, 2016

Natomas Fountains . 150409

Figure 6

Existing and **Proposed** Zoning

2035 General Plan describes the Employment Center Mid Rise designation as areas that can provide for large mixed-use office/employment centers that include office complexes; support retail and service uses, such as restaurants, dry-cleaners, gym/fitness centers, markets, hotels, and office services (printing/ copying/shipping); landscaped gathering places that include support uses; Residential uses as a supportive mixed use or adjacent to large employment center; and compatible public, quasi-public, and special uses. The minimum floor-area ratio (FAR) for Employment Center Mid Rise is 0.25.

The 2035 General Plan land use designations for surrounding properties include land uses include Employment Center Low Rise to the north; Regional Commercial east; Employment Center Mid Rise and Regional Commercial Center to the south; and Employment Center Low Rise and Parks and Recreation to the west of the project site.

Figure 6 shows the existing and proposed zoning for the project site and vicinity. The project site is zoned as EC-50-PUD: Employment Center (50 employees per net acre) within the Coral Business Center Planned Unit Development (PUD). The EC zone is intended to provide a flexible zone for employment-generating uses in a pedestrian-friendly setting with ample open space. The EC zone also provides for a variety of supporting uses including retail, residential, and light industrial. Other lands in the immediate vicinity of the project site are zoned SC-PUD (Shopping Center), HC-PUD (Highway Commercial), R-1A-PUD (Single-Unit or Duplex Dwelling), F (Flood), and additional properties zoned as EC-50 to EC-80.

The proposed project would develop approximately 115,960 sf of retail/restaurant space on a 546,245 sf parcel (12.54 acres). The FAR for the proposed project would be 0.21, which falls below the threshold for the existing land use designation. However, the proposed use would not be compatible with the existing land use designation, therefore, the proposed project would require an amendment to the General Plan for the alteration of the land use designation, from Employment Center Mid Rise to a Regional Commercial Center designation. The proposed project would also require changes to the zoning designation and the Coral Business Center PUD Schematic Plan.

The project site would continue the retail/commercial development from the south and is not dissimilar from adjacent retail/commercial land uses. The proposed project would fill in a vacant site amongst other developed uses; thus, the proposed project would not physically divide an established community.

Development within the Natomas Basin is subject to the Natomas Basin Habitat Conservation Plan (NBHCP), with the exception of development areas determined to have existed prior the 1997 adoption of the NBHCP. The 75-acre Coral Business Center PUD is included in the list of existing development, and is, therefore, exempt from compliance with the NBHCP.[1]

Population and Housing

The existing project site is undeveloped and there are no residential uses proposed for the project site. Therefore, the proposed project would not impact population and housing.

Energy

Structures built would be subject to Titles 20 and 24 of the California Code of Regulations, which reduce demand for electrical energy by implementing energy-efficient standards for residential and non-residential buildings. The 2035 General Plan includes policies (see 2035 General Plan Energy Resources Goal U 6.1.1) to encourage energy-efficient technology by offering rebates and other incentives to commercial and residential developers, coordination with local utility providers and recruitment of businesses that research and promote energy conservation and efficiency.

[1] City of Sacramento, Sutter County & Natomas Basin Conservancy, 2006. Final Natomas Basin Habitat Conservation Plan. Ch. 5 Land Use Issues. p. III-14 & Exhibit B. Available: http://www.natomasbasin.org/helpful-documents/2003-nbhcp-related-documents/. Accessed February 2, 2016.

The Master EIR discussed energy conservation and relevant 2035 General Plan policies in section 6.3 (page 6-3). The discussion concluded that with implementation of the 2035 General Plan policies and energy regulation (e.g., Title 24) development allowed in the 2035 General Plan would not result in the inefficient, wasteful or unnecessary consumption of energy.

The proposed project would comply with Building Energy Efficiency Standards included in Title 24 of the California Code of Regulations which requires new residential and nonresidential development to incorporate energy efficiency standards into project designs. While the proposed project is not an anticipated project of the 2035 General Plan, the proposed project would implement general plan policies and energy regulation including Title 24 requirements; thus, the proposed project would not result in any energy impacts.

Agricultural Resources

The Master EIR discussed the potential impact of development under the 2035 General Plan on agricultural resources. See Master EIR, section 4.1. In addition to evaluating the effect of the general plan on sites within the City, the Master EIR noted that to the extent the 2035 General Plan accommodates future growth within the City limits, the conversion of farmland outside the City limits is minimized. The Master EIR concluded that the impact of the 2035 General Plan on agricultural resources within the City was less than significant.

The project site does not contain soils designated as Important Farmland (i.e., Prime Farmland, Unique Farmland or Farmland of Statewide Importance).[2] 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. Finally, development of the project site was anticipated in the 2035 General Plan Master EIR, which concluded that development impacts assumed under the 2035 General Plan on agricultural resources within the City would be less than significant.

[2] California Department of Conservation, Division of Land Resource Protection, 2014. Sacramento County Important Farmland Map. Available: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/sac14.pdf. Accessed February 2, 2016.

Issues:	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
1. AESTHETICS Would the proposal: A) Create a source of glare that would cause a public hazard or annoyance?		X	
B) Create a new source of light that would be cast onto oncoming traffic or residential uses?		X	
C) Substantially degrade the existing visual character of the site or its surroundings?	X		

ENVIRONMENTAL SETTING

The project site is vacant land within urbanized retail, commercial, and industrial development. The surrounding retail buildings to the east and south are single-story buildings. Large asphalt parking lots interspersed with shade trees front the buildings. The warehouse buildings to the north of the project site are two-story concrete industrial buildings with asphalt parking lots in front of the buildings. Areas to the west are open across the East Drainage Canal.

Standards of Significance

The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, thresholds of significance adopted by the City in applicable general plans and previous environmental documents, and professional judgment. A significant impact related to aesthetics would occur if the project would:

- substantially interfere with an important scenic resource or substantially degrade the view of an existing scenic resource; or
- create a new source of substantial light or glare that is substantially greater than typical urban sources and could cause sustained annoyance or hazard for nearby sensitive receptors.

ANSWERS TO CHECKLIST QUESTIONS

Questions A and B

The proposed project would construct a new retail area with an 86,180 square feet (sf), south-fronting structure (Units A – F) and four smaller structures (Units G – J), ranging from 7,150 sf to 8,230 sf, constructed along the northern and western perimeters of the project site. Development of the project site, as proposed, would introduce small areas of new reflective surfaces (e.g., window glazing and possibly other building materials) and new sources of night lighting into an urban area that currently contains various sources of light or glare, such as street and parking lot lights, vehicles on adjacent streets, building signage and interior lighting, and building windows. New sources of lighting would be consistent with the existing types of lighting present in the adjacent buildings in the area.

Subject to City review and approval, illuminated signage is proposed to be placed on street fronting and internal fronting sides of all structures and likely at project driveways. Onsite security lighting would be provided in the parking lot and on the exterior of the buildings. Parking lot and walkway lighting would consist of 10-foot light standards that would direct light downward. Lighting mounted to buildings would be for safety and security purposes and would also be angled downward to provide targeted illumination. Therefore, only minimal amounts of light would be cast onto the East Drainage Canal, Truxel Road, Gateway Park Boulevard, or the Raley's Distribution Center. There are single-family residential uses to the southwest of the project site, the nearest of which is approximately 465 ft from the southwestern boundary of the project site. Those residential uses are further separated from the project site by Truxel Road, a substantial source of ambient light, the East Drainage Canal, and maintenance roads. Thus, adjacent uses would not be adversely affected by lighting on the project site and impacts from lighting would be **less than significant**.

Question C

Units A through F, that would comprise the main retail structure, would be constructed to a maximum height of 40 ft from ground level. Standalone structures along the site perimeter would be constructed to lesser heights. The exact elevations of the buildings have not been determined. Architectural features could include windows, glass, or metal, which could create glare. Therefore, the impact from glare could be significant if not mitigated as provided in **Mitigation Measure 1-1** below.

Implementation of Mitigation Measure 1-1 would ensure that the proposed buildings would not use reflective glass, mirrored glass, black glass or metal in such a way as to create glare on adjacent properties. With implementation of **Mitigation Measure 1-1**, the impact would be **less than significant**.

MITIGATION MEASURES

1-1 The project applicant shall ensure that buildings do not use reflective glass that exceeds 50 percent of any building surface and on the ground three floors, use mirrored glass, or use black glass that exceeds 25 percent of any surface of a building.

FINDINGS

All significant environmental effects of the proposed project relating to aesthetics, light, and glare would be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than significant Impact	No Impact
2. AIR QUALITY Would the proposal: A) Result in construction emissions of NOx above 85 pounds per day?			X	
B) Result in operational emissions of NOx or ROG above 65 pounds per day?			X	
C) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
D) Result in PM10 concentrations equal to or greater than five percent of the State ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours) in areas where there is evidence of existing or projected violations of this standard?			X	
E) Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm)?			X	
F) Result in exposure of sensitive receptors to substantial pollutant concentrations?			X	
G) Result in TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources?			X	
H) Conflict with the Climate Action Plan?			X	

ENVIRONMENTAL SETTING

The proposed project is located within the City of Sacramento. The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the primary local agency with respect to air quality for all of Sacramento County, including the City of Sacramento. The City of Sacramento is within the Sacramento Valley Air Basin (SVAB), which also includes all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba Counties, the western portion of Placer County, and the eastern portion of Solano County.

As required by the Federal Clean Air Act (FCAA) passed in 1970, the United States Environmental Protection Agency (U.S. EPA) has identified six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. These include ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter, and lead. Particulate matter is measured in two size ranges: PM_{10} for particles less than 10 microns in diameter, and PM2.5 for particles less than 2.5 microns in diameter. The U.S. EPA calls these pollutants "criteria air pollutants" because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Table 2-1 summarizes the national and California ambient air quality standards.

TABLE 2-1.
SACRAMENTO COUNTY ATTAINMENT STATUS

Pollutant	Designation/Classification	
	State Standards	**Federal Standards**
Ozone	Nonattainment	Nonattainment/Severe
Carbon Monoxide	Attainment	Maintenance/Moderate
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Unclassified
Fine Particulate Matter (PM10)	Nonattainment	Maintenance/Moderate
Fine Particulate Matter (PM2.5)	Attainment	Attainment

SOURCES: California Air Resources Board, 2016. Area Designation Maps. Available: http://www.arb.ca.gov/desig/adm/adm.htm. Accessed July 11, 2016; U.S. Environmental Protection Agency, 2016. U.S. EPA Fact Sheet – California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. June 2016.

The California Air Resources Board (CARB) regional air quality monitoring network provides information on ambient concentrations of non-attainment criteria air pollutants. The monitoring stations that include data representative of the proposed project site are located on Sacramento-Goldenland Court (monitors ozone, PM10 and CO and is approximately 0.7 miles north of the project) and T Street (monitors PM2.5 and is approximately 4.9 miles south of the project). Table 2-2 presents a five-year summary of air pollutant concentration data collected at these monitoring stations for ozone, PM10, PM2.5 and CO.

TABLE 2-2.
SUMMARY OF AIR QUALITY MONITORING DATA (2011–2015)

Pollutant	Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured[a]				
		2011	**2012**	**2013**	**2014**	**2015**
Ozone – Sacramento-Goldenland Court						
Days 1-hour State Std. Exceeded	>0.09 ppmb	0	0	0	0	0
Max. 1-hour Conc. (ppm)		0.088	0.089	0.090	0.088	0.086
Days 8-hour National Std. Exceeded	>0.07 ppmc	1	4	0	1	1
Days 8-hour State Std. Exceeded	>0.07 ppmb	2	7	2	4	6
Max. 8-hour Conc. (ppm)		**0.078**	**0.08**	**0.072**	**0.076**	**0.079**

TABLE 2-2.
SUMMARY OF AIR QUALITY MONITORING DATA (2011–2015)

Pollutant	Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured[a]				
		2011	2012	2013	2014	2015
Suspended Particulates (PM10) – Sacramento-Goldenland Court						
Estimated Days Over 24-hour National Std.d	>150 µg/m^3 c	0	0	0	0	0
Estimated Days Over 24-hour State Std.d	>50 µg/m^3 b	1	0	6.0	0	6.1
Max. 24-hour Conc. National/State (µg/m^3)		69.6/**67**	76.5/32	96.4/**51**	47/35	53/**54**
State Annual Average (µg/m^3)	>20 µg/m^3 b	18.6	15.0	18.9	15.0	16.5
Suspended Particulates (PM2.5) – T Street Station						
Estimated Days Over 24-hour National Std.d	>35 µg/m^3 c	18.4	0	6.1	0	3
Max. 24-hour Conc. National (µg/m^3)		**50.5**	27.1	**39.2**	26.3	**36.3**
Annual Average (µg/m^3)	>12 µg/m^3 b	10.1	8.3	10.1	8.1	9.6
Carbon Monoxide (CO) – Sacramento-Goldenland Court						
Days 8-hour Std. Exceeded	>9 ppm[b]	0	0	0	0	0
Max. 8-hour Conc. (ppm)		1.6	1.6	1.7	1.3	1.3
Days 1-hour Std. Exceeded	>20 ppm[b]	0	0	0	0	0
Max. 1-hour Conc. (ppm)		1.8	1.9	1.9	2.1	1.5

NOTES:
Bold values are in excess of applicable standard. "NA" indicates that data is not available.
conc. = concentration; ppm = parts per million; ppb=parts per billion;
µg/m^3 = micrograms per cubic meter
ND = No data or insufficient data.

a. Number of days exceeded is for all days in a given year, except for particulate matter. PM_{10} and $PM_{2.5}$ are monitored every six days.
b. State standard, not to be exceeded.
c. National standard, not to be exceeded.
d. Particulate matter sampling schedule of one out of every six days, for a total of approximately 60 samples per year. Estimated days exceeded mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored.

SOURCE: California Air Resources Board, 2016. *Summaries of Air Quality Data, 20011-2015*. www.arb.ca.gov/adam/cgi-bin/db2www/polltrendsb.d2w/start. Accessed July 7, 2016.

ANSWERS TO CHECKLIST QUESTIONS

Question A

Construction-related emissions arise from a variety of activities, including: (1) grading, excavation, road building, and other earth moving activities; (2) travel by construction equipment and employee vehicles, especially on unpaved surfaces; (3) exhaust from construction equipment; (4) architectural coatings; and (5) asphalt paving. The construction of the approximately 115,960 sf of retail, restaurant and other commercial uses would take approximately 13 months, and is anticipated to begin in 2017.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM_{10} and $PM_{2.5}$ concentrations may be adversely affected on a temporary and intermittent basis. In addition, fugitive dust generated by construction would include not only PM_{10} and $PM_{2.5}$, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts.

Construction emissions were estimated for the proposed project using the methods contained in SMAQMD's *Guide to Air Quality Assessment in Sacramento County.*[3] The CalEEMod model was used to quantify construction NO_x, PM_{10}, and $PM_{2.5}$ emissions from off-road equipment, haul trucks associated with demolition and soils export, on-road worker vehicle emissions, and vendor delivery trips. Unmitigated construction emissions for the worst-case day for each construction year are presented in Table 2-3 and compared to SMAQMD's thresholds.

TABLE 2-3.
UNMITIGATED MAXIMUM DAILY CONSTRUCTION EMISSIONS (POUNDS PER DAY)[1,2]

Category	NO_x	PM_{10}	$PM_{2.5}$
Maximum Daily – 2017	29	8	5
Maximum Daily – 2018	2	<1	<1
Construction Significance Threshold[3]	85	80	82
Exceed Construction Threshold?	No	No	No

Notes:
1. Project construction emissions estimates were made using CalEEMod version 2013.2.2. See Appendix A for model outputs and more detailed assumptions
2. Values in bold are in excess of the applicable SMAQMD significance threshold.
3. SMAQMD has established a zero emissions threshold for PM_{10} and $PM_{2.5}$ when projects do not implement Best Available Practices (BMP) during construction. However, since the proposed project would include BMPs to minimize onsite construction emissions already recommend by the SMAQMD, project-related emissions of PM_{10} and $PM_{2.5}$ are compared to the SMAQMD's mitigated significance threshold of 80 and 82 pounds per day, respectively.

Source: ESA, 2016.

As shown in Table 2-3, maximum daily construction NOx emissions would not exceed the SMAQMD significance thresholds for each construction year. According to the SMAQMD CEQA guidance, project-related construction emissions that exceed zero pounds per day of PM_{10} and $PM_{2.5}$ would result in a significant impact, unless all feasible Best Available Control Technologies/Best Management Practices (BACT/BMPs) are implemented. However, since the proposed project would include BMPs to minimize onsite construction emissions already recommend by the SMAQMD, project-related emissions of PM_{10} and $PM_{2.5}$ are compared to the SMAQMD's mitigated significance threshold of 80 and 82 pounds per day, respectively.

All grading, excavation, and earth-moving activities would be subject to industry BMPs for fugitive dust, including watering, maximum disturbance thresholds, and cessation of ground disturbing activities during high-wind periods. As shown in Table 2-3, the construction the proposed project would result in the generation of PM_{10} and $PM_{2.5}$ emissions that would not exceed the SMAQMD mitigated significance thresholds for each construction year. Therefore, the proposed project would have a **less-than-significant** impact related to construction emissions.

Question B

Over the long-term, the proposed project would increase operational emissions primarily by generating motor vehicle trips. Compared to mobile sources, onsite area sources would result in lesser quantities of criteria pollutant emissions.[4] Operational emissions in the year 2018 were calculated using CalEEMod. The key inputs to CalEEMod included the proposed project land uses and the traffic data provided by

[3] Sacramento Metropolitan Air Quality Management District, 2009. *Guide to Air Quality Assessment*. Adopted December 2009

[4] Area sources include water and space heaters than burn natural gas, and landscape maintenance equipment that typically burn gasoline.

Fehr & Peers.[5] The estimates shown in Table 2-4 are based on 11,598 gross average daily traffic (ADT) trips generated by the proposed project, which would include up to 115,960 sf of retail, restaurant, and other commercial uses. Modeling assumptions and output files are included in Appendix A

TABLE 2-4.
MAXIMUM DAILY PROJECT OPERATIONAL EMISSIONS (POUNDS PER DAY)[1,2]

Sources	Pollutant Emissions			
	ROG	NOx	PM10	PM2.5
Area Sources	2.9	0.0	0.0	0.0
Energy Sources	0.2	1.6	0.1	0.1
Mobile Sources	37.1	41.8	25.5	7.2
Total Proposed Project	40.2	43.4	25.6	7.3
SMAQMD Thresholds of Significance[1]	65	65	80	82
Exceed Operational Threshold?	No	No	No	No

Notes:
1. Project construction emissions estimates were made using CalEEMod version 2013.2.2. See Appendix A for model outputs and more detailed assumptions
2. Values in bold are in excess of the applicable SMAQMD significance threshold.
3. SMAQMD has established a zero emissions threshold for PM_{10} and $PM_{2.5}$ when projects do not implement Best Available Practices (BMP) during operation. However, since the proposed project would already include BMP measures as part of its final design that is recommended by SMAQMD to reduce operational PM10 and PM2.5 emissions, project-related emissions of PM_{10} and $PM_{2.5}$ are compared to the SMAQMD's mitigated significance threshold of 80 and 82 pounds per day, respectively.

Source: ESA, 2016.

As shown in Table 2-4, maximum daily operational emissions of ROG and NOx would not exceed the SMAQMD significance thresholds after the full build-out of the proposed project. According to the SMAQMD CEQA guidance, project-related operational emissions that exceed zero pounds per day of PM_{10} and $PM_{2.5}$ would result in a significant impact, unless all feasible BACT/BMPs are implemented. However, the proposed project would already include BMP measures as part of its final design that is recommended by SMAQMD to reduce operational PM_{10} and $PM_{2.5}$ emissions. These BMPs include incorporating bicycle and pedestrian infrastructure connectivity and transit accessibility. Pedestrian connections would be provided along the Truxel Road and Gateway Park Boulevard frontages, and internally to and from the existing retail to the south of the project site. Pedestrian access to and from the project site to the Natomas Marketplace would be available via the signalized intersection at Truxel Road and Gateway Park Boulevard. Bicycle access would be maintained for the existing Class II bike lanes along Truxel Road and Gateway Park Boulevard. Appropriate signage and lane-striping would be implemented where Class II bike lanes intersect project driveways. With the consideration of these design features in the proposed project's final design, SMAQMD's mitigated PM_{10} and $PM_{2.5}$ thresholds would apply. As shown in Table 2-4, the operational emissions of PM_{10} and $PM_{2.5}$ generated under the proposed project would not exceed the SMAQMD's significance threshold for PM_{10} and $PM_{2.5}$ after all feasible BMPs are applied. Therefore, this impact would result in a **less-than-significant** impact.

Question C

Currently, Sacramento County is nonattainment for the ozone and PM_{10}, California ambient air quality standards. Emissions generated by short term construction have the potential to generate high levels of PM_{10}, which are primarily associated with fugitive dust emissions during site preparation or grading. Exhaust emissions of NOx and PM_{10} are also generated by off-road construction equipment such as graders, dozers and excavators. As discussed in response to Question A, the proposed project would include BMPs to minimize onsite construction emissions already recommended by the SMAQMD. As

5 Fehr & Peers, 2016. Natomas Fountains Traffic Study, 2016.

shown in Table 2-3, construction emissions of PM_{10} and $PM_{2.5}$ would not exceed the SMAQMD mitigated significance threshold of 80 and 82 pounds per day, respectively. Since the proposed project would implement all feasible BMPs recommended by SMAQMD and construction emissions of PM_{10} and $PM_{2.5}$ are projected to be well below the SMAQMD significance threshold (see Table 2-3), emissions from the proposed project during construction would not result in a violation or contribute to a violation of the ambient air quality standards for NOx, PM_{10} and $PM_{2.5}$.

As discussed in response to Question B and shown in Table 2-4, operational emissions of PM_{10} and $PM_{2.5}$ would exceed the SMAQMD zero pounds per day threshold without implementing all feasible BMPs recommended by SMAQMD. However, since the proposed project would already include BMP measures as part of its final design that are recommended by SMAQMD to reduce operational PM_{10} and $PM_{2.5}$ emissions, SMAQMD's mitigated PM_{10} and $PM_{2.5}$ thresholds would apply. As shown in Table 2-4, the operational emissions of PM_{10} and $PM_{2.5}$ generated under the proposed project would not exceed the SMAQMD's significance threshold for PM_{10} and $PM_{2.5}$ after all feasible BMPs are applied. Therefore, emissions from the operation of the proposed project would not result in a violation or contribute to a violation of the ambient air quality standards for ROG, NOx, PM_{10} and $PM_{2.5}$. Therefore, this impact would result in a **less-than-significant impact**.

Question D

Traffic during project operation would consist of customers, employees and delivery trucks. These traffic volumes would contribute to the existing and future intersection volumes in the vicinity of the project site. A transportation impact study was completed for the proposed project to evaluate the long-term effects on seven intersections in the vicinity of the project site. The proposed project could potentially contribute traffic volumes to these intersections that would increase delays and idling.

Intersections that are categorized as a level of service (LOS) E or F would result in increased delays and idling times. These intersections have the potential to create CO hotspots, which is an exceedance of the 1- or 8-hour state CO standard. A CO hotspot can result in the exposure of nearby sensitive receptors to unhealthy CO concentrations. The SMAQMD's CEQA Guide to Air Quality Assessment in Sacramento County provides screening criteria to assess whether project-related vehicle trips would result in the generation of CO emissions that exceed or contribute to an exceedance to the California Air Quality Standard for CO.

The SMAQMD's recommended screening criteria are divided into a two tiers, as follows:

Tier One

The proposed project will result in a less-than-significant impact to air quality for local CO if:

- Traffic generated by the proposed project will not result in deterioration of intersection level of service (LOS) to LOS E or F; and
- The project will not contribute additional traffic to an intersection that already operates at LOS of E or F.
- If the first tier of screening criteria is not met, then the second tier of screening criteria needs to be evaluated.

Tier Two

If all of the following criteria are met, the proposed project will result in a less than-significant impact to air quality for local CO.

- The project will not result in an affected intersection experiencing more than 31,600 vehicles per hour;

- The project will not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air will be substantially limited; and
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

The operation of the proposed project would result in increases in vehicle trips along roadways in the vicinity of the project site. Based on the traffic study conducted for this project, the proposed development would generate approximately 325 AM and 592 PM peak hour trips, and result in a total of 11,598 daily trips.

According to SMAQMD's first tier, a project would result in a less than significant impact if all two categories described above are met. As described in the transportation impact study,[6] traffic generated by the proposed project during the PM peak hour cumulative plus project conditions would result in deterioration of the level of service (LOS) for Truxel Road/Natomas Marketplace (North Entrance) from LOS B to E, Gateway Park Boulevard/North Freeway from LOS D to F, and Truxel Road/I-80 Westbound Ramps from LOS C to E. In addition, the intersection analyzed in the traffic study for the proposed project would contribute additional traffic to the Truxel Road/Gateway Park Boulevard intersection, which currently operates at LOS of E. Because the first screening criteria of SMAQMD's first tier would not be met, the project would need to be evaluated against the second tier screening criteria.

According to SMAQMD's second tier, a project would result in a less than significant impact if all three categories described above are met. As determined in the transportation impact study, under cumulative plus project peak hour conditions, the affected intersection with the highest traffic volume would be at Truxel/Gateway Park Boulevard and Truxel Road/I-80 westbound ramp. These intersections would both serve approximately 6,226 vehicles during the PM peak hour conditions, which is less than the SMAQMD threshold of 31,600 vehicles per hour. The project would not result in the contribution of traffic to any tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadways. Finally, the mix of vehicle types at the effected intersections is not anticipated to be substantially different from the County Average. Therefore, the proposed project would meet all of the SMAQMD's CO hotspot second tier screening criteria and would result in a **less-than-significant** impact.

Question E

As previously discussed above in response to questions A through D, construction- and operational-related emissions would not exceed the SMAQMD's thresholds. In addition, toxic air contaminant (TAC) emissions generated during the construction and operations of the proposed project would not be significant, as discussed in response to Question G below. Consequently, this impact is **less than significant**.

Question F

Construction

Project construction would result in short-term emissions of diesel particulate matter (DPM), which is a TAC. Off-road heavy-duty diesel equipment would emit DPM during site preparation (e.g., excavation and grading); paving; installation of utilities, materials transport and handling; building construction; and other miscellaneous activities. SMAQMD has not adopted a methodology for analyzing such impacts and has not recommended that health risk assessments be completed for construction-related emissions of TACs. Due to the intermittent nature of construction activities, the relatively short-term construction period in any one location, and the varying distances to sensitive receptors as construction proceeds, the proposed

[6] Fehr & Peers, 2016. Final Transportation Impact Study for the Natomas Fountains Project. June 22, 2016.

project would not result in significant construction-related health risks. This impact would be **less than significant**.

Operations

Operation of the proposed project would not include any new stationary source of TACs. In addition, there are no nearby sources of TACs that represent a health concern to future onsite employees or customers. According to SMAQMD guidance, since the proposed project would locate new commercial uses more than 500 feet from the nearest high traffic volume roadway (defined as a freeway or urban roadway with greater than 100,000 vehicles per day), the proposed project would meet the CARB guidance distance and no further roadway-related air quality evaluations are recommended.[7] This impact would be **less than significant**.

Question G

The SMAQMD has identified typical odor sources in its *CEQA Guide to Air Quality Assessment*. These include wastewater treatment plants, sanitary landfills, composting and green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting and coating operations, rendering plants, and food packaging plants.[8] The proposed project would not include uses that have been identified by SMAQMD as potential sources of objectionable odors. In addition, the proposed project would not be located within one mile of any facilities or uses known to generate objectionable odors. Restaurants and other food and drinking places within the proposed development could produce some odors, but these types of uses are not generally considered sources of objectionable odors. Diesel equipment used during construction can produce odorous exhaust, but equipment use in any one area of the project site would be temporary and potential odors would not affect a substantial number of people. This impact would be **less than significant**.

Question H

In 2012, the City of Sacramento adopted a community wide Climate Action Plan (CAP). The CAP outlines multiple initiatives intended to help the City achieve its overall goals of reducing community-wide emissions by 15% below 2005 levels by 2020, 38% below 2005 levels by 2030, and 83% below 2005 levels by 2050. Included in the CAP are a comprehensive set of strategies, measures and implementing actions to achieve the 2020 GHG reduction target. These GHG reduction measures and actions apply to both existing sources within the City as of the 2005 baseline and projected emissions from new growth and development anticipated in the 2035 General Plan. In addition, the CAP identifies potentially adverse physical effects related to climate change on the community and includes specific adaptation measures to address and mitigate such effects.

The City has developed a Climate Action Plan Consistency Checklist for use in determining the consistency of proposed projects with the CAP.

The CAP Consistency Review Checklist includes six criteria that a project must be evaluated against. Projects that are consistent with each of the seven criteria are considered consistent with Sacramento's CAP and would not have a significant GHG impact. The following discussion evaluates the proposed project for each of these seven criteria.

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[7] Sacramento Metropolitan Air Quality Management District (SMAQMD), 2014. CEQA Guide December 2009, Revised September 2014. Available: http://www.airquality.org/ceqa/ceqaguideupdate.shtml.

[8] Sacramento Metropolitan Air Quality Management District (SMAQMD), 2009. Guide to Air Quality Assessment. Adopted December 2009.

1. Is the proposed project substantially consistent with the City's over-all goals for land use and urban form, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan?

The CAP Consistency Review Checklist states that the proposed project must be consistent with the 2035 General Plan Land Use and Urban Form Designations and Development Standards. The proposed project site is designated as Employment Center Low Rise, which requires a floor to area ratio (FAR) ranging from 0.15 to 1.0.

Although the exact footprint of all buildings is not known at this time, the total floor area ratio of the entire project would be within the range of the 0.15 to 1.0 FAR defined for the Employment Center Low Rise designation. This is determined by taking the total square footage of the development (115,960 square feet) and dividing by the total square footage of the proposed project site (546,245 square feet). This results in a FAR of 0.21, which is within the allowable range. Thus, the proposed project would be consistent with the City's 2035 General Plan FAR requirements for the Employment Center Low Rise land use designation.

2. Would the proposed project include traffic-calming measures?

The proposed project would be located along Truxel Road and Gateway Park Boulevard, (arterial roadways) in the Employment Center Low Rise District, which is not a part of the City where installation of traffic calming measures is encouraged. However, traffic calming measures including speed bumps and a 4-way stop will be constructed within the project site for pedestrian safety. The City's goal is to maintain an efficient flow of traffic along roadways in the project vicinity. Consequently, this measure does not apply to the proposed project and traffic calming measures would not be anticipated to impact roadways in the project vicinity.

3. Would the proposed project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan?

The level of pedestrian improvements necessary to determine Pedestrian Master Plan and thus CAP consistency is measured according to the "Basic, Upgrade, or Premium" categories defined in Appendix A to the Pedestrian Master Plan.[9] The differences between these three categories are based on several criteria, including project location, surrounding land uses, and proximity to transit.

The proposed project would construct connections with existing sidewalks along Truxel Road and Gateway Park Boulevard and provide a pedestrian connection to the walking path to the north of the project site. Structures within the project site would be connected by a network of sidewalks that would also provide connection to the abovementioned external pedestrian facilities. Street facilities along Truxel Road and Gateway Park Boulevard presently meet the Basic level of pedestrian improvements. The proposed project would construct driveways with curb ramps along Truxel Road, Gateway Park Boulevard, and North Freeway Boulevard, which would preserve the Basic level of pedestrian improvements. Based on this evaluation, the proposed project's pedestrian amenities would meet the City of Sacramento's Consistency Checklist for pedestrian facilities.

4. Would the proposed project incorporate bicycle facilities consistent with the City's Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen?

The project site is within an existing network of on-street and off-street bikeways that are consistent with the Bikeway Master Plan and exceed zoning code and CALGreen standards. Since the project site is

[9] City of Sacramento, 2006. City of Sacramento Pedestrian Master Plan, Making Sacramento the Walking Capital.

accessible by existing on-street bikeways, the proposed project would be consistent with the Bikeway Master Plan and meets the CAP Consistency Checklist for bicycle facilities.

5. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., photovoltaic systems) that would generate at least a minimum of 15% of the project's total energy demand on-site?

The proposed project would not generate 15 percent of its energy demand on-site. However, the proposed project would be designed in compliance with the 2016 Title 24 Building Energy Efficiency Standards, effective January 1, 2017. Buildings built to the 2016 standards will use about 28 percent less energy for lighting, hearing, cooling, ventilation and water heating than those built to the 2013 standards.[10]

6. Would the proposed project (if constructed on or after January 1, 2014) comply with minimum CALGREEN ~~Teir~~ Tier 1 water efficiency standards?

The proposed project would comply with the following CALGreen Tier 1 water efficiency measures that were assumed in the Climate Action Plan Technical Appendix (page E-29):

Non-residential Buildings/Space: 30% improvement in indoor water efficiency (compared to 2008 Plumbing Code baseline); and outdoor potable water use reduction to a quantity that does not exceed 60% of the reference evapotranspiration rate (ETo) times the landscape area plus 1 voluntary outdoor water efficiency & conservation measure as listed in the CALGreen Nonresidential Voluntary Measures.

The proposed project would comply with the above-referenced CALGreen Tier 1 Water Efficiency Measures as a condition of approval, and would therefore be consistent with CAP.

Based on this review, the proposed project would meet each applicable CAP Consistency Review Checklist item. Therefore, the proposed project would result in a **less than significant impact.**

MITIGATION MEASURES

None required.

FINDINGS

The proposed project would have no significant environmental effects relating to air quality.

[10] California Energy Commission, 2016. 2016 Building Energy Efficiency Standards Frequently Asked Questions. Available: http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf. Accessed July 7, 2016.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
3. BIOLOGICAL RESOURCES Would the proposal: 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?			X	
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?		X		
C) Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands)?		X		

ENVIRONMENTAL SETTING

Data Sources

Biological resources within the project site were identified and characterized based on literature review, database searches, and through a field reconnaissance survey conducted on December 17, 2016. While a formal wetland delineation was not conducted at the project site, potential wetlands and other waters of the U.S. were noted and informally mapped. The sources of reference data reviewed for this evaluation included the following:

- City of Sacramento 2030 General Plan Master EIR;[11]
- Natomas Basin Habitat Conservation Plan (NBHCP);[12]
- Taylor Monument, California 7.5-minute topographic quadrangle;[13]
- Federal Endangered and Threatened Species that may occur in the Proposed Project Location, and/or May be Affected by the Proposed Project;[14]

[11] City of Sacramento, 2009. City of Sacramento 2030 General Plan Master Environmental Impact Report. Certified March 3, 2009.

[12] Sacramento and Sutter Counties, and Natomas Basin Conservation, 2003 (April). Natomas Basin Habitat Conservation Plan. Prepared for U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. Sacramento, CA. Available: http://www.natomasbasin.org/helpful-documents/2003-nbhcp-related-documents/. Accessed May 3, 2016.

[13] U.S. Department of the Interior, Geological Survey (USGS), 2015. Taylor Monument, CA 7.5-minute Topographic Quadrangle Map. Available: http://store.usgs.gov/b2c_usgs/usgs/maplocator/(ctype=areaDetails&xcm=r3standardpitrex_prd&carea=%24ROOT&layout=6_1_61_48&uiarea=2)/.do. Accessed April 22, 2016.

[14] U.S. Fish and Wildlife Service (USFWS), Sacramento Fish and Wildlife Office, Sacramento, CA, December 2, 2015—list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by proposed project.

- California Natural Diversity Database (CNDDB) list of special-status species occurrences within the Taylor Monument and eight surrounding USGS 7.5-minute topographic quadrangles (Knights Landing, Verona, Pleasant Grove, Rio Linda, Sacramento East, Sacramento West, Davis, and Grays Bend);[15]
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants within the Taylor Monument and eight surrounding USGS 7.5-minute topographic quadrangles;[16]
- Natural Resource Conservation Service (NRCS) Custom Soil Resources Report for Sacramento County, California, Natomas Fountains;[17]
- The Natomas Basin Conservancy monitoring reports;
- Aerial Imagery, including Google Earth;[18]
- Special Vascular Plants, Bryophytes, and Lichens List;[19] and
- Special Animals List.[20]

Regional and Project Site Ecology

The project site is located in the Natomas Basin, a low-lying area, located east of the Sacramento River and north of its confluence with the American River. The Natomas Basin is bounded by the Natomas Cross Canal to the north, Garden Highway to the south, the Natomas East Main Drainage Canal (i.e., Steelhead Creek) to the east, and the Sacramento River to the west. The southern portion of the basin is mostly urbanized, but primary land use in the northern portion is agricultural. Primary crops grown in the Natomas Basin in 2014 included rice and upland agriculture, including alfalfa, grass hay, irrigated grassland, safflower, sunflower, wheat, and other row, and grain crops.[21]

The project site is 12.54 acres in size and is located on undeveloped land surrounded by urban development in the north portion of the City of Sacramento. The site is located east of the East Drainage Canal and Truxel Road, and north of Gateway Park Boulevard which corresponds to Range 4 E, Township 9 N, Section 14 on the Taylor Monument 7.5-minute USGS topographic quadrangle map.[22] Elevations at the site are around 15 feet above mean sea level. The topography is generally sloping terrain that drains to the center of the site to a stormwater swale. The project site is undeveloped. A line of City trees runs along Truxel Road within the City's right-of-way, through the project footprint and along the neighboring property to the south. The site is generally bordered by the Raley's Natomas Distribution Center to the north, Gateway Park Boulevard to the east, the East Drainage Canal to the west, and an

[15] California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed November 30, 2015. Data set expires May 3, 2016.

[16] California Native Plant Society, Rare Plant Program, 2015. Inventory of Rare and Endangered Plants (version 8-02). Available: http://www.rareplants.cnps.org/. Accessed December 11, 2015.

[17] U.S. Department of Agriculture, Natural Resources Conservation Service, 2016. Custom Soil Resources Report for Sacramento County, California, Natomas Fountains. Available: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed January 14, 2016.

[18] Google Earth Pro V 7.1.2.2041 (October 7, 2013). Natomas, California. 38º38'24.25'' N, 121º30'18.03'' W. Available: http://www.earth.google.com. Accessed January 14, 2016.

[19] California Department of Fish and Wildlife, Natural Diversity Database, 2016 (April).Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 126 pp.

[20] California Department of Fish and Wildlife, Natural Diversity Database, 2016 (April). Special Animals List. Periodic publication. 51 pp.

[21] The Natomas Basin Conservancy, 2015 (April). Biological Effectiveness Monitoring for the Natomas Basin Habitat Conservation Plan Area, 2014 Annual Survey Reports. Available: http://www.natomasbasin.org/helpful-documents/monitoring-reports/. Accessed April 22, 2016.

[22] U.S. Department of the Interior, Geological Survey (USGS), 2015. Taylor Monument, CA 7.5-minute Topographic Quadrangle Map. Available: http://store.usgs.gov/b2c_usgs/usgs/maplocator/(ctype=areaDetails&xcm=r3standardpitrex_prd&carea=%24ROOT&layout=6_1_61_48&uiarea=2)/.do. Accessed April 22, 2016.

existing retail space bordering Gateway Park Boulevard and Truxel Road to the south. Land uses in the vicinity of the project site include residential development to the west, and commercial and retail to the north, east, and south.[23]

The Cosumnes soil series is mapped in the project area.[24] This is a hydric soil typical of low flood plains. These soils consist of very deep, somewhat poorly drained soils formed in alluvium from mixed sources, including granitic, metasedimentary, and metamorphosed igneous rocks. These soils occur on slopes of zero to two percent, and are typically slightly acid to slightly alkaline.[25]

The Sacramento River and Fisherman's Lake are located approximately three miles west of the project site. Areas of intense agricultural use, including, but not limited to, rice, and upland agricultural areas, are located approximately three miles to the north, northwest of the project site.[26]

Vegetation Communities and Wildlife Habitats

Wildlife habitats are generally described in terms of vegetation types along with landform, disturbance regime, and other unique environmental characteristics. This section is organized into wildlife habitats based on California Department of Fish and Wildlife's (CDFW's) *A Guide to Wildlife Habitats of California*[27] that is used in CDFW's California Wildlife Habitat Relationships System (CWHR). The CWHR habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly occurring birds, mammals, reptiles and amphibians.

Vegetation types are assemblages of plant species that occur together in the same area and are repeated across landscapes, and are defined by species composition and relative abundance. Vegetation alliances are scientifically derived hierarchical classes that correspond best with plant communities and are designed to be the unit for conservation of rare or threatened plant communities. Vegetation alliances presented in this section correspond with the vegetation classification system presented in Sawyer, Keeler-Wolf, and Evans' *A Manual of California Vegetation, Second Edition*.[28] Wildlife habitats generally correspond to vegetation types. Within Sawyer, Keeler-Wolf, and Evans' vegetation classification system, a crosswalk is provided to help correlate vegetation alliances with wildlife habitats. The descriptions below make use of the crosswalk.

Descriptions of wildlife habitats present within the project site are presented below. Where applicable, related vegetation alliances are listed following the wildlife habitat description and are based on the alliance descriptions presented by Sawyer, Keeler-Wolf, and Evans.[29] It should be noted that habitat types occurring in the project site are dominated by weed, and non-native plants. These vegetation types

[23] Google Earth Pro V 7.1.2.2041 (October 7, 2013). Natomas, California. 38º38'24.25'' N, 121º30'18.03'' W. Available: http://www.earth.google.com. Accessed January 14, 2016.

[24] U.S. Department of Agriculture, Natural Resources Conservation Service, 2016. Custom Soil Resources Report for Sacramento County, California, Natomas Fountains. Available: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed January 14, 2016.

[25] United States Department of Agriculture, Natural Resources Conservation Service, 2016. Official Soil Series Description – Cosumnes Series. Available: https://soilseries.sc.egov.usda.gov/OSD_Docs/C/COSUMNES.html. Accessed January 14, 2016.

[26] Google Earth Pro V 7.1.2.2041 (October 7, 2013). Natomas, California. 38º38'24.25'' N, 121º30'18.03'' W. Available: http://www.earth.google.com. Accessed January 14, 2016.

[27] Mayer and Laudenslayer, Jr., 1988. A Guide to Wildlife Habitats of California. State of California Resources Agency, California Department of Fish and Wildlife. Sacramento, CA. Available: http://www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp. Accessed December 11, 2015.

[28] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evans, 2009. A Manual of California Vegetation, Second Edition, California Native Plant Society, Sacramento, California.

[29] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evans, 2009. A Manual of California Vegetation, Second Edition, California Native Plant Society, Sacramento, California.

are referred to as "semi-natural stands," and are not grouped into vegetation alliances.[30] Similarly, disturbed, or urban areas do not have a corresponding vegetation type classification.

Vegetation communities and wildlife habitats were identified during a reconnaissance survey on December 17, 2015. Habitat types within the project site are shown in Figure 3-1 and Table 3-1. Habitat types include Annual Grassland, Disturbed/Developed, and Freshwater Emergent Wetland/Swale.

TABLE 3-1.
HABITATS PRESENT WITHIN THE PROJECT SITE

Habitat Type	Acres
Annual Grassland	10.77
Disturbed/Developed	2.40
Freshwater Emergent Wetland/Swale	0.19
Total	13.36

Annual Grassland

Annual grassland is generally found in open areas in valleys and foothills throughout coastal and interior California. It typically occurs on soils consisting of fine-textured loams or clays that are somewhat poorly drained. This habitat type is dominated by non-native annual grasses and weedy annual and perennial forbs, primarily of Mediterranean origin, that have replaced native perennial grasslands, scrub, and woodland as a result of human disturbance. Common species present within the project site include wild oats (*Avena fatua*), slender oat (*Avena barbata*), hare barley (*Hordeum murinum* var. *leporinum*), ripgut brome (*Bromus diandrus*), yellow star thistle (*Centaurea solstitialis*), field mustard (*Brassica rapa*), Italian thistle (*Carduus pycnocephalus*), foxtail fescue (*Vulpia myuros*), and Russian thistle (*Salsola tragus*).

Common wildlife species that occur in this habitat include the western fence lizard (*Sceloporus occidentalis*) and common garter snake (*Thamnophis sirtalis*). Mammals typically found in this habitat include black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and coyote (*Canis latrans*). Common birds found in Annual Grassland habitats include horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), red-winged blackbird (*Agelaius phoeniceus*), and barn owl (*Tyto alb*a). This habitat is important foraging habitat for raptor species, including the state-species of special concern, burrowing owl (*Athene cunicularia*).

Vegetation Alliances

- Avena (*barbata*, *fatua*) Wild oats grassland

Disturbed/Developed

This habitat includes all areas that have been developed, including areas where scraping, leveling, and paving has occurred during road construction, but also includes paved areas and buildings. Vegetation in disturbed areas includes ornamental vegetation, including landscaping trees that line Truxel Road, and weed species.

[30] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evans, 2009. A Manual of California Vegetation, Second Edition, California Native Plant Society, Sacramento, California.

SOURCE: USDA, 2014; ESA, 2016

Natomas Fountains . 150409

Figure 3-1
Habitats

Freshwater Emergent Wetland/Swale

This habitat is limited to the depression in the southern portion of the project site. This area collects precipitation runoff and overland flows from the surrounding area. A large drain in the western portion of the feature is where water flows out of this feature. Plants found within this habitat include tall flatsedge (*Cyperus eragrostis*), cutleaf geranium (*Geranium dissectum*), curly dock (*Rumex crispus*), arroyo willow (*Salix lasiolepis*), and purpletop vervain (*Verbena bonariensis*).

Due to the relatively small size of this habitat, species likely to inhabit this area include species found in annual grassland habitats.

Special-Status Species, Natural Communities, and Critical Habitat

A list of special-status species that have the potential to occur within the vicinity of the study area was compiled based on data in the CNDDB,[31] the U.S. Fish and Wildlife Service (USFWS) determination of federal endangered and threatened species that may occur in the Proposed Project location, and/or may be affected by the Proposed Project,[32] the CNPS Inventory of Rare and Endangered Plants,[33] and occurrences published in the NBHCP.[34] A full list of special-status species, their general habitat requirements, and an assessment of their potential to occur with the project site is provided in Appendix B. Recorded observations of special-status species within five miles of the project site are shown in Figure 3-2. The table in Appendix B, Regionally Occurring Special-Status Species with the Potential to Occur in the Project Area, lists special-status plants and animals with medium or greater potential to occur within the project site. The "Potential for Occurrence within the Project Area" category is defined as follows:

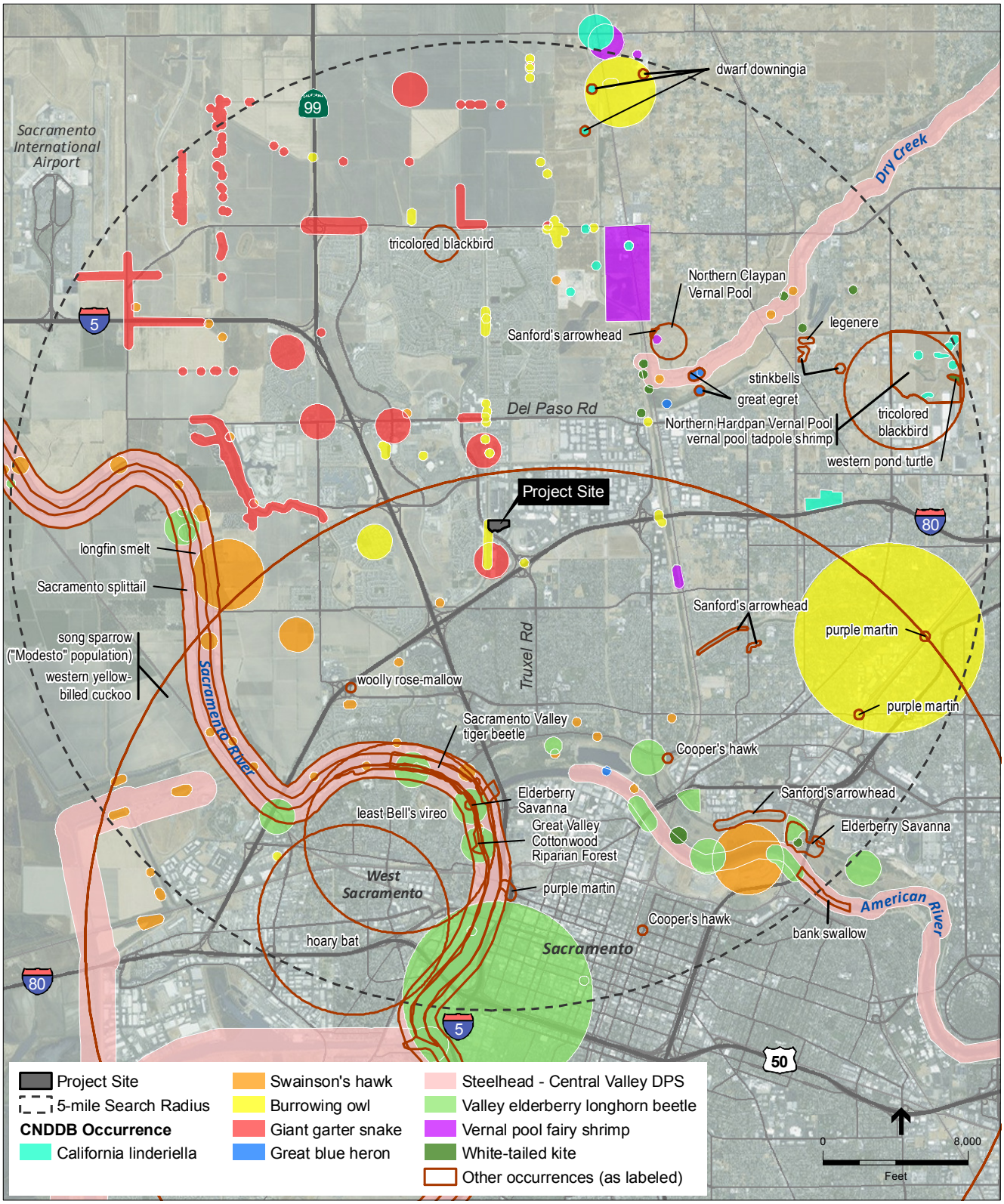
- **Unlikely**: The project site and/or surrounding area do not support suitable habitat for a particular species, or the project site is outside of the species known range.
- **Low Potential**: The project site and/or immediate area only provide limited amounts and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate project area.
- **Medium Potential**: The project site and/or immediate area provide suitable habitat for a particular species.
- **High Potential**: The project site and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in immediate area and/or within the project site.

[31] California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed November 30, 2015. Data set expires May 3, 2016.

[32] U.S. Fish and Wildlife Service (USFWS), Sacramento Fish and Wildlife Office, Sacramento, CA, December 2, 2015—list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by proposed project.

[33] California Native Plant Society, Rare Plant Program, 2015. Inventory of Rare and Endangered Plants (version 8-02). Available: http://www.rareplants.cnps.org/. Accessed December 11, 2015.

[34] Sacramento and Sutter Counties, and Natomas Basin Conservation, 2003 (April). Natomas Basin Habitat Conservation Plan. Prepared for U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. Sacramento, CA.



SOURCE: Microsoft, 2011; ESRI, 2012; CDFW, 2015; ESA, 2015

Natomas Fountains Retail Center . 150409

Figure 3-2

Special-status Species Occurrences within a 5-mile Radius

Conclusions regarding habitat suitability and species occurrence are based on reconnaissance survey, as well as the analysis of existing literature and databases described previously. Database queries identify 46 special-status wildlife species records. Of these, 44 species were eliminated from further consideration based upon lack of suitable habitat in the project site. None of the 44 species have been documented in the project site.[35] Two special-status species have medium potential to occur within the project site, six species have low potential to occur in the project site. Only species classified as having medium or greater potential for occurrence were considered in the impact analysis. No special-status plants have the potential to occur in the project site.

Birds

Burrowing Owl

The burrowing owl is a CDFW Species of Special Concern. This species is a small, long-legged, ground-dwelling bird, well-adapted to open, relatively flat expanses. Burrowing owls require underground burrows or other cavities for nesting during the breeding season and for roosting and cover, year-round. Burrows used by owls are typically dug by other species, including California ground squirrel. Natural rock cavities, debris piles, culverts, pipes, and artificial burrows are also used for nesting and roosting. Preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography and well drained soils. Grassland, shrub steppe, and desert are the natural habitat types used by these species. In addition, burrowing owl may occur in agricultural areas, ruderal grassy fields, vacant lots, and pastures. This species is a year-round resident of California, breeding typically between February and September.[36] Burrowing owls have been observed along the East Drainage Canal, immediately adjacent to the project site.[37] Neither owls, active burrows, or California ground squirrels were observed at the project site during field surveys. However, this species could be present as suitable habitat is present within and adjacent to the project site.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is listed as Threatened by CDFW. Swainson's hawk is a long-distance migrant species. The Central Valley population winters primarily in Mexico and arrives on their breeding grounds in the Central Valley in mid-March to early April. Nests are generally found in scattered trees, juniper sage flats, savannahs, and agricultural or ranch lands with groves or lines of trees, or along riparian systems adjacent to agricultural fields or pastures. The species will also nest in tall shrubs and trees in proximity to developments near foraging habitat. Prey species mainly include small mammals, reptiles, and insects. Egg-laying generally occurs in April and young hatch in May and June. Most young have fledged the nest by the end of July and are relatively independent of parental protection. However, fledged young remain with their parents until they migrate in the fall. Migration to the wintering grounds generally occurs around September. Some individuals or small groups may winter in California.[38]

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35 California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed November 30, 2015. Data set expires May 3, 2016.

36 California Department of Fish and Game, 2012. Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency Department of Fish and Game. March 7, 2012. Sacramento, CA.

37 California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed November 30, 2015. Data set expires May 3, 2016.

38 Zeiner, D.C., W.F. Laudenslayer, and K.E. Mayer, 1988-1990. California's Wildlife. Vols I, II, and III. California Statewide Wildlife Habitat Relationships System. California Department of Fish and Wildlife. Sacramento, California.

Low-quality, limited nesting habitat is present in redwood trees located approximately 500 feet north of the project site. The species requires nesting trees to be located within easy fly distance between foraging areas and nesting sites. Habitats within 0.5 mile of the project site are primarily urban. Grassland within the project site provides limited, low quality habitat. Higher quality habitat is located in agricultural and open areas north of the community of Natomas, and west of the project site along the Sacramento River. The closest recorded Swainson's hawk occurrence is located approximately one mile southwest of the project site, but is presumed possibly extirpated by CDFW.

Common Raptor Species

Common raptor species, such as red-tailed hawk (*Buteo jamaicensis*), are not considered special-status species because they are not rare or protected under FESA or CESA. However, nests of these species are protected under the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code. Common raptor species may nest in the evergreen trees north of the project site.

Common Migratory Birds

A large number of common bird species are migratory and protected under the MBTA. Examples of common migratory bird species that may use the project site include northern mockingbird, mourning dove, cliff swallow, western kingbird, scrub jay, and western meadowlark. Occupied nests of all migratory birds are protected under MBTA, which makes it illegal to destroy any active migratory bird nest.

Reptiles

Giant Garter Snake

Giant garter snake is classified as threatened under FESA and CESA. Giant garter snake is an aquatic snake that utilizes slow-moving, aquatic habitats, including freshwater marshes, flooded rice fields, sloughs, and drainage canals. Winter retreats utilized by the giant garter snake include small mammal burrows and artificial structures such as piles of large rocks or riprap. Adult and juvenile garter snakes emerge from their winter retreats in mid-March or early April with live young born from late July through early September. They are active from the time of emergence to the end of October, with surface activity concentrated from April to July.[39] They are most commonly found within approximately 100 feet of suitable habitat,[40] but are known to use upland areas up to 200 feet away from suitable aquatic habitat.

The East Drainage Canal located immediately to the west of the project site provides marginal habitat for giant garter snake. The canal contains sufficient water in the active summer season to supply food such as small fish and amphibians, however it does not contain emergent herbaceous aquatic vegetation, or have vegetated banks which is required for basking and foraging. While burrows and hibernacula along the banks of the East Drainage Canal in the vicinity of the project site may provide short-term aestivation sites, it is unlikely to support a permanent population of giant garter snake. The East Drainage Canal between extant populations and the surrounding inhospitable urban land uses CNDDB occurrences recorded in 1986 and 1998 within two miles of the project site are considered possibly extirpated by CDFW.[41] Occurrences located approximately 2.5 miles west in Fisherman's Lake, and 3 miles north near W. Elkhorn Boulevard are considered extant. Nevertheless, the portion of the East Drainage Canal adjacent to the project site may support transient giant garter snake on a temporary basis as the snakes disperse between areas of more desirable habitat, and mammal burrows, or soil cracks within the upland

[39] Zeiner, David C., William F. Laudenslayer Jr., and Kenneth E. Mayer, 1988. *California's Wildlife. Volumes 1, 2, and 3*. Wildlife and Habitat Data Analysis Branch, California Department of Fish and Wildlife. http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx. Accessed December 22, 2015.

[40] Halstead, B.J., S.M. Skalos, G.D. Wylie, and M.L. Casazza, 2015. Terrestrial Ecology of Semi-aquatic Giant Gartersnakes (*Themnophis gigas*). Herpetological Conservation and Biology: 633-644.

[41] California Natural Diversity Database (CNDDB), 2016.

portion of the project site may support giant garter snake on short-term basis for aestivation, thermoregulation, or to meet other habitat needs.

The seasonal wetland feature within the project site is considered unsuitable habitat for giant garter snake. This feature is not connected by surface water to the East Drainage Canal; therefore it is unlikely the snake would use this feature as a connective corridor. This feature primarily directs winter runoff, and because water does not persist through the active giant garter snake season, nor does the feature provide a permanent source of prey (e.g., fish or amphibians), as such, it is unlikely to support giant garter snake.

Western Pond Turtle

Western pond turtle is classified as a State Species of Special Concern. Western pond turtle inhabits aquatic habitats, including ponds, lakes, marshes, rivers, creeks, and irrigation ditches with a rocky or muddy bottom and aquatic vegetation.

The East Drainage Canal located immediately west of the project site provides suitable habitat for western pond turtle. Adult western pond turtle are observed regularly in Fisherman's Lake.[42]

Designated Critical Habitat

The FESA requires the federal government to designate critical habitat for any species it lists under the FESA. Critical habitat is defined as: (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. Critical habitat may include an area not currently used by an endangered or threatened species, but that will be needed for species recovery. The project site is not located within designated or proposed critical habitat for any listed species.[43]

Wetlands and Other Potentially Jurisdictional Waters

Although a jurisdictional delineation of wetlands and waters of the U.S. and State has not been conducted in the project site, the seasonal wetland area present in the project site could be subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) and by the Central Valley Regional Water Quality Control Board (CVRWQCB) under Section 401 of the Clean Water Act and Porter-Cologne Act.

Regulated wetlands and other waters of the U.S. are subject to jurisdiction under Section 404 of the CWA. The federal government defines wetlands in Section 404 of the CWA as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3[b] and 40 CFR 230.3). Under normal circumstances, the federal definition of wetlands requires three wetland identification parameters be present: wetland hydrology, hydric soils, and hydrophitic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to other waters of the U.S. (see definition below for "other waters of the U.S.").

[42] The Natomas Basin Conservancy, 2015 (April). Biological Effectiveness Monitoring for the Natomas Basin Habitat Conservation Plan Area, 2014 Annual Survey Reports. Available: http://www.natomasbasin.org/helpful-documents/monitoring-reports/. Accessed April 22, 2016.

[43] U.S. Fish and Wildlife Service. Critical Habitat Mapper. Available: http://fws.maps.arcgis.com/home/webmap/print.html. Accessed April 14, 2016.

"Other waters of the U.S." refers to those hydric features that are regulated by the CWA but are not wetlands (33 CFR 328.4). To be considered jurisdictional, these features must exhibit a defined bed and bank and an ordinary high water mark (OHWM). Examples of other waters of the U.S. include rivers, creeks, intermittent and ephemeral channels, ponds, and lakes.

The freshwater emergent wetland in the project site has two of the three required wetland indicators. There is a prevalence of hydrophitic vegetation as defined by USACE's *The National Wetland Plant List:2016 wetland ratings*,[44] and the Cosumnes soils are considered hydric by the NRCS.[45]

Sensitive Natural Community

A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, State, or federal agencies. Most sensitive natural communities are given special consideration because they perform important ecological functions, such as maintaining water quality and providing essential habitat for plants and wildlife. Some plant communities support a unique or diverse assemblage of plant species and therefore are considered sensitive from a botanical standpoint. CEQA identifies the elimination of such communities as a significant impact.

For the purpose of this study, sensitive natural communities include:

- Areas of special concern to federal, state, or local resource agencies;
- Areas regulated under Section 404 of the Clean Water Act;
- Areas protected under Section 402 of the Clean Water Act; and
- Areas protected under state and local regulations and policies.

CDFW formerly tracked sensitive natural communities in the CNDDB. Due to funding cuts, no new occurrences of sensitive natural communities have been added to the CNDDB since the mid-1990s, although the database continues to include older mapped occurrences. The CNDDB identifies five regionally occurring sensitive natural communities that occur within the vicinity of the project site;[46] however, none of these natural communities occur within the project site.

Additionally, the CDFW's List of California Terrestrial Natural Communities[47] ranks vegetation alliances in California according to their degree of rarity imperilment (as measured by rarity, trends, and threats). All alliances are listed with a G (global) and S (state) rank. Alliances with State ranks of S1-S3 are considered of special concern by the CDFW, and all associations within them are also considered to be highly imperiled. CDFW guidance recommends all alliances with State ranks of S1-S3 be considered and analyzed under CEQA. Vegetation alliances within the project site are not considered of special concern by CDFW and are therefore not considered sensitive natural communities under CEQA regulation.

As stated previously, the project site contains an area of freshwater emergent wetland. This habitat is potentially protected under Section 404 and Section 401 of the Clean Water Act. It should be noted that

[44] Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin, 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30:1-17. Published 28 April 2016. ISSN 2153 733X.

[45] Natural Resources Conservation Service, 2015 (December). List of Hydric Soils. Available: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed July 18, 2016.

[46] California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed November 30, 2015. Data set expires May 3, 2016.

[47] California Department of Fish and Game, 2010. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program. State of California Natural Resources Agency Department of Fish and Wildlife California Interagency Wildlife Task Group. Sacramento, CA.

while water and plant species were present in this feature during a December 17, 2015 site visit, there was no water present and all of the vegetation had been cleared at the time of a subsequent site survey, conducted on July 27, 2016. Figure 3-3 provides site photographs from comparative photo points from both site surveys. Since the December 17, 2015 site survey, the feature has been disked and the banks have been mowed.

REGULATORY SETTING

Federal Endangered Species Act

The federal Endangered Species Act (FESA) protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways, both of which require consultation with the USFWS, which administers the FESA for all terrestrial species. The first pathway, Section 10(a) incidental take permit, applies to situations where a non-federal government entity must resolve potential adverse impacts to species under FESA. The second pathway, Section 7 consultation, applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval.

Migratory Bird Treaty Act

The MBTA enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs.

Clean Water Act

The federal CWA was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States (U.S.). The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

Section 404

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the U.S. Waters of the U.S. refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands. Applicants must obtain a permit from the USACE for all discharges of dredged or fill material into waters of the U.S., before proceeding with a proposed activity. Waters of the U.S. are under the jurisdiction of USACE and the Environmental Protection Agency (EPA).

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations including Section 7 of the Federal Endangered Species Act and Section 106 of National Historic Preservation Act. USACE cannot issue an individual permit of verify the use of a general nationwide permit until the requirements of FESA and the National Historic Preservation Act (NHPA) have been met. In addition, USACE cannot issue or verify any permit until a water quality certification or waiver of certification has been issued pursuant to CWA Section 401.

View of the feature facing east from within the project site during wet season (December 17, 2015)

View of the feature facing east from within the project site during dry season, after vegetation has been cleared (July 27, 2016)

Natomas Fountains / 150409.00

SOURCE: ESA, 2015; ESA, 2016

Figure 3-3
Photographs of Potentially Jurisdictional Feature Within the Project Site

View of the feature facing west from within the project site during wet season (December 17, 2015)

View of the feature facing west from within the project site during dry season, after vegetation has been cleared (July 27, 2016)

Natomas Fountains / 150409.00

SOURCE: ESA, 2015; ESA, 2016

Figure 3-3
Photographs of Potentially Jurisdictional Feature Within the Project Site

View of Arroyo willow (*Salix lasiolepis*) within the feature during the wet season (December 17, 2015)

View of the same Arroyo willow within the feature during the dry season, after vegetation has been cleared (July 27, 2016)

Natomas Fountains / 150409.00

SOURCE: ESA, 2015; ESA, 2016

Figure 3-3
Photographs of Potentially Jurisdictional Feature Within the Project Site

View of drainage intake within the feature during wet season (December 17, 2015)

View of drainage intake within the feature during dry season, after vegetation has been cleared (July 27, 2016)

Natomas Fountains / 150409.00

SOURCE: ESA, 2015; 2016

Figure 3-3
Photographs of Potentially Jurisdictional Feature Within the Project Site

View of the feature facing west from within the project site during the wet season (December 17, 2015)

View of the feature facing west from within the project site during the dry season, following clearing of vegetation (July 27, 2016)

Natomas Fountains / 150409.00

SOURCE: ESA, 2015; 2016

Figure 3-3
Photographs of Potentially Jurisdictional Feature Within the Project Site

Section 401

Under CWA Section 401, applicants for a federal license or permits to conduct activities which may result in the discharge of a pollutant into waters of the U.S. must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over the affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect State water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFW has the responsibility for maintaining a list of endangered and threatened species (Fish and Game Code [FGC] 2070). Sections 2050 through 2098 of the FGC outline the protection provided to California's rare, endangered, and threatened species. Section 2080 of the FGC prohibits the taking of plants and animals listed under the CESA. Section 2081 established an incidental take permit program for State-listed species. CDFW maintains a list of "candidate species" which are species that CDFW formally notices as being under review for addition to the list of endangered or threatened species.

Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project study area and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from CDFW would be in the form of an Incidental Take Permit.

Species of Special Concern

CDFW maintains a list of Species of Special Concern. Species of special concern include those whose declining population level, range, and/or because continuing threats have made the species vulnerable to extinction. The CEQA requires state agencies and local governments to disclose impacts to these species.

Fully Protected Species

Certain species are considered fully protected, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals.

Protection of Birds and Their Nests

Under Section 3503 of the FGC, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, while other specified birds are protected under Section 3505.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) (together "Boards") are the principal State agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Legislature declared that the "state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation..." (California Water Code section 13000). Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface Waters of the State. Waters of the State determined to be jurisdictional would require, if impacted, waste discharge permitting and/or a Clean Water Act Section 401 certification (in the case of the required USACE permit). The enforcement of the State's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., the CFDW) have the ability to enforce certain water quality provisions in State law.

City of Sacramento 2035 General Plan

The City of Sacramento 2035 General Plan includes policies for both identification and preservation of biological resources (Policies ER 2.1.1 through 2.1.17). and the urban forest (Policies 3.1.1 through 3.1.9). Specifically, these policies address issues ranging from identification, retention, preservation, and public awareness of habitat areas, including open space, riparian areas, wetlands, annual grasslands, oak woodlands, and wildlife corridors. Policies relating to the urban forest focus on managing and enhancing the City's tree canopy and trees of significance.

Natomas Basin Habitat Conservation Plan

Development within the Natomas Basin is subject to the Natomas Basin Habitat Conservation Plan (NBHCP). The NBHCP establishes a multi-species conservation program to minimize and mitigate the expected loss of habitat values and incidental take of covered species that could result from urban development, operation and maintenance of irrigation and drainage systems, and certain activities associated with the Natomas Basin Conservancy (TNBC) management of its system of serves established under the NBHCP. The NBHCP applies to the 53,537-acre area interior to the toe of levees surrounding the Natomas Basin with the exception of areas that were considered to be existing development when the NBHCP was established. Development within the covered areas of the NBHCP is subject to HCP fees and compliance with the requirements of the NBHCP. The project site is located within the 75-acre Coral Business Center PUD, which is included in the list of existing development that is exempt from compliance with the NBHCP.[48] Therefore, the proposed project is exempt from HCP fees and compliance with the NBHCP.

City of Sacramento Tree Ordinance

City Code 12.56[49] provides provisions to protect City street trees. All removal, trimming, pruning, cutting, or other maintenance activities on any City street tree requires a permit from the director of the department of transportation pursuant to City Code 12.56.070. A City street tree is defined as any tree growing on a public street right-of-way that is maintained by the City. The Director may require, where appropriate, the replacement of street trees proposed for removal. In such case, the City is responsible for the full cost of tree removal and replacement.

[48] City of Sacramento, Sutter County & Natomas Basin Conservancy, 2006. Final Natomas Basin Habitat Conservation Plan. Ch. 5 Land Use Issues. p. III-14 & Exhibit B. Available: http://www.natomasbasin.org/helpful-documents/2003-nbhcp-related-documents/. Accessed February 2, 2016.

[49] City of Sacramento. Municipal Code Chapters 12.56 and 12.64, Trees Generally and Heritage Trees. www.qcode.us/codes/sacramento. Accessed October 4, 2016.

STANDARDS OF SIGNIFICANCE

For purposes of this environmental document, 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 document, "special-status" has been defined to include those species, which are:

- Listed as endangered or threatened under FESA (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the 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 (Section 3511, 4700, or 5050);
- Designated as species of concern by USFWS, or as species of special concern to CDFW;
- Plants or animals that meet the definition of rare or endangered under CEQA.

ANSWERS TO CHECKLIST QUESTIONS

Question A

Current conditions at the site include an undeveloped area. Under the proposed project, the site would be constructed and would become a commercial retail area. Development of the proposed project would result in increases of people and urban activity in the project site which could result in increases in the use of potentially hazardous materials, such as gasoline, oils, fertilizers, herbicides, pesticides commonly used in urban settings for fuel, and/or landscape care. During irrigation or storm events these types of pollutants could be washed into street drains and eventually end up in detention basins, drainage swales, and natural waterways. Increased vehicle trips would result in increased air emissions, such as ozone precursors and particulate matter. Increases in air, water, and soil pollutants as a result of the increase in population could expose plant and wildlife populations to hazardous materials. However, state and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. Compliance with existing state and federal laws for the handling, use, storage, and disposal of hazardous materials, would be adequate to reduce project impacts to plant and animal populations to **less-than-significant** levels.

Question B

The proposed project could potentially have significant impacts to special-status giant garter snake, and nesting birds, including, but not limited to burrowing owl, Swainson's hawk, and common raptor and bird species.

Giant Garter Snake

Giant garter snake is listed as threatened under FESA and CESA. Marginal aquatic habitat for giant garter snake is present in the East Drainage Canal adjacent to the project site, and marginal upland habitat is present in the project site. The East Drainage Canal and project site may support transient giant garter snake on a temporary basis as the snakes disperse between areas of more desirable habitat.

Mammal burrows, or soil cracks within the project site may support giant garter snake on short-term basis for aestivation, thermoregulation, or to meet other habitat needs.

Because upland habitat for giant garter snake is marginal within the project site, and would likely only support snakes on a short-term basis, development would not substantially degrade, or reduce the habitat available for the giant garter snake, nor would it impede dispersal corridors. Nevertheless, construction activity near the East Drainage Canal may adversely impact giant garter snake through accidental harm or take through vehicle/equipment strikes, or entombment of burrowed snakes if they are present during grading activity. Any harm or harassment to giant garter snake resulting from the project would be considered potentially significant. Potential significant impacts would be reduced to a **less-than-significant** level with the implementation of **Mitigation Measure 3-1(a)**.

Swainson's Hawk

The proposed project would result in the loss of approximately 12 acres of potential foraging habitat for Swainson's hawk. Although higher quality foraging habitat exists in nearby, the loss of Swainson's hawk foraging habitat, in general, is considered a potentially significant impact. Any such potential significant impact would be reduced to a **less-than-significant** level with the implementation of **Mitigation Measure 3-1(b)**.

Birds

The project site and surrounding areas could support nesting birds, including, but not limited to, burrowing owl, raptors, and migratory birds. Additionally, special-status birds have been documented within five miles of the project site. As discussed above, burrowing owl is a state Species of Special Concern. Common nesting birds and raptors are protected under California Fish and Game Code Sections 3503, 3503.5, and 3800 (i.e., take, possession, or destruction of birds, their nests, or eggs), and Section 3513 of the MBTA (16 USC, Section 703 Supp. I 1989).

The proposed project would include the use of construction equipment to develop the site. Human disturbances from construction activities have the potential to cause nest abandonment and death of young or loss of reproductive success if nests are active near project activities. Loss of, or nest site disturbance which results in nest abandonment, loss of young, or reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates), or the direct removal of vegetation that supports nesting birds, may result in the killing of nestlings or fledgling bird species, and would be a potentially significant impact. Potential significant impacts would be reduced to a **less-than-significant** level with the implementation of **Mitigation Measures 3-1(c) and 3-1(d)**.

Question C

Approximately 0.19 acres of potentially jurisdictional waters of the U.S. and waters of the State within the project site would be filled under the proposed project. The loss of jurisdictional waters is considered a potentially significant impact. Any such potential significant impacts would be reduced to a **less-than-significant** level with the implementation of **Mitigation Measure 3-2**.

Up to five City trees, as defined by the City of Sacramento Tree Ordinance, would be removed for the construction of the right-in/right-out project site driveway and deceleration lane on Truxel Road. The five trees to be removed are nonnative London plane trees (*Platanus x acerifolia*). The proposed project is required to comply with the City of Sacramento Tree Ordinance, which requires the acquisition of a tree permit. Requirements of the tree permit may include replacement of removed trees. The proposed project would plant replacement trees as directed by the tree permit. Therefore impacts to the City trees from the proposed project are **less than significant** and no mitigation is required.

MITIGATION MEASURES

3-1(a) **Avoidance and Minimization Measures for Giant Garter Snake.** The following measures shall be implemented for the project of giant garter snake:

- No more than 24-hours prior to the commencement of construction activities, a preconstruction survey shall be conducted to survey for giant garter snakes by a USFWS-approved biologist. The biologist shall provide the USFWS with a written report that adequately documents the monitoring efforts within 24-hours of commencement of construction activities. The project site shall be re-inspected by the monitoring biologist whenever a lapse in construction activity of two weeks or greater has occurred.

- Construction activity within 200 feet from giant garter snake habitat (e.g., East Drainage Canal) shall be conducted between May 1 and September 30. This is the active period for the snake and direct mortality is lessened as snakes are expected to actively move and avoid danger. If it appears that construction activity may go beyond September 30, the City shall contact the USFWS as soon as possible, but not later than September 15 of the year in question, to determine if additional measures are necessary to minimize take. Construction activities within 200 feet from the banks of aquatic snake habitat will be avoided during the snake's inactive season. If this is not feasible, the City shall consult with USFWS to determine measures to avoid impacts to giant garter snake. If project activities are approved to continue into the inactive season, a USFWS-approved biologist shall inspect construction-related activities daily during this period for unauthorized take of federally listed species or destruction of their habitat. The biologist shall be available for monitoring throughout all phases of construction that may result in adverse effects to the giant garter snake.

- A Worker Environmental Awareness Training Program for construction personnel shall be conducted by the USFWS-approved biologist for all construction workers, including contractors, prior to the commencement of construction activities. The program shall provide workers with information on their responsibilities with regard to the snake, an overview of the life-history of this species, information on take prohibitions, protections afforded this animal under FESA, and an explanation of the relevant terms and conditions of project permits. As needed, training shall be conducted in Spanish for Spanish language speakers.

3-1(b) **Compensate for the Loss of Swainson's Hawk Foraging Habitat.** Prior to construction, the applicant shall compensate for the loss of Swainson's hawk foraging habitat at a ratio of no less than 0.5:1. The preservation and management of this habitat would be documented in a Swainson's hawk mitigation plan that would be subject to final approval by CDFW.

3-1(c) **Avoidance and Minimization Measures for Nesting Birds.** For any construction activities that will occur between February 1 and August 31, the applicant shall conduct pre-construction surveys in suitable nesting habitat within 500 feet of the construction area for nesting raptors and migratory birds. Surveys shall be conducted by a qualified biologist.

If active nest are found during the survey, the applicant shall implement appropriate mitigation measures to ensure that the species will not be adversely affected, which will include establishing a no-work buffer zone, as approved by CDFW, around the active nest. Measures may include, but would not be limited to:

- Maintaining a 500 foot buffer around each active raptor nest. No construction activities shall be permitted within this buffer. For migratory birds, a no-work buffer zone shall be established, approved by CDFW, around the active nest. The no-work buffer may vary depending on species and site specific conditions, as approved by CDFW.

- Depending on conditions specific to each nest, and the relative location and rate of construction activities, if may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined on an individual basis), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the nest, the biologist shall immediately inform the construction manager. The construction manager shall stop construction activities within the buffer until the nest is no longer active.

3-1(d) **Avoidance and Minimization Measures for Burrowing Owl.** Pre-construction surveys for burrowing owls shall be conducted by a qualified biologist (as approved by CDFW) within 30 days prior to the state of work activities at the project site. If construction activities are delayed for more than 30 days after the initial preconstruction survey, then a new preconstruction survey shall be conducted. All surveys shall be conducted in accordance with the Staff Report on Burrowing Owl Mitigation.[50]

If burrowing owls are discovered in the project site vicinity during construction, the CDFW-approved project biologist shall be notified immediately. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the CDFW verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Occupied burrows during the nesting season shall be avoided by establishment of a no-work buffer of 250-foot around the occupied/active burrow. Where maintenance of a 250-foot no-work buffer zone is not practical, the City shall consult with the CDFW to determine appropriate avoidance measures. Burrows occupied during the breeding season (February 1 to August 31) will be closely monitored by the biologist until the young fledge/leave the nest. The onsite biologist shall have the authority to stop work if it is determined that construction related activities are disturbing the owls.

If approved by CDFW, the biologist may undertake passive relocation techniques by installing one-way doors in active and suitable burrows (that currently do not support eggs or juveniles). This would allow burrowing owls to escape but not re-enter. Owls should be excluded from the immediate impact zone and within a 160-foot buffer zone by having one-way doors placed over the entrance to prevent owls from inhabiting those burrows.

3-2 **Wetland Delineation and Permitting Measures.** The project applicant shall implement the following measures, prior to the issuance of a grading permit:

i. Retain a qualified biologist that meets the USACE qualification standards, to conduct a wetland delineation survey and prepare a wetland delineation report. The wetland delineation survey and report shall meet the USACE standards for a Jurisdictional Delineation. The wetland delineation report shall be submitted to the USACE for verification. Based on USACE verification of the wetland delineation, the applicant shall implement the following:

   a. If the USACE determines the seasonal wetland is jurisdictional under the Clean Water Act, then the project proponent shall obtain 404 and 401 permits. The Developer shall compensate for the loss of wetland habitat through either restoration/enhancement, or the purchase of mitigation credits at an approved

[50] California Department of Fish and Game, 2012. Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency Department of Fish and Game. March 7, 2012. Sacramento, CA.

mitigation bank. The ratio of compensation shall be determined in consultation with USACE and the Central Valley Regional Water Quality Board (CVRWQCB) as part of the 404 and 401 permit application processes, but shall be no less than 1:1. A copy of the bill of sale verifying the purchase will be included in the mitigation compliance report.

b. If the wetland delineation report determines that the seasonal wetland is not jurisdictional, and the USACE concurs with that finding, the USACE will issue a "no permit required" letter, determining that a 404 permit is not required.

c. If the USACE determines that 404 and 401 permits are not required, the applicant shall consult with the CVRWQCB, who shall determine if the seasonal wetland is considered Waters of the State, and therefore subject to waste discharge permit requirements.

d. If the CVRWQCB determines that the seasonal wetland is Waters of the State, the applicant shall obtain all permits as directed by the CVRWQCB and other state responsible agencies.

e. If the CVRWQCB determines that the seasonal wetland is not Waters of the State, no further action is required.

ii. A 50 foot buffer shall be established around the potentially jurisdictional feature, within which, all work shall be prohibited, prior to completion of the process described in Mitigation Measure 3-2(i) and all relevant permits have been acquisition. Temporary fencing shall be installed around the buffer to exclude construction equipment until Mitigation Measure 3-2(i) has been completed.

iii. The grading permit shall be conditioned to not allow grading within 50 feet of the wetland until the Developer provides the City of Sacramento evidence that the discharge of fill into the isolated wetlands is authorized under the Porter-Cologne Act.

iv. The grading permit shall be conditioned to require temporary fencing to be installed around the wetland and the buffer to exclude construction equipment until the Developer provides the City of Sacramento evidence that the discharge of fill into the isolated wetlands is authorized under the Porter-Cologne Act.

FINDINGS

With implementation of the mitigation measures described above, the proposed project would not result in a significant impact on special-status species and would have a less than significant impact on biological resources.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
4. CULTURAL RESOURCES Would the project: A) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?		X		
B) Cause a substantial adverse change in the significance of an archaeological resource as pursuant to § 15064.5?		X		
C) Disturb any human remains, including those interred outside of formal cemeteries?		X		
D) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC § 21074?		X		
E) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

This section examines the potential impacts of the project on cultural resources. In this section, the term cultural resource includes historical resources, archaeological resources, tribal cultural resources (TCR[s]), and human remains. These classifications are based on CEQA Guidelines and are not all mutually exclusive—for instance, an archaeological resource may also be an historical resource, and a TCR may also be an archaeological resource and historical resource.

In impact analyses, historical resources are typically divided into historic architectural resources (hereafter "built environment" resources) and archaeological resources. When applicable, the distinction between built environment and archaeological resources hinges on the condition of the resource—if a resource is considered a ruin (e.g., building lacking structural elements, structure lacking historic configuration, etc.), it is classified as an archaeological resource. Built environment resources include historic buildings, structures (e.g., bridges, canals, roads, utility lines, railroads), objects (e.g., monuments, boundary markers), and districts. Archaeological resources include historic-period and prehistoric remnants of past cultures, typically recorded as sites or districts. Historic-period archaeological resources are those archaeological resources dating to the period after Euroamerican settlement of an area and may include foundations, landscaping, refuse scatters, mining features, and railroad grades. Prehistoric archaeological resources are those archaeological resources dating to the period prior to Euroamerican settlement of an area and may include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps, ceremonial sites, and trails. A TCR is a site, feature, place, cultural landscape, sacred place, or object of cultural value to a California Native American tribe. This section relies upon the information and findings presented in the cultural resources technical report prepared for the project by Environmental Science Associates (ESA), *Natomas Fountains Retail Center Project Cultural Resources Inventory Report* (ESA, 2016 [July]), which is included as Appendix C.

Paleontological resources are the fossilized evidence of past life found in the geologic record. Fossils are preserved in sedimentary rocks, which are the most abundant rock type exposed at the surface of the earth. Despite the abundance of these rocks, and the vast numbers of organisms that have lived through time, preservation of plant or animal remains as fossils can be a rare occurrence. In many cases, fossils of animals and plants occur only in limited areas and in small numbers relative to the distribution of the living organisms they represent. In particular, fossils of vertebrates – animals with backbones – are sufficiently rare to be considered nonrenewable resources.

PROJECT AREA

For this study, the Project Area is defined as the maximum extent, both horizontally and vertically, of both direct and indirect potential impacts resulting from the proposed project. Specifically, the Project Area encompasses the project footprint, including areas of new construction and operations-related activities (e.g., construction staging areas, access routes) associated with the project. The vertical extent of the Project Area consists of the maximum depth of ground disturbance proposed by the project. Because detailed project design is still underway, exact depths of ground disturbance have not been determined, though they would not be anticipated to exceed 20 feet below surface.

ENVIRONMENTAL SETTING

Prehistory

Categorizing the prehistoric period into cultural stages allows researchers to describe a broad range of archaeological resources with similar cultural patterns and components during a given timeframe, thereby creating a regional chronology. A commonly used interpretation of the Central Valley prehistoric record and has divided human history in the region into three basic periods: Paleo-Indian (13,550 to 10,550 before present (BP)), Archaic (10,550 to 900 BP), and Emergent (900 to 300 BP)[51] The Archaic period is subdivided into three sub-periods: Lower Archaic (10,550 to 7550 BP), Middle Archaic (7,550 to 2,550 BP), and Upper Archaic (2,550 to 900 BP).[52] Economic patterns, stylistic aspects, and regional phases further subdivide cultural patterns into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods. The following summary of the region's prehistory is derived principally from the approach described above.

Paleo-Indian Period (13,550 to 10,550 BP)

Humans first entered the Central Valley sometime prior to 13,000 BP. At that time Pleistocene glaciers had receded to the mountain crests leaving conifer forests on the mid and upper elevations of the Sierra Nevada and a nearly contiguous conifer forest on the Coast Ranges. The Central Valley was covered with extensive grasslands and riparian forests. The Sacramento River and San Joaquin River Delta systems had not yet developed. The Central Valley was home to a diverse community of large mammals, which soon became extinct. People were likely focused on large game hunting, although limited archaeological remains provides scant detail of how people lived during this period.

[51] Rosenthal, Jeffrey S., Gregory G. White, and Mark Q. Sutton, "The Central Valley: A View from the Catbird's Seat", In California Prehistory: Colonization, Culture, and Complexity, edited by Terry L. Jones and Kathryn A. Klar, pp. 147-163, AltaMira Press, Lanham, Maryland, 2007.

[52] Rosenthal, Jeffrey S., Gregory G. White, and Mark Q. Sutton, "The Central Valley: A View from the Catbird's Seat", In California Prehistory: Colonization, Culture, and Complexity, edited by Terry L. Jones and Kathryn A. Klar, pp. 147-163, AltaMira Press, Lanham, Maryland, 2007.

Lower Archaic Period (10,550 to 7,550 BP)

Climate change during the Lower Archaic Period led to the rapid expanse of oak woodland and grassland prairies across the Central Valley. After 10,550 BP, a significant period of soil deposition ensued in the Central Valley, capping older Pleistocene Era formation. This was followed around 7000 BP by a second period of substantial soil deposition in the Central Valley. It was during this period that the first evidence of milling stone technology appears, indicating an increased reliance on processing plants for food. Milling stones include hand stones and milling slabs and are frequently associated with a diverse tool assemblage, including cobble-based pounding, chopping, and scraping tools. Milling tools were used for processing seeds and nuts. The Lower Archaic Period also saw the development of well-made bifaces used for projectile points and cutting tools, commonly formed from meta-volcanic greenstone and volcanic basalts.

Middle Archaic Period (7,550 to 2,550 BP)

After about 7,550 BP, California was marked by a change in climate with warmer and dryer conditions throughout the region. Oak woodland expanded upslope in the Coast Ranges and conifer forest moved into the alpine zone in the Sierra Nevada Range. Rising sea levels led to the formation of the Sacramento-San Joaquin River Delta and associated marshlands. An initial period of upland erosion and lowland deposition was followed by a long period of landform stabilization. Scant evidence of human occupation from this period has been found in the Central Valley or the adjacent Coast Ranges. Most evidence comes from the Sierra Foothills in Calaveras and Tuolumne counties.

Upper Archaic Period (2,550 to 900 BP)

Evidence for Upper Archaic Period human occupation in the Central Valley is much more extensive than for earlier periods. The development of the Holocene landscape buried older deposits, resulting in the identification of more sites from the Upper Archaic than from older periods of development. Alluvial deposition was partially interrupted by two consecutive droughts known as the Medieval Climatic anomaly. Two fundamental adaptations developed side-by-side during the Upper Archaic Period, evidenced by a diversification in settlements patterns. Populations in the Central Valley tended towards large, high-density, permanent settlements. These villages were used as hubs from which the populace roamed to collect resources, utilizing a wide range of technologies. The populations in the foothills and mountains lived in less dense settlements, moving with the seasons to maximize resource returns. Tools tended to be expedient and multipurpose for use in a wide variety of activities. Village sites show extended occupation as evidenced by well-developed midden, frequently containing hundreds of burials, storage pits, structural remains, hearths, ash dumps, and extensive floral and faunal remains.

Emergent Period (900 to 300 BP)

A major shift in material culture occurred around 900 BP, marking the beginning of the Emergent Period. Particularly notable, was the introduction of the bow and arrow. The adoption of the bow occurred at slightly different times in various parts of the Central Valley, but by 750 BP it was in use in the Sacramento-San Joaquin River Delta region. The bow was accompanied by the Stockton Serrated point, a seemingly indigenous invention, distinctive from point types used in other parts of the State. Another key element of material culture from this period include big-head effigy ornaments thought to be associated with the Kuksu religious movement. In areas where stone was scarce, baked clay balls are found, presumably for cooking in baskets. Other diagnostic items from this period are bone tubes, stone pipes, and ear spools. Along rivers, villages are frequently associated with fish weirs, with fishing taking on an increasing level of importance in the diet of the local populace.

Ethnography

The Project Area is within the lands occupied and used by the Nisenan, or Southern Maidu. The language of the Nisenan, which includes several dialects, is classified in the Maiduan family of the Penutian linguistic stock.[53,54] The western boundary of Nisenan territory was the western bank of the Sacramento River. The eastern boundary was "the line in the Sierra Nevada Mountain Range where the snow lay on the ground all winter."[55] Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages usually were located on low rises along major watercourses. Village size ranged from three houses to 40 or 50. Houses were domed structures covered with earth and tule or grass and measured 3.0 to 4.6 meters (9.8 to 15 feet) in diameter. Brush shelters were used in summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule or brush, with a central smoke hole at the top and an east-facing entrance. Another common village structure was a granary used for storing acorns.[56]

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna that the rich valley environment provided. The Valley Nisenan economy involved riparian resources—in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco (*Nicotiana* sp.), but many wild species were closely husbanded. The acorn crop from the blue oak (*Quercus douglasii*) and black oak (*Quercus kelloggii*) was so carefully managed that this activity served as the equivalent of agriculture. Acorns could be stored in anticipation of winter shortfalls in resource abundance. Deer, rabbit, and salmon were the chief sources of animal protein in the aboriginal diet, but many other insect and animal species were taken when available.[57] Religion played an important role in Nisenan life. The Nisenan believe that all natural objects were endowed with supernatural powers. Two kinds of shamans existed: curing shamans and religious shamans. Curing shamans had limited contact with the spirit world and diagnosed and healed illnesses. Religious shamans gained control over the spirits through dreams and esoteric experiences.[58] The usual mode of burial was cremation.[59]

As with other California Native American groups, the gold rush of 1849 had a devastating effect on the Valley Nisenan. The flood of miners that came to the area in search of gold brought diseases with them that decimated the Nisenan population. Those who survived were subjected to violence and prejudice at the hands of the miners, and the Nisenan eventually were pushed out of their ancestral territory. Although this contact with settlers had a profound negative impact on the Nisenan population through disease and

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53 Kroeber, Alfred L., Handbook of the Indians of California, Bureau of American Ethnology Bulletin 78, Smithsonian Institution, Washington, D.C., 1976 reprinted ed., Dover Publications, Inc., New York, 1925 [1976].

54 Shipley, William F., "Native Languages of California", In California, edited by Robert F. Heizer, pp. 80-90, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

55 Littlejohn, Hugh W., Nisenan Geography, Document 18, University of California Department of Anthropology, Berkeley, California, 1928.

56 Wilson, Norman L., and Arlean H. Towne, "Nisenan", In *California*, edited by Robert F. Heizer, pp. 387-397, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

57 Wilson, Norman L., and Arlean H. Towne, "Nisenan", In *California*, edited by Robert F. Heizer, pp. 387-397, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

58 Wilson, Norman L., and Arlean H. Towne, "Nisenan", In California, edited by Robert F. Heizer, pp. 387-397, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

59 Faye, Paul-Louis, *Notes on the Southern Maidu*, University of California Publications in American Archaeology and Ethnology 20:35–53, 1923.

violent actions, the Nisenan people survived and maintained strong communities and action-oriented organizations.[60]

With respect to the project, the closest documented Native American village was Pijune, also known as Joe Mound and CA-SAC-26. Located approximately 2.5 miles south of the Project Area, on the north bank of the American River east of its confluence with the Sacramento River, Pijune is an ethnographically recorded Nisenan village excavated by Sacramento Junior College in the 1930s. The village is known to have been large and influential in the area at the time of Sutter's arrival in the 1840s.[61,62]

History

Exploration and Early Settlement of the Sacramento Area

While the Spanish had made forays into the Central Valley since the mid eighteenth century, the earliest non-indigenous presence in the region occurred in 1808 when Capitan Gabriel Moraga led an expedition from Mission San Jose to the northern Sacramento River Valley. By the late 1820s, English, American, and French fur trappers, attracted by the valley's abundance of animal life, had established operations throughout the region. The Sacramento River Valley was still predominantly occupied by Native Americans with only the occasional Spanish expedition into the interior to search for mission sites or escaped neophytes. The earliest Euro-American settlement of the area occurred in the 1840s with the establishment of land grants by the Mexican government. In 1839, John Sutter, born in Germany to Swiss parents, became a Mexican citizen and obtained Governor Juan B. Alvarado's permission to establish a settlement in the California interior. Sutter left Yerba Buena in August of 1839, traveling up the Sacramento River in search of a site for his estate. Sutter arrived at the confluence of the American and Sacramento rivers, established a settlement, and received the first land grant in the region in 1841 for his New Helvetia Rancho. The New Helvetia Rancho encompassed 97 square miles and included lands on the east bank of the Feather and Sacramento Rivers. Sutter established Sutter's Fort, and developed fisheries, a flour mill, and a lumber mill.[63]

The Sacramento River Valley remained relatively isolated and sparsely populated until the advent of the Gold Rush period. Given Sacramento's proximity to mining areas, and its accessibility to maritime traffic, the area quickly became a trading and economic center. Commerce along the Sacramento River encouraged continued population growth, with many of the miners and farmers settling along the natural levees of the Sacramento River. Settlers recognized that the active flood plain deposited fertile soils in the lands nearest to the river, which supported bountiful crops and provided easy access to transportation corridors along the river itself. Ranchers and farmers found economic success in providing food and supplies for the miners, although frequent flooding troubled settlers' agricultural efforts and additional settlement.[64]

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60 Castillo, Edward D., "The Impact of Euro-American Exploration and Settlement", In *California*, edited by Robert F. Heizer, pp. 99-127, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

61 Kroeber, Alfred L., Handbook of the Indians of California, Bureau of American Ethnology Bulletin 78, Smithsonian Institution, Washington, D.C., 1976 reprinted ed., Dover Publications, Inc., New York, 1925 [1976].

62 Derr, Eleanor H., "Archeological Investigations at CA-SAC-16: Interpretations of a Middle/Late Horizon Village in the Lower Sacramento Valley of California", M.A. thesis, Department of Anthropology, California State University, Sacramento, 1983.

63 Hoover, Mildred, Hero Eugene Rensch, Ethel Grace Rensch, and William N. Abeloe, Historic Spots in California, edited by Douglas Kyle, Stanford University Press, Stanford, California, 2002.

64 Hoover, Mildred, Hero Eugene Rensch, Ethel Grace Rensch, and William N. Abeloe, Historic Spots in California, edited by Douglas Kyle, Stanford University Press, Stanford, California, 2002.

Land Reclamation and Irrigation

Early attempts of individual landholders to build levees and reclaim swamp and overflow land in the 1850s proved ineffective in most cases. Legislators began to recognize that a system or network of levees and drainages was required. They also realized that a large amount of capital and labor was necessary to build strong levees, drain large plots of land, and maintain the system. In 1861, the California Legislature created the State Board of Swamp Land Commissioners. For the next two years, the Board formed a system of reclamation and levees and laid out 30 districts. Reclamation Districts 1, 2, and 18 were organized to protect the American and Yolo basins and lower Sacramento County from flooding and to allow for reclamation of agricultural lands. In 1866, the state abolished the Board and control of swamp and overflow land fell to the counties.[65] In 1887, Assemblyman C.C. Wright sponsored the Wright Act, which allowed the formation of irrigation districts under local public control. Most of the original districts failed, however, due to limited populations and capital, and costly lawsuits filed by large landowners and the holders of riparian water rights. In 1909, the Irrigation Bond Commission formed as a result of the Wright Act, and helped to resolve some of these issues.[66]

Reclamation District 1000

In 1911, a new State Reclamation Board was established, with jurisdiction over reclamation districts and levee plans. An act of State Legislature created Reclamation District No. 1000 (RD 1000) in April 1911 for the purpose of allowing for the reclamation of the American Basin, as it was then known, for agricultural purposes. The American Basin encompassed 70,000 acres along the eastern side of the Sacramento and Feather Rivers. The American Basin historically experienced flooding when the Sacramento and American Rivers overflowed their banks as the result of winter rains and runoff from the foothills, and portions of the basin were underwater for the greater part of the year. This historic flooding gave the area fertile soil to support the agriculture which dominated the area, and the Natomas Company of California owned the majority of the land, 54,000 acres, at the time. The 1911 act gave RD 1000 authority and responsibility for flood control and drainage.[67] Reclamation in RD 1000 began in 1913 with construction of a perimeter levee system that was completed in 1915. The sale of approximately $2 million in bonds financed the project. Following completion of the levees, the district began construction of an interior drainage system including canals, ditches and drains to collect both storm and agricultural runoff. The original system conveyed runoff to a pumping plant constructed in 1915 at the terminus of Second Bannon Slough, which is still in use today. The district constructed a second pumping plant in 1920, and a third plant in 1939, both located on the Sacramento River, north of Elverta Road and San Juan Road respectively. The district eventually constructed five more pump plants at various locations in the District to accommodate local growth and development.[68]

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65 Bouey, P. D., and R. Herbert, *Intensive Cultural Resources Survey and National Register Evaluation: Sacramento Urban Area Flood Control Project,* prepared by Far Western Anthropological Research Group, Inc., Davis, CA, prepared for the U.S. Army Corps of Engineers, Sacramento, California, 1990.

66 Hendrick, Carson, and Lisa Prince, "From Swampland to Farmland: Reclamation and Irrigation in the Natomas Basin", *Sacramento History Journal* 6:1-4, 2006.

67 Bradley, D., and M. Corbett, Final Rural Historic Landscape Report for Reclamation District 1000 for the Cultural Resources Inventory and Evaluations for the American River Watershed Investigation, Sacramento and Sutter Counties, California, Submitted by Dames & Moore, Inc., Chico, CA, Submitted to U.S. Army Corps of Engineers, Sacramento District, 1994.

68 Bradley, D., and M. Corbett, Final Rural Historic Landscape Report for Reclamation District 1000 for the Cultural Resources Inventory and Evaluations for the American River Watershed Investigation, Sacramento and Sutter Counties, California, Submitted by Dames & Moore, Inc., Chico, CA, Submitted to U.S. Army Corps of Engineers, Sacramento District, 1994.

REGULATORY SETTING

State

California Environmental Quality Act

CEQA requires lead agencies to determine if a proposed project would have a significant effect on historical resources, including archaeological resources. The CEQA Guidelines define a historical resource as: (1) a resource in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is an historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083 regarding unique archaeological resources. A unique archaeological resource is "an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person" (PRC Section 21083.2 [g]).

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064[c][4]).

Impacts to TCRs also are considered under CEQA, as described under PRC Section 21084.2. PRC Section 21074(a) defines a TCR as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    - o included or determined to be eligible for inclusion in the [California Register]; or
    - o included in a local register of historical resources, as defined in PRC Section 5020.1(k).
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of [PRC] Section 5024.1. In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

Per PRC Section 21074(a)(c), an historical resource, unique archaeological resource, or non-unique archaeological resource may also be a TCR if it is included or determined eligible for the California Register or included in a local register of historical resources.

California Register of Historical Resources

The California Register is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The criteria for eligibility are based on National Register of Historic Places (National Register) criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for or listed in the National Register.

To be eligible for the California Register, an historical resource must be significant at the local, state, and/or federal level under one or more of the following criteria.

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

2. Is associated with the lives of persons important in our past.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

4. Has yielded, or may be likely to yield, information important in prehistory or history (PRC Section 5024.1[c]).

For a resource to be eligible for the California Register, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. A resource that does not retain sufficient integrity to meet the National Register criteria may still be eligible for listing in the California Register.

Senate Bill 18

Senate Bill 18 requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting tribal cultural resources. Senate Bill 18 requires cities and counties to send any proposals for revisions or amendments to general plans and specific plans to those California Native American Tribes that are on the Native American Heritage Commission (NAHC) contact list and have traditional lands located within the city or county's jurisdiction. Cities and counties must also conduct consultations with these tribes prior to adopting or amending their general plans or specific plans.

Assembly Bill 52

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on "tribal cultural resources" separately from archaeological resources (PRC Section 21074; 21083.09). The Bill defines "tribal cultural resources" in a new section of the PRC Section 21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC Section 21080.3.1, 21080.3.2, 21082.3). Finally, AB 52 requires the Office of Planning and Research to update Appendix G of the CEQA Guidelines by July 1, 2016 to provide sample questions regarding impacts to tribal cultural resources (PRC Section 21083.09).

Other Provisions of California Public Resources Code

Several sections of the PRC protect paleontological resources. PRC Section 5097.5 prohibits "knowing and willful" excavation, removal, destruction, injury, and defacement of any paleontological feature on public lands (lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted permission.

Section 7050.5 of the Health and Safety Code protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery. Section 5097.98 of the PRC (and reiterated in CEQA Section 15064.59 [e]) also identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery.

Local

City of Sacramento

The City of Sacramento 2035 General Plan includes policies for both identification and preservation of cultural resources (Policies HCR 2.1.1 to 2.1.17) and public awareness of cultural resources (Policies HCR 3.1.1 to 3.1.4). Specifically, these policies address issues ranging identification of cultural resources and consultation with potential interested parties, to project review and development of protocol for mitigating impacts to cultural resources. The public awareness policies focus on heritage tourism, coordination with interested parties, public/private partnerships, and public education.

STANDARDS OF SIGNIFICANCE

This analysis evaluates the proposed project's impacts on cultural resources based on the criteria identified in the CEQA Guidelines, Appendix G. The project could have a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or,
- Disturb any human remains, including those interred outside of formal cemeteries.

Though not yet incorporated into CEQA Guidelines Appendix G, the project is subject to AB 52, which requires consideration of a project's impacts on TCRs as part of the overall analysis of project impacts on cultural resources. As such, the project could have a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074.

SUMMARY OF ANALYSIS

The methods employed in this cultural resources study consisted of archival research, consultation with interested parties, and an archaeological field survey. The field survey for the current study focused only on archaeological resources since the Project Area lacks any structures or buildings. The methods are described in detail below.

Records Search

On November 19, 2015, ESA staff requested a records search (File # SAC-15-183) from the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) at

California State University, Sacramento. The NCIC maintains the official CHRIS records of previous cultural resources studies and recorded cultural resources for the Project Area and vicinity. The purpose of the records search was to: (1) determine whether known cultural resources have previously been recorded in a 0.5-mile radius of the Project Area; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby resources; and (3) develop a context for the identification and preliminary evaluation of cultural resources. The records search consisted of an examination of the following documents:

- NCIC base maps: Taylor Monument, California (USGS 7.5-minute topographic map)
- Resource Inventories: National Register of Historic Places, California Inventory of Historical Resources. California Historical Landmarks, California Points of Historical Interest, Historic Properties Directory Listing (Sacramento County, through May 2012), Archeological Determinations of Eligibility (Sacramento, through April 5, 2012)

Records Search Results

The NCIC records search results indicate that four previous cultural resources studies have included portions of the Project Area and eight other previous cultural resources studies have included areas within 0.5 mile of the Project Area. The majority of these studies, including all of those conducted in portions of the Project Area, consisted of only desktop analyses (e.g., records searches). Of the previous studies covering portions of the Project Area, all but one (001733) focused on RD 1000 and its associated features—the other study consisted of a survey, inventory, and evaluation that included the southwest portion of the current Project Area. Table 4-1 provides details on previous studies conducted in the Project Area.

TABLE 4-1.
PREVIOUS CULTURAL RESOURCES STUDIES IN PROJECT AREA

Study Number	Title	Author	Date	In Project Area
001733	Cultural Resource Inventory and Evaluation for the proposed Truxel Property Development Sacramento County, California	Heipel	1991	Yes
003469	Historic American Engineering Record Reclamation District 1000 HAER NO. CA-187	Peak	1997	Yes
004195	Cultural Resources Report: North Natomas Comprehensive Drainage Plan; Levee Improvements, Canal Widening and Additional Pumping Capacity	Derr	1997	Yes
011138	Rural Historic Landscape Report for Reclamation District 1000 for the Cultural Resources Inventory and Evaluations for the American River Watershed Investigation, Sacramento and Sutter Counties, California	Bradley and Corbett	1995	Yes

SOURCE: NCIC 2015

The NCIC records search indicates that there are no previously recorded cultural resources located in or within 0.5 mile of the Project Area. Note, the lack of previously recorded prehistoric resources documented in the project vicinity may reflect the dearth of previous studies rather than a low density of resources.

Native American Contact

ESA contacted the Native American Heritage Commission (NAHC) on March 2, 2016 in request of a search of their Sacred Lands File (SLF) for the Project Area and a list of Native Americans who may have an interest in the project. The NAHC replied to ESA on March 24, 2016, indicating the SLF has no record of any cultural resources in the Project Area and also including a list of Native American representatives who may be interested in the project.

Steven Hutchason, representing the Wilton Rancheria, contacted the City by a letter dated March 14, 2016 requesting that the City consult with Wilton Rancheria, for AB 52 purposes, regarding the project and potential impacts to cultural resources. On April 21, 2016, the City and Wilton Rancheria Cultural Resources Officer Antonio Ruiz met to discuss the project and any potential impacts to cultural resources. The City provided Mr. Ruiz with a copy of a draft of the current document the same day. Since then, the City has sent several follow-up emails to Mr. Ruiz requesting that Mr. Ruiz inform the City of any concerns regarding the project—no responses from this correspondence has been received to date. In a letter to the City dated May 5, 2016, United Auburn Indian Community of the Auburn Rancheria (UAIC) Chairman Gene Whitehouse requested information regarding the project. No additional correspondence with Native American representatives has occurred for the project and the City has determined that consultation ended according to PRC 21080.3.2(b)(1)–(2) and PRC 21080.3.1(b)(1).

Additional Background Research

ESA conducted a review of historic maps and aerial photographs, depicting the current location of the Project Area.[69] Aerial photographs of the Study Area from the following years were reviewed: 1947, 1957, 1964, 1966, 1993, 1998, 2002, 2005, 2009, 2010, and 2012. Historic USGS topographic quadrangle maps from the following years were reviewed: 1907, 1913, 1915, 1951, 1956, 1965, 1968, 1977, 1980, and 1994. The following is a summary of the Project Area history based on an analysis of the historic aerial photography and map research.

The Project Area was in an inundated area, named Bush Lake, until after the completion of the RD 1000 perimeter levee system, oriented north-south just west of the Project Area, in 1915. After the reclamation of the area, the Project Area was used for agriculture, specifically row crops, with a small farm complex present just northwest. The Project Area continued to be used for row crops until sometime in the 1980s or early 1990s, at which point it was graded and commercial construction (Raley Distribution Center) occurred on the lot to the north. In the early 2000s, the existing parking lot/road was construction along the south edge of the Project Area, in addition to the north-south strip of asphalt parking area in the eastern portion of the Project Area. The existing commercial buildings to the south and southeast were constructed at this time as well. No significant changes have occurred to the Project Area since that time.

Archaeological Sensitivity of Project Area

The underlying geology of the Project Area consists of Late Pleistocene and Holocene Great Valley basin deposits.[70] Until the levee system constructed by RD 1000 in the 1910s, the Project Area was part of Bush Lake, an inundated portion of the American River flood basin, with 1st Bannon Slough as the nearest discrete drainage to the Project Area, located approximately one mile south thereof. Soils in the Project Area are very deep silt loams of the Cosumnes series[71] overlain and mixed with modern fill. The Project Area appears to have experienced a large degree of ground disturbance from historic-period agricultural and modern development activities, albeit it to varying depths. Though it does not preclude the presence of archaeological deposits, the Project Area's prehistoric setting in an inundated, non-elevated, area suggests an overall low sensitivity for prehistoric archaeological material. The historic-period reclamation efforts and subsequent farming and grading have further reduced the Project Area's overall sensitivity for intact prehistoric archaeological deposits, both surficial and buried. The Project Area has low sensitivity for buried historic-period archaeological resources with little or no surface manifestation because historic-period use consisted of row crop agriculture without structures or

[69] Nationwide Environmental Title Research, LLC (NETR), 2016. Available: www.historicaerials.com. Accessed March 8, 2016.

[70] California Geological Survey, *Geologic Map of California*. 2010. Available: http://www.quake.ca.gov/gmaps/GMC/stategeologicmap.html.

[71] U.S. Department of Agriculture (USDA), 2013. *Natural Resources Conservation Service Web Soil Survey, Version 3.1*. Available: http://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx. Accessed December 6, 2013.

buildings. Further supporting a low sensitivity for surficial archaeological deposits in the Project Area are the fact that the survey conducted for the current study resulted in no archaeological material identified and that the Project Area experienced a large degree of ground disturbance from historic-period and modern development activities.

Field Survey

On March 3, 2016, ESA Archaeologist Robin Hoffman conducted a cultural resources survey of all portions of the Project Area. Intensive pedestrian survey methods were used, consisting of walking parallel transects spaced at no more than 15 meters apart and inspecting the surface for cultural material or evidence thereof. When ground visibility was poor, cleared areas and areas disturbed by rodents along and between the transect lines were checked with special attention. The entire Project Area appears to have been disturbed from historic-period agricultural and/or modern development activities (e.g., grading, paving). Currently the vast majority of the Project Area consists of an open graded lot. An asphalt parking lot/road runs along the southern edge of the Project Area, with landscaped islands present in portions of the parking lot/road area in the southeast portion of the Project Area. An abandoned north-south strip of asphalt, approximately 50 feet wide, is located just west of the east end of the Project Area. A packed dirt path, possibly access associated with the canal immediately west of the Project Area, is within the southwest corner of the Project Area. Ground visibility in unpaved and unlandscaped portions of the Project Area ranged from zero to fifteen percent, averaging five percent, with vegetation consisting of ruderal grasses and forbs. During the field survey, no cultural resources were identified in the Project Area.

ANSWERS TO CHECKLIST QUESTIONS

Question A

Through a records search, background research, and a field survey, no historical resources, per CEQA Guidelines Section 15064.5, were identified within the Project Area. Therefore, the project is not anticipated to result in a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5. However, if any previously unrecorded archaeological resource is present in the Project Area and qualifies as a historical resource, any impacts to the resource resulting from the project could be potentially significant. Any such potential significant impacts would be reduced to a **less-than-significant** level by implementing **Mitigation Measure 4-1**.

Question B

Through a records search, background research, and a field survey, no archaeological resources, pursuant to CEQA Guidelines Section 15064.5, have been identified in the Project Area. Therefore, the project is not anticipated to result in a substantial adverse change in the significance of an archaeological resource, pursuant to CEQA Guidelines Section 15064.5. However, if any previously unrecorded archaeological resource is present in the Project Area and qualifies as a unique archaeological resource, any impacts to the resource resulting from the project could be potentially significant. Any such potential significant impacts would be reduced to a **less-than-significant** level by implementing **Mitigation Measure 4-1**.

Question C

Through a records search, background research, and a field survey, no human remains were identified within the Project Area. Therefore, the project is not anticipated to disturb any human remains. However, if any previously unrecorded human remains are present in the Project Area, any impacts to the human remains resulting from the project could be potentially significant. Any such potential significant impacts would be reduced to a **less-than-significant** level by implementing **Mitigation Measure 4-1**.

Question D

Though a records search, background research, correspondence with the NAHC, and correspondence with relevant Native American representatives, no tribal cultural resources, as defined in PRC Section 21074, were identified within the Project Area. Therefore, the project is not anticipated to result in a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074. However, if any previously unrecorded archaeological resource is present in the Project Area and qualifies as a tribal cultural resource, any impacts to the resource resulting from the project could be potentially significant. Any such potential significant impacts would be reduced to a **less-than-significant** level by implementing **Mitigation Measure 4-1**.

Question E

A paleontological database search for fossil localities within Sacramento County was conducted through the University of California Museum of Paleontology (UCMP) on-line database July 15, 2016, as well as a review of United States Geological Survey (USGS) geologic mapping for the proposed project. The surficial geology of the project area is mapped as Holocene alluvium (Qha).[72] These sediments date from the last 10,000 years and are considered too young to preserve fossil remains.

The thickness of the young alluvium is unknown in the project area, however outcrops of the Riverbank formation less than one half mile from the project area indicate it likely underlies the subsurface sediments in the project area.[73] The Riverbank formation dates from the Pleistocene (0.13 million years) and is highly fossiliferous in Sacramento, as well as elsewhere in Northern California. The UCMP records 126 fossil vertebrate specimens from 5 localities in Sacramento County.[74] A number of discoveries in the Riverbank formation have been published in the scientific literature, both in and outside of Sacramento County.[75,76,77,78] Due to the proven occurrence of significant paleontological resources in the Riverbank formation, this formation has high paleontological sensitivity, according to the criteria of the Society of Vertebrate Paleontology.[79]

As discussed in Section 4.5, Geology, Soils, and Mineral Resources, of the City of Sacramento 2035 General Plan Master EIR, General Plan Policy HCR 2.1.16 requires that accepted protocols be adhered to if paleontological resources are discovered during excavation or construction.

While the surficial sediments on the project site are not considered sensitive for paleontological resources, it is highly likely that the project site is underlain by the high sensitivity Riverbank formation at an unknown depth. As such, it is possible that project-related earth-disturbing activities could affect the integrity of a paleontological site, thereby causing a substantial change in the significance of the resource.

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72 Helley, E.J. 1979. Preliminary geologic map of Cenozoic deposits of the Davis, Knights Landing, Lincoln, and Fair Oaks quadrangles, California. U.S. Geological Survey Open-File Report OF-79-583. Scale 1:62,500.

73 Helley, E.J. 1979. Preliminary geologic map of Cenozoic deposits of the Davis, Knights Landing, Lincoln, and Fair Oaks quadrangles, California. U.S. Geological Survey Open-File Report OF-79-583. Scale 1:62,500.

74 University of California Museum of Paleontology (UCMP), UCMP Specimen Search website. Available: http://ucmpdb.berkeley.edu/. Accessed July 15, 2016.

75 Hansen, R.O. and E.L. Begg. 1970. Age of quaternary sediments and soils in the Sacramento area, California by uranium and actinium series dating of vertebrate fossils. Earth and Planetary Science Letters 8: 411-419.

76 Casteel, R. W. and J. H. Hutchison. 1973. Orthodon (Actinopterygii, Cyprinidae) from the Pliocene and Pleistocene of California. Copeia 1973: 358-361.

77 Dundas, R.G., R.B. Smith, and K. L. Verosub. 1996. The Fairmead Landfill locality (Pleistocene, Irvingtonian), Madera County, California: preliminary report and significance. PaleoBios 17: 50-58.

78 Hilton, R.P., D. C. Dailey, and H.G. McDonald. 2000. A Late Pleistocene biota from the Arco Arena site, Sacramento, California. PaleoBios 20: 7-12.

79 Society of Vertebrate Paleontology. 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources. p. 11.

Implementation of Program 13 of the 2035 General Plan requires amendment of the Sacramento Code to require discovery procedures for paleontological resources found during grading, excavation, or construction. These procedures include protocols and criteria for qualifications of personnel, and for survey, research, testing, training, monitoring, cessation and resumption of construction, identification, evaluation, and reporting, as well as compliance with recommendations to address any significant adverse effects where determined by the City to be feasible. With the incorporation of **Mitigation Measures 4-2**, **4-3**, and **4-4** any project-related impacts to significant paleontological resources would be **less than significant**.

MITIGATION MEASURES

4-1 **Unanticipated Discovery Protocol for Archaeological Resources and Human Remains.** If prehistoric or historic-period archaeological resources, including those considered tribal cultural resources, are encountered during project implementation, all construction activities within 100 feet shall halt and the City shall be notified. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. An archaeologist meeting the U.S. Secretary of the Interior's Standards (SOIS) for Archeology shall inspect the findings within 24 hours of discovery. If the City determines that the resource qualifies as a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines) and that the project has potential to damage or destroy the resource, mitigation shall be implemented in accordance with PRC Section 21083.2 and CEQA Guidelines Section 15126.4. Consistent with CEQA Guidelines Section 15126.4(b)(3), mitigation shall be accomplished through either preservation in place or, if preservation in place is not feasible, data recovery through excavation. If preservation in place is feasible, this may be accomplished through one of the following means: (1) modifying the construction plan to avoid the resource; (2) incorporating the resource within open space; (3) capping and covering the resource before building appropriate facilities on the resource site; or (4) deeding resource site into a permanent conservation easement. If avoidance or preservation in place is not feasible, an archaeologist meeting the SOIS for Archeology shall prepare and implement a detailed treatment plan to recover the scientifically consequential information from and about the resource, which shall be reviewed and approved by the City prior to any excavation at the resource site. Treatment of unique archaeological resources shall follow the applicable requirements of PRC Section 21083.2. Treatment for most resources would consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals.

In the event of discovery or recognition of any human remains during project implementation, project construction activities within 100 feet of the find shall cease until the Sacramento County Coroner has been contacted to determine that no investigation of the cause of death is required. The Coroner shall contact the NAHC within 24 hours if the Coroner determines the remains to be Native American in origin. The NAHC will then identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American (PRC Section 5097.98), who in turn would make recommendations to the City for the appropriate means of treating the human remains and any associated funerary objects (CEQA Guidelines Section 15064.5[d]).

4-2 Prior to start of earth moving activities, a qualified paleontologist, defined as a paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards (SVP, 2010) shall be retained to conduct pre-construction worker paleontological resources sensitivity training. This training shall include information on what to do in case an unanticipated discovery is made by a worker, which fossil types may be discovered during project-related excavations, and laws protecting paleontological resources. All construction personnel shall be informed of the possibility of encountering fossils, and instructed to immediately inform the construction foreman if any bones or other potential fossils are unexpectedly unearthed in an area where paleontological monitoring is not required. The applicant shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

4-3 A paleontological monitor working under the direct supervision of the qualified paleontological Principal Investigator, shall monitor all ground-disturbing activity below 4 feet. The location, duration, and timing of monitoring shall be determined by the qualified paleontologist in consultation with the City, and shall be based on a review of geologic maps and grading plans. During the course of monitoring, if the paleontologist can demonstrate, based on observations of subsurface conditions, that the level of monitoring should be reduced or discontinued, the paleontologist, in accordance with the SVP guidelines,[80] may adjust the level of monitoring to circumstances, as warranted. Should additional data become available, such as geotechnical boring information, which includes more information on the depth of fill and the depth of young alluvium, monitoring depths may be adjusted, as recommended by a qualified paleontologist, in coordination with the City.

The paleontological monitor shall have authority to temporarily divert excavation operations away from exposed fossils to collect associated data and recover the fossil specimens if deemed necessary.

Following the completion of monitoring, the paleontologist shall prepare a report documenting the absence or discovery of fossil resources onsite. If fossils are found, the report shall summarize the results of the inspection program, identify those fossils encountered, recovery and curation efforts, and the methods used in these efforts, as well as describe the fossils collected and their significance. A copy of the report shall be provided to the City and to an appropriate repository.

4-4 In the event of unanticipated discovery of paleontological resources in locations or at depths not subject to paleontological monitoring, the contractor shall cease ground-disturbing activities within 50 feet of the find until it can be assessed by the qualified paleontologist. The qualified paleontologist shall assess the find, implement recovery measures if necessary, and determine if paleontological monitoring is warranted once work resumes.

FINDINGS

All potential significant environmental effects of the project relating to cultural and paleontological resources can be mitigated to a **less-than-significant** level.

[80] Society of Vertebrate Paleontology. 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources. p. 11.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No impact
5. 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?			X	

ENVIRONMENTAL SETTING

The proposed project site is located within the Sacramento Valley, and lies centrally in the Great Valley geomorphic province, a relatively flat alluvial plan composed of a deep sequence of sediments in a bedrock trough. The Sacramento Valley forms the northern third of the Great Valley, which fills a northwest-trending structural depression bounded on the west by the Great Valley Fault Zone and the northern Coast Range and to the east by the northern Sierra Nevada and the Foothills Fault Zone. Most of the surface of the Great Valley is covered with Holocene and Pleistocene-age alluvium, primarily composed of sediments from the Sierra Nevada and the Coast Ranges, which were carried by water and deposited on the valley floor. Siltstone, claystone, and sandstone are the primary types of sedimentary deposits. Older Tertiary Cenozoic deposits underlie the Quaternary alluvium.

Within the City of Sacramento and the Sacramento region, there are no known active faults. The greatest earthquake threat to the city comes from earthquakes along Northern California's major faults, which are the San Andreas, Calaveras, and Hayward faults. Ground shaking on any of these faults could cause shaking within the City to an intensity of 5 to 6 moment magnitude (Mw). Sacramento's seismic ground-shaking hazard is low, ranking among the lowest in the state. The city is in Seismic Zone 3; accordingly, any future development, rehabilitation, reuse, or possible change of use of a structure would be required to comply with all design standards applicable to Seismic Zone 3.[81]

Liquefaction

Liquefaction is a soil strength and stiffness 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 specific site is usually determined based on the results of the underlain soil composition and groundwater conditions beneath the site. Some areas in the City of Sacramento are susceptible to liquefaction events, including: Central City, Pocket, and North and South Natomas Community Plan areas. The proposed project site is not located within a State Designated Seismic Hazard Zone for liquefaction.[82]

[81] City of Sacramento, 2015. City of Sacramento 2035 General Plan Master Environmental Impact Report. p. 4.5-1.

[82] California Department of Conservation, 2015. Department of Conservation Website: Seismic Hazard Zones. Available: http://www.conservation.ca.gov/cgs/shzp/Pages/shmprealdis.aspx#in_zone. Accessed December 14, 2015.

Project Area Geology

According to the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey, the entire project site is made up of Cosumnes silt that is partially drained with 0 to 2 percent slopes.[83] No unique geologic or physical features are located on or adjacent to the project site.

STANDARDS OF SIGNIFICANCE

For the purposes of this Initial Study, an impact is considered significant if it allows 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.

ANSWERS TO CHECKLIST QUESTIONS

Question A

The City of Sacramento's topography is relatively flat, the City is not located within an Alquist-Priolo Earthquake Fault Zone, and the City is not located in the immediate vicinity of an active fault. However, the 2035 General Plan indicates that ground shaking would occur periodically in Sacramento as a result of distant earthquakes. The 2035 General Plan further states that the earthquake resistance of any building is dependent on an interaction of seismic frequency, intensity, and duration with the structure's height, condition, and construction materials. Although the project site is not located near any active or potentially active faults, strong ground shaking could occur at the project site during a major earthquake on any of the major regional faults.

The State of California provides minimum standards for building design through the California Building Standards Code (CBSC) (Title 24 of the California Code of Regulations). The CBSC is based on the federal Uniform Building Code (UBC) but is more detailed and stringent than the federal UBC. Specific minimum seismic safety requirements are set forth in Chapter 23 of the CBSC. The state earth protection law (California Health and Safety Code Section 19100 et seq.) requires that buildings be designed to resist stresses produced by lateral forces caused by earthquakes. Earthquake resistant design and materials are required to meet or exceed the current seismic engineering standards of the CBSC Seismic Risk Zone 3 improvements. The proposed project would be required to comply with CBSC requirements and the City's 2035 General Plan and Master EIR, which require project applicants to prepare site-specific geotechnical evaluations and conformance with Title 24 of the California Code of Regulations.

Seismicity

According to the California Geological Survey and the USGS, an active fault is not mapped across the project site, nor is the project site located within an Alquist-Priolo Earthquake Special Study Zone. In addition, the nearest fault to the proposed project site, the Dunnigan Hills Fault, is located approximately 22 miles to the northwest. Table 5-1 describes the proximity of the project site to local active and potentially active faults. The intensity of ground shaking caused by an earthquake at the Dunnigan Hills Fault is not expected to cause substantial damage to the project site, according to the *Probabilistic Seismic Hazard Assessment for the State of California*.

[83] U.S. Department of Agriculture (USDA), 2015. Natural Resources Conservation Service. Custom Soils Report for Sacramento County, California: Ice Blocks. Created from http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed December 10, 2015.

TABLE 5-1.
LOCAL ACTIVE AND POTENTIALLY ACTIVE FAULTS

Activity	Fault Name	Distance, Direction
Historic	Green Valley Fault	69 km W-SW
Historic	Rodgers Creek Fault	99 km W-SW
Active	Dunnigan Hills	29 km W-NW
Active	West Napa Fault	79 km W-SW
Active	Concord Fault	88 km SW
Potentially Active	Midland Fault	39 km SW
Potentially Active	Bear Mountains Fault Zone – West	39 km E
Potentially Active	Bear Mountains Fault Zone – East	48 km E
Potentially Active	Maidu Fault	44 km E
Potentially Active	Melones – West	56 km E
Potentially Active	Melones – East	60 km E

SOURCE: California Geologic Survey, 2016

Earthquake Induced Liquefaction, Surface Rupture Potential, and Settlement

Portions of the city, including the project site, are underlain by artificial fill and alluvial deposits that, in their present states, could become unstable during seismic ground motion. To reduce the primary and secondary risks associated with seismically induced groundshaking, it is necessary to take the location and type of subsurface materials into consideration when designing foundations and structures. In Sacramento, commercial, institutional, and large residential buildings and all associated infrastructure are required to reduce the exposure to potentially damaging seismic vibrations through seismic resistant design, in conformance with Chapter 16, Structural Design Requirements of the California Building Code (CBC). Further, the adherence to the site-specific soil and foundation seismic design requirements in Chapters 16 and 18 of the CBC and the grading requirements in Chapters 18 of the CBC, as required by City and state law, ensures the maximum practicable protection available from soil failures under static or dynamic conditions for structures and their associated infrastructure, trenches, temporary slopes, and foundations.

Based on an existing regulatory framework that addresses earthquake safety issues and requires adherence to the requirements of the CBC and design standards, seismically-induced groundshaking and liquefaction would not be a substantial hazard in the project site. In view of the above, the proposed project would have a less-than-significant impact regarding exposure of people or structures to seismic hazards, such as groundshaking and liquefaction.

Erosion

Construction activities would involve excavating, filling, moving, grading, and temporarily stockpiling soils onsite, which would expose site soils to erosion from wind and surface water runoff. The City has adopted standard measures to control erosion and sediment during construction and all projects in the City are required to comply with the City's Standard Construction Specifications for Erosion and Sediment Control. The proposed project would comply with the City's standards set forth in the "Administrative and Technical Procedures Manual for Grading and Erosion and Sediment Control." The project would also comply with the City's grading ordinance (Chapter 15.88 of Sacramento City Code) which specifies construction standards to minimize erosion and runoff.

Because the proposed project would be required to comply with federal, state, and local construction standards, it would not expose people or structures to the risk of loss, injury, or death. Therefore, this impact is **less than significant**.

MITIGATION MEASURES

None required.

FINDINGS

The project-specific environmental effects relating to geology and soils would be less than significant for the proposed project.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
6. HAZARDS Would the project: A) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities?			X	
B) Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials?			X	
C) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities?			X	

ENVIRONMENTAL AND REGULATORY SETTING

The project site is undeveloped and surrounded by urbanized development. The entire North Natomas area was historically used for agricultural purposes. There are no old foundations, garbage or other evidence suggesting that the historic use of the site could have resulted in hazardous material discharge or dumping. Information about hazardous materials on the project site was collected by conducting a review of the California Environmental Protection Agency's (Cal EPA) Cortese List Data Resources (Cortese List). The Cortese list includes the following data resources that provide information regarding the facilities or sites identified as meeting the Cortese list requirements: the list of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database; the list of Leaking Underground Storage Tank (LUST) sites from GeoTracker database; the list of solid waste disposal sites identified by Water Board; the list of active Cease and Desist Orders and Cleanup and Abatement Orders from Water Board; and the list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code identified by DTSC. The Cortese List is a reporting document used by the state, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. The Cortese List is updated at least annually, in compliance with California regulations (California Code Section 65964.6(a)(4)). The Cortese List includes federal superfund sites, state response sites, non-operating hazardous waste sites, voluntary cleanup sites, and school cleanup sites.

Based on a review of the Cortese List[84] conducted in January 15, 2016, there are no active sites within approximately 0.5 miles of the project site. One site that is listed within 0.5 miles of the project site is a school investigation site; however, it has been listed as "no further action" cleanup status since March 27, 2007.

[84] U.S. Department of Toxic Substances Control (DTSC), 2016. Envirostor Database. California Department of Toxic Substances Control. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). January 15, 2016. Available: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm.

REGULATORY SETTING

State Department of Toxic Substances Control (DTSC)

The DTSC is responsible for the management of hazardous materials and hazardous wastes within the state of California. The DTSC oversees some cleanup sites, sharing certain overlapping jurisdiction with the Sacramento County Environmental Management Department (SCEMD) or the Regional Water Quality Control Board (RWQCB). Sites within DTSC's jurisdiction include hazardous materials sites where soil and sometimes groundwater has been contaminated.

Regional Water Quality Control Board (RWQCB)

The RWQCB is responsible for maintaining the high quality of waters within the state. Although many hazardous materials sites are overseen by the local Certified Unified Program Agency (CUPA), the RWQCB often assumes lead agency status over hazardous materials sites where groundwater has been contaminated.

County of Sacramento Environmental Management Department (SCEMD)

The Sacramento County Environmental Management Department (SCEMD) is the local CUPA. Hazardous waste laws and regulations are enforced locally by SCEMD, including UST investigations and cleanups, as referenced in the Setting above for the USTs formerly at the project site.

Sacramento Metropolitan Air Quality Management District (SMAQMD)

The Sacramento Metropolitan Air Quality Management District (SMAQMD) enforces Rule 902 that protects the public from exposure to asbestos in the event of a release, as discussed further below. *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 (NOV) being issued by SMAQMD and civil penalties under state and/or federal law, in addition to possible action by U.S. EPA under federal law.* Federal law covers a number of different activities involving asbestos, including demolition and renovation of structures (40 CFR § 61.145).

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

Question A

As discussed in the Setting, there are no active hazardous materials sites in the project vicinity and no listed sites on the project site.[85] Therefore, excavation and earth moving activities, during construction, are not anticipated to expose construction workers and/or the general public to unusual or excessive risks related to contaminated soils. Therefore, this impact would be **less than significant**.

Question B

As discussed the Setting, the project site is undeveloped and has no existing structures. Therefore, no renovation or demolition would occur. In addition, no known hazardous materials sites are located on the project site according to the Cortese list.[86] As such, the project site is free of asbestos-containing construction materials (ACCM).

Construction activities on the project site would involve the transport and use of fuels, lubricants, paint, solvents, and other potentially hazardous materials to the project site during construction. Relatively small amounts of these commonly used hazardous substances would be used on site for construction and equipment maintenance. An array of federal, state, and local laws regulate the transport, management, storage, and use of hazardous materials. These laws are enforced by various City, County, and State departments. Consequently, use of these materials during project construction, for their intended purpose, in compliance with federal, state, and local laws, would not pose a significant risk to the public or environment.

During project operations, the transport, storage, use, and/or disposal of hazardous materials would be limited to common hazardous materials, typical of places of employment (e.g., cleaning agents, paints and thinners, fuels, insecticides, herbicides, etc.). Although limited quantities of hazardous materials can be found in most buildings, the use of such substances would not occur in quantities that would present a significant hazard to the environment or the public. Accidents or spills involving small quantities of the materials typical of any residences or place of employment (cleaning agents, paints, etc.) would not create a significant hazard to the public or the environment. Therefore, construction and operation of the project, in compliance with existing regulations, would not expose people (e.g., pedestrians, construction workers) to asbestos-containing materials or other hazardous materials, and this impact is considered to be **less than significant**.

Question C

As discussed in the Setting, no known groundwater contamination exists on the project site, according to the Cortese list.[87] According to the Groundwater Information Center,[88] the groundwater level at the project site is approximately 30 feet below the ground surface. In addition, groundwater dewatering is not

[85] U.S. Department of Toxic Substances Control (DTSC), 2016. Envirostor Database. California Department of Toxic Substances Control. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). January 15, 2016. Available: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm.

[86] U.S. Department of Toxic Substances Control (DTSC), 2016. Envirostor Database. California Department of Toxic Substances Control. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). January 15, 2016. Available: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm.

[87] U.S. Department of Toxic Substances Control (DTSC), 2016. Envirostor Database. California Department of Toxic Substances Control. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). January 15, 2016. Available: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm.

[88] California Department of Water Resources (DWR), 2016. Groundwater Information Center Interactive Map Application. January 20, 2016. Accessed at: https://gis.water.ca.gov/app/gicima/

anticipated during construction. Therefore, impacts related to exposure of people to existing contaminated groundwater during dewatering activities would be **less than significant**.

MITIGATION MEASURES

None required.

FINDINGS

The proposed project would have no significant environmental effects relating to hazards.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
7. 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?			X	
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?			X	

ENVIRONMENTAL SETTING

Hydrology

The project site is set within the Natomas Basin which is set within the Greater Sacramento River Basin, which drains the Sacramento Valley. The Natomas Basin has historically provided backwater flood flows on the Sacramento River, north of the confluence with the American River. Historically, intensive agriculture in the basin installed a series of canals and channels for the conveyance and drainage of water supplies to agricultural operations throughout the basin. These canals include the Reclamation District (RD) 1000 canals: the East Drain, which runs along the west side of the project site; the Steelhead Creek, which runs parallel to the Union Pacific right of way (1.7 miles east of the project site); and the West Drain which runs along the western boundary of the North Natomas plan area. This system of canals eventually drains agricultural and stormwater runoff into the Sacramento River.

The project site is within a greater regional context that includes the Sacramento River and the American River and their tributaries, which merge in the City of Sacramento approximately 3 miles south of the project site. The Sacramento River Basin encompasses approximately 27,000 square miles and is bound by the Sierra Nevada mountain range to the east, the California coast range to the west, the Cascade Range and Trinity Mountains to the north, and the Sacramento River Delta to the southeast. The American River watershed runs down the western slope of the Sierra Nevada mountain range to the City of Sacramento where it feeds the Sacramento River. Elevations in the watershed range from more than 10,000 feet in the high Sierra to 23 feet above mean sea level where it meets the Sacramento River. The river is subject to multiple impoundments including dams, canals, pipelines, and penstocks for power generation, flood control, water supply, recreation, and fisheries and wildlife management. The Folsom Dam forms Folsom Lake and its afterbay forms Lake Natoma. Water from Lake Natoma is released to the lower American River and to the Folsom South Canal. Operation of the Folsom Dam directly affects most of the water utilities on the American River system including domestic water supply for the City of Sacramento.

Surface and groundwater within the City of Sacramento are regulated by the Central Valley Regional Water Quality Control Board (CVRWQCB). The primary function of the CVRWQCB is the prevention of either the introduction of new pollutants or an increase in the discharge of existing pollutants into bodies of water that fall under its jurisdiction.

The project site is currently undeveloped with no impervious surfaces. Adjacent land uses to the project are urbanized, with a high level of impervious surfaces.

Flood Protection

Storm drain runoff in Sacramento's North Natomas Community Plan area is managed through constructed drainage systems consisting of gutters, drain inlets, pipes, detention basins, and pumping facilities, planned through the North Natomas Comprehensive Drainage Study. The North Natomas Drainage System retains storm flows through a series of retention basins and canals to maintain a "natural" rate of discharge into the Sacramento River from the Natomas Basin. The North Natomas Community Plan area consists of ten major drainage sheds – each of which is served by detention basins. The project site lies within the drainage shed for Basin 9 and is adjacent to the East Drainage Canal.[89] Basin 9 is an approximately 1.5-acre retention basin, located at the southwest corner of the Natomas Marketplace development. The drainage shed Basin 9 covers approximately 270 acres, including the full area of the Coral Business Center PUD and the Natomas Marketplace retail area to the south of the project site. These systems convey storm runoff by gravity flow through pipes, which discharge into regional detention basins. The City of Sacramento's storm drainage pump stations pump storm runoff from these basins into the RD 1000's channel system. The District's interior canal system collects the stormwater runoff and agricultural drainage from within the Natomas Basin and safely discharges it out of the Natomas Basin to the Sacramento River.[90]

As discussed in the project description, in December 2008, the Flood Insurance Rate Maps (FIRMS) for the Natomas Basin were remapped by Federal Emergency Management Agency (FEMA). The Natomas Basin, which includes the project site, was reclassified as an AE Zone (within the 100-year flood hazard zone) after the U.S. Army Corps of Engineers (USACE) decertified the levee system protecting the basin. The AE Zone classification required that all new construction or substantial improvements to structures had to meet a 33-foot base flood elevation requirement. Prior to the USACE decertification, the Sacramento Area Flood Control Agency (SAFCA) implemented the Natomas Levee Improvement Program (NLIP) to upgrade the levee system protecting the Natomas Basin. Construction of the NLIP began in 2007. However, the remap limited construction to the extent that it served as a de facto building moratorium.

In April 2015, FEMA approved an A99 flood zone designation for the Natomas Basin. An A99 designation is an interim flood zone designation that does not diminish the risk consideration for the flood zone, but allows construction in Natomas if certain conditions are met. An A99 designation is granted in areas of special flood hazard where sufficient progress has been made on the construction of a protection system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes. Areas designated as A99 are required to comply with the following criteria established by FEMA:

- At least 60 percent of the total financial project cost of the completed flood control system has been appropriated;
- At least 50 percent of the total financial project cost of the completed flood control system has been expended;
- All critical features of the flood control system, as identified by FEMA, are under construction, and each critical feature is 50 percent complete as measured by the actual expenditure of the estimated construction budget funds; and

FEMA determined in April 2015, that progress of the NLIP was sufficient to grant an A99 designation for the Natomas Basin. Under the A99 designation the City is allowed to issue building permits for projects that meet the requirements of the designation.

89 City of Sacramento, 2011. North Natomas Drainage Basins. December 2011.

90 Reclamation District 1000, 2004. Reclamation District No. 1000 Drains. December 2004.

REGULATORY SETTING

Stormwater Quality Improvement Plan

The City of Sacramento Stormwater Quality Improvement Program (SQIP) was established in 1990 to reduce the pollution carried by stormwater into local creeks and rivers. The SQIP[91] outlines the priorities, key elements, strategies, and evaluation methods of the City's Stormwater Management program for 2007-2011. The Program is based on the National Pollutant Discharge Elimination System (NPDES) municipal stormwater discharge permit. The comprehensive Program includes pollution reduction activities for construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. The Program also includes an extensive public education effort, target pollutant reduction strategy and monitoring program.[92]

Sacramento City Code

The Sacramento City Code Section 13.08.145 addresses mitigation of drainage impacts and provides a design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities. The code requires that when a property contributes drainage to the storm drain system or combined sewer system, all storm water and surface runoff drainage impacts resulting from the improvement or development must be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system and that there is no increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property. The project site is located within Sacramento Area Sewer District's (SASD) service area. Revenues are generated from impact fees paid by developers and others whose projects add to the demand on the combined sewer collection systems.

STANDARDS OF SIGNIFICANCE

For purposes of this Initial Study, impacts to hydrology and water quality may be considered significant if the proposed project would:

- 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 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

Question A

The proposed project may result in some sedimentation and construction-period erosion and runoff. Construction-related activities have the potential to impact water quality. Fuel, oil, grease, solvents, concrete wash and other chemicals used in construction activities have the potential of creating toxic problems if allowed to enter a waterway. Construction activities are also a source of various other materials including trash, soap, and sanitary wastes.

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91 City of Sacramento, 2007. City of Sacramento Department of Utilities, Engineering Services. Stormwater Quality Improvement Program. June 2007.

92 City of Sacramento, 2016. Stormwater Program Information Page. Available: https://www.cityofsacramento.org/Utilities/Stormwater/About-Us. Accessed April 29, 2016.

Stormwater runoff from the project site flows to RD 1000's channel system. Construction activities associated with the proposed project would create the potential to degrade water quality from increased sedimentation and increased discharge (increased flow and volume of runoff) associated with stormwater runoff. Disturbance of site soils would increase the potential for erosion from stormwater. The State Water Resources Control Board (SWRCB) adopted a statewide general NPDES permit for stormwater discharges associated with construction activity. Dischargers whose projects disturb one or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation.

The City's SQIP contains a Construction Element that guides in implementation of the NPDES Permit for Storm Water Discharges Associated with Construction Activity. This Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list BMPs the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. Compliance with City requirements to protect stormwater inlets would require the developer to implement BMPs such as the use of straw bales, sandbags, gravel traps, and filters; erosion control measures such as vegetation and physical stabilization; and sediment control measure such as fences, dams, barriers, berms, traps, and basins. City staff also inspects and enforces the erosion, sediment and pollution control requirements in accordance with City codes (Grading, Erosion and Sediment Control ordinance).

Conformance with City regulations and the requirements of the Construction General Permit, along with implementation of BMPs, would result in a **less-than-significant** impact related to stormwater absorption rates, discharges, flows, and water quality due to construction activities of the proposed project.

Question B

The project site is located in the City of Sacramento within a portion of the 100-year floodplain identified as flood hazard area. In addition, the project site is located in the Natomas Basin, which was recently subject to a change in FEMA floodplain designation from flood hazard area to A99 flood zone. The A99 designation is only used for areas whose flood protection system has reached specified statutory progress toward completion.

Mandatory flood insurance purchase requirements and floodplain management would be required of properties located in Zone A99. At a minimum, projects located within Zone A99 would need to include the floodplain management and building requirements set forth in Section 60.3 of the National Flood Insurance Program (NFIP) regulations, which include, but are not limited to, the following:

- Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be constructed with materials resistant to flood damage, (iii) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- Review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from

> flooding. If a subdivision proposal or other proposed new development is in a flood-prone area, any such proposals shall be reviewed to assure that (i) all such proposals are consistent with the need to minimize flood damage within the flood-prone area, (ii) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and (iii) adequate drainage is provided to reduce exposure to flood hazards.

The proposed project would be required to comply with floodplain management and building requirements of Section 60.3 of the NFIP, consistent with the A99 flood zone designation. Therefore, the proposed project would not substantially increase exposure of people or property to risk of injury or damage from the event of a 100-year flood and this impact would be **less than significant**.

MITIGATION MEASURES

None required.

FINDINGS

The proposed project would not have significant environmental effects relating to hydrology and water quality.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
8. NOISE Would the project: A) Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases?			X	
B) Result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to the project?			X	
C) Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance?		X		
D) Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction?			X	
E) Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations?			X	
F) Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic?			X	

ENVIRONMENTAL SETTING

The following discussions present basic information related to noise and vibration, as well as to the existing noise environment at the proposed project site.

Noise

Sound is mechanical energy transmitted by pressure waves through the air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Since the human ear is not equally sensitive to all frequencies within the entire spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called "A-weighting," referred to as dBA. In general, a difference of more than three dBA is a barely perceptible change in environmental noise, while a five dBA difference typically causes a change

readily perceptible change environmental noise. An increase of 10 dBA is perceived by people as a doubling of loudness.[93]

Cumulative noise levels from two or more sources will combine logarithmically, rather than linearly. For example, if two identical noise sources produce a noise level of 50 dBA each, the combined noise level would be 53 dBA, not 100 dBA.

Time variation in noise exposure is typically expressed in terms of the average energy over time (L_{eq}), or alternatively, as a statistical description of the sound level that is exceeded over some fraction of a given period of time. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time–half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Several methods have been devised to relate noise exposure over time to human response. The Day-Night Noise Level (L_{dn}) is a 24-hour L_{eq} that adds a 10 dBA penalty to sounds occurring between 10:00 p.m. to 7:00 a.m. to account for the increased sensitivity to noise events that occur during the quiet late evening and nighttime periods. A commonly used noise metric for this type of study is the Community Noise Equivalent Level (CNEL).

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration.[94] Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly and sick), and vibration sensitive equipment. Fragile buildings can be exposed to ground-borne vibration levels of 0.5 PPV without experiencing structural damage. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV. The human annoyance response level is 80 RMS.

Existing Noise Setting

The proposed project is in an urban area. The existing land uses near the proposed project area includes residential uses to the west and commercial/retail uses to the north, east and south. Existing noise sources in the immediate vicinity of the proposed project are primarily vehicular traffic along Truxel Road (approximately 50 feet west of the proposed project area), Gateway Park Boulevard (approximately 50 feet east of the proposed project area) and Interstate 80 (I-80) (approximately 2,200 feet south of the proposed project site).

To quantify the ambient noise levels in the vicinity of the proposed project, a noise measurement survey was conducted on January 27 - 28, 2016 within the project area and near sensitive land uses that could be impacted by noise generated by the project. All noise measurements were conducted using calibrated Metrosonics dB308 and Larson Davis 831 noise meters. The noise measurement survey consisted of six

[93] California Department of Transportation (Caltrans), 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September 2013. pp. 2-45.

[94] Federal Transit Administration (FTA), 2006. Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06). May 2006.

15-minute short-term (ST) noise measurements and one 24-hour long-term (LT) noise measurement. Noise measurement results and locations are shown in Table 8-1 and Figure 8-1, respectively. Noise levels generally increase in the early morning corresponding with increases in commuter traffic and other activities.

TABLE 8-1.
MEASURED AMBIENT NOISE LEVELS

Monitor	Start Time	Noise level (dBA)	Lmax (dBA)	Primary Noise Source(s)
LT-1	8:00 a.m.	68 L_{dn}	95	N. Freeway Blvd
ST-1	8:00 a.m.	62 L_{eq}	82	Truxel Rd
ST-2	8:45 a.m.	59 L_{eq}	68	Truxel Rd
ST-3	9:06 a.m.	52 L_{eq}	69	Truxel Rd
ST-4	8:20 a.m.	61 L_{eq}	71	Gateway Park Blvd

Source: ESA, 2016

ANSWERS TO CHECKLIST QUESTIONS

Questions A through C

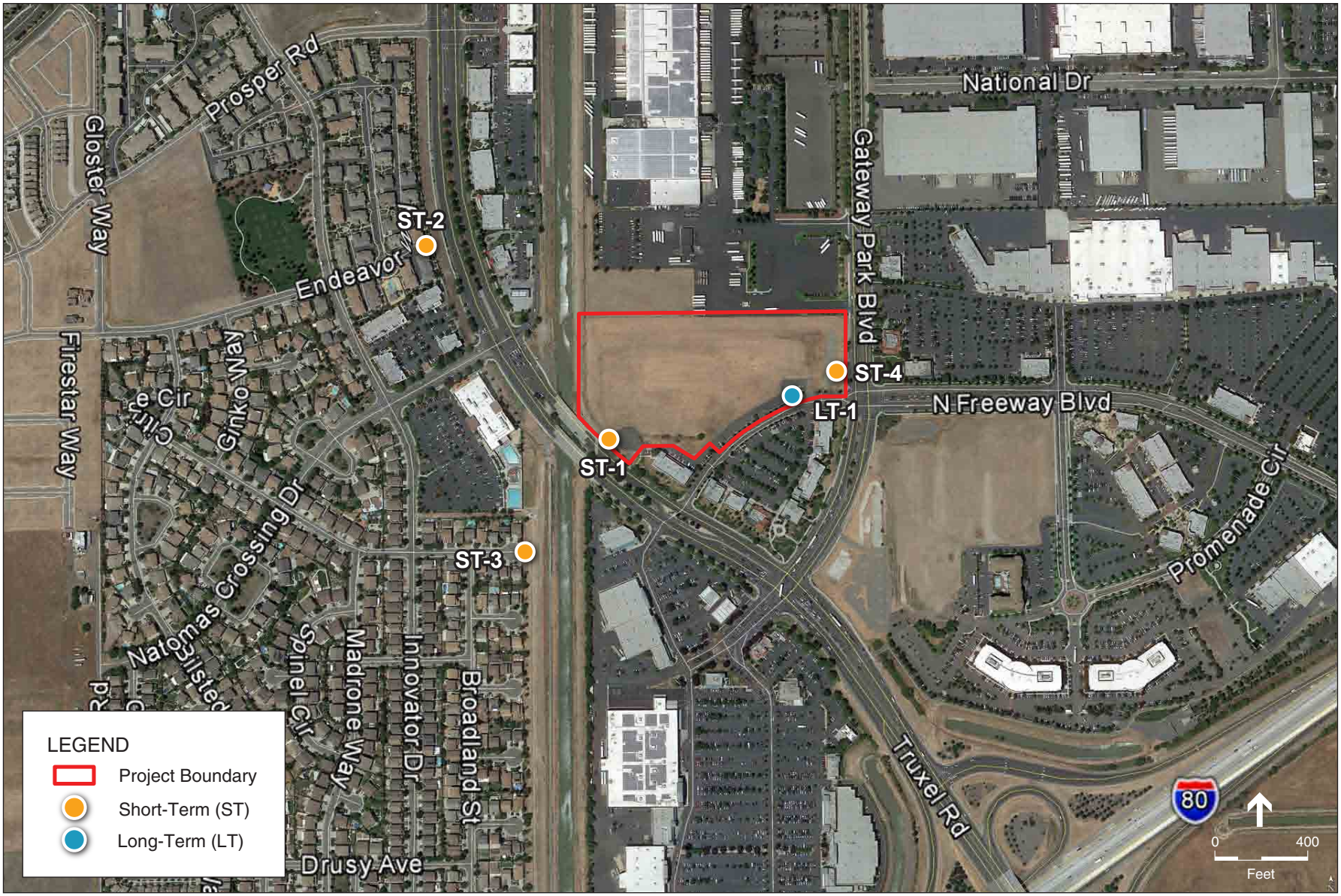
Construction

The construction of the approximately 115,960 sf of retail, restaurant and other commercial uses would take approximately 13 months, and is anticipated to begin in 2017. Construction activity noise levels at the project site would fluctuate depending on the particular type, number and duration of usage for various pieces of construction equipment. Proposed project construction activities would involve demolition, excavation, grading and earth movement, foundations (concrete pours), paving, materials delivery, building erection and cladding, roofing, exterior treatments (power washing, painting, application of siding materials), and landscaping. The exact type and number of construction equipment would be based on the contractor's judgement and what equipment is reasonably necessary to complete the project using industry standard means and methods. Typical vehicles that are expected to be used include but are not limited to: impact pile drivers, scrapers, backhoes, skip loaders, water trucks, generators, and other miscellaneous equipment. Table 8-2 shows typical noise levels produced by various types of construction equipment.

TABLE 8-2.
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Type of Equipment	L_{max}, dBA	Hourly L_{eq}, dBA/% Use
Dump Truck	84	80/40%
Air Compressor	80	76/40%
Concrete Mixer (Truck)	85	81/40%
Scraper	85	81/40%
Jack Hammer	85	78/20%
Dozer	85	81/40%
Paver	85	82/50%
Generator	82	79/50%
Backhoe	80	76/40%
Impact Pile Driver	95	88/20%

SOURCE: Federal Highway Administration (FHWA), Roadway Construction Noise Model User's Guide, 2006.



SOURCE: Google Earth Pro, basemap 2016; ESA 2016

Natomas Fountains . 150409

Figure 8-1

Noise Measurement Locations

According to the City's Municipal Code (Chapter 8.68.080), noise generated during erection, excavation, demolition, alteration or repair of any building or structure between the hours of 7:00 a.m. and 6:00 p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday is exempt from the City's noise standards. For this exception to take effect, all internal combustion engines must be equipped with suitable exhaust and intake silencers that are in good working order. If the construction of the proposed project occurs within the City's construction exempt hours, noise generated during construction would result in a less than significant impact. However, if the construction of the proposed project occurs outside of the City's construction exempt hours, the project would have to comply with the City's noise standards. The City does not allow noise levels at residential uses to exceed 55 dBA L_{eq}/75 dBA L_{max} between the hours of 7:00 a.m. to 10:00 p.m. and 50 dBA L_{eq}/70 dBA L_{max} between the hours of 10:00 p.m. to 7:00 a.m.

Construction of the proposed project could extend outside of the City's construction exempt hours. Therefore, for the purposes of this analysis, residential receptors exposed to noise generated during the construction of the proposed project above the City's nighttime noise threshold of 50 dBA L_{eq}/70 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m. Monday through Saturday and 6:00 pm and 9:00 a.m. on Sundays would be considered a significant impact.

The nearest off-site sensitive land use to the proposed project are residences that are located approximately 540 feet south-west of the proposed project area, across Truxel Road. Noise from construction activities generally attenuates at a rate of 6 to 7.5 dBA for every doubling of distance (Caltrans, 2013). Assuming an attenuation rate of 7.5 dBA per doubling of distance and three of the loudest pieces of construction equipment listed in Table 8-2 (i.e., Scraper, impact pile driver, dozer) operating at the same time, the nearest sensitive land use located 540 feet from the proposed project site would be exposed to a maximum noise level of approximately 64 dBA L_{eq}/70 dBA L_{max}, which would exceed the City's nighttime noise, which would exceed the City's nighttime noise ordinance threshold of 50 dBA L_{eq}/70 dBA L_{max}. This impact would be considered **significant**. However, implementation of **Mitigation Measure 8-1** would reduce this impact to a **less than significant level**.

Vehicular Traffic Noise

The effect of project generated traffic was calculated using traffic noise prediction equations found in the FHWA Traffic Noise Prediction Model (FHWA RD-77-108). Table 8-3 shows the calculated traffic noise levels along roadways that are expected to have an increase in traffic due to the proposed project during existing, existing plus project, cumulative no project and cumulative plus project conditions.

As shown in Table 8-3, the greatest effect on ambient levels would occur at the existing commercial land uses located along N. Freeway Boulevard, where traffic noise would increase by approximately 3.9 dBA Ldn/CNEL. The highest increase in traffic noise near a sensitive land use would occur at the single-family homes along Truxel Road, between Arena Boulevard and the Project Driveway, where traffic noise would increase by 0.8 dBA Ldn/CNEL. All other traffic noise increases near existing sensitive land uses are expected to be below 0.6 dBA Ldn/CNEL. The City of Sacramento 2035 General Plan provides maximum allowable exterior incremental noise standards for existing developments, which are based on existing noise levels. The existing traffic noise levels at sensitive land uses adjacent to roadway segments affected by the proposed project would range between 66.2 and 66.6 dBA Ldn/CNEL, as shown in Table 8-3. According to the City of Sacramento 2035 General Plan, the allowable traffic noise increment for this range of existing noise levels is between 1 and 2 dB at residences and buildings where people sleep. The highest increase in traffic noise at a sensitive land use (located adjacent to a roadway segment affected by the proposed project) is 0.8 dB, which is below the City of Sacramento General Plan Exterior Incremental Noise Impact Standard. Therefore, localized noise increases from the addition of project traffic would be **less than significant**.

TABLE 8-3
TRAFFIC NOISE LEVELS ALONG ROADWAYS IN THE PROJECT VICINITY

Roadway Segment	Adjacent to an Existing Sensitive Land Use (Yes or No)	Traffic Noise Level 100 feet from Center of Roadway, dBA, CNEL/L_{dn} [a]							
		Existing	Existing Plus Project	Incremental Increase	Significant? (Yes or No) [b]	Cumulative Near Term No Project	Cumulative Near Term Plus Project	Incremental Increase	Cumulatively Significant? (Yes or No) [b]
1. Truxel Rd, between Arena Blvd and Natomas Crossing Dr.	Yes	66.2	66.6	0.4	No	67.1	67.4	0.3	No
2. Truxel Rd., between Natomas Crossing Dr. and Project Driveway	Yes	66.9	67.7	0.8	No	68.2	68.5	0.3	No
3. Truxel Rd, between Project Driveway and N. Freeway Blvd	No	66.9	67.3	0.4	No	68.2	68.5	0.3	No
4. Truxel Rd, between N. Freeway Blvd and Gateway Park Blvd	No	66.6	67.2	0.6	No	68.0	68.5	0.4	No
5. Truxel Rd, between Gateway Park Blvd and I-90 WB Ramps	No	69.5	69.8	0.3	No	70.5	70.6	0.1	No
6. Market Place, between Truxel Rd and Gateway Park Blvd	No	57.9	61.8	3.9	No	57.9	61.8	3.9	No
7. Gateway Park Blvd, between Truxel Rd and N. Freeway Blvd	No	67.0	67.2	0.2	No	67.7	67.9	0.2	No

NOTES:

a. Noise levels were determined using FHWA Traffic Noise Prediction Model (FHWA RD-77-108).

b. For existing sensitive land uses traffic noise is considered significant if the incremental increase exceeds the City of Sacramento maximum allowable exterior incremental noise impact standards (City of Sacramento General Plan Environmental Constraints Element, Policy EC2.1.2, Table EC 2). For new/planned development traffic noise is considered significant if the exterior noise levels exceed the City of Sacramento Exterior Noise Compatibility Standards (City of Sacramento General Plan Environmental Constraints Element, Policy EC2.1.1, Table EC 1).

Source: ESA, 2016

Mechanical Building Noise

The proposed project would generate stationary-source noise associated with heating, ventilation and air conditioning (HVAC) units. Such HVAC units typically generate noise levels of approximately 51 dBA L_{eq} at a reference distance of 100 feet from the operating units during maximum heating or air conditioning operations.[95] HVAC units are typically housed in equipment rooms or in exterior enclosures on the building's rooftop. Sensitive land uses located within approximately 105 feet of these HVAC units would be exposed to noise levels above the applied City of Sacramento nighttime noise standard of 50 dBA L_{eq}. Since the nearest sensitive land use is located 540 feet south-east of the proposed project are, the nearest sensitive land use would not be exposed to noise generated by the onsite HVAC equipment that would exceed the City's nighttime noise standards. Therefore, this impact would be **less than significant**.

Question D and E

Since the operation of the proposed project would not include any activities known to generate significant levels of vibration, it is not anticipated that the operation of the proposed project would expose the nearest sensitive receptor or structure to vibration levels that would result in annoyance or building damage. Therefore, only vibration impacts from onsite construction activities are assessed. Construction activities would include demolition, excavation, site preparation work, foundation work (including concrete pours) and new building framing and finishing. Construction activities may generate perceptible vibration when heavy equipment or impact tools such as jackhammers, hoe rams, or impact wrenches are used.

The potential use of an impact pile driver during foundation construction would be expected to generate the highest vibration levels during construction. Impact pile drivers typically generate vibration levels of 0.644 in/sec PPV or 104 VdB at a distance of 25 feet. Assuming an impact pile driver would be used during the construction of the proposed project, the nearest modern structure located approximately 70 feet south of the proposed project area would be exposed to vibration levels of 0.137 in/sec PPV or 91 VdB, which is below the City's building damage threshold of 0.5 in/sec PPV. Consequently, construction-related vibration levels at the nearest off-site modern structure would be **less than significant**.

The nearest sensitive land use to the proposed project site is a single-family home located approximately 540 feet south-west of the proposed project area, across Truxel Road. The vibration level at this residential land use during potential on-site impact pile driving activities would be approximately 0.006 in/sec PPV or 64 VdB. According to the FTA's Guidance Manual for Transit Noise and Vibration Impact Assessment,[96] the average human's perceptibility of vibration is about 65 VdB and vibration levels are often noticeable, but acceptable, in the range of 70 to 75 VdB. Beyond 80 VdB, vibration levels are often considered unacceptable by building occupants. The groundborne vibration at the nearest single-family home, during potential onsite impact pile driving, would be below the FTA vibration impact threshold of 80 VdB. Consequently, construction-related vibration levels at the nearest off-site sensitive land uses would be below the FTA vibration impact threshold and would be **less than significant**.

Question F

As previously discussed in response to Question D, the highest vibration levels during construction would be generated through the use of bulldozers during fine-site grading. Bulldozers can generate vibration levels as high as 0.089 in/sec PPV at a distance of 25 feet. As described in the cultural resources discussion), there are no historic buildings or known archaeological sites located close enough to the

[95] Puron, 2005. 48PG03-28 Product Data. p. 10-11.

[96] Federal Transit Administration (FTA), 2006. Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06). May 2006.

project site that would be exposed to vibration levels above the City of Sacramento 0.2 in/sec PPV threshold. Consequently, construction-related vibration levels at the nearest historic building or known historic site would be **less than significant**.

MITIGATION MEASURES

8-1 In order to avoid noise-sensitive hours of the day and night, construction contractors shall comply with the following:

- Construction activities shall be limited to City of Sacramento construction exempt hours between 7:00 a.m. and 6:00 p.m. Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sundays.
- All internal combustion engines shall be equipped with suitable exhaust and intake silencers that are in good working order.
- Quieter "sonic" pile-drivers shall be used, unless engineering studies are submitted to the City that show this is not feasible, based on geotechnical considerations.

FINDINGS

All significant environmental effects of the project relating to noise can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
9. 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 2035 General Plan?			X	

ENVIRONMENTAL SETTING

The project site is located in Sacramento and is served with fire protection and police protection by the City of Sacramento.

The Sacramento City Police Department (SPD) provides police protection services to the project site. In addition to the SPD, the Sacramento County Sheriff's Department, California Highway Patrol (CHP), UC Davis Police Department, and the Regional Transit Police Department aid the SPD to provide protection for the City.

The Sacramento Fire Department (SFD) provides fire protection and emergency medical services to the entire City and some small areas just outside the City boundaries within the Sacramento County limits.

The project site is located in an area dominated by retail, office and industrial land uses. The proposed project would not require school or library services because the project does not propose any residential uses that would generate demand for these services.

STANDARDS OF SIGNIFICANCE

For the purposes of this Initial Study, an impact would be considered significant if the 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 2035 General Plan.

ANSWERS TO CHECKLIST QUESTIONS

The City of Sacramento Police Department would provide police protection services to the proposed project. The proposed project would be provided service by North Command, which is located at the William J. Kinney Police Facility at 3550 Marysville Boulevard, which is 5.9 miles east of the project site. The project site is located within Police District 1A, under North Command jurisdiction. The proposed project would generate a minor increase in demand for police protection services beyond the demand that currently exists. Thus, the increase in demand for police services from the proposed project would not require construction of a new station or expansion of an existing facility. The proposed project would implement Crime Prevention Through Environmental Design (CPTED) principles such as maximizing visibility of parking areas and building entrances and prohibiting entry or access using window locks, dead bolts, and interior door hinges, in the design of commercial buildings. Furthermore, the project applicant would be required to pay fair share fees for the necessary police services as a result of project implementation.

The Sacramento Fire Department would provide fire protection services to the proposed project. SFD would provide fire protection and emergency medical services to the proposed project. First-response

service would be provided by Station 30 located at 1901 Club Center Drive, approximately 2.5 miles north of the project site. The proposed project would not generate an increase in demand for fire protection services beyond what currently exists. Construction of a new fire station or expansion of an existing station would not be required to continue provision of fire protection services by the SFD. The proposed project would incorporate California Fire Code standards, including requirements related to fire flow, fire department access, and automatic sprinkler systems, and other applicable requirements into building designs. Furthermore, the project applicant would be required to pay fair share fees for the necessary fire services as a result of project implementation.

Because the proposed project would not result in the need for new police protection and fire protection facilities, this impact would be **less than significant**.

The proposed project does not involve construction of residential land uses that would generate new residents. Therefore, the proposed project would not result in the need for new school services or necessitate the construction of new school facilities or other public facilities or services such as libraries. The proposed project would not create any new public roadways or create the need for additional roadway maintenance. Therefore, the proposed project would result in no impact to these public services.

MITIGATION MEASURES

None required.

FINDINGS

The project would have no significant environmental effects relating to public services.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
10. RECREATION Would the project: A) Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities?			X	
B) Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan?			X	

ENVIRONMENTAL SETTING

The City of Sacramento Parks and Recreation (Parks) Department maintains parks and recreational facilities within the City of Sacramento. The Parks Department classifies parks according to three distinct types: 1) neighborhood parks; 2) community parks; and, 3) regional parks. Neighborhood parks are typically less than ten acres in size and are intended to be used primarily by residents within a half-mile radius. Neighborhood parks contribute to a sense of community by providing gathering places for recreation, entertainment, sports, or quiet relaxation. Community Parks are generally 10 to 60 acres and serve an area within approximately two to three miles, encompassing several neighborhoods and meeting the requirements of a large portion of the City. Regional parks are larger in size and serve the entire City, as well as population from around the region. Regional parks are developed with a wide range of improvements not usually found in local neighborhood and community parks.[97] The City of Sacramento currently has a park inventory of 235 facilities with a total area of 3,431 acres. Of these, 1,607 acres are neighborhood and community parks and the remaining are City regional parks and parkways.

The closest parks to the proposed project site are Linden Park, located approximately 1,200 feet west of the project site, at the corner of Innovator Drive and Endeavor Way; Chuckwagon Park, located 1.0 mile to the southeast of the project site, at the corner of Chuckwagon Drive and Bridgeford Drive; and Jefferson School Park, located approximately 1.1 miles to the south, at the intersection of Pebblewood Drive and Lemitar Way (see Figure 2). In general, neighborhood parks are located near the residential neighborhoods that they serve.

The City's 2035 General Plan establishes a goal of developing and maintaining 5 acres of neighborhood and community parks and other recreational facilities/sites per 1,000 residents. The 2035 General Plan also requires new residential development to meet its fair share of park dedication, payment of a fee in lieu of dedication, or a combination of the two. For new development in urban areas where land dedication or acquisition is constrained by a lack of available suitable properties (e.g., the Central City), General Plan Policy ERC 2.2.5 requires new development to either construct improvements or pay fees for existing park and recreation enhancements to address increased use. General Plan Policy ERC 2.2.5 requires the City to identify and pursue the best possible options for park development, such as joint use, regional park partnerships, private open space, acquisition of parkland, and use of grant funding.

[97] City of Sacramento Department of Parks and Recreation. 2015. Parks. Available: http://portal.cityofsacramento.org/ParksandRec/Parks. Accessed March 31, 2015.

Residential and non-residential projects that are built in the City of Sacramento are required to pay a park development impact fee pursuant to Chapter 18.44 of the Sacramento City Code. The fees collected pursuant to Chapter 18.44 are used to finance the construction of neighborhood and community park facilities. Projects sized below the map requirement threshold are not required to meet the construct improvements or pay fees.

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 2035 General Plan.

ANSWERS TO CHECKLIST QUESTIONS

Questions A and B

The proposed project would construct 115,960 sf of retail and restaurant space and does not involve construction of residential land uses that would generate residents or in other ways increase demand for parks or recreation facilities. The proposed project would be subject to park development impact fees pursuant to Chapter 18.44 of the City's municipal code. The City would determine the park development impact fee at the time of development and payment of the fees is required at the time of application for building permits. Park development impact fees are used by the City to finance construction of new neighborhood and community parks and address the impacts on existing parks caused by development in the City. Based on the lack of increased demand and the payment of park development impact fees, the proposed project would not adversely affect the capacity or physical conditions of local parks and recreation facilities. Further, no aspect of this project would cause or accelerate the physical deterioration of area parks and recreation facilities, and would not create the need for construction or expansion of parks or recreation facilities. This impact would be **less than significant**.

MITIGATION MEASURES

None required.

FINDINGS

The project would have no significant project-specific environmental effects relating to recreation.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
11. TRANSPORTATION AND CIRCULATION Would the project: A) Roadway segments: degrade peak period Level of Service (LOS) from A, B, C or D (without the project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more?			X	
B) Intersections: degrade peak period level of service from A, B, C or D (without project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more?		X		
C) Freeway facilities: off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway; project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service; project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or the expected ramp queue is greater than the storage capacity?			X	
D) Transit: adversely affect public transit operations or fail to adequately provide for access to public transit?			X	
E) Bicycle facilities: adversely affect bicycle travel, bicycle paths or fail to adequately provide for access by bicycle?			X	
F) Pedestrian: adversely affect pedestrian travel, pedestrian paths or fail to adequately provide for access by pedestrians?			X	

The information on Environmental Setting and Impacts, presented below, is derived from a transportation analysis of the proposed Natomas Fountains project prepared by Fehr & Peers for the City of Sacramento.[98] The analysis report is summarized below and is presented in its entirety in Appendix D.

ENVIRONMENTAL SETTING

Roadway System – Regional Access

Regional automobile access to the site is provided by the freeway system. Interstate 5 (I-5) is a north-south freeway that extends the length of the west coast states of the United States. I-5 can be accessed from Arena Boulevard, west of the project site. Interstate 80 (I-80) is an east-west freeway that extends from San Francisco to New Jersey. I-80 is accessible from Truxel Road to the south of the project site. California State Route 99 (Highway 99) is a north-south highway that stretches almost the entire length of the Central Valley and provides an alternate travel route to I-5. Highway 99 with I-5 in northern Sacramento and is accessible from the I-5/Arena Boulevard access west of the project site.

Roadway System – Local Access

Primary access to the project site is provided by an existing driveway that runs between a driveway on Truxel Road and the intersection of Gateway Park Boulevard and North Freeway Boulevard, immediately south of the project site. A new right-turn only driveway would be located on Truxel Road.

Truxel Road

Truxel Road is an arterial roadway that extends north from Garden Highway, in South Natomas, past the project site, to Del Paso Road, north of the project site. This street then becomes Natomas Boulevard and continues further north. Within the vicinity of the project site, it consists of three to four lanes in each direction and has a posted speed limit of 45 miles per hour (mph). Truxel Road has an interchange with the I-80. On-street parking is prohibited on Truxel Road in the project vicinity.

Gateway Park Boulevard

Gateway Park Boulevard extends in a northeasterly direction from Truxel Road, intersecting North Freeway Boulevard, then extending in a northerly direction to Arena Boulevard. It has three lanes in each direction between Truxel Road and North Freeway Boulevard and two lanes in each direction north of North Freeway Boulevard. On-street parking is prohibited in the vicinity of the project site and the posted speed limit is 40 mph.

North Freeway Boulevard

North Freeway Boulevard begins at Gateway Park Boulevard and extends in a generally easterly direction. In the vicinity of the project site, it consists of three lanes in each direction. On-street parking is prohibited in the vicinity of the project site.

Pedestrian System

Throughout North Natomas, sidewalks are provided on both sides of most streets. A sidewalk exists along the project's frontage on Truxel Road. A sidewalk is also present on the south side of the driveway that serves the Natomas Village Shopping Center. Sidewalks are present along Gateway Park Boulevard and North Freeway Boulevard. The north, west, and south legs of the Truxel Road/Gateway Park

[98] Fehr & Peers, 2016. Final Transportation Impact Study for the Natomas Fountains Project. June 22, 2016.

Boulevard intersection feature pedestrian-actuated crosswalks. All approaches to the North Freeway Boulevard/Gateway Park Boulevard intersection feature crosswalks.

Bicycle System

The City's Bikeway Master Plan is intended to create and maintain a safe, comprehensive, and integrated bicycle system and support facilities throughout the City. The project site is within an extensive network of bikeways. Class II bike lanes (on-street with appropriate signing and striping) exist along portions of Truxel Road, Gateway Park Boulevard, Natomas Crossing Drive, North Freeway Boulevard, and Arena Boulevard. Class I (off-street dedicated two-way path) bike lanes run along North Freeway Boulevard, extending westerly parallel to I-80, south of the project site, and then north along west side of the East Drainage Canal, northwest of the project site. The network of bikeways in North Natomas allow for access to other parts of the city through the American River Bike Trail which features miles of interlinking Class I bikeways spanning from Folsom Lake to downtown Sacramento.

Transit System

The project site is provided transit services by the Sacramento Regional Transit District (SacRT) and the North Natomas Transit Management Association (TMA). The SacRT operates 67 bus routes and 38.6 miles of light rail covering a 418 square-mile service area. Buses and light rail run 365 days a year using 76 light rail vehicles, 182 buses (with an additional 30 buses in reserve) powered by compressed natural gas (CNG) and 11 shuttle vans. Buses operate daily from 5 a.m. to 11 p.m. every 12 to 75 minutes, depending on the route. The project site is served by two SacRT bus routes, which include:

- **Route 11** provides service from Club Center Drive in North Natomas, southerly along Natomas Boulevard and Truxel Road to Garden Highway. Monday through Friday, Route 11 operates on 30-minute headways during most of the day (otherwise 60-minute headways), including AM and PM peak hours. The route also operates on Saturdays with 60 minute headways, but not on Sundays or holidays.
- **Route 13** provides service on Gateway Park Boulevard and Truxel Road. The route then continues north until Arena Boulevard and then heads in a generally easterly direction to Northgate Boulevard. It then travels along Northgate Boulevard and Arden Way to the Arden/Del Paso Light Rail Station. Monday through Friday, Route 13 operates on 60-minute headways from about 6:00 AM to 8:30 PM. The route does not operate on Saturdays, Sundays, or holidays.

These routes feature a northbound stop (shelter) on Truxel Road just south of the driveway intersection on Truxel Road. A southbound stop (bench only) is provided in a similar location across the street.

STANDARDS OF SIGNIFICANCE

For the purposes of this Initial Study, impacts resulting from changes in transportation or circulation 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:

Roadway Segments

- The traffic generated by a project degrades peak period Level of Service (LOS) from A, B, C, or D (without the project) to E or F (with the project), or
- The LOS (without the project) is E or F, and project generated traffic increases the peak period average delay by five sections or more, or increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.

Intersections

- The traffic generated by a project degrades peak period level of service from A, B, C or D (without project) to E or F (with project) or
- The LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

Freeway Facilities

Caltrans considers the following to be significant impacts.

- Off-ramps with vehicle queues that extend onto the freeway mainline;
- Project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service;
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or

Transit

- Adversely affect public transit operations or
- Fail to adequately provide for access to public transit.

Bicycle Facilities

- Adversely affect bicycle travel, bicycle paths or
- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

- Adversely affect pedestrian travel, pedestrian paths or
- Fail to adequately provide for access by pedestrians.

Construction-Related Traffic Impacts

The project would have a temporarily significant impact during construction if it would:

- Degrade an intersection or roadway to an unacceptable level;
- Cause inconveniences to motorists due to prolonged road closures; or
- Result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists.

ANSWERS TO CHECKLIST QUESTIONS

Questions A and B

For traffic analysis purposes, a set of intersections was selected based upon the anticipated volume of project traffic, the distributional patterns of project traffic, and known location of operational difficulty. The following locations were identified to be studied:

1. Truxel Road/Arena Boulevard
2. Truxel Road/Natomas Crossing Drive
3. Truxel Road/Natomas Marketplace (north entrance)
4. North Freeway Boulevard/Gateway Park Boulevard
5. Truxel Road/Gateway Park Boulevard.

6. Truxel Road/I-80 Westbound Ramps
7. Truxel Road/I-80 Eastbound Ramps

Traffic generated by the project was added to existing traffic volumes. In this manner, the traffic and impacts associated with the project was directly compared to known and measured conditions. Impacts were determined by comparing traffic operating conditions associated with the project scenarios to traffic operating conditions without the project.

For cumulative scenarios, traffic associated with full development of the project was added to future year traffic on the roadway system. The future year forecasts were developed through use of the SACSIM model with SACOG's year 2035 projections. The regional travel model encompasses the entire Sacramento region, and forecasts peak hour and daily traffic volumes based upon projections of future land use and transportation networks throughout the region. Cumulative impacts were determined by comparing the traffic operation conditions associated with the project with the traffic operation conditions associated with the cumulative (no project) scenario.

The proposed project would cause delays to increase at most intersections. However, the project would not cause any intersections to worsen from acceptable to unacceptable levels under Existing Plus Project conditions. Operations at all facilities would remain at acceptable levels during the weekday PM peak hour. The project would add 4.5 seconds of delay to the Truxel Road/Gateway Park Boulevard intersection, which currently operates at an unacceptable LOS E. Since this is less than the five-second threshold for exacerbating unacceptable conditions, impacts to study intersections are **less than significant** in the Existing Plus Project scenario.

The proposed project would have a cumulatively considerable impact on the Gateway Park Boulevard/North Freeway Boulevard intersection. Cumulative impacts and mitigation are discussed, within this document, in the answer to Question B of Issue 13, Mandatory Finings of Significance section of this document.

Construction of the proposed project would generate a variety of truck and employee trips. Since the magnitude of these trips during peak hours would be less than that of the proposed project, absolute impacts (in terms of delay and queuing) when compared to project operations would not be significant.

Per City code, the project applicant is required to develop a Construction Traffic Management Plan (TMP) to the satisfaction of the City's Department of Public Works. The plan would include items such as: the number and size of trucks per day, expected arrival/departure times, truck circulation patterns, location of truck staging areas, location/amount of employee parking, a driveway access plan (including provisions for safe vehicular, pedestrian, and bicycle travel, minimum distance from any open trench, special signage, and private vehicle accesses), and the proposed use of traffic control/partial street closures on public streets. The overall goal of the Construction Traffic Management Plan would be to minimize traffic impacts to public streets and maintain a high level of safety for all roadway users. The Construction TMP would adhere to the following performance standards throughout project construction:

1) Delivery trucks shall not idle/stage on Truxel Road or Gateway Park Boulevard.
2) Safe and efficient access routes shall be maintained for existing businesses (and emergency vehicles) in the adjacent Natomas Village Shopping Center shall be maintained.
3) Although unlikely to be necessary, any lane closures on northbound Truxel Road during project construction shall be limited to a single lane during off-peak hours (9:00 a.m. to 2:30 p.m.).
4) Roadways, sidewalks, crosswalks, and bicycle facilities shall be maintained clear of debris (e.g., rocks) that could otherwise impede travel and impact public safety.

With implementation of the Construction TMP, the proposed project's impacts during construction would be **less than significant**.

Question C

The project would not cause traffic to spill back onto the freeway mainline on either the I-80 EB or WB off-ramps. Therefore, impacts associated with queuing onto a Caltrans facility would be **less than significant**. The LOS at freeway off-ramps will be D or better with the implementation of mitigation measures to City intersections. I

Question D

The project would not disrupt or adversely affect existing or planned transit facilities or conflict with adopted City transit plans, guidelines, policies, or standards. The project may be accessed by two Regional Transit bus routes (routes 11 and 13) that feature a stop within ¼-mile of the project site. For these reasons, project impacts to transit facilities would be **less than significant**.

Question E

The proposed project would not interfere with any existing bicycle facilities. It would also not preclude implementation of any future bicycle facilities. The new project driveway on Truxel Road would be designed to be compatible with the existing Class II bike lane. In addition, the proposed project would construct an approximately 790-foot-long segment of a Class I bike trail along the east side of the East Drainage Canal replacing the existing gravel service road, consistent with the City's 2010 Bicycle Master Plan.[99] Therefore, proposed project impacts to bicycle facilities would be **less than significant**.

Question F

The project would not disrupt existing or planned pedestrian facilities or conflict with adopted City pedestrian plans, guidelines, policies, or standards. The adjacent intersections feature crosswalks with pedestrian actuation to facilitate pedestrian travel. The project site plan includes the provision of continuous sidewalks along its frontage on North Freeway Boulevard, the internal driveway, and Truxel Road to accommodate pedestrian travel. The site plan also includes pedestrian connections into the site from adjacent streets as well as a series of pedestrian linkages that connect the parking areas and building entrances. For these reasons, proposed project impacts to pedestrian facilities would be **less than significant**.

FINDINGS

All significant environmental effects of the proposed project relating to transportation and circulation can be mitigated to a **less-than-significant** level.

[99] City of Sacramento, 2016. *City of Sacramento Bicycle Master Plan*. July, 2016.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	Less than Significant Impact	No Impact
12. 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?			X	
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?			X	

ENVIRONMENTAL SETTING

Water Supply

Water service for the project would be provided by the City of Sacramento. The City provides domestic water service from a combination of surface water and groundwater sources including the American River, Sacramento River, and groundwater wells. Water from the American River and Sacramento River is diverted by two water treatment plants: the Sacramento River Water Treatment Plant (WTP), located at the southern end of Bercut Drive approximately 3 miles south of the project site, and the E.A. Fairbairn Water Treatment Plant (EAFWTP), located at the northeast corner of State University Drive South and College Town Drive approximately 6 miles southeast of the project site. Water diverted from the Sacramento and American Rivers is treated, stored in storage reservoirs, and pumped to customers via an existing conveyance network.

The City of Sacramento complies with the California Water Code, which requires urban water suppliers to prepare and adopt an Urban Water Management Plan (UWMP) every five years. The most recent UWMP was adopted in 2016 (the 2015 UWMP), and includes an analysis of water demand sufficiency under normal, single dry year, and multiple dry year scenarios.[100] Water supply and demand projections include future planned development until 2040. Based, in part, on these projections, the City possesses sufficient water supply entitlements and treatment capacity during normal, dry, and multiple dry years to meet the demands of its customers up to the year 2040.

Due to recent severe drought conditions in California, the Governor issued Executive Order B-29-15 on April 1, 2015, mandating substantial water reductions across the State. Executive Order B-29-15 required that the Governor's January 17, 2014 and April 25, 2014 Proclamations and Executive Orders B-26-14 and B-28-14 remain in effect with modification for stricter water-saving measures. The Order imposed restrictions to achieve statewide 25% reduction in potable urban water usage through February 28, 2016, enforceable across a number of agencies, including the California Water Resources Control Board (Water Board), Department of Water Resources (DWR) and California Energy Commission. The Executive Order called for DWR to partner with local agencies to replace 50 million square feet of lawns and ornamental turf with drought tolerant landscapes. The Order further requires the Water Board to impose restrictions for commercial, industrial, and institutional properties to reduce potable water usage by 25%. The Water

[100] City of Sacramento, 2016. 2015 Urban Water Management Plan. Adopted June, 2016.

Board was further required to prohibit irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems. The Order also increased enforcement measures against water waste.

Wastewater and Stormwater

Wastewater for the proposed project would be collected by the Sacramento Area Sewer District's (SASD) Separated Sewer System, conveyed to the Sacramento Regional County Sanitation District (Regional San) system, and ultimately treated at the Regional San Wastewater Treatment Plant (WWTP), which is located in Elk Grove. Local stormwater drainage in and surrounding the project area is collected by City storm drain systems, and pumped or gravity flown into nearby drainages, creeks, and rivers.

Solid Waste

As discussed in the City's 2035 General Plan Background Report, commercial development properties, such as the proposed project, are served by private haulers franchised by the Sacramento Solid Waste Authority (SWA).[101] The Sacramento County Kiefer Landfill is the primary location for the disposal of waste in the City of Sacramento. The landfill accepts municipal waste and industrial waste and is permitted to accept up to 10,815 tons per day, averaging 6,300 tons per day.[102] This is further limited, however, by Section 17, Condition 26 and Table 2 of Kiefer's Solid Waste Permit, which limits the 2013 peak to 5,928 TPD and average to 3,487 TPD.[103] It is the only landfill facility in Sacramento County permitted to accept household waste from the public. Current peak and average daily disposal is much lower than the current permitted amounts. As of 2012, 305 acres of the 660 acres contain waste.[104] The landfill facility sits on 1,084 acres. As a result, the Kiefer Landfill is expected to be able to provide service to the City, without need for new expansion beyond that already planned, until the year 2065.[105]

Electricity and Natural Gas

The Sacramento Municipal Utility District (SMUD) is responsible for the generation, transmission, and distribution of electrical power to its 900 square mile service area, which includes most of Sacramento County (including the project site and vicinity), and a small portion of Placer County. SMUD buys and sells energy and capacity on a short-term basis to meet load requirements and reduce costs. The Pacific Gas & Electric Company (PG&E) provides natural gas service to residents and businesses within the City of Sacramento, including the project site and vicinity.

STANDARDS OF SIGNIFICANCE

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the need for new or altered services related to water, wastewater, or other utilities facilities beyond what was anticipated in the 2035 General Plan:

- Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments, or

[101] City of Sacramento, 2014. City of Sacramento 2035 General Plan Background Report Public Review Draft. August 2014. Page 4-44.

[102] CalRecycle, 2013. Solid Waste Facility Permit 34-AA-0001, updated June 2013.

[103] CalRecycle, 2013. Solid Waste Facility Permit 34-AA-0001, updated June 2013.

[104] City of Sacramento, 2014. City of Sacramento 2035 General Plan Background Report Public Review Draft. August 2014. Page 4-45.

[105] City of Sacramento, 2014. City of Sacramento 2035 General Plan Background Report Public Review Draft. August 2014. Page 4-45.

- 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

Questions A and B

Water Supply

The project would include construction and use of 10 buildings, totaling nearly 116,000 sf of finished floor area. This would include approximately 67,000 sf retail-only space, 14,000 sf restaurant space, and 35,000 sf mixed retail/restaurant. An existing water transmission main runs north-south along Gateway Park Boulevard in the existing right-of-way (roadway located adjacent to the east side of the project site); the proposed on-site water conveyance system for the proposed project would connect to this water pipeline for water conveyance.

The projected water demand from the proposed project was not explicitly accounted for in the City's 2035 General Plan and Master EIR, because the project has been revised to commercial land use, rather than office space. Generally, commercial space results in a higher water demand per square foot of area than office space. However, the project would have a substantially smaller finished floor area than initially anticipated under the General Plan and Master EIR, which would partially offset higher per-square foot water demand. In addition, according to the 2015 Sacramento Urban Water Management Plan (UWMP), the City's water supply would be well below the City's water demand during a multiple-dry year through 2040. For example, during the third year of a multiple year drought year in 2040, the City's water yearly supply (excludes wholesale supplies, which are tracked separately in the UWMP) is expected to be 294,419 acre feet (AFY), while the City's yearly water demand would be 162,029 AFY; thus it is anticipated that there would be a 132,390 AFY surplus of water supply in the year 2040 during drought.[106] Because the City would have over 130,000 AFY of surplus capacity at buildout of the 2035 General Plan, and because water demand under the project would not substantially differ from the land use considered for the project site under the General Plan and Master EIR, the project would have a **less-than-significant** impact related to water supply.

Wastewater and Stormwater

There are existing City-owned, 54-inch and 24-inch storm drains located along the western property line of the project site. This is located within a 30-foot drainage easement. However, it is anticipated that the project would connect with existing storm drainage system located immediately east of the project site. The 54-inch and 24-inch storm drains would not be disturbed or connected to ~~under~~ serve the project. The existing drainage Master Plan assumes 85% imperviousness for the project site at buildout. It is anticipated that the proposed use would include 85% or less impervious surfaces; therefore, City owned stormwater infrastructure would be sufficient to serve the proposed project.

In terms of wastewater generation rates, the proposed 116,000 sf commercial development would represent a change from the previously approved 255,000 sf of office space. Additionally, each parcel developed under the project would have a separate connection to SASD's system consistent with SASD requirements. All connections to the existing sewer system would be included under the project, and preliminary contact with SASD did not identify available capacity as a constraining factor for the proposed sewer connections.

The SRCSD has a program in place to continually evaluate demand/capacity needs, and the master planning effort provides the flexibility to respond to changes in demand that can be anticipated in advance

[106] City of Sacramento, 2016. 2015 Urban Water Management Plan. Adopted June, 2016.

of planned improvements so that capacity issues are addressed in a timely and cost-effective manner. Master planning efforts that would identify necessary improvement in capacity to accommodate city growth beyond the 2020 Master Plan timeframe would be initiated well in advance of 2035. To fund expansions to the conveyance systems, the SRCSD requires a regional connection fee be paid to the District for any users connecting to or expanding sewer collection systems (SRCSD Ordinance No. SRCSD-0043). Therefore, because there are established plans and fee programs in place as well as proposed policies to increase conveyance capacity in response to demand, the impact would be **less than significant**.

Solid Waste

As described above, the proposed commercial development would be served by private haulers franchised by the Sacramento Solid Waste Authority (SWA).[107] Solid waste generation rates for the project site was accounted for in the City's General Plan and Master EIR, except based on office rather than commercial development. Commercial development is expected to result in higher levels of solid waste generation than office land use. Nonetheless, as discussed previously, Kiefer landfill maintains sufficient capacity to provide waste services for more than 40 years. The project would result in a negligible increase in waste generation, in comparison to what was previously planned at the site, and therefore potential impacts on solid waste would be **less than significant.**

Electricity and Natural Gas

Construction of the project would result in increased use of electricity and natural gas. Both utility providers would install new distribution facilities, as needed, according to California Public Utilities Commission rules. Thus, PG&E and SMUD would ensure their capability to provide an adequate level of service to the project site, and this impact would be **less than significant**.

MITIGATION MEASURES

None required.

FINDINGS

The project would have no significant project-specific environmental effects relating to utilities and service systems.

[107] City of Sacramento, 2014. City of Sacramento 2035 General Plan Background Report Public Review Draft. August 2014. Page 4-44.

MANDATORY FINDINGS OF SIGNIFICANCE

Issues:	Effect remains significant with all identified mitigation	Effect can be mitigated to less than significant	Less than Significant Impact
13. 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?			X
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.)		X	
C) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

ANSWERS TO CHECKLIST QUESTIONS

Questions A and C

With the incorporation of mitigation measures, the proposed project would not 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, or threaten to eliminate a plant or animal community. The proposed project would not impact rare or endangered wildlife species, or eliminate important examples of the major periods of California history or prehistory.

With implementation of the mitigation measures described in this document, the project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly, and the impact would be **less than significant**.

Question B

The analysis in this Initial Study demonstrates there would be no project-specific or cumulative significant and unavoidable impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards, hydrology and water quality, noise, public services, recreation, or utilities.

The proposed project would have potential intersection impacts that would be individually limited, but cumulatively considerable. As presented in the transportation analysis for the proposed project (see Appendix D), the Gateway Park Boulevard/North Freeway Boulevard intersection would worsen from LOS E (no project) to LOS F (with project) during the PM peak hour. The proposed project would add at least a five-second increase in delay during the PM peak hour at the Gateway Park Boulevard/North Freeway Boulevard intersection. Therefore, project would have a cumulatively considerable contribution to this potentially significant cumulative impact. ~~i~~Impacts to that intersection would be **cumulatively considerable**. Project impacts at all other study intersections would be less than significant because operations at these facilities would remain acceptable under cumulative plus project conditions. Implementation of **Mitigation Measure 13-1** would ensure that this cumulatively considerable impact is reduced to a **less-than-significant** level. Mitigation Measures

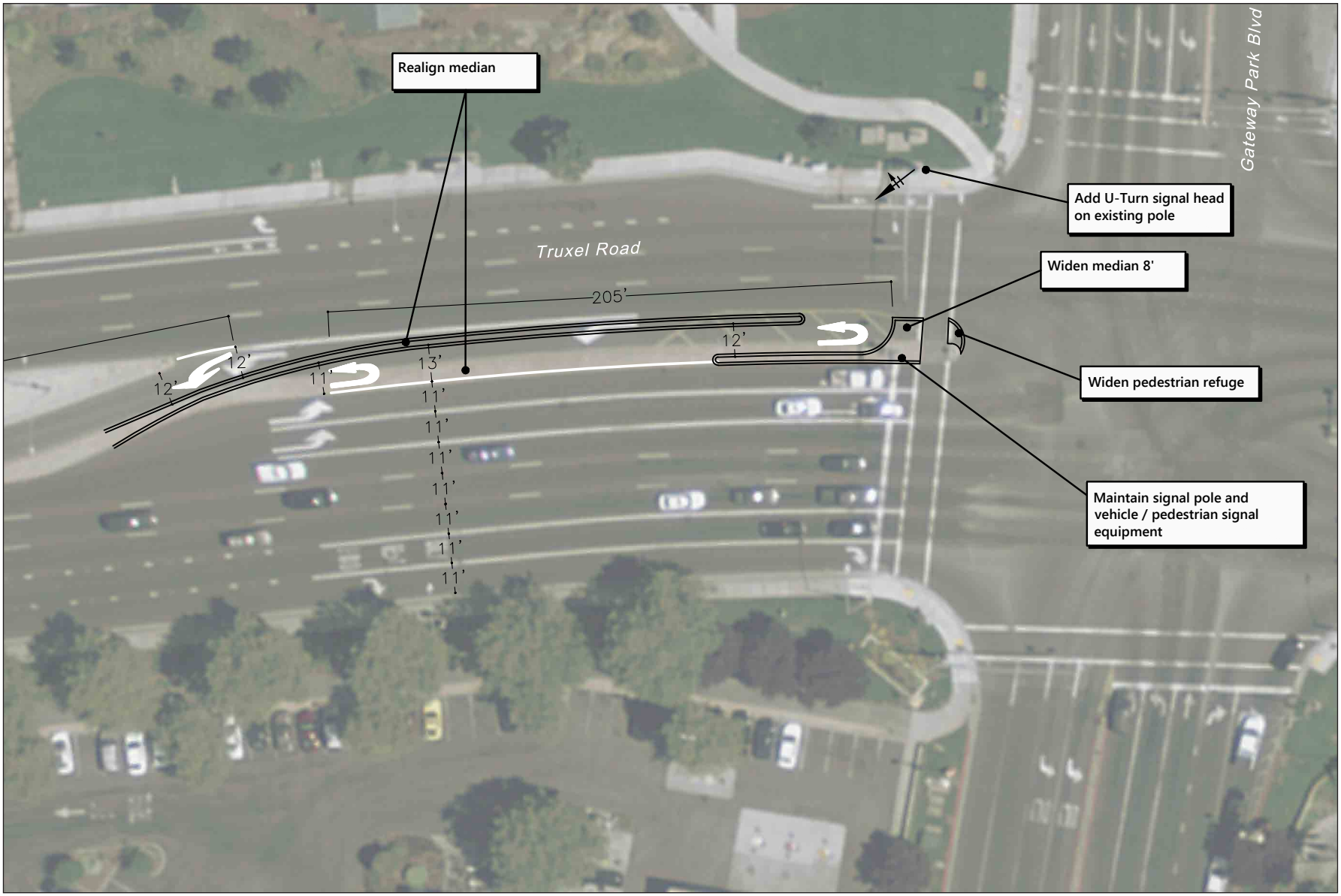
13-1 The project applicant shall pay their fair share cost of the following improvements:

- Restripe eastbound approach at Gateway Park Boulevard/North Freeway Boulevard intersection to consist of one left-turn lane, one through lane, and one right-turn lane.

- Coordinate traffic signal at Gateway Park Boulevard/North Freeway Boulevard intersection such that the westbound left-turn is coordinated with the westbound left-turn at Truxel Road/Gateway Park Boulevard. Signal coordination should be maintained along Truxel Road between intersections 5, 6, and 7.

- Realign/restripe the southbound departing lanes from the Gateway Park Boulevard/North Freeway Boulevard intersection such that both westbound left turn lanes from North Freeway Boulevard become left-turn lanes approaching Truxel Road (refer to Figure 11 for illustration of improvements). This figure indicates that a modest amount of median reconfiguration may be necessary to accommodate this improvement, but no additional right-of-way is needed.

- Modify the southbound Truxel Road approach at Gateway Park Boulevard to construct a dedicated u-turn lane (refer to Figure 13-1 for illustration of improvements). The proposed sketch in Figure 13-1 shows that a 200-foot u-turn lane could be provided without requiring any additional right-of-way. However, it would require a decrease in the northbound left-turn lane storage (355 to 210 feet) for the Natomas Marketplace North Entrance. Signal poles are currently positioned in the median nose and would need to be maintained along with a pedestrian refuge area. The design concept on Figure 13-1 accomplishes this.



Natomas Fountains Retail Center . 150409

SOURCE: Fehr & Peers, 2016

Figure 13-1

Southbound Truxel Road Improvements Proposed in Mitigation Measure 13-1

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

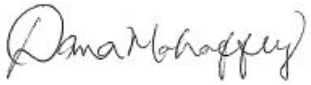
The environmental factors checked below would potentially be affected by this project.

X	Aesthetics		Hazards
	Air Quality	X	Noise
X	Biological Resources		Public Services
X	Cultural Resources		Recreation
	Energy and Mineral Resources	X	Transportation/Circulation
	Geology and Soils		Utilities and Service Systems
	Hydrology and Water Quality		
	None Identified		

SECTION V - DETERMINATION

On the basis of the initial study:

X I find that the proposed project could have significant environmental effects, but those effects could be mitigated through the implementation of mitigation measures. A Mitigated Negative Declaration will be prepared. Mitigation measures will be applied to the project as appropriate, to avoid or mitigate the identified effects to a level of insignificance. (CEQA Guidelines Section 15178(b)).



September 20, 2016

Signature | Date

Dana Mahaffey

Printed Name

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SECTION VII – COMMENTS AND RESPONSES

This Response to Comments document contains agency comments received during the public review period of the Natomas Fountains (proposed project) Initial Study/Mitigated Negative Declaration (IS/MND).

BACKGROUND

The City of Sacramento Community Development Department, as lead agency, released the IS/MND for public review beginning on August 17, 2016 and ending on September 16, 2016 pursuant to CEQA Guidelines Section 15105. The IS/MND and supporting documents were made available at the public planning counter of the City of Sacramento Community Development Department located at 300 Richards Boulevard, Third Floor, Sacramento, California, 95811. According to CEQA Guidelines Sections 15073 and 15074, the lead agency must consider the comments received during consultation and review periods together with the mitigated negative declaration. However, unlike with an environmental impact report, comments received on a mitigated negative declaration are not required to be attached to the mitigated negative declaration, nor must the lead agency make specific written responses to public agencies. Nonetheless, the lead agency has chosen to provide responses to the comments received during the public review process for the Natomas Fountains IS/MND and during prior review of the project application.

LIST OF COMMENTERS

The City of Sacramento received five comment letters during the public comment period on the IS/MND and during the prior review of the application for the proposed project. The comment letters were authored by the following representatives of the local agencies noted:

Letter 1	Becky Heieck, North Natomas Transportation Management Association
Letter 2	Robb Armstrong, RegionalSan
Letter 3	Stephanie Tadlock, Central Valley Regional Water Quality Control Board
Letter 4	Rob Ferrera, Sacramento Municipal Utility District
Letter 5	Chris Holm, Walk Sacramento

RESPONSE TO COMMENTS

The Response to Comments below, include responses to the comment letters submitted regarding the proposed project. The letters are numbered and bracketed with assigned comment numbers. The bracketed comment letters are followed by numbered responses corresponding to each bracketed comment. Where revisions to the IS/MND text were made, new text is <u>double underlined</u> and deleted text is ~~struck through~~.

NORTH NATOMAS TRANSPORTATION MANAGEMENT ASSOCIATION
1918 Del Paso Road, Suite 100 | Sacramento, CA 95834 | P: (916) 419-9955 | F: (916) 419-0055

April 18, 2016

Arwen Wacht
Community Development Department
City of Sacramento
300 Richards Blvd., 3rd Floor
Sacramento, CA 95811-0218

Re: Natomas Fountains
File #P16-012

Dear Arwen,

Thank you for the opportunity to comment on the Natomas Fountains proposed project. Please find attached map with our notes within. Last week I met with Ethan Conrad regarding our ideas for bicycle connectivity through Natomas Fountains and he is considering our request.

1. Construct 10'-12' sidewalk on the south side of the development, from Truxel Rd. to Gateway Park Blvd., for pedestrians and cyclists. This also allows access to Sacramento Gateway Shopping Center.
2. Or, construct a bike path on the east side of the East Drain Canal, to connect with a future bridge across the canal and augment the shopping center entrance to accommodate cyclists.

   In scenario #2, the city would need to agree to Class 4 bike lanes in both directions, from Natomas Crossing Dr. to the entrance of Natomas Fountains. This bike lane would allow bicyclists from three miles north, an opportunity to stay on a protected bike lane to access the shopping center. This also allows comfortable access to Sacramento Gateway Shopping Center.

1

If you have any questions, please contact me at 916-419=9955.

Sincerely,

Becky Heieck
Executive Director
North Natomas Transportation Management Association

natomas fountains

retail center

site context

Existing newly completed Bike Path

Bridge + Bike path, or

Class 4 Bike Lanes on Truxel + then turning into development

pull architecture inc

Letter 1

Letter 1: Becky Heieck, North Natomas Transportation Management Association, April 18, 2016

Response to Comment 1-1

The comment describes a prior meeting between the project applicant and the letter's author. The comment also summarizes bikeway improvements requested by the North Natomas Transportation Management Association (NNTMA) to be considered by the applicant. The project applicant has agreed to construct a portion of the Class I bike path along the eastern side of the East Drainage Canal immediately west of the project site. The bikeway improvement has been added to the project description and is reflected in the revised text on Page 11, as follows:

> Bicycle Access
>
> Bicycle access would be maintained for the existing Class II bike lanes along Truxel Road and Gateway Park Boulevard. Appropriate signage and lane-striping would be implemented where Class II bike lanes intersect the new proposed project driveway on Truxel Road. The proposed project would construct approximately 790 feet of Class I bike trail on the unpaved access road that runs along the east side of the East Drainage Canal, directly adjacent to the project site.

Letter 1

REGIONALSAN
TAKING THE WASTE OUT OF WATER
Sacramento Regional County Sanitation District

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

www.srcsd.com

August 18, 2016

Ms. Dana Mahaffey, Associate Planner
City of Sacramento, Community Development
Environmental Planning Services
300 Richards Blvd., 3rd Floor
Sacramento, CA 95811

Subject: Notice of Availability/Intent to Approve the Draft Mitigated Negative Declaration for Natomas Fountains (P16-012)

Dear Ms. Mahaffey:

Sacramento Regional County Sanitation District (Regional San) has the following comments regarding the Draft Mitigated Negative Declaration for the Natomas Fountains project.

The proposed project includes the construction and operation of buildings that would house approximately 115,960 square-feet of retail, restaurant and other commercial uses on an approximately 12.54 acre site.

Regional San is not a land-use authority. Projects identified within Regional San planning documents are based on growth projections provided by land-use authorities. Sewer studies will need to be completed to assess the impacts of any project that has the potential to increase flow demands. Onsite and offsite impacts associated with constructing sanitary sewer facilities to provide service to the subject project should be included in the Mitigated Negative Declaration. 1

Customers receiving service from Regional San are responsible for rates and fees 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 serves new customers. The Regional San ordinance is located on the Regional San website at www.regionalsan.com 2

Local sanitary sewer service for the proposed project site will be provided by the Sacramento Area Sewer District's (SASD) local sewer collection system. Ultimate conveyance to the Sacramento Regional Wastewater Treatment Plant (SRWTP) for treatment and disposal will be provided by Regional San. SASD will respond via separate correspondence. 3

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. 4

These organisms eventually settle on the bottom of the secondary clarifiers. 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 began 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

4 cont.

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.

5

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

Letter 2: Robb Armstrong, Sacramento Regional County Sanitation District (RegionalSan, SRCSD), August 18, 2016

Response to Comment 2-1

The City acknowledges that the Sacramento County Regional Sanitation District (RegionalSan) is not a land use authority and does not generate growth projections for its service area. As discussed in Issue 12, Utilities and Service Systems, of the IS/MND, the proposed projects would not connect directly to RegionalSan sewage collection facilities, but would instead connect to the Sacramento Area Sewer District's existing Separated Sewer System. Construction of on-site sanitary sewer systems and connection to the City's sewer system are discussed in the impact assessment in Issue 12, Utilities and Service Systems, of the IS/MND, and throughout other environmental impact analysis sections of the IS/MND, as relevant to each CEQA resource area. Please refer to these sections of the IS/MND for more information.

Response to Comment 2-2

The comment refers to RegionalSan ordinances that establish rates and fees for sewer system connections and service. The comment does not address the IS/MND for the proposed project. The comment is noted and will be conveyed to the decision makers for their consideration.

Response to Comment 2-3

The comment identifies that the project site would be provided sanitary sewer service by the Sacramento Area Sewer District's (SASD) local sewer collection system, which will convey wastewater to the Sacramento Regional Wastewater Treatment Plant. The comment does not address the IS/MND for the proposed project. The comment is noted and will be conveyed to the decision makers for their consideration.

Response to Comment 2-4

The comment describes the process for providing secondary treatment for wastewater. The comment also describes RegionalSan's negotiation with the Central Valley Regional Water Quality Control Board over the specification of the NPDES Discharge Permit issued in 2010. The comment does not address the IS/MND for the proposed project. The comment is noted and will be conveyed to the decision makers for their consideration.

Response to Comment 2-5

The City of Sacramento does not supply recycled water to the project site or surrounding areas. Recycled water facilities or infrastructure are not proposed as part of the proposed project and would have no impact on RegionalSan's existing recycled water facilities or conveyance.

Letter 3

CALIFORNIA Water Boards

Edmund G. Brown Jr.
Governor

Matthew Rodriquez
Secretary for
Environmental Protection

Central Valley Regional Water Quality Control Board

9 September 2016

Dana Mahaffey
City of Sacramento
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811

CERTIFIED MAIL
91 7199 9991 7035 8360 9805

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, NATOMAS FOUNTAINS (P16-012) PROJECT, SCH# 2016082045, SACRAMENTO COUNTY

Pursuant to the State Clearinghouse's 17 August 2016 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the Natomas Fountains (P16-012) 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.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38. 1

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website: http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at: http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

> *Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*
>
> *This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

1 cont.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

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) Permits[1]
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

1 cont.

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. 2014-0057-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

[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.

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.

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 10 of the Rivers and Harbors Act or 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 – Discharges to Waters of the State

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 may 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. 1 cont.

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.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

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.

1 cont.

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

1 cont.

NPDES Permit

If the proposed project discharges waste that could affect the quality of the waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.

Stephanie Tadlock

Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Letter 3: Stephanie Tadlock, Central Valley Regional Water Quality Control Board, September 9, 2016

Response to Comment 3-1

The comment describes applicable Water Board plans and considerations that the proposed project must comply with including the applicable Basin Plan and the State Water Board Antidegradation Policy. The comment identifies potential types of permits that could be required from the Central Valley Regional Water Quality Control Board (CVRWQCB). Such permits could include a Construction Storm Water General Permit, Phase I and II Municipal Separate Storm Sewer System (MS4) Permits, an Industrial Storm Water General Permit, a Clean Water Act Section 404 Permit, a Clean Water Act Section 401 Permit, a Waste Discharge Requirement (WDR) permit, a dewatering permit, a permit for commercially irrigated agriculture, a Low or Limited Threat General NPDES Permit, or meeting Waste Discharge Requirements. Water quality permit requirements are detailed in Issue 7, Hydrology and Water Quality. As described in Issue 7, the proposed project would be required to comply with both state and local regulations designed to reduce or eliminate construction-related water quality effects.

SMUD™

September 15, 2016

Dana Mahaffey
City of Sacramento
300 Richards Blvd., 3rd Floor
Sacramento, CA 95811

Subject: Mitigated Negative Declaration (MND), Natomas Fountains

Dear Ms. Mahaffey,

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the MND, Natomas Fountains project. SMUD is the primary energy provider for Sacramento County and the proposed project area. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a Responsible Agency, SMUD aims to ensure that the proposed project limits the potential for significant environmental effects on SMUD facilities, employees, and customers. 1

It is our desire that the MND, Natomas Fountains project will acknowledge any project impacts related to the following: 2

- Overhead and or underground transmission and distribution line easements. Please view the following links on smud.org for more information regarding transmission encroachment:
- https://www.smud.org/en/business/customer-service/support-and-services/design-construction-services.htm
- https://www.smud.org/en/do-business-with-smud/real-estate-services/transmission-right-of-way.htm
- Utility line routing
- Electrical load needs/requirements
- Energy Efficiency

SMUD would like to be involved with discussing the above areas of interest as well as discussing any other potential issues. We aim to be partners in the efficient and sustainable delivery of the proposed project. Please ensure that the information included in this response is conveyed to the project planners and the appropriate project proponents. 3

Environmental leadership is a core value of SMUD and we look forward to collaborating with you on this project. Again, we appreciate the opportunity to provide input on this MND. If you have any questions regarding this letter, please contact Rob Ferrera, SMUD Environmental Specialist at (916) 732-6676.

Sincerely,

Rob Ferrera
Environmental Specialist
Environmental Management
Workforce and Enterprise Services
Sacramento Municipal Utility District

Cc: Rob Ferrera
Jose Bodipo-Memba
Pat Durham
Joseph Schofield

Letter 4: Rob Ferrera, Sacramento Municipal Utility District

Response to Comment 4-1

The comment describes the Sacramento Municipal Utility District's (SMUD) role as the primary energy provider for the region and as a responsible agency for limiting potentially significant environmental effects on SMUD facilities, employees, and customers. The comment does not address the IS/MND for the proposed project. The comment is noted and will be conveyed to the decision makers for their consideration

Response to Comment 4-2

The comment identifies types of impacts for which SMUD requests that the IS/MND acknowledge, if relevant to the proposed project. Project impacts related to energy are discussed in the Land Use, Population and Housing, Agricultural Resources and Energy Section of the IS/MND, beginning on page 14. The IS/MND concludes that the project will not result in energy impacts.

Response to Comment 4-3

The comment requests ongoing coordination between project planners, project proponents, and SMUD for issues relating to the areas of interest named in Comment 4-2. The comment does not address the IS/MND for the proposed project. The comment is noted and will be conveyed to the decision makers for their consideration.

3/10/2016 VIA EMAIL

Arwen Wacht, Associate Planner
City of Sacramento Community Development Department
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811

RE: Natomas Fountains (P16-012)

Dear Ms. Wacht:

WALKSacramento has reviewed the project routing for Natomas Fountains (P16-012) and we offer the following comments. The Natomas Fountains project requests entitlements for a 115,960 square foot retail center on about 12.5 acres within the Coral Business Center PUD. The Project also proposes to change the zoning from Employment Center to Shopping Center and change the General Plan designation from Employment Center Mid Rise to Regional Commercial Center. Our comments relate to the impact the change in land use could have on walking rates in Natomas and Sacramento, and how the design of the site could impact walking for patrons and employees of the stores. 1

Development projects that lead to more walking and active travel are critical to our community's future. Human beings need moderate exercise, such as walking, for about 30 minutes a day in order to prevent the development of chronic disease and overweight. Only 30% of the population in the Sacramento region is active at this minimal level, often due to limitations placed by a built environment not suited to walking and other types of physically active travel. 2

Walking to shopping can contribute to daily physical activity, but the closest residence to the Natomas Fountains proposed site is ¼-mile distant and the trip involves crossing an 11-lane intersection. Considering the limited number of people that would walk to the shopping center and the regional-serving retail uses, Natomas Fountains may have few walking trips from nearby residents. 3

However, walking to transit can be a large part of one's daily physical activity – a 2005 study found that American transit users spend a median of 19 minutes per day walking to and from transit[1] - and employment uses typically generate more transit riders than shopping centers. The bus stop on Truxel is less than ¼ mile from the furthest point on the Natomas Fountains site and a proposed light rail station for the Green Line to the Airport is just across the street. Transit ridership for the bus stop is already limited 4

[1] Besser, LM and Dannenberg, AL, *Walking to public transit: steps to help meet physical activity recommendations*, Am J Prev Med. 2005 Nov; 29(4):273-80.

because 8.2 acres of the Coral Business Center PUD was amended to commercial use in 2003 and developed as a shopping center. Amending more of the PUD to commercial eliminates the potential for over six hundred office jobs next to bus and light rail transit and the corresponding public health benefits for commuters walking to transit. 4 cont.

The December 7, 2015 proposed site plan distributed with the project routing has several walkability elements that improve upon the August 7, 2014 preliminary site plan. There is a direct east-west pathway between Pad J and Pad I. Sidewalks have been added on both sides of the driveway from the southern edge of the site to Major C and which intersect with the east-west walkway mentioned above. Also, a sidewalk has been added along the existing drive aisle on the south (effectively the extension of N Freeway Boulevard). 5

Unfortunately, there are no trees to shade the sidewalk that was added on the south edge. Note that the trees, or columnar shrubs, that currently exist where the sidewalk is proposed do not provide shade. To make this project truly walkable, sidewalks should be shaded by trees. 6

WALKSacramento makes the following recommendations: 7

1. **Maintain existing zoning** to maximize transit use and walking trips.
2. **Add trees to sidewalk-bisected parking islands** to shade walkways. *
3. **Add trees along existing Coral Business Center driveway at south edge of site** to shade the sidewalk. *
4. **Add raised crosswalk between buildings on either side of the existing Truxel driveway into Coral Business Center and remove the speed bump** to provide direct pedestrian route between shopping center phases and maintain traffic calming. *
5. **Add sidewalk along the north side of the existing driveway into Coral Business Center between the new raised crosswalk and the proposed driveway on the south edge of the site** to provide direct pedestrian route between shopping center phases and maintain traffic calming. *
6. **Add sidewalks from Gateway Park Blvd to the fountains area between Building G and Building H** to provide for a pathway that people will be inclined to use. *
7. **Incorporate windows with views into and out of occupied space on Buildings G and H** to provide eyes on the street.

* See the site plan markup on the following page for locations of recommendations 2-6.

schematic site plan

Letter 5

WALKSacramento is working to support increased physical activity such as walking and bicycling in local neighborhoods as well as helping to create community environments that support walking and bicycling. The benefits include improved physical fitness, less motor vehicle traffic congestion, better air quality, and a stronger sense of cohesion and safety in local neighborhoods. 8

Thank you for your consideration of these comments and recommendations. If you have questions or need additional information, please contact me at (916) 446-9255.

Sincerely,

Chris Holm
Project Manager

Attachment: Development Checklist for Biking and Walking

DEVELOPMENT CHECKLIST for BIKING and WALKING

Prepared by WALKSacramento and SABA (Sacramento Area Bicycle Advocates)
September 2012

This checklist is provided to give an indication of design, engineering, and policy elements that we consider when reviewing development projects.

POLICIES

- ❑ Walking and biking is a priority
- ❑ Adopted a policy to develop a full multi-modal and ADA accessible transportation system

Project Review and Comment

POLICY CONSIDERATIONS

- ❑ Pedestrian Master Plan
- ❑ Bicycle Master Plan
- ❑ Regional Blueprint
- ❑ Regional Blueprint Consistent General Plans
- ❑ Adopted Climate Action Plans
- ❑ Subdivision ordinances to support pedestrian and bicycle access and safety
- ❑ Zoning ordinance to support pedestrian and bicycle access and safety

ENGINEERING

- ❑ SIDEWALKS & BIKELANES ON BOTH SIDES OF MAJOR ROADWAYS
  - Pedestrian Level of Service “C” or better on arterials
  - Bicycle Level of Service “C” or better on arterials
- ❑ SAFE CROSSINGS FOR PEDESTRIANS
  - every 300-600 feet on major arterials
  - well lit, marked crosswalks
  - audible signals & count-down signals
  - median refuge islands
- ❑ SPEED MANAGEMENT
  - Speed limits based on safety of pedestrians and bicyclists
  - Implement “road diets” where there is excess lane capacity
- ❑ STREET DESIGN STANDARDS
  - Maximize pedestrian and bicyclist safety
  - Sidewalks buffered by trees and landscaping on major arterials
  - Vertical curbs
  - 5’ minimum sidewalk widths, 8’ in front of schools
  - 6’ minimum bike lanes on busy streets

- INTERSECTIONS
  - Median refuge islands for pedestrians
  - Signal timing to enable safe passage
  - Signal detection for bicyclists
  - Crossings on all 4 legs of intersections

- ELIMINATE BARRIERS
  - Freeway, railroad, river and creek crossings
  - Obstructions in sidewalks and bike lanes

NEW DEVELOPMENT – REQUIRE

- Walking & bicycling circulation plans for all new development
- Direct and convenient connections to activity centers, including schools, stores, parks, transit
- Mixed uses and other transit supporting uses within ¼ mile of light rail stations or bus stops with frequent service
- Minimum width streets
- Maximum block length of 400’
- 4-lane maximum for arterials; Recommend 2 lanes wherever possible

NEW DEVELOPMENT – DISCOURAGE

- Cul-de-sacs (unless it includes bike/ped connections)
- Gated and/or walled communities
- Meandering sidewalks
- Inappropriate uses near transit (gas stations, drive-thru restaurants, mini storage and other auto dependent uses)

BUILDINGS – REQUIRE

- Direct access for pedestrians from the street
- Attractive and convenient stairways
- Bicycle parking – long & short term
- Shower & clothing lockers

OLDER NEIGHBORHOODS

- Improve street crossings
- Reduce speeds
- Provide new connections
- Create short cuts for walkers and bicyclists by purchase of properties or other means
- Provide sidewalks on both sides of major streets

Policy Review and Comment

ENFORCEMENT & MAINTENANCE

- Enforce speed limits
- Enforce crosswalk rules – conduct crosswalk sting operations
- Enforce restrictions against parking on sidewalks
- Enforce bicycle rules including riding with traffic, lights at night, stopping at red lights
- Implement CVC 267 setting speed limits based on pedestrian and bicyclist safety
- Sweep streets and fix hazards
- Repair and replace broken sidewalks

EDUCATION

- Train staff on pedestrian and bicycle facility design.
- Train development community about pedestrian and bicycle planning and safety issues
- Bicycle skills training

FUNDING

- Include pedestrian and bicycle facilities in capital improvement programs
- Include pedestrian and bicycle facilities as a part of roadway widening and improvement projects
- Support Measure A pedestrian and bicycle facility allocation
- Set priorities based on safety and latent demand
- SACOG Community Design grants & Bike/Ped grants
- California Bicycle transportation Account
- Safe Routes to School

www.walksacramento.org

WALKSacramento
909 12th Street, Suite 203
Sacramento, CA 95814
(916) 446-9255

www.sacbike.org

Sacramento Area Bicycle Advocates
909 12th Street, Suite 116
Sacramento, CA 95814
(916) 444-6600

Letter 5: Chris Holm, WALKSacramento, March 10, 2016

Response to Comment 5-1

The comment describes the focus of WALKSacramento's comments, including how the change in land use will impact walking rates and how project design may impact pedestrian access. The comment does not address the IS/MND for the proposed project. The comment is noted and will be conveyed to the decision makers for their consideration.

Response to Comment 5-2

The comment describes the importance of walking as exercise and potential reasons for the low number of active citizens in the Sacramento region. The comment does not address the IS/MND for the proposed project.

Response to Comment 5-3

The comment describes the value of walking to shopping as a daily physical activity and establishes that due to the distance to the nearest residents, the propose project is anticipated to have very few walking trips. The comment does not address the IS/MND for the proposed project.

Response to Comment 5-4

The comment describes the value of walking to transit, identifying employment as a higher generator of transit riders per day. The proposed project would generate fewer commuters walking to transit than would occur at the site if the project site was developed based on the existing land use designation, specifically the addition of a direct east-west pathway between Pad J and Pad I within the project site. Sidewalks have been added on both sides of the driveway from the southern edge of the site the proposed retail buildings along the north side of the site, which intersect with the new east-west walkway and provide pedestrian connectivity within the project site. Also, a sidewalk has been added along the existing drive aisle on the south edge of the project site. However, the comment does not address the IS/MND for the proposed project. The comment is noted and will be conveyed to the decision makers for their consideration.

Response to Comment 5-5

The comment acknowledges that the project applicant has updated project designs to include prior design recommendations provided by Walk Sacramento. The comment does not address the IS/MND for the proposed project.

Response to Comment 5-6

The comment requests the additional of more trees along walkways to provide adequate shade for pedestrians. The comment does not address the IS/MND for the proposed project.

Response to Comment 5-7

The comment provides a list of project design recommendations and a site plan markup for improving pedestrian access for the proposed project site. Many of the WALKSacramento recommendations have been incorporated into project design as required by City planning staff, including the provision of additional shade vegetation for walkways. The comment does not address the IS/MND for the proposed project.

Response to Comment 5-8

The comment describes the goals of WALKSacramento and the benefits of walking and bicycling. The comment does not address the IS/MND for the proposed project.

Appendix A
Air Quality Data

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Natomas Fountains

Sacramento Metropolitan AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	31.61	1000sqft	0.73	31,605.00	0
Strip Mall	55.38	1000sqft	1.27	55,375.00	0
Supermarket	28.90	1000sqft	0.66	28,900.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2017
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Vehicle Trips - trip rates adjusted per trip generation per 1000SF

Energy Use - adjust title 24 values (*.75)

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	10.75	8.06
tblEnergyUse	T24E	3.98	2.98
tblEnergyUse	T24E	6.97	5.23
tblEnergyUse	T24NG	62.79	47.09
tblEnergyUse	T24NG	4.72	3.54
tblEnergyUse	T24NG	16.86	12.64
tblLandUse	LandUseSquareFeet	31,610.00	31,605.00
tblLandUse	LandUseSquareFeet	55,380.00	55,375.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	158.37	127.15
tblVehicleTrips	ST_TR	42.04	83.50
tblVehicleTrips	ST_TR	177.59	102.24
tblVehicleTrips	SU_TR	131.84	127.15
tblVehicleTrips	SU_TR	20.43	83.50
tblVehicleTrips	SU_TR	166.44	102.24
tblVehicleTrips	WD_TR	44.32	83.50

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	161.4920	28.6488	20.3749	0.0327	6.6284	1.5556	8.1840	3.3877	1.4311	4.8188	0.0000	3,032.0227	3,032.0227	0.7503	0.0000	3,047.7781
2018	161.4554	2.0290	2.1659	3.7500e-003	0.0609	0.1510	0.2118	0.0161	0.1510	0.1671	0.0000	340.5625	340.5625	0.0293	0.0000	341.1786
Total	**322.9475**	**30.6777**	**22.5408**	**0.0365**	**6.6893**	**1.7066**	**8.3958**	**3.4038**	**1.5821**	**4.9859**	**0.0000**	**3,372.5852**	**3,372.5852**	**0.7796**	**0.0000**	**3,388.9567**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	161.4920	28.6488	20.3749	0.0327	6.6284	1.5556	8.1840	3.3877	1.4311	4.8188	0.0000	3,032.0227	3,032.0227	0.7503	0.0000	3,047.7781
2018	161.4554	2.0290	2.1659	3.7500e-003	0.0609	0.1510	0.2118	0.0161	0.1510	0.1671	0.0000	340.5625	340.5625	0.0293	0.0000	341.1786
Total	**322.9475**	**30.6777**	**22.5408**	**0.0365**	**6.6893**	**1.7066**	**8.3958**	**3.4038**	**1.5821**	**4.9859**	**0.0000**	**3,372.5852**	**3,372.5852**	**0.7796**	**0.0000**	**3,388.9567**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9225	1.1000e-004	0.0121	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0269
Energy	0.1803	1.6392	1.3770	9.8400e-003		0.1246	0.1246		0.1246	0.1246		1,967.0710	1,967.0710	0.0377	0.0361	1,979.0423
Mobile	37.1389	41.7674	235.6078	0.3928	24.9861	0.5289	25.5151	6.6746	0.4864	7.1609		32,831.5390	32,831.5390	1.4466		32,861.9171
Total	**40.2416**	**43.4067**	**236.9969**	**0.4027**	**24.9861**	**0.6536**	**25.6397**	**6.6746**	**0.6110**	**7.2855**		**34,798.6354**	**34,798.6354**	**1.4844**	**0.0361**	**34,840.9862**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9225	1.1000e-004	0.0121	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0269
Energy	0.1803	1.6392	1.3770	9.8400e-003		0.1246	0.1246		0.1246	0.1246		1,967.0710	1,967.0710	0.0377	0.0361	1,979.0423
Mobile	37.1389	41.7674	235.6078	0.3928	24.9861	0.5289	25.5151	6.6746	0.4864	7.1609		32,831.5390	32,831.5390	1.4466		32,861.9171
Total	**40.2416**	**43.4067**	**236.9969**	**0.4027**	**24.9861**	**0.6536**	**25.6397**	**6.6746**	**0.6110**	**7.2855**		**34,798.6354**	**34,798.6354**	**1.4844**	**0.0361**	**34,840.9862**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2017	2/1/2017	5	3	
2	Grading	Grading	2/2/2017	2/9/2017	5	6	
3	Building Construction	Building Construction	2/10/2017	12/14/2017	5	220	
4	Paving	Paving	12/15/2017	12/28/2017	5	10	
5	Architectural Coating	Architectural Coating	12/29/2017	1/11/2018	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 173,820; Non-Residential Outdoor: 57,940 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	40.00	19.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850		2,439.4360	2,439.4360	0.7474		2,455.1322
Total	**2.5289**	**28.6230**	**17.1310**	**0.0238**	**1.5908**	**1.3967**	**2.9875**	**0.1718**	**1.2850**	**1.4567**		**2,439.4360**	**2,439.4360**	**0.7474**		**2,455.1322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0286	0.0258	0.3456	7.8000e-004	0.0609	4.3000e-004	0.0613	0.0161	4.0000e-004	0.0165		61.4319	61.4319	2.8200e-003		61.4911
Total	**0.0286**	**0.0258**	**0.3456**	**7.8000e-004**	**0.0609**	**4.3000e-004**	**0.0613**	**0.0161**	**4.0000e-004**	**0.0165**		**61.4319**	**61.4319**	**2.8200e-003**		**61.4911**

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850	0.0000	2,439.4360	2,439.4360	0.7474		2,455.1322
Total	**2.5289**	**28.6230**	**17.1310**	**0.0238**	**1.5908**	**1.3967**	**2.9875**	**0.1718**	**1.2850**	**1.4567**	**0.0000**	**2,439.4360**	**2,439.4360**	**0.7474**		**2,455.1322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0286	0.0258	0.3456	7.8000e-004	0.0609	4.3000e-004	0.0613	0.0161	4.0000e-004	0.0165		61.4319	61.4319	2.8200e-003		61.4911
Total	**0.0286**	**0.0258**	**0.3456**	**7.8000e-004**	**0.0609**	**4.3000e-004**	**0.0613**	**0.0161**	**4.0000e-004**	**0.0165**		**61.4319**	**61.4319**	**2.8200e-003**		**61.4911**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306		2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**6.5523**	**1.5550**	**8.1074**	**3.3675**	**1.4306**	**4.7981**		**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0357	0.0322	0.4320	9.7000e-004	0.0761	5.4000e-004	0.0766	0.0202	5.0000e-004	0.0207		76.7899	76.7899	3.5200e-003		76.8639
Total	**0.0357**	**0.0322**	**0.4320**	**9.7000e-004**	**0.0761**	**5.4000e-004**	**0.0766**	**0.0202**	**5.0000e-004**	**0.0207**		**76.7899**	**76.7899**	**3.5200e-003**		**76.8639**

3.3 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306	0.0000	2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**6.5523**	**1.5550**	**8.1074**	**3.3675**	**1.4306**	**4.7981**	**0.0000**	**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0357	0.0322	0.4320	9.7000e-004	0.0761	5.4000e-004	0.0766	0.0202	5.0000e-004	0.0207		76.7899	76.7899	3.5200e-003		76.8639
Total	**0.0357**	**0.0322**	**0.4320**	**9.7000e-004**	**0.0761**	**5.4000e-004**	**0.0766**	**0.0202**	**5.0000e-004**	**0.0207**		**76.7899**	**76.7899**	**3.5200e-003**		**76.8639**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998		2,334.8503	2,334.8503	0.5189		2,345.7479
Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**		**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1980	1.3515	2.3977	3.9600e-003	0.1116	0.0211	0.1327	0.0318	0.0194	0.0512		390.0127	390.0127	2.9100e-003		390.0738
Worker	0.1429	0.1289	1.7280	3.8900e-003	0.3043	2.1600e-003	0.3064	0.0807	1.9900e-003	0.0827		307.1596	307.1596	0.0141		307.4556
Total	**0.3409**	**1.4804**	**4.1257**	**7.8500e-003**	**0.4159**	**0.0232**	**0.4392**	**0.1125**	**0.0214**	**0.1339**		**697.1724**	**697.1724**	**0.0170**		**697.5294**

3.4 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998	0.0000	2,334.8503	2,334.8503	0.5189		2,345.7479
Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**	**0.0000**	**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1980	1.3515	2.3977	3.9600e-003	0.1116	0.0211	0.1327	0.0318	0.0194	0.0512		390.0127	390.0127	2.9100e-003		390.0738
Worker	0.1429	0.1289	1.7280	3.8900e-003	0.3043	2.1600e-003	0.3064	0.0807	1.9900e-003	0.0827		307.1596	307.1596	0.0141		307.4556
Total	**0.3409**	**1.4804**	**4.1257**	**7.8500e-003**	**0.4159**	**0.0232**	**0.4392**	**0.1125**	**0.0214**	**0.1339**		**697.1724**	**697.1724**	**0.0170**		**697.5294**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6402	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423		1,777.4745	1,777.4745	0.5344		1,788.6966
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6402**	**16.4619**	**12.0566**	**0.0176**		**1.0230**	**1.0230**		**0.9423**	**0.9423**		**1,777.4745**	**1,777.4745**	**0.5344**		**1,788.6966**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
Total	**0.0536**	**0.0483**	**0.6480**	**1.4600e-003**	**0.1141**	**8.1000e-004**	**0.1149**	**0.0303**	**7.5000e-004**	**0.0310**		**115.1849**	**115.1849**	**5.2800e-003**		**115.2959**

3.5 Paving - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6402	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423	0.0000	1,777.4745	1,777.4745	0.5344		1,788.6966
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6402**	**16.4619**	**12.0566**	**0.0176**		**1.0230**	**1.0230**		**0.9423**	**0.9423**	**0.0000**	**1,777.4745**	**1,777.4745**	**0.5344**		**1,788.6966**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
Total	**0.0536**	**0.0483**	**0.6480**	**1.4600e-003**	**0.1141**	**8.1000e-004**	**0.1149**	**0.0303**	**7.5000e-004**	**0.0310**		**115.1849**	**115.1849**	**5.2800e-003**		**115.2959**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	161.1311					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**161.4635**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0286	0.0258	0.3456	7.8000e-004	0.0609	4.3000e-004	0.0613	0.0161	4.0000e-004	0.0165		61.4319	61.4319	2.8200e-003		61.4911
Total	**0.0286**	**0.0258**	**0.3456**	**7.8000e-004**	**0.0609**	**4.3000e-004**	**0.0613**	**0.0161**	**4.0000e-004**	**0.0165**		**61.4319**	**61.4319**	**2.8200e-003**		**61.4911**

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	161.1311					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**161.4635**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0286	0.0258	0.3456	7.8000e-004	0.0609	4.3000e-004	0.0613	0.0161	4.0000e-004	0.0165		61.4319	61.4319	2.8200e-003		61.4911
Total	**0.0286**	**0.0258**	**0.3456**	**7.8000e-004**	**0.0609**	**4.3000e-004**	**0.0613**	**0.0161**	**4.0000e-004**	**0.0165**		**61.4319**	**61.4319**	**2.8200e-003**		**61.4911**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	161.1311					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**161.4298**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0256	0.0232	0.3117	7.8000e-004	0.0609	4.2000e-004	0.0613	0.0161	3.9000e-004	0.0165		59.1140	59.1140	2.5900e-003		59.1685
Total	**0.0256**	**0.0232**	**0.3117**	**7.8000e-004**	**0.0609**	**4.2000e-004**	**0.0613**	**0.0161**	**3.9000e-004**	**0.0165**		**59.1140**	**59.1140**	**2.5900e-003**		**59.1685**

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	161.1311					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**161.4298**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0256	0.0232	0.3117	7.8000e-004	0.0609	4.2000e-004	0.0613	0.0161	3.9000e-004	0.0165		59.1140	59.1140	2.5900e-003		59.1685
Total	**0.0256**	**0.0232**	**0.3117**	**7.8000e-004**	**0.0609**	**4.2000e-004**	**0.0613**	**0.0161**	**3.9000e-004**	**0.0165**		**59.1140**	**59.1140**	**2.5900e-003**		**59.1685**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	37.1389	41.7674	235.6078	0.3928	24.9861	0.5289	25.5151	6.6746	0.4864	7.1609		32,831.5390	32,831.5390	1.4466		32,861.9171
Unmitigated	37.1389	41.7674	235.6078	0.3928	24.9861	0.5289	25.5151	6.6746	0.4864	7.1609		32,831.5390	32,831.5390	1.4466		32,861.9171

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	4,019.21	4,019.21	4019.21	3,571,458	3,571,458
Strip Mall	4,624.23	4,624.23	4624.23	5,686,337	5,686,337
Supermarket	2,954.74	2,954.74	2954.74	2,542,700	2,542,700
Total	11,598.18	11,598.18	11,598.18	11,800,495	11,800,495

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	10.00	5.00	6.50	8.50	72.50	19.00	37	20	43
Strip Mall	10.00	5.00	6.50	16.60	64.40	19.00	45	40	15
Supermarket	10.00	5.00	6.50	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.504380	0.068251	0.178421	0.147199	0.044767	0.006294	0.020809	0.016358	0.002307	0.002286	0.006181	0.000572	0.002175

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1803	1.6392	1.3770	9.8400e-003		0.1246	0.1246		0.1246	0.1246		1,967.0710	1,967.0710	0.0377	0.0361	1,979.0423
NaturalGas Unmitigated	0.1803	1.6392	1.3770	9.8400e-003		0.1246	0.1246		0.1246	0.1246		1,967.0710	1,967.0710	0.0377	0.0361	1,979.0423

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	678.154	7.3100e-003	0.0665	0.0559	4.0000e-004		5.0500e-003	5.0500e-003		5.0500e-003	5.0500e-003		79.7828	79.7828	1.5300e-003	1.4600e-003	80.2684
Supermarket	1743.5	0.0188	0.1709	0.1436	1.0300e-003		0.0130	0.0130		0.0130	0.0130		205.1178	205.1178	3.9300e-003	3.7600e-003	206.3661
High Turnover (Sit Down Restaurant)	14298.4	0.1542	1.4018	1.1775	8.4100e-003		0.1065	0.1065		0.1065	0.1065		1,682.1704	1,682.1704	0.0322	0.0308	1,692.4078
Total		**0.1803**	**1.6392**	**1.3770**	**9.8400e-003**		**0.1246**	**0.1246**		**0.1246**	**0.1246**		**1,967.0710**	**1,967.0710**	**0.0377**	**0.0361**	**1,979.0423**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	0.678154	7.3100e-003	0.0665	0.0559	4.0000e-004		5.0500e-003	5.0500e-003		5.0500e-003	5.0500e-003		79.7828	79.7828	1.5300e-003	1.4600e-003	80.2684
Supermarket	1.7435	0.0188	0.1709	0.1436	1.0300e-003		0.0130	0.0130		0.0130	0.0130		205.1178	205.1178	3.9300e-003	3.7600e-003	206.3661
High Turnover (Sit Down Restaurant)	14.2984	0.1542	1.4018	1.1775	8.4100e-003		0.1065	0.1065		0.1065	0.1065		1,682.1704	1,682.1704	0.0322	0.0308	1,692.4078
Total		**0.1803**	**1.6392**	**1.3770**	**9.8400e-003**		**0.1246**	**0.1246**		**0.1246**	**0.1246**		**1,967.0710**	**1,967.0710**	**0.0377**	**0.0361**	**1,979.0423**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9225	1.1000e-004	0.0121	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0269
Unmitigated	2.9225	1.1000e-004	0.0121	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0269

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4415					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4798					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1600e-003	1.1000e-004	0.0121	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0269
Total	**2.9225**	**1.1000e-004**	**0.0121**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0254**	**0.0254**	**7.0000e-005**		**0.0269**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4415					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4798					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1600e-003	1.1000e-004	0.0121	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0254	0.0254	7.0000e-005		0.0269
Total	**2.9225**	**1.1000e-004**	**0.0121**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0254**	**0.0254**	**7.0000e-005**		**0.0269**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

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Appendix B

List of Regionally Occurring Special Status Species

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- **Unlikely:** The project site and/or surrounding area do not support suitable habitat for a particular species, or the project site is outside of the species known range.

- **Low:** The project site and/or immediate area only provide limited amounts and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate project area.

- **Medium:** The project site and/or immediate area provide suitable habitat for a particular species.

- **High:** The project site and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in immediate area and/or within the project site.

APPENDIX B
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Plants			
Astragalus tener var. *ferrisiae* Ferris' milk-vetch	--/1B.1	Found in alkaline flats, and vernally moist meadow habitat. Blooms March–June. Found at elevations between 0 and 196 feet.	**Unlikely.** No suitable habitat present within project site.
Astragalus tener var. *tener* Alkali milk-vetch	--/1B.2	Found in alkaline soils in mesic playas, vernally most meadow habitat, and vernal pools. Blooms March–June. Found at elevations between 0 and 196 feet.	**Unlikely.** No suitable habitat present within project site.
Atriplex cordulata var. *cordulata* Heartscale	--/1B.2	Found in saline or alkaline soils, in chenopod scrub, meadows, seeps, and grasslands. Blooms April–October. Found at elevations between 0 and 1,850 feet.	**Unlikely.** No suitable habitat present within project site.
Atriplex depressa Brittlescale	--/1B.2	Found in alkaline, clay soils within chenopod scrub, meadow and seep, playa, grassland, and vernal pool habitats. Blooms April–October. Found at elevations between 0 and 1,100 feet.	**Unlikely.** No suitable habitat present within project site.
Cordylanthus palmatus Palmate-bracted salty bird's-beak	FE/SE/1B.1	Found in alkaline soils in chenopod scrub, and grassland habitats. Blooms May–October. Found at elevations between 15 and 525 feet.	**Unlikely.** No suitable habitat present within project site.
Downingia pusilla Dwarf downingia	--/2B.2	Found in grassland (mesic) and vernal pools. Blooms March–May. Found at elevations between 15 and 1,475 feet.	**Unlikely.** No suitable habitat present within project site.
Extriplex joaquinana San Joaquin spearscale	--/1B.2	Found in alkaline soils in chenopod scrub, meadow and seep, playa, and grassland habitats. Blooms April–October. Found at elevations 0 to 2,800 feet.	**Unlikely.** No suitable habitat present within project site.

APPENDIX B
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Fritillaria agrestis Stinkbells	--/4.2	Found in clay, sometimes serpentinite soils in chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland. Found at elevations between 32 to 5,101 feet.	**Unlikely.** No suitable habitat present within project site.
Gratiola heterosepala Boggs Lake hedge-hyssop	--/SE, 1B.2	Found in clay soils in marshes and swamps, and vernal pools. Blooms April–August. Found at elevations 25 to 8,000 feet.	**Unlikely.** No suitable habitat present within project site.
Hibiscus lasiocarpos var. *occidentalis* Woolly rose-mallow	--/1B.2	Found in marshes and swamps, and often in riprap on the sides of levees. Blooms June–September. Found at elevations between 0 to 400 feet.	**Unlikely.** No suitable habitat present within project site.
Legenere limosa Legenere	--/1B.1	Found in vernal pools. Blooms April–June. Found at elevations between 0 and 2,900 feet.	**Unlikely.** No suitable habitat present within project site.
Lepidium latipes var. *heckardii* Heckard's pepper-grass	--/1B.2	Found in alkaline soils in vernal pool margins, salt marsh edges, and grasslands. Blooms March–May. Found at elevations between 0 and 675 feet.	**Unlikely.** No suitable habitat present within project site.
Puccinellia simplex California alkali grass	--/1B.2	Found in alkaline, vernally mesic sinks, flats, and lake margins in chenopod scrub, meadows, and seeps, valley, and foothill grassland, and vernal pools. Blooms March–May. Found at elevations between 6 and 3,051 feet.	**Unlikely.** No suitable habitat present within project site.
Sagittaria sanfordii Sanford's arrowhead	--/1B.2	Found in freshwater marshes and swamps. Blooms May–November. Found at elevations between 0 and 2,150 feet.	**Unlikely.** No suitable habitat present within project site.
Symphyotrichum lentum Suisun Marsh aster	--/1B.2	Found in freshwater and brackish marshes and swamps. Blooms April–November. Found at elevations 0 to 25 feet.	**Unlikely.** No suitable habitat present within project site.
Trifolium hydrophilum Saline clover	--/1B.2	Found in marshes and swamps, mesic and alkaline grasslands, and vernal pools. Blooms April–June. Found at elevations 0 to 1,000 feet.	**Unlikely.** No suitable habitat present within project site.
Invert			
Branchinecta lynchi Vernal pool fairy shrimp	FT/--	Lifecycle restricted to vernal pools.	**Unlikely.** No suitable habitat present within project site.

APPENDIX B
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT/--	Found only in the Central Valley of California, in association with blue elderberry (Sambucus nigra ssp. caerulea). Prefers to lay eggs in elderberries, 2-8 inches in diameter, some preference shown for "stressed" elderberries.	**Unlikely.** No suitable habitat (*Sambucus nigra* spp. *caerulea*) present within project site.
Lepidurus packardi Vernal pool tadpole shrimp	FE/--	Lifecycle restricted to vernal pools.	**Unlikely.** No suitable habitat present within project site.
Linderiella occidentalis California linderiella	--/SAL	Lifecycle restricted to vernal pools.	**Unlikely.** No suitable habitat present within project site.
Cicindela hiricollis abrupta Sacramento Valley tiger beetle	--/SAL	Little is known about this species life history.	**Unlikely.** No suitable habitat present within project site.
Bombus crotchii Crotch bumble bee	--/SAL	Little is known about this species life history.	**Unlikely.** No suitable habitat present within project site.
Bombus occidentalis Western bumble bee	--/SAL	Little is known about this species life history.	**Unlikely.** No suitable habitat present within project site.
Myrmosula pacifica Antioch multilid wasp	--/SAL	Little is known about this species life history.	**Unlikely.** No suitable habitat present within project site.
Birds			
Accipiter cooperi Cooper's hawk	--/WL	Found in woodland chiefly of open, interrupted or marginal type. Nests mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains. Also nests in live oaks. Forages in broken woodland habitat edges.	**Unlikely.** No suitable nesting or foraging habitat present within or adjacent to the project site.
Agelaius tricolor Tricolored blackbird	--/CC	Nests near freshwater, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herb; forages in grassland and cropland habitats.	**Unlikely.** No suitable nesting habitat present within or adjacent to the project site.
Ardea alba Great egret	--/--	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	**Unlikely.** No suitable nesting or foraging habitat present within or adjacent to the project site.
Ardea herodias Great blue heron	--/SAL	Colonial nester in tall trees, cliff sides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes lake margins, tide-flats, rivers and streams, and wet meadows.	**Low.** No suitable nesting habitat present within or adjacent to the project site. Suitable foraging habitat present in East Drainage Canal immediately adjacent to the project site. This species was not observed during the reconnaissance survey.

APPENDIX B
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Athene cunicularia Burrowing owl	--/SSC	Forages in open plains, grasslands, and prairies; typically nests in abandoned small mammal burrows.	**Medium.** Suitable habitat present within project site. Additionally, burrowing owls have been observed along the East Drainage Canal immediately adjacent to the project site.[1] This species was not observed during the reconnaissance survey.
Buteo swainsoni Swainson's hawk	--/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Medium.** Low-quality, limited nesting habitat is present in redwood trees located approximately 500 feet north of the project site. Species requires nesting trees be located within easy fly distance between foraging areas and nest sites. Habitats within 0.5-mile of the project site are primarily urban. Grassland within the project site provides limited, low quality habitat. High quality habitat is located in agricultural and open areas north of the community of Natomas, and east of the project site along the Sacramento River, however the site could still be used as foraging habitat. The closest recorded Swainson's hawk occurrence is located approximately one mile southwest of the project site but is presumed possibly extirpated by CDFW.
Charadrius alexandrinus nivosus Western snowy plover	FT/SSC	Nests and forages in barren to sparsely vegetated beaches and dry mud or sand flats on margins of rivers, lakes, and ponds.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.
Charadrius montanus Mountain plover	--/SSC	Short grasslands, agricultural fields, and sagebrush areas, avoids high and dense cover. Forages on the ground. Feeds on large insects, especially grasshoppers. Does not nest in California.	**Low.** Foraging habitat for this species present within the project site, however project site is isolated from other potential foraging areas. No CNDDB records of this species in the vicinity of the project site[2].This species was not observed during the reconnaissance survey.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT/SE	Densely foliaged, valley foothill, desert, deciduous riparian thickets or forest habitats with dense, low-level or understory foliage which abut on slow-moving watercourses, backwaters, or seeps.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.

1 California Natural Diversity Database (CNDDB), 2016.

2 California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed: November 30, 2015. Data set expires May 3, 2016.

APPENDIX B
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Egretta thula Snowy egret	--/SAL	Forages in shallow water or along shores of wetlands or aquatic habitats. Nests in dense marshes and low trees.	**Low.** No suitable nesting habitat present within or adjacent to the project site. Suitable foraging habitat present in East Drainage Canal immediately adjacent to the project site. This species was not observed during the reconnaissance survey.
Elanus leucurus White-tailed kite	--/FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Low.** Low-quality, limited nesting habitat is present in within redwood trees located approximately 500 feet north of the project site. Species rarely found away from agricultural areas. Habitats within 0.5-mile of the project site are primarily urban. Grassland within the project site provides limited, low quality habitat. Higher quality habitat is located in agricultural and open areas north of the community of Natomas, and east of the project site along the Sacramento River. The closest record of occurrence is located approximately two miles northeast near Dry Creek.
Falco columbarius Merlin	--/WL	Forages primarily along coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages. Does not breed in California.	**Low.** Project site is outside the nesting range of this species. Suitable foraging habitat present within the project area.
Melospiza melodia Song sparrow ("Modesto" population)	--/SSC	Nest in emergent freshwater marshes dominated by tule (*Scirpus* spp., *Schoenoplectus* spp.) and cattail (*Typha* spp.) as well as riparian willow (*Salix* spp.) thickets. Also nest in riparian forests of valley oak (*Quercus lobata*) with a sufficient understory of blackberry (*Rubus* spp.), along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.
Nycticorax nycticoras Black-crowned night heron	--/SAL	Forages during night and twilight hours in shallow water. Nests in dense-foliaged trees, dense, fresh or brackish emergent wetlands, or dense shrubbery or vine tangles, usually near aquatic or emergent feeding areas.	**Low.** No suitable nesting habitat present within or adjacent to the project site. Suitable foraging habitat present in East Drainage Canal immediately adjacent to the project site. This species was not observed during the reconnaissance survey.
Plegadis chihi White-faced ibis	--/--	Forages in fresh emergent wetland, shallow water, muddy ground of wet meadows, and irrigated flooded pastures and croplands. Nests in dense, fresh emergent wetland. Not known to breed in the Central Valley.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.

APPENDIX B
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Progne subis Purple martin	--/SSC	Found in valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats. Nests exclusively under bridges in Sacramento.	**Low.** No suitable nesting habitat present within or adjacent to the project site. Truxel Road bridge over the East Drainage Canal does not contain weep holes likely to support purple martins. However, multiple purple martin occurrences have been recorded in CNDDB within five miles of the project site[3].
Riparia riparia Bank swallow	--/ST	Colonial nester; nest primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.
Vireo bellii pusillus Least Bell's vireo	FE/SE	Nests in lowland, willow-dominated, dense riparian habitat through the Sacramento and San Joaquin Valleys.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.
Reptiles			
Emys marmorata Western pond turtle	--/SSC	Found in permanent or nearly permanent water in a wide variety of habitat types, including permanent ponds, lakes, streams, irrigation ditches, or permanent pools along intermittent streams. Species requires basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks.	**Medium**. No suitable habitat present within project site. Suitable habitat present adjacent to the project site in the East Drainage Canal; however, no western pond turtle populations are known to occur within five miles of the project site.[4]
Spea hammondii Western spadefoot	--/SSC	Found seasonally in grasslands, prairies, chaparral, and woodlands, in and around wet sites. Breeds in shallow, temporary pools formed by winter rains. Takes refuge in burrows.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site. There are no recorded occurrences in the Natomas Basin.[5]
Thamnophis gigas Giant garter snake	FT/ST	Found in marshes, sloughs, and irrigation canals/ditches, less with slow-moving creeks, and absent from larger rivers. Species is extremely aquatic and is rarely found away from water, and forages in water for food. Young are born in secluded sites, such as loose bark of rotting logs, dense vegetation, or crevices of rocky shorelines. Species basks on emergent vegetation such as cattails or tules. Takes refuge in mammal burrows, or piles of vegetation.	**High.** Suitable habitat present in the East Drainage Canal adjacent to the project site.

[3] California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed: November 30, 2015. Data set expires May 3, 2016.

[4] California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed: November 30, 2015. Data set expires May 3, 2016.

[5] Sacramento and Sutter Counties, and Natomas Basin Conservation, 2003 (April). Natomas Basin Habitat Conservation Plan. Prepared for U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. Sacramento, CA.

APPENDIX B
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Mammals			
Antrozous pallidus Pallid bat	--/SSC	Roosts in caves, crevices, mines, hollow trees, and buildings. Found in a wide variety of habitats, including grasslands, shrub lands, woodlands, and forests. Prefers open, dry habitats with rocky areas for roosting.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site.
Lasionycteris noctivagans Silver-haired bat	--/--	Roosts in trees, buildings, rock crevices, caves, and under bark. Species may be found anywhere in California including forests, woodland, and grassland habitats. Forages above streams, ponds, and open brushy areas.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site.
Lasiurus blissevillii Western red bat	--/SSC	Roosts in mixed conifer forests, prefers habitat edges and mosaics with trees that are protected from above and open below, forages within grasslands, shrub lands, open woodlands and forests, and croplands.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site.
Lasiurus cinerecus Hoary bat		Roosts in dense foliage of medium to large trees. Preferred sites are hidden from above, with few branches below.	**Unlikely**. No suitable roosting habitat present within or adjacent to the project site.
Taxidea taxus American badger	--/SSC	Most abundant in drier open stage of most shrub, forest, and herbaceous habitats, with friable soils. Use dense vegetation and rocky areas for cover and den sites. Prefer forest interspersed with meadows or alpine fell-fields.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site.
Natural Plant Communities			
Elderberry Savanna		Natural Community	**Not present.**
Great Valley Cottonwood Riparian Forest		Natural Community	**Not present.**
Great Valley Mixed Riparian Forest		Natural Community	**Not present.**
Northern Claypan Vernal Pool		Natural Community	**Not present.**
Northern Hardpan Vernal Pool		Natural Community	**Not present.**
Fish			
Archoplites interruptus Sacramento perch	--/SSC	Historically found in the sloughs, slow-moving rivers, and lakes of the central valley. Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	**Unlikely**. No suitable habitat present within or adjacent to the project site.

APPENDIX B
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Ochorhynchus mykiss irideus Steelhead – Central Valley DPS	FT/--	This ESU enters the Sacramento and San Joaquin Rivers and their tributaries from July to May; spawning from December to April. Young move to rearing areas in and through the Sacramento and San Joaquin Rivers, Delta, and San Pablo and San Francisco Bays.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Oncorhynchus tshawytscha Chinook salmon – Central Valley spring-run ESU	FT/ST	This ESU enters the Sacramento and San Joaquin Rivers and tributaries March to July; spawning from late August to early October. Young move to rearing areas in and through the Sacramento and San Joaquin Rivers, Delta, and San Pablo and San Francisco Bays.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Oncorhynchus tshawytscha Chinook salmon – Sacramento River winter-run ESU	FE/SE	This ESU enters the Sacramento River December to May; spawning peaks May and June. Upstream movement occurs more quickly than in spring run population. Young move to rearing areas in and through the Sacramento River, Delta, and San Pablo and San Francisco.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Pogonichthys macrolepidotus Sacramento splittail	--/SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the delta, Suisun Bay & associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning & foraging for young.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Spirinchus thaelichthys Longfin smelt	FC/ST	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Thaleichthys pacificus Eulachon – Southern DPS	FT/--	Moves in from ocean in to natal stream to spawn from late winter to mid-spring.	**Unlikely**. No suitable habitat present within or adjacent to the project site.

STATUS CODES:

Federal
FE = Endangered
FT = Threatened
FC = Candidate

State
CE = Endangered
CT = Threatened
FP = Fully Protected
CC = State Candidate Species
SSC = (CA) Department of Fish and Wildlife Species of Special Concern

Appendix C

Natomas Fountains Project Cultural Resources Inventory Report

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NATOMAS FOUNTAINS PROJECT
CITY OF SACRAMENTO, SACRAMENTO COUNTY, CALIFORNIA
Cultural Resources Inventory Report

Prepared for the
City of Sacramento

July 2016

Prepared by:
ESA
2600 Capitol Ave, Suite 200
Sacramento, CA 95816

Confidential – Not for Public Distribution

NATOMAS FOUNTAINS PROJECT
CITY OF SACRAMENTO, SACRAMENTO COUNTY, CALIFORNIA
Cultural Resources Inventory Report

Prepared for the
City of Sacramento

July 2016

Prepared by:
ESA
2600 Capitol Ave, Suite 200
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Author:
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USGS Quadrangle: Taylor Monument, CA
Resources: *None*

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Appendix D

Final Transportation Impact Study for the Natomas Fountains Project

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Final Transportation Impact Study for the Natomas Fountains Project

Prepared for
City of Sacramento

June 22, 2016

FEHR & PEERS

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EXECUTIVE SUMMARY

This study analyzes the transportation impacts associated with the proposed 115,880 square-foot Natomas Fountains retail project, which would be located on Truxel Road north of Interstate 80 in the City of Sacramento. The potential off-site traffic impacts of the project are analyzed under existing and cumulative conditions. Impacts to transit, bicycle, parking, and pedestrian circulation are also evaluated. A detailed evaluation of project access is also conducted.

PROJECT DESCRIPTION

The proposed project would be comprised of the following land uses (see **Figure 2** for project site plan):

- 55,375 square feet of general retail,
- 31,605 square feet of high-turnover sit-down restaurants, and
- 28,900 square-foot supermarket.

A surface parking lot consisting of 525 parking spaces would be provided. Vehicular access to the site would be provided by two access points along the existing driveway that serves the adjacent Natomas Village Shopping Center, and a new right-turn only driveway on Truxel Road.

EXISTING CONDITIONS

Seven study intersections along the Truxel Road and Gateway Park Boulevard corridors were selected for analysis during the weekday PM peak hour. This period is most appropriate for study because background traffic levels and the project's trip generation are each considerable during this period. Had an AM peak hour analysis been conducted, fewer (or no) project impacts would have been identified. Because the adjacent Natomas Marketplace Retail Center is known to generate considerable levels of traffic on weekends, travel conditions along Truxel Road during a Saturday mid-day period were also evaluated.

EXISTING PLUS PROJECT CONDITIONS

Although the proposed project would cause delays to increase at most intersections, it would not cause any intersections to worsen from acceptable to unacceptable levels, or exacerbate to a significant degree any intersections that currently operate unacceptably. Therefore, impacts to study intersections are less than significant and no mitigation is required.

The project would not disrupt or adversely affect existing or planned transit facilities. The project can be accessed by two Regional Transit bus routes that stop within ¼-mile of the project site. The project would not interfere with any existing or planned bicycle or pedestrian facilities. The project site plan shows sidewalks along its frontage and internal pedestrian connections. For these reasons, project impacts to transit, bicycle, and pedestrian facilities are considered less than significant. Therefore, mitigations are not required.

Based on counts collected during a recent Saturday mid-day peak period and the project's expected Saturday trip generation, project impacts during the Saturday mid-day peak hour would be less severe than any impacts identified during the weekday PM peak hour.

Construction of the proposed project would generate a variety of truck and employee trips. Since the magnitude of these trips during peak hours would be less than that of the proposed project, traffic impacts when compared to project operations would not be significant. The project applicant will develop a Construction Traffic Management Plan (TMP) to the satisfaction of the City's Department of Public Works. The overall goal of the Construction TMP will be to minimize traffic impacts to public streets and maintain a high level of safety for all roadway users.

CUMULATIVE CONDITIONS

The proposed project would cause a cumulatively considerable impact to Gateway Park Boulevard/North Freeway Boulevard intersection. This impact and the recommended mitigation are described below.

Impact TR-1: Cumulatively considerable impact (LOS F operations exacerbated) at Gateway Park Boulevard/North Freeway Boulevard intersection during the PM peak hour.

Mitigation TR-1: Pay fair share cost of the following improvements:

- *Restripe eastbound approach at Gateway Park Boulevard/North Freeway Boulevard intersection to consist of one left-turn lane, one through lane, and one right-turn lane.*
- *Coordinate traffic signal at Gateway Park Boulevard/North Freeway Boulevard intersection such that the westbound left-turn is coordinated with the westbound left-turn at Truxel Road/Gateway Park Boulevard.*
- *Realign/restripe the southbound departing lanes from the Gateway Park Boulevard/North Freeway Boulevard intersection such that both westbound left turn lanes from North Freeway Boulevard become left-turn lanes approaching Truxel Road (refer to Figure 10 for illustration of improvements).*
- *Modify the southbound Truxel Road approach at Gateway Park Boulevard to construct a dedicated u-turn lane (refer to Figure 11 for illustration of improvements).*

The net effect of the above improvements is more balanced lane utilization departing the Gateway Park Boulevard/North Freeway Boulevard intersection, coordinated operations with Truxel Road/Gateway Park Boulevard, more effective lane assignments exiting the project site onto Gateway Park Boulevard, and additional capacity at the Truxel Road/Gateway Park Boulevard intersection.

These improvements would restore operations at the Gateway Park Boulevard/North Freeway Boulevard intersection to an acceptable LOS E condition. The project's fair share traffic contribution is 42 percent at the Gateway Park Boulevard/North Freeway Boulevard intersection and 20 percent at the Truxel Road/Gateway Park Boulevard intersection. This mitigation would reduce the impact to less than significant.

Cumulative project impacts to transit, bicycle, and pedestrian facilities are considered less than significant. Therefore, mitigations are not required.

PROJECT ACCESS AND INTERNAL CIRCULATION EVALUATION

Fehr & Peers conducted a detailed evaluation of project access based on the project site plan. **Figure ES-1** illustrates the recommended modifications to the site plan to accommodate vehicles, delivery trucks, and pedestrians. Key recommendations from this figure include:

- Construct a right-turn deceleration lane on northbound Truxel Road at proposed Driveway #1.
- Directly align the westerly project driveway #2 with the existing Natomas Village westerly driveway and operate as an all-way stop controlled intersection with crosswalks.
- Relocate easterly project driveway #3 further west (situated about 275 feet from westerly driveway) to permit full-access. Operate with all-way stop control. Confirm that delivery trucks can maneuver through the parking lot and exit at Driveway 3.
- Construct narrow raised median on internal driveway to restrict movements at easterly Natomas Village Shopping Center driveway to right-turns.
- Work with Natomas Village Shopping Center owner to investigate concept of constructing a 4th leg to the relocated project driveway #3 intersection.

The two all-way stop-control intersections proposed along the internal driveway would each operate at LOS A under cumulative plus project conditions with all mitigation measures in place. Traffic would not spill back from one all-way-stop intersection to the other.

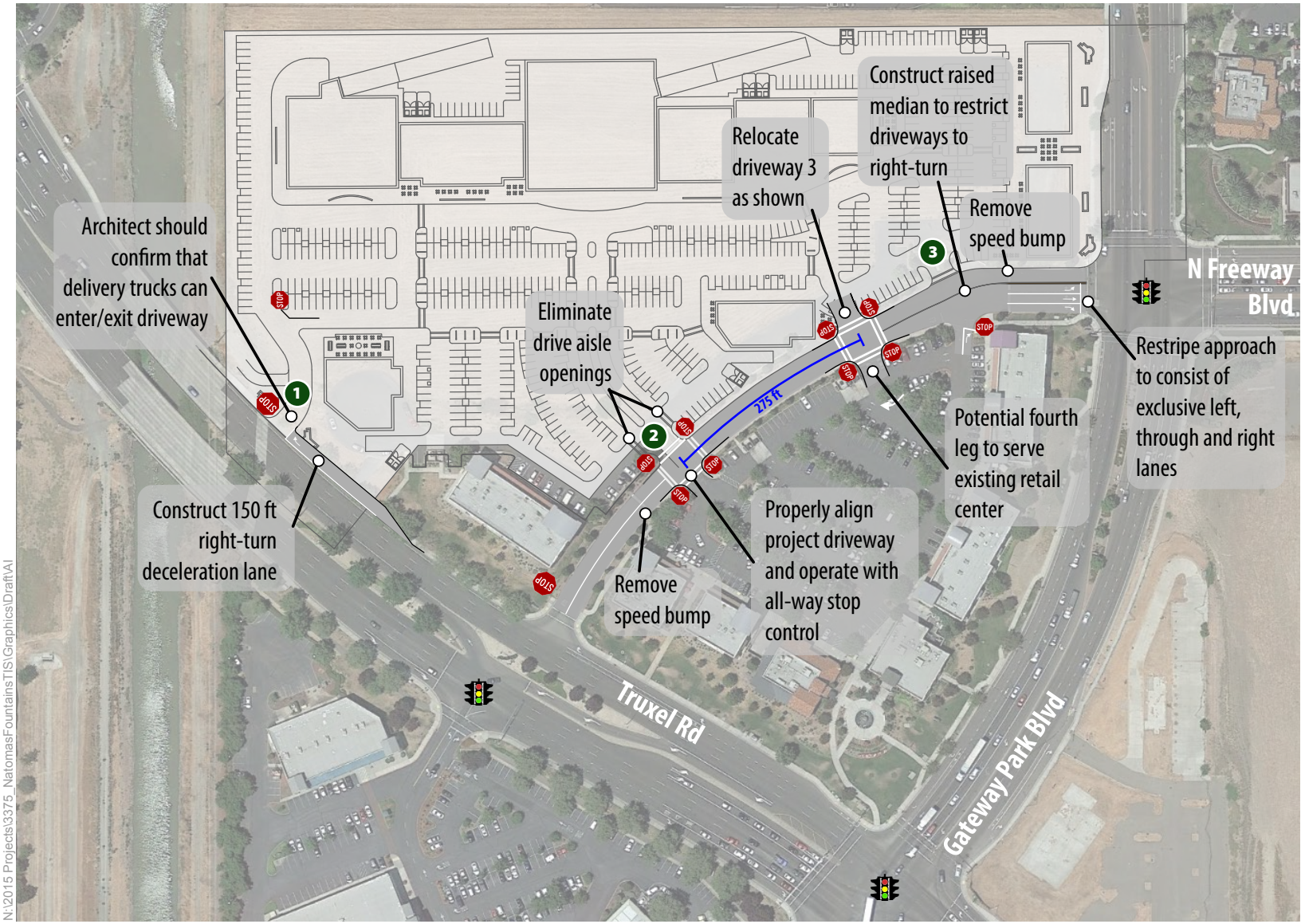


Figure ES-1

Project Access Recommendations

1. INTRODUCTION

PURPOSE

This study analyzes the transportation impacts associated with the Natomas Fountains project. The 115,880 square-foot retail center is proposed to be located on Truxel Road north of Interstate 80 in the City of Sacramento. The potential off-site traffic impacts of the project are analyzed under existing and cumulative conditions. Impacts to transit, bicycle, parking, and pedestrian circulation are also evaluated. A detailed evaluation of project access is also conducted.

STUDY AREA

The study area includes the following seven intersections along the Truxel Road and Gateway Park Boulevard corridors. These intersections were selected based on their proximity to the project site, expected usage by project traffic, and susceptibility for being impacted. Refer to **Figure 1** for a map showing the study intersections. The study area also includes bicycle, pedestrian, and transit facilities within the project vicinity.

1. Truxel Road/Arena Boulevard
2. Truxel Road/Natomas Crossing Drive
3. Truxel Road/Natomas Marketplace (north entrance)
4. North Freeway Boulevard/Gateway Park Boulevard
5. Truxel Road/Gateway Park Boulevard
6. Truxel Road/I-80 WB Ramps
7. Truxel Road/I-80 EB Ramps

The study does not include an analysis of the I-80 mainline due to the continued construction activity on this facility. Any counts or analysis of this facility would be substantially affected by the construction lane closures and lane detouring.

PROJECT DESCRIPTION

Figure 2 shows the project site plan (*Natomas Fountains*, Pull Architecture, Inc., January 11, 2016). The project would be comprised of the following land uses:

- 55,375 square feet of general retail,
- 31,605 square feet of high-turnover sit-down restaurants, and
- 28,900 square-foot supermarket.

A surface parking lot consisting of 525 parking spaces would be provided.

1 Study Intersection

Project Site

Figure 1

Study Area

Figure 2

Project Site Plan

Vehicular access to the site would be provided as follows (refer to Figure 2 for driveway numbering):

- Vehicular access would be provided from an existing driveway that extends in a southwesterly direction from the Gateway Park Boulevard/North Freeway Boulevard signalized intersection to Truxel Road. Two full access driveways (#2 and #3) are proposed along this driveway.
- A new right-turn only driveway (#1) would be located on Truxel Road approximately 450 feet north of the existing driveway's intersection with Truxel Road.

ANALYSIS SCENARIOS

The following scenarios are analyzed in this study:

- Existing Conditions – represents the baseline condition, upon which project impacts are measured. The baseline condition represents conditions in fall 2015.
- Existing Plus Project Conditions – reflects changes in travel conditions associated with implementation of the proposed project.
- Cumulative No Project Conditions – assumes the site is developed with its existing Planned Unit Development (PUD) office zoning.
- Cumulative Plus Project Conditions – reflects travel conditions in the horizon year (2035) assuming the proposed project is developed. Through a trip/delay accounting process, the project's contribution to any cumulatively unacceptable operations is calculated to assess cumulatively considerable impacts.

ANALYSIS PERIODS

This study focuses on project impacts during the weekday PM peak hour, which is the busiest one-hour period of travel from 4 to 6 PM. This period is most appropriate for study because background traffic levels and the project's trip generation are each considerable during this period. Had an AM peak hour analysis been conducted, fewer (or no) project impacts would have been identified.

Because the adjacent Natomas Marketplace Retail Center is known to generate considerable levels of traffic on weekends, a focused evaluation of travel conditions along Truxel Road during a Saturday mid-day period is also presented.

ANALYSIS METHODOLOGY

Traffic operations at all study intersections were analyzed for weekday PM peak hour conditions using procedures and methodologies contained in the *Highway Capacity Manual* (Transportation Research Board, 2010) for calculating delay at intersections. These methodologies were applied using the SimTraffic software program, which considers the effects of lane utilization, turn pocket storage lengths, upstream/downstream queue spillbacks, and coordinated signal timings on intersection queuing and delays. The SimTraffic model was validated against observed queues. Reported results are based on an average of 10 runs. The following procedures and assumptions were applied in the development of the SimTraffic model:

- Roadway geometric data were gathered using aerial photographs and field observations.
- Peak hour traffic volumes were entered into the model according to the peak hour of the study intersections.
- The peak hour factor (PHF) was set at 1.0 in accordance with City of Sacramento *Traffic Impact Study Guidelines*.
- An input of 3 percent heavy vehicles (as recommended in Exhibit 18-28 of the 2010 HCM) was used for all movements.
- Speeds for the model network were based on the posted speed limits.
- The counted pedestrian and bicycle volumes were entered into the model according to the study area peak hour.
- Signal phasing and timings were based on signal timing plans provided by the City of Sacramento.

Level of service is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions.

Table 1 displays the average delay ranges associated with each LOS category for signalized intersections. The LOS is based on the average delay experienced by all vehicles passing through the intersection.

TABLE 1:
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Average Control Delay (seconds/vehicle)[1]
	Signalized Intersections
A	0 – 10.0
B	10.1 – 20.0
C	20.1 – 35.0
D	35.1 – 55.0
E	55.1 – 80.0
F	> 80.0

Notes:
1. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay based on *Highway Capacity Manual* (Transportation Research Board, 2010).

LEVEL OF SERVICE STANDARDS

On March 3, 2015, the City of Sacramento City Council adopted the 2035 General Plan. The Mobility Element of the City of Sacramento's *2035 General Plan* outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The following LOS policy is relevant to this study:

- **M 1.2.2** The City shall implement a flexible context-sensitive Level of Service (LOS) standard, and will measure traffic operations against the vehicle LOS thresholds established in this policy. The City will measure vehicle LOS based on the methodology contained in the latest version of the Highway Capacity Manual (HCM) published by the Transportation Research Board. The City's specific vehicle LOS thresholds have been defined based on community values with respect to modal priorities, land use context, economic development, and environmental resources and constraints. As such, the City has established variable LOS thresholds appropriate for the unique characteristics of the City's diverse neighborhoods and communities. The City will strive to operate the roadway network at LOS D or better for vehicles during typical weekday conditions including AM and PM peak hour with certain exceptions mapped on Figure M-1 (and listed in the actual General Plan document).

  A. Core Area (Central City Community Plan Area) – LOS F allowed
  B. Priority Investment Areas – LOS F allowed
  C. LOS E roadways (11 distinct segments listed). LOS E is also allowed on all roadway segments and associated intersections located within ½ mile walking distance of a light rail stations.
  D. LOS F roadways (24 distinct segments listed)
  E. If maintaining the above LOS standards would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals, LOS E or F conditions may be accepted provided that provisions are made to improve the overall system, promote non-vehicular transportation and/or implement vehicle trip reduction measures as part of a development project or a city-initiated project. Additionally, the City shall not expand the physical capacity of the planned roadway network to accommodate a project beyond that identified in Figure M4 and M4a (2035 General Plan Roadway Classification and Lanes).

The *I-80/Capital City Freeway Corridor System Management Plan* (Caltrans, 2009) identifies a concept LOS F and current LOS F operations for the segment of I-80 in the project vicinity. For existing LOS F operations, no further exacerbation is permitted, as indicated by delay performance measurement. No specific thresholds are provided for ramp terminal intersections.

Policy M 1.2.2 is applied to the study intersections as follows:

- Under existing plus project conditions, intersections 1-5 are subject to the City's base LOS D standard. Intersections 6 and 7 would be significantly impacted if the project caused operations to worsen to LOS F or exacerbate LOS F conditions.
- Under cumulative conditions, intersections 1-5 are subject to the City's LOS E standard for intersections because they would each be located within ½-mile walking distance of a light rail station (i.e., Regional Transit's Green Line will run parallel to Truxel Road with a planned station near Natomas Crossing Drive and another just south of Arena Boulevard). Intersections 6 and 7

would be significantly impacted if the project caused operations to worsen to LOS F or exacerbate projected LOS F conditions.

SIGNIFICANCE CRITERIA

The following describes the significance criteria used to identify project-specific and cumulative impacts to the transportation system. These criteria are derived from the City of Sacramento General Plan, City of Sacramento *Traffic Impact Study Guidelines*, and policies of other affected agencies.

Intersections

Impacts to the roadway system are considered significant if:

- The traffic generated by the project degrades LOS from acceptable (without the project) to unacceptable (with the project);
- The LOS (without project) is already (or projected to be) unacceptable and project generated traffic increases the average vehicle delay by 5 seconds or more.
- Project traffic causes (or exacerbates) vehicular queuing on a freeway off-ramp to extend onto the freeway mainline.

Freeways

Impacts to the freeway system are considered significant if:

- Project traffic causes (or exacerbates) vehicular queuing on a freeway off-ramp to extend onto the freeway mainline.

Transit

Impacts to the transit system are considered significant if the proposed project would:

- Adversely affect public transit operations; or
- Fail to adequately provide access to transit.

Bicycle Facilities

Impacts to bicycle facilities are considered significant if the proposed project would:

- Adversely affect existing or planned bicycle facilities; or
- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

Impacts to pedestrian circulation are considered significant if the proposed project would:

- Adversely affect existing or planned pedestrian facilities; or
- Fail to adequately provide for access by pedestrians.

Construction-Related Traffic Impacts

The project would have a temporarily significant impact during construction if it would:

- Degrade an intersection or roadway to an unacceptable level;
- Cause inconveniences to motorists due to prolonged road closures; or
- Result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists.

2. EXISTING CONDITIONS

This chapter describes the existing physical and operational characteristics of the transportation system within the study area including the roadway, transit, bicycle, and pedestrian components of the system.

ROADWAY SYSTEM

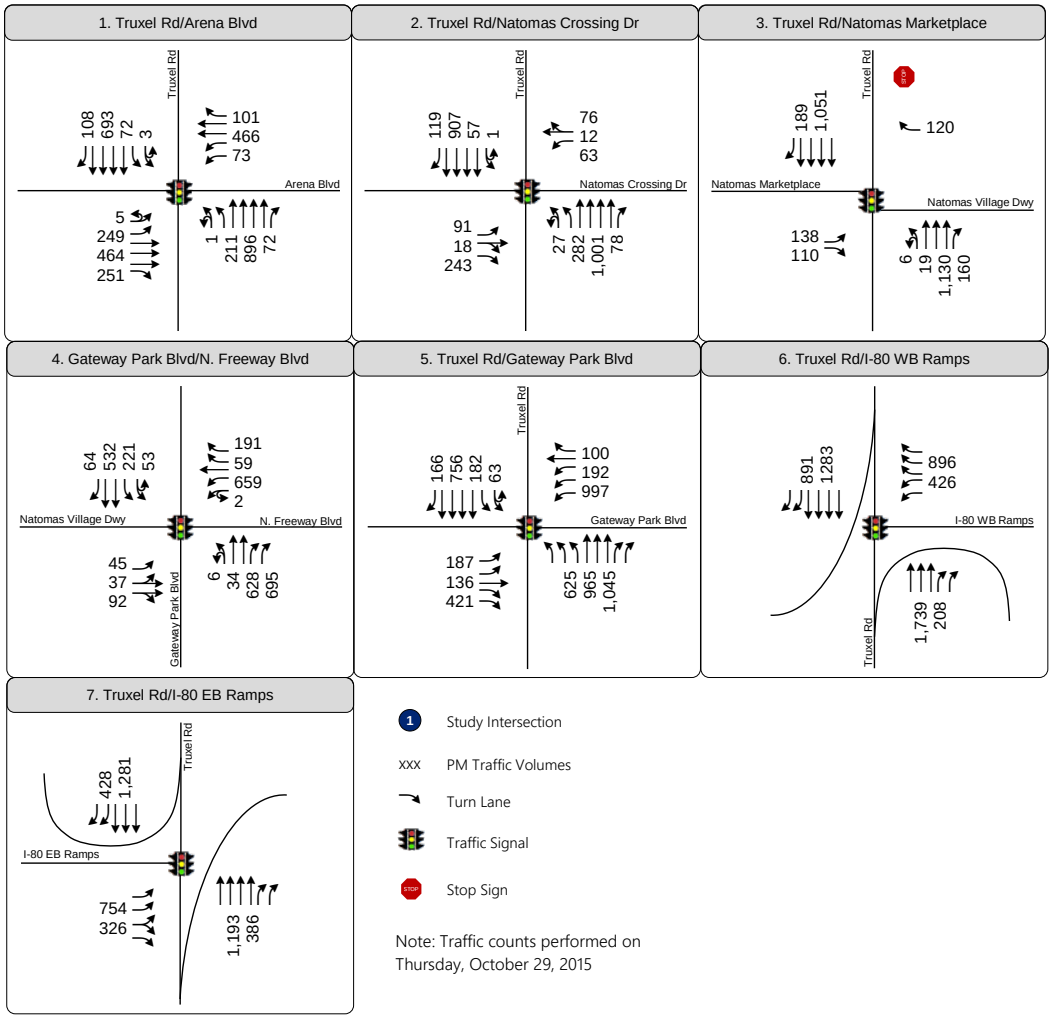
Figure 3 shows the study area roadway network. Key roadways in the study area include:

- Truxel Road – is an arterial street that extends from the Garden Highway in a northerly direction to Del Paso Boulevard in North Natomas. This street then becomes Natomas Boulevard and continues further north. Within the study area, it consists of three to four lanes in each direction and has a posted speed limit of 45 miles per hour (mph). Truxel Road has an interchange with the I-80. On-street parking is prohibited on Truxel Road through the study area.
- Gateway Park Boulevard – extends in a northeasterly direction from Truxel Road, intersecting North Freeway Boulevard, then extending in a northerly direction to Arena Boulevard. It has three lanes in each direction between Truxel Road and North Freeway Boulevard and two lanes in each direction north of North Freeway Boulevard. On-street parking is prohibited through the study area and the posted speed limit is 40 mph.
- North Freeway Boulevard – begins at Gateway Park Boulevard and extends in a generally easterly direction. Within the study area, it consists of three lanes in each direction. On-street parking is prohibited through the study area.

Traffic counts were collected during the PM (4:00 – 6:00 PM) peak period at all study intersections on either Wednesday, October 28, 2015 or Thursday, October 29, 2015. Schools were in session at the time of the counts. Due to a traffic count equipment malfunction, counts at Truxel Road/I-80 EB Ramps were not available, and thus replaced by counts from the City of Sacramento (counted by idax). These counts (from March 10, 2015) were balanced to match adjacent intersection counts.

There was a Sacramento Kings home game at Sleeptrain Arena on October 28th that started at 7:00 PM. When compared with counts at adjacent intersections on October 29th, the October 28th counts were higher due to early arrivals to the game. Since professional basketball games will no longer be played at Sleeptrain Arena beyond April/May 2016, trips associated with the October 28th game were removed from the two intersections counted on that day. All traffic counts can be found in Appendix A.

Figure 3 displays the existing PM peak hour traffic volumes, lane configurations, and traffic controls at each intersection. At the Truxel Road/Gateway Park Boulevard intersection, the PM peak hour occurred from 5:00 to 6:00 PM. The peak hours were similar at the other study intersections. Figure 3 shows that all seven study intersections are controlled by traffic signals. However, the existing driveway intersecting Truxel Road is not part of the Natomas Marketplace partial traffic signal and is controlled by a stop sign.



Note: Traffic counts performed on Thursday, October 29, 2015

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Figure 3

PM Peak Hour Traffic Volumes and Lane Configurations
Existing Conditions

As part of the traffic count data collection, maximum vehicle queues were recorded for several critical turning movements. **Table 2** displays the available storage, observed maximum vehicle queue, and modeled (via SimTraffic) maximum queue lengths for the PM peak hour. It is important for the SimTraffic model to be adequately calibrated to existing conditions because it will be used to estimate queues for existing plus project and cumulative conditions.

TABLE 2:
PM PEAK HOUR QUEUING ANALYSIS – EXISTING CONDITIONS

Intersection	Movement	Available Storage (ft.)	Maximum Observed Vehicle Queue (ft.)[1]	Maximum Modeled Vehicle Queue (ft.)[2]	Difference (vehicles)
4. Gateway Park Blvd / N. Freeway Boulevard	NB TH[3]	725 [3]	350	400	+2
	NB LT	200	100	75	+1
	WB LT[3]	700 [3]	700	700	0
5. Truxel Rd / Gateway Park Blvd	SB LT	225	150	225	+3
	WB LT	700 [3]	700	700	0

Notes:
1. Observed queues on Thursday, October 29, 2015. Values rounded to nearest 25 ft (assumed 25-ft design vehicle).
2. Modeled results based on maximum queue length reported from SimTraffic. Values rounded to nearest 25 feet.
3. Total storage length to adjacent upstream intersection.

Source: Fehr & Peers, 2016

The SimTraffic model validates well against the observed maximum vehicle queues in the project vicinity. It is able to replicate queue spillbacks in the westbound left-turn lanes at Truxel Road/Gateway Park Boulevard that extend into the Gateway Park Boulevard/North Freeway Boulevard intersection. It also replicates extensive queuing in the left-turn movement from westbound North Freeway Boulevard onto Gateway Park Boulevard. In summary, the SimTraffic model is adequately calibrated for use in this study.

The following page contains a screenshot of a portion of the SimTraffic model used to analyze the study intersections. This image shows the queue spillback on westbound Gateway Park Boulevard extending to North Freeway Boulevard.

View of existing vehicular queuing on Gateway Park Boulevard and North Freeway Boulevard

Table 3 summarizes existing PM peak hour operations at the study intersections (refer to Appendix A for detailed calculations). During the PM peak hour, all study intersections operate at LOS D or better, with the exception of Truxel Road/Gateway Park Boulevard, which operates at LOS E.

TABLE 3:
INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Control[1]	PM Peak Hour	
		Delay (sec/veh)	LOS
1. Truxel Rd. / Arena Blvd.	Traffic Signal	29.8	C
2. Truxel Rd. / Natomas Crossing Dr.	Traffic Signal	24.9	C
3. Truxel Rd. / Natomas Marketplace (North Entrance)[2]	Traffic Signal	18.2	B
4. Gateway Park Blvd / N. Freeway Blvd.	Traffic Signal	44.3	D
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	63.1	E
6. Truxel Rd. / I-80 Westbound Ramps	Traffic Signal	23.2	C
7. Truxel Rd. / I-80 Eastbound Ramps	Traffic Signal	12.4	B

Notes:
1. For signalized intersections, the LOS is based on the average delay experienced by all vehicles passing through the intersection.
2. This intersection consists of a partial traffic signal. Thus, the delay and LOS shown represents only the movements affected by the signal, including the southbound through and right, eastbound left and right, and northbound left movements.

Source: Fehr & Peers, 2016

BICYCLE SYSTEM

Figure 4 displays the existing bicycle facilities located in the vicinity of the project site based on information from the City of Sacramento and review of aerial imagery. As shown, Class II bike lanes (on-street with appropriate signing and striping) exist along portions of Truxel Road, Gateway Park Boulevard, Natomas Crossing Drive, North Freeway Boulevard, and Arena Boulevard. Figure 4 also shows a Class I (off-street, dedicated two-way path) that begins at North Freeway Boulevard, and extends westerly parallel to I-80 and then northerly parallel to Truxel Road (on the west side of the street).

PEDESTRIAN SYSTEM

Figure 4 also displays the pedestrian facilities located in the vicinity of the project site. As shown, a sidewalk exists along the project's frontage on Truxel Road. A sidewalk is also present on the south side of the driveway that serves the Natomas Village Shopping Center. Sidewalks are present along Gateway Park Boulevard and North Freeway Boulevard. The north, west, and south legs of the Truxel Road/Gateway Park Boulevard intersection feature pedestrian-actuated crosswalks. All approaches to the North Freeway Boulevard/Gateway Park Boulevard intersection feature crosswalks.

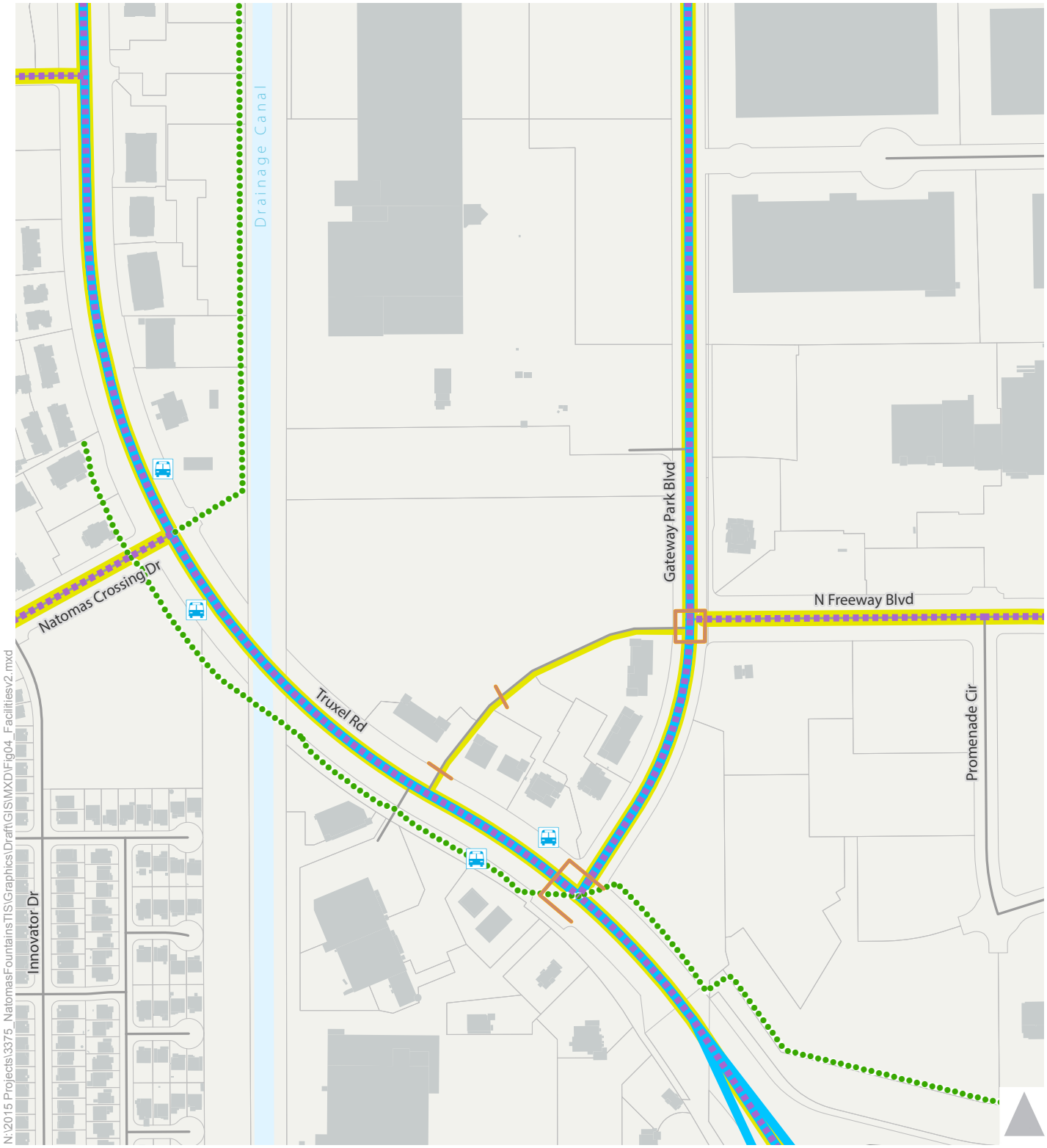

Figure 4

Pedestrian, Bicyle and Transit Facilities - Existing Conditions

TRANSIT SYSTEM

Public transit service within the study area is provided by bus, which is operated by Sacramento Regional Transit (RT). The following routes serve the area:

Route 11 provides service from Club Center Drive in North Natomas, southerly along Natomas Boulevard and Truxel Road to Garden Highway. Monday through Friday, Route 11 operates on 30-minute headways during most of the day (otherwise 60-minute headways), including AM and PM peak hours. The route also operates on Saturdays with 60 minute headways, but not on Sundays or holidays.

Route 13 provides service on Gateway Park Boulevard and Truxel Road. The route then continues north until Arena Boulevard and then heads in a generally easterly direction to Northgate Boulevard. It then travels along Northgate Boulevard and Arden Way to the Arden/Del Paso Light Rail Station. Monday through Friday, Route 13 operates on 60-minute headways from about 6:00 AM to 8:30 PM. The route does not operate on Saturdays, Sundays, or holidays.

These routes feature a northbound stop (shelter) on Truxel Road just south of the existing drive aisle intersection on Truxel Road. A southbound stop (bench only) is provided in a similar location across the street.

3. EXISTING PLUS PROJECT CONDITIONS

This chapter analyzes the potential traffic impacts of the proposed project on the surrounding roadway system under existing conditions. Chapter 4 identifies the significant impacts of the project on the roadway system, as well as any impacts to bicycle, pedestrian, and transit modes.

PROJECT TRAVEL CHARACTERISTICS

This chapter begins by describing the project's expected travel characteristics including the anticipated number of vehicle trips, directionality of those trips, and expected travel routes.

Trip Generation

The first step in analyzing the proposed project's travel characteristics was to estimate its weekday AM and PM peak hour trip generation using data published in the *Trip Generation Manual, 9th Edition* (Institute of Transportation Engineers, 2012) The *Trip Generation Manual* is the most widely used industry resource for this type of data. The trip generation data are organized by land use types, with more than 170 different categories of land uses. For each category, the *Trip Generation Manual* provides a data set for use in estimating the number of vehicle and person trips generated by a site based on its characteristics such as physical size or intensity. Trips may be estimated by direction (entering or exiting the site), and for time periods typically pertaining to a full day (weekday or weekend), peak periods of the adjacent roadway, and peak hours of the particular land use. Used properly, this reference provides an objective basis for estimating trips generated by a proposed development.

The expected amount of internal trip-making within the site was estimated using the Mixed-Use Trip Generation Model (MXD). This model was developed for the US Environmental Protection Agency (EPA) by consultants and academic researchers to more accurately estimate the external vehicular trip generation of mixed-use land development projects than prior methods (e.g., ITE internalization spreadsheet). The model was developed based on empirical evidence at 240 mixed-use projects located across the U.S. The model considers various built environment variables such as land use density, regional location, proximity to transit, and various design variables when calculating the project's internal trips, and external trips made by auto, transit, and non-motorized modes. The MXD model has been used in dozens of EIRs and other environmental documents throughout California.

The following specific adjustments were made:

- Internalization: The degree to which project trips remain internal to the site is caused by the project's complementary land uses. The MXD model predicts that internalization would be in the 1 to 2 percent range during the AM peak hour (due to modest levels of trip generation associated with the retail and supermarket), and in the 7 to 8 percent range during the PM peak hour.

- Pass-by Trips: Per *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, 2014), 34 percent of retail trips, 43 percent of high-turnover sit-down restaurant trips, and 36 percent of supermarket trips are expected to be pass-by trips during the PM peak hour. The *Trip Generation Handbook* does not specify pass-by trips for the AM peak hour. In the absence of this data, the same percentages used for the PM peak hour were assumed and applied to the AM peak hour.

This study assumes no additional adjustments for walk/bike trips and transit trips to/from the project site. This is because the ITE trip rates already reflect a certain amount of such travel activity based on the sampled sites being located in primarily suburban locations.

Table 4 displays the trip generation of the proposed project during the weekday AM and PM peak hours. During the PM peak hour, the project would generate a combined 945 new or pass-by trips, which is the total number of trips that would use the project driveways. The project would generate 592 new PM peak hour vehicle trips, which represents new travel added to the study intersections. This table indicates that the AM peak hour trip generation would be 45 percent less than the PM peak hour trip generation, providing further evidence for why a quantitative AM peak hour analysis was not conducted in this study.

TABLE 4:
PROPOSED PROJECT AM AND PM PEAK HOUR TRIP GENERATION

Land Use	Quantity (ksf)	ITE Land Use Code	Trip Rate [1]		Trips					
			AM Peak Hour	PM Peak Hour	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Retail	55.375	820	1.96	7.28	109	67	41	403	194	210
High-Turnover Sit-Down Restaurant	31.605	932	10.81	9.85	342	188	154	311	187	125
Supermarket	28.9	850	3.40	10.76	98	61	37	311	159	152
Gross Trips					548	316	232	1,025	539	487
Internal Trips (1.2% during AM and 7.8% during PM) [2]					-7	-4	-3	-80	-42	-38
Pass-by Trips [3]					-217	-124	-92	-353	-187	-166
New Vehicle Trips					**325**	**188**	**137**	**592**	**309**	**283**

Notes:

[1] Trip rates from *Trip Generation Manual* (ITE, 2012). Fitted curve equations used to estimate trips for supermarket and retail uses. Average rate used to estimate trips for high-turnover sit-down restaurant use due to lack of equation.

[2] Based on results of MXD+ trip generation model. See text on the previous page.

[3] Per *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, 2014), 34 percent of PM peak hour retail trips, 43 percent of PM peak hour high-turnover sit-down restaurant trips, and 36 percent of PM peak hour supermarket trips are expected to be pass-by trips. These same percentages were assumed for AM peak hour traffic.

ksf = thousand square feet.

Table 5 displays the project's average weekday daily trip generation. As shown, the project is estimated to generate approximately 6,900 new vehicle trips on a typical weekday.

TABLE 5:
PROPOSED PROJECT AVERAGE DAILY TRIP GENERATION

Land Use	Quantity (ksf)	ITE Land Use Code	Trip Rate	Trips
Retail	55.375	820	83.5	4,624
High-Turnover Sit-Down Restaurant	31.605	932	127.15	4,019
Supermarket	28.9	850	102.24	2,955
			Gross Trips	11,598
			Internal Trips (5%)	- 580
			Pass-by Trips [2]	- 4,146
			New Vehicle Trips	6,872

Notes:
[1] Trip rates from *Trip Generation Manual* (ITE, 2012). Fitted curve equation used to estimate trips for retail uses. Average rate used to estimate trips for supermarket and high-turnover sit-down restaurant uses due to lack of equation or poor fit of equation to data points.
[2] Same pass-by percentages used for PM peak hour conditions were also used for daily conditions.
ksf = thousand square feet.

Trip Distribution/Assignment

Figures 5 and 6 show the expected distribution of new inbound and outbound vehicle trips, respectively. The distribution percentages are based on a review of current travel patterns (i.e., trip patterns exiting/entering the adjacent Natomas Village shopping center, as well as general travel patterns along Truxel Road), and complementary land uses (i.e., employment and residential areas).

- Figure 5 shows that PM peak hour inbound trips are distributed fairly equally from origins in the south (i.e., I-80), the north (i.e., residential areas), and the east (i.e., employment). Inbound traffic may use either of the two right-turn only driveways located on Truxel Road, or also access the site via the signalized North Freeway Boulevard/Gateway Park Boulevard intersection (#4). Inbound traffic arriving from the north on Truxel Road would perform a u-turn at Gateway Park Boulevard and then access the site via the driveways on Truxel Road.

- Figure 6 shows the distribution of outbound project trips. Due to outbound left-turn movement restrictions from the driveways on Truxel Road, a greater percentage of outbound trips (versus inbound trips) would exit through the Gateway Park Boulevard/North Freeway Boulevard intersection (#4) to reach destinations to the south.

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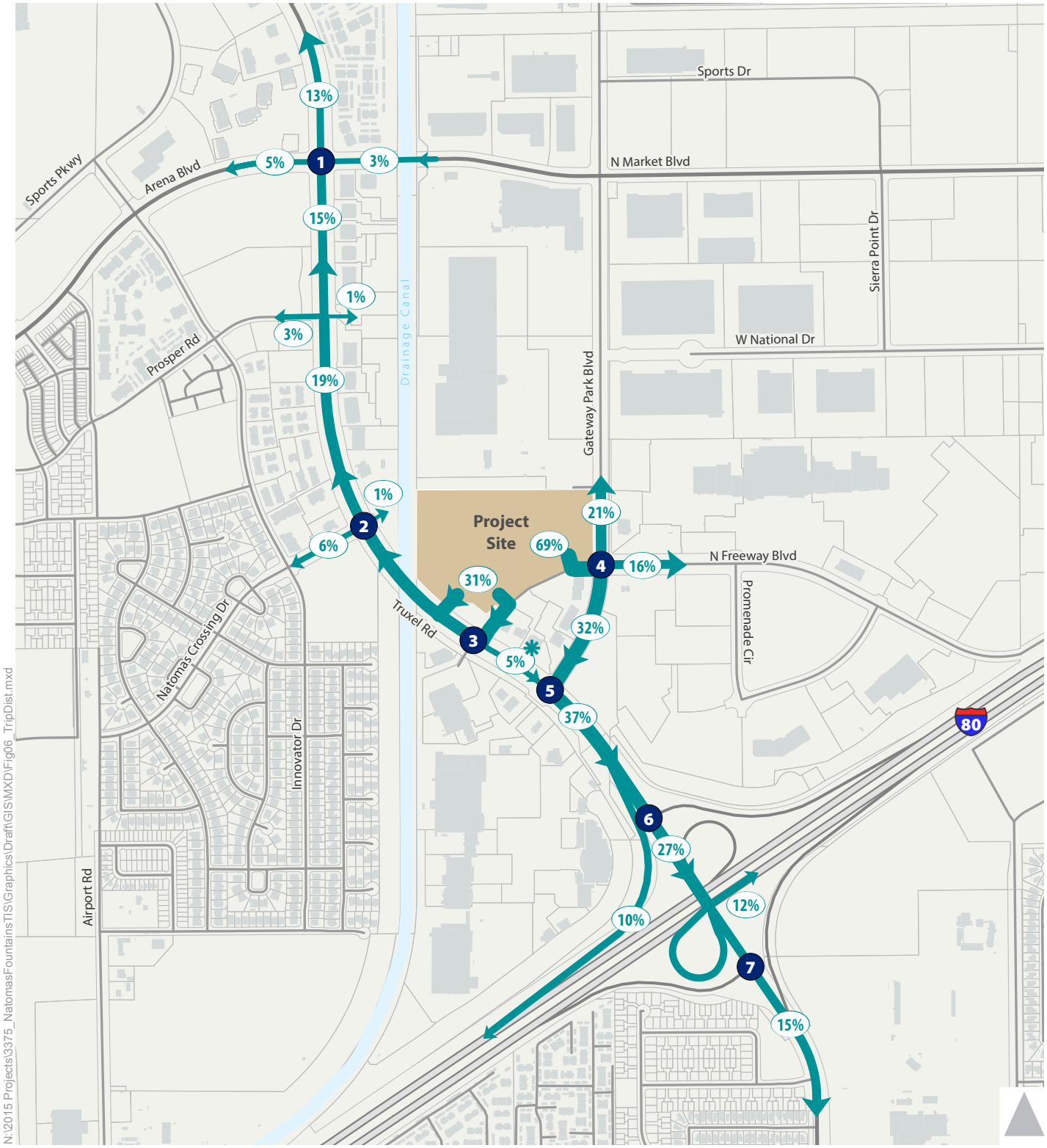
1 Study Intersections

1% Trip Distribution

✱ Entire 27% of inbound trips on southbound Truxel Rd assumed to perform u-turn at Gateway Park Blvd/Truxel Rd (Study Intersection 5) to enter project site at right in/right out driveways.

Figure 5

Inbound Project Trip Distribution



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1 Study Intersections

1% Trip Distribution

* 5% of outbound trips on northbound Truxel Rd assumed to perform u-turn at Natomas Crossing Dr/Truxel Rd (Study Intersection 2).

Figure 6

Outbound Project Trip Distribution

TRAFFIC FORECASTS

The PM peak hour traffic forecasts were developed for the "existing plus project" condition by adding project trips to existing volumes using the project's trip generation from Table 4 and trip distribution percentages from Figures 5 and 6. **Figure 7** displays project only trips at the study intersections. **Figure 8** displays the resulting existing plus project forecasts.

After reviewing preliminary 'plus project' results in SimTraffic, a minor traffic assignment adjustment was made by shifting 40 vehicles (headed to destinations in the south) assumed to exit at the Gateway Park Boulevard/North Freeway Boulevard intersection, to instead exit one of the two right-turn only driveways on Truxel Road, and perform a u-turn at Natomas Crossing Drive/Truxel Road to head south on Truxel Road. This adjustment was made because of excessive queuing predicted to occur at the eastbound exit at Gateway Park Boulevard/North Freeway Boulevard in the traffic simulation.

INTERSECTION OPERATIONS

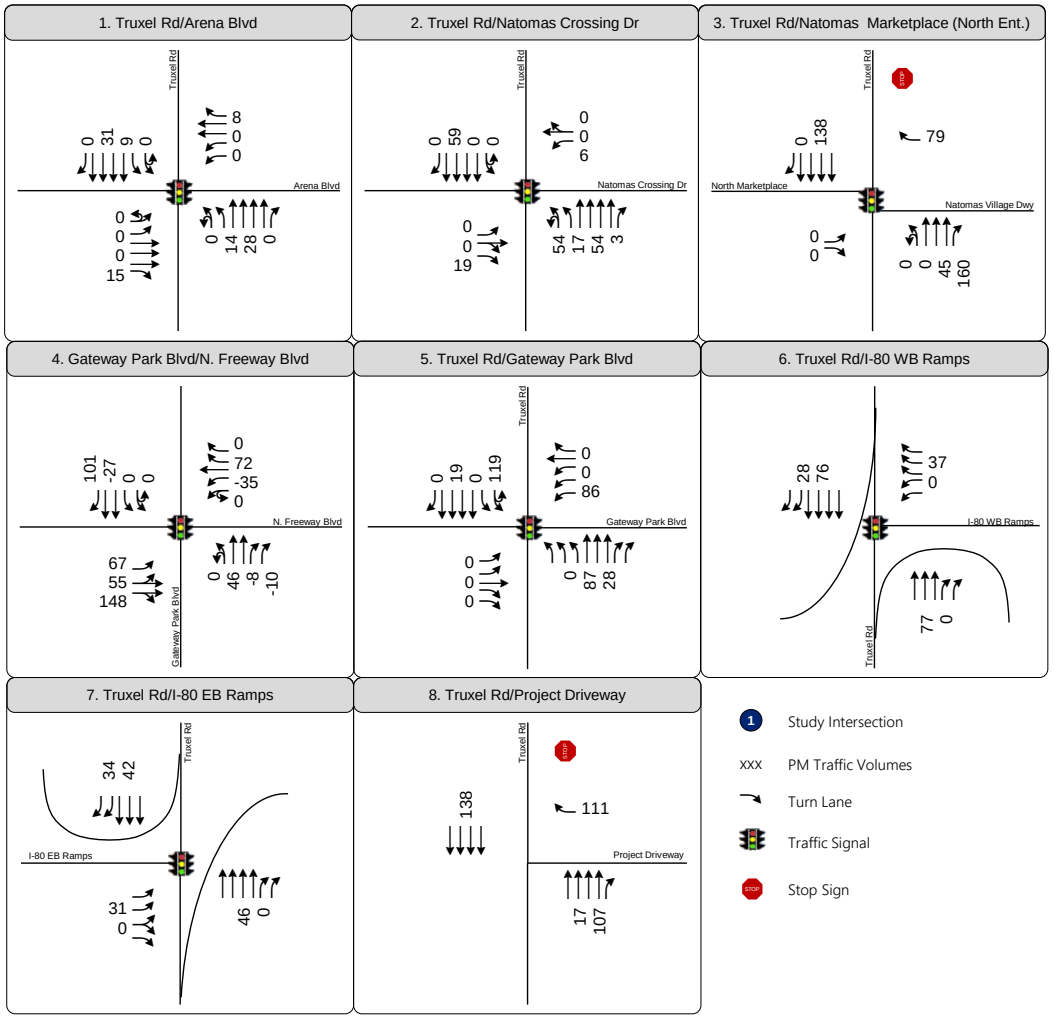
Table 6 displays the operational results at the study intersections under "existing plus project" conditions. Refer to Appendix B for technical calculations.

TABLE 6:
PM PEAK HOUR INTERSECTION OPERATIONS – EXISTING PLUS PROJECT CONDITIONS

Intersection	Control[1]	Existing Conditions		Existing Plus Project Conditions	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Truxel Rd. / Arena Blvd.	Traffic Signal	29.8	C	30.7	C
2. Truxel Rd. / Natomas Crossing Dr.	Traffic Signal	24.9	C	25.9	C
3. Truxel Rd. / Natomas Marketplace (North Entrance)	Traffic Signal	18.2	B	21.8	C
4. Gateway Park Blvd. / N. Freeway Blvd.	Traffic Signal	44.3	D	49.5	D
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	63.1	E	67.6	E
6. Truxel Rd. / I-80 Westbound Ramps	Traffic Signal	23.2	C	36.8	D
7. Truxel Rd. / I-80 Eastbound Ramps	Traffic Signal	12.4	B	14.5	B

Notes:
1. For signalized intersections, the LOS is based on the average delay experienced by all vehicles passing through the intersection.

Source: Fehr & Peers, 2016



* Negative volumes at Gateway Park Blvd/N. Freeway Blvd represent volumes which decreased due to pass-by trips entering the project.

Figure 7

PM Peak Hour Traffic Volumes and Lane Configurations
Project Only Conditions

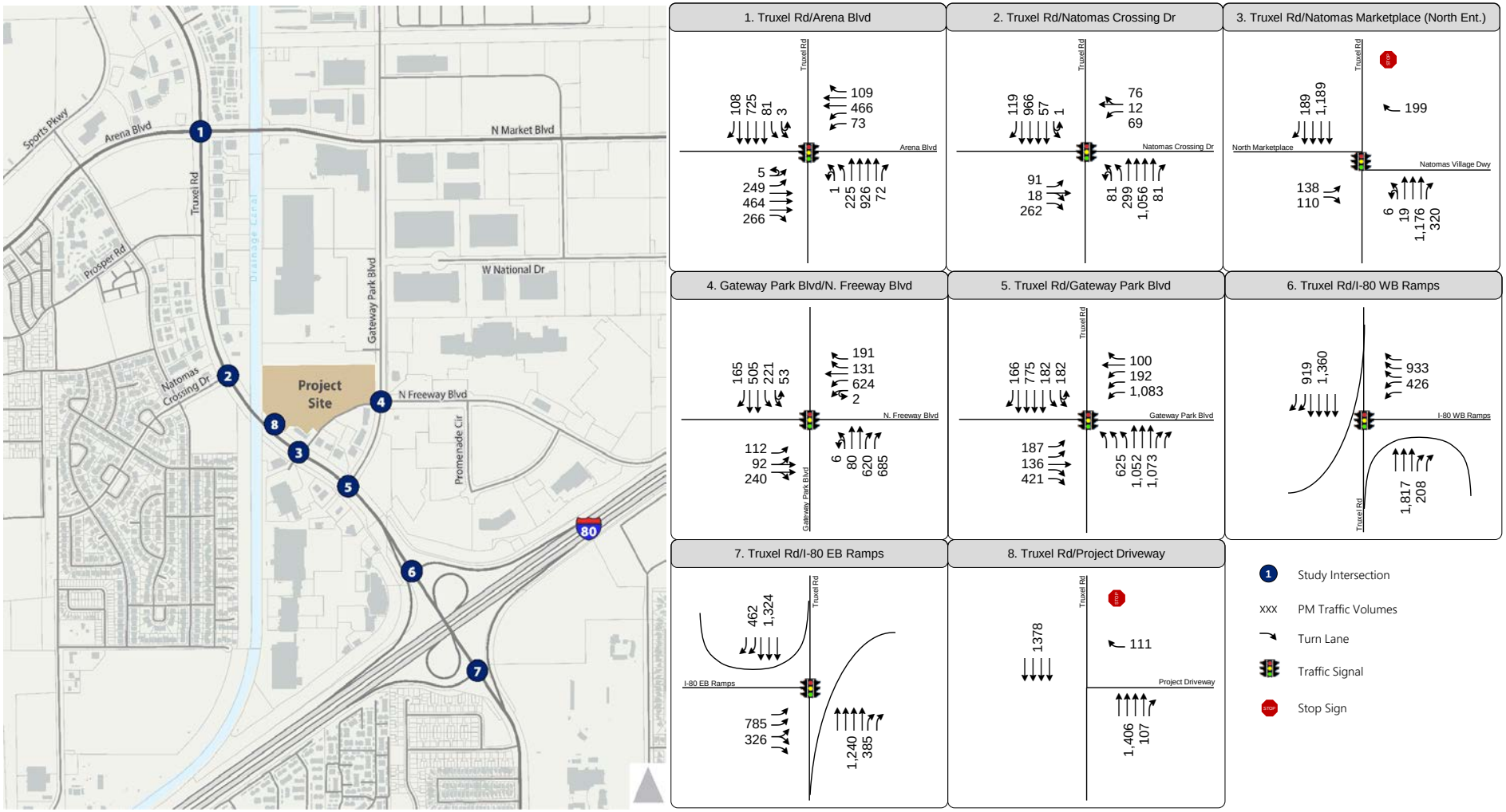


Figure 8

PM Peak Hour Traffic Volumes and Lane Configurations
Existing Plus Project Conditions

This table indicates the following:

- During the PM peak hour, the average delay at the Truxel Road/Natomas Marketplace North Entrance intersection would increase from about 18 to 22 seconds per vehicle. Operations would degrade from LOS B to LOS C.
- The average delay at the Gateway Park Boulevard/North Freeway Boulevard intersection would increase from about 44 to 50 seconds per vehicle and remain LOS D, while the average delay at Truxel Road/Gateway Park Boulevard would increase from about 63 to 68 seconds and remain LOS E.
- The Truxel Road/I-80 WB Ramps intersection would experience the greatest delay increase, from about 23 to 37 seconds and the LOS would drop from C to D.
- Changes in average delay at other study intersections would be relatively small and would not result in changes to LOS.

Table 7 display the maximum vehicle queues for key movements during the PM peak hour at the Gateway Park Boulevard/North Freeway Boulevard and Truxel Road/Gateway Park Boulevard intersections under "existing plus project" conditions. Refer to Appendix B for technical calculations.

TABLE 7:
PM PEAK HOUR QUEUING ANALYSIS – EXISTING PLUS PROJECT CONDITIONS

Intersection	Movement	Available Storage (ft.)	Maximum Observed Vehicle Queue (ft.)[1]	SimTraffic Results - Maximum Vehicle Queue (ft.)			Adjusted Existing Plus Project Maximum Queue (ft.) [3]
				Existing Conditions[1]	Existing Plus Project Conditions[2]	Difference	
4. Gateway Park Blvd / N. Freeway Blvd	NB TH	725	350	400	375	- 25	325
	NB LT	200	100	75	150	+75	175
	WB LT	700	700	700	700	0	700
5. Truxel Rd / Gateway Park Blvd	SB LT	225	150	225	275	+50	200
	WB LT	700	700	700	700	0	700

Notes:
1. Observed queues on Thursday, October 29, 2015. Values rounded to nearest 25 ft.
2. Modeled results based on maximum queue length reported from SimTraffic. Values rounded to nearest 25 feet.
3. Final queue length estimated using the 'difference method' process, whereby the growth in queue predicted by SimTraffic is added to the observed maximum queue length.

Source: Fehr & Peers, 2016

Key findings from this table include:

- The proposed project would cause the maximum vehicle queue in the southbound left-turn lane at the Truxel Road/Gateway Park Boulevard intersection to increase from 150 to 200 feet during the PM peak hour. This queue would remain within the 225 feet of available storage that is provided.
- The project would cause increases in queuing on the northbound left-turn movement at Gateway Park Boulevard at North Freeway Boulevard during the PM peak hour. However, the resulting queue would not exceed the available storage.

EVALUATION OF PROJECT IMPACTS DURING SATURDAY CONDITIONS

Traffic counts were conducted at the Truxel Road/Gateway Park Boulevard intersection from 11 AM to 1 PM on Saturday, February 6, 2015. The peak hour occurred from 12 to 1 PM. The following compares the observed volume during this hour with the weekday PM peak hour volumes:

- During the Saturday peak hour, 5,448 vehicles passed through the Truxel Road/Gateway Park Boulevard intersection. During the weekday PM peak hour, 5,835 vehicles passed through the intersection, which represents a 7 percent increase.
- The two-way volume of traffic on Gateway Park Boulevard between Truxel Road and North Freeway Boulevard was 1,885 vehicles during the Saturday peak hour, which is 29 percent less than the 2,652 vehicles observed during the weekday PM peak hour.

Using ITE trip rates, the project is conservatively[1] estimated to generate 858 new trips during the Saturday peak hour. This represents 45 percent more trips than the project would generate during the weekday PM peak hour. However, when project trips are added to the existing volumes at the Truxel Road/Gateway Park Boulevard intersection, the resultant Saturday mid-day peak hour volume would be four percent lower than the weekday PM peak hour volume. The volume of traffic at the Gateway Park Boulevard/North Freeway Boulevard intersection would be considerably lower during the Saturday peak hour versus the weekday PM peak hour.

Therefore, project impacts during the Saturday mid-day peak hour would be less severe than any impacts identified during the weekday PM peak hour.

[1] For this calculation, trip rates for the 'peak hour of the generator' were used for each land use regardless of whether that peak hour occurred during the Saturday peak hour (12 to 1 PM).

4. PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

This chapter evaluates the significance of project impacts using the criteria described in Chapter 1 and the analysis results from Chapter 3.

EVALUATION OF POTENTIAL INTERSECTION IMPACTS

The proposed project would cause delays to increase at most intersections. However, the project would not cause any intersections to worsen from acceptable to unacceptable levels. The project would operations at all facilities would remain at acceptable levels during the weekday PM peak hour. The project would add 4.5 seconds of delay to the Truxel Road/Gateway Park Boulevard intersection, which currently operates at an unacceptable LOS E. Since this is less than the five-second threshold for exacerbating unacceptable conditions, impacts to study intersections are ***less than significant*** and no mitigation is required.

The project would not cause traffic to spill back onto the freeway mainline on either the I-80 EB or WB off-ramps. Therefore, impacts associated with queuing onto a Caltrans facility are ***less than significant*** and mitigations are not required.

EVALUATION OF POTENTIAL FREEWAY IMPACTS

The project would not cause traffic to spill back onto the freeway mainline on either the I-80 EB or WB off-ramps. Therefore, impacts associated with queuing onto a Caltrans facility are ***less than significant*** and mitigations are not required.

EVALUATION OF TRANSIT IMPACTS

The project would not disrupt or adversely affect existing or planned transit facilities or conflict with adopted City transit plans, guidelines, policies, or standards. The project may be accessed by two Regional Transit bus routes (routes 11 and 13) that feature a stop within ¼-mile of the project site. For these reasons, project impacts to transit facilities are considered ***less than significant***. Therefore, mitigations are not required.

EVALUATION OF BICYCLE IMPACTS

The proposed project would not interfere with any existing bicycle facilities. It would also not preclude implementation of any future bicycle facilities. Refer to Chapter 7 for a discussion of how the new project driveway on Truxel Road would be designed to be compatible with the existing Class II bike lane. Proposed project impacts to bicycle facilities are considered ***less than significant***. Therefore, mitigations are not required.

EVALUATION OF PEDESTRIAN IMPACTS

The project would not disrupt existing or planned pedestrian facilities or conflict with adopted City pedestrian plans, guidelines, policies, or standards. The adjacent intersections feature crosswalks with pedestrian actuation

to facilitate pedestrian travel. The project site plan includes the provision of continuous sidewalks along its frontage on North Freeway Boulevard, the internal driveway, and Truxel Road to accommodate pedestrian travel. The site plan also includes pedestrian connections into the site from adjacent streets as well as a series of pedestrian linkages that connect the parking areas and building entrances. For these reasons, proposed project impacts to pedestrian facilities are considered ***less than significant***. Therefore, mitigations are not required.

EVALUATION OF POTENTIAL CONSTRUCTION IMPACTS

Construction of the proposed project would generate a variety of truck and employee trips. Since the magnitude of these trips during peak hours would be less than that of the proposed project, absolute impacts (in terms of delay and queuing) when compared to project operations would not be significant.

Per City code, the project applicant is required to develop a Construction Traffic Management Plan (TMP) to the satisfaction of the City's Department of Public Works. The plan will include items such as: the number and size of trucks per day, expected arrival/departure times, truck circulation patterns, location of truck staging areas, location/amount of employee parking, a driveway access plan (including provisions for safe vehicular, pedestrian, and bicycle travel, minimum distance from any open trench, special signage, and private vehicle accesses), and the proposed use of traffic control/partial street closures on public streets. The overall goal of the Construction Traffic Management Plan will be to minimize traffic impacts to public streets and maintain a high level of safety for all roadway users. The Construction TMP will adhere to the following performance standards throughout project construction:

1) Delivery trucks shall not idle/stage on Truxel Road or Gateway Park Boulevard.

2) Safe and efficient access routes shall be maintained for existing businesses (and emergency vehicles) in the adjacent Natomas Village Shopping Center shall be maintained.

3) Although unlikely to be necessary, any lane closures on northbound Truxel Road during project construction shall be limited to a single lane during off-peak hours (9:00 AM to 2:30 PM).

4) Roadways, sidewalks, crosswalks, and bicycle facilities shall be maintained clear of debris (e.g., rocks) that could otherwise impede travel and impact public safety.

Provided that this TMP is approved by the City's Department of Public Works, and then implemented by the project applicant, the proposed project impacts during construction are ***less than significant***.

5. CUMULATIVE CONDITIONS

This chapter describes anticipated cumulative (2035) operating conditions in the study area including intersection operations and planned transit service expansions.

TRAFFIC FORECASTS

The cumulative no project scenario assumes the site is developed with 255,000 square feet of office space consistent with the site's Planned Unit Development (PUD) zoning. The cumulative plus project scenario assumes the proposed project is constructed on the site.

A modified version of the Sacramento Area Council of Governments (SACOG) SACMET regional travel demand model (TDM) was used to forecast cumulative traffic volumes at the study intersections. By 2035, Truxel Road is assumed to extend southerly from Garden Highway into the Railyards Specific Plan. In addition, Natomas Crossing Drive is assumed to extend westerly from Truxel Road to connect with East Commerce Way. However, no changes in lane configurations are planned at any of the study intersections.

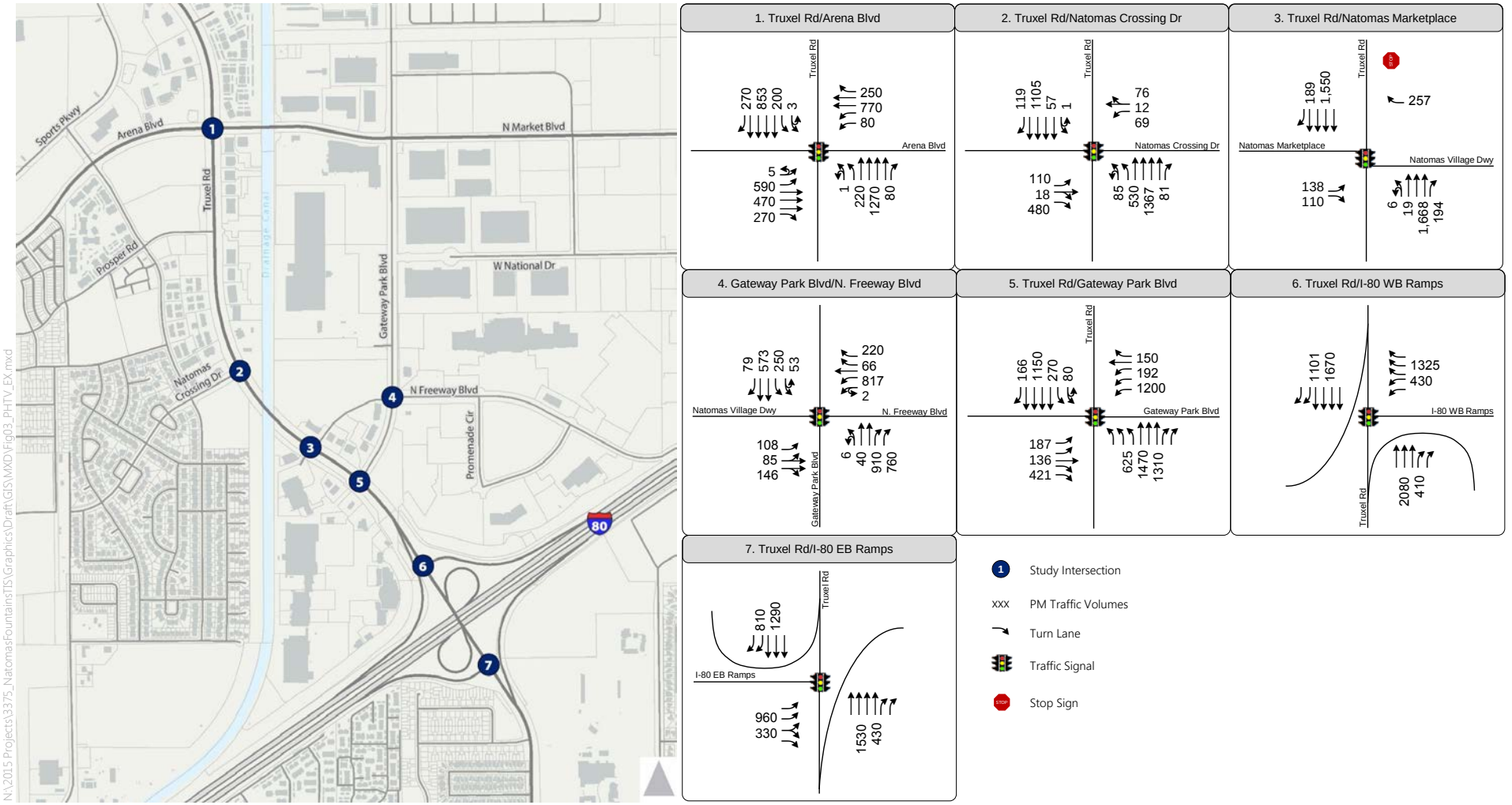
Figures 9 and 10 show cumulative traffic forecasts under no project and plus project conditions, respectively.

INTERSECTION OPERATIONS

Table 8 displays the PM peak hour operations results at the study intersections under both cumulative scenarios. Refer to Appendix C for technical calculations. This table indicates the following:

- The Gateway Park Boulevard/North Freeway Boulevard intersection would worsen from LOS E (no project) to LOS F (with project) during the PM peak hour.
- The Truxel Road/Natomas Marketplace (North Entrance), Truxel Road/Gateway Park Boulevard, and Truxel Road/I-80 Westbound Ramps intersection would each operate at LOS E under cumulative with project conditions.

The degraded operations at the above intersections stem from queuing that occurs at the Truxel Road/Gateway Park Boulevard intersection, extending upstream and adversely affecting other intersections. Due to the severity of these queue spillbacks, a queuing table/analysis is not provided under cumulative conditions.



N:\2015 Projects\3375_NatomasFountainsTIS\Graphics\Draft\GIS\MXD\Fig03_PHTV_EX.mxd

Figure 9

PM Peak Hour Traffic Volumes and Lane Configurations
Cumulative No Project Conditions

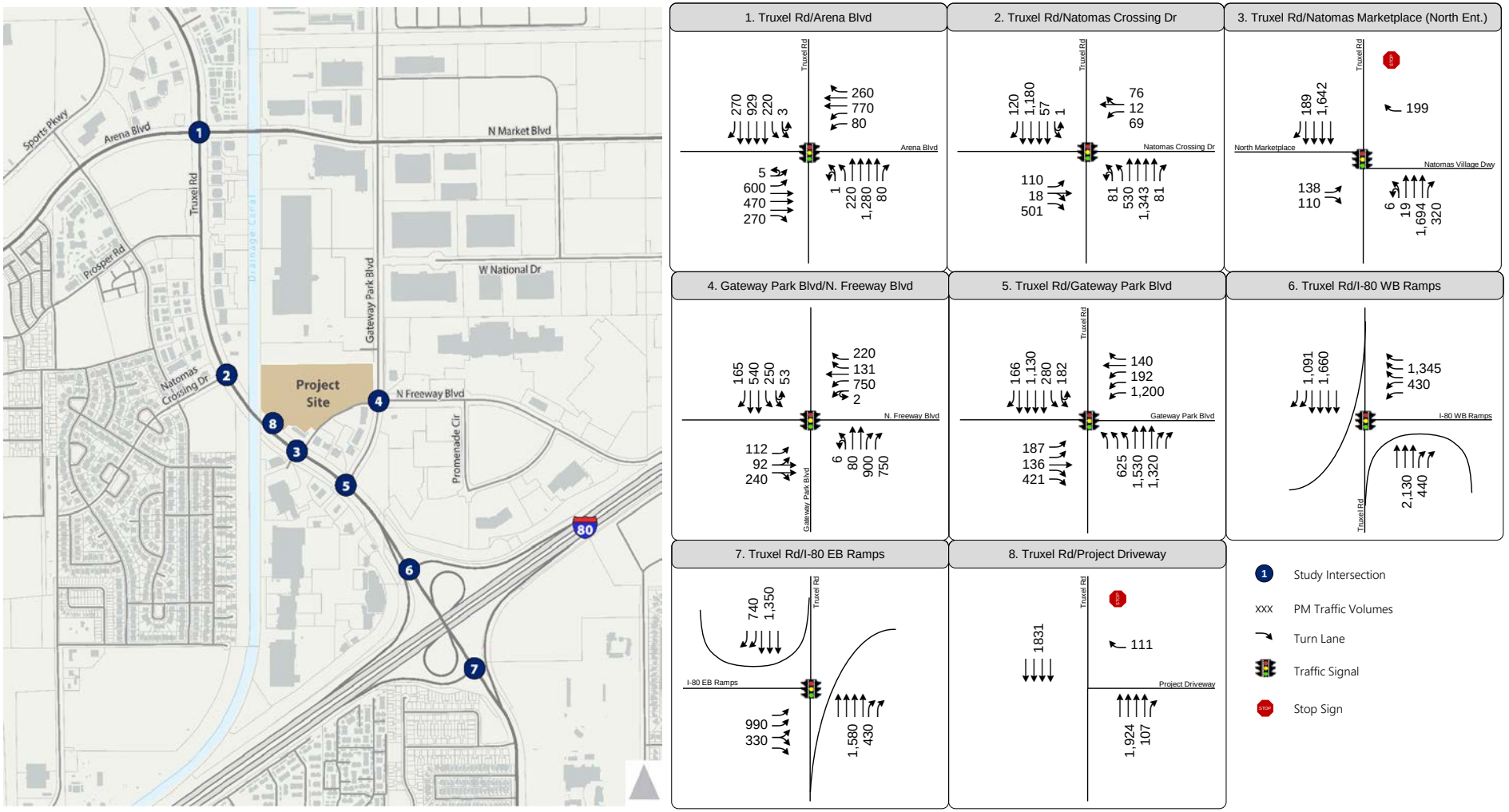


Figure 10

PM Peak Hour Traffic Volumes and Lane Configurations
Cumulative Plus Project Conditions

TABLE 8:
INTERSECTION OPERATIONS – CUMULATIVE CONDITIONS

Intersection	Control[1]	PM Peak Hour			
		No Project		Plus Project	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Truxel Rd. / Arena Blvd.	Traffic Signal	32.5	C	40.8	D
2. Truxel Rd. / Natomas Crossing Dr.	Traffic Signal	35.1	D	54.8	D
3. Truxel Rd. / Natomas Marketplace (North Entrance)[2]	Traffic Signal	50.9	D	69.9	E
4. Gateway Park Blvd / N. Freeway Blvd.	Traffic Signal	75.4	E	86.5	F
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	70.5	E	73.3	E
6. Truxel Rd. / I-80 Westbound Ramps	Traffic Signal	61.6	E	72.2	E
7. Truxel Rd. / I-80 Eastbound Ramps	Traffic Signal	24.7	C	36.4	D

Notes:
1. For signalized intersections, the LOS is based on the average delay experienced by all vehicles passing through the intersection.
2. This intersection is partially signalized. Thus, the delay and LOS shown represents only the movements affected by the signal, including the southbound through and right, eastbound left and right, and northbound left movements.

Source: Fehr & Peers, 2016

6. CUMULATIVE IMPACTS AND MITIGATION MEASURES

This chapter describes the significance of project impacts under cumulative conditions using the criteria described in Chapter 1 and the results from Chapter 5.

EVALUATION OF POTENTIAL INTERSECTION IMPACTS

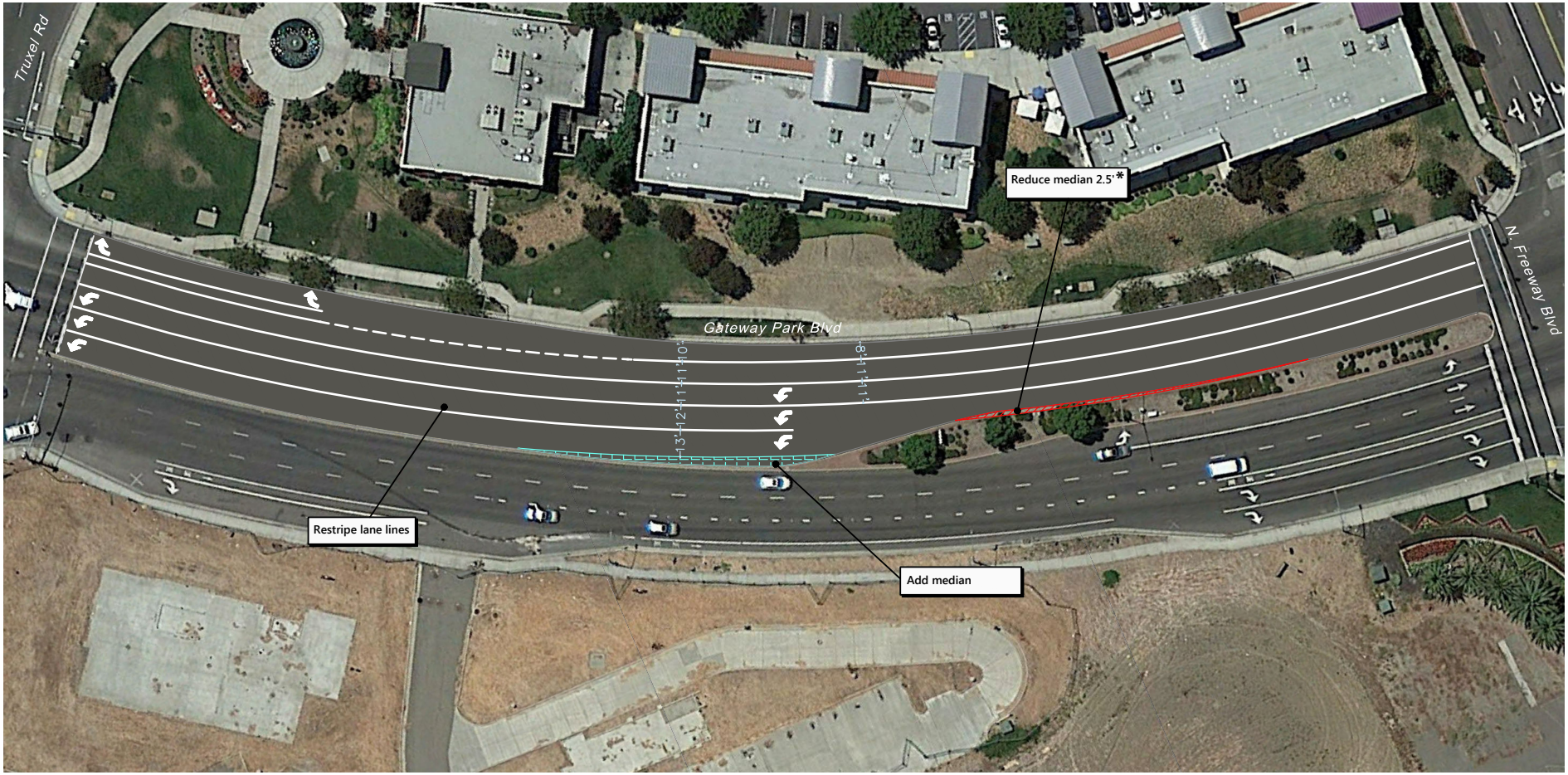
Table 8 shows that unacceptable LOS F operations would occur during the PM peak hour at the Gateway Park Boulevard/North Freeway Boulevard intersection. Based on the results in Table 8, it is apparent that the project would add at least a five-second increase in delay to this intersection. Therefore, project impacts to Gateway Park Boulevard/North Freeway Boulevard intersection would be **cumulatively considerable**. Project impacts at all other study intersections would be less than significant because operations at these facilities would remain acceptable under cumulative plus project conditions.

Impact TR-1: Cumulatively considerable impact (LOS F operations exacerbated) at Gateway Park Boulevard/North Freeway Boulevard intersection during the PM peak hour.

Mitigation TR-1: Pay fair share cost of the following improvements:

- *Restripe eastbound approach at Gateway Park Boulevard/North Freeway Boulevard intersection to consist of one left-turn lane, one through lane, and one right-turn lane.*
- *Coordinate traffic signal at Gateway Park Boulevard/North Freeway Boulevard intersection such that the westbound left-turn is coordinated with the westbound left-turn at Truxel Road/Gateway Park Boulevard. Signal coordination should be maintained along Truxel Road between intersections 5, 6, and 7.*
- *Realign/restripe the southbound departing lanes from the Gateway Park Boulevard/North Freeway Boulevard intersection such that both westbound left turn lanes from North Freeway Boulevard become left-turn lanes approaching Truxel Road (refer to **Figure 11** for illustration of improvements).* This figure indicates that a modest amount of median reconfiguration may be necessary to accommodate this improvement, but no additional right-of-way is needed.
- *Modify the southbound Truxel Road approach at Gateway Park Boulevard to construct a dedicated u-turn lane (refer to **Figure 12** for illustration of improvements).* The proposed sketch in Figure 12 shows that a 200-foot u-turn lane could be provided without requiring any additional right-of-way. However, it would require a decrease in the northbound left-turn lane storage (355 to 210 feet) for the Natomas Marketplace North Entrance. Signal poles are currently positioned in the median nose and would need to be maintained along with a pedestrian refuge area. The design concept on Figure 12 accomplishes this.

Implementation of this mitigation would reduce the impact to ***less-than-significant***.



Restriping Purpose: To enable both left-turns from North Freeway Blvd to turn left onto southbound Truxel Rd, thereby improving operations at the Gateway Park Blvd/North Freeway Blvd intersection**.**

*Amount of median take may be reduced through additional travel lane narrowing and restriping.

Figure 11

Proposed Restriping of Southbound Gateway Park Boulevard

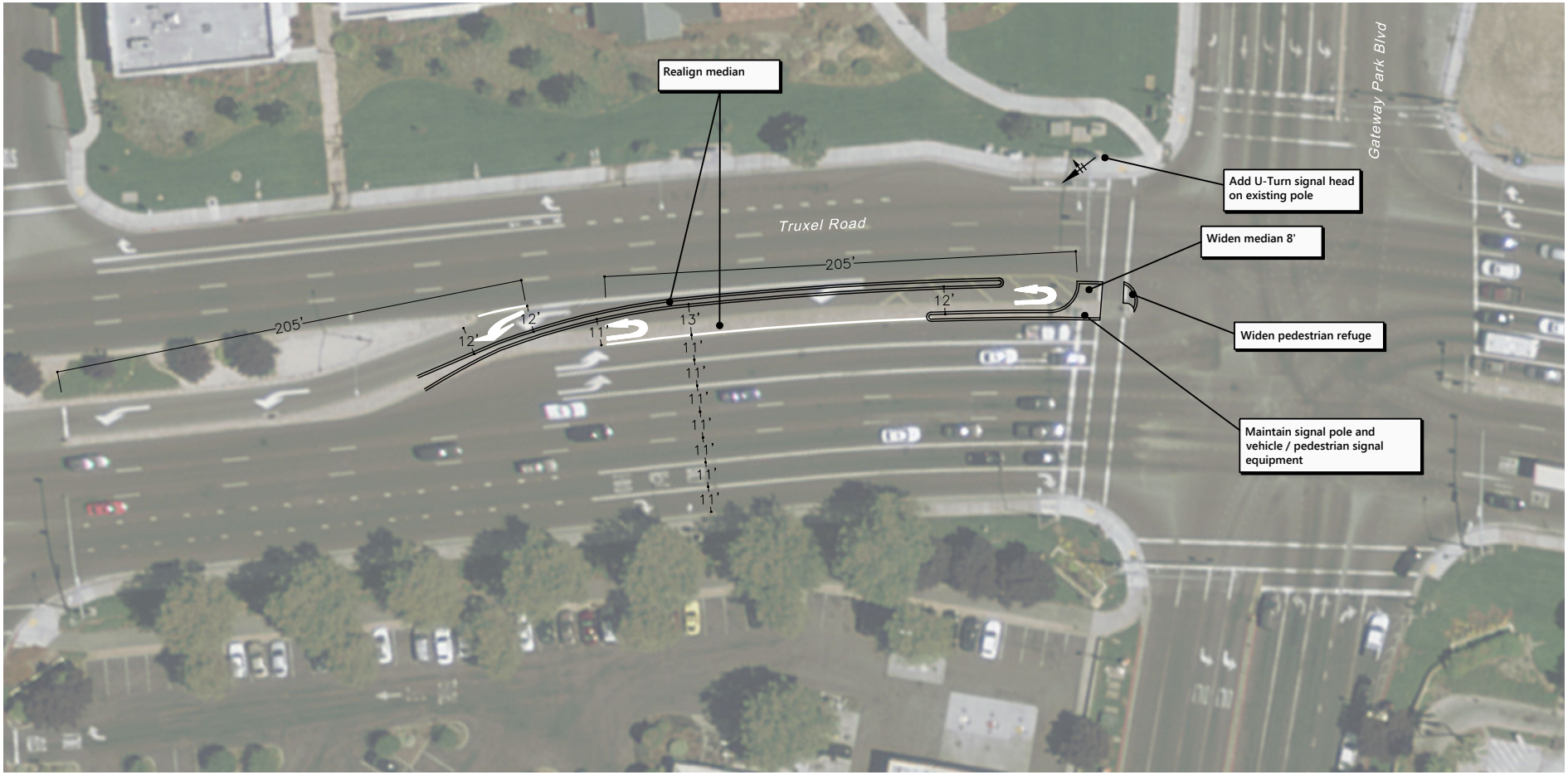


Figure 12

Proposed Southbound U-Turn Lane at
Truxel Road/Gateway Park Boulevard Intersection

The net effect of the above improvements is more balanced lane utilization departing the Gateway Park Boulevard/North Freeway Boulevard intersection, coordinated operations with Truxel Road/Gateway Park Boulevard, more effective lane assignments exiting the project site onto Gateway Park Boulevard, and additional capacity at the Truxel Road/Gateway Park Boulevard intersection.

Table 9 displays the operational benefits provided by the recommended mitigations under cumulative conditions. Refer to Appendix C for detailed calculations.

TABLE 9:
INTERSECTION OPERATIONS – CUMULATIVE CONDITIONS WITH RECOMMENDED MITIGATIONS

Intersection	Control [1]	PM Peak Hour			
		Cumulative Plus Project Conditions		Cumulative Conditions with Recommended Mitigations [2]	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Truxel Rd. / Arena Blvd.	Traffic Signal	40.8	D	40.4	D
2. Truxel Rd. / Natomas Crossing Dr.	Traffic Signal	54.8	D	51.5	D
3. Truxel Rd. / Natomas Marketplace (North Entrance)	Traffic Signal	69.9	E	19.3	B
4. Gateway Park Blvd. / N. Freeway Blvd.	Traffic Signal	86.5	F	57.6	E
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	73.3	E	72.6	E
6. Truxel Rd. / I-80 Westbound Ramps	Traffic Signal	72.2	E	54.1	D
7. Truxel Rd. / I-80 Eastbound Ramps	Traffic Signal	36.4	D	15.1	B

Notes:
1. For signalized intersections, the LOS is based on the average delay experienced by all vehicles passing through the intersection.
2. Refer to previous pages for description of recommended mitigation measures.

Source: Fehr & Peers, 2016

Table 9 indicates that the recommended mitigations would provide the following operational benefits:

- The Gateway Park Boulevard/North Freeway Boulevard intersection would improve from LOS F (unacceptable) to LOS E (acceptable).
- Despite receiving a greater arriving volume (due to upstream efficiency/capacity enhancements along Gateway Park Boulevard), operations at the Truxel Road/Gateway Park Boulevard intersection would remain at an acceptable LOS E due to the additional southbound left/u-turn capacity enhancement.
- The southbound u-turn lane at the Truxel Road/Gateway Park Boulevard intersection would have a maximum queue of 225 feet, while the adjacent southbound left-turn lanes would each have a

maximum queue of 425 feet (i.e., queue would extend into the Natomas Marketplace partial signal). However, the overall extent of queue spillback would be reduced by adding the u-turn lane.

- The Truxel Road/Natomas Marketplace North Entrance and Truxel Road/I-80 interchange ramp terminal intersections would also benefit (i.e., reduced delays and queuing) from the recommended mitigation measures.

Table 10 presents the proposed project's fair share traffic contribution to the two intersections included in the recommended cumulative mitigations. As shown, project trips would represent 42 percent of the total growth in traffic at the Gateway Park Boulevard/North Freeway Boulevard intersection and 20 percent of the total growth in traffic at the Truxel Road/Gateway Park Boulevard intersection.

TABLE 10:
FAIR SHARE RESPONSIBILITY FOR INTERSECTIONS WITH RECOMMENDED MITIGATIONS

Intersection	Control	PM Peak Hour			
		Existing Volume [1]	Project-Added Trips [2]	Cumulative Volume [3]	Fair Share Responsibility [4]
4. Gateway Park Blvd. / N. Freeway Blvd.	Traffic Signal	3,318	409	4,291	42%
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	5,835	339	7,509	20%

Notes:
1. Source: Figure 3.
2. Source: Figure 7.
3. Source: Figure 9.
4. Fair Share calculated as follows: Project trips / (cumulative – existing).

Source: Fehr & Peers, 2016

EVALUATION OF POTENTIAL FREEWAY IMPACTS

The project would not cause traffic to spill back onto the freeway mainline on either the I-80 EB or WB off-ramps. Therefore, impacts associated with queuing onto a Caltrans facility are ***less than significant*** and mitigations are not required.

EVALUATION OF TRANSIT IMPACTS

The project would not disrupt or adversely affect any planned transit facilities or conflict with adopted City transit plans, guidelines, policies, or standards. The planned extension of the LRT Green line would include grade-separated crossings of Gateway Park Boulevard and the Natomas Marketplace (North Entrance) intersections. The project may be accessed by multiple LRT and bus stops within ¼-mile of the project site. For these reasons, cumulative project impacts to transit facilities are considered ***less than significant***. Therefore, mitigations are not required.

It is worth noting that irrevocable offers of dedication (IODs) have been granted by property owners to Regional Transit along portions of Truxel Road to accommodate future light rail in the corridor. Between Gateway Park Boulevard and the canal, IODs exist on both sides of the street. However, north of the canal, the IOD is on the west side of the street only. To date, no specific proposals have been made with Regional Transit for a preferred alignment of the Green line along Truxel Road. Potential alignments could occur on the west side of the street, east side of the street, and in the median (via an elevated structure).

If the Green line extension ultimately includes at-grade crossings of the two unsignalized driveways serving the project, its construction would include all necessary gates, signage, and other items required for the at-grade crossing. If trains were to operate on 15-minute headways in each direction during peak hours under cumulative conditions, this would equate to approximately 8 train crossings during the PM peak hour. With each crossing taking about one minute or less, the effects of train crossing would be to reduce driveway ingress/egress capacity by about 10 percent. As is described later, deceleration lanes would be provided at each driveway on northbound Truxel Road to store vehicles waiting for trains to complete their crossing.

EVALUATION OF BICYCLE IMPACTS

The proposed project would not interfere with any existing bicycle facilities. It would also not preclude implementation of any future bicycle facilities. Cumulative impacts to bicycle facilities are considered ***less than significant***. Therefore, mitigations are not required.

EVALUATION OF PEDESTRIAN IMPACTS

The project would not disrupt planned pedestrian facilities or conflict with adopted City pedestrian plans, guidelines, policies, or standards. The adjacent intersections feature crosswalks with pedestrian actuation to facilitate pedestrian travel. The project site plan includes the provision of continuous sidewalks along its frontage on North Freeway Boulevard, the internal driveway, and Truxel Road to accommodate pedestrian travel. The site plan also includes pedestrian connections into the site from adjacent streets as well as a series of pedestrian linkages that connect the parking areas and building entrances. For these reasons, cumulative project impacts to pedestrian facilities are considered ***less than significant***. Therefore, mitigations are not required.

7. PROJECT ACCESS AND INTERNAL CIRCULATION EVALUATION

This chapter provides a detailed evaluation of vehicular, bicycle, and pedestrian access to the project site. In addition, on-site circulation is also evaluated. Refer to **Figure 13** for weekday PM peak hour volumes at project driveways.

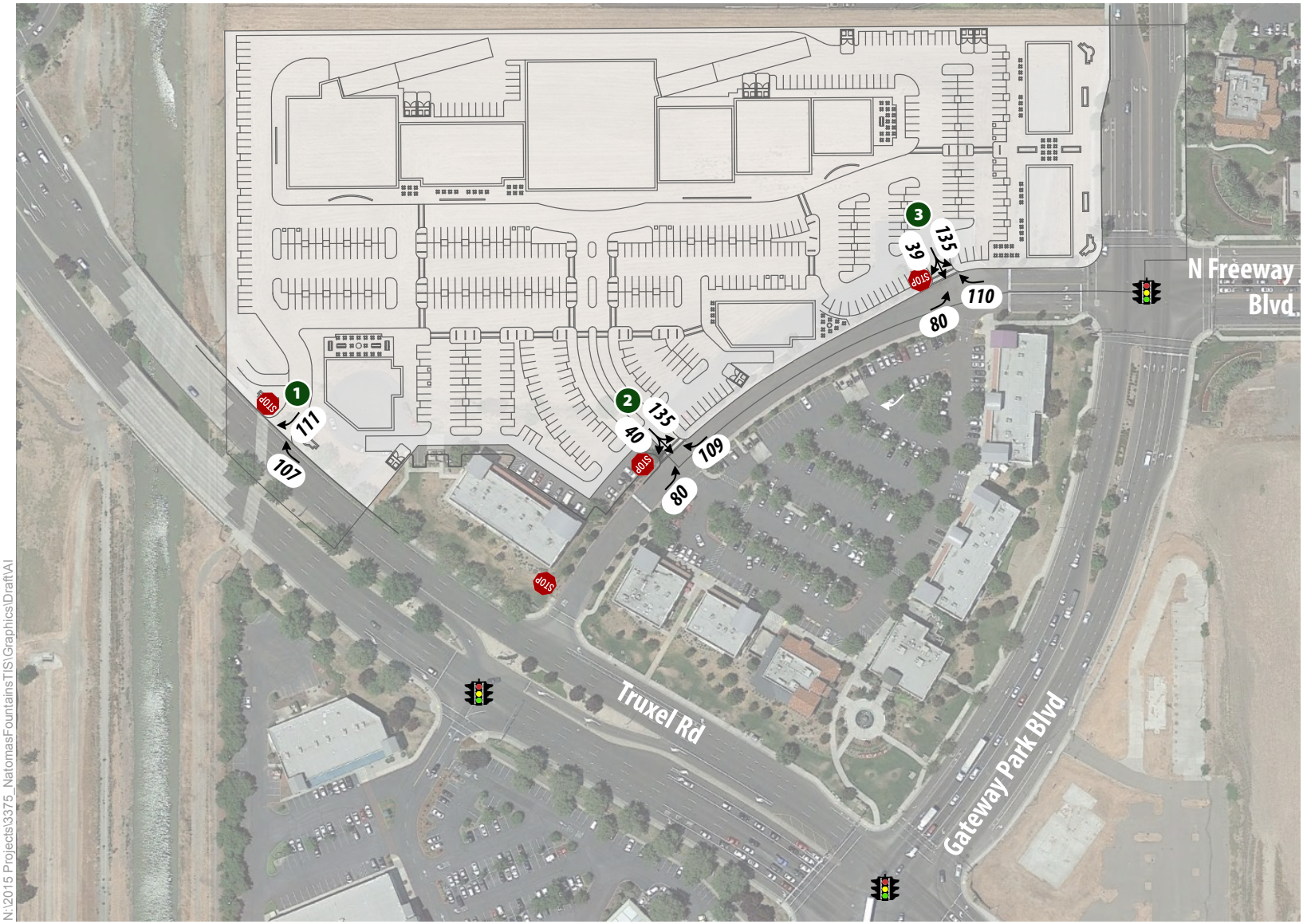
REVIEW OF PROJECT ACCESS ON TRUXEL ROAD

Two driveways along Truxel Road would serve project traffic. The more southerly driveway currently exists and serves the Natomas Village Shopping Center. The more northerly driveway would be a new right-turn only driveway. Fehr & Peers recommends the following at these driveways:

- Existing Natomas Village Shopping Center Driveway on Truxel Road: *No modifications are recommended*. This driveway provides 250 feet of throat depth (i.e., storage on-site for exiting vehicles), which is sufficient to accommodate the cumulative maximum throat depth of 150 feet. This driveway also includes a 200-foot right-turn deceleration lane to accommodate the heavy ingress volume.
- Proposed New Driveway (#1) on Truxel Road: *The following modifications are recommended:*
    - *Construct a 150-foot right-turn deceleration lane on northbound Truxel Road*. This is recommended to accommodate the 107 PM peak hour vehicles expected to turn right at this driveway. The project applicant should coordinate with the City to identify and implement a preferred means for displaying the transition area for the Class II bike lane approaching the deceleration lane.
    - *Place stop signs and pavement markings at the first internal intersection.* This is recommended in response to the maximum expected throat depth of 275 feet under cumulative conditions. This queue occurs as a result of the northbound u-turn/left-turn movement queuing back from the Natomas Crossing Drive signal at Truxel Road.
    - *The project architect should confirm that the driveway width and curb return radii are sufficient to enable inbound and outbound delivery trucks.*

REVIEW OF PROJECT ACCESS ON INTERNAL DRIVEWAY

Fehr & Peers reviewed aerial imagery, conducted a field visit, and evaluated the project site plan to analyze project access needs along the internal driveway. Recommendations are illustrated on **Figure 14** and described in **Table 11** (including supporting rationale)**.**



1 Driveway

Permitted Turning Movement

Traffic Signal

STOP Stop Sign

107 Driveway Volume during PM Peak Hour

Figure 13

PM Peak Hour Driveway Volumes

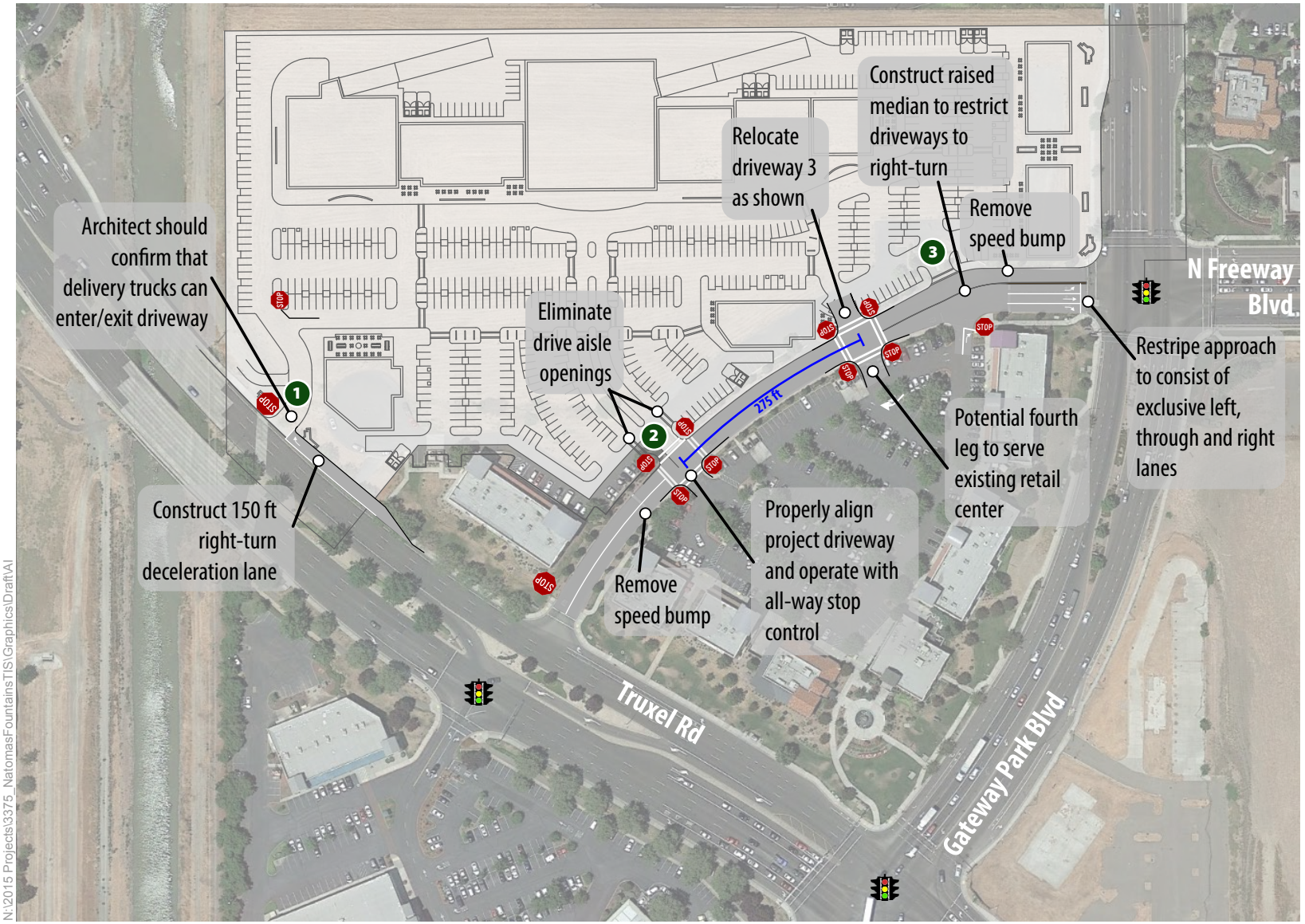


Figure ES-1

Project Access Recommendations

TABLE 11:
PROJECT ACCESS RECOMMENDATIONS ALONG INTERNAL NATOMAS VILLAGE SHOPPING CENTER DRIVEWAY

Recommendation	Rationale
1. Directly align the westerly project driveway (#2) with the existing Natomas Village westerly driveway and operate as an all-way stop controlled intersection with crosswalks.	Offset configuration in site plan would have resulted in undesirable left-turn conflicts. All-way stop slows traffic and allows for pedestrian crossings.
2. Relocate easterly project driveway (#3) further west (approximately 275 feet measured from centerline) from westerly driveway) to permit full-access. Operate with all-way stop control.	Eastbound traffic queues from Gateway Park Boulevard/North Freeway Boulevard would routinely spill back beyond this intersection, blocking access.
3. Construct narrow raised median on internal driveway to restrict movements at easterly Natomas Village Shopping Center driveway to right-turns.	Raised median is necessary to physically prohibit left-turns at this driveway, which would be frequently blocked by eastbound queued vehicles on the internal driveway.
4. Work with Natomas Village Shopping Center owner to investigate concept of constructing a 4th leg to the relocated project driveway #3 intersection.	Due to elimination of left-turn access at existing easterly driveway, a new full-access driveway opening may be desirable.
5. Close nearest drive aisle openings (or at a minimum, restrict to right-turns) along the westerly (#2) driveway throat.	Queued vehicles on this driveway approach would routinely block these drive aisle openings.
6. Remove both speed bumps on the existing Natomas Village Shopping Center driveway.	Due to the introduction of two all-way-stop intersections along this driveway, speed bumps are no longer needed.

Source: Fehr & Peers, 2016

The two project driveway intersections along the internal driveway are recommended to operate with all-way stop-control (with single lanes on all approaches) for the following reasons:

- They would each accommodate substantial levels (i.e., up to 175 vehicles per hour) of side-street traffic, which would result in lengthy and delays if side-street stop-control were in operation.
- They would each serve sizeable (i.e., up to 80 vehicles per hour) volumes of major street left-turning traffic. Due to the width of the driveway, it is not possible to provide a dedicated left-turn lane for these movements. As a result, left-turning traffic would turn from the through lane and block the flow of through traffic if side-street stop-control were in operation.
- All-way stop-control will enable crosswalks to be provided across the internal driveway to facilitate pedestrian travel between the two retail centers.

The two all-way stop-control intersections were analyzed in SimTraffic. They would each operate at LOS A under cumulative plus project conditions with all mitigation measures in place. Eastbound traffic from the North

Freeway Boulevard/Gateway Park Boulevard intersection would occasionally queue back into the easterly all-way stop intersection. However, traffic would not spill back from one all-way-stop intersection to the other.

REVIEW OF INTERNAL CIRCULATION

Fehr & Peers reviewed the project site plan with regard to internal circulation for pedestrians, vehicles, and delivery trucks. Key findings from this evaluation include:

- As part of the reconfiguration of Driveway #3, the project architect should use AutoTurn software to confirm that delivery trucks can maneuver through the parking lot and exit at Driveway 3.
- The site plan includes a sizeable amount of parking behind Buildings B – F, which would likely be unnoticed by most patrons. Should localized parking deficits occur in some portions of the site (i.e., closest to sit-down restaurants), employees should be encouraged to use this rear parking.

APPENDIX A: TRAFFIC COUNT DATA AND EXISTING TECHNICAL CALCULATIONS

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-014 Truxel Road & Arena Boulevard
Date : 10/29/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					Arena Boulevard Westbound					Truxel Road Northbound					Arena Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	11	153	33	0	197	10	19	5	1	35	16	55	29	0	100	9	100	22	1	132	464	2
7:15	22	256	31	0	309	11	29	6	1	47	26	72	31	0	129	22	101	41	3	167	652	4
7:30	13	305	48	0	366	13	32	5	0	50	35	138	30	0	203	45	126	39	1	211	830	1
7:45	45	316	55	0	416	19	34	5	3	61	45	122	45	0	212	74	197	49	2	322	1011	5
Total	91	1030	167	0	1288	53	114	21	5	193	122	387	135	0	644	150	524	151	7	832	2957	12
8:00	31	372	42	0	445	17	45	6	1	69	32	87	22	0	141	13	151	49	7	220	875	8
8:15	28	258	34	0	320	16	36	7	2	61	31	65	25	1	122	27	105	53	2	187	690	5
8:30	11	211	24	1	247	20	35	4	6	65	33	98	18	0	149	14	98	45	0	157	618	7
8:45	21	190	30	1	242	11	35	13	1	60	25	67	18	0	110	22	112	47	1	182	594	3
Total	91	1031	130	2	1254	64	151	30	10	255	121	317	83	1	522	76	466	194	10	746	2777	23
16:00	10	151	21	0	182	22	124	29	0	175	41	175	17	0	233	42	99	74	2	217	807	2
16:15	17	169	27	0	213	21	93	27	1	142	31	191	12	1	235	38	92	46	1	177	767	3
16:30	11	177	28	0	216	24	116	23	2	165	45	177	13	1	236	44	103	50	4	201	818	7
16:45	18	157	37	2	214	25	93	13	3	134	47	227	16	1	291	33	88	53	3	177	816	9
Total	56	654	113	2	825	92	426	92	6	616	164	770	58	3	995	157	382	223	10	772	3208	21
17:00	23	161	25	1	210	25	165	37	0	227	49	205	27	0	281	61	115	69	2	247	965	3
17:15	12	185	26	1	224	17	131	25	0	173	66	222	15	0	303	60	136	66	0	262	962	1
17:30	18	174	23	0	215	17	98	21	0	136	41	237	17	1	296	65	106	53	1	225	872	2
17:45	19	173	34	1	227	14	72	18	0	104	55	232	13	0	300	63	107	63	2	235	866	3
Total	72	693	108	3	876	73	466	101	0	640	211	896	72	1	1180	249	464	251	5	969	3665	9
Grand Total	310	3408	518	7	4243	282	1157	244	21	1704	618	2370	348	5	3341	632	1836	819	32	3319	12607	65
Apprch %	7.3%	80.3%	12.2%	0.2%		16.5%	67.9%	14.3%	1.2%		18.5%	70.9%	10.4%	0.1%		19.0%	55.3%	24.7%	1.0%			
Total %	2.5%	27.0%	4.1%	0.1%	33.7%	2.2%	9.2%	1.9%	0.2%	13.5%	4.9%	18.8%	2.8%	0.0%	26.5%	5.0%	14.6%	6.5%	0.3%	26.3%	100.0%	

AM PEAK HOUR	Truxel Road Southbound					Arena Boulevard Westbound					Truxel Road Northbound					Arena Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	13	305	48	0	366	13	32	5	0	50	35	138	30	0	203	45	126	39	1	211	830
7:45	45	316	55	0	416	19	34	5	3	61	45	122	45	0	212	74	197	49	2	322	1011
8:00	31	372	42	0	445	17	45	6	1	69	32	87	22	0	141	13	151	49	7	220	875
8:15	28	258	34	0	320	16	36	7	2	61	31	65	25	1	122	27	105	53	2	187	690
Total Volume	117	1251	179	0	1547	65	147	23	6	241	143	412	122	1	678	159	579	190	12	940	3406
% App Total	7.6%	80.9%	11.6%	0.0%		27.0%	61.0%	9.5%	2.5%		21.1%	60.8%	18.0%	0.1%		16.9%	61.6%	20.2%	1.3%		
PHF	.650	.841	.814	.000	.869	.855	.817	.821	.500	.873	.794	.746	.678	.250	.800	.537	.735	.896	.429	.730	.842

PM PEAK HOUR	Truxel Road Southbound					Arena Boulevard Westbound					Truxel Road Northbound					Arena Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	23	161	25	1	210	25	165	37	0	227	49	205	27	0	281	61	115	69	2	247	965
17:15	12	185	26	1	224	17	131	25	0	173	66	222	15	0	303	60	136	66	0	262	962
17:30	18	174	23	0	215	17	98	21	0	136	41	237	17	1	296	65	106	53	1	225	872
17:45	19	173	34	1	227	14	72	18	0	104	55	232	13	0	300	63	107	63	2	235	866
Total Volume	72	693	108	3	876	73	466	101	0	640	211	896	72	1	1180	249	464	251	5	969	3665
% App Total	8.2%	79.1%	12.3%	0.3%		11.4%	72.8%	15.8%	0.0%		17.9%	75.9%	6.1%	0.1%		25.7%	47.9%	25.9%	0.5%		
PHF	.783	.936	.794	.750	.965	.730	.706	.682	.000	.705	.799	.945	.667	.250	.974	.958	.853	.909	.625	.925	.949

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-014 Truxel Road & Arena Boulevard
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					Arena Boulevard Westbound					Truxel Road Northbound					Arena Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	1
7:30	0	0	0	4	0	1	1	1	0	3	0	1	0	0	1	0	0	0	0	0	4	4
7:45	0	1	0	0	1	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	3	2
Total	0	1	0	5	1	1	1	1	2	3	0	3	0	1	3	0	0	1	0	1	8	8
8:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15	0	1	0	0	1	0	0	0	4	0	0	0	0	1	0	0	1	0	0	1	2	5
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	1	0	0	0	0	3	0	0	0	0	2	0	0	0	1	0	1	1	6
Total	0	1	0	2	1	0	0	0	7	0	0	0	0	3	0	0	1	1	0	2	3	12
16:00	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	3	0
16:15	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
16:30	0	2	1	1	3	0	2	0	0	2	1	0	0	0	1	0	1	0	1	1	7	2
16:45	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	0	0	0	0	1	3
Total	0	3	1	1	4	1	3	0	1	4	1	2	0	3	3	0	1	0	1	1	12	6
17:00	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	0	0	2	0	1	5
17:15	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	2
17:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
17:45	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1
Total	0	1	0	3	1	0	0	0	1	0	0	2	0	3	2	0	1	0	4	1	4	11
Grand Total	0	6	1	11	7	2	4	1	11	7	1	7	0	10	8	0	3	2	5	5	27	37
Apprch %	0.0%	85.7%	14.3%			28.6%	57.1%	14.3%			12.5%	87.5%	0.0%			0.0%	60.0%	40.0%				
Total %	0.0%	22.2%	3.7%		25.9%	7.4%	14.8%	3.7%		25.9%	3.7%	25.9%	0.0%		29.6%	0.0%	11.1%	7.4%		18.5%	100.0%	

AM PEAK HOUR	Truxel Road Southbound				Arena Boulevard Westbound				Truxel Road Northbound				Arena Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																	
Peak Hour For Entire Intersection Begins at 07:30																	
7:30	0	0	0	0	1	1	1	3	0	1	0	1	0	0	0	0	4
7:45	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	2	0	2	1	1	1	3	0	3	0	3	0	1	0	1	9
% App Total	0.0%	100.0%	0.0%		33.3%	33.3%	33.3%		0.0%	100.0%	0.0%		0.0%	100.0%	0.0%		
PHF	.000	.500	.000	.500	.250	.250	.250	.250	.000	.375	.000	.375	.000	.250	.000	.250	.563

PM PEAK HOUR	Truxel Road Southbound				Arena Boulevard Westbound				Truxel Road Northbound				Arena Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																	
Peak Hour For Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	1	0	1	4
% App Total	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	100.0%	0.0%		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250	.500

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-012 Truxel Road & Natomas Crossing Drive
Date : 10/29/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					Natomas Crossing Drive Westbound					Truxel Road Northbound					Natomas Crossing Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	24	146	20	0	190	20	2	22	0	44	12	57	18	2	89	19	7	57	0	83	406	2
7:15	25	230	22	0	277	26	3	22	0	51	18	78	23	1	120	31	6	73	0	110	558	1
7:30	19	341	31	0	391	30	4	20	0	54	29	148	33	1	211	38	5	89	0	132	788	1
7:45	18	327	26	2	373	18	5	37	0	60	38	158	20	2	218	37	13	76	0	126	777	4
Total	86	1044	99	2	1231	94	14	101	0	209	97	441	94	6	638	125	31	295	0	451	2529	8
8:00	16	385	42	0	443	18	5	16	0	39	28	110	27	3	168	10	9	67	0	86	736	3
8:15	17	269	30	0	316	22	2	27	0	51	34	94	20	2	150	11	2	55	0	68	585	2
8:30	21	209	25	0	255	22	4	16	0	42	27	117	30	2	176	18	6	49	0	73	546	2
8:45	23	211	26	1	261	18	2	12	0	32	31	100	10	3	144	16	2	53	0	71	508	4
Total	77	1074	123	1	1275	80	13	71	0	164	120	421	87	10	638	55	19	224	0	298	2375	11
16:00	10	193	25	0	228	17	4	24	0	45	60	183	24	6	273	21	4	61	0	86	632	6
16:15	10	211	28	1	250	17	2	10	0	29	49	218	20	10	297	18	3	38	0	59	635	11
16:30	9	219	24	2	254	15	7	18	0	40	46	199	16	4	265	15	3	54	0	72	631	6
16:45	15	194	25	0	234	10	4	13	0	27	65	248	9	9	331	31	6	61	0	98	690	9
Total	44	817	102	3	966	59	17	65	0	141	220	848	69	29	1166	85	16	214	0	315	2588	32
17:00	14	236	35	1	286	22	3	10	0	35	70	239	16	14	339	27	4	74	0	105	765	15
17:15	16	216	29	0	261	16	3	18	0	37	63	251	13	9	336	28	1	58	0	87	721	9
17:30	11	230	29	0	270	7	2	26	0	35	74	255	23	3	355	16	6	46	0	68	728	3
17:45	16	247	26	0	289	18	4	22	0	44	75	263	26	1	365	20	7	65	0	92	790	1
Total	57	929	119	1	1106	63	12	76	0	151	282	1008	78	27	1395	91	18	243	0	352	3004	28
Grand Total	264	3864	443	7	4578	296	56	313	0	665	719	2718	328	72	3837	356	84	976	0	1416	10496	79
Apprch %	5.8%	84.4%	9.7%	0.2%		44.5%	8.4%	47.1%	0.0%		18.7%	70.8%	8.5%	1.9%		25.1%	5.9%	68.9%	0.0%			
Total %	2.5%	36.8%	4.2%	0.1%	43.6%	2.8%	0.5%	3.0%	0.0%	6.3%	6.9%	25.9%	3.1%	0.7%	36.6%	3.4%	0.8%	9.3%	0.0%	13.5%	100.0%	

AM PEAK HOUR	Truxel Road Southbound					Natomas Crossing Drive Westbound					Truxel Road Northbound					Natomas Crossing Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	19	341	31	0	391	30	4	20	0	54	29	148	33	1	211	38	5	89	0	132	788
7:45	18	327	26	2	373	18	5	37	0	60	38	158	20	2	218	37	13	76	0	126	777
8:00	16	385	42	0	443	18	5	16	0	39	28	110	27	3	168	10	9	67	0	86	736
8:15	17	269	30	0	316	22	2	27	0	51	34	94	20	2	150	11	2	55	0	68	585
Total Volume	70	1322	129	2	1523	88	16	100	0	204	129	510	100	8	747	96	29	287	0	412	2886
% App Total	4.6%	86.8%	8.5%	0.1%		43.1%	7.8%	49.0%	0.0%		17.3%	68.3%	13.4%	1.1%		23.3%	7.0%	69.7%	0.0%		
PHF	.921	.858	.768	.250	.859	.733	.800	.676	.000	.850	.849	.807	.758	.667	.857	.632	.558	.806	.000	.780	.916

PM PEAK HOUR	Truxel Road Southbound					Natomas Crossing Drive Westbound					Truxel Road Northbound					Natomas Crossing Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	14	236	35	1	286	22	3	10	0	35	70	239	16	14	339	27	4	74	0	105	765
17:15	16	216	29	0	261	16	3	18	0	37	63	251	13	9	336	28	1	58	0	87	721
17:30	11	230	29	0	270	7	2	26	0	35	74	255	23	3	355	16	6	46	0	68	728
17:45	16	247	26	0	289	18	4	22	0	44	75	263	26	1	365	20	7	65	0	92	790
Total Volume	57	929	119	1	1106	63	12	76	0	151	282	1008	78	27	1395	91	18	243	0	352	3004
% App Total	5.2%	84.0%	10.8%	0.1%		41.7%	7.9%	50.3%	0.0%		20.2%	72.3%	5.6%	1.9%		25.9%	5.1%	69.0%	0.0%		
PHF	.891	.940	.850	.250	.957	.716	.750	.731	.000	.858	.940	.958	.750	.482	.955	.813	.643	.821	.000	.838	.951

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-012 Truxel Road & Natomas Crossing Drive
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					Natomas Crossing Drive Westbound					Truxel Road Northbound					Natomas Crossing Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	2	0	0	1	2	0	1	0	2	1	0	0	0	0	0	3	3
7:30	1	1	0	4	2	0	0	0	2	0	0	1	0	1	1	0	0	0	3	0	3	10
7:45	0	1	0	0	1	0	0	0	0	0	0	2	0	1	2	0	0	0	0	0	3	1
Total	1	2	0	4	3	3	0	0	3	3	0	4	0	4	4	0	0	0	3	0	10	14
8:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	1	0	1	0	0	0	1	0	1	0	0	1	0	1	0	0	1	3	1
Total	0	0	0	2	0	1	0	0	0	1	0	1	0	1	1	0	2	0	1	2	4	4
16:00	0	1	0	0	1	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	2	2
16:15	0	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	4
16:30	0	1	1	0	2	0	0	0	0	0	1	0	0	1	1	0	0	1	0	1	4	1
16:45	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1
Total	0	2	1	3	3	0	0	0	1	0	2	2	0	3	4	0	0	1	1	1	8	8
17:00	0	0	0	3	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	5
17:15	0	0	0	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4
17:30	0	0	0	2	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	2
17:45	0	1	0	3	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	2	4
Total	0	1	0	12	1	1	1	0	2	2	2	1	0	0	3	0	0	0	1	0	6	15
Grand Total	1	5	1	21	7	5	1	0	6	6	4	8	0	8	12	0	2	1	6	3	28	41
Apprch %	14.3%	71.4%	14.3%			83.3%	16.7%	0.0%			33.3%	66.7%	0.0%			0.0%	66.7%	33.3%				
Total %	3.6%	17.9%	3.6%		25.0%	17.9%	3.6%	0.0%		21.4%	14.3%	28.6%	0.0%		42.9%	0.0%	7.1%	3.6%		10.7%	100.0%	

AM PEAK HOUR	Truxel Road Southbound				Natomas Crossing Drive Westbound				Truxel Road Northbound				Natomas Crossing Drive Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																	
Peak Hour For Entire Intersection Begins at 07:30																	
7:30	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
7:45	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	2	0	3	0	0	0	0	0	3	0	3	0	1	0	1	7
% App Total	33.3%	66.7%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	100.0%	0.0%		
PHF	.250	.500	.000	.375	.000	.000	.000	.000	.000	.375	.000	.375	.000	.250	.000	.250	.583

PM PEAK HOUR	Truxel Road Southbound				Natomas Crossing Drive Westbound				Truxel Road Northbound				Natomas Crossing Drive Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																	
Peak Hour For Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
17:15	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
17:30	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
17:45	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
Total Volume	0	1	0	1	1	1	0	2	2	1	0	3	0	0	0	0	6
% App Total	0.0%	100.0%	0.0%		50.0%	50.0%	0.0%		66.7%	33.3%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.250	.000	.250	.250	.250	.000	.500	.500	.250	.000	.750	.000	.000	.000	.000	.750

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-023 Truxel Road & Natomas Marketplace (North Entrance)
Date : 10/29/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					Natomas Marketplace (North Entrance) Westbound					Truxel Road Northbound					Natomas Marketplace (North Entrance) Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
16:00	0	257	42	0	299	0	0	19	0	19	6	215	36	1	258	33	0	25	0	58	634	1
16:15	0	223	42	0	265	0	0	34	0	34	8	218	28	0	254	28	0	24	0	52	605	0
16:30	0	267	40	0	307	0	0	24	0	24	5	232	30	0	267	29	0	33	0	62	660	0
16:45	0	251	38	0	289	0	0	26	0	26	5	254	47	0	306	25	0	29	0	54	675	0
Total	0	998	162	0	1160	0	0	103	0	103	24	919	141	1	1085	115	0	111	0	226	2574	1
17:00	0	309	32	0	341	0	0	39	0	39	3	271	36	1	311	42	0	34	0	76	767	1
17:15	0	240	51	0	291	0	0	33	0	33	5	251	39	2	297	30	0	27	0	57	678	2
17:30	0	239	53	0	292	0	0	23	0	23	4	312	40	0	356	27	0	31	0	58	729	0
17:45	0	272	53	0	325	0	0	25	0	25	7	306	45	3	361	39	0	18	0	57	768	3
Total	0	1060	189	0	1249	0	0	120	0	120	19	1140	160	6	1325	138	0	110	0	248	2942	6
Grand Total	0	2058	351	0	2409	0	0	223	0	223	43	2059	301	7	2410	253	0	221	0	474	5516	7
Apprch %	0.0%	85.4%	14.6%	0.0%		0.0%	0.0%	100.0%	0.0%		1.8%	85.4%	12.5%	0.3%		53.4%	0.0%	46.6%	0.0%			
Total %	0.0%	37.3%	6.4%	0.0%	43.7%	0.0%	0.0%	4.0%	0.0%	4.0%	0.8%	37.3%	5.5%	0.1%	43.7%	4.6%	0.0%	4.0%	0.0%	8.6%	100.0%	

PM PEAK HOUR	Truxel Road Southbound					Natomas Marketplace (North Entrance) Westbound					Truxel Road Northbound					Natomas Marketplace (North Entrance) Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	309	32	0	341	0	0	39	0	39	3	271	36	1	311	42	0	34	0	76	767
17:15	0	240	51	0	291	0	0	33	0	33	5	251	39	2	297	30	0	27	0	57	678
17:30	0	239	53	0	292	0	0	23	0	23	4	312	40	0	356	27	0	31	0	58	729
17:45	0	272	53	0	325	0	0	25	0	25	7	306	45	3	361	39	0	18	0	57	768
Total Volume	0	1060	189	0	1249	0	0	120	0	120	19	1140	160	6	1325	138	0	110	0	248	2942
% App Total	0.0%	84.9%	15.1%	0.0%		0.0%	0.0%	100.0%	0.0%		1.4%	86.0%	12.1%	0.5%		55.6%	0.0%	44.4%	0.0%		
PHF	.000	.858	.892	.000	.916	.000	.000	.769	.000	.769	.679	.913	.889	.500	.918	.821	.000	.809	.000	.816	.958

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-023 Truxel Road & Natomas Marketplace (North Entrance)
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					Natomas Marketplace (North Entrance) Westbound					Truxel Road Northbound					Natomas Marketplace (North Entrance) Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
8:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	3
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0
16:15	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	1
16:30	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	2	1
16:45	0	0	0	0	0	0	0	0	5	0	0	1	0	0	1	0	0	0	0	0	1	5
Total	0	2	0	0	2	0	0	0	7	0	0	3	0	0	3	1	0	0	0	1	6	7
17:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
17:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
17:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	2	0	0	2	0	0	0	2	0	0	2	0	1	2	0	0	0	0	0	4	3
Grand Total	0	4	0	0	4	0	0	0	18	0	0	5	0	2	5	1	0	0	0	1	10	20
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%				
Total %	0.0%	40.0%	0.0%		40.0%	0.0%	0.0%	0.0%		0.0%	0.0%	50.0%	0.0%		50.0%	10.0%	0.0%	0.0%		10.0%	100.0%	

AM PEAK HOUR	Truxel Road Southbound				Natomas Marketplace (North Entrance) Westbound				Truxel Road Northbound				Natomas Marketplace (North Entrance) Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:00 to 08:00																	
Peak Hour For Entire Intersection Begins at 07:00																	
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	Truxel Road Southbound				Natomas Marketplace (North Entrance) Westbound				Truxel Road Northbound				Natomas Marketplace (North Entrance) Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																	
Peak Hour For Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
% App Total	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-022 Gateway Park Boulevard & Freeway Boulevard
Date : 10/29/2015

Unshifted Count = All Vehicles & Uturns

	Gateway Park Boulevard Southbound					N Freeway Boulevard Westbound					Gateway Park Boulevard Northbound					N Freeway Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
16:00	37	180	15	7	239	175	10	38	0	223	11	136	93	0	240	9	8	17	0	34	736	7
16:15	33	167	18	11	229	148	9	26	2	185	9	139	133	1	282	8	5	20	0	33	729	14
16:30	48	170	15	9	242	188	17	37	0	242	8	162	151	4	325	8	14	25	0	47	856	13
16:45	43	136	13	10	202	176	5	34	0	215	7	162	159	3	331	8	4	25	0	37	785	13
Total	161	653	61	37	912	687	41	135	2	865	35	599	536	8	1178	33	31	87	0	151	3106	47
17:00	70	157	17	15	259	217	22	62	0	301	6	137	140	2	285	9	11	24	0	44	889	17
17:15	62	140	14	17	233	176	17	52	0	245	9	167	163	0	339	9	9	24	0	42	859	17
17:30	46	149	15	9	219	153	8	33	0	194	9	151	164	4	328	8	10	19	0	37	778	13
17:45	43	111	18	12	184	145	12	44	2	203	10	148	200	0	358	19	7	25	0	51	796	14
Total	221	557	64	53	895	691	59	191	2	943	34	603	667	6	1310	45	37	92	0	174	3322	61
Grand Total	382	1210	125	90	1807	1378	100	326	4	1808	69	1202	1203	14	2488	78	68	179	0	325	6428	108
Apprch %	21.1%	67.0%	6.9%	5.0%		76.2%	5.5%	18.0%	0.2%		2.8%	48.3%	48.4%	0.6%		24.0%	20.9%	55.1%	0.0%		100.0%	
Total %	5.9%	18.8%	1.9%	1.4%	28.1%	21.4%	1.6%	5.1%	0.1%	28.1%	1.1%	18.7%	18.7%	0.2%	38.7%	1.2%	1.1%	2.8%	0.0%	5.1%		

PM PEAK HOUR	Gateway Park Boulevard Southbound					N Freeway Boulevard Westbound					Gateway Park Boulevard Northbound					N Freeway Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	48	170	15	9	242	188	17	37	0	242	8	162	151	4	325	8	14	25	0	47	856
16:45	43	136	13	10	202	176	5	34	0	215	7	162	159	3	331	8	4	25	0	37	785
17:00	70	157	17	15	259	217	22	62	0	301	6	137	140	2	285	9	11	24	0	44	889
17:15	62	140	14	17	233	176	17	52	0	245	9	167	163	0	339	9	9	24	0	42	859
Total Volume	223	603	59	51	936	757	61	185	0	1003	30	628	613	9	1280	34	38	98	0	170	3389
% App Total	23.8%	64.4%	6.3%	5.4%		75.5%	6.1%	18.4%	0.0%		2.3%	49.1%	47.9%	0.7%		20.0%	22.4%	57.6%	0.0%		
PHF	.796	.887	.868	.750	.903	.872	.693	.746	.000	.833	.833	.940	.940	.563	.944	.944	.679	.980	.000	.904	.953

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-022 Gateway Park Boulevard & Freeway Boulevard
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Gateway Park Boulevard Southbound					N Freeway Boulevard Westbound					Gateway Park Boulevard Northbound					N Freeway Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
16:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
16:15	0	1	0	2	1	0	0	0	0	0	0	0	0	2	0	1	0	0	3	1	2	7
16:30	1	1	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2	8
16:45	0	0	0	3	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	1	5
Total	1	2	0	9	3	0	1	0	1	1	0	0	0	4	0	1	0	0	8	1	5	22
17:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4
17:15	0	0	0	2	0	0	0	0	2	0	1	0	0	1	1	0	0	0	0	0	1	5
17:30	0	1	0	0	1	0	0	0	4	0	0	0	0	3	0	0	1	0	0	1	2	7
17:45	0	0	0	0	0	0	0	0	3	0	0	0	1	1	1	0	0	0	0	0	1	4
Total	0	1	0	4	1	0	0	0	9	0	1	0	1	5	2	0	1	0	2	1	4	20
Grand Total	1	3	0	13	4	0	1	0	10	1	1	0	1	9	2	1	1	0	10	2	9	42
Apprch %	25.0%	75.0%	0.0%			0.0%	100.0%	0.0%			50.0%	0.0%	50.0%			50.0%	50.0%	0.0%				
Total %	11.1%	33.3%	0.0%		44.4%	0.0%	11.1%	0.0%		11.1%	11.1%	0.0%	11.1%		22.2%	11.1%	11.1%	0.0%		22.2%	100.0%	

PM PEAK HOUR	Gateway Park Boulevard Southbound				N Freeway Boulevard Westbound				Gateway Park Boulevard Northbound				N Freeway Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																	
Peak Hour For Entire Intersection Begins at 16:30																	
16:30	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	1	1	0	2	0	1	0	1	1	0	0	1	0	0	0	0	4
% App Total	50.0%	50.0%	0.0%		0.0%	100.0%	0.0%		100.0%	0.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.250	.250	.000	.250	.000	.250	.000	.250	.250	.000	.000	.250	.000	.000	.000	.000	.500

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-011 Truxel Road & Gateway Park Boulevard
Date : 10/28/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					Gateway Park Boulevard Westbound					Truxel Road Northbound					Gateway Park Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	13	237	11	1	262	115	22	2	0	139	48	82	239	2	371	3	11	48	0	62	834	3
7:15	7	341	9	1	358	162	14	1	0	177	48	122	252	0	422	8	15	37	0	60	1017	1
7:30	24	433	15	1	473	171	16	5	0	192	60	163	307	0	530	6	17	45	0	68	1263	1
7:45	29	397	24	2	452	136	25	8	0	169	57	196	378	0	631	13	24	48	0	85	1337	2
Total	73	1408	59	5	1545	584	77	16	0	677	213	563	1176	2	1954	30	67	178	0	275	4451	7
8:00	24	352	30	2	408	164	39	1	0	204	53	120	275	0	448	10	11	46	0	67	1127	2
8:15	15	331	23	1	370	151	24	4	0	179	69	138	291	0	498	12	21	50	0	83	1130	1
8:30	16	243	23	2	284	142	20	3	0	165	80	186	281	0	547	16	13	46	0	75	1071	2
8:45	28	217	26	4	275	121	26	7	0	154	66	197	287	1	551	14	21	60	0	95	1075	5
Total	83	1143	102	9	1337	578	109	15	0	702	268	641	1134	1	2044	52	66	202	0	320	4403	10
16:00	23	158	39	10	230	297	50	18	0	365	118	198	211	0	527	55	40	121	0	216	1338	10
16:15	39	201	26	9	275	270	55	29	1	355	126	237	230	0	593	44	37	134	0	215	1438	10
16:30	39	190	35	7	271	300	61	19	0	380	145	291	242	2	680	48	25	137	0	210	1541	9
16:45	32	182	43	12	269	259	45	26	0	330	155	284	271	1	711	58	42	144	0	244	1554	13
Total	133	731	143	38	1045	1126	211	92	1	1430	544	1010	954	3	2511	205	144	536	0	885	5871	42
17:00	46	262	36	25	369	301	49	22	0	372	133	302	260	0	695	51	37	103	0	191	1627	25
17:15	34	181	37	14	266	259	48	21	0	328	145	336	273	2	756	34	31	106	0	171	1521	16
17:30	55	184	43	10	292	243	52	25	0	320	166	354	259	0	779	50	32	108	0	190	1581	10
17:45	47	178	50	14	289	194	43	32	0	269	181	404	253	0	838	52	36	104	1	193	1589	15
Total	182	805	166	63	1216	997	192	100	0	1289	625	1396	1045	2	3068	187	136	421	1	745	6318	66
Grand Total	471	4087	470	115	5143	3285	589	223	1	4098	1650	3610	4309	8	9577	474	413	1337	1	2225	21043	125
Apprch %	9.2%	79.5%	9.1%	2.2%		80.2%	14.4%	5.4%	0.0%		17.2%	37.7%	45.0%	0.1%		21.3%	18.6%	60.1%	0.0%			
Total %	2.2%	19.4%	2.2%	0.5%	24.4%	15.6%	2.8%	1.1%	0.0%	19.5%	7.8%	17.2%	20.5%	0.0%	45.5%	2.3%	2.0%	6.4%	0.0%	10.6%	100.0%	

AM PEAK HOUR	Truxel Road Southbound					Gateway Park Boulevard Westbound					Truxel Road Northbound					Gateway Park Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	24	433	15	1	473	171	16	5	0	192	60	163	307	0	530	6	17	45	0	68	1263
7:45	29	397	24	2	452	136	25	8	0	169	57	196	378	0	631	13	24	48	0	85	1337
8:00	24	352	30	2	408	164	39	1	0	204	53	120	275	0	448	10	11	46	0	67	1127
8:15	15	331	23	1	370	151	24	4	0	179	69	138	291	0	498	12	21	50	0	83	1130
Total Volume	92	1513	92	6	1703	622	104	18	0	744	239	617	1251	0	2107	41	73	189	0	303	4857
% App Total	5.4%	88.8%	5.4%	0.4%		83.6%	14.0%	2.4%	0.0%		11.3%	29.3%	59.4%	0.0%		13.5%	24.1%	62.4%	0.0%		
PHF	.793	.874	.767	.750	.900	.909	.667	.563	.000	.912	.866	.787	.827	.000	.835	.788	.760	.945	.000	.891	.908

PM PEAK HOUR	Truxel Road Southbound					Gateway Park Boulevard Westbound					Truxel Road Northbound					Gateway Park Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	46	262	36	25	369	301	49	22	0	372	133	302	260	0	695	51	37	103	0	191	1627
17:15	34	181	37	14	266	259	48	21	0	328	145	336	273	2	756	34	31	106	0	171	1521
17:30	55	184	43	10	292	243	52	25	0	320	166	354	259	0	779	50	32	108	0	190	1581
17:45	47	178	50	14	289	194	43	32	0	269	181	404	253	0	838	52	36	104	1	193	1589
Total Volume	182	805	166	63	1216	997	192	100	0	1289	625	1396	1045	2	3068	187	136	421	1	745	6318
% App Total	15.0%	66.2%	13.7%	5.2%		77.3%	14.9%	7.8%	0.0%		20.4%	45.5%	34.1%	0.1%		25.1%	18.3%	56.5%	0.1%		
PHF	.827	.768	.830	.630	.824	.828	.923	.781	.000	.866	.863	.864	.957	.250	.915	.899	.919	.975	.250	.965	.971

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-011 Truxel Road & Gateway Park Boulevard
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					Gateway Park Boulevard Westbound					Truxel Road Northbound					Gateway Park Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	2	0	0	2	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	3	2
7:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45	0	0	0	1	0	0	0	0	1	0	1	0	2	0	3	0	0	0	1	0	3	3
Total	0	2	0	2	2	0	1	0	3	1	1	0	2	0	3	0	0	0	1	0	6	6
8:00	0	0	0	6	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2	0	1	9
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45	0	0	0	1	0	1	1	0	0	2	0	0	1	0	1	0	0	0	0	0	3	1
Total	0	0	0	10	0	2	2	0	1	4	0	0	1	0	1	0	0	0	2	0	5	13
16:00	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
16:15	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	3	1
16:30	0	1	0	3	1	1	0	0	2	1	0	2	0	0	2	0	0	0	2	0	4	7
16:45	0	1	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
Total	0	3	0	18	3	1	1	0	2	2	0	3	0	0	3	0	0	0	2	0	8	22
17:00	0	0	0	5	0	0	0	1	3	1	0	1	0	0	1	0	0	0	3	0	2	11
17:15	0	3	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2
17:30	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:45	0	0	0	6	0	0	1	0	2	1	0	1	0	0	1	0	0	0	1	0	2	9
Total	0	3	0	15	3	0	1	1	5	2	0	2	0	0	2	0	0	0	4	0	7	24
Grand Total	0	8	0	45	8	3	5	1	11	9	1	5	3	0	9	0	0	0	9	0	26	65
Apprch %	0.0%	100.0%	0.0%			33.3%	55.6%	11.1%			11.1%	55.6%	33.3%			0.0%	0.0%	0.0%				
Total %	0.0%	30.8%	0.0%		30.8%	11.5%	19.2%	3.8%		34.6%	3.8%	19.2%	11.5%		34.6%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Truxel Road Southbound				Gateway Park Boulevard Westbound				Truxel Road Northbound				Gateway Park Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																	
Peak Hour For Entire Intersection Begins at 07:30																	
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	1	0	2	3	0	0	0	0	3
8:00	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	1	1	0	2	1	0	2	3	0	0	0	0	5
% App Total	0.0%	0.0%	0.0%		50.0%	50.0%	0.0%		33.3%	0.0%	66.7%		0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.250	.000	.250	.250	.000	.000	.000	.000	.417

PM PEAK HOUR	Truxel Road Southbound				Gateway Park Boulevard Westbound				Truxel Road Northbound				Gateway Park Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																	
Peak Hour For Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
17:15	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total Volume	0	3	0	3	0	1	1	2	0	2	0	2	0	0	0	0	7
% App Total	0.0%	100.0%	0.0%		0.0%	50.0%	50.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.250	.000	.250	.000	.250	.250	.500	.000	.500	.000	.500	.000	.000	.000	.000	.583

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-010 Truxel Road & I-80 WB Ramps
Date : 10/28/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					I-80 WB Ramps Westbound					Truxel Road Northbound					I-80 WB On-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	196	204	0	400	40	0	121	0	161	0	246	109	0	355	0	0	0	0	0	916	0
7:15	0	267	263	0	530	62	0	131	0	193	0	320	122	0	442	0	0	0	0	0	1165	0
7:30	0	362	288	0	650	69	0	155	0	224	0	363	123	0	486	0	0	0	0	0	1360	0
7:45	0	336	262	0	598	86	0	183	0	269	0	413	100	0	513	0	0	0	0	0	1380	0
Total	0	1161	1017	0	2178	257	0	590	0	847	0	1342	454	0	1796	0	0	0	0	0	4821	0
8:00	0	297	259	0	556	51	0	143	0	194	0	349	73	0	422	0	0	0	0	0	1172	0
8:15	0	295	251	0	546	57	0	151	0	208	0	362	91	0	453	0	0	0	0	0	1207	0
8:30	0	244	190	0	434	49	0	150	0	199	0	382	70	0	452	0	0	0	0	0	1085	0
8:45	0	244	176	0	420	51	0	176	0	227	0	396	43	0	439	0	0	0	0	0	1086	0
Total	0	1080	876	0	1956	208	0	620	0	828	0	1489	277	0	1766	0	0	0	0	0	4550	0
16:00	0	300	284	0	584	80	0	170	0	250	0	378	52	0	430	0	0	0	0	0	1264	0
16:15	0	338	251	0	589	98	0	151	0	249	0	438	46	0	484	0	0	0	0	0	1322	0
16:30	0	353	301	0	654	98	0	204	0	302	0	487	47	0	534	0	0	0	0	0	1490	0
16:45	0	317	249	0	566	79	0	207	0	286	0	499	48	0	547	0	0	0	0	0	1399	0
Total	0	1308	1085	0	2393	355	0	732	0	1087	0	1802	193	0	1995	0	0	0	0	0	5475	0
17:00	0	407	277	0	684	112	0	238	0	350	0	460	49	0	509	0	0	0	0	0	1543	0
17:15	0	327	233	0	560	100	0	256	0	356	0	528	51	0	579	0	0	0	0	0	1495	0
17:30	0	303	220	0	523	111	0	262	0	373	0	533	61	0	594	0	0	0	0	0	1490	0
17:45	0	294	195	0	489	103	0	289	0	392	0	510	47	0	557	0	0	0	0	0	1438	0
Total	0	1331	925	0	2256	426	0	1045	0	1471	0	2031	208	0	2239	0	0	0	0	0	5966	0
Grand Total	0	4880	3903	0	8783	1246	0	2987	0	4233	0	6664	1132	0	7796	0	0	0	0	0	20812	0
Apprch %	0.0%	55.6%	44.4%	0.0%		29.4%	0.0%	70.6%	0.0%		0.0%	85.5%	14.5%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	23.4%	18.8%	0.0%	42.2%	6.0%	0.0%	14.4%	0.0%	20.3%	0.0%	32.0%	5.4%	0.0%	37.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Truxel Road Southbound					I-80 WB Ramps Westbound					Truxel Road Northbound					I-80 WB On-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	362	288	0	650	69	0	155	0	224	0	363	123	0	486	0	0	0	0	0	1360
7:45	0	336	262	0	598	86	0	183	0	269	0	413	100	0	513	0	0	0	0	0	1380
8:00	0	297	259	0	556	51	0	143	0	194	0	349	73	0	422	0	0	0	0	0	1172
8:15	0	295	251	0	546	57	0	151	0	208	0	362	91	0	453	0	0	0	0	0	1207
Total Volume	0	1290	1060	0	2350	263	0	632	0	895	0	1487	387	0	1874	0	0	0	0	0	5119
% App Total	0.0%	54.9%	45.1%	0.0%		29.4%	0.0%	70.6%	0.0%		0.0%	79.3%	20.7%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.891	.920	.000	.904	.765	.000	.863	.000	.832	.000	.900	.787	.000	.913	.000	.000	.000	.000	.000	.927

PM PEAK HOUR	Truxel Road Southbound					I-80 WB Ramps Westbound					Truxel Road Northbound					I-80 WB On-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	407	277	0	684	112	0	238	0	350	0	460	49	0	509	0	0	0	0	0	1543
17:15	0	327	233	0	560	100	0	256	0	356	0	528	51	0	579	0	0	0	0	0	1495
17:30	0	303	220	0	523	111	0	262	0	373	0	533	61	0	594	0	0	0	0	0	1490
17:45	0	294	195	0	489	103	0	289	0	392	0	510	47	0	557	0	0	0	0	0	1438
Total Volume	0	1331	925	0	2256	426	0	1045	0	1471	0	2031	208	0	2239	0	0	0	0	0	5966
% App Total	0.0%	59.0%	41.0%	0.0%		29.0%	0.0%	71.0%	0.0%		0.0%	90.7%	9.3%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.818	.835	.000	.825	.951	.000	.904	.000	.938	.000	.953	.852	.000	.942	.000	.000	.000	.000	.000	.967

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-010 Truxel Road & I-80 WB Ramps
Date : 1/0/1900

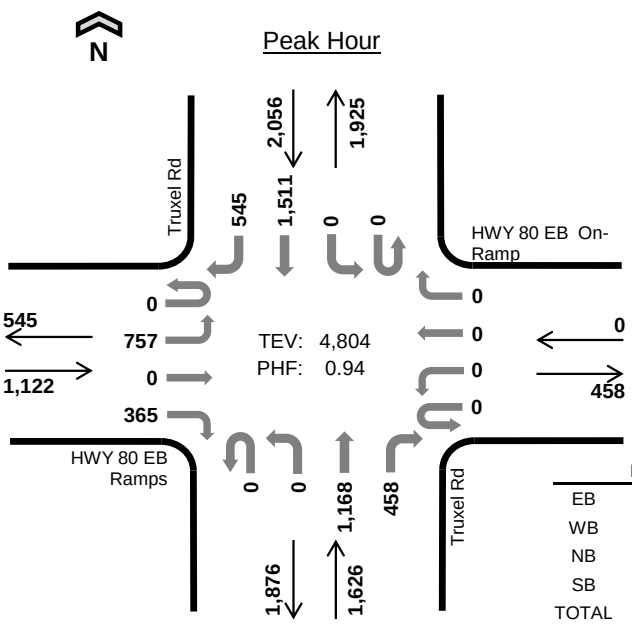
Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					I-80 WB Ramps Westbound					Truxel Road Northbound					I-80 WB On-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15	0	2	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	2	3
7:30	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	2	0	3	2
7:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	3	0	0	3	0	0	0	2	0	0	3	0	0	3	0	0	0	4	0	6	6
8:00	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	1	3
8:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1
8:45	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	2	1
Total	0	2	0	0	2	0	0	0	4	0	0	2	0	0	2	0	0	0	3	0	4	7
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	4	0	1	4
16:15	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	1	3
16:30	0	4	0	0	4	0	0	0	1	0	0	2	0	0	2	0	0	0	4	0	6	5
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	1	2
Total	0	5	0	0	5	0	0	0	2	0	0	4	0	0	4	0	0	0	12	0	9	14
17:00	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
17:15	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
17:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1
Total	0	5	0	0	5	0	0	0	2	0	0	1	0	0	1	0	0	0	2	0	6	4
Grand Total	0	15	0	0	15	0	0	0	10	0	0	10	0	0	10	0	0	0	21	0	25	31
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	60.0%	0.0%		60.0%	0.0%	0.0%	0.0%		0.0%	0.0%	40.0%	0.0%		40.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

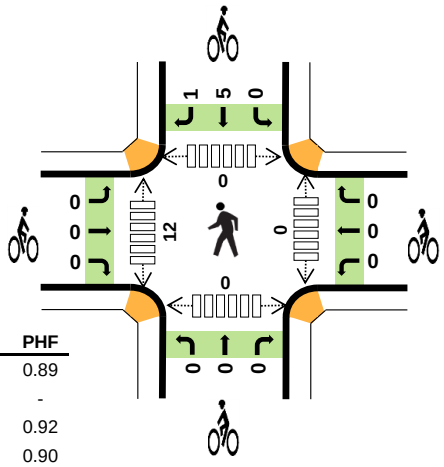
AM PEAK HOUR	Truxel Road Southbound				I-80 WB Ramps Westbound				Truxel Road Northbound				I-80 WB On-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																		
Peak Hour For Entire Intersection Begins at 07:30																		
7:30	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
7:45	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
8:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
% App Total	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.417

PM PEAK HOUR	Truxel Road Southbound				I-80 WB Ramps Westbound				Truxel Road Northbound				I-80 WB On-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																		
Peak Hour For Entire Intersection Begins at 17:00																		
17:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	5	0	5	0	0	0	0	0	1	0	1	0	0	0	0	6
% App Total	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.313	.000	.313	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.375

Truxel Rd
HWY 80 EB On-Ramp



	HV %:	PHF
EB	2.3%	0.89
WB	-	-
NB	1.2%	0.92
SB	0.5%	0.90
TOTAL	1.1%	0.94



Date: 03/10/2015
Count Period: 3:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Three-Hour Count Summaries

Interval Start		HWY 80 EB Ramps Eastbound				HWY 80 EB On-Ramp Westbound				Truxel Rd Northbound				Truxel Rd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:30 PM		0	213	0	101	0	0	0	0	0	0	274	123	0	0	323	128	1,162	0
4:45 PM		0	180	0	94	0	0	0	0	0	0	302	121	0	0	389	128	1,214	0
5:00 PM		0	190	0	84	0	0	0	0	0	0	267	96	0	0	372	148	1,157	0
5:15 PM		0	174	0	86	0	0	0	0	0	0	325	118	0	0	427	141	1,271	4,804
Peak Hour	All	0	757	0	365	0	0	0	0	0	0	1,168	458	0	0	1,511	545	4,804	0
	HV	0	25	0	1	0	0	0	0	0	0	9	10	0	0	7	3	55	0
	HV%	-	3%	-	0%	-	-	-	-	-	-	1%	2%	-	-	0%	1%	1%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:30 PM	11	0	8	3	*22*	0	0	0	1	*1*	0	2	0	0	*2*
4:45 PM	4	0	5	4	*13*	0	0	0	1	*1*	0	6	0	0	*6*
5:00 PM	5	0	3	3	*11*	0	0	0	2	*2*	0	2	0	0	*2*
5:15 PM	6	0	3	0	*9*	0	0	0	2	*2*	0	2	0	0	*2*
Peak Hour	26	0	19	10	*55*	0	0	0	6	*6*	0	12	0	0	*12*

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Three-Hour Count Summaries

Interval Start	HWY 80 EB Ramps				HWY 80 EB On-Ramp				Truxel Rd				Truxel Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	232	0	119	0	0	0	0	0	0	300	50	0	0	276	96	1,073	0
3:15 PM	0	246	0	104	0	0	0	0	0	0	278	65	0	0	300	122	1,115	0
3:30 PM	0	183	0	88	0	0	0	0	0	0	255	84	0	0	288	140	1,038	0
3:45 PM	0	214	0	94	0	0	0	0	0	0	260	80	0	0	311	113	1,072	4,298
4:00 PM	0	206	0	105	0	0	0	0	0	0	255	90	1	0	348	124	1,129	4,354
4:15 PM	0	156	0	100	0	0	0	0	0	0	257	128	0	0	377	102	1,120	4,359
4:30 PM	**0**	**213**	**0**	**101**	**0**	**0**	**0**	**0**	**0**	**0**	**274**	**123**	**0**	**0**	**323**	**128**	**1,162**	4,483
4:45 PM	**0**	**180**	**0**	**94**	**0**	**0**	**0**	**0**	**0**	**0**	**302**	**121**	**0**	**0**	**389**	**128**	**1,214**	4,625
5:00 PM	**0**	**190**	**0**	**84**	**0**	**0**	**0**	**0**	**0**	**0**	**267**	**96**	**0**	**0**	**372**	**148**	**1,157**	4,653
5:15 PM	**0**	**174**	**0**	**86**	**0**	**0**	**0**	**0**	**0**	**0**	**325**	**118**	**0**	**0**	**427**	**141**	**1,271**	**4,804**
5:30 PM	0	211	0	86	0	0	0	0	0	0	291	98	0	0	338	109	1,133	4,775
5:45 PM	0	202	0	70	0	0	0	0	0	0	342	73	0	0	348	97	1,132	4,693
Count Total	0	2,407	0	1,131	0	0	0	0	0	0	3,406	1,126	1	0	4,097	1,448	13,616	0
Peak Hour All	**0**	**757**	**0**	**365**	**0**	**0**	**0**	**0**	**0**	**0**	**1,168**	**458**	**0**	**0**	**1,511**	**545**	**4,804**	**0**
Peak Hour HV	**0**	**25**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**10**	**0**	**0**	**7**	**3**	**55**	**0**
Peak Hour HV%	**-**	**3%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**-**	**1%**	**2%**	**-**	**-**	**0%**	**1%**	**1%**	**0**

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	18	0	6	4	*28*	0	0	0	2	*2*	0	6	0	0	*6*
3:15 PM	26	0	8	5	*39*	0	0	0	1	*1*	0	2	0	0	*2*
3:30 PM	13	0	15	3	*31*	0	0	2	2	*4*	0	4	0	0	*4*
3:45 PM	17	0	5	4	*26*	0	0	1	3	*4*	0	2	0	0	*2*
4:00 PM	10	0	5	6	*21*	0	0	0	3	*3*	0	5	0	0	*5*
4:15 PM	11	0	5	3	*19*	0	0	0	1	*1*	0	4	0	0	*4*
4:30 PM	**11**	**0**	**8**	**3**	***22***	**0**	**0**	**0**	**1**	***1***	**0**	**2**	**0**	**0**	*2*
4:45 PM	**4**	**0**	**5**	**4**	***13***	**0**	**0**	**0**	**1**	***1***	**0**	**6**	**0**	**0**	*6*
5:00 PM	**5**	**0**	**3**	**3**	***11***	**0**	**0**	**0**	**2**	***2***	**0**	**2**	**0**	**0**	*2*
5:15 PM	**6**	**0**	**3**	**0**	***9***	**0**	**0**	**0**	**2**	***2***	**0**	**2**	**0**	**0**	***2***
5:30 PM	11	0	2	5	*18*	0	0	0	3	*3*	0	4	0	0	*4*
5:45 PM	4	0	0	1	*5*	0	0	0	1	*1*	0	1	0	0	*1*
Count Total	136	0	65	41	*242*	0	0	3	22	*25*	0	40	0	0	*40*
Peak Hour	**26**	**0**	**19**	**10**	***55***	**0**	**0**	**0**	**6**	***6***	**0**	**12**	**0**	**0**	***12***

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Three-Hour Count Summaries - Heavy Vehicles

Interval Start	HWY 80 EB Ramps				HWY 80 EB On-Ramp				Truxel Rd				Truxel Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	14	0	4	0	0	0	0	0	0	6	0	0	0	2	2	28	0
3:15 PM	0	24	0	2	0	0	0	0	0	0	7	1	0	0	4	1	39	0
3:30 PM	0	12	0	1	0	0	0	0	0	0	14	1	0	0	2	1	31	0
3:45 PM	0	14	0	3	0	0	0	0	0	0	3	2	0	0	2	2	26	124
4:00 PM	0	10	0	0	0	0	0	0	0	0	3	2	0	0	4	2	21	117
4:15 PM	0	8	0	3	0	0	0	0	0	0	2	3	0	0	1	2	19	97
4:30 PM	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**4**	**0**	**0**	**2**	**1**	**22**	88
4:45 PM	**0**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**0**	**0**	**2**	**2**	**13**	75
5:00 PM	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**3**	**0**	**11**	65
5:15 PM	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**9**	**55**
5:30 PM	0	10	0	1	0	0	0	0	0	0	1	1	0	0	4	1	18	51
5:45 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	43
Count Total	0	121	0	15	0	0	0	0	0	0	45	20	0	0	27	14	242	0
Peak Hour	**0**	**25**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**10**	**0**	**0**	**7**	**3**	**55**	**0**

Three-Hour Count Summaries - Bikes

Interval Start	HWY 80 EB Ramps			HWY 80 EB On-Ramp			Truxel Rd			Truxel Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
3:30 PM	0	0	0	0	0	0	0	2	0	0	1	1	4	0
3:45 PM	0	0	0	0	0	0	0	1	0	0	3	0	4	11
4:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	3	12
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	12
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	9
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**2**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**6**
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	1	3	8
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	8
Count Total	0	0	0	0	0	0	0	3	0	0	19	3	25	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**6**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	212	208	97.9%	58.2	5.6	E
	Through	896	903	100.8%	17.2	2.1	B
	Right Turn	72	69	96.4%	5.2	1.3	A
	Subtotal	1,180	1,180	100.0%	23.3	2.5	C
SB	Left Turn	75	77	102.1%	54.0	8.7	D
	Through	693	701	101.2%	33.5	2.6	C
	Right Turn	108	113	104.2%	7.3	1.4	A
	Subtotal	876	890	101.6%	31.9	2.5	C
EB	Left Turn	254	254	100.2%	56.8	5.7	E
	Through	464	466	100.3%	30.8	3.3	C
	Right Turn	251	246	98.1%	9.6	2.5	A
	Subtotal	969	966	99.7%	32.8	2.3	C
WB	Left Turn	73	67	91.6%	56.4	5.6	E
	Through	466	470	100.9%	36.0	3.2	D
	Right Turn	101	108	107.3%	12.2	2.8	B
	Subtotal	640	646	100.9%	34.5	2.5	C
Total		3,665	3,682	100.5%	29.8	1.1	C

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	309	297	96.1%	53.8	6.5	D
	Through	1,001	1,005	100.4%	18.6	2.7	B
	Right Turn	78	77	98.1%	4.9	1.3	A
	Subtotal	1,388	1,379	99.3%	25.0	2.5	C
SB	Left Turn	58	59	101.6%	68.2	12.9	E
	Through	907	918	101.2%	21.1	3.3	C
	Right Turn	119	116	97.2%	10.0	1.2	A
	Subtotal	1,084	1,093	100.8%	22.8	2.6	C
EB	Left Turn	91	91	99.9%	52.4	6.1	D
	Through	18	19	107.8%	51.9	15.3	D
	Right Turn	243	241	99.0%	14.6	4.0	B
	Subtotal	352	351	99.7%	27.2	3.7	C
WB	Left Turn	63	60	94.4%	54.0	12.5	D
	Through	12	12	95.8%	54.2	32.0	D
	Right Turn	76	78	102.2%	14.6	4.5	B
	Subtotal	151	149	98.5%	33.4	6.7	C
Total		2,975	2,971	99.9%	24.9	1.2	C

Intersection 3 **Truxel Rd/North Marketplace-Existing Retail Center Driveway** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	25	99.2%	62.1	29.2	E
	Through						
	Right Turn						
	Subtotal	25	25	99.2%	62.1	29.2	E
SB	Left Turn						
	Through	1,051	1,059	100.7%	14.6	2.9	B
	Right Turn	189	183	96.7%	7.8	1.4	A
	Subtotal	1,240	1,241	100.1%	13.6	2.6	B
EB	Left Turn	138	142	103.1%	48.3	5.3	D
	Through						
	Right Turn	110	113	102.3%	16.6	3.0	B
	Subtotal	248	255	102.7%	34.8	4.1	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,513	1,521	100.5%	18.2	2.0	B

Intersection 4 **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	40	39	97.8%	61.1	14.2	E
	Through	628	622	99.0%	41.0	5.7	D
	Right Turn	695	708	101.9%	9.3	1.4	A
	Subtotal	1,363	1,369	100.4%	24.9	2.8	C
SB	Left Turn	274	273	99.7%	55.8	4.1	E
	Through	532	522	98.1%	30.1	3.3	C
	Right Turn	64	64	100.3%	7.1	1.2	A
	Subtotal	870	859	98.8%	36.4	2.9	D
EB	Left Turn	45	45	100.7%	51.0	8.9	D
	Through	37	33	90.3%	57.2	12.3	E
	Right Turn	92	93	101.4%	26.2	7.6	C
	Subtotal	174	172	98.9%	38.6	6.0	D
WB	Left Turn	661	651	98.5%	107.5	28.1	F
	Through	59	58	98.8%	34.0	11.4	C
	Right Turn	191	199	104.0%	8.1	1.7	A
	Subtotal	911	908	99.6%	82.7	21.2	F
Total		3,318	3,308	99.7%	44.3	6.8	D

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	575	92.0%	233.4	19.0	F
	Through	965	960	99.4%	48.4	7.2	D
	Right Turn	1,045	1,051	100.6%	24.9	6.2	C
	Subtotal	2,635	2,586	98.1%	81.2	9.9	F
SB	Left Turn	245	245	100.1%	45.9	5.6	D
	Through	756	766	101.3%	48.5	2.8	D
	Right Turn	166	160	96.5%	8.3	2.4	A
	Subtotal	1,167	1,171	100.4%	42.5	2.5	D
EB	Left Turn	187	187	99.9%	58.5	9.0	E
	Through	136	137	100.8%	77.2	26.6	E
	Right Turn	421	419	99.6%	31.8	3.6	C
	Subtotal	744	743	99.9%	47.0	7.1	D
WB	Left Turn	997	997	100.0%	61.6	9.5	E
	Through	192	187	97.3%	41.0	7.0	D
	Right Turn	100	97	97.4%	12.6	6.3	B
	Subtotal	1,289	1,282	99.4%	55.0	8.3	E
Total		5,835	5,781	99.1%	63.1	6.0	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,739	1,738	99.9%	29.1	7.0	C
	Right Turn	208	202	96.9%	7.3	0.8	A
	Subtotal	1,947	1,939	99.6%	26.8	6.1	C
SB	Left Turn						
	Through	1,283	1,278	99.6%	13.2	0.9	B
	Right Turn						
	Subtotal	1,283	1,278	99.6%	13.2	0.9	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	426	418	98.0%	26.9	8.9	C
	Through						
	Right Turn	896	884	98.6%	28.4	15.9	C
	Subtotal	1,322	1,301	98.4%	27.8	12.6	C
Total		4,552	4,518	99.3%	23.2	5.8	C

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,193	1,197	100.3%	12.4	0.9	B
	Right Turn	385	396	102.8%	1.1	0.4	A
	Subtotal	1,578	1,592	100.9%	9.6	0.8	A
SB	Left Turn						
	Through	1,281	1,267	98.9%	12.2	0.9	B
	Right Turn	428	425	99.2%	5.4	0.3	A
	Subtotal	1,709	1,692	99.0%	10.5	0.7	B
EB	Left Turn	754	744	98.7%	20.3	2.1	C
	Through						
	Right Turn	326	333	102.1%	17.9	1.6	B
	Subtotal	1,080	1,077	99.7%	19.5	1.6	B
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		4,367	4,361	99.9%	12.4	0.8	B

APPENDIX B: EXISTING PLUS PROJECT TECHNICAL CALCULATIONS

Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	226	224	98.9%	60.0	10.6	E
	Through	926	918	99.2%	19.7	2.8	B
	Right Turn	72	76	105.7%	5.8	1.6	A
	Subtotal	1,224	1,218	99.5%	26.4	2.9	C
SB	Left Turn	84	84	100.2%	53.0	10.2	D
	Through	725	725	100.0%	33.8	3.2	C
	Right Turn	108	111	102.6%	7.6	1.7	A
	Subtotal	917	920	100.3%	32.7	3.4	C
EB	Left Turn	254	256	100.7%	56.9	5.3	E
	Through	464	466	100.5%	31.3	3.8	C
	Right Turn	266	267	100.2%	10.7	2.0	B
	Subtotal	984	989	100.5%	32.8	3.4	C
WB	Left Turn	73	71	97.1%	57.6	6.6	E
	Through	466	464	99.6%	33.6	3.6	C
	Right Turn	109	112	102.3%	11.4	1.5	B
	Subtotal	648	647	99.8%	32.6	2.9	C
Total		3,773	3,773	100.0%	30.7	1.8	C

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	380	360	94.7%	55.5	7.4	E
	Through	1,056	1,044	98.8%	19.3	4.0	B
	Right Turn	81	81	100.2%	3.4	0.8	A
	Subtotal	1,517	1,485	97.9%	27.2	3.6	C
SB	Left Turn	58	59	102.2%	69.1	12.9	E
	Through	966	975	100.9%	22.0	2.8	C
	Right Turn	119	122	102.4%	10.7	1.4	B
	Subtotal	1,143	1,156	101.1%	23.0	2.3	C
EB	Left Turn	91	95	104.5%	51.7	8.8	D
	Through	18	18	98.9%	61.5	34.6	E
	Right Turn	262	261	99.5%	17.2	3.8	B
	Subtotal	371	374	100.7%	27.6	4.8	C
WB	Left Turn	69	65	94.2%	52.1	7.4	D
	Through	12	12	96.7%	39.5	24.7	D
	Right Turn	76	78	102.2%	13.0	4.5	B
	Subtotal	157	154	98.3%	31.3	5.7	C
Total		3,188	3,168	99.4%	25.9	2.4	C

Intersection 3 **Truxel Rd/North Marketplace-Existing Retail Center Driveway** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	20	79.6%	59.0	33.7	E
	Through						
	Right Turn						
	Subtotal	25	20	79.6%	59.0	33.7	E
SB	Left Turn						
	Through	1,189	1,177	99.0%	18.7	8.2	B
	Right Turn	189	187	98.9%	8.3	2.4	A
	Subtotal	1,378	1,364	99.0%	17.2	7.2	B
EB	Left Turn	138	133	96.3%	58.5	22.4	E
	Through						
	Right Turn	110	110	99.6%	31.3	26.8	C
	Subtotal	248	243	97.8%	46.7	23.1	D
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,651	1,626	98.5%	21.8	7.7	C

Intersection 4 **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	86	85	99.3%	63.8	14.7	E
	Through	620	626	101.0%	48.6	4.9	D
	Right Turn	685	675	98.5%	9.7	1.1	A
	Subtotal	1,391	1,386	99.7%	30.8	3.2	C
SB	Left Turn	274	275	100.2%	62.5	3.5	E
	Through	505	497	98.5%	42.7	5.7	D
	Right Turn	165	167	101.0%	12.4	4.0	B
	Subtotal	944	939	99.4%	43.6	4.9	D
EB	Left Turn	112	112	100.1%	52.7	10.3	D
	Through	92	97	105.0%	47.3	7.1	D
	Right Turn	240	244	101.8%	29.6	3.9	C
	Subtotal	444	453	102.0%	38.6	4.0	D
WB	Left Turn	626	596	95.2%	122.5	33.5	F
	Through	131	135	102.9%	50.8	11.3	D
	Right Turn	191	189	98.7%	8.6	2.2	A
	Subtotal	948	920	97.0%	90.0	23.5	F
Total		3,727	3,697	99.2%	49.5	6.9	D

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	573	91.6%	216.9	46.0	F
	Through	1,052	1,035	98.4%	54.6	7.6	D
	Right Turn	1,073	1,082	100.8%	26.9	7.3	C
	Subtotal	2,750	2,690	97.8%	79.1	14.8	E
SB	Left Turn	364	349	95.9%	107.4	41.5	F
	Through	775	780	100.6%	46.5	6.9	D
	Right Turn	166	159	95.5%	7.7	1.7	A
	Subtotal	1,305	1,287	98.7%	58.8	8.3	E
EB	Left Turn	187	192	102.7%	64.0	12.4	E
	Through	136	130	95.7%	84.5	37.2	F
	Right Turn	421	428	101.7%	36.3	7.9	D
	Subtotal	744	750	100.8%	52.2	12.9	D
WB	Left Turn	1,083	1,057	97.6%	68.2	9.9	E
	Through	192	190	99.2%	41.0	5.0	D
	Right Turn	100	99	99.4%	21.3	3.2	C
	Subtotal	1,375	1,347	98.0%	61.2	8.3	E
Total		6,174	6,074	98.4%	67.6	8.8	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,817	1,790	98.5%	58.2	20.1	E
	Right Turn	208	196	94.4%	13.2	4.8	B
	Subtotal	2,025	1,986	98.1%	53.5	18.1	D
SB	Left Turn						
	Through	1,360	1,347	99.0%	13.9	0.5	B
	Right Turn						
	Subtotal	1,360	1,347	99.0%	13.9	0.5	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	426	430	101.0%	27.2	7.9	C
	Through						
	Right Turn	933	928	99.4%	39.2	28.0	D
	Subtotal	1,359	1,358	99.9%	35.2	21.2	D
Total		4,744	4,691	98.9%	36.8	12.4	D

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,240	1,211	97.6%	16.6	5.8	B
	Right Turn	385	381	98.9%	1.3	0.3	A
	Subtotal	1,625	1,591	97.9%	13.1	4.7	B
SB	Left Turn						
	Through	1,324	1,307	98.7%	13.1	1.0	B
	Right Turn	462	459	99.4%	5.9	0.5	A
	Subtotal	1,786	1,766	98.9%	11.2	0.9	B
EB	Left Turn	785	779	99.2%	22.0	5.1	C
	Through						
	Right Turn	326	334	102.3%	19.2	3.4	B
	Subtotal	1,111	1,113	100.1%	21.2	4.4	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		4,522	4,470	98.9%	14.5	2.7	B

APPENDIX C: CUMULATIVE TECHNICAL CALCULATIONS

Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	207	201	97.0%	51.2	8.3	D
	Through	1,252	1,235	98.6%	42.7	4.2	D
	Right Turn	80	77	96.8%	16.8	7.8	B
	Subtotal	1,539	1,513	98.3%	42.5	4.2	D
SB	Left Turn	214	216	100.8%	65.5	8.3	E
	Through	898	914	101.8%	42.7	2.3	D
	Right Turn	270	274	101.6%	17.7	6.9	B
	Subtotal	1,382	1,404	101.6%	41.6	2.4	D
EB	Left Turn	605	564	93.3%	14.4	1.3	B
	Through	470	444	94.5%	4.3	0.6	A
	Right Turn	255	236	92.6%	4.8	1.2	A
	Subtotal	1,330	1,244	93.6%	8.9	0.6	A
WB	Left Turn	80	82	103.0%	60.6	8.8	E
	Through	770	751	97.5%	44.3	4.2	D
	Right Turn	252	250	99.2%	20.4	3.3	C
	Subtotal	1,102	1,083	98.3%	39.8	3.6	D
Total		5,353	5,245	98.0%	34.4	1.4	C

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	540	514	95.1%	77.2	9.4	E
	Through	1,290	1,246	96.6%	22.1	3.0	C
	Right Turn	78	82	105.6%	7.8	1.0	A
	Subtotal	1,908	1,842	96.5%	37.3	4.6	D
SB	Left Turn	58	58	99.8%	80.3	13.7	F
	Through	1,122	1,125	100.2%	48.7	5.6	D
	Right Turn	120	124	103.6%	16.9	4.5	B
	Subtotal	1,300	1,307	100.5%	46.6	5.3	D
EB	Left Turn	110	104	94.7%	11.4	3.7	B
	Through	18	18	101.1%	9.1	11.5	A
	Right Turn	482	486	100.9%	7.4	1.1	A
	Subtotal	610	609	99.8%	8.2	1.5	A
WB	Left Turn	63	62	97.6%	54.3	11.6	D
	Through	12	13	104.2%	47.3	30.5	D
	Right Turn	76	79	103.9%	17.6	7.0	B
	Subtotal	151	153	101.3%	36.2	9.3	D
Total		3,969	3,910	98.5%	35.2	3.1	D

Intersection 3 **Truxel Rd/North Marketplace-Existing Retail Center Driveway** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	23	92.4%	54.7	25.9	D
	Through						
	Right Turn						
	Subtotal	25	23	92.4%	54.7	25.9	D
SB	Left Turn						
	Through	1,505	1,499	99.6%	6.6	0.8	A
	Right Turn	189	190	100.7%	4.9	0.4	A
	Subtotal	1,694	1,689	99.7%	6.4	0.7	A
EB	Left Turn	138	128	92.8%	50.4	6.8	D
	Through						
	Right Turn	110	107	97.5%	17.6	6.4	B
	Subtotal	248	235	94.8%	36.6	6.4	D
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,967	1,947	99.0%	11.0	1.5	B

Intersection 4 **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	40	41	102.0%	58.1	11.6	E
	Through	908	889	97.9%	51.4	10.4	D
	Right Turn	760	748	98.4%	10.1	1.4	B
	Subtotal	1,708	1,677	98.2%	33.6	6.3	C
SB	Left Turn	303	295	97.3%	105.4	28.5	F
	Through	567	538	95.0%	128.3	54.2	F
	Right Turn	64	62	96.3%	84.5	60.5	F
	Subtotal	934	895	95.8%	117.9	45.9	F
EB	Left Turn	45	44	97.1%	40.4	16.3	D
	Through	37	36	97.8%	40.8	17.5	D
	Right Turn	92	89	97.2%	31.3	7.7	C
	Subtotal	174	169	97.3%	35.6	8.0	D
WB	Left Turn	787	732	92.9%	118.1	13.0	F
	Through	59	56	95.4%	32.3	5.7	C
	Right Turn	220	218	99.0%	8.4	2.8	A
	Subtotal	1,066	1,006	94.3%	89.8	11.1	F
Total		3,882	3,747	96.5%	68.8	14.8	E

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	612	97.9%	81.8	8.9	F
	Through	1,445	1,365	94.5%	107.9	19.6	F
	Right Turn	1,292	1,267	98.0%	29.7	5.1	C
	Subtotal	3,362	3,244	96.5%	72.8	12.2	E
SB	Left Turn	343	341	99.3%	64.4	23.6	E
	Through	1,112	1,112	100.0%	28.9	1.8	C
	Right Turn	166	165	99.2%	5.1	1.7	A
	Subtotal	1,621	1,617	99.8%	34.6	6.6	C
EB	Left Turn	187	190	101.7%	70.0	10.2	E
	Through	136	133	97.6%	76.3	26.2	E
	Right Turn	421	412	97.8%	43.3	6.3	D
	Subtotal	744	735	98.8%	56.1	10.1	E
WB	Left Turn	1,114	1,047	94.0%	105.7	6.1	F
	Through	192	183	95.5%	50.1	5.7	D
	Right Turn	140	138	98.2%	26.0	9.5	C
	Subtotal	1,446	1,368	94.6%	91.5	6.4	F
Total		7,173	6,963	97.1%	65.0	6.4	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	2,054	1,993	97.0%	94.8	36.3	F
	Right Turn	440	438	99.5%	10.7	1.2	B
	Subtotal	2,494	2,431	97.5%	80.0	29.7	E
SB	Left Turn						
	Through	1,584	1,534	96.9%	15.0	0.9	B
	Right Turn						
	Subtotal	1,584	1,534	96.9%	15.0	0.9	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	430	442	102.7%	37.2	8.2	D
	Through						
	Right Turn	1,308	1,323	101.2%	55.3	6.7	E
	Subtotal	1,738	1,765	101.5%	51.0	5.5	D
Total		5,816	5,730	98.5%	53.0	12.9	D

SimTraffic Post-Processor **Natomas Fountains TIS**
Average Results from 10 Runs **Cumulative No Project**
Volume and Delay by Movement **PM Peak Hour**

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,535	1,529	99.6%	17.9	6.9	B
	Right Turn	430	425	98.9%	1.7	0.7	A
	Subtotal	1,965	1,954	99.5%	14.2	5.4	B
SB	Left Turn						
	Through	1,308	1,292	98.8%	10.4	1.2	B
	Right Turn	706	668	94.6%	6.6	0.4	A
	Subtotal	2,014	1,960	97.3%	9.1	0.9	A
EB	Left Turn	959	950	99.0%	24.1	6.8	C
	Through						
	Right Turn	330	323	97.9%	13.2	2.5	B
	Subtotal	1,289	1,273	98.8%	21.3	5.5	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		5,268	5,188	98.5%	14.1	3.4	B

Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	221	212	96.0%	63.0	5.4	E
	Through	1,280	1,197	93.5%	57.0	2.4	E
	Right Turn	80	71	88.6%	32.0	6.5	C
	Subtotal	1,581	1,480	93.6%	56.8	2.3	E
SB	Left Turn	223	222	99.5%	76.2	8.6	E
	Through	929	938	101.0%	50.9	3.1	D
	Right Turn	270	265	98.3%	14.6	2.3	B
	Subtotal	1,422	1,426	100.3%	48.1	3.5	D
EB	Left Turn	605	615	101.6%	9.5	0.7	A
	Through	470	475	101.1%	3.6	0.4	A
	Right Turn	270	285	105.6%	3.8	1.0	A
	Subtotal	1,345	1,375	102.2%	6.3	0.4	A
WB	Left Turn	80	78	97.5%	68.9	15.5	E
	Through	770	755	98.0%	60.1	14.2	E
	Right Turn	260	264	101.5%	30.6	17.0	C
	Subtotal	1,110	1,097	98.8%	53.7	14.5	D
Total		5,458	5,377	98.5%	40.8	3.5	D

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	611	578	94.5%	75.1	16.6	E
	Through	1,343	1,284	95.6%	14.7	3.2	B
	Right Turn	81	80	98.5%	3.2	1.0	A
	Subtotal	2,035	1,942	95.4%	32.7	6.8	C
SB	Left Turn	58	56	96.0%	187.6	104.1	F
	Through	1,180	1,184	100.3%	98.1	29.9	F
	Right Turn	120	122	101.7%	36.7	5.5	D
	Subtotal	1,358	1,361	100.2%	95.8	29.5	F
EB	Left Turn	110	80	72.5%	36.2	17.0	D
	Through	18	13	72.8%	8.7	13.1	A
	Right Turn	501	406	80.9%	19.8	4.7	B
	Subtotal	629	498	79.2%	21.3	4.5	C
WB	Left Turn	69	68	98.3%	64.1	7.9	E
	Through	12	11	95.0%	21.9	25.4	C
	Right Turn	76	77	101.7%	15.3	6.5	B
	Subtotal	157	157	99.7%	38.6	5.4	D
Total		4,179	3,958	94.7%	54.8	12.6	D

Intersection 3 **Truxel Rd/North Marketplace-Existing Retail Center Driveway** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	20	78.4%	48.8	20.2	D
	Through						
	Right Turn						
	Subtotal	25	20	78.4%	48.8	20.2	D
SB	Left Turn						
	Through	1,642	1,522	92.7%	80.0	6.0	F
	Right Turn	189	184	97.5%	37.6	3.7	D
	Subtotal	1,831	1,707	93.2%	75.3	5.5	E
EB	Left Turn	138	136	98.7%	52.5	7.1	D
	Through						
	Right Turn	110	117	106.4%	20.4	5.7	C
	Subtotal	248	253	102.1%	38.6	6.4	D
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		2,104	1,979	94.1%	69.9	4.7	E

Intersection 4 **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	86	76	88.4%	126.4	28.8	F
	Through	900	836	92.8%	91.7	28.1	F
	Right Turn	750	700	93.3%	13.7	6.5	B
	Subtotal	1,736	1,611	92.8%	60.0	19.3	E
SB	Left Turn	303	293	96.6%	177.5	54.7	F
	Through	540	546	101.1%	91.5	33.8	F
	Right Turn	165	164	99.1%	43.1	27.9	D
	Subtotal	1,008	1,002	99.4%	109.5	34.5	F
EB	Left Turn	112	99	87.9%	47.0	5.1	D
	Through	92	88	95.1%	47.9	11.8	D
	Right Turn	240	216	90.0%	80.8	43.3	F
	Subtotal	444	402	90.5%	65.6	27.1	E
WB	Left Turn	752	509	67.6%	171.9	43.0	F
	Through	131	91	69.5%	49.8	7.4	D
	Right Turn	220	159	72.4%	12.5	5.6	B
	Subtotal	1,103	759	68.8%	127.5	30.5	F
Total		4,291	3,774	87.9%	86.5	12.6	F

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	605	96.7%	71.4	4.8	E
	Through	1,530	1,490	97.4%	85.4	11.8	F
	Right Turn	1,320	1,260	95.5%	39.9	17.1	D
	Subtotal	3,475	3,354	96.5%	66.0	7.5	E
SB	Left Turn	462	363	78.5%	198.5	13.3	F
	Through	1,130	1,111	98.3%	24.0	4.8	C
	Right Turn	166	169	101.6%	4.0	1.0	A
	Subtotal	1,758	1,642	93.4%	62.8	4.8	E
EB	Left Turn	187	179	95.5%	92.2	34.5	F
	Through	136	135	99.6%	116.1	57.4	F
	Right Turn	421	413	98.2%	39.1	5.7	D
	Subtotal	744	727	97.7%	65.6	17.8	E
WB	Left Turn	1,200	994	82.8%	124.7	4.7	F
	Through	192	161	83.7%	70.5	5.0	E
	Right Turn	140	115	82.4%	34.2	9.9	C
	Subtotal	1,532	1,270	82.9%	110.2	5.1	F
Total		7,509	6,994	93.1%	73.3	5.1	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	2,130	2,017	94.7%	138.7	26.8	F
	Right Turn	440	436	99.0%	12.6	2.8	B
	Subtotal	2,570	2,452	95.4%	115.4	22.2	F
SB	Left Turn						
	Through	1,660	1,521	91.6%	17.9	0.7	B
	Right Turn						
	Subtotal	1,660	1,521	91.6%	17.9	0.7	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	430	417	97.0%	34.9	3.9	C
	Through						
	Right Turn	1,345	1,340	99.6%	65.9	11.7	E
	Subtotal	1,775	1,757	99.0%	58.8	9.1	E
Total		6,005	5,730	95.4%	72.2	10.5	E

SimTraffic Post-Processor **Natomas Fountains TIS**
Average Results from 10 Runs **Cumulative Plus Project**
Volume and Delay by Movement **PM Peak Hour**

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,580	1,544	97.7%	43.6	34.3	D
	Right Turn	430	439	102.1%	6.4	9.2	A
	Subtotal	2,010	1,983	98.7%	35.0	27.8	C
SB	Left Turn						
	Through	1,350	1,268	93.9%	9.9	1.2	A
	Right Turn	740	670	90.5%	6.5	0.6	A
	Subtotal	2,090	1,937	92.7%	8.7	0.9	A
EB	Left Turn	990	958	96.7%	99.9	83.0	F
	Through						
	Right Turn	330	329	99.7%	37.1	34.3	D
	Subtotal	1,320	1,287	97.5%	82.1	68.9	F
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		5,420	5,208	96.1%	36.4	24.1	D

Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	221	219	99.0%	77.3	9.8	E
	Through	1,280	1,235	96.5%	60.9	10.4	E
	Right Turn	80	81	101.1%	34.5	14.2	C
	Subtotal	1,581	1,534	97.1%	61.9	9.8	E
SB	Left Turn	223	216	96.7%	66.1	4.6	E
	Through	929	948	102.1%	46.1	3.1	D
	Right Turn	270	274	101.6%	16.6	4.5	B
	Subtotal	1,422	1,438	101.1%	43.6	2.8	D
EB	Left Turn	605	602	99.6%	9.5	0.7	A
	Through	470	474	100.8%	3.7	0.5	A
	Right Turn	270	273	101.2%	3.4	1.3	A
	Subtotal	1,345	1,349	100.3%	6.2	0.3	A
WB	Left Turn	80	81	100.6%	63.5	8.7	E
	Through	770	768	99.7%	53.0	7.1	D
	Right Turn	260	265	102.0%	24.9	5.4	C
	Subtotal	1,110	1,113	100.3%	47.3	6.3	D
Total		5,458	5,435	99.6%	40.4	3.6	D

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	611	585	95.7%	80.6	16.4	F
	Through	1,343	1,313	97.8%	33.2	6.8	C
	Right Turn	81	82	101.1%	12.5	4.7	B
	Subtotal	2,035	1,980	97.3%	46.5	7.2	D
SB	Left Turn	58	58	100.5%	67.9	14.5	E
	Through	1,180	1,188	100.7%	77.9	19.6	E
	Right Turn	120	117	97.7%	93.6	48.7	F
	Subtotal	1,358	1,363	100.4%	78.9	21.7	E
EB	Left Turn	110	106	96.6%	10.7	2.2	B
	Through	18	17	94.4%	9.7	12.5	A
	Right Turn	501	507	101.2%	10.3	1.0	B
	Subtotal	629	630	100.2%	10.3	0.9	B
WB	Left Turn	69	67	97.2%	63.6	17.5	E
	Through	12	12	99.2%	37.7	21.0	D
	Right Turn	76	77	101.4%	14.5	6.8	B
	Subtotal	157	156	99.4%	38.7	12.1	D
Total		4,179	4,129	98.8%	51.5	9.7	D

Intersection 3 — **Truxel Rd/North Marketplace-Existing Retail Center Driveway** — **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	19	76.4%	45.1	12.1	D
	Through						
	Right Turn						
	Subtotal	25	19	76.4%	45.1	12.1	D
SB	Left Turn						
	Through	1,642	1,641	99.9%	19.2	8.6	B
	Right Turn	189	193	101.9%	12.6	1.7	B
	Subtotal	1,831	1,834	100.1%	18.5	7.8	B
EB	Left Turn	138	139	101.0%	35.1	6.5	D
	Through						
	Right Turn	110	113	102.7%	10.3	3.6	B
	Subtotal	248	252	101.8%	24.1	6.0	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		2,104	2,105	100.0%	19.3	6.8	B

Intersection 4 — **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** — **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	80	80	99.5%	84.4	9.6	F
	Through	906	895	98.8%	43.8	4.7	D
	Right Turn	750	742	98.9%	11.6	1.8	B
	Subtotal	1,736	1,717	98.9%	32.1	3.1	C
SB	Left Turn	303	301	99.2%	82.7	33.2	F
	Through	546	538	98.6%	58.8	51.1	E
	Right Turn	165	160	96.8%	23.4	42.1	C
	Subtotal	1,014	999	98.5%	60.5	43.9	E
EB	Left Turn	112	113	101.0%	46.6	8.5	D
	Through	92	89	97.0%	58.8	10.7	E
	Right Turn	240	240	100.0%	15.0	9.2	B
	Subtotal	444	442	99.6%	32.8	5.0	C
WB	Left Turn	752	502	66.7%	199.9	53.6	F
	Through	131	98	74.5%	62.5	10.4	E
	Right Turn	220	168	76.5%	16.9	4.0	B
	Subtotal	1,103	768	69.6%	145.9	35.5	F
Total		4,297	3,925	91.3%	57.6	9.8	E

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	614	98.2%	67.7	5.8	E
	Through	1,530	1,496	97.8%	78.1	15.0	E
	Right Turn	1,320	1,297	98.3%	28.4	1.9	C
	Subtotal	3,475	3,407	98.0%	57.7	7.5	E
SB	Left Turn	462	461	99.8%	99.7	39.8	F
	Through	1,130	1,135	100.5%	49.8	11.6	D
	Right Turn	166	157	94.7%	8.6	2.9	A
	Subtotal	1,758	1,754	99.8%	58.7	12.6	E
EB	Left Turn	187	185	98.7%	83.2	24.3	F
	Through	136	138	101.5%	99.4	34.4	F
	Right Turn	421	421	100.0%	39.5	4.9	D
	Subtotal	744	743	99.9%	61.6	12.5	E
WB	Left Turn	1,200	1,003	83.6%	156.1	12.7	F
	Through	192	160	83.3%	68.1	14.8	E
	Right Turn	140	116	82.9%	76.7	13.7	E
	Subtotal	1,532	1,279	83.5%	137.3	12.6	F
Total		7,509	7,183	95.7%	72.6	4.1	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	2,130	2,077	97.5%	85.2	31.5	F
	Right Turn	440	435	98.8%	10.2	1.0	B
	Subtotal	2,570	2,512	97.7%	72.3	26.7	E
SB	Left Turn						
	Through	1,660	1,552	93.5%	21.6	5.9	C
	Right Turn						
	Subtotal	1,660	1,552	93.5%	21.6	5.9	C
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	430	423	98.4%	36.3	3.3	D
	Through						
	Right Turn	1,345	1,335	99.2%	62.5	9.1	E
	Subtotal	1,775	1,758	99.1%	56.4	7.4	E
Total		6,005	5,822	96.9%	54.1	10.7	D

Average Results from 10 Runs **Cumulative Plus Project - Mitigated (No RT Overlap at int. 4)**

Volume and Delay by Movement **PM Peak Hour**

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,580	1,569	99.3%	18.1	7.8	B
	Right Turn	430	432	100.5%	1.7	0.4	A
	Subtotal	2,010	2,002	99.6%	14.6	6.0	B
SB	Left Turn						
	Through	1,350	1,287	95.3%	10.7	1.1	B
	Right Turn	740	687	92.9%	5.9	0.7	A
	Subtotal	2,090	1,975	94.5%	9.0	0.6	A
EB	Left Turn	990	966	97.6%	28.8	12.0	C
	Through						
	Right Turn	330	328	99.5%	15.0	3.5	B
	Subtotal	1,320	1,294	98.1%	25.4	10.3	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		5,420	5,271	97.2%	15.1	4.7	B