City of SACRAMENTO
Community Development

ADDENDUM TO AN ADOPTED MITIGATED NEGATIVE DECLARATION

The City of Sacramento, California, a municipal corporation, does hereby prepare, make declare, and publish the Addendum to a certified Negative Declaration for the following described project:

Project Name and Number: Raising Cane's at Gateway Park (P24-027)

Original Project: Natomas Fountains Initial Study/Mitigated Negative Declaration (P16-012).

The proposed project is located on a 1.77-acre project site and would include the development of 3,329 square foot (sf) drive-through Raising Cane's restaurant. The proposal includes dual-lane drive-through lanes with decorative screening, a 1,554 square foot outdoor covered patio, and 29 parking stalls within the Shopping Center (SC-PUD) zone and Coral Business Park Planned Unit Development.

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, as identified in the attached Addendum, would have a significant effect on the environmental beyond that which was evaluated in the attached Mitigated Negative Declaration (MND). A Subsequent MND is not required pursuant to the California Environmental Quality Act (CEQA) of 1970 (Sections 21000, et. Seq., Public Resources Code of the State of California).

This Addendum to an adopted Mitigated Negative Declaration has been prepared pursuant to Title 14, Section 15164 of the California Code of Regulations; the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, Planning Division, 300 Richards Boulevard, Sacramento, California 95811 and is available online at: https://www.cityofsacramento.gov/community-development/planning/environmental/impact-reports

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

By: Scott Johnson

Date: June 19, 2025

RAISING CANE'S GATEWAY PARK PROJECT (P24-027)

ADDENDUM TO THE CITY OF SACRAMENTO MITIGATED NEGATIVE DECLARATION FOR THE NATOMAS FOUNTAINS (P16-012) (SCH NO. 2016082045)

Prepared for	City of Sacramento 300 Richards Boulevard, Third Floor Sacramento, CA 95811
Prepared by	Kimley-Horn and Associates, Inc. 555 Capitol Mall, Suite 300 Sacramento, CA 95814
Date	June 2025

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Project Name/File Number: Raising Cane's Gateway Park (P24-027)

1 INTRODUCTION

The project applicant is requesting the City of Sacramento's consideration of the approval of the Raising Cane's Gateway Park Project (proposed project or project), an approximately 3,442-square-foot (sf) drive-thru restaurant on a 1.77-acre project site within the North Natomas area of Sacramento, California.

1.1 Project Location

The project site is located in the northern area of the City of Sacramento (City) in Sacramento County (County), approximately 0.41 miles northwest of Interstate 80 (I-80) and approximately 1.1 miles east of Interstate 5 (I-5). The site is at the northwest corner of the intersection of Gateway Park Boulevard and North Freeway Boulevard. Existing vehicular access to the site is provided from one driveway on North Freeway Boulevard. The site is generally bordered by Raley's Natomas Distribution Center to the north, Gateway Park Boulevard to the east, an existing retail center bordering Gateway Park Boulevard and Truxel Road to the south, and the residential apartment complex (under construction), the East Drainage Canal, and Truxel Road to the to the west (see ***Exhibit 1: Regional Vicinity Map***, ***Exhibit 2: Site Vicinity Map*****, and** ***Exhibit 3: USGS Topographic Map***).

1.2 Background

The project site is within the Coral Business Center Planned Unit Development (PUD), consisting approximately 76 acres and is one of the first major business centers in North Natomas. Sacramento City Council designated the Coral Business Center PUD on December 11, 1990 (P90-157), originally designating the project site for the Sacramento Coca-Cola Bottling Facility and warehouse uses. In 1994, City Council amended the Coral Business Center PUD schematic to allow office uses on the project site and designated EC-50-PUD zoning for the project area. However, 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. The Natomas Fountains Project (P16-012) Mitigated Negative Declaration (MND) (referred herein as the Natomas Fountains MND) was adopted by the Sacramento City Council in on January 5, 2017, and concurrently rezoned from EC-50-PUD to SC-PUD (Shopping Center). See **Appendix A: Natomas Fountains Initial Study/Mitigated Negative Declaration**. On February 10, 2022, the City of Sacramento published an addendum to an adopted mitigated negative declaration for the *Natomas Fountains Apartments Project (P21-025)* (Natomas Fountains Apartments Project Addendum) for 10.99-acre site located in Assessor's Parcel Number 225-0160-094 west of the proposed project site and within the Natomas Fountains Project area. However, this addendum would not apply to the proposed project area.

The project site for the proposed project is within the boundaries of the Natomas Fountains Project area. The Natomas Fountains MND identified that the following topical areas would have a less than significant impact with the adoption of mitigation measures: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Noise, Transportation and Circulation, and Mandatory Findings of Significance. The Natomas Fountains MND found that impacts would be less than significant without mitigation for Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Public Services, Recreation, and Utilities. No significant impacts were identified for the topic of Agricultural Resources, Energy, Land Use, and Population and Housing. The Natomas Fountains MND did not include analysis of impacts for Mineral Resources and Wildfire. The Natomas Fountains MND found that 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, transportation and circulation, utilities and service systems, or mandatory findings of significance.

The Natomas Fountains project was approved under the land use and density goals of the 2035 General Plan. The proposed project is consistent with these goals as the proposed project is an infill project, and consistent with the site's general plan designation (Regional Commercial Center) and zoning (SC-PUD), with the approval of a conditional use permit. As described in the 2035 General Plan, the City's goal is to grow inward, within the city limits, and develop vacant or underutilized parcels. The proposed urban form, with parking interior to the site, and pedestrian connections to sidewalks, complies with the design requirements set forth in the City's Design Guidelines and is similar in nature to other drive-thru restaurant uses near the project site.

As further discussed in Section 2, *Project Description*, the proposed development would result in the development of an approximately 3,442 sf drive-thru restaurant, which is 10,958 sf less than what was assumed for the project site in the Natomas Fountains MND. Accordingly, the proposed project would result in less intense development than what was previously analyzed for the project site in the Natomas Fountains MND.

1.3 Conclusion

This Addendum has been prepared in accordance with the provisions of the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] §§21000 et seq.); the State CEQA Guidelines (Title 14, California Code of Regulations [CCR] §§15000 et seq.); and the rules, regulations, and procedures for implementing CEQA as set forth by the City of Sacramento. Pursuant to the provisions of CEQA and the State CEQA Guidelines, City of Sacramento is the Lead Agency charged with the responsibility of deciding whether to approve the project.

Section 15164(b) of the State CEQA Guidelines states that "an addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred." Pursuant to Section 15162(a) of the State CEQA Guidelines, a subsequent Environmental Impact Report (EIR) or Negative Declaration is only required when:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

As part of its decision-making process, the City is required to review and consider whether the project would create new significant impacts or significant impacts that would be substantially more severe than those disclosed in the *Natomas Fountains Mitigated Negative Declaration* (Natomas Fountains MND). Additional CEQA review beyond this Addendum would be triggered if the proposed project creates new significant impacts or impacts that are more severe than those disclosed in the Natomas Fountains MND such that major revisions to the Natomas Fountains MND would be required.

The following describes the requirements of an addendum, as defined by State CEQA Guidelines Section 15164:

(a) The lead agency or responsible agency shall prepare an Addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.

(b) An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

(c) An addendum need not be circulated for public review but can be included in or attached to the Final EIR or adopted negative declaration.

(d) The decision making body shall consider the addendum with the final EIR prior to making a decision on the project.

A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

This Raising Cane's Gateway Park Project Addendum to the Natomas Fountains MND finds that potential impacts associated with this project would be less than or the same as those described in the Natomas Fountains MND for buildout of the Natomas Fountains area. As discussed in this Addendum, these conclusions are supported by substantial evidence, including project-specific analyses of potential environmental impacts.

Consistent with State CEQA Guidelines Section 15162, based upon the analysis of potential environmental consequences anticipated to occur from implementation of the project as provided in Section 3, *Evaluation of Environmental Impacts*, the project would not result in any new or more severe impacts that were not disclosed, analyzed, and mitigated for in the Natomas Fountains MND. As demonstrated in this Addendum, the project's potential impacts would either be the same or less than those anticipated for

the future development on the project site as evaluated in the Natomas Fountains MND. In addition, there are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND, nor has any new information regarding the potential for new or more severe significant environmental impacts been identified. Consistent with CEQA Guidelines Section 15162(a)(3)(C), no new information of substantial importance shows that mitigation measures or alternatives that were previously found not to be feasible or that are considerably different from those analyzed for the Natomas Fountains MND would substantially reduce one or more significant effects on the environment. Therefore, and as set forth below, none of the conditions described in CEQA Guidelines Section 15162 have occurred, thus an addendum is appropriate (CEQA Guidelines §15164(b)).

Therefore, in accordance with State CEQA Guidelines Section 15126 and Section 15164, this Addendum to the previously adopted Natomas Fountains MND is the appropriate environmental documentation for the project. In taking action on any of the approvals, the decision-making body must consider the whole of the data presented in the Natomas Fountains MND, as augmented by this Addendum. Therefore, preparation of a subsequent negative declaration is not required and the appropriate CEQA document for the project is this Addendum to the Natomas Fountains MND. No additional environmental analysis or review is required for the project. This document will be maintained in the administrative record files at the City of Sacramento offices.

2 DESCRIPTION OF PROPOSED PROJECT

2.1 Project Setting and Location

The approximately 1.77-acre project site is comprised of Assessor Parcel Numbers [APNs] 225-0160-099-0000 and 225-0160-0980-000 and is located in the City of Sacramento, Sacramento County, California. The City is approximately 98.61 square miles in Sacramento County. The project site is in the northern area of the City, approximately 0.41 miles northwest of Interstate 80 (I-80) and approximately 1.1 miles east of Interstate 5 (I-5). Specifically, the project site is located at the northwest corner of the intersection of Gateway Park Boulevard and North Freeway Boulevard within the Coral Business Park PUD area. ***Exhibit 1: Regional Vicinity Map*** and ***Exhibit 2: Site Vicinity Map*** depict the project site in a regional and local context, respectively.

The northern and central portions of the project site are vacant, and the southern portion of the site is partially paved consisting of a driveway along North Freeway Boulevard. A sidewalk and some ornamental landscaping are located along Gateway Park Boulevard directly adjacent to the eastern boundary of the project site. There is also ornamental landscaping on North Freeway Boulevard along the southern portion of the project site frontage. The North Freeway Boulevard frontage does not have pedestrian sidewalk access. The project site is generally flat, and elevations range from approximately 12 to 16 feet above mean sea level (amsl).

The site is directly bordered by Raley's Natomas Distribution Center to the north, Gateway Park Boulevard and a retail center to the east, an existing retail center bordering Gateway Park Boulevard and Truxel Road to the south, and a residential apartment complex (under construction) to the west. **Table 2.1-1: Existing Land Uses** summarizes the land uses on and near the project site.

Table 2.1-1: Existing Land Uses

Direction	Land Uses
Project site	Southern portion of site is paved. The northern and central portions of the site is not developed.
North	Industrial Uses (i.e. Raley's Natomas Distribution Center)
South	An existing retail center bordering Gateway Park Boulevard and Truxel Road
East	Gateway Park Boulevard and a retail center
West	Residential apartment complex (under construction)

2.2 Existing Land Use Designations

The City's 2035 General Plan Land Use Plan Map depicts the City's land use designations and indicates that the project site has a regional commercial land use designation. The regional commercial land use designation allows major retail stores, home improvement stores, offices, restaurants, services, multifamily dwellings, central public gathering places, and compatible public, quasi-public, and special uses.

The City's Zoning Map identifies the project site as shopping center zoning and is located within the Coral Business Center PUD. The Coral Business Center PUD was originally designated by City Council on December 11, 1990 (P90-157) to allow office uses and amended on November 18, 1997, adopting Resolution No. 97-640 to allow for hotel and other retail uses in addition to office uses.

2.3 Project Characteristics

Site Development

The environmental analysis provided for this Addendum is based on the development of an approximately 3,442-sf Raising Cane's Chicken Fingers Drive-Thru Restaurant on the 1.77-acre project site. The restaurant building would be oriented east-to-west and with a building height of approximately 22 feet along with approximately 44,179 sf of hardscape area, 29,313 sf of landscape area, 29 parking spaces, and a total drive-thru queue stacking of 380 linear feet for the inner lane and 340 linear feet for outer lane. Delivery trucks and Passenger vehicles would access the project site from the southern driveway on North Freeway Boulevard. ***Exhibit 4: Conceptual Site Plan***, depicts the proposed development. **Table 2.3-1: Project Building Summary**, summarizes the project's characteristics.

The environmental analysis provided for this Addendum is based on the development of an approximately 115,960-sf of retail, restaurant, and other commercial uses on an approximately 12.54-acre project site for the Natomas Fountains (P16-012). The previously proposed Natomas Fountains uses consisted of 66,980 sf of retail, 34,750 sf of 50% retail/50% restaurant, and 14,230 sf of restaurant. Those previously proposed structures proposed single story buildings with heights no greater than 40 feet. Heavy duty/large delivery trucks previously proposed limiting truck access to a proposed Truxel Road right-in/right-out driveway. The previously proposed Natomas Fountains internal vehicle circulation proposed parking aisles along all sides of the main grouping of retail/restaurant structures with a central driveway providing connectivity between the central driveway and the main grouping of retail structures, parking lot aisles and driveways providing access to four standalone structures, driveway access at Truxel Road, and additional access to the existing retail center driveway.

Table 2.3-1: Project Building Summary

Site (sf)	Building Area (sf)	Hardscape Area (sf)	Landscape (sf)	Automobile Parking Stalls	
				Required	Provided
76,934	3,442	44,179	29,313	11	29

The proposed project would have approximately 55 to 60 total employees with an average of approximately 13 employees per shift (including 2 managers per shift). The proposed hours of operation are 9:00 AM to 3:30 AM seven days a week. Vehicular trip generation is based on the ITE Trip Generation Manual 11th Edition for ITE Land Use Code 934 (Fast-Food Restaurant with Drive-Thru).



Source: ESRI, 2025

Exhibit 1: Regional Map

Raising Cane's Gateway Park Project

City of Sacramento

Not to scale

Kimley»Horn



Source: ESRI, 2025

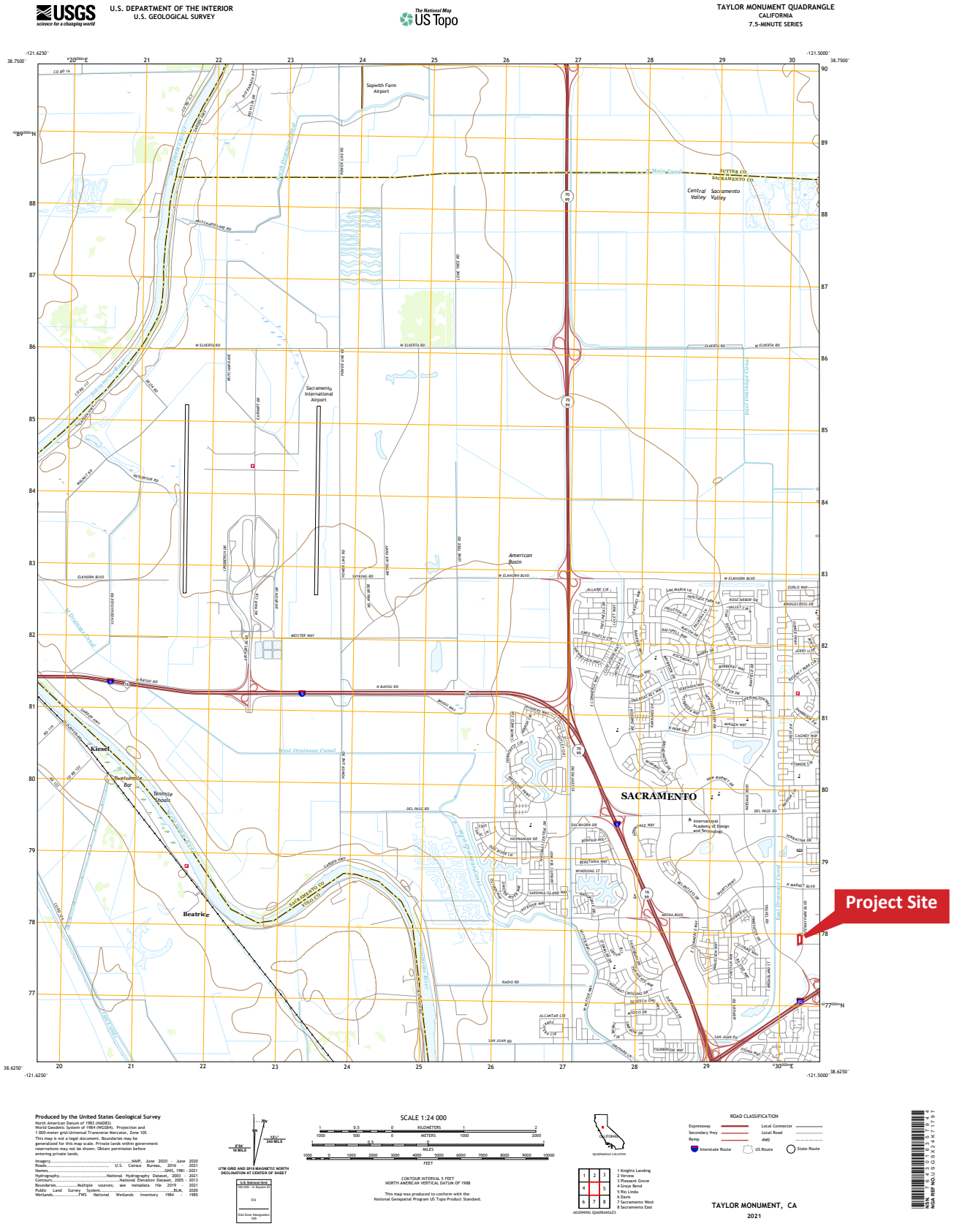
Exhibit 2: Vicinity Map

Raising Cane's Gateway Park Project

City of Sacramento

Not to scale

Kimley»Horn



Source: USGS, 2021

Exhibit 3: USGS Topographic Map

Raising Cane's Gateway Park Project

City of Sacramento

Not to scale

Kimley»Horn

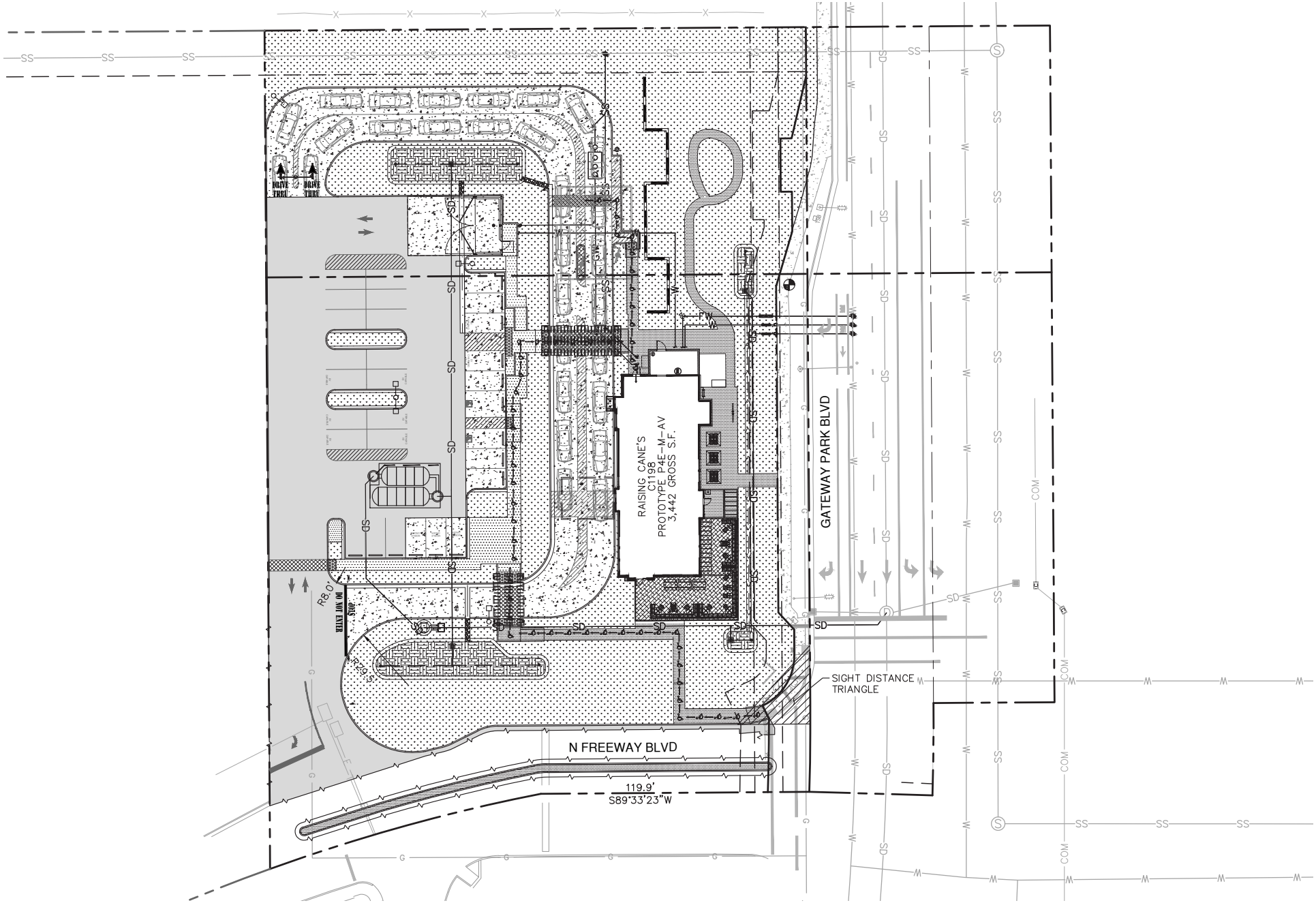


Exhibit 4: Conceptual Site Plan

Raising Cane's Gateway Park Project
City of Sacramento

Not to scale

Kimley»Horn

Architecture, Landscaping, and Lighting

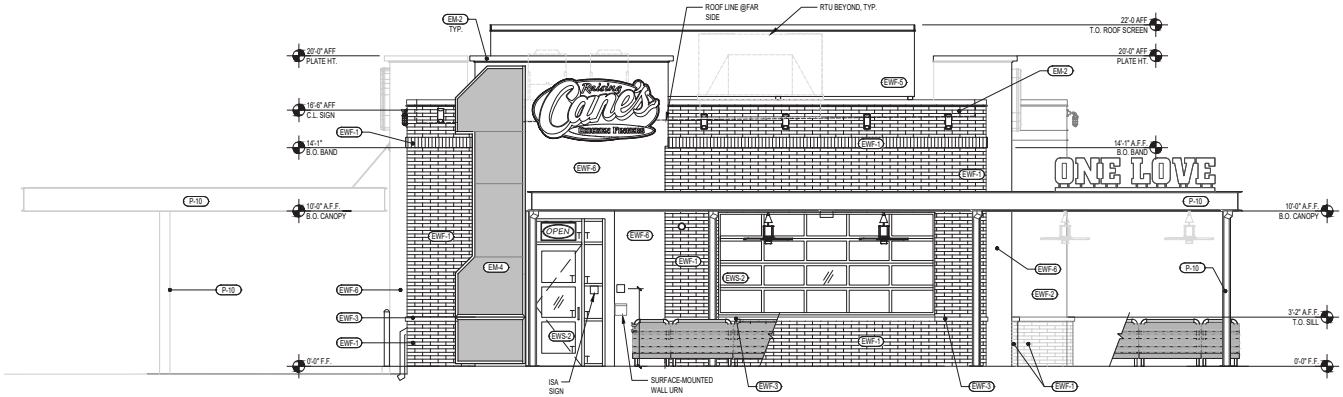
As shown in ***Exhibit 5A-5B: Conceptual Exterior Elevations***, the conceptual architectural design for the project assumes standing seam roof with architectural treatments, such as metal accent panels and brick veneer, to provide visual interest to the building facades. The exterior elevations would be a mix of white and brick with shades of red, black, and grey accents.

Exhibit 6: Conceptual Landscape Plan depicts the proposed landscaping plan for the project site. Of the 1.77-acre project site, approximately 29,313 sf (or approximately 38.10%) of the project site would be landscaped. The proposed project would include an approximately 25-foot landscaped setback along Gateway Park Boulevard and 20-foot setback along North Freeway Boulevard. Shopping Center (SC) zone minimum setback requirements are 20 feet for front and street side-yard setbacks and no minimum rear-yard setback unless a rear-yard lot line is adjacent to R- or OB-zoned lot and is not separated by an alley for which 15 feet is required. All minimum required front-yard and street side-yard setbacks shall be landscaped and maintained per Section 17.612.010 for which the proposed project would be consistent.

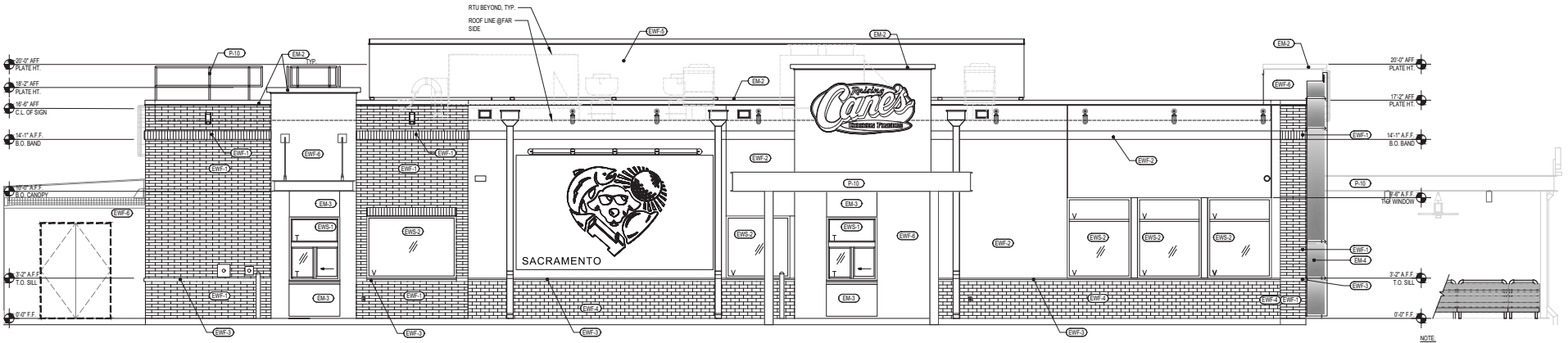
The dual-lane drive-thru lanes would have a low, decorative wall to provide additional car screening in the northern portion of the site. Landscaping consisting of ornamental trees would be located throughout the front-, street-, and rear-yard setbacks to provide landscaping to be viewed from the public right-of-way along Gateway Park Boulevard and North Freeway Boulevard. Section 17.612.010 of the City's Municipal Code addresses landscaping for shopping center uses within the City.

Existing landscaping along North Freeway Boulevard would be removed and replaced while existing landscaping along Gateway Park Boulevard would be maintained. Landscaping would be provided along the North Freeway Boulevard and Gateway Park Boulevard street frontages, driveway entrances, property boundaries, as well as adjacent to the northern boundary of the project site. The proposed landscaping would include a mix of ornamental trees and a mix of shrubs and groundcover plants with some bioretention planting.

Site lighting would be provided for circulation, safety, and security. The proposed project would include outdoor security lighting on the building and in the parking area, which would be directed downward onto the project site and installed in accordance with applicable City ordinances. The project assumes that night lighting would be provided seven days per week.



1 | SOUTH-FRONT ELEVATION
1/4"= 1'-0"



2 | WEST-DRIVE THRU ELEVATION
1/4"= 1'-0"

NOTE:
PROVIDE ANTI-GRAFFITI FINISH AT THE FIRST 9' (NINE FEET), MEASURED FROM GRADE, AT EXTERIOR WALLS AND DOORS.

SCHEDULE OF EXTERIOR MATERIALS

KEY	MATERIALS	MANUFACTURER	PRODUCT	COLOR / FINISH	DESCRIPTION
EM-1	STANDING SEAM ROOF	BERRIDGE		KYNAR 500 MATTE BLACK	GALVANIZED STEEL SHEET W/ KYNAR FINISH STANDARD COLOR
EM-2	METAL CAP FLASHING	REFER TO SPEC		KYNAR 500 MATTE BLACK	GALVANIZED STEEL SHEET W/ KYNAR FINISH STANDARD COLOR
EM-3	POWDER COATED ALUM.	SIGNAGE SUPPLIER		CHARCOAL	POWER COAT ALUM. MATTE BLACK FINISH 0.063 GA.
EM-4	METAL ACCENT PANELS	SIGNAGE SUPPLIER		DISTRESSED/SALVAGED RED	METAL PANELS TO BE APPLIED OVER STUCCO WALL EWF-5
EWF-1	BRICK VENEER	BELDEN	NORMAN STANDARD	MEDIUM RANGE IRON SPOT	1/2 RUNNING BOND, REFER TO DETAIL. MORTAR: SOLOMAN COLORS, INC. 10H LIGHT BUFF JOINT PROFILE: WEATHER-STRUCK
EWF-2	ELASTOMERIC COATING	DRYVIT	SANDPEBBLE E	SW7669 SUMMIT GREY	APPLIED OVER PORTLAND CEMENT STUCCO AT EXTERIOR WALLS. APPLIED OVER MASONRY AT CORRAL.
EWF-3	CAST STONE LEDGE	MARCSTONE		6658 ARCHITECT'S GREY	MORTAR: ARGOS MAGNOLIA MASON'S MIX
EWF-4	BRICK VENEER	BORAL	QUEEN BRICK	ALAMO	MORTAR: LAFARGE IVORY BUFF. SACK RUB FINISH
EWF-5	ELASTOMERIC COATING	DRYVIT	SANDPEBBLE E	132 MOUNTAIN FOG	APPLIED OVER PORTLAND CEMENT STUCCO EXTERIOR WALL. APPLIED OVER EIFS AT ROOF SCREEN.
EWF-6	ELASTOMERIC COATING	DRYVIT	SANDPEBBLE E	456 OYSTER SHELL	APPLIED OVER PORTLAND CEMENT STUCCO AT EXTERIOR WALLS.
EWS-1	DRIVE-THRU WINDOW	QS		DARK BRONZE	
EWS-2	ALUMINUM STOREFRONT	KW		BLACK ANODIZED	
P-10	EXTERIOR PAINT	BENJAMIN MORE	SUPER SPEC (P23)	BLACK - LOW LUSTRE	TWO COATS REQUIRED - PATIO STEEL

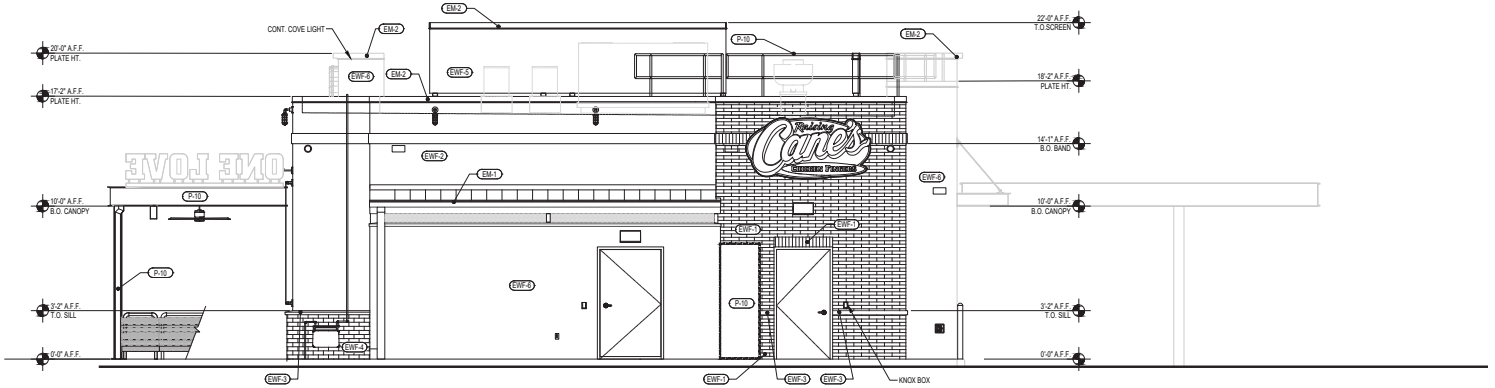
Source: PM Design, 2024

Exhibit 5A: Conceptual Exterior Elevations

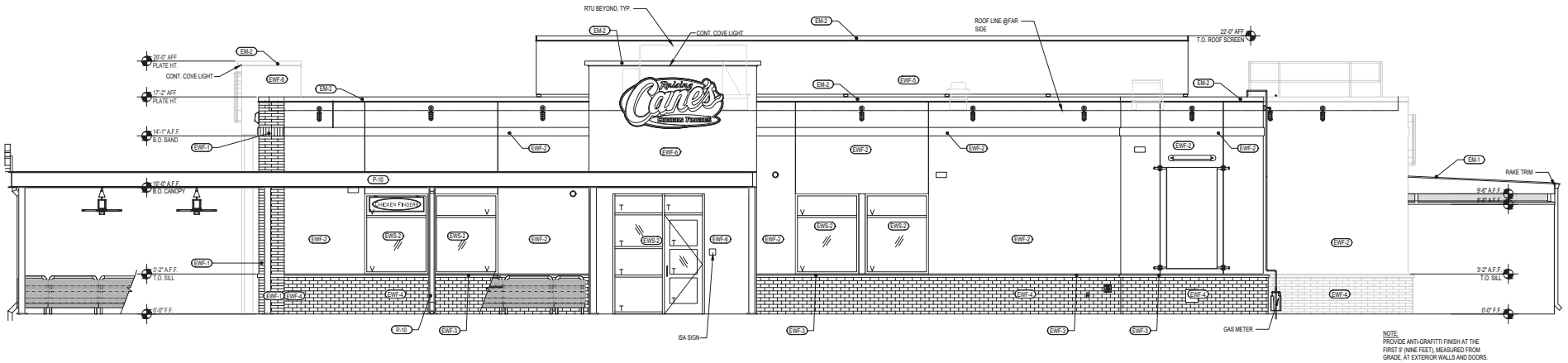
Raising Cane's Gateway Park Project
City of Sacramento

Not to scale

Kimley»Horn



1 | NORTH-REAR ELEVATION
1/4"= 1'-0"



2 | EAST-SIDE ENTRY ELEVATION
1/4"= 1'-0"

SCHEDULE OF EXTERIOR MATERIALS

KEY	MATERIALS	MANUFACTURER	PRODUCT	COLOR / FINISH	DESCRIPTION
EM-1	STANDING SEAM ROOF	BERRIDGE		KYNAR 500 MATTE BLACK	GALVANIZED STEEL SHEET W/ KYNAR FINISH STANDARD COLOR
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EM-4	METAL ACCENT PANELS	SIGNAGE SUPPLIER		DISTRESSED/SALVAGED RED	METAL PANELS TO BE APPLIED OVER STUCCO WALL EWF-5
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EWF-2	ELASTOMERIC COATING	DRYVIT	SANDPEBBLE E	SW7669 SUMMIT GREY	APPLIED OVER PORTLAND CEMENT STUCCO AT EXTERIOR WALLS. APPLIED OVER MASONRY AT CORRAL.
EWF-3	CAST STONE LEDGE	MARCSTONE		6658 ARCHITECT'S GREY	MORTAR: ARGOS MAGNOLIA MASON'S MIX
EWF-4	BRICK VENEER	BORAL	QUEEN BRICK	ALAMO	MORTAR: LAFARGE IVORY BUFF, SACK RUB FINISH
EWF-5	ELASTOMERIC COATING	DRYVIT	SANDPEBBLE E	132 MOUNTAIN FOG	APPLIED OVER PORTLAND CEMENT STUCCO EXTERIOR WALL. APPLIED OVER EIFS AT ROOF SCREEN.
EWF-6	ELASTOMERIC COATING	DRYVIT	SANDPEBBLE E	456 OYSTER SHELL	APPLIED OVER PORTLAND CEMENT STUCCO AT EXTERIOR WALLS.
EWS-1	DRIVE-THRU WINDOW	QS		DARK BRONZE	
EWS-2	ALUMINUM STOREFRONT	KW		BLACK ANODIZED	
P-10	EXTERIOR PAINT	BENJAMIN MORE	SUPER SPEC (P23)	BLACK - LOW LUSTRE	TWO COATS REQUIRED - PATIO STEEL

Source: PM Design, 2024

Exhibit 5B: Conceptual Exterior Elevations

Raising Cane's Gateway Park Project
City of Sacramento

Not to scale

Kimley»Horn



Conceptual Plant List

Species Name	Common Name	Size
Trees		
Quercus wislizeni	Interior Live Oak	36" box
Pistacia chinensis	Chinese Pistache	36" box
Cercis occidentalis	Western Redbud	36" box
Olea 'Fruitless'	Fruitless Olive Tree	36" box
Umus parvifolia 'Athena'	Athena Chinese Elm	36" box
Screening Shrubs		
Arctostaphylos 'Sunset'	Sunset Manzanita	15 gal
Ceanothus 'Concha'	Ceanothus	15 gal
Leucophyllum f. 'Compacta'	Compact Texas Ranger	15 gal
Olea europaea 'Montra'	Little Ollie	15 gal
Rhaphiolepis umbellata 'Minor'	Dwarf Yedda Hawthorn	15 gal
Shrubs/Grasses		
Achillea 'Moonshine'	Yarrow	2 gal
Arctostaphylos 'John Dourley'	John Dourley Manzanita	5 gal
Dianella revoluta 'Little Rev'	Little Rev Flax Lily	2 gal
Epilobium sp.	California Fuchsia	1 gal
Eriogonum sp.	Buckwheat	1 gal
Hesperaloe parvifolia	Red Yucca	5 gal
Lomandra 'Platinum Beauty'	Variegated Dwarf Mat Rush	5 gal
Mimulus sp.	Monkey Flower	2 gal
Muhlenbergia sp.	Muhly Grass	5 gal
Salvia greggii	Autumn Sage	5 gal
Salvia 'Bee's Bliss'	Bee's Bliss Salvia	5 gal
Groundcover		
Lippia nodiflora	Kurapia	1 gal
Myoporum parvifolium	Myoporum	1 gal
Bioretention Planting		
Carex divulsa	European Grey Sedge	2 gal
Chondropetalum sp.	Small Cape Rush	2 gal
Juncus patens	California Gray Rush	2 gal

Materials Legend

Material	Size	Area
Chocolate Brown Hard Wood Chip Bark Mulch	N/A	26,773 SF
Direct Colors® Battleship Grey 102 - 2lb integral colored concrete W/ 3/8" sawcut joints. Finish: TOPCAST ® #05	N/A	4,964 SF
Natural colored concrete W/ 3/8" sawcut joints. Finish: TOPCAST ® #05	N/A	1,358 SF
Enhanced Paving to be natural colored concrete with 45 degree saw cuts and Top-Cast® #5	N/A	445 SF

Proposed Notes

1. (P) overhead structure per Architect
2. (P) patio furniture per Architect
3. (P) pre order board per Architect
4. (P) clearance bar per Architect
5. (P) menu board per Architect
6. (P) wall per Civil
7. (P) bioretention basin per Civil
8. (P) light pole per Architect, TYP.
9. (P) transformer per Civil
10. (P) enhanced paving
11. (P) bike racks per Architect
12. (P) trash enclosure per Architect
13. (P) sight distance triangle per Civil
14. (P) plant material within sewer easement to be MAX. 5'
15. (P) plant material to be MAX. 3.5'

Existing Notes

- A (E) Boxwood Tree, 10" DBH; to be removed
- B (E) Boxwood Tree, 13" DBH; to be removed
- C (E) Boxwood Tree, 6" DBH; to be removed
- D (E) Pear Tree, 19" DBH; to be removed
- E (E) Pear Tree, 10" DBH; to be removed
- F (E) Pear Tree, 6" DBH; to be removed
- G (E) Chinese Elm Tree, 12" DBH; to remain
- H (E) sidewalk
- I (E) right-of-way landscape planter
- J (E) Chinese Elm Tree; to remain

Existing Tree Protection & Removal Notes

All existing plant material to remain and be protected unless otherwise noted.

(E) tree symbol

(E) to be removed symbol

Source: Kiesel Landscape Architecture, Inc., 2025

Exhibit 6: Conceptual Landscaping Plan

Raising Cane's Gateway Park Project
City of Sacramento

Not to scale

Kimley»Horn

Site Access and Parking

The project would have one point of access at the proposed driveway on North Freeway Boulevard. The driveway on North Freeway Boulevard would be unsignalized and would provide site access for passenger vehicles. Delivery trucks would access the project site at the entrance on North Freeway Boulevard.

The proposed project would provide 29 parking stalls including 17 standard passenger vehicle parking stalls, 2 standard accessible passenger vehicle parking stalls, 2 standard electric vehicle (EV) stalls, and 8 electric vehicle capable parking stalls.

Non-Vehicular Transportation

Five-foot-wide accessible pedestrian sidewalks would be provided along North Freeway Boulevard and would connect to the existing sidewalk located on Gateway Park Boulevard. A six-foot-wide sidewalk entrance would provide access from Gateway Park Boulevard and would connect to an ADA-accessible path coming from the parking lot and to the north-side entrance. This pedestrian access from Gateway Park Boulevard also connects to a pedestrian path located in the northeastern corner of the project site.

On-site bike racks would be located in the paved area near the paved entrance at Gateway Park Boulevard. Short-term bike racks would be available to customers and long-term bike racks to employees. There are Class II bicycle lanes directly adjacent to the project site along Gateway Park Boulevard and along North Freeway Boulevard from its intersection with Gateway Park Boulevard to the intersection of Lennane Drive and North Freeway Boulevard.

The Sacramento Regional Transit District (SacRT) provides public transportation throughout Sacramento County, including the City of Sacramento. There are several transit stops near the project site on Truxel Road and on Gateway Park Boulevard. The nearest transit stops are approximately 765 feet southwest of the project site and approximately 1,298 feet west of the project site on the SacRT Route 113.

Off-Site Improvements

Off-site improvements would be limited to a concrete curb and proposed median directly south of the project site along North Freeway Boulevard to limit left turns into the project site. The project would maintain the existing off-site catch basin along Gateway Park Boulevard and would connect to existing curb ramps and sidewalks.

Utility Infrastructure

Project implementation would require construction of new utility infrastructure. The project would connect to existing utility infrastructure with the final sizing and design of on-site facilities occurring during final building design and plan check.

Water and Sewer. The project site is within the service area of the City of Sacramento Water District for the provision of water; sewer treatment is provided by the Sacramento Area Sewer District (SASD) and the Sacramento Regional County Sanitation District (Regional San). The project would connect to the existing municipal water system along Gateway Park Boulevard and to the existing sewer located along the northern boundary of the project site.

Drainage and Water Quality. Proposed drainage improvements would include four total bioretention basins each with drop inlets with one located in the northern portion of the project site, one located in the eastern portion, and two located in the southern portion. Runoff from the project site would be

conveyed via a 12-inch polyvinyl chloride (PVC) storm drain and a 10-inch reinforced concrete pipe (RCP) to the existing connection in Gateway Park Boulevard. The proposed bioretention basins would treat and detain storm water to minimize peak flow rates.

Dry Utilities. The Sacramento Municipal Utility District (SMUD) provides electrical power to the area and the Pacific Gas and Electric Company (PG&E) provides natural gas to the area. The project would connect to existing utility lines located along the project site frontage along Gateway Park Boulevard and along North Freeway Boulevard.

Solid Waste Management. WM, formerly known as Waste Management, provides environmental services to City residents and businesses. The Sacramento County Department of Waste Management and Recycling oversees the City's refuse and recycling service contract.

2.4 Construction Activities

Project construction is anticipated to begin in May of 2026 with a construction duration of approximately eight months. Construction would occur in a single phase.

The project site is generally flat. Based on information provided by the Applicant, total excavation and fill of soils for the proposed project is anticipated to require 1,392 cubic yards (cy) of cut and 366 cy of fill, anticipating no imported soil.

2.5 Intended Uses of the Addendum

City of Sacramento

The City of Sacramento is the Lead Agency as set forth in CEQA Section 21067 and is responsible for reviewing and approving the Raising Cane's Gateway Park Project. The City of Sacramento Planning Commission will consider the following discretionary approvals for the project:

- **Conditional Use Permit** to allow development of the drive-thru restaurant, which is a conditionally permitted use in shopping center zones within the City.
- **Site Plan and Design Review** for the construction of a 3,442 square foot commercial building, drive-thru lanes, and site improvements on 1.77 acres (APNs 225-0160-099-0000 and 225-0160-0980-000) located at the northwest corner of the intersection of Gateway Park Boulevard and North Freeway Boulevard within the Shopping Center (SC) zone and Coral Business Park Planned Unit Development.

Responsible Agencies

Central Valley Regional Water Quality Control Board (RWQCB): Issuance of a National Pollution Discharge Elimination System (NPDES) Permit and Construction General Permit.

3 EVALUATION OF ENVIRONMENTAL IMPACTS

The scope of the City's review of the proposed Raising Cane's Gateway Park Project is governed by provisions set forth in CEQA and the State CEQA Guidelines (Title 14, CCR §§15000 et seq.). This review is limited to evaluating the environmental effects associated with the proposed project to the environmental effects of the Natomas Fountains Project as set forth in the Natomas Fountains MND. This Addendum also reviews new information, if any, of substantial importance that was not known and could not have been known with the exercise of reasonable due diligence at the time the Natomas Fountains MND was adopted. This evaluation includes a determination as to whether the changes proposed for the project would result in any new significant impacts or a substantial increase in a previously identified significant impact.

Although State CEQA Guidelines Section 15164 does not stipulate the format or content of an Addendum, the topical areas in the CEQA Guidelines environmental checklist were used as guidance for this Addendum. This comparative analysis provides the City with the factual basis for determining whether any changes in the project, any changes in circumstances, or any new information since the Natomas Fountains MND was adopted would require additional environmental review or preparation of a subsequent negative declaration or Supplemental EIR.

As previously discussed, pursuant to PRC Section 21166 and State CEQA Guidelines Section 15162, when a negative declaration has been previously adopted for a project, no subsequent or supplemental EIR shall be prepared for that project unless the lead agency determines that one or more of the following three conditions are met: changes in the proposed project result in new or substantially more severe impacts than were disclosed in the previous EIR or negative declaration; changes in the circumstances surrounding the project result in new or substantially more severe impacts than were disclosed in the previous EIR or negative declaration; or new information has come to light showing that new or substantially more severe impacts than were disclosed in the previous EIR or negative declaration.

It should be noted that the Natomas Fountains MND did not discuss Mineral Resources and Wildfire and, for those reason, these impact areas were not included in this Addendum to the Natomas Fountains MND for the Raising Cane's Gateway Park Project. Furthermore, no evidence has been identified that would indicate that the proposed project would result in any new areas or more significant impacts to those issue areas.

3.1 Aesthetics

Threshold (a) Create a source of glare that would cause a public hazard or annoyance?

Threshold (b) Create a new source of light that would be cast onto oncoming traffic or residential uses?

Threshold (c) Substantially degrade the existing visual character of the site or its surroundings?

Summary of Impacts Identified in the Addendum to the Natomas Fountains MND

The Initial Study for the Natomas Fountains MND characterized that the previously proposed project area would introduce a retail area that would introduce small areas of reflective surfaces as a result of, for example, window glazing and other building materials in addition to new sources of night lighting with proposed street and parking lot lights, vehicles on adjacent streets, building signage and interior lighting, and building windows. The Natomas Fountains MND states that future development of the project site would be consistent with the existing types of lighting present in the buildings adjacent to the project area. Furthermore, onsite lighting would be shielded downward and would be for safety and security purposes. Therefore, impacts would be less than significant for the Natomas Fountains retail development with the proposed new sources of lighting. The Natomas Fountains MND notes that the maximum height of the main retail structure would be 40 feet from ground level with standalone structures constructed to lesser heights. The Natomas Fountains MND also notes that external building materials are not known and would require Mitigation Measure 1-1 to limit the allowable reflectivity of glass surfaces on the exterior of the proposed structures in which reflective glass shall not exceed 50 percent of any building surface for any building surface. With mitigation, the MND found that the retail development project would have less than significant impacts related to glare. The Natomas Fountains MND notes that ensuring that proposed project would conform with City regulations, policies, and guidelines and would be subject to City review and approval to address visual quality and scenic resources, maintain less than significant levels, and create beneficial impacts.

Project-Specific Analysis and Significance Determination: No new impacts; no substantial change from previous analysis.

The project would result in the development of the drive-thru restaurant consistent with the previously proposed uses allow for retail and restaurant development. The project site is located in an area consisting of industrial and retail uses but there are planned multi-family residences west adjacent to the proposed project site. The land uses bordering the project site consist of Raley's Natomas Distribution Center to the north, Gateway Park Boulevard and a retail center to the east, an existing retail center bordering Gateway Park Boulevard and Truxel Road to the south, and a residential apartment complex (under construction) to the west.

The maximum building height of the project would be 22 feet. This height is below the 40-foot maximum height adopted for the Natomas Fountains Project and the 35-foot maximum height zoned for the SC zone. The proposed setbacks would include an approximately 25-foot landscaped setback along Gateway Park Boulevard and 20-foot setback along North Freeway Boulevard. Shopping Center (SC) zone minimum setback requirements are 20 feet for front and street side-yard setbacks and no minimum rear- yard setback unless a rear-yard lot line is adjacent to R- or OB-zoned lot and is not separated by an alley for which 15 feet is required. All minimum required front-yard and street side-yard setbacks shall be landscaped and maintained per Section 17.612.010 for which the proposed project would be consistent with.

The project would change the site appearance from a vacant lot to one with a drive-thru restaurant development. The aesthetic appearance of the site would be consistent with the existing zoning and the intent of the Coral Business Park PUD Schematic Plan. Compliance with the design guidelines would create a uniform and consistent theme within the overall plan area. Therefore, although the visual characteristics of the site would change, the project would be consistent with the intent of the Coral Business Park PUD Schematic Plan and with adopted development regulations. Compliance and/or exceedance of the applicable development standards would ensure that the project would not substantially impact the visual quality of the project site or its surroundings.

With respect to light and glare, the project would introduce additional sources of lighting to illuminate the restaurant building, signage, and the parking areas. Project lighting would be consistent with existing sources of nighttime lighting in the area associated with the existing industrial and retail uses bordering and near the project site, as well as street lighting along North Freeway Boulevard and Gateway Park Boulevard. Project lighting would be designed in accordance with the City's Zoning Code and would comply with all applicable development standards in Shopping Center (SC) zone. New sources of lighting would be oriented to avoid impacts on surrounding properties. The project would comply with General Plan Policy LUP-4.6 requiring compatibility with adjoining uses, which includes shielded lighting from view and directed downward to minimize impacts on adjacent resident uses, in addition to compliance with City lighting standards. Furthermore, the project would limit the allowable reflectivity of glass surfaces to less than 50 percent of the exterior of the proposed structure. Incorporation of these design features would ensure that the introduction of the new sources of light associated with the project would be less than significant.

Accordingly, no new impacts relative to adverse effects related to scenic vistas, scenic highways, regulations governing scenic quality, or light and glare that would substantially increase the severity of a previously identified impact evaluated in the Natomas Fountains MND would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant with the incorporation of mitigation. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

As identified in the Natomas Fountains MND, implementation of the Natomas Fountains MND Project would be less than significant with mitigation. Lighting impacts would be consistent with existing City regulations and would be less than significant. As discussed above, the project would not cause a new significant adverse aesthetic impact to occur. Therefore, the project would not cause a new cumulative impact to occur. Implementation of the project would not alter the conclusions of the Natomas Fountains MND analysis and would not result in a new or substantially more severe project-specific or cumulative aesthetic impact than those already analyzed.

Mitigation Program

Mitigation Measure 1-1 from the Natomas Fountains MND is applicable to the proposed project.

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.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to adverse aesthetic impacts or a substantial increase in the severity of a previously identified impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts or increase the severity of the previously identified impacts with respect to aesthetics. There are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.2 Agricultural and Forestry Resources

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

Threshold (b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Threshold (c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

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

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

Summary of Impacts Identified in the Natomas Fountains MND

As discussed in the Natomas Fountains MND, the project would not result in the conversion of forest land or conversion of farmland to non-agricultural use. Furthermore, as noted in the Natomas Fountains MND, the project area is not located on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Furthermore, the 2035 General Plan Master EIR concluded development impacts assumed under the 2035 General Plan. The Initial Study for the Natomas Fountains MND stated that there were no agricultural resources in the Natomas Fountains area nor were there any agricultural operations currently in existence in the area. No significant impacts were identified, and mitigation was not required.

Project-Specific Analysis and Significance Determination: No impact; no substantial change from previous analysis.

There are no agricultural resources in the Natomas Fountains MND area or proximate to the project site. No Prime Farmland, Unique Farmland, or Farmland of Statewide is mapped in the vicinity of the project site; the project site is designated as Farmland of Local Importance and Urban and Built-Up Land[1]. However, the site is not zoned for agricultural uses. Further, the project site is not the subject of a Williamson Act Contract. The project site does not include forestry resources, including timberlands. No impacts related to the loss of prime farmland, unique farmland, or farmland of statewide importance would occur. Accordingly, no new impact relative to agricultural or forestry resources or a substantial increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of no significant impact. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

Because the project site does not contain agricultural or forestry resources nor does it have a land use designation that would allow for these uses, the project would not cumulatively contribute to any impact

[1] California Department of Conservation. (2022) *California Important Farmland Finder*. https://maps.conservation.ca.gov/dlrp/ciff/. Accessed February 2025.

to agriculture or forestry resources. Therefore, the proposed project would not cause a new cumulative impact to occur. Implementation of the project would not alter the conclusions of the Natomas Fountains MND analysis and would not result in a new or substantially more severe project-specific or cumulative impact than those already analyzed.

Mitigation Program

None.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to agricultural or forestry resources would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts with respect to agricultural and forestry resources. There are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of no impact. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.3 Air Quality and Greenhouse Gas Emissions

Would the proposal:

Threshold (a) Result in construction emissions of NOX above 85 pounds per day?

Threshold (b) Result in operational emissions of NOX or ROG above 65 pounds per day?

Threshold (c) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Threshold (d) Result in PM_{10} 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?

Threshold (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., 90 ppm)?

Threshold (f) Result in exposure of sensitive receptors to substantial pollutant concentrations?

Threshold (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?

Threshold (h) Conflict with the Climate Action Plan?

Summary of Impacts Identified in the Natomas Fountains MND

The Natomas Fountains MND evaluated criteria pollutant emissions from construction and operations against the Sacramento Metropolitan Air Quality Management District (SMAQMD) significance thresholds. The Natomas Fountains MND concluded that the previously proposed Natomas Fountains Project would not exceed SMAQMD construction emissions thresholds. Long-term operational criteria pollutant emissions were also determined to not exceed SMAQMD thresholds with implementation of Best Management Practices (BMPs) and Best Available Control Technologies (BACT) in accordance with SMAQMD requirements. Short-term construction and long-term operational air emissions impacts were determined to be less than significant.

The Natomas Fountains MND evaluated carbon monoxide (CO) hotspot effects at affected intersections. The analysis identified that Natomas Fountains Project traffic would not contribute a significant amount to CO hotspots and cumulative traffic conditions would not exceed SMAQMD significance thresholds for CO hotspots. Construction and operational toxic air contaminant (TAC) emissions were also assessed and determined to result in less than significant impacts. Objectionable odors were also determined to be less than significant for the previously approved project.

Lastly, the previously approved Natomas Fountains Project was determined to be consistent with The City of Sacramento's community wide Climate Action Plan (CAP) and would result in a less than significant greenhouse gas (GHG) emissions impact.

Project-Specific Analysis and Significance Determination: No new impacts/reduced impacts; change from previous analysis.

The Natomas Fountains MND analyzed impacts from the development of retail and restaurant uses. Therefore, impacts associated with the proposed project would be similar to or less than those evaluated in the Natomas Fountains MND. The project would comply with regulations and standards established by applicable regulatory agencies, including SMAQMD, California Air Resources board (CARB), Sacramento Area Council of Governments (SACOG), and Environmental Protection Agency (EPA). Compliance with applicable laws and regulations controlling air pollutants would ensure that the project would not cause any significant air quality impacts. As such, the proposed development would not exceed SMAQMD's air pollutant thresholds, nor lead to substantial increase in PM_{10} or CO concentration. The project would not expose sensitive receptors to substantial pollutant concentrations and would not substantially increase the risk of exposure to Toxic Air Contaminants (TACs) from mobile sources. Accordingly, there would be no new impacts associated with the proposed project compared to those identified in the Natomas Fountains MND.

Regional Plan Consistency. The project is located within the Sacramento Valley Air Basin (SVAB), which is under the jurisdiction of the SMAQMD. The SMAQMD is required, pursuant to the Federal Clean Air Act (FCAA), to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. To reduce such emissions, the SMAQMD drafted the latest attainment plan (*Sacramento Regional Plan for the 2015 8-Hour Ozone Standard*). The attainment plans establish rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The attainment plans are a regional and multi-agency effort including the SMAQMD, the CARB, the Sacramento Area Council of Governments (SACOG), and the U.S. Environmental Protection Agency (EPA). The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SACOG's 2020 MTP/SCS, updated emission inventory methodologies for various source categories, and SACOG's latest growth forecasts. SACOG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The proposed project was assessed to determine if impacts associated with implementation of the proposed project would conflict with or obstruct the implementation of the applicable attainment plan. Based on the SMAQMD Guide to Air Quality Assessment in Sacramento County (2009) (CEQA Guide), by exceeding the SMAQMD's mass emission thresholds for operational emissions of ROG, NO_x, PM_{10} or $PM_{2.5}$, a project would be considered to conflict with or obstruct implementation of SMAQMD air quality planning efforts.

As discussed below, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed SMAQMD thresholds of significance. Operational emissions associated with the proposed project would also not exceed SMAQMD established significance thresholds for ROG, NO_x, PM_{10}, or $PM_{2.5}$ emissions. Therefore, the proposed project would not conflict with the SMAQMD's ability to achieve emissions reductions as part of their air quality attainment plans at the project level.

Construction Emissions. Construction associated with the proposed project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include ozone-precursor pollutants (i.e., ROG and NO_X), PM_{10}, and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SMAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from demolition, site preparation, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities for the project is estimated to be approximately eight months, beginning in May 2026. Construction-generated emissions associated with the proposed project were calculated using the California Air Resources Board (CARB)-approved California Emissions Estimator Model version 2022.1 (CalEEMod), which is designed to model emissions for land use development projects, based on typical construction requirements. See **Appendix B: Air Quality and Greenhouse Gas Emissions Data** for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the proposed project are identified in **Table 3.3-1 : Project Construction-Related Emissions.**

Table 3.3-1 : Project Construction-Related Emissions

Construction Year	Emissions (Maximum Pounds per Day)[1]			
	NO_X	ROG	PM_{10}	$PM_{2.5}$
2026	33.98	3.90	14.69	7.49
SMAQMD Threshold[2]	85	None	80	82
SMAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**

1. Basic Construction Emission Control Practices applied, which include the following: control of on-road fugitive dust; water unpaved roads twice daily; and limit vehicle speeds on unpaved roads to 15 miles per hour. Refer to **Appendix B** for Model Data Outputs.
2. Sacramento Metropolitan Air Quality Management District, *SMAQMD Thresholds of Significance Table*, 2020. 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 PM_{10} and $PM_{2.5}$ 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: CalEEMod version 2022.1. Refer to **Appendix B** for model outputs.

Table 3.3-1 shows that construction pollutant emissions would remain below their respective thresholds with implementation of SMAQMD Rule 403 (required for all projects). The project would also be required to comply with SMAQMD Rules 402 and 442, which prohibit nuisances and limit VOC content in coatings, respectively. Compliance with SMAQMD rules 402 and 442 would further reduce specific construction-related emissions. As shown above, all criteria pollutant emissions would be below their respective thresholds and impacts would be less than significant.

Operational Emissions. Operational emissions are typically associated with mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, hearths, consumer products, and architectural coatings). Energy source emissions would be generated due to electricity and natural gas (non-hearth) usage. **Table 3.3-2: Operational Emissions** summarizes the operational emissions attributable to the proposed project. As shown in **Table 3.3-2**, the project's emissions would not exceed SMAQMD thresholds.

Table 3.3-2 : Operational Emissions

Source	Emissions (Maximum Pounds per Day)[1]			
	NO_X	ROG	PM_{10}	$PM_{2.5}$
Area	<0.01	0.11	<0.01	<0.01
Energy	0.11	0.01	0.01	0.01
Mobile	6.85	6.44	11.69	3.03
Drive-Thru Idling[2]	<0.01	<0.01	<0.01	<0.01
Total	**6.96**	**6.56**	**11.7**	**3.04**
SMAQMD Threshold[3]	65	65	80	82
SMAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**

1. Emissions were calculated using the California Emissions Estimator Model version 2022.1 (CalEEMod). Worst-case seasonal maximum daily emissions are reported.
2. On-site drive-thru idling emissions were calculated with emissions factors from EMFAC2021.
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 PM_{10} and $PM_{2.5}$ 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.

SMAQMD CEQA guidance establishes operational thresholds of zero pounds per day for PM_{10} and $PM_{2.5}$ without implementation of BACT/BMPs. However, the proposed project would already include BMP measures as part of its final design as recommended by SMAQMD to reduce operational PM_{10} and $PM_{2.5}$ emissions. These BMPs include short- and long-term bicycle storage on-site, and pedestrian pathways connecting the project site to existing pedestrian infrastructure and transit access along Gateway Park Boulevard. By incorporating these designs to the project, SMAQMD's PM_{10} and $PM_{2.5}$ operational emissions would utilize mitigated significance threshold of 80 and 82 pounds per day, respectively. As shown in **Table 3.3-2**, PM_{10} and $PM_{2.5}$ from the proposed project would not exceed SMAQMD's mitigated significance threshold with implementation of BMPs and impacts would be less than significant.

Carbon Monoxide Hotspots. The preliminary screening methodology provided by the SMAQMD provides lead agencies with a conservative indication of whether project-generated vehicle trips will result in the generation of CO emissions that contribute to an exceedance of the thresholds of significance. The SMAQMD's recommended screening criteria are divided into two tiers. The screening criteria have been developed to help lead agencies analyze potential CO impacts and identify when site-specific CO dispersion modeling is not necessary. According to the SMAQMD, a project will result in a less than significant impact to air quality for local CO if:

Tier 1

- Traffic generated by the project will not result in deterioration of intersection LOS to LOS E or F; and
- The project will not contribute to additional traffic to an intersection that already operates at LOS of E or F.

The SMAQMD guidance states that, if the first tier of screening criteria is not met, then a second tier of screening criteria shall be examined. The second tier of screening criteria is listed below. According to the SMAQMD, the project would result in a less than significant impact to air quality for local CO if all of the following criteria are met:

Tier 2

- 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 proposed Raising Cane's restaurant would result in an increase in vehicle trips along roadways in the site vicinity. However, as described in Section 3.15, *Transportation*, the proposed project, in combination with the Natomas Fountains Apartments Project Addendum, would generate fewer daily trips than those analyzed in the Natomas Fountains MND. The Natomas Fountains MND determined that maximum daily peak hour trips would not exceed 31,600 vehicles per hour nor contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadways. Lastly, the mix of vehicle types at nearby intersections would not be substantially different from the County average. Thus, the proposed project would meet all of SMAQWMD's second tier criteria and CO impacts would be less than significant.

Health Risk Assessment. Construction would result in the generation of diesel particulate matter (DPM) emissions from the use of off-road diesel equipment required. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e. potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. The California Office of Environmental Health Hazard Assessment has not identified short-term health effects from DPM. Construction is temporary and would be transient throughout the site (i.e., move from location to location) and would not generate emissions in a fixed location for extended periods of time which would limit the exposure of any proximate individual sensitive receptor to TACs.

Additionally, construction is subject to and would comply with California regulations (e.g., California Code of Regulations, Title 13, Sections 2485 and 2449), which reduce diesel PM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. These regulations would further reduce sensitive receptors' exposure to temporary and variable DPM emissions. Given the temporary and intermittent nature of construction activities likely to occur within specific locations in the project site (i.e., construction is not likely to occur in any one location for an extended time), the dose of DPM of any one receptor is exposed to would be limited. Therefore, considering the relatively short duration of DPM-emitting construction activity at any one location and the highly dispersive properties of DPM, sensitive receptors would not be exposed to substantial concentrations of construction-related TAC emissions. Impacts would be less than significant.

Odors. The SMAQMD CEQA Guide identifies certain land uses as sources of odors. These land uses 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. The project would not include any of the land uses that have been identified by the SMAQMD as odor sources.

Construction activities associated with the project may generate detectable odors from heavy duty equipment (i.e., diesel exhaust), as well as from architectural coatings. However, these standard construction-related odors are temporary with short-term impact and would disperse rapidly. Therefore, the project would not create objectionable odors and impacts would be less than significant.

Climate Action and Adaptation Plan Consistency

The City of Sacramento adopted a community wide Climate Action and Adaptation Plan (CAAP) on February 27, 2024. The CAAP elaborates on the City's 2012 Climate Action Plan, the City's Climate Emergency Declaration, and includes recommendations from the Mayors' Commission on Climate Change. The CAAP identifies new targets for the City and outlines strategies and actions to achieve the City's carbon neutrality goal by 2045. The CAAP measures were used to determine the project's consistency with GHG reduction actions. Compliance with the CAAP would ensure the City's greenhouse gas (GHG) reduction efforts. The project's consistency with the CAAP is provided in **Table 3.3-3: The City of Sacramento Climate Action and Adaptation Plan Consistency**. As shown in **Table 3.3-3**, the project would be consistent with the stated goals of CAAP. Therefore, the project would not conflict with the CAAP.

Table 3.3-3: The City of Sacramento Climate Action and Adaptation Plan Consistency

CAAP Measure	Description/Actions	Project Consistency
E-1: Support SMUD as it Implements the 2030 Zero Carbon Plan	Support SMUD in the implementation of the 2030 Zero Carbon Plan.	**Not Applicable.** These measures are not applicable to the project since the City is responsible for implementing them. However, the project would meet the CALGreen Code and Title 24 Building Energy Efficiency standards to help achieve carbon reduction goals.
E-2: Eliminate Natural Gas in New Construction	Develop and adopt an ordinance that reduces energy use and GHG emissions in new construction through an Energy Policy and Conservation Act (EPCA) compliant flexible path reach code. Assess the feasibility of requiring or incentivizing net-zero energy (NZE) or net positive design for new buildings and significant retrofitting of existing privately-owned buildings.	**Not Applicable.** These measures are not applicable to the project since the City is responsible for implementing them. However, the project would be required to comply with City building ordinances and the most current Title 24 Building Energy Efficiency standards to help reduce energy use and GHG emissions.
E-3: Transition Natural Gas in Existing Buildings to Carbon-free Electricity by 2045	Develop a comprehensive existing building electrification strategy. Reduce GHG emissions from existing buildings through electrification or other means. Work with SMUD to expand existing low-income programs to weatherize and retrofit/electrify existing buildings.	**Not Applicable.** This measure is not applicable to the project since the project involves the development of a new retail restaurant with drive-thru rather than renovation of an existing building.

Table 3.3-3: The City of Sacramento Climate Action and Adaptation Plan Consistency		
CAAP Measure	**Description/Actions**	**Project Consistency**
	Promote and educate the community about existing programs and expand electrification retrofit incentives for space and water heating. Provide electrification retrofit incentives and financing for space and water heating. Continue to promote and incentivize electrification supportive energy efficiency in existing buildings.	
E-4: Increase the Amount of Electricity Produced from Local Resources and Work with SMUD to Install Additional Local Storage by 2030	Continue to promote and support local energy generation and storage resources. Work with SMUD to site storage and renewable generation at locations in the City. Promote and further incentivize battery storage. Develop a community solar and storage project of at least 1 MW as a pilot project. Assess opportunities to minimize solar shading from new developments on existing solar access of adjacent properties. Assess opportunities to support integration of distributed energy resources into the grid through SMUD's Virtual Power Plant programs.	**Not Applicable.** These measures are not applicable to the project since the City is responsible for implementing them. However, the project would meet the CALGreen Code and Title 24 Building Energy Efficiency standards to help reduce energy consumption and increase energy efficiency.
E-5: Support Infill Growth with the Goal that 90% of New Growth is in the Established and Center/Corridor Communities and 90% Small-lot and Attached Homes by 2040	Adopt and implement policies, land use designations, and implementation programs to accommodate 30% of the region's new living-wage jobs and 30% of the region's new housing units by 2040. Enable development of 29,000 new multi-unit dwellings that are public transit accessible by 2040. Enable the development of 8,700 new missing middle and affordable by design housing types by 2040. Permit a greater array of housing types in existing single-family neighborhoods citywide.	**Consistent.** The project is an infill site located in an urban area close to existing community services, transit routes (i.e., bus stop at Truxel Road and Gateway Park Boulevard), and access to Interstate 80 (I-80). In addition, the project would introduce approximately 55-60 new jobs/employees to the area adjacent to future multi-family residences.
TR-1: Improve Active Transportation Infrastructure to Achieve 6% Active Transportation Mode Share by 2030 and 12% by 2045	Implement the 2016 Bicycle Master Plan. Implement the improvements in the 2006 Pedestrian Master Plan. Complete and adopt the Streets for People: Active Transportation Plan. Conduct a study to identify educational barriers and provide education and outreach to the community on active transportation options. Identify and secure ongoing funding for and then implement active transportation programs. Assess opportunities to support public and private partnerships that provide incentives for residents to purchase e-bikes. Assess opportunities to develop or support Safe Routes to School programming.	**Not Applicable.** As the proposed project is not a transportation project, TR-1 is not applicable. However, the project includes short- and long-term bicycle storage on-site to help promote alternate modes of transportation.

Table 3.3-3: The City of Sacramento Climate Action and Adaptation Plan Consistency		
CAAP Measure	**Description/Actions**	**Project Consistency**
TR-2: Support Public Transit Improvements to Achieve 11% Public Transit Mode Share by 2030 and Maintain Through 2045	Update and implement the City's Transportation System Management Plan (TSMP) ordinance. Eliminate parking minimums Citywide, develop parking maximums and require parking management and transportation demand management plans. Encourage SacRT to provide frequent, reliable transit in the City's priority corridors. Collaborate with SacRT in planning and implementing increased transit services. Work with SacRT to identify changes to signals and other technological enhancements for transit prioritization. Continue to support electric car sharing options. Continue to support shared rideables (bikes and scooters). Support SacRT efforts to secure funding to support improved service/ communications. Continue to implement and improve curbside management strategies. Remove barriers to access transit stops and stations. Implement the City's adopted plans including modal/Citywide plans and corridor/area plans. Identify an Employee Transportation Coordinator and establish an employee commute program for City staff. Investigate and lobby for the development of a TNC user tax.	**Not Applicable.** These measures are not applicable to the project since the City is responsible for implementing them. However, the project site is located near existing transit routes (i.e., bus stop at Truxel Road and Gateway Park Boulevard), which supports public transit improvements.
TR-3: Achieve Zero-Emission Vehicle (ZEV) Adoption Rates of 28% for Passenger Vehicles and 22% for Commercial Vehicles by 2030 and 100% for all Vehicles by 2045	Consider amending the City Building Code to require increased EV charging standards for new development. Continue to support a variety of public and public/private partnerships to provide more publicly accessible chargers. Continue to install and provide EV charger access at City-owned facilities and parking garages. Pursue affordable, zero-emission car share expansions. Collaborate on mobility hub pilot efforts. Continue to maintain a highly streamlined EV infrastructure permit process. Develop and implement a fee for use of City-owned parking facilities and EV chargers. Work and collaborate with major employers to promote ZEV adoption. Continue to provide information and education about currently available incentives for expansion of Level II chargers on private property. Coordinate with community-based organizations, agencies, and non-profits to conduct EV education	**Consistent.** The project would provide two EV charging stations and eight EV capable (conduit provided for future EV charger connection) parking spaces.

Table 3.3-3: The City of Sacramento Climate Action and Adaptation Plan Consistency		
CAAP Measure	**Description/Actions**	**Project Consistency**
	events. Continue to monitor, test, and adapt to new and emerging zero-emission technologies and solutions. Assess opportunities to increase public access to curbside charging. Support regional heavy-duty fleet decarbonization.	
W-1: Work to Reduce Organic Waste Disposal 75% Below 2014 Levels by 2025	Implement the requirements of SB 1383. Work with regional partners and the private sector to assess the feasibility of siting long term organics processing facilities. Continue to provide backyard compost education and reduced-cost compost bins. Continue to provide a food waste diversion program for residential customers. Continue to enforce commercial waste code. Serve as a regional partner in the development and implementation of an edible food recovery program. Explore the feasibility of capital improvement projects for reducing organics in the waste stream. Consider adopting an ordinance that aligns with AB 827.	**Not Applicable.** These measures are not applicable to the project since the City is responsible for implementing them.
WW-1: Reduce Water Utility Emissions (in MT CO2e per Million Gallon Delivered) by 100% by 2030 and Maintain that Through 2045	Reduce GHG emissions associated with the water utility by procuring 100% carbon-free electricity by 2030. Investigate the feasibility of allowing on-site non-potable treatment and distributed water resources in new development. Continue to implement the Model Water Efficient Landscape Ordinance each year. Continue to require the use of low impact development (LID) strategies for new construction and development. Continue to investigate the landscaping/irrigation use of non-potable reclaimed water from regional sanitation at parks. Increase the use of renewable energy and storage to reduce GHG emissions and increase resiliency for critical infrastructure. Continue to encourage efficient water use by residents and businesses through expanded education, incentives and assistance services.	**Not Applicable.** These measures are not applicable to the project since the City is responsible for implementing them. However, the project would meet the water efficiency standards within the CALGreen Code and City's Model Water Efficient Landscape Ordinance.
WW-2: Reduce Wastewater Emissions by 22% by 2030 and 40% by 2045	The Sacramento Regional Sanitation District (Regional San) implements biogas recovery and improvement projects. GHG Emissions Reductions from SB 100 implementation by Regional San. Regional San implements solar PV generation project.	**Not Applicable.** These measures are not applicable to the project since the City is responsible for implementing them.

Table 3.3-3: The City of Sacramento Climate Action and Adaptation Plan Consistency		
CAAP Measure	**Description/Actions**	**Project Consistency**
CS-1: Increase Urban Tree Canopy Cover to 25% by 2030 and 35% by 2045	Implement the Urban Forest Plan and Parks Plan 2040. Utilize compost and mulch for application to City-owned trees and planters. Develop online educational materials about native tree species and species that are adapted to Sacramento's climate and resilient to drought and climate change. Continue to support the SMUD/Sacramento Tree Foundation program which provides free shade trees for residents and businesses.	**Not Applicable.** These measures are not applicable to the project since the City is responsible for implementing them.

Summary

Impacts related to construction and operation of the proposed project would be less than significant. The project would not exceed thresholds considered by the SMAQMD to for construction or operation. The project would implement BMPs and would be consistent with the applicable regional plan. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

Project impacts related to air quality would not be cumulatively considerable. Projects that do not exceed project-specific thresholds are considered by the SMAQMD to not have a cumulatively significant impact. The project would not result in significant operational air quality impacts including nonattainment criteria pollutants. The project would not exceed SMAQMD construction thresholds. The project would comply with SMAQMD's attainment plan, which is intended to reduce air pollutant emissions and achieve state (California) and national air quality standards. Therefore, the project's contribution to regional pollutant concentrations would not be cumulatively considerable. As discussed above, the proposed project would not be cumulatively considerable. Therefore, the proposed project would not result in cumulatively considerable impacts.

Mitigation Program

None.

Conclusion

Based on the analysis set forth in this Addendum, the Project would not cause a new air quality impact to occur, nor an increase in the severity of air quality impact previously disclosed in the Natomas Fountains MND. Therefore, the project would not cause either a new cumulative impact to occur, nor an increase in the severity of air quality impact. There are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was certified is available that would impact the prior finding less than significant impact with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.4 Biological Resources

Threshold (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?

Threshold (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?

Threshold (c) Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands)?

Summary of Impacts Identified in the Natomas Fountains MND

The Natomas Fountains MND included field surveys and documentation of sensitive species in and around the Natomas Fountains area. No listed or candidate sensitive plant species were observed on or around the Natomas Fountains area. The Natomas Fountains MND notes that burrowing owls (*Athene cunicularia*) have been observed along the East Drainage Canal immediately west adjacent to the project site. However, the Natomas Fountains MND notes that neither Burrowing Owls, active burrows, Swainson's Hawk, Giant Garter Snake, and Western Pond Turtle were observed on the Natomas Fountains area during field surveys despite medium to high potential for these species to occur. Giant garter snake is listed as threated under FESA and CESA; western pond turtle is classified as a State Species of Special Concern; burrowing owl is a CDFW Species of Special Concern; and Swainson's hawk is listed as threatened by CDFW. Impacts to giant garter snake would be reduced to less than significant with implementation of Mitigation Measure 3-1(a). Impacts to Swainson's hawk would be reduced to less than significant with implementation of Mitigation Measure 3-1(b). Impacts to nesting birds, which include, but are not limited to, burrowing owl, raptors, and migratory birds, would be less than significant with implementation of Mitigation Measure 3-1(c) and 3-1(d).

The Natomas Fountains MND did include approximately 0.19 acres of potentially jurisdictional delineation of waters the U.S. and waters of the State but included Mitigation Measure 3-2 requiring developers to obtain applicable regulatory approvals from the Central Valley Regional Water Quality Control Board (CVRWQCB) and the U.S. Army Corps of Engineers (USACE) as required under Section 404 of the federal Clean Water Act, where applicable for sites within the Natomas Fountains area that contain wetlands.

The Natomas Fountains MND does not identify the Natomas Fountains as an area connected to, or part of, a distinct wildlife movement corridor. Therefore, mitigation related to wildlife movement corridors was not required.

Project-Specific Analysis and Significance Determination: No new impacts/reduced impact; no substantial change from previous analysis.

A list of special-status species that have the potential to occur within the vicinity of the Natomas Fountains study area is included as *Appendix B: List of Regionally Occurring Special Status Species* of **Appendix A.** to this Addendum for project-specific analysis, including data from California Natural Diversity Database (CNDDB), U.S. Fish and Wildlife Service (USFWS) determination of federally endangered and threatened species, the California Native Plan Society (CNPS) Inventory of Rare and Endangered Plants, and occurrences published in the Natomas Basin Habitat Conservation Plan. Regionally occurring special-status species with the potential to occur in the project area have been noted for special-status species with medium and high potentials to occur within the project area.

Special-Status Plant Species

The project site is disturbed and partially paced, consisting of non-native ruderal vegetation not considered a sensitive natural community under CEQA. No special-status plant species, including federally and/or state-listed and California Rare Plant Rank list plant species were identified on or are expected to occur on the project site. Therefore, the project would not result in impacts on special-status plant species.

Threatened and Endangered Wildlife Species

Giant Garter Snake. Giant garter snake is classified as Federally Threatened and State Threatened under FESA and CESA, respectively. Giant garter snake is an aquatic snake that reside in slow-moving, aquatic habitats, such as freshwater marshes, flooded rice fields, sloughs, and drainage canals. The Natomas Fountains MND noted that they are typically found within 100 feet of suitable habitat and may use upland areas up to 200 feet away from suitable aquatic habitat. Unlike the Natomas Fountains Project Site, the proposed project site would be over 200 feet away from the East Drainage Canal at approximately 900 feet east of the project site. Although the Natomas Fountains MND noted high potential for occurrence, the proposed project would have a lower potential for occurrence for giant garter snake, and, unlike the Natomas Fountains MND, mitigation would not be required.

Swainson's Hawk. Swainson's hawk is listed as threatened by CDFW that typically nest in scattered trees, juniper sage flats, savannahs, agricultural or ranch lands with groves or lines of trees, and along riparian systems near agricultural fields or pastures. As noted in the Natomas Fountains MND, there is low-quality, limited nesting habitat located approximately 500 feet north of the project site in the form of redwood trees. The project site is located in a primarily urban area and would not provide adequate habitat within an easy fly distance between foraging areas and nesting sites. Furthermore, the grassland within the project site would provide limited, low-quality habitat as noted in the Natomas Fountains MND. This species has been recorded approximately 1 mile southwest of the project site but is presumed to likely be extirpated according to CDFW. The proposed project would occur on a disturbed and partially paved vacant lot and lacks suitable habitat for Swainson's hawk. Given disturbed conditions since adoption of the Natomas Fountains MND, there is likely less potential for this species to occur compared to the previously noted medium potential for Swainson's Hawk.

Other Special-Status Wildlife Species

Western Pond Turtle. Western pond turtle is classified as a State Species of Special Concern. The Natomas Fountains MND noted that the East Drainage Canal would also provide Suitable habitat for western pond turtle. However, no western pond turtle populations are known to occur within five miles of the project site. Furthermore, although there is medium potential for western pond turtle to occur based on the Natomas Fountains MND, the proposed project site is located farther away from the East Drainage Canal than the Natomas Fountains Project site, and would result in lower potential to occur.

Burrowing Owl. The burrowing owl is listed as a Species of Special Concern by the CDFW. Burrowing owl have the potential to occur in agricultural areas, ruderal grassy fields, vacant lots, and pastures. The Natomas Fountains MND noted that burrowing owls have been observed along the East Drainage Canal located approximately 900 feet east of the project site. However, no burrowing owl individuals or active sign were observed during the general biological survey conducted for the Natomas Fountains Project. The Natomas Fountains found that there is medium potential for burrowing owl; however, given that the proposed project consists of primarily disturbed vacant lot, there is likely less potential for burrowing owl to occur on the proposed project site.

Nesting Birds

The proposed project has the potential to impact active bird nests if vegetation is removed or ground disturbing activities are initiated during the nesting season. The non-native grasslands, ornamental, disturbed, and developed lands within the project site have the potential to support avian nests and impacts on nesting birds are prohibited by the Migratory Bird Treaty Act (MBTA) and/or California Fish and Game Code Section 3503, which states that it is unlawful to "take, possess, or needlessly destroy" avian nests or eggs. It is preferable to remove habitat outside of the breeding season (generally February 1 through August 31). If vegetation removal cannot occur outside of the breeding season, a qualified biologist would survey the area prior to the initiation of construction. If active nests are found, construction activities in the area containing the active nest plus an appropriate buffer (determined by the qualified biologist in consultation with CDFW) would be delayed until nestlings have fledged. Implementation of Mitigation Measures 3-1(c) and 3-1(d) would ensure impacts related to nesting birds would be less than significant. Consistent with the City's standard conditions and in compliance with the MBTA and California Fish and Game Code, no significant impacts to nesting birds would occur.

Riparian Resources

No aquatic resources were identified during desktop review of the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) and U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) databases. During the constraints-level aquatic resources assessment, no aquatic resources potentially jurisdictional by the U.S./State were observed. The Natomas Fountains MND notes approximately 0.19 acres of potentially jurisdictional waters of the U.S. and waters of the State within the Natomas Fountains Project site; however, these aquatic resources are not located within the proposed project site, and mitigation is not required.

Local Policies and Ordinances

The proposed project would not conflict with any local policies or ordinances protecting biological resources. The City does have a tree preservation ordinance applicable to trees on private property. The 3 trees to be removed are nonnative ornamental trees. The proposed project would comply with the City of Sacramento Tree Ordinance requiring a tree permit for the replacement of removed trees. Impacts would be less than significant in this regard.

Habitat Conservation Plans and Natural Community Conservation Plans

As mentioned in the Natomas Fountains MND, the Natomas Fountains Project would be located within the Natomas Basin Habitat Conservation Plan (NBHCP) for which the Natomas Fountains Project would be exempt as previously proposed development considered in the Coral Business Center PUD prior to establishment of the NBHCP. Accordingly, the proposed project would also be exempt from HCP fees and compliance with the NBHCP.

Summary

Accordingly, no new known impacts relative to adverse effects related to biological resources would substantially increase the severity of a previously identified potential impact evaluated in the Natomas Fountains MND would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant with mitigation. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

Proposed projects are required to implement measures, as set forth in their respective CEQA documents, consistent with federal, State, and local regulations to avoid adverse effects to existing biological resources or to mitigate for significant impacts to these resources. The types of measures required for projects impacting protected habitat, species, and regulated resources can include avoidance, project design features, regulatory approvals, and mitigation measures. As it applies to the proposed project, the project site does not contain riparian habitat or any other water resources. Additionally, the project site does not contain sensitive habitat or sensitive species or waters, including wetland waters, which are subject to federal jurisdiction under Section 404 of the Clean Water Act. Although the project site is located within an HCP implemented to support species and habitats that are sensitive and rare within the region or may function as a migration corridor for wildlife, the proposed project would be exempt from HCP fees and compliance with NBHCP. Therefore, the proposed project would not contribute to a cumulative effect on biological resources including sensitive species, protected habitat, or wetland resources. The proposed project would not cause a new biological impact to occur, nor an increase in the severity of a biological impact previously disclosed in the Natomas Fountains MND. Implementation of the proposed project would not alter the conclusions of the Natomas Fountains MND analysis and would not result in a new or substantially more severe project-specific or cumulative biological resources impact than those already analyzed.

Mitigation Program

Mitigation Measures 3-1(a), 3-1(b), and 3-2 from the Natomas Fountains MND are not applicable to the proposed project because the project site has a low potential for special-status species to occur on-site and no jurisdictional waters or wetlands are present within the project site. The following mitigation measures would be applicable to the proposed project for nesting birds.

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 preconstruction 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.

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.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to biological resources or a substantial increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in biological impacts, or increase the severity of the previously identified impacts for the Natomas Fountains Project area. There are no substantial changes to the circumstances under which the proposed project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.5 Cultural and Tribal Cultural Resources

Threshold (a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Threshold (b) Cause a substantial adverse change in the significance of an archaeological resource as pursuant to § 15064.5?

Threshold (c) Disturb any human remains, including those interred outside of formal cemeteries?

Threshold (d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Threshold (e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC § 21074?

Threshold (f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Summary of Impacts Identified in the Natomas Fountains MND

The Natomas Fountains MND included a cultural resources study consisting of archival research, consultation with interested parties, and an archaeological field survey in the Natomas Project area. The cultural resources study did not identify previously recorded prehistoric archaeological resources or Native American tribal resources or sites within the Natomas Fountains area. However, the Natomas Fountains MND determined that development of the Natomas Fountains Project could result in the disturbance of unknown prehistoric archaeological or Native American tribal resources or sites. The Natomas Fountains MND also noted that unknown historic archaeological sites could be disturbed as a result of implementation.

Accordingly, Mitigation Measures 4-1, 4-2, 4-3, and 4-4 address archaeological and tribal cultural resources. These measures include protocols and criteria for qualifications of personnel in addition to survey, research, testing, training, monitoring, cessation and resumption of construction, identification, evaluation, and reporting. The Natomas Fountains MND found that implementation of these mitigation measures would reduce potential impacts to prehistoric and historic archaeological resources to a less than significant level.

Project-Specific Analysis and Significance Determination: No new impacts; no substantial change from previous analysis.

The North Central Information Center (NCIC) provided a records search for the Natomas Fountains Project site and summarized their findings in a letter included as *Appendix C: Natomas Fountains Project Cultural Resources Inventory Report* in **Appendix A**. In combination with NCIC provided records, background research, and a field survey conducted on March 3, 2016, for the Natomas Fountains Project site, there are currently no recorded archaeological sites within the project site. The project is consistent with the assumptions set forth in the Natomas Fountains MND, which assumed development of the project site with commercial-related uses. Although the project site has been disturbed, consistent with the findings of the Natomas Fountains MND, there is a potential for previously unknown archeological and tribal cultural resources to be uncovered during ground-disturbing activities. Implementation of Mitigation Measure 4-1 would ensure impacts to archaeological resources would be less than significant. Furthermore, as determined in the Natomas Fountains MND, any earth disturbing activities could affect

unknown paleontological resources related to the Riverbank formation determined by a search on the University of California Museum of Paleontology (UCMP) database and United States Geological Survey (USGS) geologic mapping. Mitigation Measures 4-2 through 4-4 would reduce impacts to paleontological resources.

The project site is not located within a known or suspected cemetery and there are no known human remains within the project site. However, this does not preclude the discovery of human remains during project-related ground disturbance. In compliance with State regulations, should any human remains be encountered during construction activities, State Health and Safety Code Section 7050.5 states that no further disturbances shall occur in the immediate area until the County Coroner has made the necessary findings as to origin and disposition pursuant to California PRC Section 5097.98. In addition, in accordance with State and local guidelines, if the Coroner determines the remains to be Native American, the Coroner must contact the Native American Heritage Commission within 24 hours for identification of the most likely descendent of the deceased Native American. Additionally, if the remains are determined to be Native American, the City would work with local Native American representatives to ensure that the remains and any associated artifacts are treated in a respectful and dignified manner. Although the potential for disturbance of undiscovered resources during grading and excavation activities is considered low, incorporation of the Natomas Fountains MND mitigation measures below would reduce this potential impact to a level considered less than significant.

Accordingly, no new known impacts relative to adverse effects related to archeological and tribal cultural resources would substantially increase the severity of a previously identified potential impact evaluated in the Natomas Fountains MND would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant with mitigation. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

As discussed above, the project would not cause a known cultural resources impact to occur, nor an increase in the severity of a potential archeological or tribal cultural resources impact previously disclosed in the Natomas Fountains MND, with adherence to State and local regulations and mitigation measures discussed in this section. Implementation of the project would not alter the conclusions of the Natomas Fountains MND analysis and would not result in a new or substantially more severe project-specific or cumulative cultural resources impact than those already analyzed.

Mitigation Program

Mitigation Measures 4-1, 4-2, 4-3, and 4-4 from the Natomas Fountains MND are applicable to the project.

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, 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.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to cultural or tribal cultural resources or a substantial increase in the severity of a previously identified potential significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts, or increase the severity of the previously identified potential impacts. There are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.6 Energy

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

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

Summary of Impacts Identified in the Natomas Fountains MND

Impacts related to energy were briefly discussed in the Natomas Fountains MND because they were not on the State CEQA Guidelines' Appendix G checklist until January 1, 2019, which was subsequent to the adoption of the Natomas Fountains MND. Nonetheless, the Natomas Fountains Project would be subject to the 2035 General Plan Master EIR, which determined that energy impacts from construction and operation in the City would be less than significant with implementation of General Plan Policies U 6.1.6 through U 6.1.8 pertaining to the use of renewable resources and implementation of General Plan Policies U 6.1.10 and U 6.1.13 pertaining to the promotion of new energy conservation technologies among utility providers and industries. The Natomas Fountains Project proposed land uses consistent with those analyzed in the 2035 General Plan Master EIR. Furthermore, the structures previously proposed would be subject to Titles 20 and 24 of the California Code of Regulations, requiring energy-efficient standards for residential and non-residential buildings. Therefore, the Natomas Fountains MND determined that impacts related to construction and operation of the Natomas Fountains Project would be less than significant.

Project-Specific Analysis and Significance Determination: No new impacts; no substantial change from previous analysis.

The proposed project proposes a drive-thru restaurant. The project would be allowed and would be consistent with the planned land uses outlined in the 2035 General Plan for regional commercial land use designation. Impacts related to energy for the proposed restaurant land use are accounted for in the 2035 General Plan Master EIR. Furthermore, the proposed project would be subject to Title 20 and 24 of the California Code of Regulations. Impacts related to construction and operation of the proposed project would be less than significant. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

As discussed above, the proposed project would not cause an energy impact to occur. Implementation of the proposed project would not result in significant unavoidable energy impacts and would therefore not result in a new or substantially more severe project-specific or cumulative energy impact than those already analyzed. The project's contribution to energy use would be less than cumulatively considerable.

Mitigation Program

None.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to energy or a substantial increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts or increase the severity of the previously

identified impacts. There are no substantial changes to the circumstances under which the proposed project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance is known that would impact the prior finding of less than significant. The proposed project would have a less than significant impact on energy. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.7 Geology and Soils

Threshold **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?**

Summary of Impacts Identified in the Natomas Fountains MND

The Natomas Fountains MND notes that there are no faults across the Natomas Fountains area. The City is located in Seismic Zone 3 and is ranked low in terms of seismic ground-shaking hazard. Nonetheless, the Natomas Fountains MND notes that ground shaking occurs periodically in Sacramento during distant earthquakes. The Natomas Fountains MND notes that conformance to seismic design requirements of the Uniform Building Code (subsequently referred to as the California Building Code) and conduction of a geotechnical investigation would maintain less than significant impacts pertaining to seismicity.

The Natomas Fountains MND does note that the Natomas Fountains project site is underlain by artificial fill and alluvial deposits that may become unstable during seismic ground motion. However, conformance with the California Building Code would result in less than significant impacts regarding exposure of people or structures to seismic hazards, such as groundshaking and liquefaction. Additional measures include the preparation of a geotechnical investigation, a requirement that building plans are reviewed for seismic design by a qualified professional, and a requirement that building plans are reviewed and approved by the City's Engineering Department.

The Natomas Fountains MND outlines that the Natomas Fountains Project would comply with the City's Standard Construction Specifications for Erosion and Sediment Control to minimize erosions and runoff. Although construction activities would expose site soils to erosion with excavation, filling, moving, and temporarily stockpiling soils onsite, the project would comply to the City's grading ordinance and erosion standards.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The Natomas Fountains MND assumed the development of the project site with commercial land uses, specifically retail and restaurant. As such, the findings for the proposed project are consistent with the Natomas Fountains MND. The project site is not located within an Alquist-Priolo Earthquake Fault Zone and there are no known active faults in the vicinity of the site. The nearest fault to the project site is the Dunnigan Hills Fault, located approximately 22 miles to the northwest.[2] Given the project site distance from an active fault, the potential for surface fault rupture is considered low and would be highly unlikely as noted in the 2035 General Plan Master EIR.

Project construction would be required to conform to the seismic design requirements of the 2022 California Building Code and California Health and Safety Code (or applicable adopted codes at the time of plan submittal or grading and building permit issuance for construction). The building and safety standards established by these codes have been developed to address structural integrity during a seismic event. State laws and local ordinances require that, prior to construction, potential seismic hazards be identified and mitigated, as needed, to protect public health and safety from substantial risks through appropriate engineering practices. Additionally, the project would need to comply with the City of

[2] USGS. 2025. Earthquake Zones of Required Investigation. https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf.

Sacramento Municipal Code Chapter 15.88, Grading, Erosion and Sediment Control, which requires approval of a soil engineering and engineering geology report whenever the City Director of the Department of Utilities determines a potentially hazardous condition.

As outlined in the 2035 General Plan Master EIR, the project site is not located within the areas susceptible to liquefaction or ground failure. With adherence to California Building Code and City design standards, impacts related to liquefaction potential is considered to be low. There are no known geologic conditions on the project site that would render development infeasible. Compliance with the City's Municipal Code would reduce the risk associated with seismic-related ground failure and associated liquefaction, lateral spreading, or subsidence to a less than significant level. The project would not result in a new specific impact or an increase in the severity of an impact that was identified in the Natomas Fountains MND and would therefore be consistent with the effects of implementation of the Natomas Fountains Project.

The project site is located at an elevation of approximately 12 to 16 feet amsl and is relatively flat. As such, the project site is not subject to the potential for a landslide. The project would be required to comply with all applicable building code regulations and engineering design standards related to shaking hazards and geologic stabilization. Therefore, the project would not result in a new impact or an increase in the severity of an impact that was identified in the Natomas Fountains MND and would therefore be consistent with the effects of implementation of the Natomas Fountains Project.

The project site has been disturbed and the southern portion of the site is paved. Consistent with the assumptions of the Natomas Fountains MND, disturbance of the ground surface at the project site would occur during grading of the site. The project site would be graded, and foundation excavation would require approximately 1,392 cubic yards (cy) of cut and 366 cy of fill, anticipating no imported soil. Grading and earthwork activities during construction would expose soils to potential short-term erosion by wind and water. However, the increased erosion rates and the consequent downslope and downwind movement of sediment can be mitigated to less than significant levels by proper and strict erosion control measures enacted during grading.

All demolition and construction activities within the City are required to comply with California Building Code (CBC) standards, which would ensure implementation of appropriate measures during grading activities to reduce soil erosion. Compliance with policies in the 2035 General Plan would further ensure that the project would not result in substantial soil erosion or loss of topsoil. Further, compliance with the NPDES permit would minimize effects from erosion and ensure consistency with the Regional Water Quality Control Board (RWQCB) Water Quality Control Plan. The project's impact on soil erosion would be less than significant, similar to those impacts previously analyzed in the Natomas Fountains MND.

Accordingly, no new impacts relative to adverse effects related to geology or soils would substantially increase the severity of a previously identified impact evaluated in the Natomas Fountains MND would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

As discussed above, the project would not cause a new geologic impact to occur, nor an increase in the severity of an impact previously disclosed in the Natomas Fountains MND. As such, the project would not cumulatively contribute to a cumulatively considerable impact related to geologic resources.

Mitigation Program

None.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to geology and soils or a substantial increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.8 Hazards and Hazardous Materials

Threshold (a) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities?

Threshold (b) Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials?

Threshold (c) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities?

Summary of Impacts Identified in the Natomas Fountains MND

The Natomas Fountains MND identified no active hazardous materials in the project site or within 0.5 miles of the project site. Furthermore, the Natomas Fountains MND determined that there was no potential for asbestos-containing materials given that there were no previous structures or known sources of exposure to asbestos previously identified on the project site. The Natomas Fountains MND does note that construction of the previously proposed development has the potential to lead to the accidental release of hazardous substances associated with operation of construction equipment but would be less than significant with adherence to Sacramento Municipal Code and the NPDES permit program in addition to best management practices. Operation of the Natomas Fountains would result in the transport, storage, use, and/or disposal of hazardous materials but would be limited to common hazardous materials, typical of places of employment, including, but not limited to, cleaning agents, paints and thinners, fuels, insecticides, and herbicides. Compliance with existing regulations would result in less than significant impacts and would prevent exposure of people to hazardous materials. The Natomas Fountains MND does not identify any known groundwater contamination of the Natomas Fountains project site and would not require groundwater dewatering during construction; therefore, impacts related to contaminated groundwater during dewatering activities would be less than significant.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

Development of the project site with restaurant uses was contemplated in the Natomas Fountains MND. Therefore, impacts associated with the project would be similar to or less than those evaluated in the Natomas Fountains MND.

Exposure of the public or the environment to hazardous materials can occur through transportation accidents; environmentally unsound disposal methods, improper handling of hazardous materials or hazardous wastes, and/or emergencies such as explosions or fires. The severity of these potential effects varies by type of activity, concentration and/or type of hazardous materials or wastes, and proximity to sensitive receptors.

The project would be required to comply with regulations and standards established by applicable regulatory agencies, including the Department of Toxic Substances Control (DTSC), the U.S. EPA, and the Occupational Safety and Health Administration (OSHA). Compliance with applicable laws and regulations governing the use, storage, transportation, and disposal of hazardous material would ensure that the project would not create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials.

Construction of the project would involve the transport, use and disposal of hazardous materials on and off the project site. Such materials would include fuels, paints, mechanical fluids, and solvents but would not be present in such a quantity or used in such a manner that would pose a significant hazard to the public. The routine transport, use, and disposal of these materials must adhere to federal, State, and local regulations for transport, handling, storage, and disposal of hazardous substances. Compliance with the regulatory framework would ensure that project construction would not create a significant hazard to the public or environment.

The project would include the construction of one drive-thru restaurant building and associated on-site and off-site improvements and is not anticipated to result in the release of hazardous materials into the environment. The proposed drive-thru restaurant building would be expected to use limited hazardous materials and substances which include cleaners, paints, solvents, and fertilizers and pesticides for the proposed landscaping. Project implementation would not create a significant impact through the transport, use, or disposal of hazardous materials as the proposed development would be required to comply with all applicable federal, State, and local regulations which are intended to avoid impacts to the public and environment. These regulations ensure that hazardous materials/waste users, generators and transporters provide operational safety and measures to reduce potential threats to public health and safety.

Per Envirostor and Geotracker, no active contaminated sites have been identified on the project site with the nearest active site located approximately over 0.5 miles away. The nearest contaminated site is a completed and closed LUST Cleanup site located approximately 0.089 miles (470 feet) northwest of the project site.

There are no existing or planned schools within 0.5 miles of the project site. Nonetheless, the project would be subject to school district impact fees[3]. Accordingly, no new impacts relative to proximity to schools would occur.

The closest airport is the Sacramento International Airport, located approximately 5.8 miles northwest of the project site. Accordingly, the project site is not located within the vicinity of a public use airport and would not create a safety hazard or excessive noise for people at the project site.

Project implementation would not impair or physically interfere with an adopted emergency response or evacuation plan. Project construction may require the temporary closure of a lane on North Freeway Boulevard along the project frontage. Access to the planned residential area west of the project site would be maintained during construction for residents and emergency access. Access to the commercial area directly south would be maintained. Upon completion of construction, the impacted portion of North Freeway Boulevard would resume similar to existing conditions. Adherence to all applicable regulations and General Plan policies would result in a less than significant impact with respect to interference with an adopted emergency response plan or emergency evacuation plan.

Similar to the Natomas Fountains MND, hazards and hazardous materials related impacts would be less than significant and there are no changes or new information requiring preparation of subsequent CEQA documentation. No new impact would result, nor would the impact previously identified be any more severe as a result of the proposed project. Therefore, the project would be consistent with the effects of

[3] City of Sacramento. (2024). *School District Impact Fees*. https://www.cityofsacramento.gov/content/dam/portal/cdd/Building/Forms/CDD-0226_School-Disctrict-Impact-Fees.pdf. Accessed February 2025.

implementation of the Natomas Fountains Project. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

Project impacts related to hazards and hazardous materials would not be cumulatively considerable. There are no identified active contaminated sites on the project site or within 0.5 miles of the project site, and no mitigation is required. The proposed project would not cumulatively contribute known groundwater contamination. Accordingly, the proposed project would not result in incremental effects to hazards or hazardous materials that could be compounded or increased when considered together with similar effects from cumulative projects.

Mitigation Program

None.

Conclusion

Based on the analysis set forth in this Addendum, the project would not cause a new hazardous materials impact to occur, nor an increase in the severity of a hazardous material impact previously disclosed in the Natomas Fountains MND. Project impacts related to hazards and hazardous materials would be less than those analyzed in the Natomas Fountains MND with the reduced project footprint and would not be altered significantly from the conclusions of the Natomas Fountains MND. Therefore, the project would not cause either a new cumulative impact to occur, nor an increase in the severity of a cumulative impact previously disclosed. There are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding less than significant impact. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.9 Hydrology and Water Quality

Threshold (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?

Threshold (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?

Summary of Impacts Identified in the Natomas Fountains MND

The Natomas Fountains MND notes that construction-related activities have the potential to impact water quality. However, implementation of the NPDES Permit for Storm Water Discharges Associated with Construction Activity and a Storm Water Pollution Prevention Plan (SWPPP) in addition to compliance with City regulations and implementation of best management practices would result in less than significant impacts related to water quality. The Natomas Fountains MND identifies the Natomas Fountains Project area as within FEMA floodplain designation A99 flood zone and requires compliance with floodplain management and building requirements of Section 60.3 of the National Flood Insurance Program (NFIP) regulations. With compliance to floodplain management and building requirements, impacts would be less than significant and would not result in substantially increasing exposure of people or property to risk of injury or damage from the event of a 100-year flood.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The Natomas Fountains MND assumed that the project site would be developed and potential impacts associated with drainage and water quality would be addressed. The land use designation for the project site in the 2035 General Plan is regional commercial. Therefore, the 2035 General Plan EIR evaluated potential drainage and water quality impacts assuming that the project site would be developed with uses permitted under the regional commercial land use designation, which includes retail, restaurant, high-density residential, office, and public uses for which the project would be consistent with the proposed drive-thru restaurant. It is also noted that the project site has been previously disturbed and is partially graded. Runoff from the site would flow into Reclamation District (RD) No. 1000's channel system.

The project would obtain coverage under the NPDES administered by the Regional Water Quality Control Board (RWQCB). The project would prepare a Post-Construction Erosion and Sediment Control Plan as outlined in the Natomas Fountains MND. Stormwater generated by the proposed development would be captured by bio-retention basins into catch-basins and conveyed to the existing stormwater system. To minimize water quality impacts during construction of the project, construction activities would be required to comply with a Stormwater Pollution Prevention Plan (SWPPP) consistent with the General Permit for Stormwater Discharge Associated with Construction Activity (Construction Activity General Permit). The SWPPP would incorporate BMPs such as gravel bags, silt fence, and fiber rolls. The project would result in an increase in impervious surfaces on-site; however, similar to the development assumed for the Natomas Fountains Project, the proposed project use would still include 85% or less impervious surfaces and would not substantially decrease groundwater recharge with the proposed bioretention basins. The project is consistent with the General Plan and zoning designations and therefore the development envisioned for the project site would have been accounted for in the water supply estimates included in the General Plan. Further, there are no public water wells located on the project site and groundwater is not drawn from the area.

The project would not substantially alter the existing drainage patterns of the project site. The proposed project would continue to discharge to the existing stormwater connection located within Gateway Parkway Boulevard. The project site does not contain any streams or rivers; therefore, none would be altered by the project. Additionally, the project site is located approximately 81 miles inland and northeast of the Pacific Ocean. There is no risk of exposure to inundation by seiche of tsunami. Accordingly, there is no significant risk of release pollutants due to site inundation.

The project would not obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts to hydrology and water quality would be less than significant and there are no changes or new information on requiring preparation of subsequent environmental documentation. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

As discussed above, the project would not cause a new drainage or water quality impact to occur, nor an increase in the severity of a drainage or water quality impact previously disclosed in the Natomas Fountains MND. As such, the project would not cumulatively contribute to a cumulatively significant impact related to water quality and drainage.

Mitigation Program

None

Conclusion

Based on the comparative analysis provided in this Addendum, no new impacts relative to hydrology and water quality or an increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the project would be undertaken that would result in a new or more severe environmental impacts that previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding less than significant impact. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.10 Land Use and Planning

Threshold (a) Would the project physically divide an established community?

Threshold (b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Summary of Impacts Identified in the Natomas Fountains MND

Prior to the Natomas Fountains MND, the Natomas Fountains Project area was previously designated as Employment Center for 50 employees per net acre within the Coral Business Center Planned Unit Development (PUD) but adoption of the Natomas Fountains MND included a zoning change to re-zone from Employment Center Mid-Rise (ECMR) to Regional Commercial (RC) and General Plan Amendment to re-designate from Employment Center (EC-50-PUD), as listed in the 2035 General Plan, to Shopping Center (SC-PUD). The Natomas Fountains Project also required a PUD Schematic Plan Amendment for the Coral Business Center PUD to designate the Natomas Fountains Project site for commercial use. The Natomas Fountains Project proposed retail/commercial development similar from adjacent retail/commercial land uses. The Natomas Fountains MND determined that the Natomas Fountains Project would not physically dive an established community. The Natomas Fountains MND also determined that, although the development is within the Natomas Basin and is subject to the Natomas Basin Habitat Conservation Plan (NBHCP), the project is within a development area exempted as a development area determined to have existing prior to the 1997 adoption of the NBHCP for which the Coral Business Center PUD is considered exempt. No mitigation measures were required for land use for the Natomas Fountains MND.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The land use designation for the project site is subject to the 2035 General Plan and listed as regional commercial. The northern and central portions of the project site are vacant, and the southern portion of the site is partially paved consisting of a driveway along North Freeway Boulevard. The project would not include any roadway extensions or other development features through currently developed areas. Therefore, the project would not physically divide an established community and there would be no impacts. Therefore, there are no changes or new significant information that would require preparation of subsequent CEQA documentation.

The City's 2035 General Plan Land Use Plan Map depicts the City's land use designations and indicates that the project site has a regional commercial land use designation. The regional commercial land use designation allows retail, restaurant, high-density residential, office, and public uses for which the project would be consistent with the proposed drive-thru restaurant. The City's Zoning Map identifies the project site as being located within a shopping center zone (SC-PUD). The project site is within the Natomas Fountains Project area and would be consistent with the PUD Schematic Plan Amendment for the Coral Business Center PUD Schematic Plan adopted with adoption of the Natomas Fountains MND. The project's proposed restaurant use would comply with the allowable uses identified in the 2035 General Plan. A Conditional Use Permit is required to allow the development of a drive-thru restaurant, which is a conditionally permitted use in shopping center zones within the City. Additionally, as required by Chapter 17.216 of the City's Municipal Code, the proposed project has prepared a Site Plan. No mitigation

measures are applicable to the proposed project as none were applicable to the Natomas Fountains Project.

The project is consistent with the pertinent land use planning and policy documents, including the General Plan, the City's Zoning Ordinance, and the Coral Business Center PUD. Therefore, the project, similar to development pursuant to the General Plan, would not physically divide an established community and there would be no impacts. Therefore, there are no changes or new significant information that would require preparation of subsequent CEQA documentation. The preparation of a subsequent MND or EIR is not required.

Cumulative Impact

The project is consistent with applicable land use goals and policies. Although other changes in land use plans and regulations may have occurred with past and present projects in the area and may be necessary for individual future projects, such changes have been, and would be, required to demonstrate consistency with General Plan and other City policies such that no significant adverse cumulative impact has occurred or would occur from such changes. Given that the project is consistent with the land use policies of the applicable plans, the project would not cumulatively contribute to cause an adverse land use impact based on a conflict with a plan or policy. Any associated physical impacts are covered in the individual topic sections. The City of Sacramento would review for consistency with adopted land use plans and policies in accordance with the requirements of CEQA, the State Zoning and Planning Law, and the State Subdivision Map Act, all of which require findings of plan and policy consistency prior to approval of entitlements for development. Therefore, the project would not cumulatively contribute to any cumulative land use impacts.

Mitigation Program

None.

Conclusion

Based on the comparative analysis provided in this Addendum, no new impacts relative to land use or a substantial increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of no impact. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.11 Noise

Would the project:

Threshold (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 increase?**

Threshold (b) **Result in residential interior noise levels of 45 dBA Ldn or greater caused by noise level increases due to the project?**

Threshold (c) **Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance?**

Threshold (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?**

Threshold (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?**

Threshold (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?**

Summary of Impacts Identified in the Natomas Fountains MND

The Natomas Fountains MND evaluated noise and vibration impacts from construction and operation of the previously approved Natomas Fountains Project. The Natomas Fountains MND concluded that the previously proposed Natomas Fountains Project would reduce construction noise impacts to a less than significant level with implementation of Mitigation Measure 8-1. Traffic noise was also determined to result in less than a significant level as the highest increase in traffic noise would not exceed the City of Sacramento General Plan Exterior Incremental Noise Impact Standard. Also, the mechanical noise analysis also concluded that heating, ventilation and air conditioning (HVAC) units would have a less than significant impact.

The Natomas Fountains MND analyzed vibration impact from construction activities. The evaluation concluded that construction-related vibration levels would be below the Federal Transit Administration (FTA) vibration impact thresholds for residential, commercial, and historic uses and result in a less than significant impact. The groundborne vibration for the nearest residential was also identified to be below the FTA vibration impact threshold with less than a significant impact.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

Noise Measurements

To quantify existing ambient noise levels in the project area, Kimley-Horn conducted four short-term (10-minute) measurements on February 20, 2025, and one long-term noise measurement (24 hours in duration) starting on February 20, 2025, and ending February 21, 2025; see **Appendix C: Noise Data**. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site. The 10-minute daytime measurements were taken between 10:06 a.m. and

11:11 a.m. Measurements of L_{eq} are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in Table 3.11-1: Existing Noise Measurements and shown on ***Exhibit 7: Noise Measurement Locations Map***.

Table 3.11-1: Existing Noise Measurements

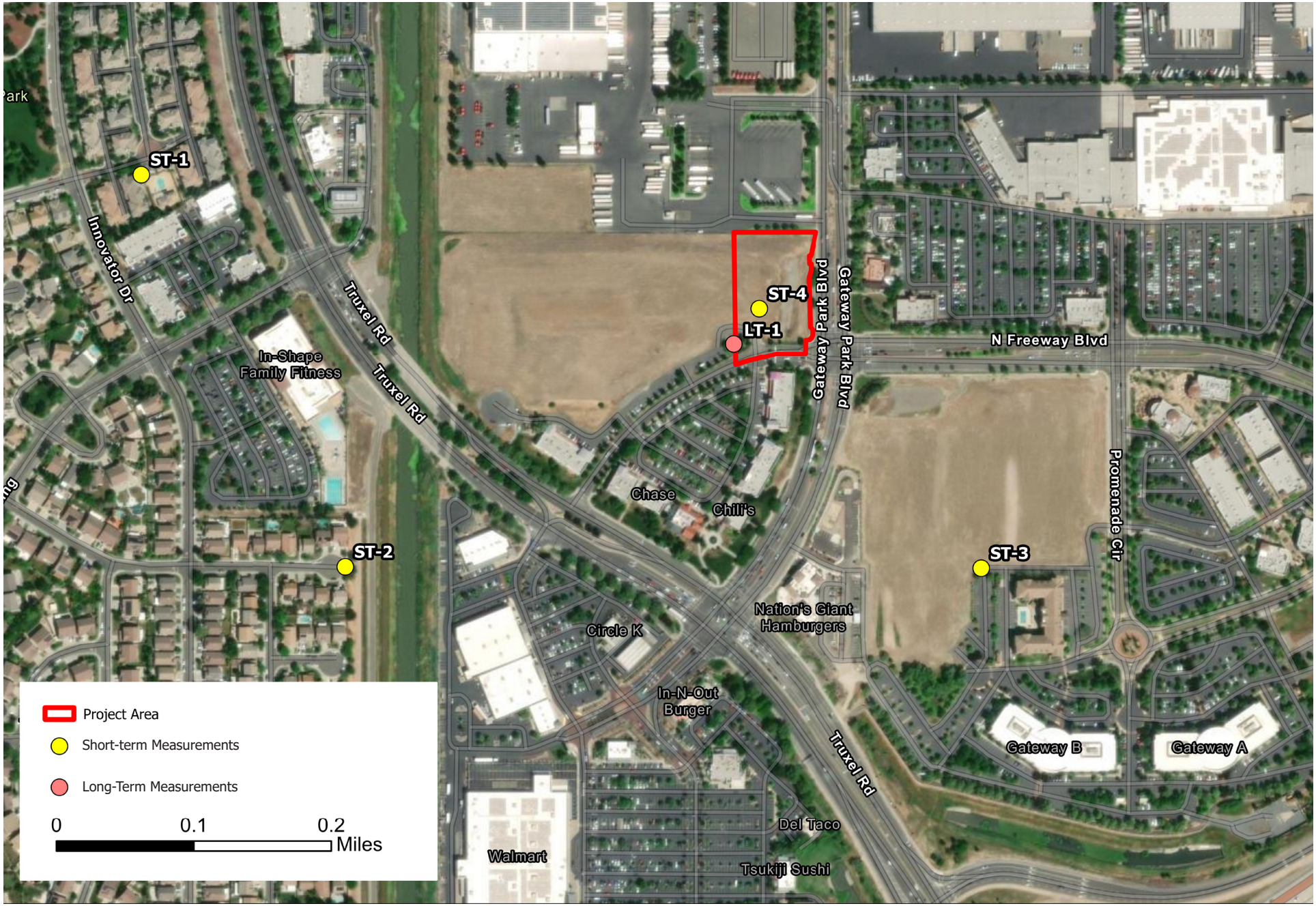
Site	Location	Measurement Period	Duration	Daytime Average L_{eq} (dBA)[1]	Nighttime Average L_{eq} (dBA)[1]
Short-Term Noise Measurements (10-minute measurements)					
ST-1	Adjacent to multi-family residences northwest of the project site, along Innovator Drive.	10:06 a.m. to 10:06 a.m., Thursday, February 20, 2025	10 min	51.7	-
ST-2	Adjacent to single-family residences to the southwest of the project site, along Citrine Way.	10:25 a.m. to 10:35 a.m., Thursday, February 20, 2025	10 min	52.6	-
ST-3	Near hotel at 120 Promenade Cir located to the southeast of the project site.	10:42 a.m. to 10:52 a.m., Thursday, February 20, 2025	10 min	55.6	-
ST-4	Within the central portion of the project site.	11:01 a.m. to 11:11 a.m., Thursday, February 20, 2025	10 min	60.1	-
Long-Term Noise Measurements (continuous 24-hour measurement)					
LT-1	Southwest portion of the project site adjacent to multi-family residential uses.	Thursday, February 20, 2025, to Friday, February 21, 2025	24 hr	60.1	59.0
			Average L_{eq}	**59.7**	

Notes:
1. Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m.

Source: Noise measurements taken by Kimley-Horn and Associates, February 20-21, 2025. See **Appendix C** for noise measurement results.

Sensitive Receptors

Noise exposure standards and guidelines for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Healthcare facilities, rehabilitation centers, retirement homes, convalescent homes, residences, schools, childcare centers, and playgrounds are treated as the sensitive receptors, and therefore have more stringent noise exposure targets than do other uses, such as manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. Sensitive land uses nearest to the project site are the multi-family residences located approximately 130 feet to the west that are currently under construction. Although not yet occupied, these residences represent the nearest sensitive receptor to the project and therefore are analyzed for worst-case impacts in this analysis.



Source: Kimley-Horn, 2025

Exhibit 7: Noise Measurements Location Map

Raising Cane's Gateway Park Project
City of Sacramento

Not to scale

Kimley»Horn

Construction

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving, etc.). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect nearby sensitive receptors.

Construction of the project would take approximately 8 months. Construction activities would include site preparation, grading, building construction, paving, architectural coating, and infrastructure improvement. Such activities could require graders, dozers and tractors during site preparation; tractors, graders, and dozers during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, tractors, and paving equipment during paving; air compressors during architectural coating; and trenchers, pavers, rollers, and dozers during infrastructure improvement. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels associated with individual construction equipment are identified in **Table 3.11-2: Typical Construction Noise Levels**.

Table 3.11-2: Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA Lmax) at 50 feet from Source
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pneumatic Tool	85
Pump	77
Roller	85
Saw	76
Scraper	85
Shovel	82
Truck	84

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

The City's Municipal Code (Chapter 8.68.080) states that noise sources generated during the erection, excavation, demolition, alteration or repair of any building or structure between the hours of 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 is exempt from the City's noise standards. However, this exemption would be effective only if the operation of an internal combustion engine is equipped with suitable exhaust and intake silencers and are in good working order. Construction noise would have less than a significant impact if the construction of proposed project occurs within the City's construction exempt hours. However, if construction takes place outside the City's exempt hours, the project must adhere to the City's noise standards. Per Sacramento Municipal Code Chapter 8.68.080, the City does not allow exterior noise levels at residential properties to exceed 55 dBA L_{eq} and 75 dBA L_{max} from 7 a.m. to 10 p.m. and 50 dBA L_{eq} and 70 dBA L_{max} from 10 p.m. to 7 a.m.

The nearest noise-sensitive land uses are the multi-family residences located 130 feet west of the project. Following FTA's methodology for quantitative construction noise assessments, the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM) was used to predict construction noise. The noise levels calculated in Table 3.11-3: Project Construction Noise Levels[1] shows the estimated exterior construction noise that would be generated during construction of the project. Consistent with FTA methodologies, all construction equipment was assumed to operate simultaneously at the center of the project construction area as construction activities would routinely be spread throughout the construction site and would operate at different intervals. The modeled receptor in **Table 3.11-3** represents the closest noise-sensitive land use to project construction activities. Noise levels at other sensitive receptors surrounding the project site would be located further away and would experience lower construction noise levels than the closest receptors modeled.

Table 3.11-3: Project Construction Noise Levels[1]

Construction Phase	Receptor Land Use	Direction	Distance (feet)[1]	Modeled Noise Level (dBA L_{eq}/dBA L_{max})
Site Preparation	Residential	West	220	71.7/75.7
Grading	Residential	West	220	73.0/77.0
Building Construction	Residential	West	300	68.4/72.6
Paving	Residential	West	170	74.9/80.5
Architectural Coating	Residential	West	300	58.2/62.1
Infrastructure Improvement	Residential	West	200	70.0/74.1

1. Distances are measured from the center of the Project construction area to the nearest sensitive receptor.

Source: Federal Highway Administration, *Roadway Construction Noise Model,* 2006. Refer to **Appendix C** for noise modeling results.

Table 3.11-3 indicates the nearest receptor (multi-family residences), located 130 feet to the west of the project site, could be exposed to construction noise levels up to approximately 74.9 dBA L_{eq} and 80.5 L_{max}. However, project construction would occur during the City's allowable construction 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 and construction equipment would be equipped with suitable exhaust and intake silencers that are in good working order in compliance with Mitigation Measure 8-1. Project construction would not require the use of pile drivers. Therefore, project construction noise would not be required to adhere to the City's noise standards, and impacts would be less than significant.

Operations

On-Site Operations

The project proposes to operate a Raising Cane's restaurant with drive-thru access and an outdoor seating area. The primary noise sources associated with the proposed Raising Cane's restaurant would consist of drive-thru operations (i.e., sound from the ordering intercom and vehicles idling/queuing in the drive-thru lanes), parking lot noise, outdoor dining, mechanical equipment, truck deliveries (i.e., maneuvering and idling trucks, and loading/unloading activities), and trash/recycling pickup noise. A discussion of each of these project noise sources is provided below.

Drive-Thru Operations. The proposed restaurant would be open daily between 9:00 a.m. and 3:30 a.m. One drive-thru menu board and intercom would be located to the north/northwest of the proposed restaurant building in the northern portion of the project site. Project noise sources from drive-thru operations include amplified speech from the intercom, idling vehicles, vehicles circulating along the drive-thru lanes. The measured noise level associated with active drive-thru operations is 64 dBA at a distance of 20 feet.[4] The closest sensitive receptors to the project site are the multi-family residences located approximately 260 feet from the closest menu board and intercom, and approximately 145 feet from the drive-thru lane/queuing area.

Parking Lot Noise. Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the one-hour L_{eq} and CNEL scales. The instantaneous maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys range from 53 to 61 dBA[5] and may be an annoyance to nearby noise-sensitive receptors. Conversations in parking areas may also be an annoyance to nearby sensitive receptors. Sound levels of speech typically range from 33 dBA at 50 feet for normal speech to 50 dBA at 50 feet for very loud speech.[6] Parking lot noise would occur at the proposed surface parking lot as close as approximately 150 feet from the single-family residences to the west of the project site.

Outdoor Dining Noise. The project would include an outdoor dining area on the eastern and southern façade of the proposed Raising Cane's restaurant. The outdoor dining areas would be used by individuals or small groups to gather outside for a meal and may include low-level background music. Outdoor dining areas with music can generate noise levels up to approximately 82 dBA at one meter from the source.[7] The nearest sensitive receptors (single-family residences to the west) would be located approximately 275 feet from the outdoor dining area of the proposed restaurant.

Mechanical Equipment. The project would include HVAC units located on the rooftop of the restaurant building. Mechanical equipment (e.g., HVAC equipment) typically generates noise levels of approximately 52 dBA at 50 feet.[8] The nearest sensitive receptors (single-family residences to the west) would be located approximately 270 feet from the proposed rooftop HVAC equipment.

[4] Drive-thru noise sample collected at Raising Cane's restaurant by Kimley-Horn on August 17, 2018.

[5] Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.

[6] Elliott H. Berger, Rick Neitzel1, and Cynthia A. Kladden. *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.

[7] Obtained from the SoundPLAN Essential version 5.1 reference noise level database.

[8] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.

Truck Deliveries and Loading Activities. The project would include infrequent truck deliveries to the restaurant for goods replenishment. Noise would be generated during loading and unloading activities by the trucks' diesel engines, exhaust systems, and brakes during low gear shifting and braking activities; dropping down the truck ramps; and maneuvering away from the delivery area. Slow-moving heavy truck movements generate noise levels up to approximately 70 dBA at 50 feet[9] Loading dock operations typically generate a noise level of 86.3 dBA at a distance of 50 feet.[10] Truck loading was modeled to occur in the parking lot west of the proposed restaurant building. The delivery truck route through the parking lot was modeled conservatively assuming one heavy truck trip per hour. In reality, noise levels from truck deliveries and unloading would be intermittent and infrequent. As a result, actual noise levels associated with truck deliveries would be far lower. Truck loading activities would occur approximately 200 feet from the multi-family residences to the west.

Trash/Recycling Collection. The proposed project would involve occasional deliveries and weekly trash/recycling collection from slow-moving trucks during normal daytime hours. Trash/recycling trucks typically generate noise levels up to approximately 75 dBA at 50 feet.[11] Trash/recycling truck activities would occur approximately 175 feet from the multi-family residences to the west.

Modeled Noise Levels. Exterior noise levels associated with drive-thru operations, parking lot noise, outdoor dining, mechanical equipment, truck movements and loading activities, and trash/recycling pickup noise were modeled with the SoundPLAN software. SoundPLAN allows computer simulations of noise situations, and creates noise contour maps using reference noise levels, topography, point and area noise sources, mobile noise sources, and intervening walls and structures. Inputs to the SoundPLAN model included ground topography and ground type, noise source locations and heights, receiver locations, sound power level data.

Noise levels were calculated at the nearest sensitive receptors surrounding the project site. Four SoundPLAN model runs were quantified for the project: Standard Operations, Truck Deliveries and Loading Activities, and Trash/Recycling Pickups. The maximum modeled noise levels for the project are provided in **Table** 3.11-4: Project Operational Exterior Noise Levels and **Table** 3.11-5: Project Operational Interior Noise Levels**.** The complete noise modeling results and contours for the project are provided in **Appendix C**.

Table 3.11-4: Project Operational Exterior Noise Levels

Noise Source	Daytime			Nighttime		
	Maximum Noise Level at Residential Uses (dBA L_{eq})	City Noise Standard (dBA L_{eq})[1]	Exceeds Standard?	Maximum Noise Level at Residential Uses (dBA L_{eq})	City Noise Standard (dBA L_{eq})[1]	Exceeds Standard?
Standard Operations	47.2	60	No	46.8	55	No

[9] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.

[10] Truck loading noise level was taken from the SoundPLAN system library. Noise level represents peak level of truck loading event in time evaluation "fast".

[11] Trash/recycling truck noise level obtained from the SoundPLAN system library.

Truck Deliveries and Loading	62.4	60	No	62.4	55	No
Trash/Recycling Collection	63.6	70[2]	No	63.6	65[2]	No

Notes:
1. SMC Section 8.68.080 limits exterior noise standards for residential properties to 55 dBA from 7:00 a.m. to 10:00 p.m. and 50 dBA from 10:00 p.m. to 7:00 a.m. However, the exterior noise standards were adjusted to encompass the measured ambient levels in accordance with SMC Section 8.68.060(D). The measured ambient daytime and nighttime noise levels are 60.1 dBA and 59.0 dBA, respectively (see **Table 3.11-1**), which are higher than the base noise level standards of 55 dBA (daytime) and 50 dBA (nighttime) in SMC Section 8.68.080(A).
2. SMC Section 8.68.060(B) allows for an increase above the City's noise standards of up to 10 dBA for a cumulative period of 5 minutes per hour. Truck movements and loading, and trash/recycling collection activities would not last more than five minutes in any hour during operation; therefore, 10 dBA is added to the City's adjusted noise standard to account for these brief activities.

Source: SoundPLAN version 5.1. See **Appendix C** for noise modeling data and results.

Table 3.11-5: Project Operational Interior Noise Levels

Noise Source	Daytime			Nighttime		
	Maximum Noise Level at Residential Uses (dBA L_{eq})[1]	City Noise Standard (dBA)[2]	Exceeds Standard?	Maximum Noise Level at Residential Uses (dBA L_{eq})[1]	City Noise Standard (dBA)[2]	Exceeds Standard?
Standard Operations	22.2	45	No	21.8	45	No
Truck Deliveries and Loading	37.4	45	No	37.4	45	No
Trash/Recycling Collection	38.6	45	No	38.6	45	No

Notes:
1. Interior noise levels were calculated assuming an exterior-interior sound reduction of 25 dBA from standard construction practices, per the United States Department of Housing and Urban Development, *Noise Guidebook*, available at: https://www.hudexchange.info/resource/313/hud-noise-guidebook/ (2009).
2. SMC Section 8.68.070(A) and General Plan Policy ERC-10.3 establish an interior noise standard of 45 dBA for residential uses.

Source: SoundPLAN version 5.1. See **Appendix C** for noise modeling data and results.

As shown in **Table 3.11-4**, exterior noise levels from project operations would reach a maximum of approximately 63.6 dBA L_{eq} at the multi-family residences to the west of the project site and would not exceed the City's daytime or nighttime noise standards. In addition, as shown in **Table 3.11-5**, interior noise levels from project operations would also not exceed the City's standards for residential uses. Therefore, impacts from on-site operations at the project site would be less than significant.

Off-Site Traffic Noise. The Natomas Fountains MND determined that operational traffic noise would not result in a noticeable increase at sensitive uses (i.e., residential uses) along roadways in the site vicinity and/or exceed the City's allowable exterior incremental noise impact standards. As discussed in Section 3.15, *Transportation*, the proposed project, in combination with the Natomas Fountains Apartments Project Addendum, would generate fewer daily trips than those analyzed in the Natomas Fountains MND.

As such, the proposed project would not exceed the City's incremental noise thresholds and impacts would be less than significant in this regard.

Ground-borne Vibration and Noise Levels. Increases in ground-borne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the operations involved.

The FTA has published standard vibration velocities for construction equipment operations in their 2018 *Transit Noise and Vibration Impact Assessment Manual* (FTA Transit Noise and Vibration Manual). In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA Transit Noise and Vibration Manual shows that a vibration level of up to 0.20 in/sec is considered safe and would not result in any construction vibration damage.

The nearest structures to on-site construction activities are the multi-family residences located approximately 130 feet to the west of the project site boundary. **Table 3.11-6: Typical Construction Equipment Vibration Levels**, lists vibration levels at 25 feet and 130 feet for typical construction equipment based on FTA data. Ground-borne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in **Table 3.11-6**, at 130 feet, vibration velocities from typical heavy construction equipment operations that would be used during project construction range from 0.0003 to 0.008 in/sec PPV at the closest structure, which is well below the FTA's 0.20 in/sec PPV threshold.

Table 3.11-6: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (in/sec)	Peak Particle Velocity at 130 Feet (in/sec)
Large Bulldozer	0.089	0.008
Loaded Trucks	0.076	0.006
Small Bulldozer	0.003	0.001
Vibratory Compactor/Roller	0.21	0.0003

1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (125/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.

It is also acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest structure. Therefore, based on the significance criteria, vibration impacts associated with the proposed project would be less than significant.

Once operational, the project would not be a significant source of ground-borne vibration. Ground-borne vibration surrounding the project currently result from heavy-duty vehicular travel (e.g., refuse trucks, heavy duty trucks, delivery trucks, and transit buses) on the nearby local roadways. Operations of the proposed project would include truck deliveries. Due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. According to the FTA Transit Noise and Vibration Manual, trucks rarely create vibration levels that exceed 70 VdB (equivalent to 0.012 in/sec PPV) when they are on roadways. Therefore, trucks operating at the project site or along surrounding roadways would not exceed FTA thresholds for building damage or annoyance. Impacts would be less than significant.

Airport-Related Noise. The nearest airport to the project site is the Sacramento International Airport approximately five miles to the northwest. Therefore, the project site is not within two miles of a public airport or within an airport land use plan. Additionally, there are no private airstrips located within the vicinity. Therefore, the project would not expose people residing or working in the area to excessive airport- or airstrip-related noise levels and no mitigation is required.

Summary

The proposed project would result in construction and operational impacts that are less than significant. The project would be consistent with the City Municipal Code and noise ordinance for construction. Furthermore, implementation of Mitigation Measure 8-1 from the Natomas Fountains MND would result in less than significant construction noise impacts. Project operational exterior and interior noise levels would not exceed the City's daytime or nighttime noise standards. Increases in ground-borne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities and operational sources of ground-borne vibration would not be significant and would not exceed FTA thresholds for building damage or annoyance. Impacts related to noise would be less than significant with mitigation. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

As discussed above, all construction and operational noise impacts would be less than significant. Construction noise impacts are by nature localized. The distance of separation among the proposed project and other cumulative projects would be such that the temporary noise and vibration effects of the proposed project would not be compounded or increased by similar noise or vibration effects from other cumulative projects. As discussed above, operational noise caused by the proposed project would be less than significant. Due to site distance and these intervening land uses, cumulative stationary noise impacts would not occur. No known projects would compound or increase the operational noise levels generated by the project. Therefore, cumulative impacts relative to temporary and permanent noise generation associated with the proposed project would be less than significant and within the level of impacts analyzed in the Natomas Fountains MND.

Mitigation Program

Mitigation Measure 8-1 from the Natomas Fountains MND is applicable to the proposed project.

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.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to noise or an increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. There are no substantial changes to the circumstances under which the proposed project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was certified is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.12 Population and Housing

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

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

Summary of Impacts Identified in the Natomas Fountains MND

The Natomas Fountains MND noted that the proposed Natomas Fountains Project would not include residential uses. The Natomas Fountains MND determined that the Natomas Fountains Project would not impact population and housing.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The project would result in the construction of a drive-thru restaurant. Development of the project site was anticipated as a part of the General Plan area and is consistent with the project site's zoning; no significant impacts were identified. Additionally, no residential development is proposed as a part of the project. The land use designation for the project site in the City's 2035 General Plan Land Use Plan Map depicts is regional commercial land use designation. The regional commercial land use designation allows retail, restaurant, high-density residential, office, and public uses and would allow for the proposed drive-thru restaurant. The project would be consistent with City Zoning for a shopping center zone (SC-PUD). The project site is within the Natomas Fountains Project area and would be consistent with the PUD Schematic Plan Amendment for the Coral Business Center PUD Schematic Plan adopted with adoption of the Natomas Fountains MND. Furthermore, the total area of the proposed project building area is 3,442 sf (0.08 acres), which would be less than the previously proposed building area for this portion of the Natomas Fountains MND for which one 7,200 sf 50% retail/50% restaurant and one 7,150 sf 50% retail/50% restaurant were previously proposed. As such, the proposed development would have fewer employees than assumed in the Natomas Fountains Project for the project site. Consistent with the Natomas Fountains MND, no population and housing impacts would occur as a result of the project. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

As discussed above, the project would not cause an impact to population and housing to occur, nor an increase in the severity of any impacts previously disclosed in the Natomas Fountains MND. Natomas Fountains MND was found to be generally consistent with the City General Plan and zoning designations and was not anticipated to result in growth-inducing impacts related to population or housing. Therefore, the project would not cause either a new cumulative impact to occur, nor an increase in the severity of a cumulative impact previously disclosed.

Mitigation Program

None.

Conclusion

Based on the comparative analysis set forth in this Addendum and consistent with the Natomas Fountains MND, the project would have no impact on population and housing. With regard to PRC Section 21166

and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of no impact. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.13 Public Services

Threshold **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?**

Summary of Impacts Identified in the Natomas Fountains MND

Fire Protection. Fire protection and emergency medical services are provided by the Sacramento Fire Department (SFD). The Natomas Fountains MND concluded that impacts to fire services from implementation of the Natomas Fountains Project were less than significant, specifically compliance with all applicable code and ordinance requirements, including requirements related to fire flow, fire department access, and automatic sprinkler systems, and other applicable requirements into building designs. The Natomas Fountains Project noted that 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 Natomas Fountains MND noted that the Natomas Fountains Project applicant would be required to pay fair share fees for fire services with Natomas Fountains Project implementation. Furthermore, the Natomas Fountains noted that the Natomas Fountains Project would not generate an increase in demand for fire protection beyond what currently exists, and a new fire station would not be required.

Police Protection. The City of Sacramento Police Department provides law enforcement services to the City of Sacramento, inclusive of the Natomas Fountains Project area. The Natomas Fountains MND noted that the Natomas Project Area is located within Police District 1A under North Command Jurisdiction. The Natomas Fountains Project would be provided police services by North Command located at the William J. Kinney Police Facility at 3550 Marysville Boulevard approximately 5.9 miles east of the project site. The Natomas Fountains MND determined that police services via calls for service, police enforcement, and protection would only result in a minor increase as a result of the previously proposed Natomas Fountains Project. The Natomas Fountains MND noted that implementation of the Natomas Fountains Project would include Crime Prevention Through Environmental Design (CPTED) principles. Furthermore, the Natomas Fountains MND determined that the Natomas Fountains Project applicant would be required to pay fair share fees for police services with Natomas Fountains Project implementation. Therefore, the Natomas Fountains MND determined that impacts related to police services would be less than significant.

Schools. The Natomas Fountains MND noted that the Natomas Fountains Project would not involve the construction of residential land uses that would generate new residents and, therefore, would not require new school services, new school facilities, or libraries. Therefore, the Natomas Fountains MND determined that impacts related to school services would be less than significant.

Parks. Please refer to Section 3.14, *Recreation*.

Other Public Facilities. The Natomas Fountains MND noted that the Natomas Fountains Project would not create any new public roadways and would not create the need for additional roadway maintenance. The Natomas Fountains MND determined that the Natomas Fountains Project would have no impact to these public services.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

Fire Protection. The project would result in the construction of a drive-thru restaurant. The project does not involve any residential development and therefore is not expected to substantially increase service

demand such that new or altered facilities would need to be constructed. Fire protection and emergency medical services would be provided by the Sacramento Fire Department (SFD). Similar to the Natomas Fountains Project, the proposed project would receive first-response service from Station 30, located at 1901 Club Center Drive approximately 2.5 miles north of the project site[12]. The project would be required to pay a fee to ensure a proportionate fair share is contributed toward facilities, equipment, and personnel that would be needed over time to accommodate any additional incremental demand from future development including the project. The project does not propose or require new or physically altered fire station facilities.

Police Protection. The project site is in a currently developed area served by the Police Department. The closest police station is the William J. Kinney Police Facility located at 3550 Marysville Boulevard, approximately 5.9 miles east of the project site.[13] Because of this, and because law enforcement personnel already patrol the area, the project is not anticipated to increase response times to the project site or surrounding area. Further, the project applicant would be required to pay fair share fees for police services, which requires all development projects to pay a fee to account for any cost increases associated with the law enforcement facilities, equipment, and training resulting from project implementation. The project does not propose or require new or physically altered police protection facilities.

Schools. The project is a non-residential development. Implementation of the project would not directly result in increased population in the City and therefore, would not increase the need for the construction of additional school facilities. Furthermore, given that the project would not generate new residents, the project would not require new school services, new school facilities, or libraries.

Summary. The preparation of a subsequent MND or EIR is not required.

Cumulative

As discussed above, the project would not cause a new public services impact to occur, nor an increase in the severity of any public service impacts previously disclosed in the Natomas Fountains MND. Natomas Fountains MND did not identify any potential significant cumulative impacts associated with the provision of public services. The project would not cumulatively contribute to any impacts to public services.

Mitigation Program

None.

[12] City of Sacramento. (2025). *Fire Stations*. https://www.cityofsacramento.gov/fire/about-sacramento-fire/station-information. Accessed February 2025.

[13] City of Sacramento. (2025). *William J Kinney Police Facility - North Command.* https://www.cityofsacramento.gov/police/your-sacpd/about/police-facilities/william-j-kinney-police-facility---north-command. Accessed February 2025.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to public services or an increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts, or increase the severity of the previously identified impacts. No new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.14 Recreation

Threshold (a) Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities?

Threshold (b) Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan?

Summary of Impacts Identified in the Natomas Fountains MND

The City of Sacramento Parks and Recreation (Parks) Department manages recreational facilities in the City of Sacramento, inclusive of the Natomas Fountains Project area. The Natomas Fountains MND identifies three district park types classified by the Parks Department: 1) neighborhood parks, 2) community parks, and 3) regional parks. At the time of the adoption of the Natomas Fountains MND, the City of Sacramento had a park inventory of 235 facilities totaling approximately 3,431 acres with approximately 1,607 acres dedicated to neighborhood and community parks with the remaining listed as City regional parks and parkways. Although the Natomas Fountains Project would not increase demand for parks or recreation facilities, the Natomas Fountains MND noted that the Natomas Fountains Project would be subject to park development fees pursuant to Chapter 18.44 of the City's Municipal Code at the time the Natomas Fountains MND was adopted. The Natomas Fountains MND determined that the Natomas Fountains Project would have a less than significant impact.

Project-Specific Analysis and Significance Determination: No new impact/reduced impact; no change from previous analysis.

Development of the project site with non-residential uses was assumed in the Natomas Fountains MND. The project does not include residential development, which would directly increase population and result in increased demand for parks and recreational facilities. Accordingly, implementation of the project would not generate an increase in demand on existing public or private parks or other recreational facilities that could result in substantial physical deterioration of the City's parks and recreational facilities. The City of Sacramento requires the payment of development fees for public facilities maintained in the City for uses including but not limited to parks and recreation. The proposed project would be subject to Municipal Code Section 18.56, Development Impact Fees, Article II, Park Impact Fee. In addition, the proposed project site has a regional commercial land use designation and is not identified in the Sacramento 2035 General Plan as a park or open space resource. The project does not include the construction of recreational facilities, nor would it require the construction or expansion of recreational facilities. Therefore, no impact to existing recreational facilities would occur and no mitigation is required. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

Under the significance criteria for recreation, potential cumulative impacts could occur if the project—when combined with cumulative projects—would include new recreational facilities or require the construction or expansion of recreational facilities that might adversely affect the environment in order to maintain acceptable service ratios or other performance objectives for parks; or increase the use of the existing neighborhood and regional parks or other recreational facilities such that a substantial physical deterioration of the facilities would occur or be accelerated. The project would not cause the need for new or expanded recreational facilities or result in substantial physical deterioration of existing facilities. As discussed above, the project would not cause an increase in the severity of recreational impacts

previously disclosed in the Natomas Fountains MND. Implementation of the project would not result in project-specific recreational impacts nor cumulatively contribute to recreation impacts.

Mitigation Program

None.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to recreation or an increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.15 Transportation

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

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

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

Threshold (d) Would the project result in inadequate emergency access?

Summary of Impacts Identified in the Natomas Fountains MND

The Natomas Fountains MND evaluated existing traffic conditions and existing plus project conditions at the following intersections: Truxel Road and Arena Boulevard, Truxel Road and Natomas Crossing Drive, Truxel Road and Natomas Marketplace at the north entrance, North Freeway Boulevard and Gateway Park Boulevard, Truxel Road and Gateway Park Boulevard, Truxel Road and I-80 Westbound Ramps, and Truxel Road and I-80 Eastbound Ramps. The Natomas Fountains MND concluded that implementation of the Natomas Fountains Project would increase delays at most intersections but would not cause any intersection to worsen from acceptable to unacceptable levels under existing plus project conditions. The Natomas Fountains MND also noted that operation at all facilities assessed would remain at acceptable levels during the weekday PM peak hour. The Natomas Fountains MND noted that any added delay would be below the five-second threshold for exacerbating unacceptable conditions and impacts to study intersections would be less than significant in the Existing Plus Project scenario. The Natomas Fountains MND did note that the Natomas Fountains project would result in cumulatively considerable impacts to the Gateway Park Boulevard and North Freeway Boulevard Intersection. Cumulative impacts and mitigation for transportation for the Natomas Fountains Project was discussed in the Mandatory Findings of Significance section of the Natomas Fountains MND. However, implementation of Mitigation Measure 13-1 would result in less than significant impacts with mitigation. Although roadways in the study area would experience heavier traffic conditions as a result of Natomas Fountains Project development, implementation of the Mitigation Measure 13-1 would reduce impacts to less than significant levels.

Project-Specific Analysis and Significance Determination: Reduced Impact; change from previous analysis.

Methodology. When the Natomas Fountains MND was adopted in 2017, the applicable traffic threshold was Level of Service (LOS). Previously, on September 27, 2013, SB 743 was signed into law and started a process that would change the methodology and significance criteria for transportation impact analyses as part of CEQA compliance. These changes include the elimination of auto delay, LOS, and similar measures of vehicular capacity or traffic congestion as a basis for determining significant environmental impacts. On January 20, 2016, the State of California Office of Planning and Research (OPR) released revisions to its proposed CEQA Guidelines for the implementation of SB 743, and final review and rulemaking for the new guidelines were completed in December 2018. OPR allowed lead agencies an opt-in period to adopt the guidelines before the mandatory date adoption of July 1, 2020.

Level of Service was the applicable threshold when the City adopted the Natomas Fountains MND. The mandate requiring lead agencies to use Vehicle Miles Traveled (VMT) as a threshold for evaluating traffic impacts was adopted in 2018 and became effective in 2020. The potential environmental impacts

regarding the amount of travel associated with the Natomas Fountains Project were known at the time that Natomas Fountains MND was adopted.

Trip Generation. The Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition was used to develop trip generation characteristics of the project. The project is most comparable to Fast-Food Restaurant with Drive-Thru (Land Use Code 934). The estimated trip generation is shown in **Table 3.15-1: Project Trip Generation**. The project is estimated to generate 1,493 total trips per day.

The land use designation for the project site in the 2035 General Plan is regional commercial. Regional commercial land uses may include major retail stores, home improvement stores, offices, restaurants, services, multifamily dwellings (e.g., apartments and condominiums), central public gathering places, and compatible public, quasi-public, and specials uses. Restaurants are a permitted use in the regional commercial land use designation. Applying the 11th Edition of ITE to the Fast-Food Restaurant with Drive-Thru Land Use Code 934, development of the project site with 3,442 sf drive-thru restaurant uses is estimated to generate 1,493 trips per day, with zero PCE trips during the AM peak hour and 94 trips during the PM peak hour.

In comparison with the anticipated trip generation associated with the Natomas Fountains Project, the proposed project in combination with the adopted Natomas Fountains Apartments Project Addendum would result in a net decrease in external trips. The Natomas Fountains Project anticipated 6,872 daily trips for the previously proposed retail, High-Turnover Sit-Down Restaurant, and supermarket land uses. Serving as an Addendum to Natomas Fountains Project for Assessor Parcel Number (APN) 225-0160-094, the Natomas Fountains Apartments Project Addendum to an Adopted Mitigated Negative Declaration anticipated 1,650 daily trips for the proposed multifamily mid-rise housing. See **Appendix D: Traffic Impact Study for the Natomas Fountains Apartments**. As mentioned previously, the proposed project would generate 1,493 trips per day. In combination with the proposed project, the net new external trips would be 3,729 less daily trips than listed in the Natomas Fountains Project. **Table 3.15-2: Comparative Trip Generation considering the Natomas Fountains Project and the Natomas Fountains Apartments Project** includes a comparison of trips between the Natomas Fountains Project and the proposed project combined with the Natomas Fountains Apartments Project. In combination with the previous Addendum to an Adopted Initial Study/Mitigated Negative Declaration for the Natomas Fountains Project, the proposed project would result in less trips than the previously proposed Natomas Fountains Project.

Table 3.15-1: Project Trip Generation

Trip Generation Rates[1]

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Fast-Food Restaurant with Drive-Thru	934	KSF	467.48	-	-	-	29.840	31.228	61.069

Project Trip Generation

Land Use	Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Raising Cane's Restaurant	3.442	KSF	1,609	--[3]	--[3]	--[3]	103	107	210
Pass-by Trips (0% AM, 55% PM)			-116	--	--	--	-57	-59	-116
Total Proposed Project Trips			**1,493**	**--**	**--**	**--**	**46**	**48**	**94**

KSF = thousand square feet

1. Source: Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition
2. Note: The Trip Generation Manual does not provide pass-by rates for daily trip generation. The daily pass-by trips shown are the sum of the AM and the PM pass-by trips.
3. Raising Cane's is not open during the AM Peak Hour
4. Source: PM peak hour trip rates are based on a trip generation survey at the Laguna Hill's Raising Cane's restaurant (October 2017). Daily trip rates are based on the daily rate from the ITE Trip Generation Manual 11th Edition for ITE Land Use Code 934 (Fast-Food Restaurant with Drive-Thru)

Table 3.15-2: Comparative Trip Generation considering the Natomas Fountains Project and the Natomas Fountains Apartments Project

Land Use (ITE Code)	Size (KSF/ Dwelling Units)	Daily Trips	AM Peak-Hour					PM Peak-Hour				
			Total Trips	In		Out		Total Trips	In		Out	
				%	Trips	%	Trips		%	Trips	%	Trips
2016 Traffic Study for the Natomas Fountains Project[1]												
Retail (820)	55.375	4,624	109	61%	67	39%	41	403	48%	194	52%	210
High-Turnover Sit-Down Restaurant (932)	31.605	4,019	342	55%	188	45%	154	311	60%	187	40%	125
Supermarket (850)	28.9	2,955	98	62%	61	38%	37	311	51%	159	49%	152
Gross Trips		11,598	549	0	316	0	232	1,025	0	540	0	487
Internal Trips		-580	-7	0	-4	0	-3	-80	0	-42	0	-38
Pass-by Trips		-4,146	-217	0	-124	0	-92	-353	0	-187	0	-166
Subtotal of Trips		**6,872**	**325**	**0**	**188**	**0**	**137**	**592**	**0**	**311**	**0**	**283**
Residential Land Use Analysis for the Natomas Fountains Apartments Project (2022)[2]												
Multifamily Housing, Mid-Rise (221)	303	1,650	101	26	26	74	75	128	61	78	39	50
Subtotal of Trips		**1,650**	**101**		**26**		**75**	**128**		**78**		**50**
Proposed Project Land Use Analysis												
Raising Cane's Restaurant[3]	3.442	1,609	--[4]	N/A	--[4]	N/A	--[4]	210	N/A	103	N/A	107
Pass-by-Trips (0% AM, 55% PM)	--	-116	--	N/A	--	N/A	--	-116	N/A	-57	N/A	-59
Total Proposed Project Trips	**--**	**1,493**	--	N/A	--	N/A	--	**94**	**--**	**46**	**--**	**48**
Net New External Trips		**-3,729**	**-224**	**--**	**-162**	**--**	**-62**	**-370**	**--**	**-187**	**--**	**-185**

KSF = thousand square feet

1. City of Sacramento, 2016, Final Transportation Impact Study for the Natomas Fountains Project prepared by Fehr & Peers. See *Appendix D: Final Transportation Impact Study for the Natomas Fountains Project* in **Appendix A**.
2. City of Sacramento, 2021, Traffic Impact Study for the Natomas Fountains Apartments Project prepared by Kimley-Horn. See **Appendix D**.
3. PM peak hour trip rates are based on a trip generation survey at the Laguna Hill's Raising Cane's restaurant (October 2017). Daily trip rates are based on the daily rate from the ITE Trip Generation Manual 11th Edition for ITE Land Use Code 934 (Fast-Food Restaurant with Drive-Thru)
4. Raising Cane's is not open during the AM Peak Hour

Traffic Analysis. The project would propose drive-thru restaurant uses that would generate traffic accounted for in the Natomas Fountains MND. For that reason, traffic volumes studied previously in the Natomas Fountains MND at the following intersections would apply:

- Truxel Road and Arena Boulevard
- Truxel Road and Natomas Crossing Drive
- Truxel Road and Natomas Marketplace (north entrance)
- North Freeway Boulevard and Gateway Park Boulevard

- Truxel Road and Gateway Park Boulevard
- Truxel Road and I-80 Westbound Ramps
- Truxel Road and I-80 Eastbound Ramps

Traffic analyzed in the Natomas Fountains MND compared 2016 traffic operating conditions and traffic operating conditions with the project. Similar to the Natomas Fountains MND, the proposed project would cause delays to increase at most intersections. However, as analyzed in the Natomas Fountains MND, the project would also not cause any intersections to worsen from acceptable to unacceptable levels under Existing Plus Project conditions. Consistent with the Natomas Fountains MND, the project would not result in unacceptable changes in levels of service during the PM peak hour. The project would likely result in delay, as mentioned in the Natomas Fountains MND, for the Truxel Road and Gateway Park Boulevard intersection. The Natomas Fountains MND considered a 4.5 second delay to the Truxel Road and Gateway Park Boulevard intersection but also determined that the delay would be less than the five second threshold for exacerbating unacceptable conditions. Consistent with the Natomas Fountains MND, the proposed project would result in less than significant impacts to study intersection in the Existing Plus Project scenario.

The Natomas Fountains MND determined that there would be a cumulatively considerable impact on the Gateway Park Boulevard and North Freeway Boulevard Intersection. The project, in combination with the Natomas Fountains Apartments Project Addendum to an Adopted Mitigated Negative Declaration, would result in less trips than the Natomas Fountains MND. The proposed drive-thru restaurant, in combination with the proposed residential uses for the Proposed Natomas Fountains Project, would result in less cumulative traffic impacts. Impacts would be less than significant without mitigation in this regard.

Construction of the proposed project would add construction-related trips to and from the site during construction activities. These trips are associated with construction workers, grading, and construction of structures and site features. Trips associated with construction of the proposed project would temporary and would be less than operation of the proposed project. Furthermore, the proposed project would develop a Construction Traffic Management Plan (TMP) that would be reviewed by the City's Department of Public Works. Impacts from construction traffic would be limited to occasional and temporary delays to traffic during the movement of heavy equipment or transport of heavy loads to and from the site. The arrivals and departures of dirt-hauling trucks and other heavy trucks will be scheduled outside of the AM and PM peak hours. Construction management requirements, such as complying with peak hour restrictions, using flag men for short-term obstructions, and a formal traffic control plan for extended lane and street closures would be required. Consistent with the Natomas Fountains MND, the proposed project would adhere to the following performance standards during 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.

Therefore, impacts relate to delay and queuing as a result of construction would be less than significant.

The project would not introduce incompatible uses to area roadways. The project would be designed in compliance with all applicable State and City building codes and would meet City of Sacramento standards for design. The project would not introduce roadway hazards or incompatible uses. It would not increase

transportation hazards in comparison to the General Plan. Constructed driveways are required to meet access standards of the Sacramento Fire Department. Project traffic would not result in substantial delays and congestions that would affect the circulation of emergency vehicles in the study area.

The project would cause neither a new impact to occur, nor an increase in the severity of an impact previously disclosed. The Project would be subject to City standards and CMP. The preparation of a subsequent MND or EIR is not required.

Cumulative Impacts

As discussed above, the project would not cause a transportation impact to occur, nor an increase in the severity of any cumulatively considerable transportation impacts previously disclosed in the Natomas Fountains MND, with implementation of the mitigation measures discussed in this section. Implementation of the project would not cumulatively contribute to cumulative transportation impacts.

Mitigation Program

Mitigation Measure 13-1 from the Natomas Fountains MND would not apply to the proposed project. The proposed project would result in less traffic impacts than analyzed in the Natomas Fountains Project. No mitigation would be required for the proposed project.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to transportation or an increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. The Natomas Fountains MND concluded that the Natomas Fountains Project would result in less than significant impacts with respect to the Natomas Fountains Project trip generation of 6,872 trips. Consistent with the findings of the Natomas Fountains MND, all transportation impacts pertaining to the proposed project can be mitigated to a less than significant level. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.16 Utilities and Service Systems

Threshold (a) Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments?

Threshold (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??

Summary of Impacts Identified in the Natomas Fountains MND

Water Supply. The Natomas Fountains Project area is within the City of Sacramento water service area. The Natomas Fountains MND would connect to an existing water transmission main that runs north-south along Gateway Park Boulevard in the existing right-of-way east of the Natomas Fountains Project site. The Natomas Fountains Project proposed on-site water conveyance that would connect to this existing water pipeline. The Natomas Fountains MND determined that although the projected water demand for the proposed commercial uses for the Natomas Fountains Project would result in a greater water demand per square foot of area than office space uses, the Natomas Fountains Project would have a smaller floor area than anticipated in the City's 2035 General Plan and Master EIR, offsetting higher water demand per-square foot for commercial uses compared to office uses. Furthermore, based on the 2015 Sacramento Urban Water Management Plan (UWMP), the Natomas Fountains MND noted that the City would have a surplus capacity at buildout of the 2035 General Plan. Therefore, the Natomas Fountains MND determined that water demand under the Natomas Fountains Project would not substantially differ from the land use considered for the project site under the 2035 General Plan and Master EIR, and impacts would be less than significant for water supply.

Wastewater and Stormwater. The Natomas Fountains MND listed that wastewater for the Natomas Fountains Project would be collected by the Sacramento Area Sewer District's (SASD) Separated Sewer System for conveyance to the Sacramento Regional County Sanitation District (Regional San) system. The Natomas Fountains Project would be subject to a regional connection fee to be paid to the Sacramento Regional County Sanitation District (SRCSD) and impacts would be less than significant for sewer facilities. Furthermore, the Natomas Fountains MND noted that local stormwater drainage in and surrounding the Natomas Fountains Project area would be collected by City of Sacramento storm drain systems and pumped or gravity flown into nearby drainages, creeks, and rivers. The Natomas Fountains Project proposed connection to the existing drainage system located east of the project site and would not disturb drainage located west of the Natomas Fountains Project site. Furthermore, the Natomas Fountains MND noted that the Natomas Fountain Project would include 85% or less impervious surfaces and would be consistent with the drainage Master Plan.

Solid Waste. The Natomas Fountains MND noted that the Sacramento Solid Waste Authority (SWA), a private hauler, would serve the Natomas Fountains Project. The Natomas Fountains MND highlighted that, although the Natomas Fountains Project would generate more solid waste than planned for in the General Plan and Master EIR at the time, Kiefer landfill maintains sufficient capacity to provide waste services. The Natomas Fountains MND determined that waste generation would be a negligible increase and impacts to solid waste would be less than significant.

Electricity and Natural Gas. Electricity is provided to the Natomas Fountains Project area by the Sacramento Municipal Utility District (SMUD) and natural gas is supplied by the Pacific Gas and Electric Company (PG&E). Natomas Fountains Project implementation would require expansion of existing electrical and natural gas. The Natomas Fountains MND determined that both utility providers would

install new distribution facilities, as needed, according to the California Public Utilities Commission rules. The Natomas Fountains MND deemed that PG&E and SMUD would ensure their capability to provide an adequate level of service to the Natomas Fountains Project site, and impacts to electricity and natural gas would be less than significant.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The land use designation for the project site in the 2035 General Plan is regional commercial. Restaurants are a permitted use in the regional commercial land use designation.

Water. The project site is in the service area of the City of Sacramento Water District.[14] As it applies to the project, the City of Sacramento 2020 Urban Water Management Plan (UWMP)[15] is the applicable planning document for evaluating water supply and demand. According to the UWMP, the City of Sacramento considered population projections from 2025 to 2035 from the 2035 General Plan, 2040 population projections based on a continuous growth rate plus the Natomas Joint Vision Study Area, and 2045 population projections using growth rate of previous projections. The 2020 UWMP determined that supply would exceed demand and anticipates that existing supplies would be sufficient through 2045 with projected retail demands and existing wholesale contracts. Furthermore, the proposed project would have less building area than previously proposed in the Natomas Fountains Project and would require less water supply. Therefore, the proposed project would result in less than significant impacts.

Sewer. The project is a drive-thru restaurant within land zoned for shopping centers. As such, the proposed development is consistent with the assumptions in the General Plan for the project site. The proposed project would include restaurant uses accounted for in the Natomas Fountains MND for which impacts to wastewater was deemed to be less than significant. Furthermore, the total area of the proposed project building area is 3,442 sf (0.08 acres), which would be less than the previously proposed building area for this portion of the Natomas Fountains MND for which one 7,200 sf 50% retail/50% restaurant and one 7,150 sf 50% retail/50% restaurant were previously proposed. The proposed project would not exceed the capacity of the SASD Separated Sewer System, impacts related to sewer would be less than significant.

Solid Waste. Implementation of the project would be expected to generate additional waste during the temporary, short-term construction phase, as well as the operational phase, but it would not result in inadequate landfill capacity. Similar to the Natomas Fountains MND, the City would provide solid waste and recycling collection and disposal services to the project site. The Kiefer Landfill would have sufficient capacity to serve the project site[16]. The Kieffer Landfill currently has approximately 102 million cubic yards in remaining capacity[17]. Waste as a result of the proposed project would represent a fraction of a percentage of the available capacity from this facility, and there would be no need to expand or create

[14] Sacramento County. (2010). *Sacramento County Water Districts Map.* https://planning.saccounty.gov/Documents/Maps/Water%20Districts_0110.pdf.

[15] City of Sacramento. (2020). *City of Sacramento 2020 Urban Water Management Plan*. https://wuedata.water.ca.gov/getfile?filename=/public%2Fuwmp_attachments%2F1495274186%2FSacramento%202020%20UWMP%20-%20Final.pdf.

[16] CalRecycle. (2025). *SWIS Facility/Site Summary*. https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/2507. Accessed February 21, 2025.

[17] CalRecycle. (2025). SWIS Facility/Site Activity Details. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2070?siteID=2507. Accessed February 21, 2025.

new landfill or solid waste management facilities. Therefore, similar to the impacts evaluated in the Natomas Fountains MND, the project would have less than significant impacts on solid waste services.

Electrical and Natural Gas. The project would not require relocation or construction of new backbone infrastructure facilities. The project would connect to existing connections for services. Impacts related to electrical and natural gas would be less than significant.

Summary. The preparation of a subsequent MND or EIR is not required.

Cumulative Impact

Given the existing available water supply, the water supply needs of the project—together with related projects—would not result in the need for new or expanded water entitlements that could result in significant environmental impacts. Since the project would not have a significant impact on the water supply and would have adequate water infrastructure improvements, the project combined with related projects would not result in significant water supply and infrastructure impacts. Therefore, the project would not require or result in the relocation or construction of new or expanded water facilities. Further, the project would have sufficient water supplies to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. No significant cumulative impact is anticipated with respect to water supply, and the project's contribution is not considered cumulatively considerable.

Given the existing available capacity of the water treatment plant, the wastewater treatment needs of the project—together with related projects—would not result in the need for new or expanded wastewater treatment facilities that could result in significant environmental impacts or that could cause the wastewater treatment to exceed the capacity of the wastewater treatment facilities. The City indicated that sufficient capacity exists for sewer services for the project. Therefore, the project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities. Further, the project would have adequate wastewater capacity to serve the project and reasonably foreseeable future development. No significant cumulative impact is anticipated with respect to wastewater capacity, and the project's contribution is not cumulatively considerable.

As addressed in Section 3.6, *Energy*, the project would not cause an energy impact to occur, including the use of electricity. Implementation of the proposed project would not result in significant unavoidable energy impacts and would therefore not result in a new or substantially more severe project-specific or cumulative energy impact than those already analyzed. The proposed project's contribution to energy use would less than cumulatively considerable.

Potential future projects in the area would increase solid waste generation and decrease available capacity of the County's landfills. The proposed project does not propose a change to land use or zoning; thus, the solid waste generation for construction and operations of industrial uses on the site were assumed in planning documents. The proposed project would not result in a significant impact and combined with related projects would not result in significant impacts to solid waste standards, infrastructure, or reduction goals. Therefore, the proposed project's contribution would not be cumulative considerable.

In summary, the proposed project would not cause utility impacts to occur, nor an increase in the severity of any utilities impacts previously disclosed in the Natomas Fountains MND. The proposed project's contribution would be less than cumulatively considerable.

Mitigation Program

None.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to Utilities and Services or a substantial increase in the severity of a previously identified significant impact evaluated in the Natomas Fountains MND would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the proposed project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Natomas Fountains MND was adopted is available that would impact the prior finding of less than significant. Therefore, preparation of a subsequent environmental analysis is not warranted.

4 DETERMINATION OF APPROPRIATE CEQA DOCUMENTATION

Based upon the analysis of potential environmental consequences anticipated to occur from implementation of the proposed project as provided in Section 3, *Evaluation of Environmental Impacts*, the proposed project would not result in any new or more severe impacts that were not disclosed, analyzed, and mitigated for in the Natomas Fountains MND. As demonstrated in this Addendum, the proposed project's potential impacts would either be the same or less than those anticipated for the approved project as evaluated in the Natomas Fountains MND. In addition, there are no substantial changes to the circumstances under which the proposed project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Natomas Fountains MND, nor has any new information regarding the potential for new or more severe significant environmental impacts been identified.

Therefore, in accordance with State CEQA Guidelines Section 15164, this Addendum to the previously adopted Natomas Fountains MND is the appropriate environmental documentation for the proposed project. In taking action on any of the approvals, the decision-making body must consider the whole of the data presented in the Natomas Fountains MND, as augmented by this Addendum. Therefore, preparation of a subsequent negative declaration is not required and the appropriate CEQA document for the proposed project is this Addendum to the Natomas Fountains MND. No additional environmental analysis or review is required for the proposed project.

Section 15162 – Subsequent EIRs and Negative Declarations

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

The land use designation for the project site in the 2035 General Plan is regional commercial. Restaurants are a permitted use in the regional commercial land use designation. The proposed project proposes restaurant uses accounted for within the Natomas Fountains MND.

The City of Sacramento proposes to implement the project within the context of the Natomas Fountains Project, as described in this Addendum. As discussed in the Environmental Impact Analysis section of this Addendum, no new or more severe significant environmental effects beyond what was evaluated in the Natomas Fountains MND would occur that would require substantive revisions to the Natomas Fountains MND. The proposed project would not result in increased impacts above what was evaluated in the Natomas Fountains MND with regard to environmental factors such as air quality, noise, public services, transportation, and utilities.

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

As documented herein, subsequent to the implementation and adoption of the Natomas Fountains MND, the Sacramento City Council adopted resolutions adopting the Natomas Fountains Apartments Addendum to the Natomas Fountains MND to allow entitlements to construct a 303 multi-unit dwelling apartment complex on approximately 10.59 acres in the Shopping Center and in the Coral Business Center Planned Unit Development (SC-PUD) zone and to amend the Coral Business Center Schematic to designate the Natomas Fountains Apartments Project site for residential uses. The Natomas Fountains Apartments Addendum to an Adopted Mitigated Negative Declaration does not include the proposed project area and would not result in a substantial change that would require revisions to the previous Natomas Fountains MND.

Accordingly, this change in circumstances does not result in new or substantially more severe significant environmental effects than previously identified. As discussed in the Environmental Impact Analysis section of this Addendum, no substantial changes have occurred with respect to the circumstances under which the project will be undertaken which will require major revisions of the Natomas Fountains MND due to new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant environmental effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

No new information that was not known at the time the Natomas Fountains MND was prepared is now available that demonstrates that the proposed project will result in a new or increased impact. Based on the analysis prepared for the proposed project, the project-related effects would not be substantially more severe than were disclosed in the Natomas Fountains MND as a result of the proposed project. Implementation of the proposed project within the context of the Natomas Fountains Project would not substantially increase the severity of previously identified impacts.

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

No mitigation measures or alternatives were found infeasible in the Natomas Fountains MND.

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous MND would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

No feasible alternatives have been identified that would substantially reduce significant impacts associated with the buildout of the Natomas Fountains Project. However, the proposed project would not result in any significant unavoidable impacts.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

Additional technical analyses were performed for the proposed project and are the subject of this Addendum. Based on the analysis in this document, the proposed project would not result in any new significant environmental effects that are substantially different from those identified in the Natomas Fountains MND nor would it substantially increase the severity of significant effects previously identified in the Natomas Fountains MND. None of the conditions listed under subsection (a) would occur that would require preparation of a subsequent EIR or negative declaration.

(c) Once a project has been approved, the lead agency's role in project approval is completed, unless further discretionary approval on that project is required. Information appearing after an approval does not require reopening of that approval. If after the project is approved, any of the conditions described in subdivision (a) occurs, a subsequent EIR or negative declaration shall only be prepared by the public agency which grants the next discretionary approval for the project, if any. In this situation no other responsible agency shall grant an approval for the project until the subsequent EIR has been certified or subsequent negative declaration adopted.

None of the conditions listed in subsection (a) would occur as a result of the proposed project. Therefore, no subsequent EIR or negative declaration is required.

Section 15164 – Addendum to an EIR or Negative Declaration

(a) The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.

As described above, none of the conditions described in the State CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR have occurred.

(b) An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

None of the conditions described in Section 15162 calling for preparation of a subsequent EIR or negative declaration would occur as a result of the proposed project. Therefore, an Addendum to the Natomas Fountains MND is the appropriate CEQA document for the proposed project.

(c) An addendum need not be circulated for public review but can be included in or attached to the EIR or adopted negative declaration.

This Addendum will be attached to the Natomas Fountains MND and maintained in the administrative record files at the City of Sacramento.

(d) The decision making body shall consider the addendum with the EIR or adopted negative declaration prior to making a decision on the project.

The City of Sacramento would consider this Addendum with the Natomas Fountains MND prior to making a decision on the proposed project.

(e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's required findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

This document provides substantial evidence for City of Sacramento records to support the preparation of this Addendum for the proposed project.

5 PREPARERS

City of Sacramento (Lead Agency)

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Appendix A

Natomas Fountains Initial Study/Mitigated Negative Declaration, Adopted January 5, 2017

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.

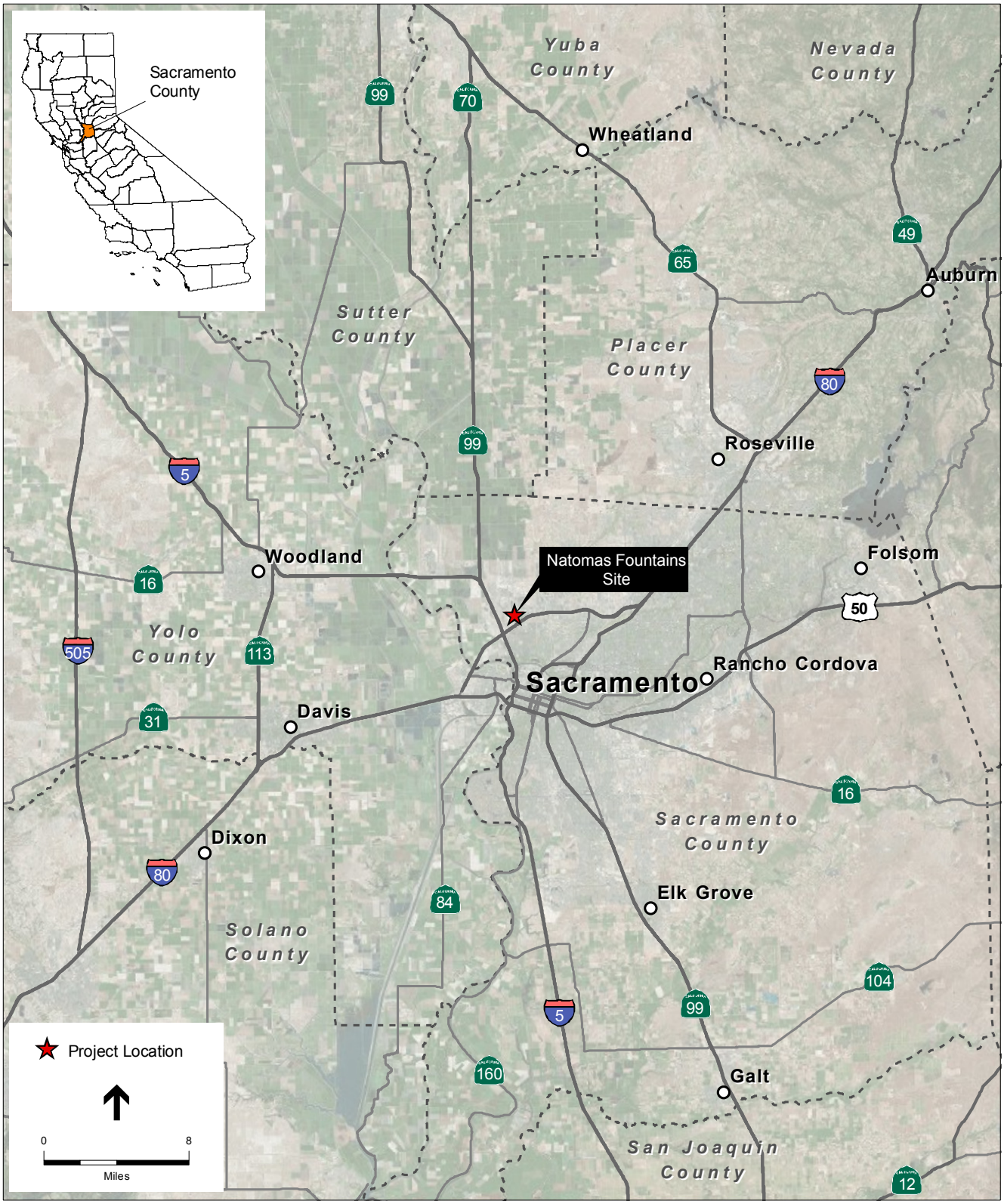
The project site is generally bounded by the Raley's Natomas Distribution Center to the north, Gateway Park Boulevard to the east, the East Drainage Canal and Truxel Road to the west, and an existing retail center bordering Gateway Park Boulevard and Truxel Road to the south. Figure 2 and Figure 3 illustrate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

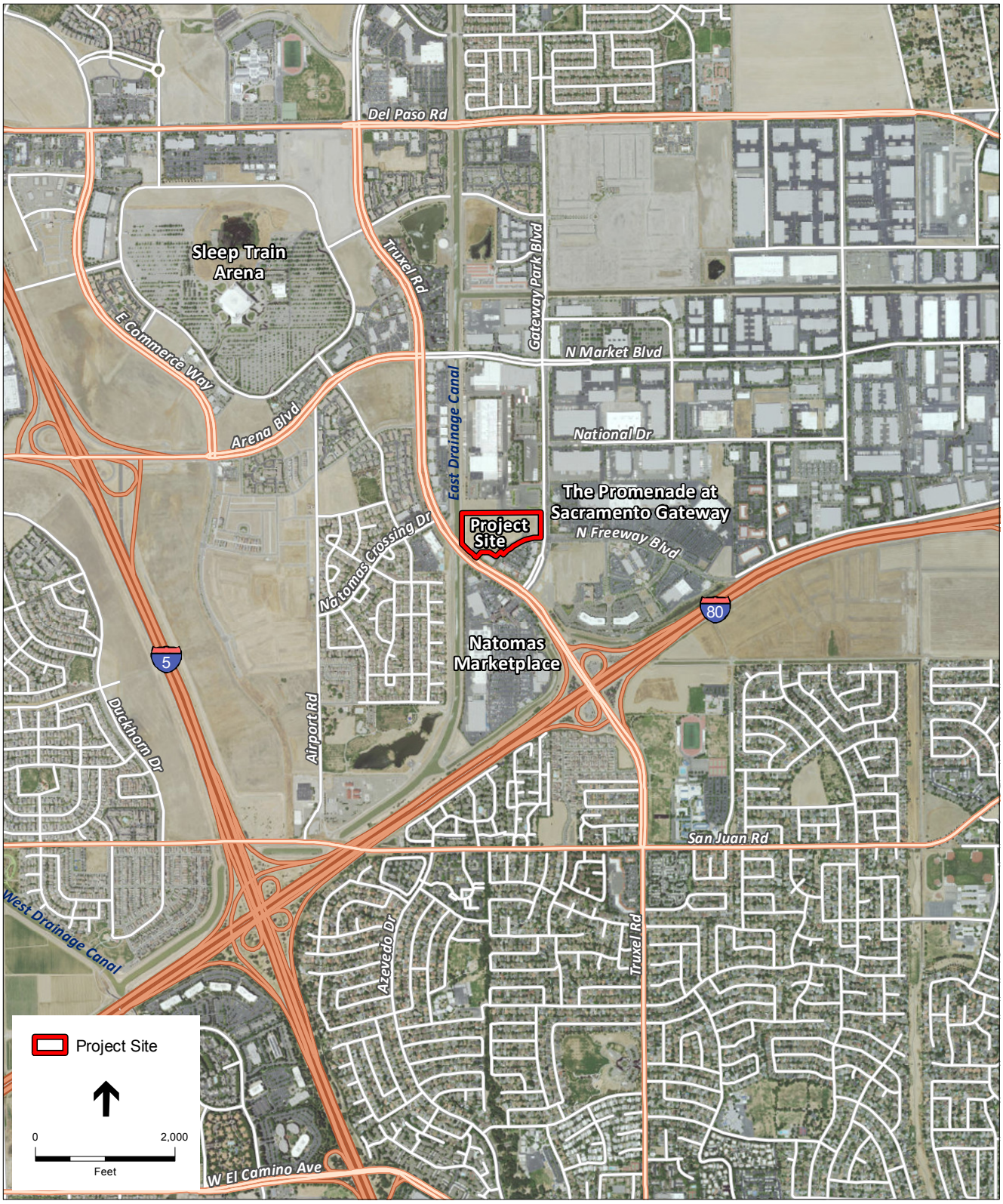


SOURCE: i-cubed, 1999; ESRI, 2012; ESA, 2015

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Figure 1

Regional Location

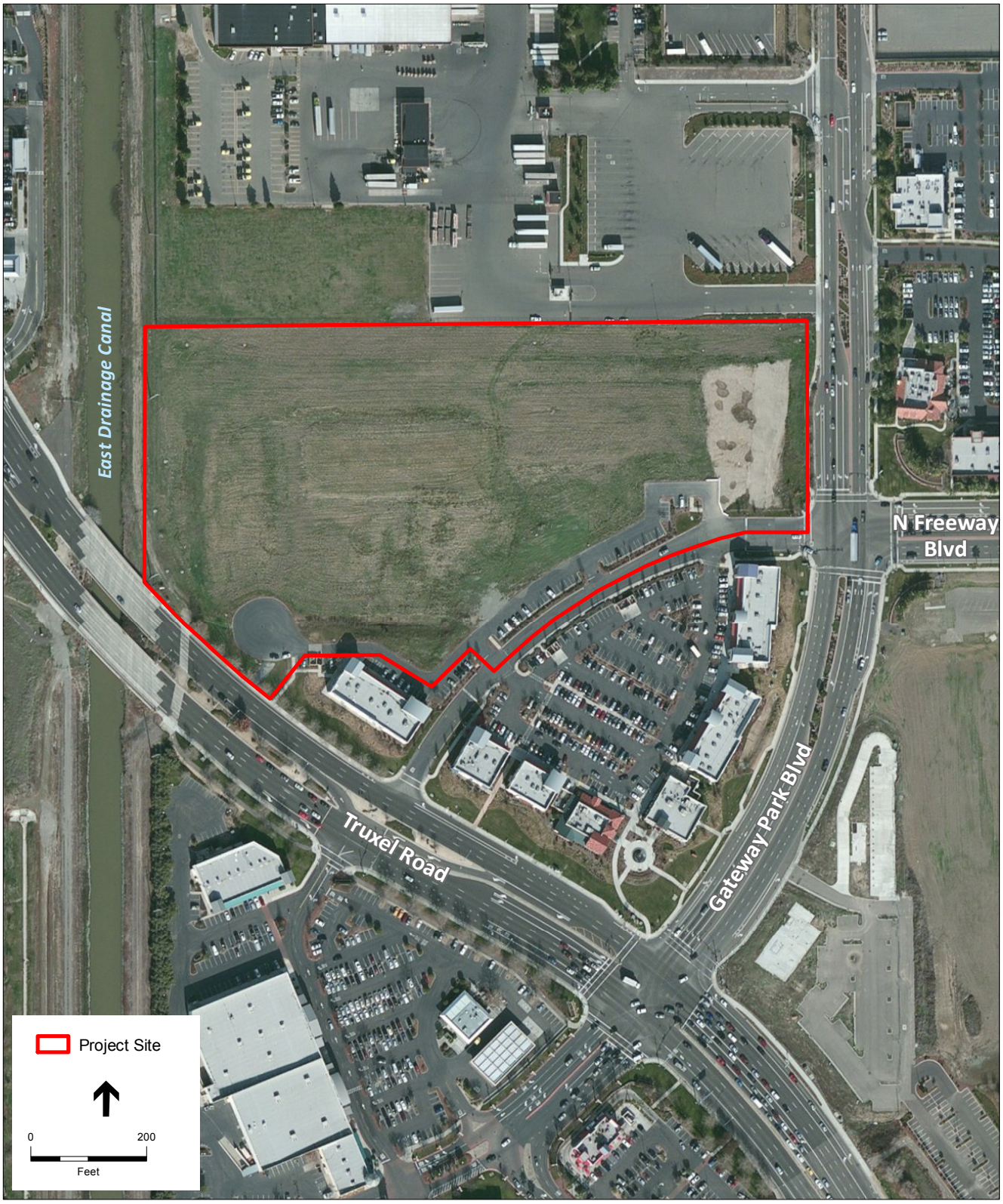


SOURCE: USDA, 2014; ESRI, 2012; ESA, 2015

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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

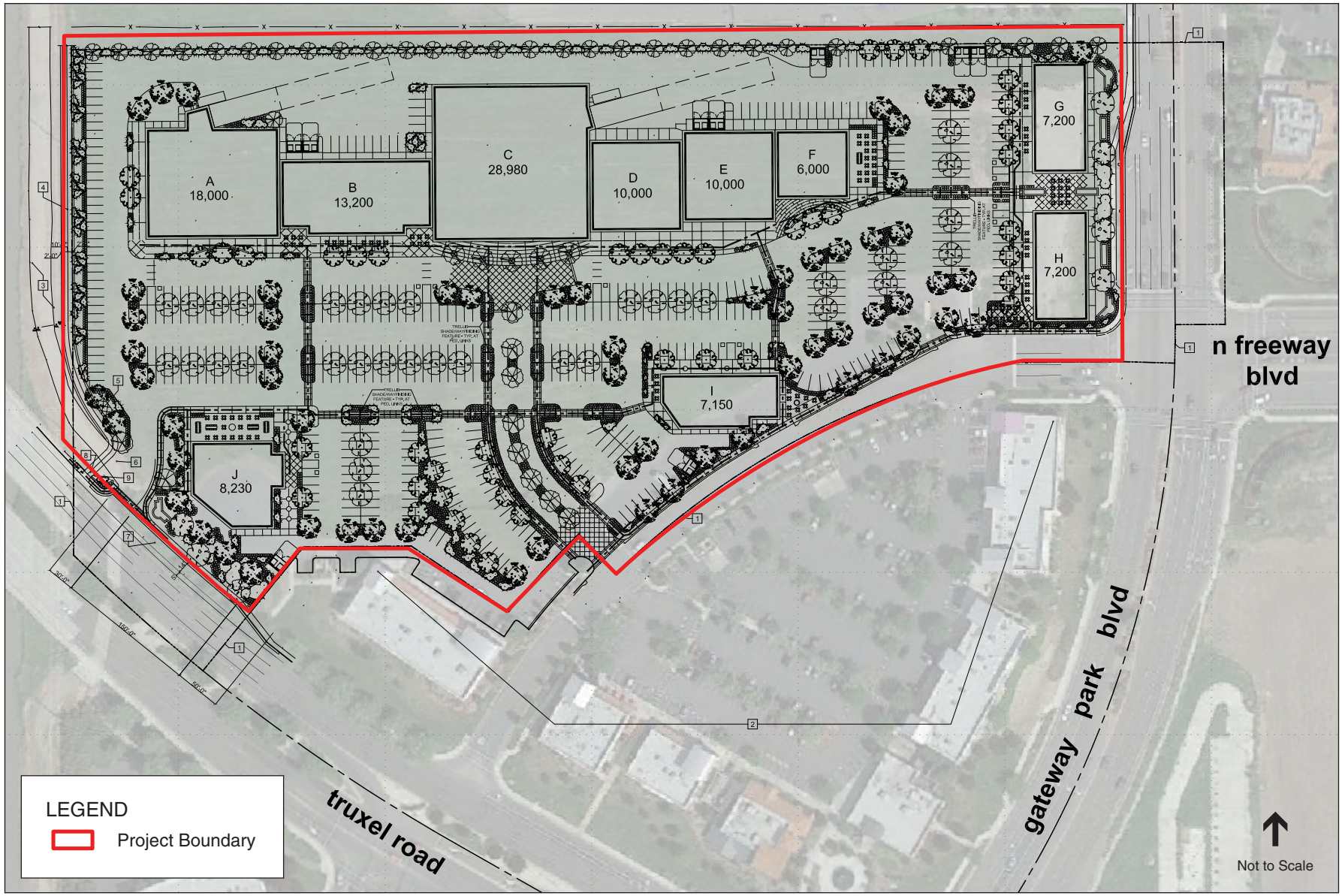
The project site is currently accessible from the retail center driveway to the south of the project site that can be accessed from the intersection of Gateway Park Boulevard/North Freeway Boulevard and a right-in/right-out driveway at Truxel Road. The project site would be accessible from multiple points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

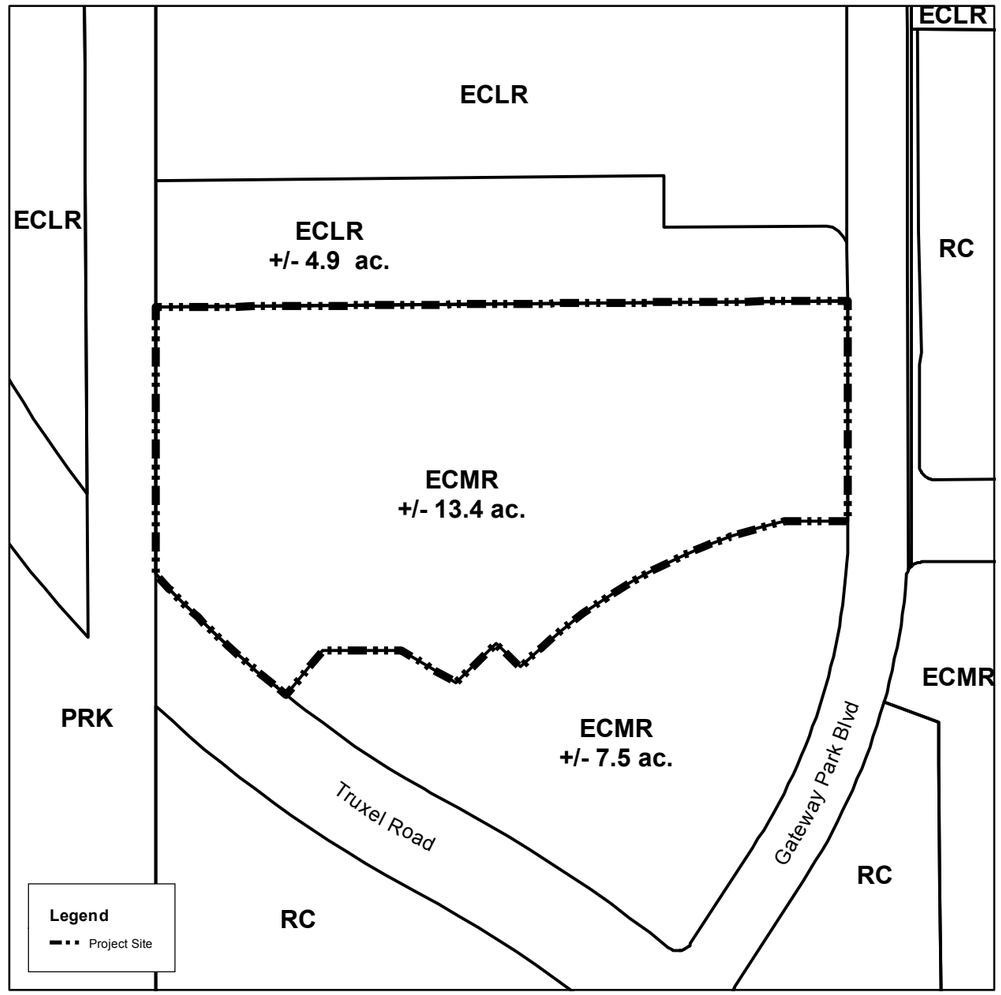
This section of the initial study identifies the applicable land use designations, plans and policies, and permissible densities and intensities of use, and discusses any inconsistencies between these plans and the proposed project. This section also discusses agricultural resources and the effect of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

Discussion

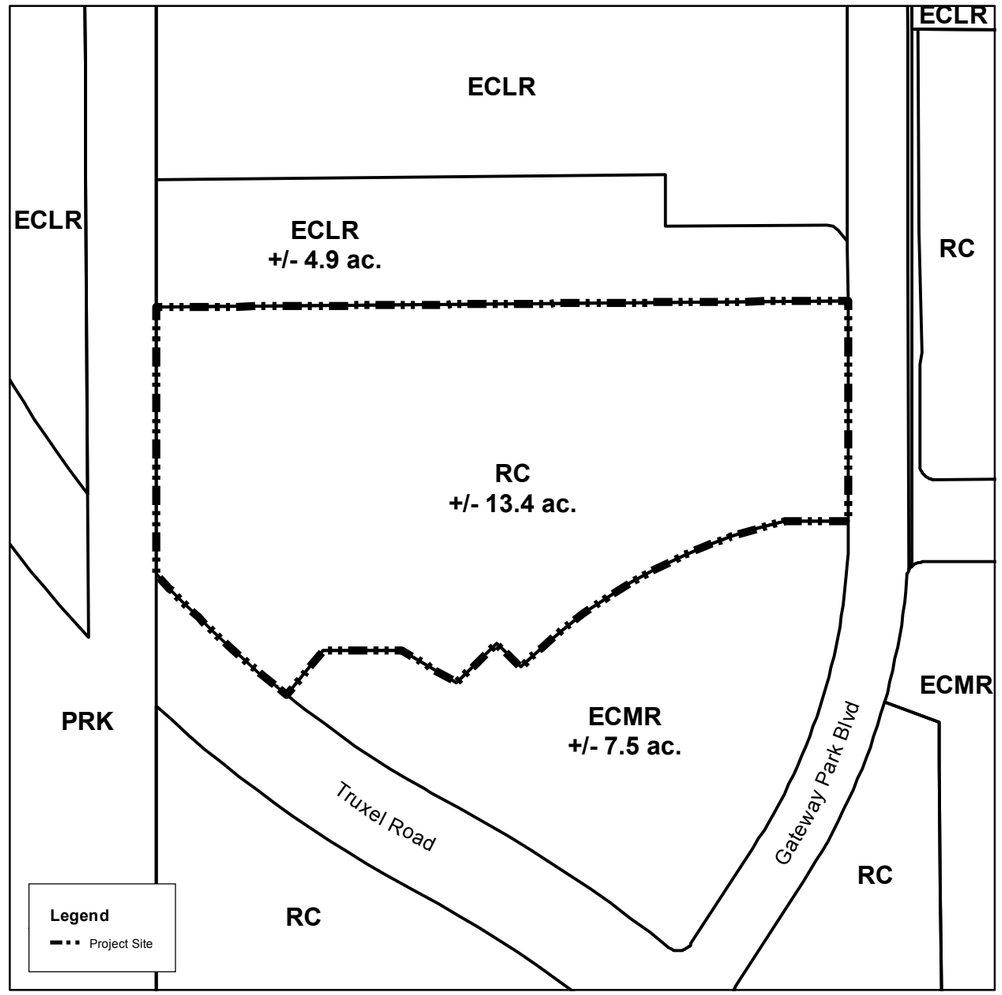
Land Use

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.

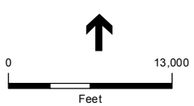
The project site is located in an urbanized area of Sacramento on a vacant parcel. Figure 5 shows the existing and proposed City of Sacramento General Plan land use designations for the project site and other parcels in the project vicinity. The project site is designated as Employment Center Mid Rise.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



Existing Land Use



Proposed Land Use



SUMMARY TABLE

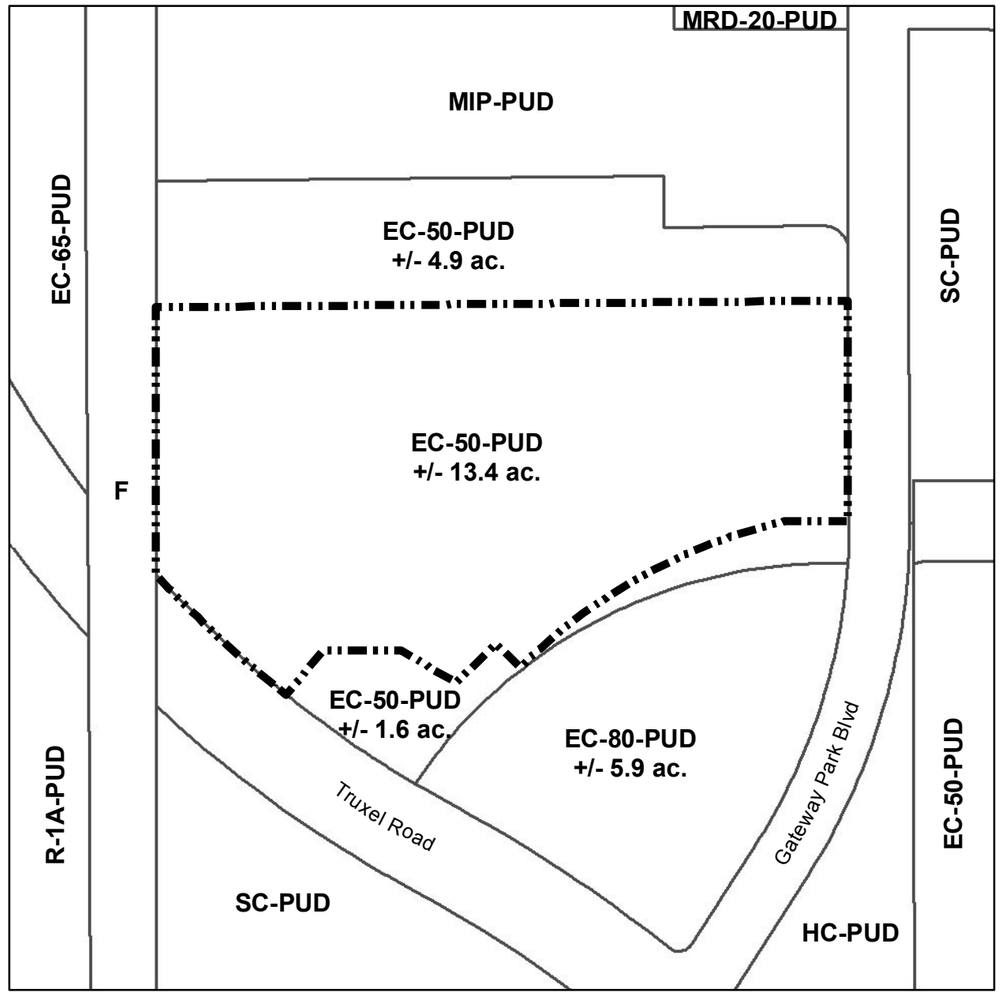
LAND USE CODE	LAND USE	EXISTING	PROPOSED	DIFFERENCE
RC	Regional Commercial	0.0	13.4	+13.4
ECMR	Employment Center Mid-rise	20.9	7.5	-13.4
ECMR	Employment Center Low-rise	4.9	4.9	0.0
TOTAL		25.8	25.8	

SOURCE: City of Sacramento, 2016; ESA, 2016

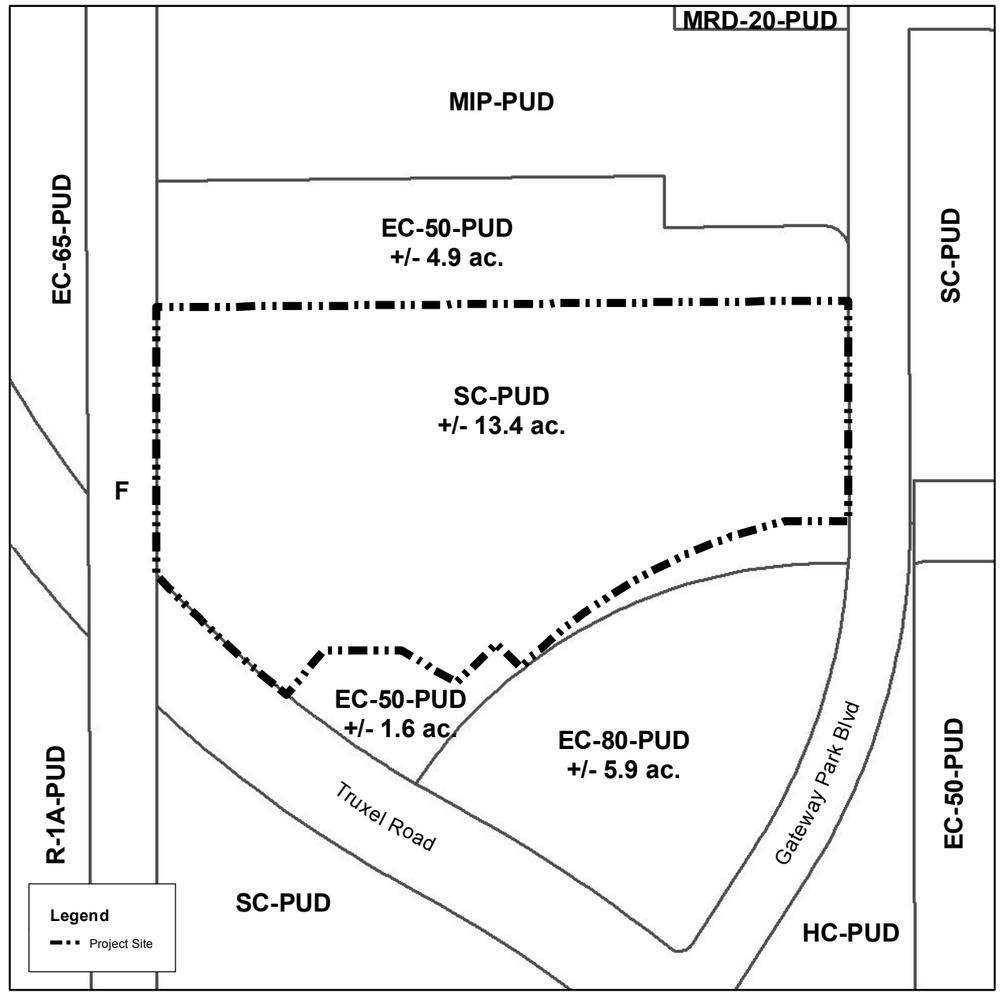
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Figure 5

City of Sacramento 2035 General Plan Land Use



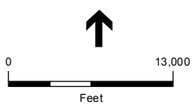
Existing Zoning



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

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

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[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

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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:

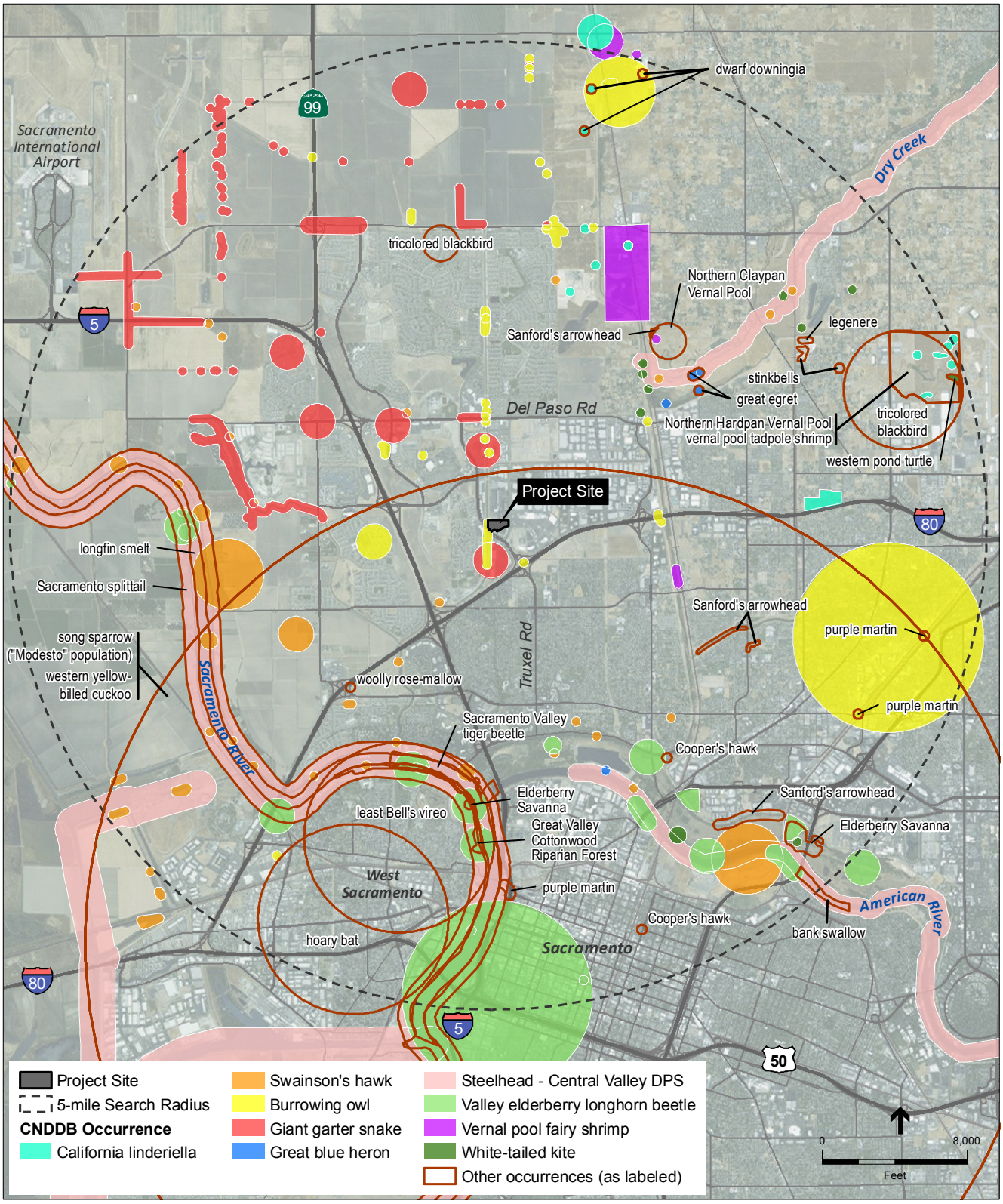
- **Unlikely**: The project site and/or surrounding area do not support suitable habitat for a particular species, or the project site is outside of the species known range.
- **Low Potential**: The project site and/or immediate area only provide limited amounts and low quality habitat for a particular 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

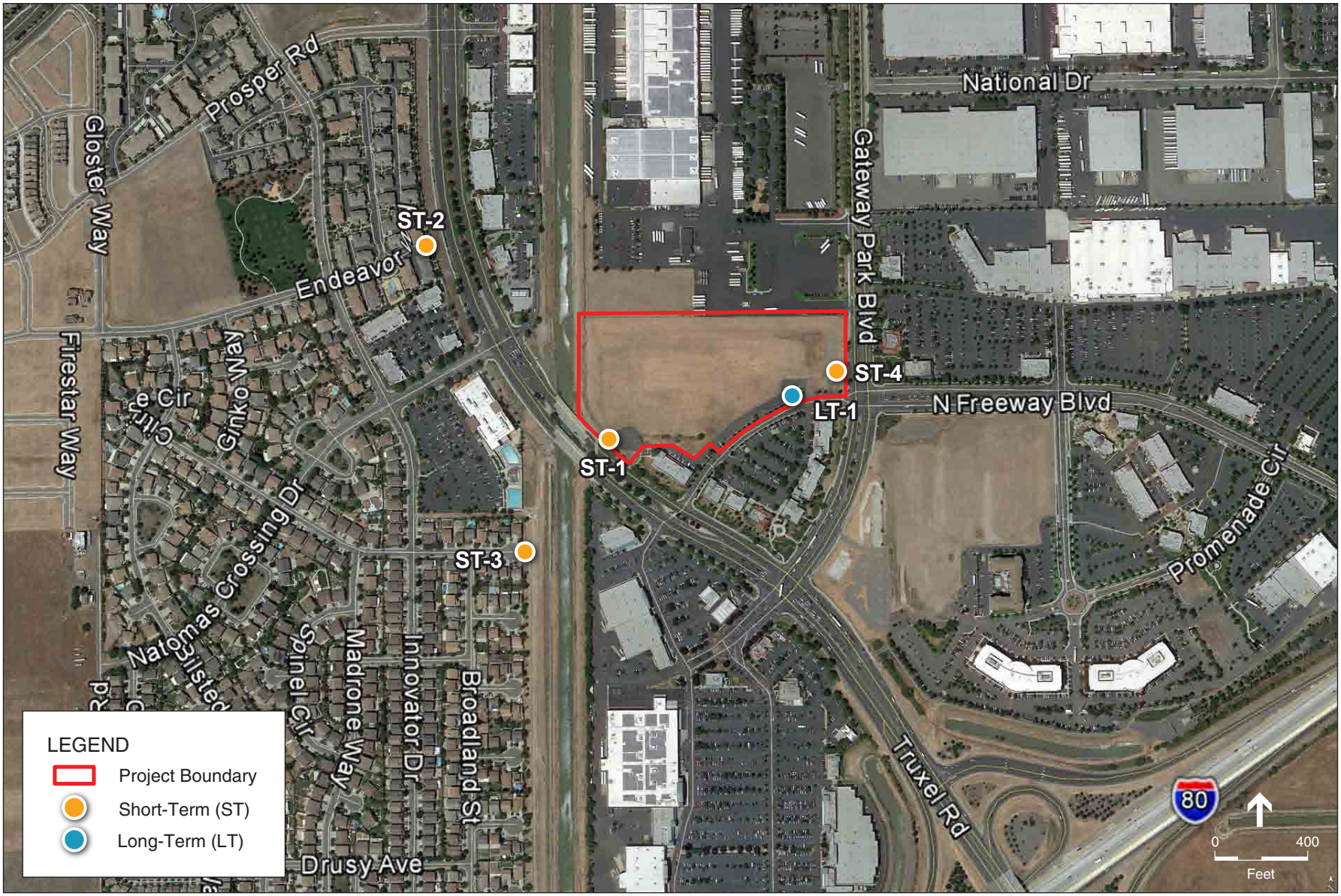
Construction

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

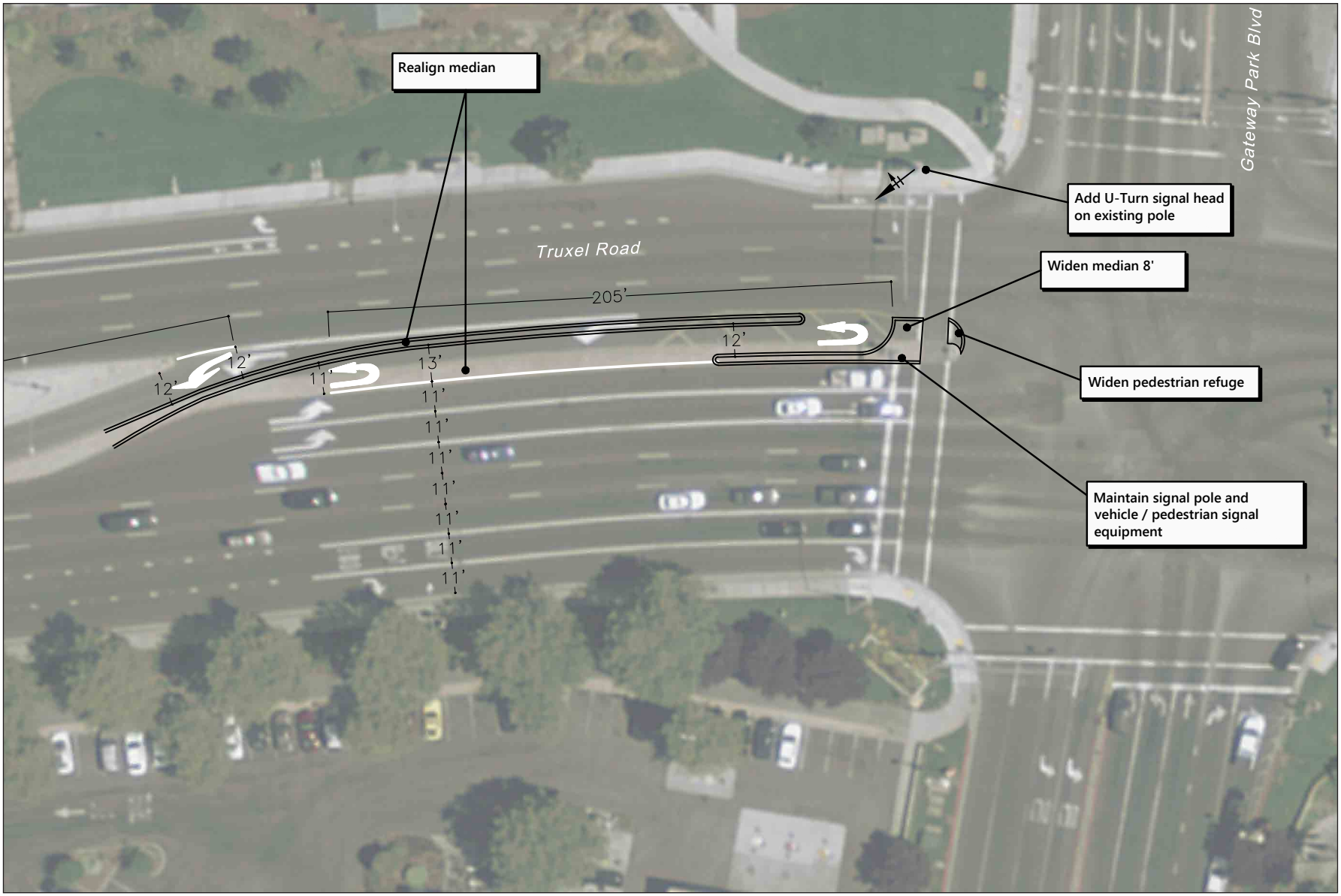
13-1 The project applicant shall pay their fair share cost of the following improvements:

- 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.



SOURCE: Fehr & Peers, 2016

Natomas Fountains Retail Center . 150409

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.

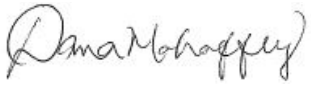
- [X] Aesthetics
- [ ] Air Quality
- [X] Biological Resources
- [X] Cultural Resources
- [ ] Energy and Mineral Resources
- [ ] Geology and Soils
- [ ] Hydrology and Water Quality
- [ ] Hazards
- [X] Noise
- [ ] Public Services
- [ ] Recreation
- [X] Transportation/Circulation
- [ ] Utilities and Service Systems

- [ ] 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

SECTION VI – REFERENCES CITED

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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
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District Engineer

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Director of Policy & Planning

Karen Stoyanowski
Director of Internal Services

Joseph Maestretti
Chief Financial Officer

Claudia Goss
Public Affairs Manager

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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

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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

Printed on Recycled Paper

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

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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.

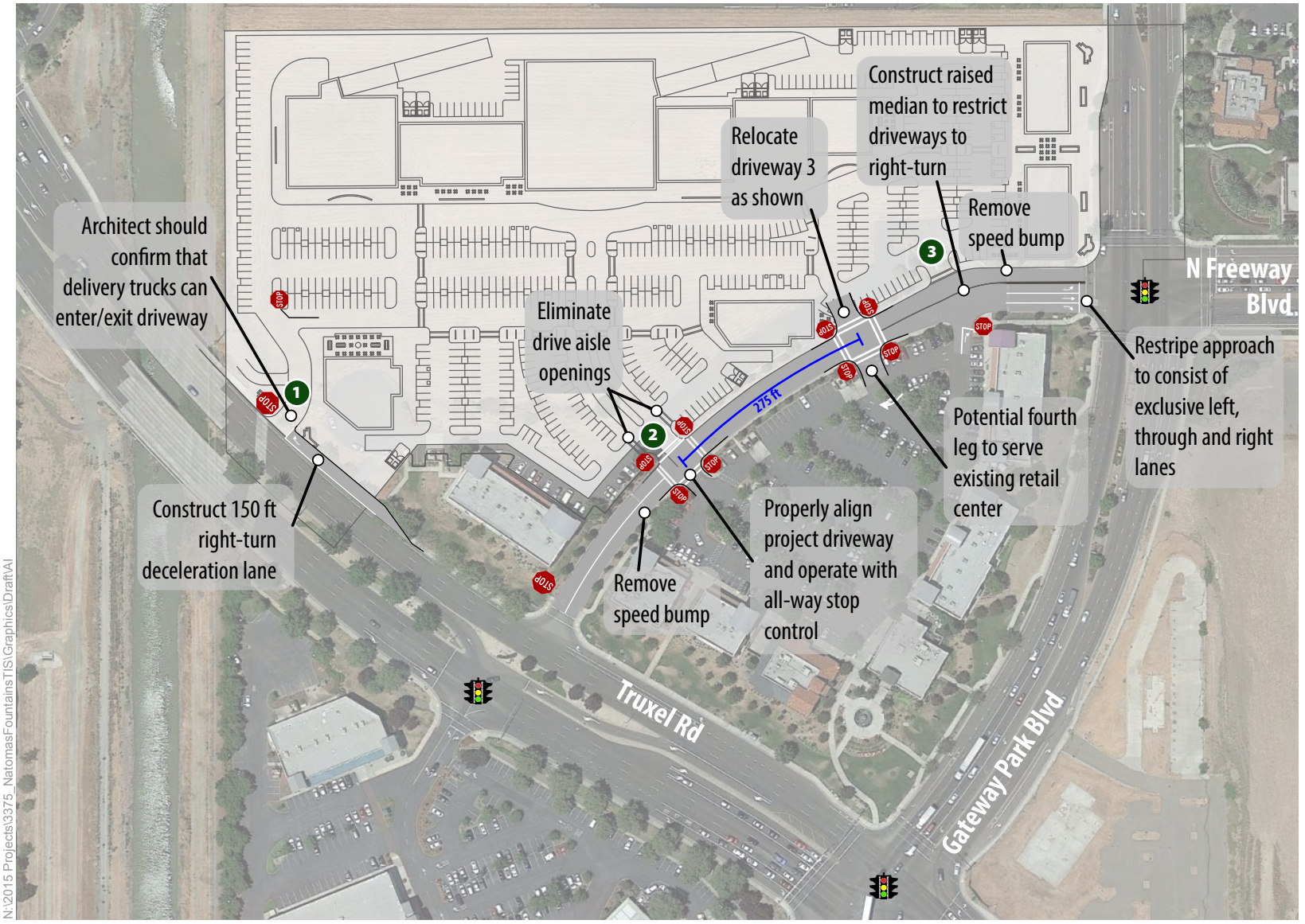


Figure ES-1

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:

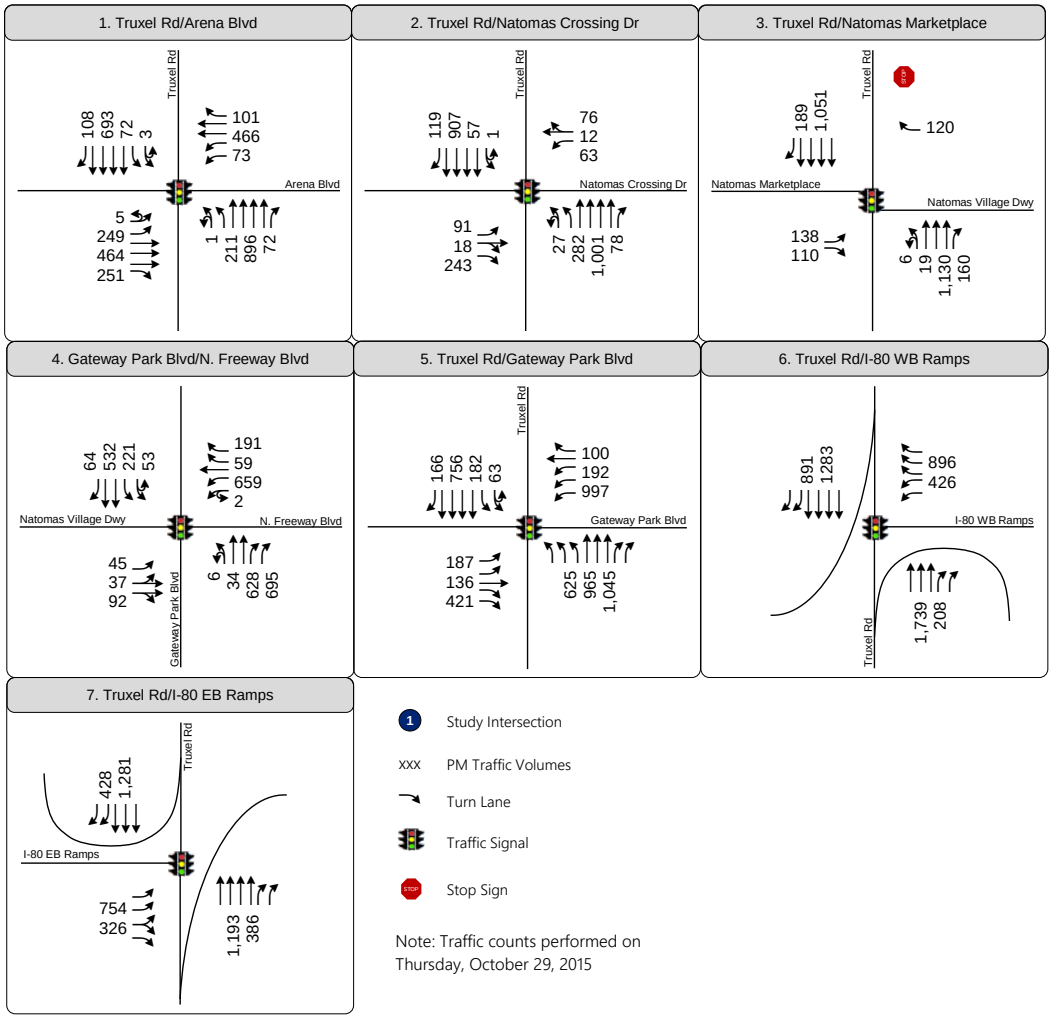
- Truxel Road – is an arterial street that extends from the Garden Highway in a northerly direction to Del Paso Boulevard in North Natomas. This street then becomes Natomas Boulevard and continues further north. Within the study area, it consists of three to four lanes in each direction and has a posted 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.

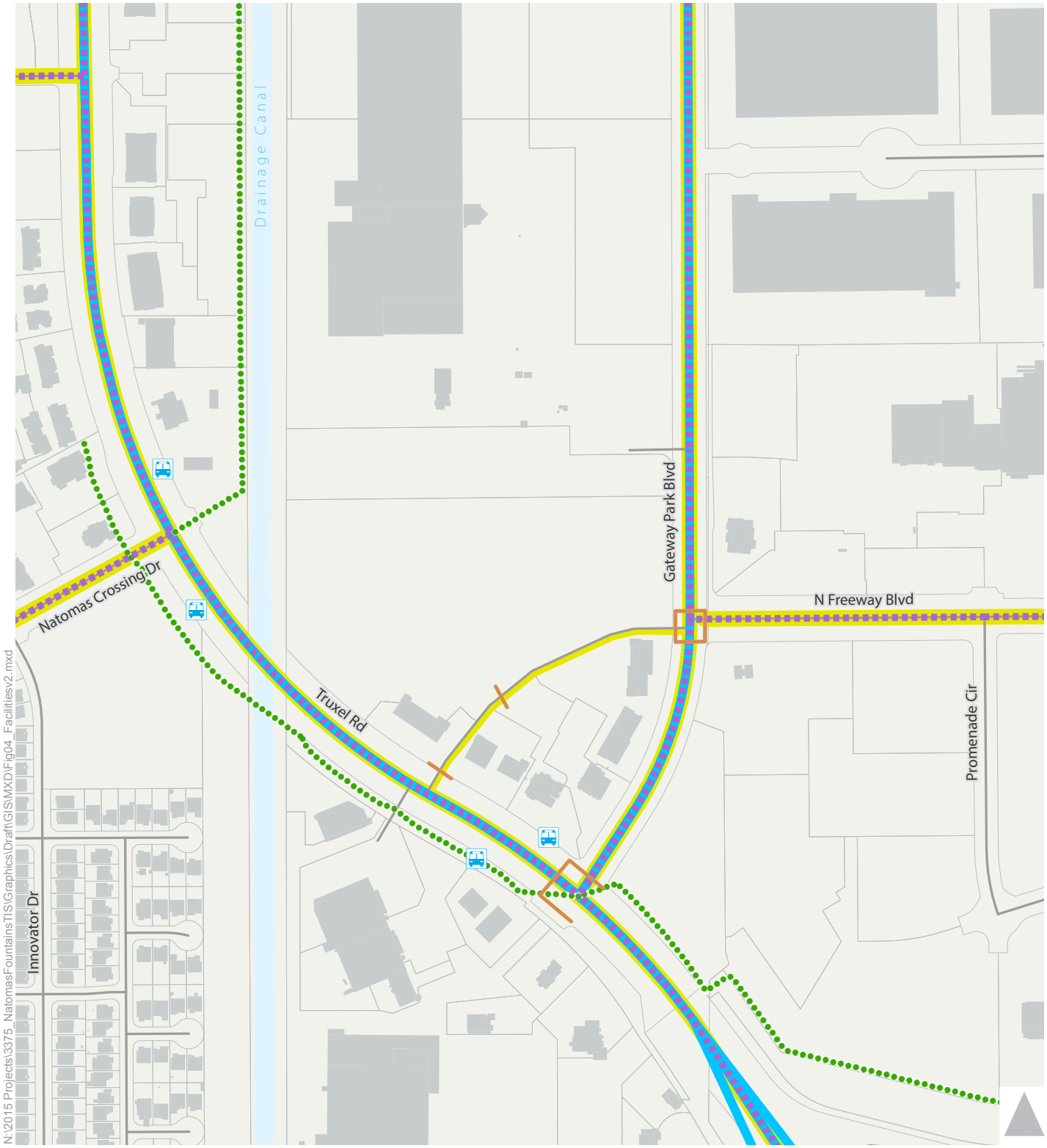


Figure 4

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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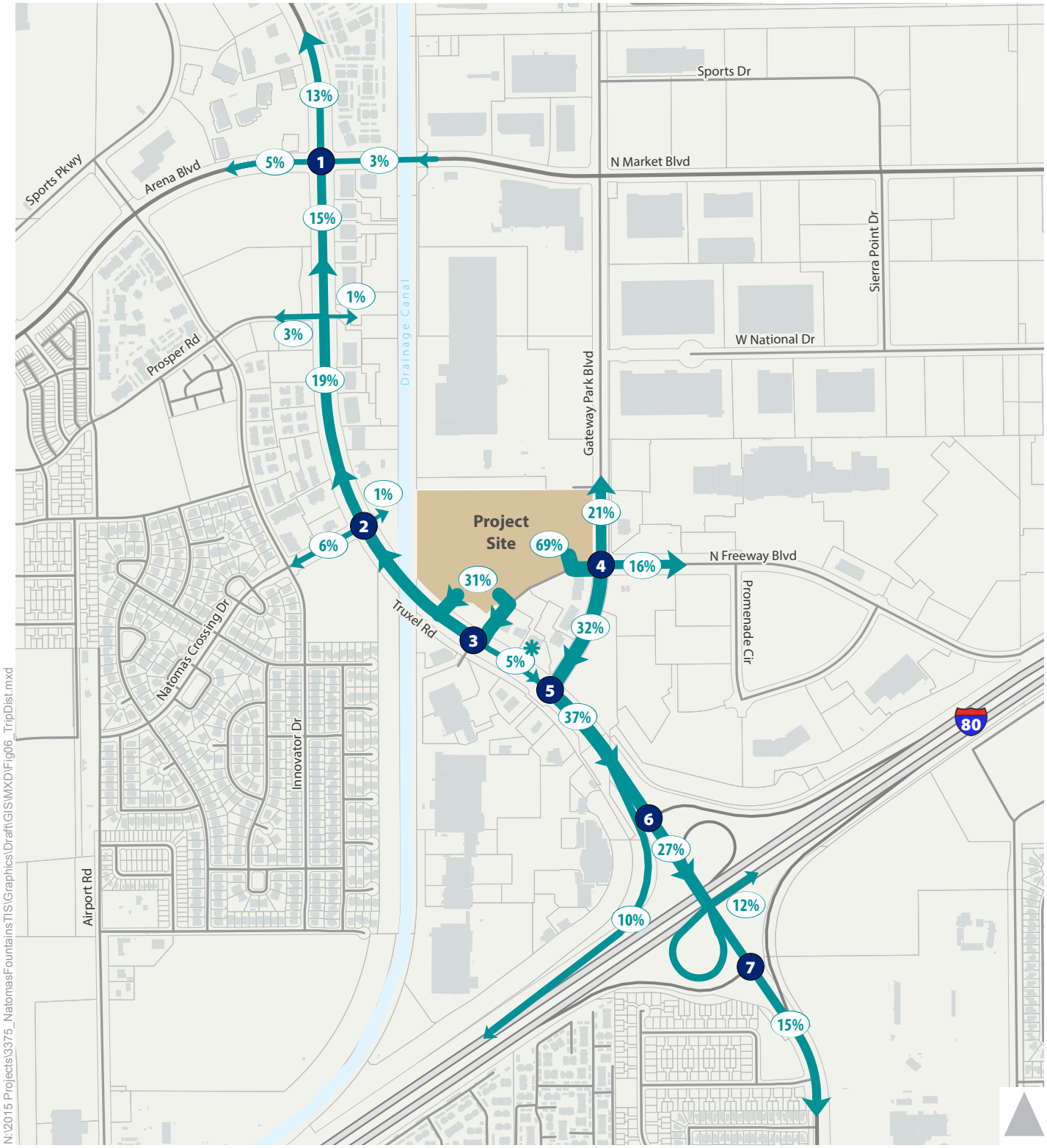
1 Study Intersections

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.

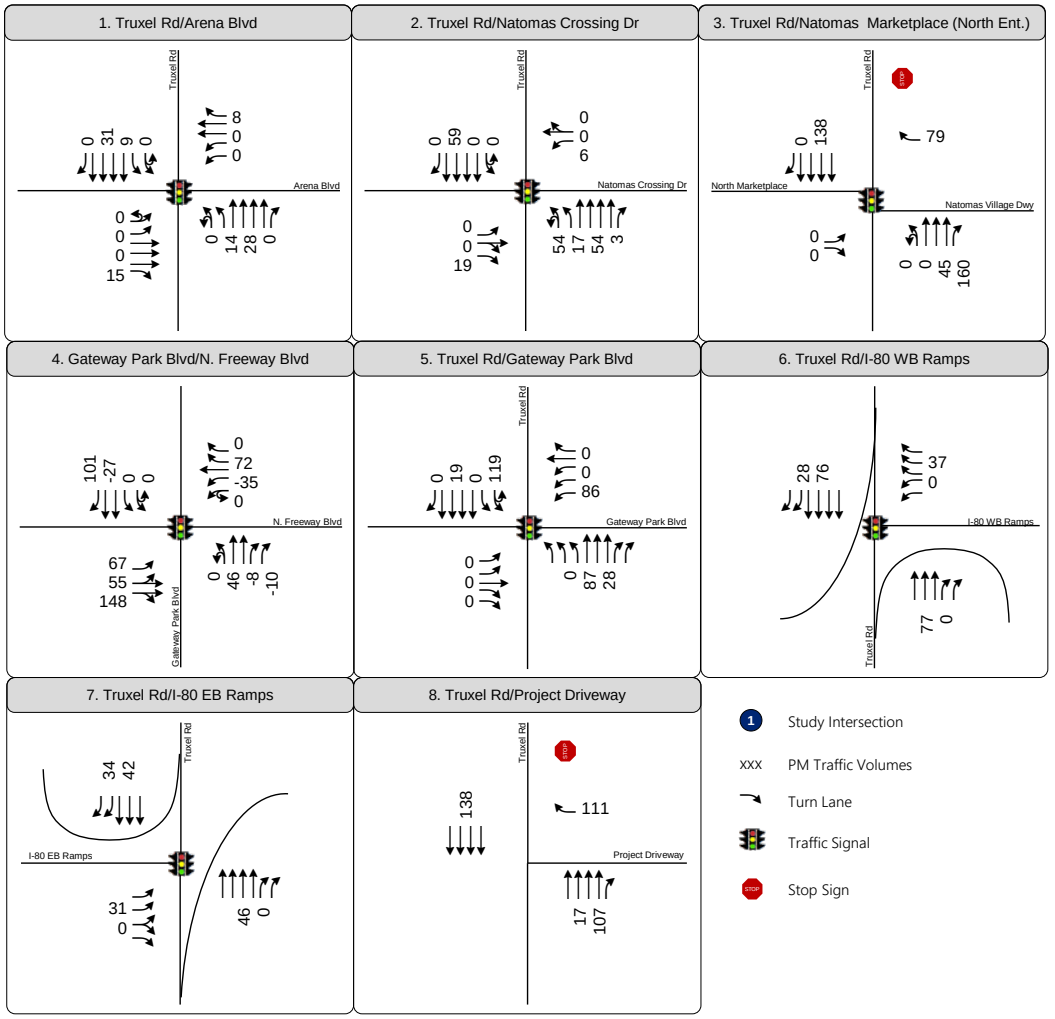
TABLE 6:
PM PEAK HOUR INTERSECTION OPERATIONS – EXISTING PLUS PROJECT CONDITIONS

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

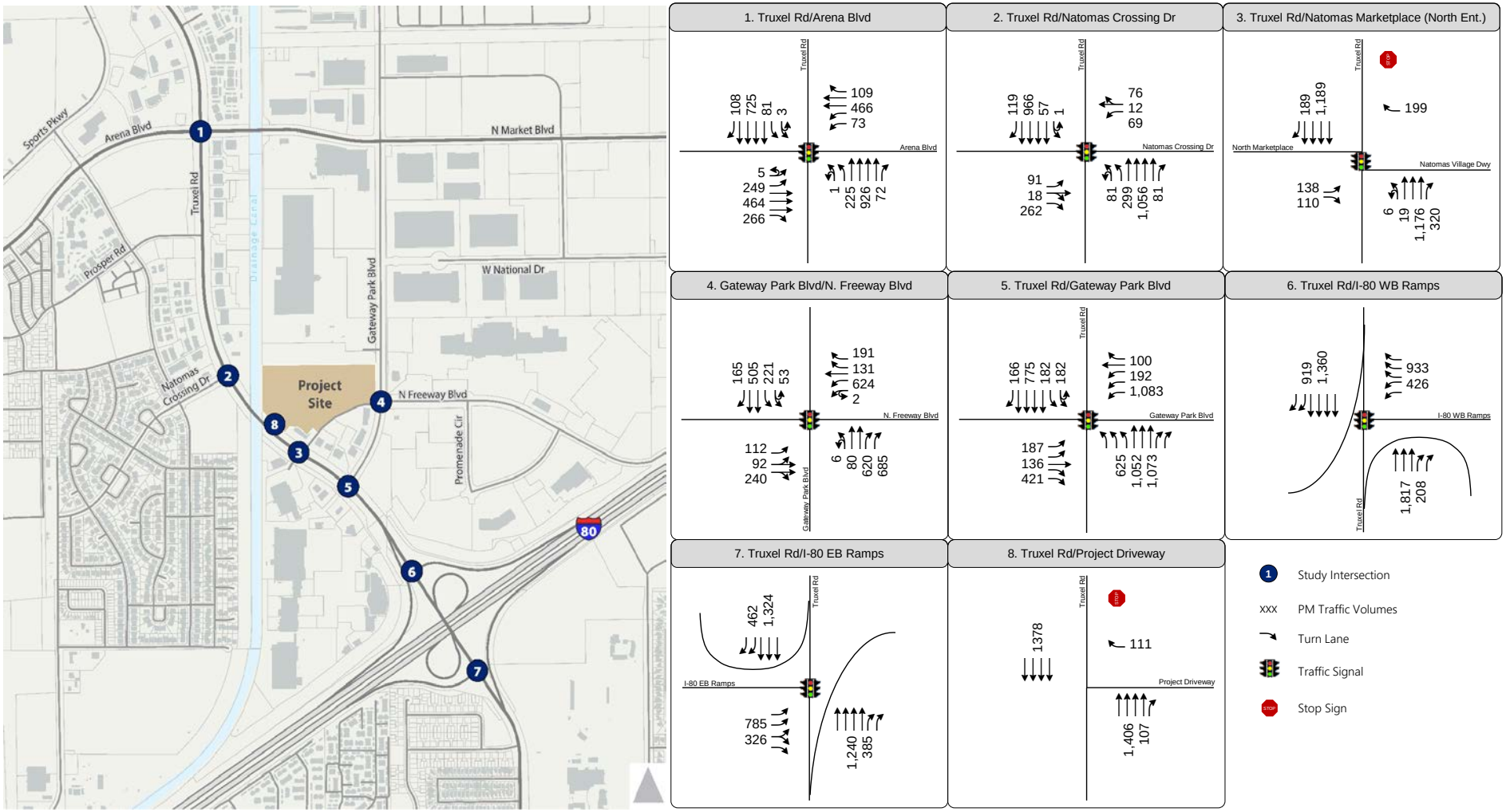


Figure 8

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.

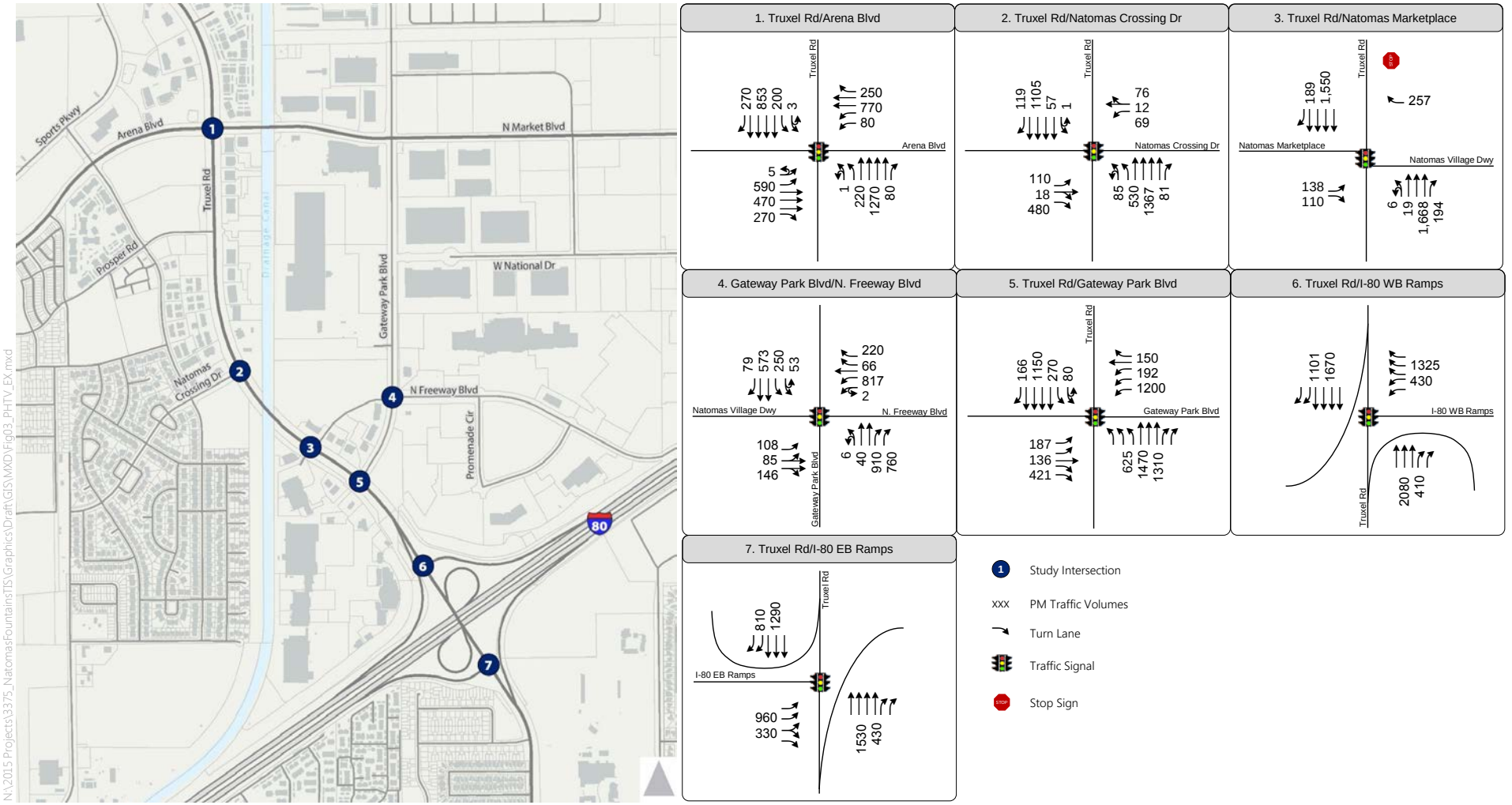
Figures 9 and 10 show cumulative traffic forecasts under no project and plus project conditions, respectively.

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

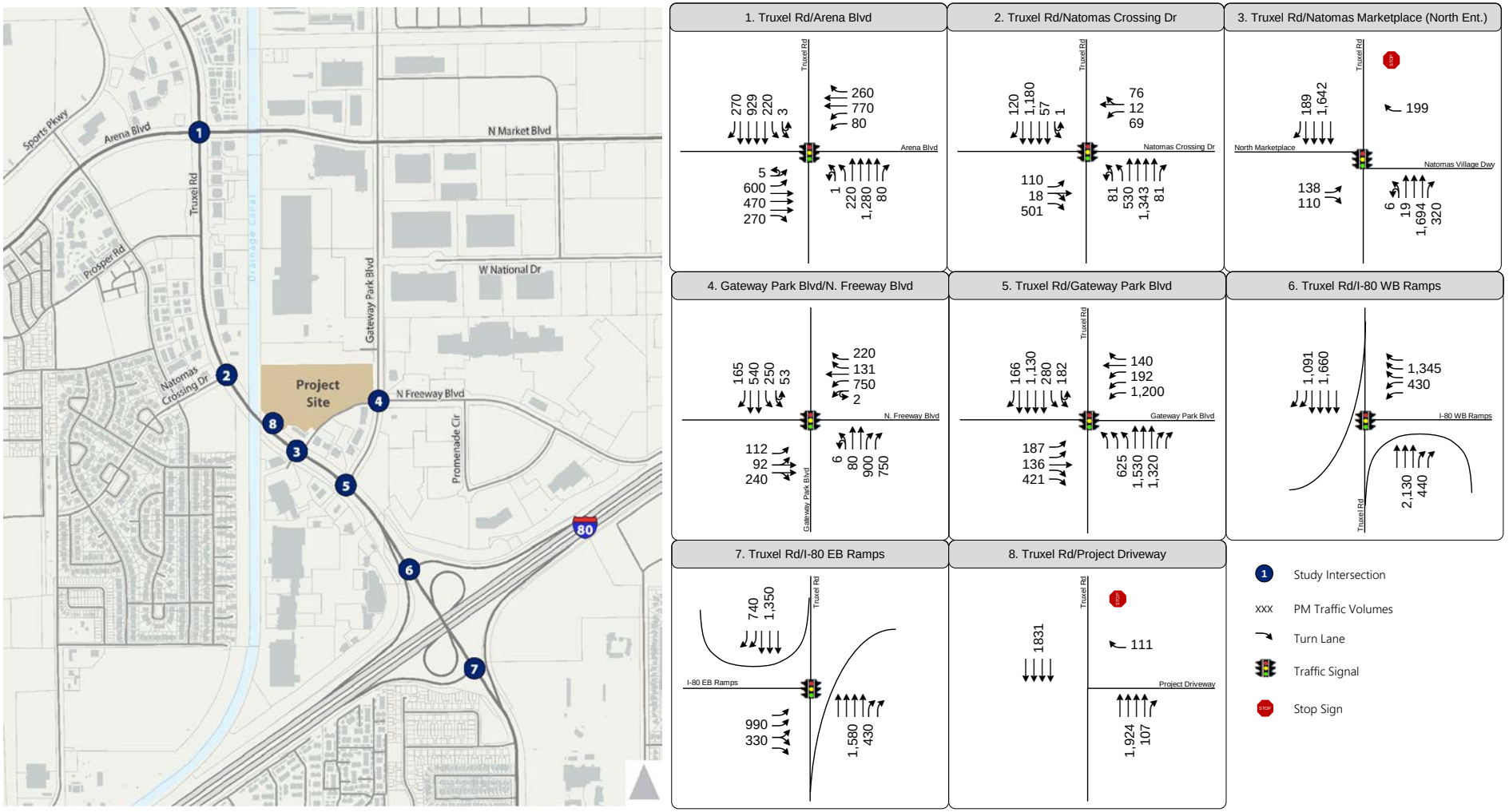


Figure 10

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

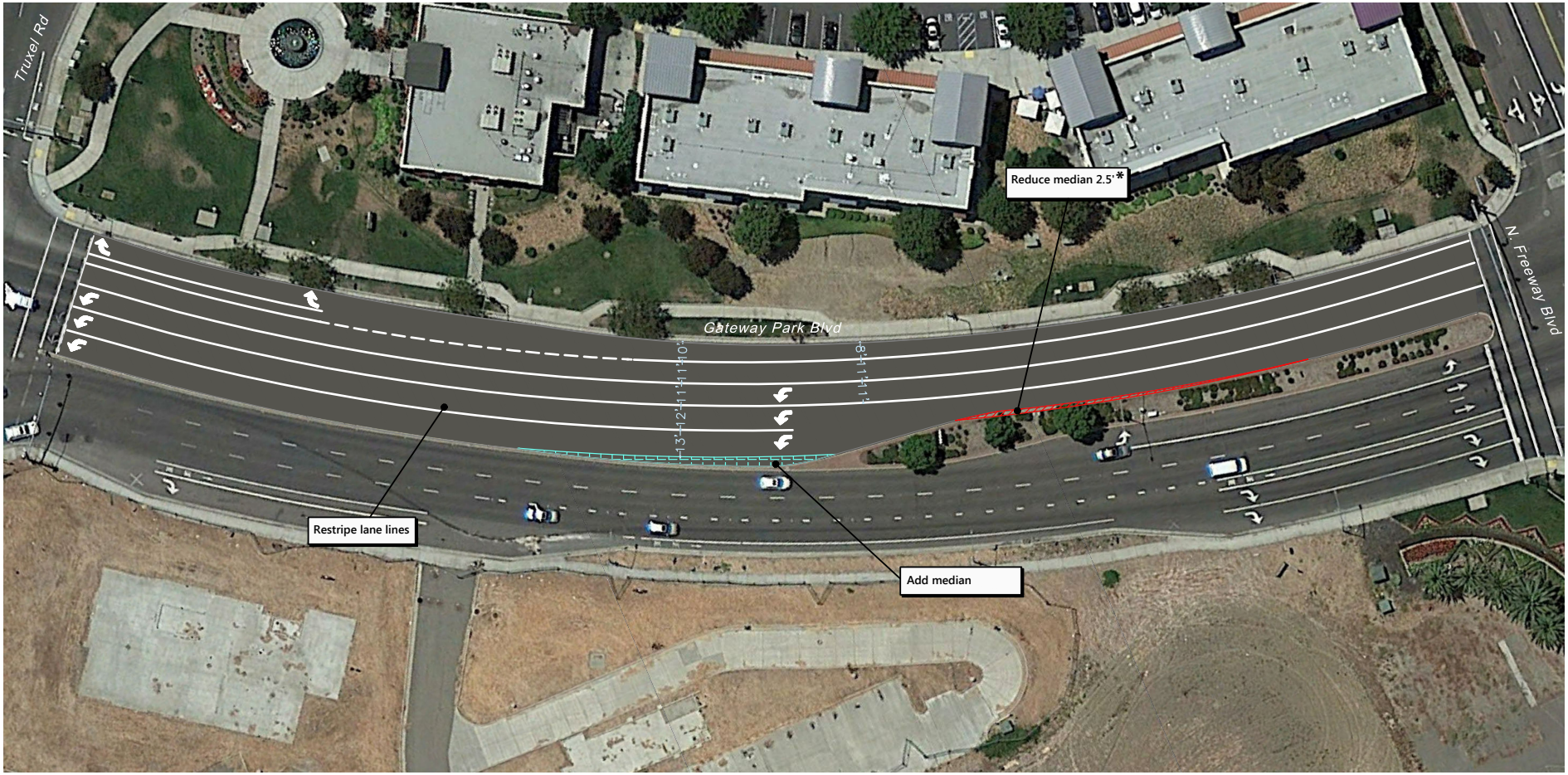
Table 8 shows that unacceptable LOS F operations would occur during the PM peak hour at the Gateway Park Boulevard/North Freeway Boulevard intersection. Based on the results in Table 8, it is apparent that the project would add at least a five-second increase in delay to this intersection. Therefore, 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

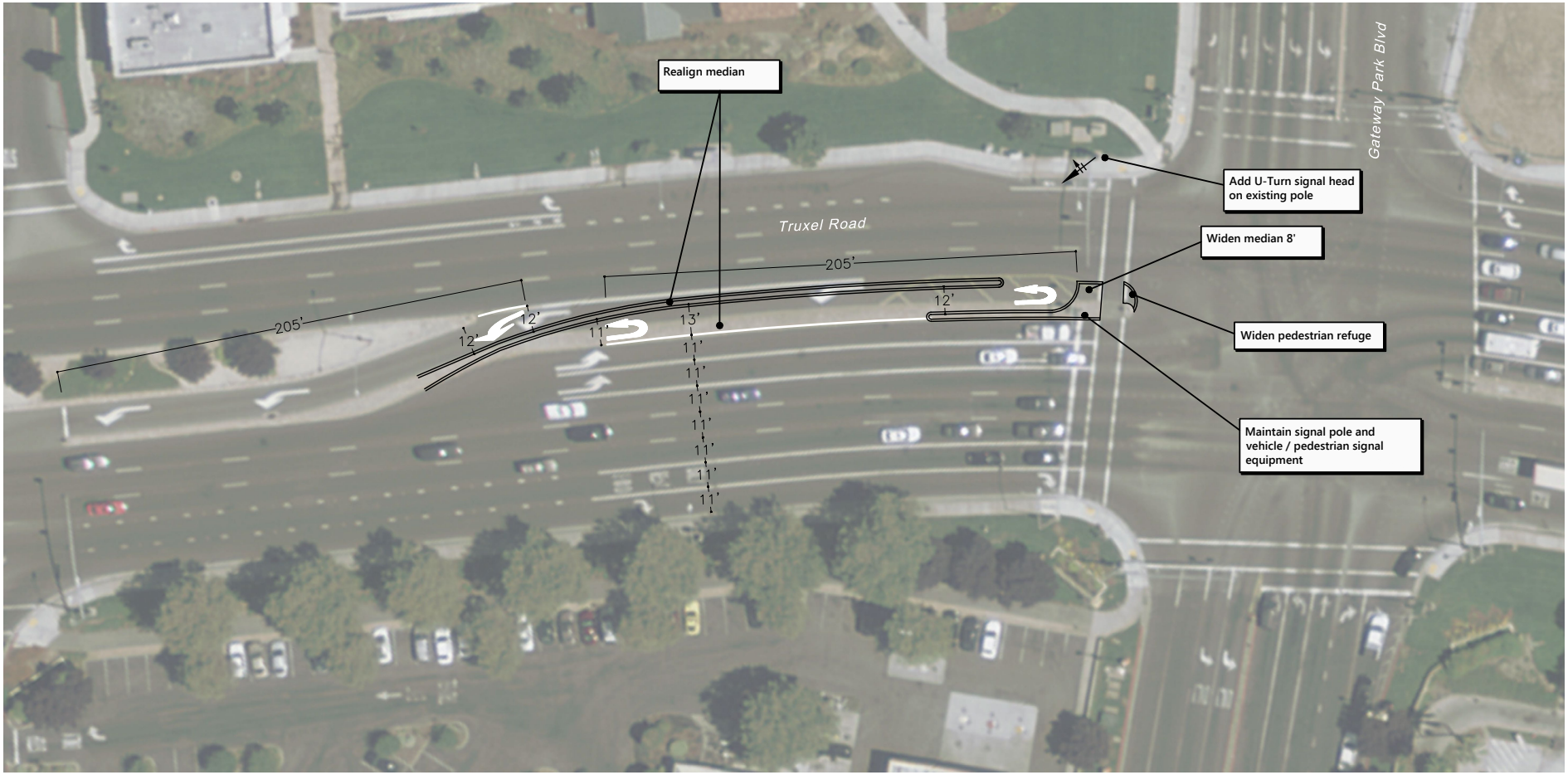


Figure 12

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.

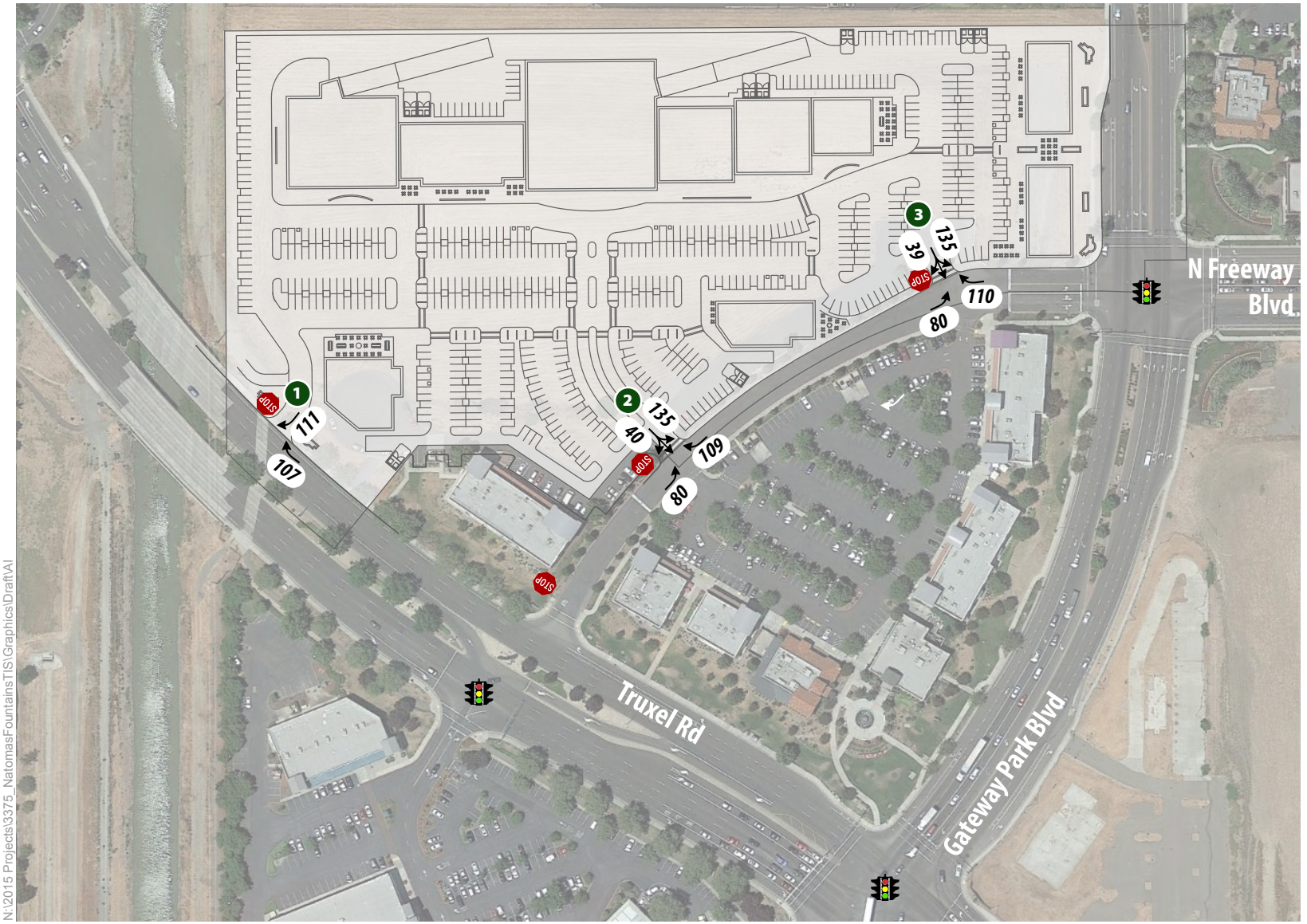
REVIEW OF PROJECT ACCESS ON TRUXEL ROAD

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

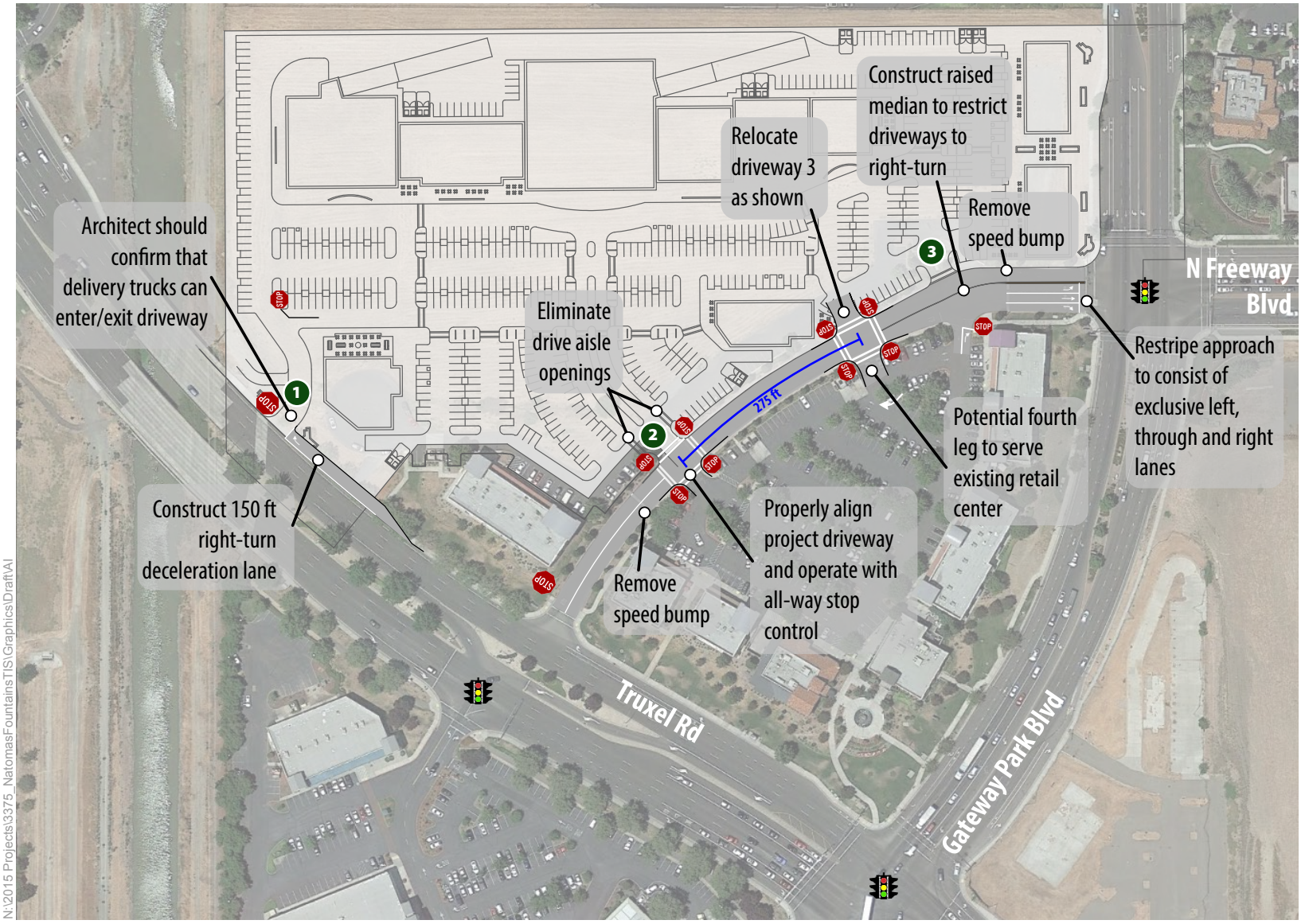


Figure ES-1

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
(916) 771-8700
orders@atdtraffic.com

All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

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%			
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%	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	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

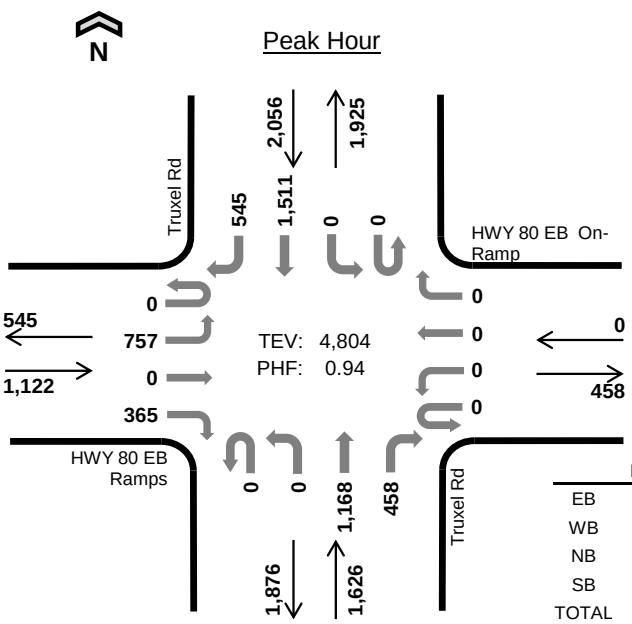
Bank 1 Count = Bikes & Peds

	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%	

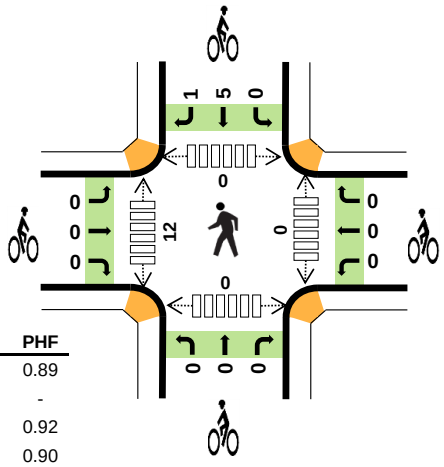
AM PEAK HOUR	Truxel Road Southbound				I-80 WB Ramps Westbound				Truxel Road Northbound				I-80 WB On-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																		
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

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

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

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

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Air Quality and Greenhouse Gas Emissions Data

SAC - Raising Cane's Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	SAC - Raising Cane's
Construction Start Date	5/1/2026
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	37.6
Location	38.64000100083027, -121.50373489830272
County	Sacramento
City	Sacramento
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	600
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Fast Food Restaurant with Drive Thru	3.44	1000sqft	0.76	3,442	29,313	—	—	—
Other Asphalt Surfaces	44.2	1000sqft	1.01	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.67	3.90	34.0	36.9	0.06	1.41	13.6	14.7	1.30	6.49	7.49	—	6,837	6,837	0.29	0.14	2.16	6,878
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.93	1.58	14.1	17.4	0.03	0.49	1.00	1.49	0.45	0.18	0.63	—	3,520	3,520	0.17	0.12	0.05	3,561
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.31	1.10	8.87	10.0	0.02	0.35	1.26	1.61	0.32	0.53	0.85	—	1,906	1,906	0.08	0.04	0.25	1,921
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.20	1.62	1.83	< 0.005	0.06	0.23	0.29	0.06	0.10	0.16	—	316	316	0.01	0.01	0.04	318

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	4.67	3.90	34.0	36.9	0.06	1.41	13.6	14.7	1.30	6.49	7.49	—	6,837	6,837	0.29	0.14	2.16	6,878
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.93	1.58	14.1	17.4	0.03	0.49	1.00	1.49	0.45	0.18	0.63	—	3,520	3,520	0.17	0.12	0.05	3,561
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.31	1.10	8.87	10.0	0.02	0.35	1.26	1.61	0.32	0.53	0.85	—	1,906	1,906	0.08	0.04	0.25	1,921
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.24	0.20	1.62	1.83	< 0.005	0.06	0.23	0.29	0.06	0.10	0.16	—	316	316	0.01	0.01	0.04	318

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.15	6.56	5.94	59.9	0.14	0.10	11.6	11.7	0.10	2.94	3.04	23.6	14,038	14,061	2.72	0.55	49.0	14,343
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.51	5.89	6.96	50.1	0.12	0.10	11.6	11.7	0.10	2.94	3.04	23.6	12,843	12,867	2.78	0.61	6.51	13,124
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.52	5.92	6.52	49.7	0.13	0.10	11.3	11.4	0.10	2.87	2.97	23.6	13,091	13,114	2.74	0.58	24.2	13,380
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	1.19	1.08	1.19	9.07	0.02	0.02	2.06	2.08	0.02	0.52	0.54	3.91	2,167	2,171	0.45	0.10	4.01	2,215

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.03	6.44	5.83	59.7	0.14	0.10	11.6	11.7	0.09	2.94	3.03	—	13,803	13,803	0.56	0.55	43.6	14,024
Area	0.11	0.11	< 0.005	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.62
Energy	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	231	231	0.02	< 0.005	—	232
Water	—	—	—	—	—	—	—	—	—	—	—	2.23	2.55	4.78	0.01	< 0.005	—	6.44
Waste	—	—	—	—	—	—	—	—	—	—	—	21.4	0.00	21.4	2.14	0.00	—	74.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.38	5.38
Total	7.15	6.56	5.94	59.9	0.14	0.10	11.6	11.7	0.10	2.94	3.04	23.6	14,038	14,061	2.72	0.55	49.0	14,343
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.41	5.80	6.85	50.0	0.12	0.10	11.6	11.7	0.09	2.94	3.03	—	12,610	12,610	0.62	0.60	1.13	12,806
Area	0.09	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	231	231	0.02	< 0.005	—	232
Water	—	—	—	—	—	—	—	—	—	—	—	2.23	2.55	4.78	0.01	< 0.005	—	6.44
Waste	—	—	—	—	—	—	—	—	—	—	—	21.4	0.00	21.4	2.14	0.00	—	74.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.38	5.38
Total	6.51	5.89	6.96	50.1	0.12	0.10	11.6	11.7	0.10	2.94	3.04	23.6	12,843	12,867	2.78	0.61	6.51	13,124
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.40	5.81	6.41	49.5	0.13	0.10	11.3	11.4	0.09	2.87	2.96	—	12,857	12,857	0.58	0.58	18.8	13,062
Area	0.11	0.10	< 0.005	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.42	0.42	< 0.005	< 0.005	—	0.42
Energy	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	231	231	0.02	< 0.005	—	232

Water	—	—	—	—	—	—	—	—	—	—	—	2.23	2.55	4.78	0.01	< 0.005	—	6.44
Waste	—	—	—	—	—	—	—	—	—	—	—	21.4	0.00	21.4	2.14	0.00	—	74.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.38	5.38
Total	6.52	5.92	6.52	49.7	0.13	0.10	11.3	11.4	0.10	2.87	2.97	23.6	13,091	13,114	2.74	0.58	24.2	13,380
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.17	1.06	1.17	9.04	0.02	0.02	2.06	2.08	0.02	0.52	0.54	—	2,129	2,129	0.10	0.10	3.12	2,163
Area	0.02	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.07	0.07	< 0.005	< 0.005	—	0.07
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	38.3	38.3	< 0.005	< 0.005	—	38.4
Water	—	—	—	—	—	—	—	—	—	—	—	0.37	0.42	0.79	< 0.005	< 0.005	—	1.07
Waste	—	—	—	—	—	—	—	—	—	—	—	3.54	0.00	3.54	0.35	0.00	—	12.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.89	0.89
Total	1.19	1.08	1.19	9.07	0.02	0.02	2.06	2.08	0.02	0.52	0.54	3.91	2,167	2,171	0.45	0.10	4.01	2,215

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.47	1.24	11.0	11.7	0.02	0.51	—	0.51	0.47	—	0.47	—	2,065	2,065	0.08	0.02	—	2,072
Dust From Material Movement	—	—	—	—	—	—	6.26	6.26	—	3.00	3.00	—	—	—	—	—	—	—

Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.64	0.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	119	119	< 0.005	< 0.005	—	119
Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.12	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	19.7	19.7	< 0.005	< 0.005	—	19.7
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.42	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	83.5	83.5	< 0.005	< 0.005	0.30	84.7
Vendor	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	0.00
Hauling	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.38	4.38	< 0.005	< 0.005	0.01	4.44
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.72	0.72	< 0.005	< 0.005	< 0.005	0.73
Vendor	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	0.00
Hauling	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	0.00

3.3. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.70	1.42	12.9	14.0	0.02	0.58	—	0.58	0.53	—	0.53	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	7.09	7.09	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.16	1.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	222	222	0.01	< 0.005	—	223
Dust From Material Movement	—	—	—	—	—	—	0.64	0.64	—	0.31	0.31	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.7	36.7	< 0.005	< 0.005	—	36.9
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	111	111	< 0.005	< 0.005	0.40	113
Vendor	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	0.00
Hauling	0.03	0.01	0.49	0.20	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	283	283	0.03	0.05	0.57	298
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.17	9.17	< 0.005	< 0.005	0.02	9.30

Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.6	25.6	< 0.005	< 0.005	0.02	26.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.52	1.52	< 0.005	< 0.005	< 0.005	1.54
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.24	4.24	< 0.005	< 0.005	< 0.005	4.46

3.5. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.48	0.40	3.38	3.93	0.01	0.12	—	0.12	0.11	—	0.11	—	711	711	0.03	0.01	—	713
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.62	0.72	< 0.005	0.02	—	0.02	0.02	—	0.02	—	118	118	< 0.005	< 0.005	—	118
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	16.1	16.1	< 0.005	< 0.005	0.06	16.3
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.0	16.0	< 0.005	< 0.005	0.04	16.8
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	< 0.005	14.5
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.0	16.0	< 0.005	< 0.005	< 0.005	16.7
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.78	5.78	< 0.005	< 0.005	0.01	5.87
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.31	6.31	< 0.005	< 0.005	0.01	6.61
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.96	0.96	< 0.005	< 0.005	< 0.005	0.97

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.09
Hauling	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	0.00

3.7. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.41	6.48	0.01	0.18	—	0.18	0.17	—	0.17	—	991	991	0.04	0.01	—	995
Demolition	—	—	—	—	—	—	0.71	0.71	—	0.11	0.11	—	—	—	—	—	—	—
Paving	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.41	6.48	0.01	0.18	—	0.18	0.17	—	0.17	—	991	991	0.04	0.01	—	995
Demolition	—	—	—	—	—	—	0.71	0.71	—	0.11	0.11	—	—	—	—	—	—	—
Paving	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.12	0.10	0.98	1.44	< 0.005	0.04	—	0.04	0.04	—	0.04	—	220	220	0.01	< 0.005	—	221
Demolition	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—	—	—	—	—	—	—
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.4	36.4	< 0.005	< 0.005	—	36.5
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.03	0.70	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	139	139	< 0.005	< 0.005	0.50	141
Vendor	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	0.00
Hauling	0.07	0.02	1.00	0.40	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	574	574	0.05	0.09	1.16	604
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.52	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	124	124	< 0.005	0.01	0.01	125
Vendor	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	0.00
Hauling	0.07	0.01	1.08	0.40	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	574	574	0.05	0.09	0.03	603
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.1	28.1	< 0.005	< 0.005	0.05	28.5

Vendor	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	0.00
Hauling	0.02	< 0.005	0.23	0.09	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	127	127	0.01	0.02	0.11	134
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.66	4.66	< 0.005	< 0.005	0.01	4.72
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.1	21.1	< 0.005	< 0.005	0.02	22.2

3.9. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	0.69	0.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.1	16.1	< 0.005	< 0.005	—	16.1

Architectural	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.66	2.66	< 0.005	< 0.005	—	2.67
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.22	3.22	< 0.005	< 0.005	0.01	3.26
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.36
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	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	0.00
Hauling	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	0.00

3.11. Infrastructure Improvement (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.0	11.5	0.02	0.53	—	0.53	0.49	—	0.49	—	2,043	2,043	0.08	0.02	—	2,050
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.26	2.30	2.21	< 0.005	0.10	—	0.10	0.09	—	0.09	—	392	392	0.02	< 0.005	—	393
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.42	0.40	< 0.005	0.02	—	0.02	0.02	—	0.02	—	64.9	64.9	< 0.005	< 0.005	—	65.1
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.04	0.03	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	111	111	< 0.005	< 0.005	0.40	113
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.5	19.5	< 0.005	< 0.005	0.03	19.7
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.22	3.22	< 0.005	< 0.005	0.01	3.27
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant with Drive Thru	7.03	6.44	5.83	59.7	0.14	0.10	11.6	11.7	0.09	2.94	3.03	—	13,803	13,803	0.56	0.55	43.6	14,024
Other Asphalt Surfaces	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	0.00
Total	7.03	6.44	5.83	59.7	0.14	0.10	11.6	11.7	0.09	2.94	3.03	—	13,803	13,803	0.56	0.55	43.6	14,024
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	6.41	5.80	6.85	50.0	0.12	0.10	11.6	11.7	0.09	2.94	3.03	—	12,610	12,610	0.62	0.60	1.13	12,806
Other Asphalt Surfaces	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	0.00
Total	6.41	5.80	6.85	50.0	0.12	0.10	11.6	11.7	0.09	2.94	3.03	—	12,610	12,610	0.62	0.60	1.13	12,806
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	1.17	1.06	1.17	9.04	0.02	0.02	2.06	2.08	0.02	0.52	0.54	—	2,129	2,129	0.10	0.10	3.12	2,163
Other Asphalt Surfaces	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	0.00
Total	1.17	1.06	1.17	9.04	0.02	0.02	2.06	2.08	0.02	0.52	0.54	—	2,129	2,129	0.10	0.10	3.12	2,163

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	98.4	98.4	< 0.005	< 0.005	—	98.7
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	98.4	98.4	< 0.005	< 0.005	—	98.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	98.4	98.4	< 0.005	< 0.005	—	98.7
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	98.4	98.4	< 0.005	< 0.005	—	98.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	16.3	16.3	< 0.005	< 0.005	—	16.3

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	16.3	16.3	< 0.005	< 0.005	—	16.3

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	133	133	0.01	< 0.005	—	133
Other Asphalt Surfaces	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
Total	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	133	133	0.01	< 0.005	—	133
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	133	133	0.01	< 0.005	—	133
Other Asphalt Surfaces	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
Total	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	133	133	0.01	< 0.005	—	133
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant with Drive Thru	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.0	22.0	< 0.005	< 0.005	—	22.0
Other Asphalt Surfaces	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
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.0	22.0	< 0.005	< 0.005	—	22.0

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.02	< 0.005	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.62
Total	0.11	0.11	< 0.005	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.62
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.09	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.07	0.07	< 0.005	< 0.005	—	0.07
Total	0.02	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.07	0.07	< 0.005	< 0.005	—	0.07

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	2.23	2.55	4.78	0.01	< 0.005	—	6.44
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.23	2.55	4.78	0.01	< 0.005	—	6.44
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	2.23	2.55	4.78	0.01	< 0.005	—	6.44
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.23	2.55	4.78	0.01	< 0.005	—	6.44
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	0.37	0.42	0.79	< 0.005	< 0.005	—	1.07
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.37	0.42	0.79	< 0.005	< 0.005	—	1.07

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	21.4	0.00	21.4	2.14	0.00	—	74.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	21.4	0.00	21.4	2.14	0.00	—	74.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	21.4	0.00	21.4	2.14	0.00	—	74.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	21.4	0.00	21.4	2.14	0.00	—	74.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	3.54	0.00	3.54	0.35	0.00	—	12.4

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.54	0.00	3.54	0.35	0.00	—	12.4

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.38	5.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.38	5.38
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.38	5.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.38	5.38
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.89	0.89
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.89	0.89

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	5/1/2026	5/31/2026	5.00	21.0	—
Grading	Grading	5/15/2026	6/30/2026	5.00	33.0	—
Building Construction	Building Construction	6/15/2026	12/31/2026	5.00	144	—
Paving	Paving	8/1/2026	11/23/2026	5.00	81.0	—
Architectural Coating	Architectural Coating	7/1/2026	8/31/2026	5.00	44.0	—
Infrastructure Improvement	Trenching	6/15/2026	9/18/2026	5.00	70.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Infrastructure Improvement	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Infrastructure Improvement	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Infrastructure Improvement	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Infrastructure Improvement	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—

Grading	Worker	10.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	3.91	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1.45	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	0.56	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	7.91	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.29	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Infrastructure Improvement	—	—	—	—
Infrastructure Improvement	Worker	10.0	14.3	LDA,LDT1,LDT2
Infrastructure Improvement	Vendor	—	8.80	HHDT,MHDT
Infrastructure Improvement	Hauling	0.00	20.0	HHDT
Infrastructure Improvement	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	5,163	1,721	2,651

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Site Preparation	0.00	0.00	19.7	0.00	—
Grading	0.00	1,026	44.0	0.00	—
Paving	0.00	0.00	0.00	2,562	1.01

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Fast Food Restaurant with Drive Thru	0.00	0%
Other Asphalt Surfaces	1.01	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	279	0.01	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Fast Food Restaurant with Drive Thru	1,493	1,493	1,493	544,944	16,340	16,340	16,340	5,964,113
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	5,163	1,721	2,651

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Fast Food Restaurant with Drive Thru	134,450	267	0.0129	0.0017	414,224
Other Asphalt Surfaces	0.00	267	0.0129	0.0017	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Fast Food Restaurant with Drive Thru	1,044,763	409,395
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Fast Food Restaurant with Drive Thru	39.6	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	23.0	annual days of extreme heat
Extreme Precipitation	5.10	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	2	1	1	3
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	53.7
AQ-PM	36.7
AQ-DPM	17.8
Drinking Water	16.8
Lead Risk Housing	31.4
Pesticides	0.00
Toxic Releases	24.8
Traffic	85.6
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	8.76
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.5

Cardio-vascular	92.4
Low Birth Weights	96.4
Socioeconomic Factor Indicators	—
Education	47.1
Housing	94.0
Linguistic	19.9
Poverty	98.4
Unemployment	76.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—

Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—
Uncrowded housing	—
Health Outcomes	—
Insured adults	—
Arthritis	95.9
Asthma ER Admissions	55.3
High Blood Pressure	57.0
Cancer (excluding skin)	97.9
Asthma	8.7
Coronary Heart Disease	98.1
Chronic Obstructive Pulmonary Disease	84.0
Diagnosed Diabetes	88.2
Life Expectancy at Birth	0.0
Cognitively Disabled	6.9
Physically Disabled	36.0
Heart Attack ER Admissions	68.1
Mental Health Not Good	28.5
Chronic Kidney Disease	85.5
Obesity	29.3
Pedestrian Injuries	0.0

Physical Health Not Good	64.0
Stroke	88.3
Health Risk Behaviors	—
Binge Drinking	41.7
Current Smoker	20.8
No Leisure Time for Physical Activity	55.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	32.5
Elderly	99.0
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	55.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	8.0
Traffic Density	0.0
Traffic Access	23.0
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	44.0
Healthy Places Index Score for Project Location (b)	—
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based on construction questionnaire.
Construction: Demolition	Combined total of pavement material from construction questionnaire.
Operations: Vehicle Data	Based on Traffic Study.
Construction: Off-Road Equipment	Construction equipment added for infrastructure improvement.
Land Use	Based on site plan
Construction: Dust From Material Movement	Based on construction questionnaire

Appendix C
Noise Data

Noise Measurement Field Data

Project:	Sacramento Raising Cane's RC1198	**Job Number:**	197445028
Site No.:	ST 1	**Date:**	2/20/2025
Analyst:	Makena Bohannon	**Time:**	10:06am -10:16am
Location:	38.64128 degrees N, 121.50977 degrees W (4000 Innovator Dr, Sacramento)		
Noise Sources:	Faint sound of kids playing in background, occasional crows		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
51.7	47.9	59.2	83.2

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	56
Wind (mph):	15
Sky:	Clear
Bar. Pressure:	30.19
Humidity:	62%

Photo:







Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.026.s	Computer's File Name	LxTse_0006073-20250220 100633-LxT_Data.026.ldbin
Meter	LxT SE 0006073	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2025-02-20 10:06:33	Duration	0:10:00.0		
End Time	2025-02-20 10:16:33	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2025-02-18 14:01:53	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	51.7 dB		
LAE	79.5 dB	SEA	--- dB
EA	9.9 µPa²h		
LA_{peak}	83.2 dB	2025-02-20 10:10:38	
LAS_{max}	59.2 dB	2025-02-20 10:10:38	
LAS_{min}	47.9 dB	2025-02-20 10:15:30	
LA_{eq}	51.7 dB		
LC_{eq}	64.4 dB	LC_{eq} - LA_{eq}	12.7 dB
LAI_{eq}	53.3 dB	LAI_{eq} - LA_{eq}	1.6 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
51.7 dB	51.7 dB	0.0 dB

LDEN	LDay	LEve	LNight
51.7 dB	51.7 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	51.7 dB		64.4 dB		--- dB	
$LS_{(max)}$	59.2 dB	2025-02-20 10:10:38	--- dB	None	--- dB	None
$LS_{(min)}$	47.9 dB	2025-02-20 10:15:30	--- dB	None	--- dB	None
$L_{Peak(max)}$	83.2 dB	2025-02-20 10:10:38	--- dB	None	--- dB	None

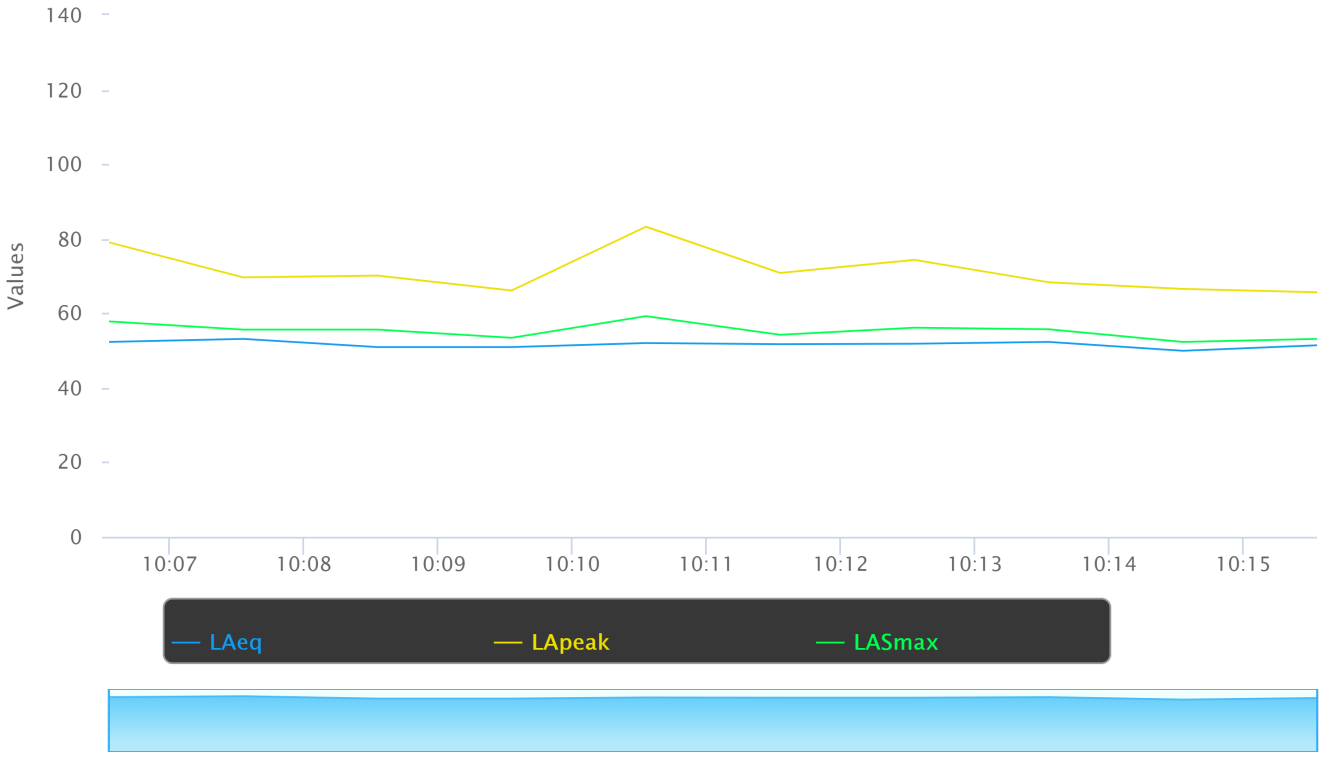
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	53.8 dB
LAS 10.0	53.3 dB
LAS 33.3	52.1 dB
LAS 50.0	51.5 dB
LAS 66.6	50.8 dB
LAS 90.0	49.5 dB

Time History



Noise Measurement Field Data

Project:	Sacramento Raising Cane's RC1198	**Job Number:**	197445028
Site No.:	ST 2	**Date:**	2/20/2025
Analyst:	Makena Bohannon	**Time:**	10:25am -10:35am
Location:	38.63800 degrees N, 121.50776 degrees W (2101 Citrine Way, Sacramento)		
Noise Sources:	Street noise, cars in neighborhood coming in and out of driveways, neighborhood recording device coming online (10:31am)		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
52.6	47.2	64.8	88.7

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	57
Wind (mph):	17
Sky:	Clear
Bar. Pressure:	30.19
Humidity:	57%

Photo:







Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.027.s	Computer's File Name	LxTse_0006073-20250220 102516-LxT_Data.027.ldbin
Meter	LxT SE 0006073	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2025-02-20 10:25:16	Duration	0:10:00.0		
End Time	2025-02-20 10:35:16	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2025-02-18 14:01:53	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	52.6 dB		
LAE	80.4 dB	SEA	--- dB
EA	12.1 µPa²h		
LA_{peak}	88.7 dB	2025-02-20 10:35:15	
LAS_{max}	64.8 dB	2025-02-20 10:28:45	
LAS_{min}	47.2 dB	2025-02-20 10:32:22	
LA_{eq}	52.6 dB		
LC_{eq}	66.3 dB	LC_{eq} - LA_{eq}	13.7 dB
LAI_{eq}	54.9 dB	LAI_{eq} - LA_{eq}	2.3 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
52.6 dB	52.6 dB	0.0 dB

LDEN	LDay	LEve	LNight
52.6 dB	52.6 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	52.6 dB		66.3 dB		--- dB	
$LS_{(max)}$	64.8 dB	2025-02-20 10:28:45	--- dB	None	--- dB	None
$LS_{(min)}$	47.2 dB	2025-02-20 10:32:22	--- dB	None	--- dB	None
$L_{Peak(max)}$	88.7 dB	2025-02-20 10:35:15	--- dB	None	--- dB	None

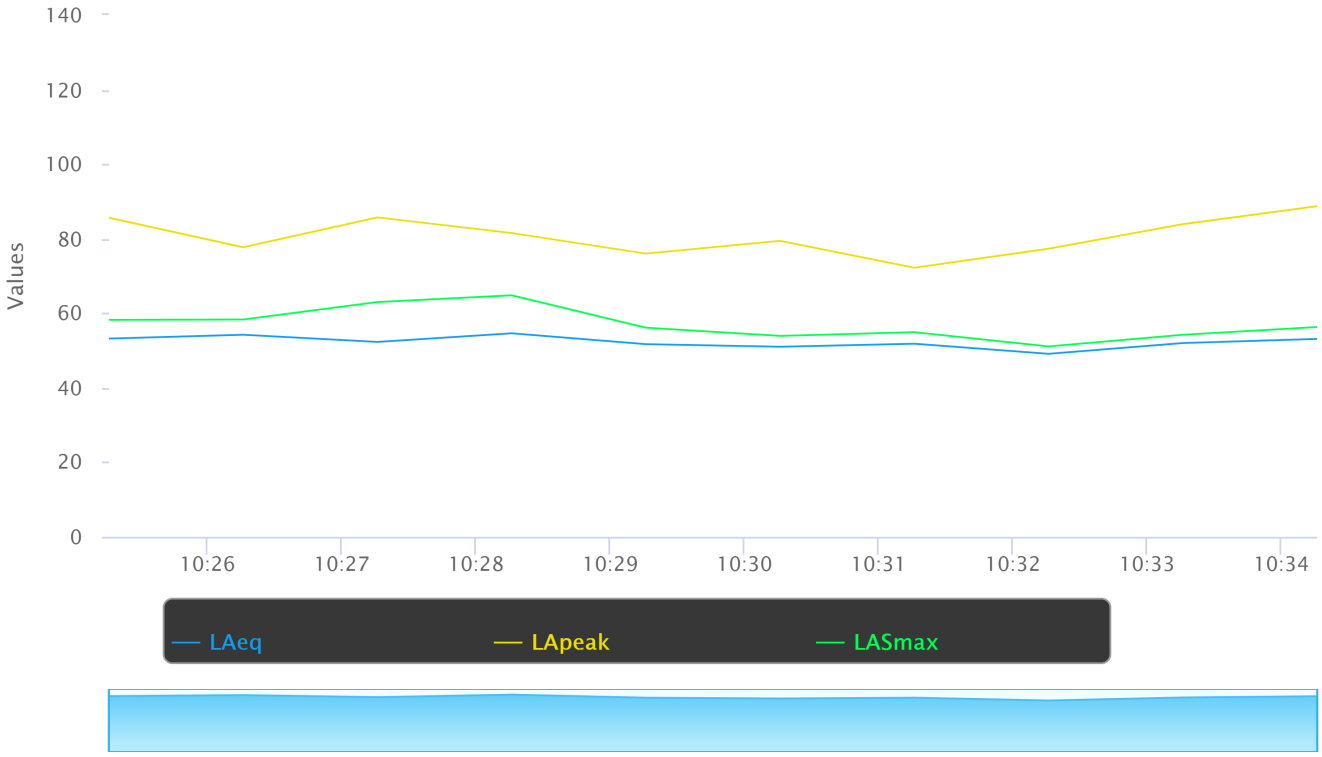
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	55.7 dB
LAS 10.0	54.8 dB
LAS 33.3	52.7 dB
LAS 50.0	51.6 dB
LAS 66.6	50.5 dB
LAS 90.0	49.0 dB

Time History



Noise Measurement Field Data

Project:	Sacramento Raising Cane's RC1198	**Job Number:**	197445028
Site No.:	ST 3	**Date:**	2/20/2025
Analyst:	Makena Bohannon	**Time:**	10:42am -10:52am
Location:	38.63792 degrees N, 121.50103 degrees W (120 Promenade Cir, Sacramento)		
Noise Sources:	Distant road noise, windy		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
55.6	52.4	600.9	86.5

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	57
Wind (mph):	17
Sky:	Clear
Bar. Pressure:	30.19
Humidity:	57%

Photo:







Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.028.s	Computer's File Name	LxTse_0006073-20250220 104218-LxT_Data.028.ldbin
Meter	LxT SE 0006073	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2025-02-20 10:42:18	Duration	0:10:00.0		
End Time	2025-02-20 10:52:18	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2025-02-18 14:01:53	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	55.6 dB		
LAE	83.4 dB	SEA	--- dB
EA	24.2 µPa²h		
LA_{peak}	86.5 dB	2025-02-20 10:42:25	
LAS_{max}	60.9 dB	2025-02-20 10:46:52	
LAS_{min}	52.4 dB	2025-02-20 10:44:56	
LA_{eq}	55.6 dB		
LC_{eq}	69.5 dB	LC_{eq} - LA_{eq}	13.9 dB
LAI_{eq}	56.4 dB	LAI_{eq} - LA_{eq}	0.8 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
55.6 dB	55.6 dB	0.0 dB

LDEN	LDay	LEve	LNight
55.6 dB	55.6 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	55.6 dB		69.5 dB		--- dB	
$LS_{(max)}$	60.9 dB	2025-02-20 10:46:52	--- dB	None	--- dB	None
$LS_{(min)}$	52.4 dB	2025-02-20 10:44:56	--- dB	None	--- dB	None
$L_{Peak(max)}$	86.5 dB	2025-02-20 10:42:25	--- dB	None	--- dB	None

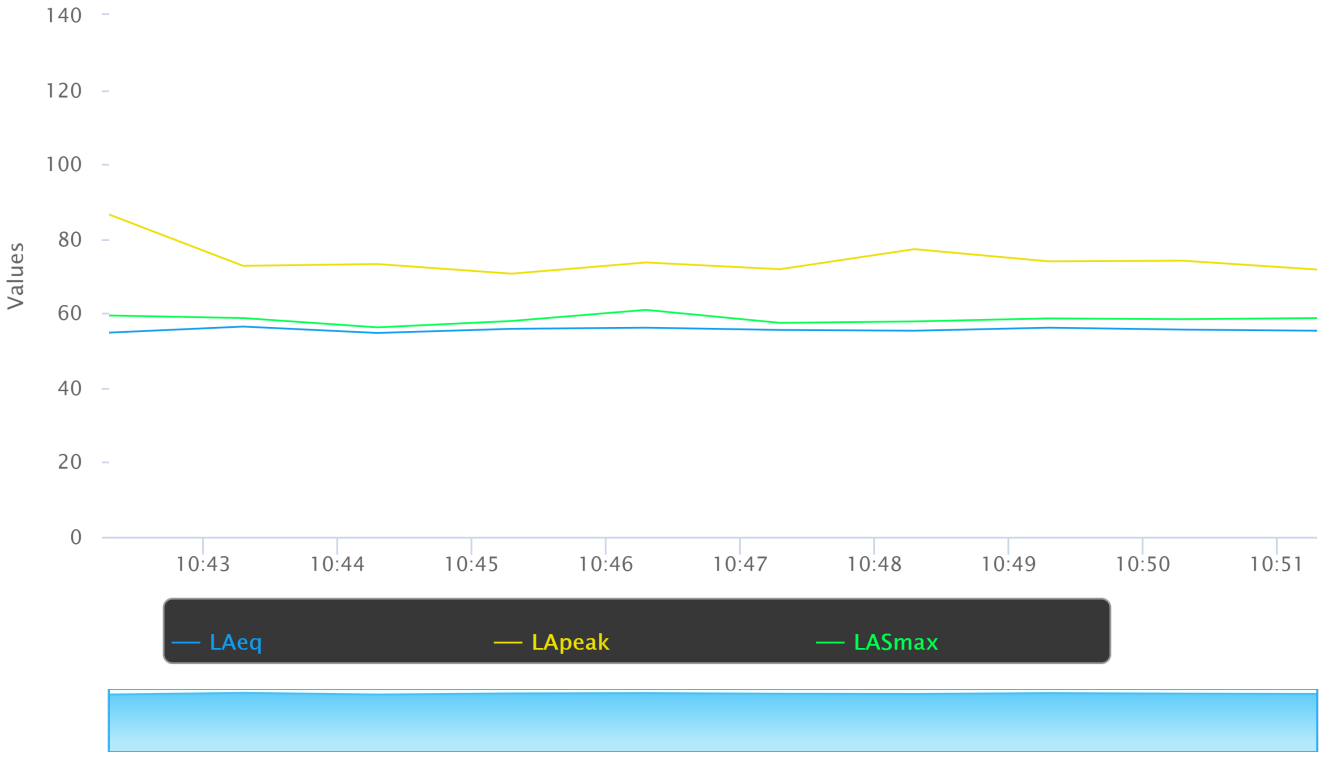
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	57.5 dB
LAS 10.0	57.0 dB
LAS 33.3	55.9 dB
LAS 50.0	55.4 dB
LAS 66.6	54.8 dB
LAS 90.0	53.9 dB

Time History



Noise Measurement Field Data

Project:	Sacramento Raising Cane's RC1198	**Job Number:**	197445028
Site No.:	ST 4	**Date:**	2/20/2025
Analyst:	Makena Bohannon	**Time:**	11:01am -11:11am
Location:	38.64009 degrees N, 121.50343 degrees W (N Freeway Blvd, Sacramento)		
Noise Sources:	Street noise, adjacent construction site, honking (11:05)		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
60.1	54.9	71.4	82.4

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60
Wind (mph):	17
Sky:	Clear
Bar. Pressure:	30.19
Humidity:	50%

Photo:









Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.029.s	Computer's File Name	LxTse_0006073-20250220 110102-LxT_Data.029.ldbin
Meter	LxT SE 0006073	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2025-02-20 11:01:02	Duration	0:10:00.0		
End Time	2025-02-20 11:11:02	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2025-02-18 14:01:53	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	60.1 dB		
LAE	87.9 dB	SEA	--- dB
EA	68.2 µPa²h		
LA_{peak}	82.4 dB	2025-02-20 11:01:54	
LAS_{max}	71.4 dB	2025-02-20 11:01:54	
LAS_{min}	54.9 dB	2025-02-20 11:08:52	
LA_{eq}	60.1 dB		
LC_{eq}	73.5 dB	LC_{eq} - LA_{eq}	13.4 dB
LAI_{eq}	61.2 dB	LAI_{eq} - LA_{eq}	1.1 dB

Exceedances

Exceedances	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
60.1 dB	60.1 dB	0.0 dB

LDEN	LDay	LEve	LNight
60.1 dB	60.1 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	60.1 dB		73.5 dB		--- dB	
$LS_{(max)}$	71.4 dB	2025-02-20 11:01:54	--- dB	None	--- dB	None
$LS_{(min)}$	54.9 dB	2025-02-20 11:08:52	--- dB	None	--- dB	None
$L_{Peak(max)}$	82.4 dB	2025-02-20 11:01:54	--- dB	None	--- dB	None

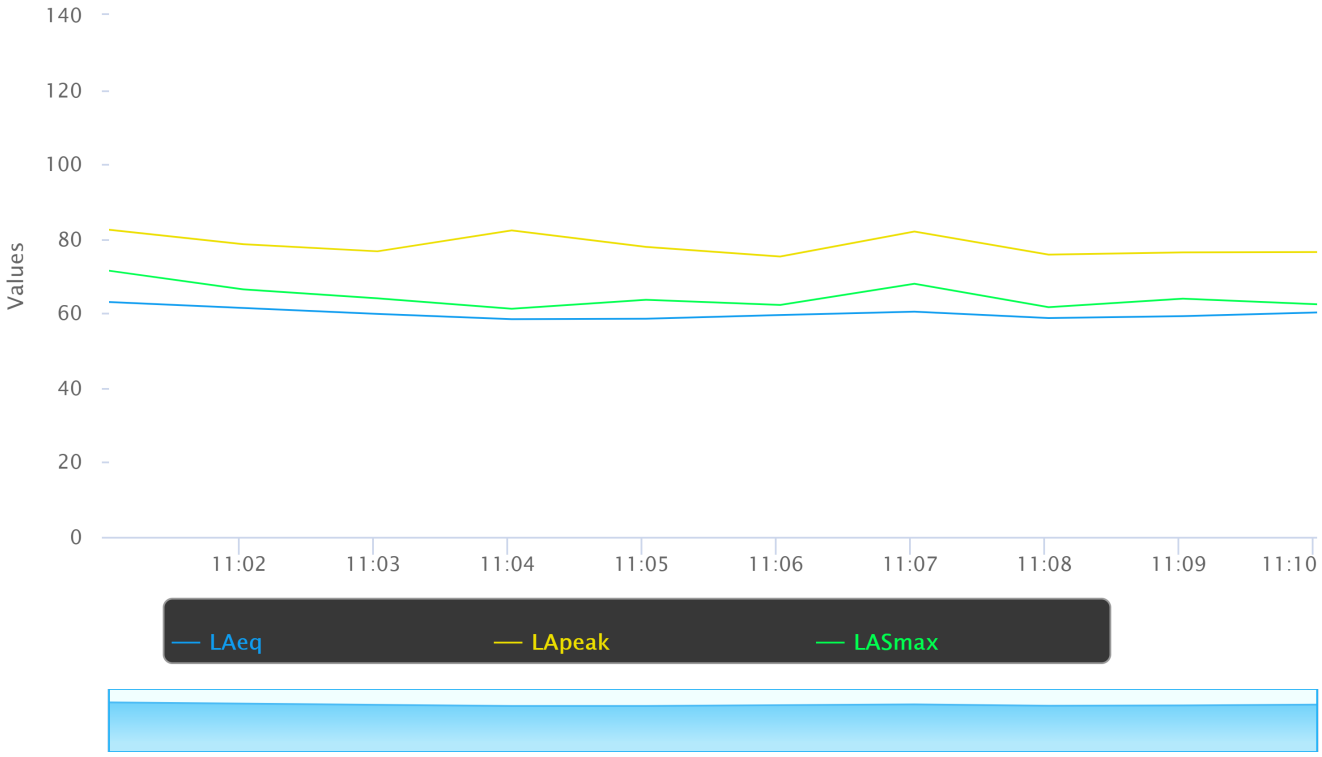
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	64.2 dB
LAS 10.0	62.2 dB
LAS 33.3	60.0 dB
LAS 50.0	58.9 dB
LAS 66.6	57.8 dB
LAS 90.0	56.5 dB

Time History



Noise Measurement Field Data

Project:	Sacramento Raising Cane's RC1198	**Job Number:**	197445028
Site No.:	LT 1	**Date:**	2/20/2025 - 2/21/2025
Analyst:	Makena Bohannon	**Time:**	12:09pm - 12:09pm
Location:	38.63995 degrees N, 121.50350 degrees W (N Freeway Blvd, Sacramento)		
Noise Sources:	Street noise, adjacent construction site		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
59.7	46.0	85.3	105.4

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	63
Wind (mph):	17
Sky:	Clear
Bar. Pressure:	30.19
Humidity:	48%

Photo:









Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.032.s	Computer's File Name	LxTse_0006073-20250220 120956-LxT_Data.032.ldbin
Meter	LxT SE 0006073	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2025-02-20 12:09:56	Duration	24:00:00.0		
End Time	2025-02-21 12:09:56	Run Time	24:00:00.0	Pause Time	0:00:00.0
Pre-Calibration	2025-02-20 11:24:29	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	59.7 dB		
LAE	109.1 dB	SEA	--- dB
EA	9.0 mPa²h		
LA_{peak}	105.4 dB	2025-02-21 06:28:16	
LAS_{max}	85.3 dB	2025-02-20 13:16:49	
LAS_{min}	46.0 dB	2025-02-20 23:57:23	
LA_{eq}	59.7 dB		
LC_{eq}	72.6 dB	LC_{eq} - LA_{eq}	12.9 dB
LAI_{eq}	61.6 dB	LAI_{eq} - LA_{eq}	1.9 dB

Exceedances

Exceedances	Count	Duration
LAS > 85.0 dB	1	0:00:01.7
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
65.6 dB	60.1 dB	0.0 dB

LDEN	LDay	LEve	LNight
65.8 dB	60.6 dB	57.7 dB	59.0 dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	59.7 dB		72.6 dB		--- dB	
$LS_{(max)}$	85.3 dB	2025-02-20 13:16:49	--- dB	None	--- dB	None
$LS_{(min)}$	46.0 dB	2025-02-20 23:57:23	--- dB	None	--- dB	None
$L_{Peak(max)}$	105.4 dB	2025-02-21 06:28:16	--- dB	None	--- dB	None

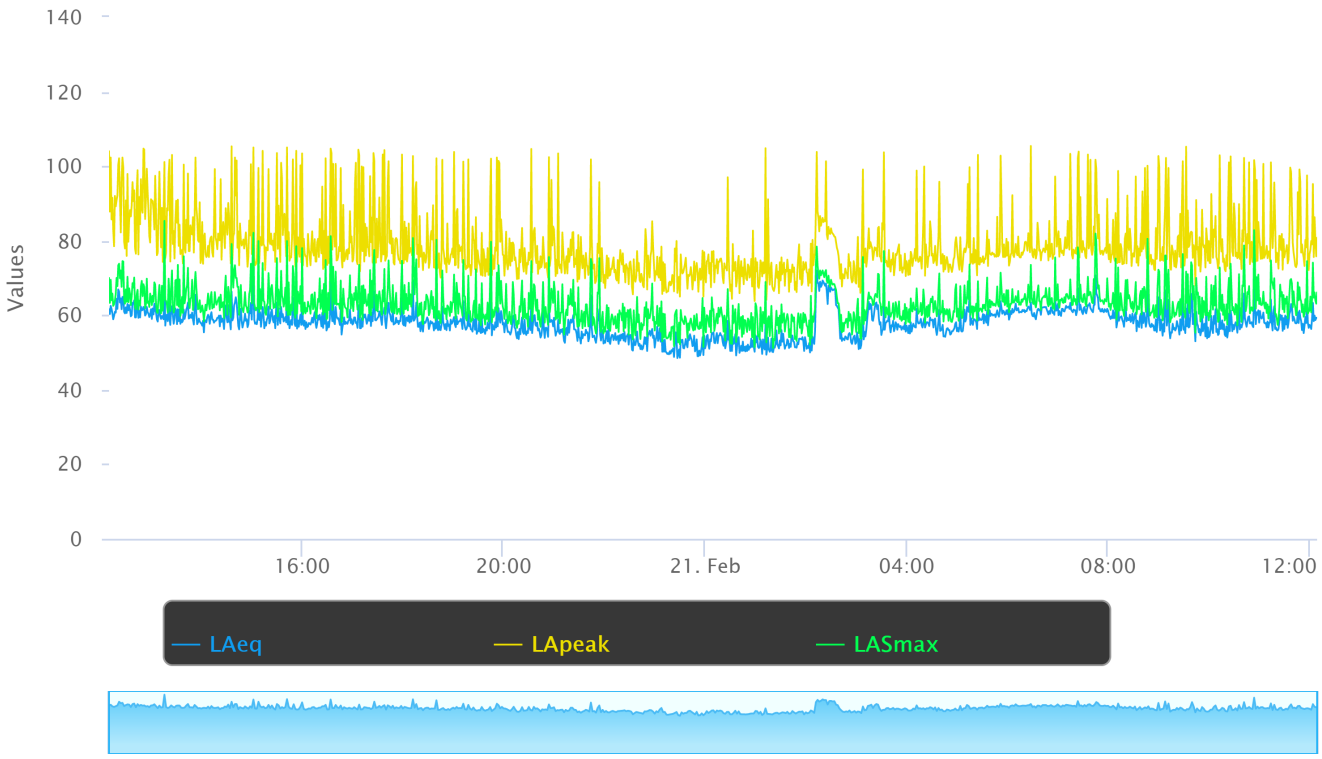
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	63.6 dB
LAS 10.0	62.0 dB
LAS 33.3	58.8 dB
LAS 50.0	57.1 dB
LAS 66.6	55.5 dB
LAS 90.0	51.6 dB

Time History



Project: Sacramento Raising Cane's

Construction Noise Impact on Sensitive Receptors

Parameters

Construction Hours:	Daytime hours (7 am to 7 pm)	8
	Evening hours (7 pm to 10 pm)	0
	Nighttime hours (10 pm to 7 am)	0
Leq to L10 factor		3

	Receptor (Land Use)	Average Distance (feet)	Distance to Property Line (feet)	Shielding	Direction
1	Residential	1	60	0	W

Construction Noise Levels by Phase (Leq)

Demolition	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Infrastructure Improvement	Construction Phase 8	Maximum Construction
74.5	71.7	73.0	68.4	74.9	58.2	70.0	10.8	75.7

Construction Phase	Equipment Type	No. of Equip.	Acoustical Usage Factor	Reference Noise Level at 50ft per Unit, Lmax	RECEPTOR 1 Distance (feet)	Noise Level at Receptor 1, Lmax	Noise Level at Receptor 1, Leq
Site Preparation							
	Grader	1	40%	85	220	72.1	68.2
	Dozer	1	40%	82	220	68.8	64.9
	Tractor	1	40%	84	220	71.1	67.2
	Combined LEQ					**75.7**	**71.7**
Grading							
	Grader	1	40%	85	220	72.1	68.2
	Tractor	2	40%	84	220	74.1	70.2
	Dozer	1	40%	82	220	68.8	64.9
	Combined LEQ				220	**77.0**	**73.0**
Building Construction							
	Crane	1	16%	81	300	65.0	57.1
	Generator	1	50%	81	300	65.0	62.0
	Tractor	1	40%	84	300	68.4	64.5
	Welder/Torch	3	40%	74	300	63.2	59.2
	Forklift	1	40%	80	300	64.4	60.5
	Combined LEQ					**72.6**	**68.4**
Paving							
	Tractor	1	40%	84	170	73.4	69.4
	Paver	1	50%	77	170	66.6	63.6
	Pavement Scarafier	1	20%	90	170	78.9	71.9
	Drum Mixer	1	50%	80	170	69.4	66.4
	Combined LEQ					**80.5**	**74.9**
Architectural Coating							
	Compressor (air)	1	40%	78	300	62.1	58.2
Combined LEQ						**62.1**	**58.2**
Infrastructure Improvement							
	Slurry Trenching Machine	1	50%	80	200	68.4	65.3
	Paver	1	50%	77	200	65.2	62.1
	Roller	1	20%	80	200	68.0	61.0
	Dozer	1	40%	82	200	69.7	65.7
	Combined LEQ					**74.1**	**70.0**
Overlapping Phases							
Overlapping Phases							75.4
Overlapping Phases							75.7
Overlapping Phases							75.7
Overlapping Phases							75.7
Maximum Noise Level							**75.7**

Source for Ref. Noise Levels: RCNM, 2005

Noise Level Without Mitigation (dBA)										
Receiver	Floor	Day	Night	Ldn	Day	Night	Ldn	Day	Night	Ldn
		Standard Operations			Truck Deliveries and Loading			Trash Trucks		
1	1.Fl	35.7	35.2	41.7	44.7	44.7	51.1	59.9	59.9	66.3
2	1.Fl	36.9	36.4	42.9	46.8	46.8	53.2	61.0	61.0	67.4
3	1.Fl	38.4	37.7	44.3	50.6	50.6	57.0	62.2	62.2	68.6
4	1.Fl	46.2	45.7	52.2	61.6	61.6	68.1	63.4	63.4	69.8
5	1.Fl	46.3	45.7	52.2	61.8	61.8	68.3	63.2	63.2	69.6
6	1.Fl	46.3	45.8	52.3	62.0	62.0	68.4	62.9	62.8	69.2
7	1.Fl	46.3	45.7	52.2	62.1	62.1	68.5	62.3	62.3	68.7
8	1.Fl	46.1	45.5	52.0	62.1	62.1	68.5	61.0	60.9	67.4
9	1.Fl	45.9	45.3	51.8	61.8	61.8	68.2	60.2	60.2	66.6
10	1.Fl	45.6	45.0	51.5	61.5	61.5	67.9	59.5	59.5	65.9
11	1.Fl	45.3	44.6	51.1	60.9	60.9	67.4	59.1	59.1	65.5
12	1.Fl	44.9	44.3	50.8	60.4	60.4	66.9	58.3	58.2	64.6
13	1.Fl	35.5	34.2	40.9	50.6	50.6	57.0	42.4	42.2	48.7
14	1.Fl	37.1	36.5	43.0	49.3	49.3	55.7	40.9	40.6	47.0
15	1.Fl	36.7	36.1	42.6	46.5	46.5	52.9	40.3	40.0	46.4
16	1.Fl	31.6	30.8	37.3	38.2	38.2	44.6	39.1	38.9	45.4
17	1.Fl	33.8	32.8	39.4	45.3	45.3	51.7	39.5	39.2	45.6
18	1.Fl	39.9	39.4	45.9	55.1	55.1	61.5	43.4	43.1	49.6
19	1.Fl	39.5	39.1	45.6	55.0	55.0	61.4	41.3	41.0	47.4
20	1.Fl	38.9	38.5	44.9	54.1	54.1	60.5	40.3	39.9	46.4
21	1.Fl	38.3	38.0	44.4	53.5	53.5	59.9	39.5	39.2	45.7
22	1.Fl	37.7	37.4	43.8	52.7	52.7	59.1	38.7	38.4	44.9
23	1.Fl	37.4	37.1	43.6	52.3	52.3	58.7	38.4	38.1	44.5
24	1.Fl	28.3	27.8	34.3	36.3	36.3	42.7	49.1	49.0	55.5
25	1.Fl	28.5	28.1	34.6	38.2	38.2	44.6	48.6	48.5	55.0
26	1.Fl	28.4	28.0	34.4	39.0	39.0	45.4	47.5	47.4	53.8
27	1.Fl	30.4	30.1	36.5	39.9	39.9	46.3	43.1	42.9	49.3
28	1.Fl	30.2	29.8	36.3	38.1	38.1	44.6	41.2	41.1	47.5
29	1.Fl	29.7	29.3	35.8	38.2	38.2	44.7	40.7	40.6	47.0
30	1.Fl	32.4	32.2	38.7	38.6	38.6	45.0	38.4	38.3	44.7
31	1.Fl	31.9	31.8	38.2	39.8	39.8	46.2	38.2	38.2	44.6

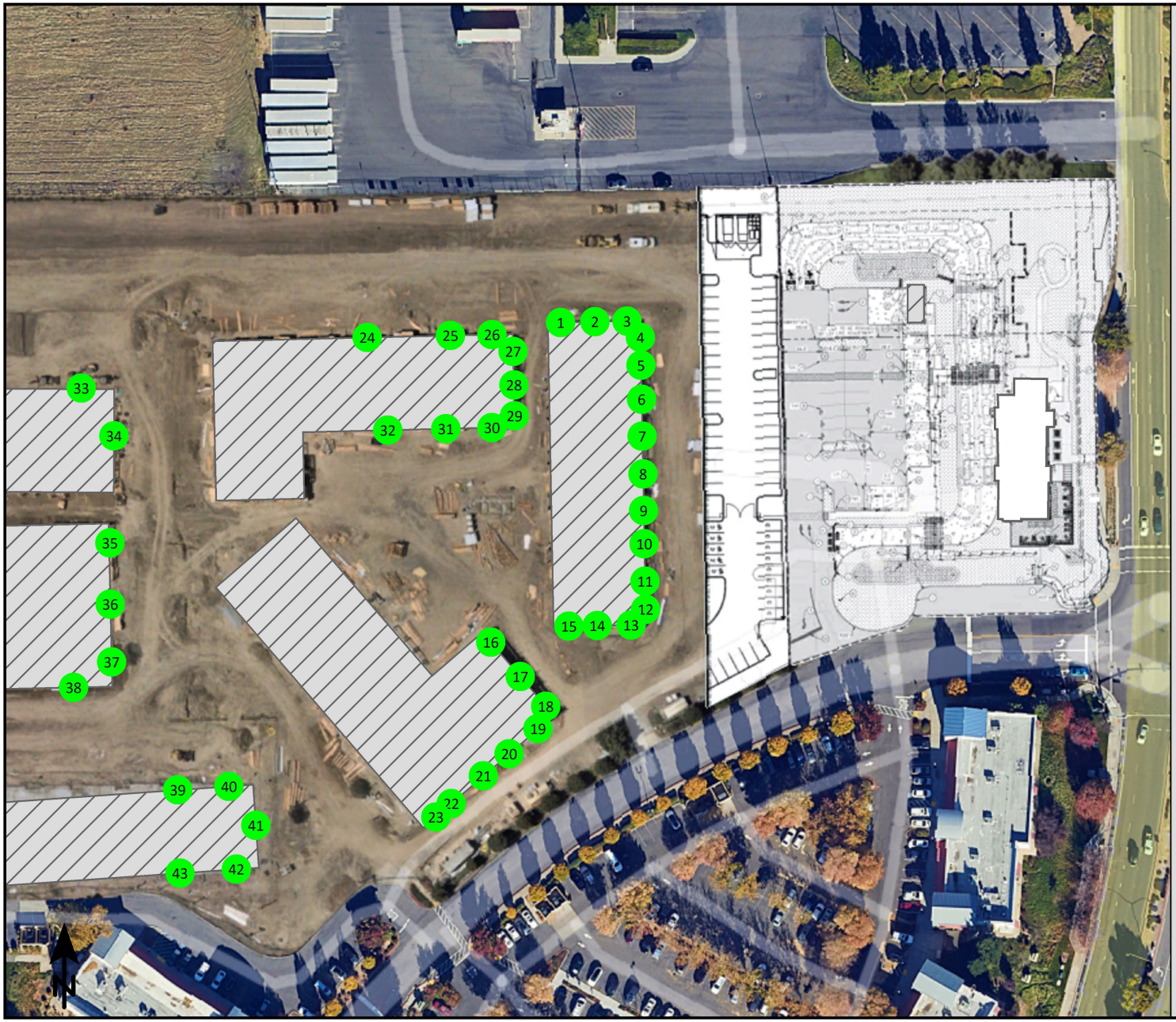
Noise Level Without Mitigation (dBA)										
Receiver	Floor	Day	Night	Ldn	Day	Night	Ldn	Day	Night	Ldn
		Standard Operations			Truck Deliveries and Loading			Trash Trucks		
32	1.Fl	31.2	31.1	37.5	38.3	38.3	44.7	38.0	38.0	44.4
33	1.Fl	23.9	23.7	30.2	32.0	32.0	38.4	35.5	35.3	41.7
34	1.Fl	25.6	25.5	31.9	32.3	32.3	38.7	34.6	34.5	40.9
35	1.Fl	24.9	24.6	31.0	32.8	32.8	39.2	33.8	33.8	40.2
36	1.Fl	23.3	23.0	29.5	29.7	29.7	36.1	33.9	33.9	40.3
37	1.Fl	23.7	23.4	29.9	30.1	30.1	36.5	33.1	33.1	39.5
38	1.Fl	17.4	17.1	23.6	26.4	26.4	32.8	31.3	31.3	37.7
39	1.Fl	24.6	24.3	30.8	30.9	30.9	37.3	33.9	33.8	40.3
40	1.Fl	25.5	25.4	31.8	32.6	32.6	39.0	33.6	33.6	40.1
41	1.Fl	25.9	25.6	32.1	32.8	32.8	39.3	33.9	33.9	40.3
42	1.Fl	19.0	18.6	25.0	28.0	28.0	34.4	28.9	28.9	35.3
43	1.Fl	18.1	17.8	24.2	27.2	27.2	33.6	28.2	28.2	34.6
44	1.Fl	32.2	32.0	38.4	38.5	38.5	44.9	41.3	41.3	47.7
1	2.Fl	36.0	35.5	42.0	45.1	45.1	51.5	60.1	60.1	66.6
2	2.Fl	37.2	36.7	43.2	47.3	47.3	53.7	61.3	61.3	67.7
3	2.Fl	38.8	38.2	44.7	51.1	51.1	57.5	62.5	62.5	68.9
4	2.Fl	46.6	46.2	52.6	62.0	62.0	68.4	63.6	63.6	70.0
5	2.Fl	46.7	46.2	52.7	62.2	62.2	68.6	63.4	63.4	69.8
6	2.Fl	46.7	46.2	52.7	62.3	62.3	68.7	63.1	63.1	69.5
7	2.Fl	46.6	46.1	52.6	62.4	62.4	68.8	62.6	62.5	69.0
8	2.Fl	46.4	45.9	52.4	62.3	62.3	68.8	61.3	61.3	67.7
9	2.Fl	46.2	45.7	52.2	62.1	62.1	68.5	60.7	60.7	67.1
10	2.Fl	45.9	45.4	51.9	61.8	61.8	68.2	60.1	60.0	66.5
11	2.Fl	45.5	45.0	51.5	61.3	61.3	67.7	59.7	59.7	66.1
12	2.Fl	45.2	44.7	51.2	60.9	60.9	67.3	58.9	58.9	65.3
13	2.Fl	35.7	34.7	41.3	51.4	51.4	57.8	43.4	43.2	49.6
14	2.Fl	37.4	36.9	43.4	49.6	49.6	56.1	41.8	41.5	48.0
15	2.Fl	37.0	36.5	43.0	46.8	46.8	53.3	41.3	41.0	47.5
16	2.Fl	32.9	32.2	38.7	39.6	39.6	46.0	40.6	40.5	46.9
17	2.Fl	34.6	33.8	40.3	45.9	45.9	52.4	40.9	40.7	47.1
18	2.Fl	40.3	39.9	46.4	55.7	55.7	62.1	44.3	44.1	50.6

Noise Level Without Mitigation (dBA)										
Receiver	Floor	Day	Night	Ldn	Day	Night	Ldn	Day	Night	Ldn
		Standard Operations			Truck Deliveries and Loading			Trash Trucks		
19	2.Fl	39.8	39.4	45.9	55.6	55.6	62.0	41.5	41.2	47.7
20	2.Fl	39.1	38.7	45.2	54.7	54.7	61.1	40.5	40.2	46.6
21	2.Fl	38.5	38.2	44.7	54.0	54.0	60.4	39.7	39.4	45.8
22	2.Fl	37.9	37.6	44.1	53.2	53.2	59.6	38.9	38.6	45.0
23	2.Fl	37.6	37.3	43.8	52.8	52.8	59.2	38.5	38.2	44.6
24	2.Fl	28.8	28.5	34.9	35.3	35.3	41.7	49.5	49.5	55.9
25	2.Fl	29.2	28.8	35.3	36.9	36.9	43.3	49.1	49.0	55.5
26	2.Fl	29.0	28.6	35.1	37.6	37.6	44.0	48.0	48.0	54.4
27	2.Fl	32.8	32.5	39.0	40.4	40.4	46.8	44.4	44.3	50.7
28	2.Fl	32.7	32.4	38.9	39.7	39.7	46.1	42.9	42.9	49.3
29	2.Fl	32.2	31.9	38.4	39.6	39.6	46.0	42.5	42.4	48.9
30	2.Fl	34.3	34.2	40.6	40.3	40.3	46.7	39.5	39.5	45.9
31	2.Fl	34.0	33.8	40.3	41.3	41.3	47.7	39.4	39.4	45.8
32	2.Fl	33.3	33.2	39.6	40.1	40.1	46.5	39.2	39.2	45.6
33	2.Fl	26.2	26.0	32.5	33.3	33.3	39.7	36.5	36.3	42.7
34	2.Fl	28.2	28.1	34.5	34.3	34.3	40.7	36.2	36.2	42.6
35	2.Fl	27.3	27.1	33.6	34.7	34.7	41.1	35.4	35.4	41.8
36	2.Fl	26.0	25.9	32.3	32.1	32.1	38.5	35.5	35.5	41.9
37	2.Fl	26.4	26.2	32.7	32.5	32.5	38.9	34.9	34.9	41.3
38	2.Fl	17.5	17.2	23.6	26.3	26.3	32.7	32.6	32.6	39.0
39	2.Fl	27.3	27.1	33.5	33.5	33.5	39.9	35.7	35.7	42.1
40	2.Fl	28.2	28.1	34.5	34.9	34.9	41.3	35.7	35.7	42.1
41	2.Fl	28.4	28.3	34.7	35.2	35.2	41.6	35.9	35.9	42.3
42	2.Fl	19.0	18.6	25.0	28.3	28.3	34.7	29.2	29.2	35.6
43	2.Fl	18.2	17.8	24.3	27.4	27.4	33.8	28.5	28.5	34.9
1	3.Fl	36.8	36.4	42.8	45.1	45.1	51.5	60.2	60.2	66.6
2	3.Fl	39.7	39.4	45.9	47.4	47.4	53.8	61.3	61.3	67.7
3	3.Fl	41.2	40.8	47.3	51.2	51.2	57.6	62.5	62.5	68.9
4	3.Fl	47.2	46.8	53.2	62.0	62.0	68.4	63.6	63.6	70.0
5	3.Fl	47.2	46.8	53.3	62.2	62.2	68.6	63.5	63.4	69.9
6	3.Fl	47.2	46.8	53.3	62.3	62.3	68.7	63.1	63.1	69.5

Noise Level Without Mitigation (dBA)										
Receiver	Floor	Day	Night	Ldn	Day	Night	Ldn	Day	Night	Ldn
		Standard Operations			Truck Deliveries and Loading			Trash Trucks		
7	3.Fl	47.1	46.7	53.1	62.4	62.4	68.8	62.6	62.6	69.0
8	3.Fl	47.0	46.5	52.9	62.3	62.3	68.8	61.3	61.3	67.7
9	3.Fl	46.7	46.2	52.7	62.1	62.1	68.5	60.7	60.7	67.1
10	3.Fl	46.4	45.9	52.4	61.8	61.8	68.2	60.1	60.1	66.5
11	3.Fl	46.0	45.5	52.0	61.4	61.4	67.8	59.8	59.7	66.1
12	3.Fl	45.7	45.2	51.6	60.9	60.9	67.3	59.0	58.9	65.3
13	3.Fl	37.1	36.2	42.7	51.5	51.5	57.9	44.9	44.8	51.2
14	3.Fl	38.3	37.8	44.3	49.9	49.9	56.3	43.6	43.4	49.8
15	3.Fl	38.0	37.5	44.0	47.4	47.4	53.8	43.3	43.1	49.6
16	3.Fl	35.8	35.4	41.8	42.5	42.5	48.9	43.6	43.6	50.0
17	3.Fl	36.9	36.4	42.9	47.0	47.0	53.4	43.9	43.7	50.2
18	3.Fl	41.2	40.9	47.4	55.8	55.8	62.2	46.2	46.0	52.5
19	3.Fl	40.2	39.9	46.3	55.6	55.6	62.0	42.2	41.9	48.4
20	3.Fl	39.5	39.2	45.7	54.7	54.7	61.1	41.1	40.8	47.3
21	3.Fl	39.0	38.6	45.1	54.0	54.0	60.4	40.3	40.1	46.5
22	3.Fl	38.3	38.0	44.5	53.3	53.3	59.7	39.5	39.2	45.7
23	3.Fl	38.0	37.7	44.2	52.9	52.9	59.3	39.2	38.9	45.3
24	3.Fl	30.7	30.4	36.8	35.0	35.0	41.4	49.9	49.9	56.3
25	3.Fl	31.4	31.1	37.5	36.3	36.3	42.7	49.7	49.6	56.1
26	3.Fl	31.5	31.2	37.6	36.9	36.9	43.4	48.9	48.9	55.3
27	3.Fl	36.7	36.5	43.0	43.4	43.4	49.8	46.9	46.9	53.3
28	3.Fl	36.7	36.5	43.0	43.3	43.3	49.7	46.1	46.1	52.5
29	3.Fl	36.4	36.2	42.7	43.3	43.3	49.7	45.8	45.8	52.2
30	3.Fl	36.9	36.8	43.3	43.0	43.0	49.4	41.7	41.6	48.1
31	3.Fl	36.6	36.5	42.9	43.5	43.5	50.0	41.5	41.5	47.9
32	3.Fl	35.9	35.9	42.3	42.5	42.5	48.9	41.1	41.1	47.5
33	3.Fl	29.4	29.3	35.7	35.6	35.6	42.0	38.1	38.1	44.5
34	3.Fl	31.4	31.3	37.8	37.2	37.2	43.6	38.5	38.5	44.9
35	3.Fl	30.3	30.2	36.6	37.0	37.0	43.4	37.6	37.6	44.0
36	3.Fl	29.7	29.6	36.0	35.4	35.4	41.8	37.5	37.5	43.9
37	3.Fl	29.9	29.7	36.2	35.7	35.7	42.1	37.2	37.2	43.6

Noise Level Without Mitigation (dBA)										
Receiver	**Floor**	**Day**	**Night**	**Ldn**	**Day**	**Night**	**Ldn**	**Day**	**Night**	**Ldn**
		Standard Operations			**Truck Deliveries and Loading**			**Trash Trucks**		
38	3.Fl	20.0	19.7	26.2	27.3	27.3	33.7	34.5	34.5	41.0
39	3.Fl	30.6	30.5	36.9	36.6	36.6	43.1	38.1	38.1	44.5
40	3.Fl	31.6	31.5	38.0	38.1	38.1	44.5	38.5	38.5	44.9
41	3.Fl	31.9	31.8	38.2	38.5	38.5	44.9	38.6	38.6	45.0
42	3.Fl	21.3	20.9	27.4	29.2	29.2	35.6	30.9	30.9	37.3
43	3.Fl	20.6	20.3	26.7	28.4	28.4	34.8	30.2	30.2	36.6

Source: SoundPLAN Essential 5.1.



Sacramento Raising Cane's - Receiver Locations

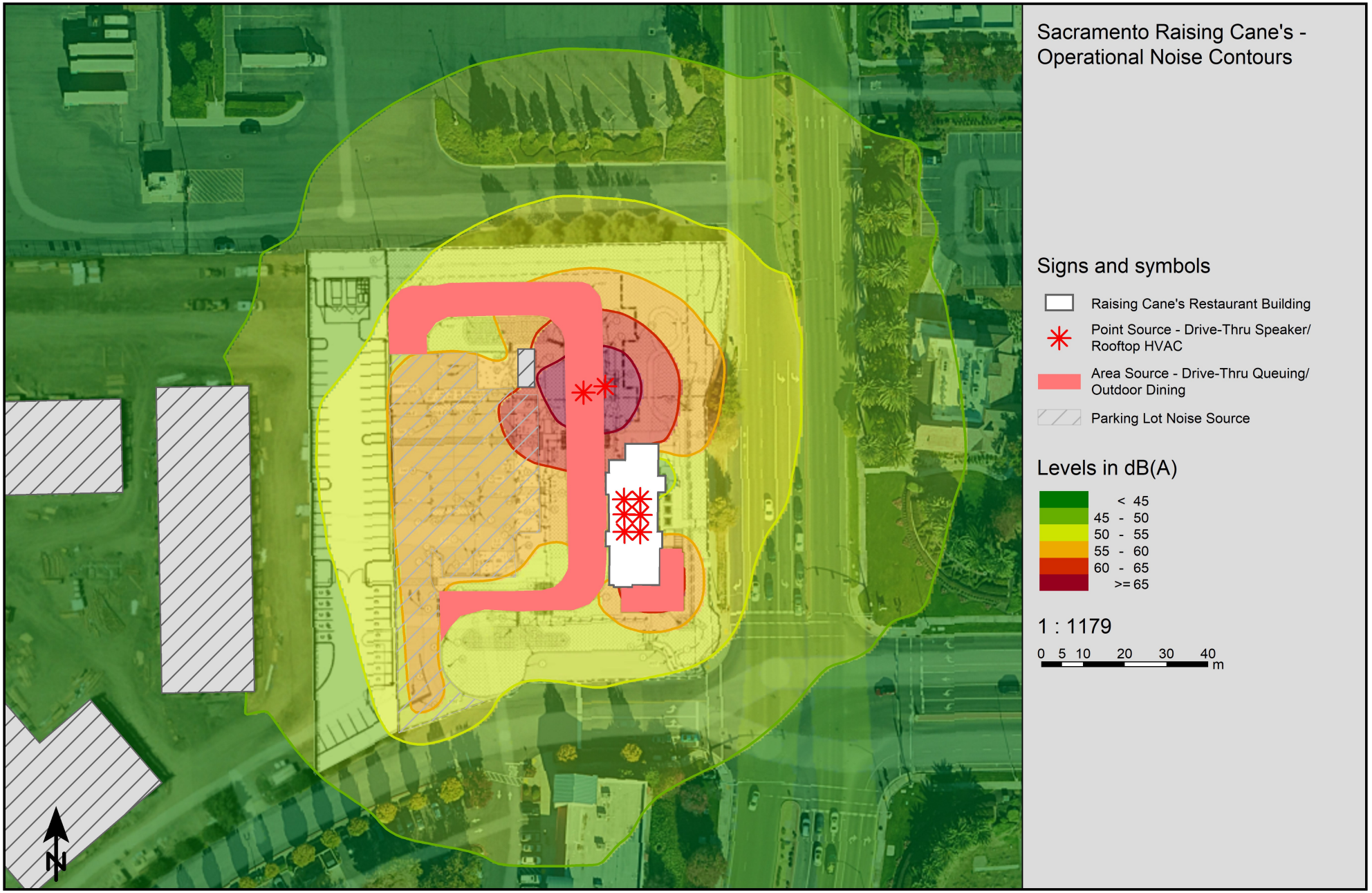
Signs and symbols

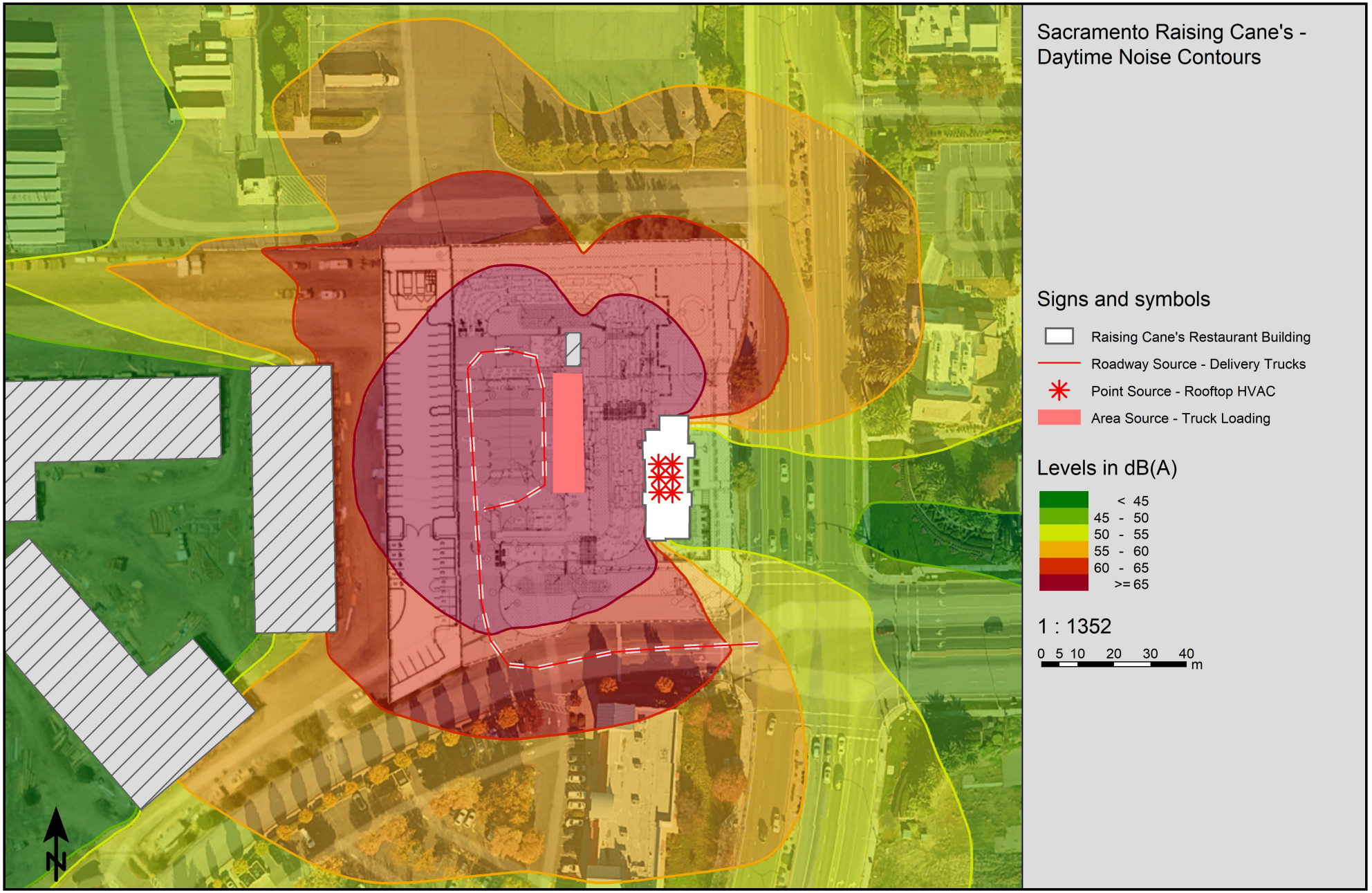
Raising Cane's Restaurant Building

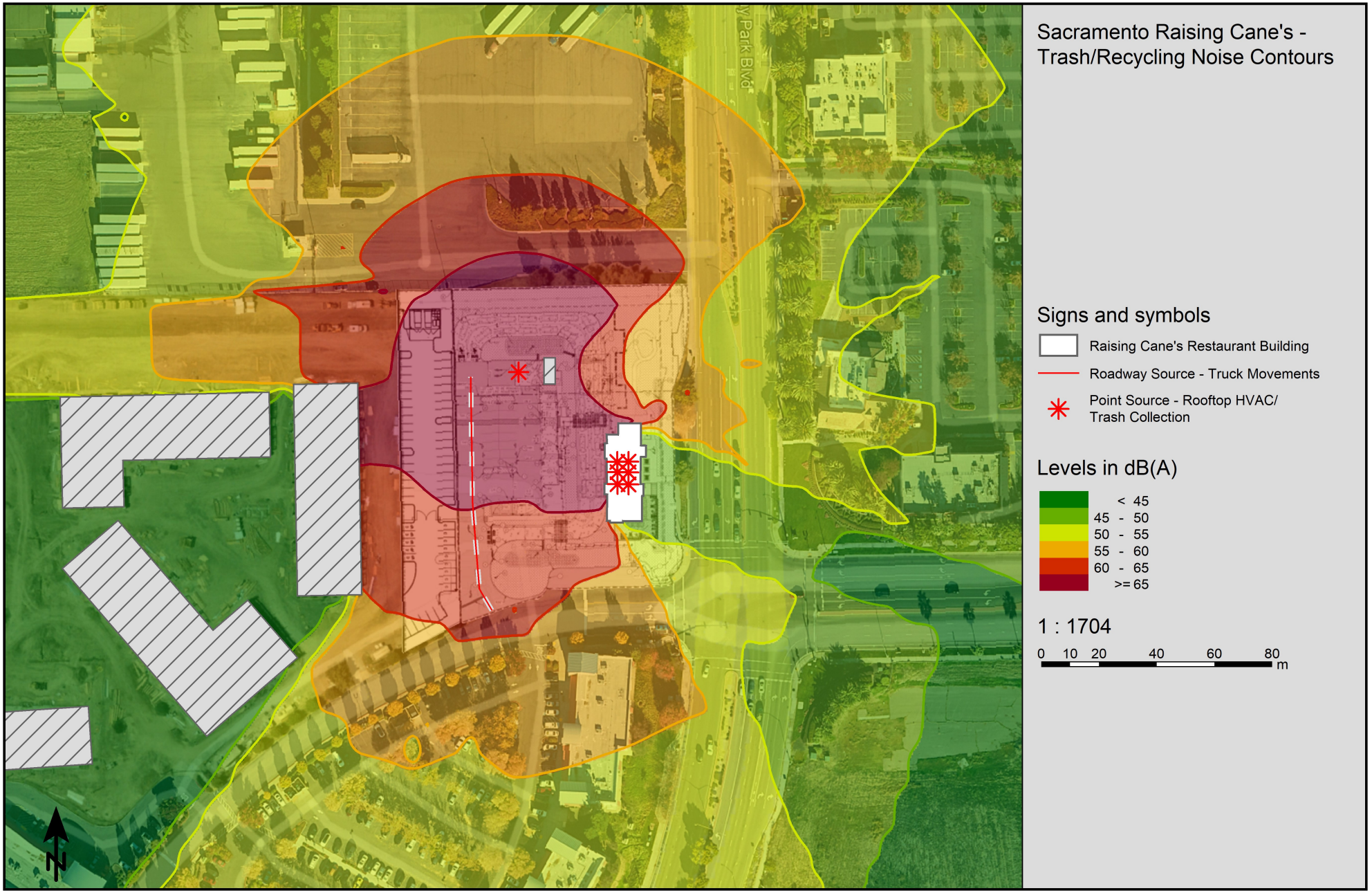
Receiver at building

1 : 1358

0 5 10 20 30 40 m


Sacramento Raising Cane's - Operational Noise Contours
Signs and symbols
Raising Cane's Restaurant Building
Point Source - Drive-Thru Speaker/ Rooftop HVAC
Area Source - Drive-Thru Queuing/ Outdoor Dining
Parking Lot Noise Source
Levels in dB(A)
< 45
45 - 50
50 - 55
55 - 60
60 - 65
>= 65
1 : 1179
0 5 10 20 30 40
m
N


Sacramento Raising Cane's - Daytime Noise Contours
Signs and symbols
Raising Cane's Restaurant Building
Roadway Source - Delivery Trucks
Point Source - Rooftop HVAC
Area Source - Truck Loading
Levels in dB(A)
< 45
45 - 50
50 - 55
55 - 60
60 - 65
>= 65
1 : 1352
0 5 10 20 30 40
m
N


Sacramento Raising Cane's -
Trash/Recycling Noise Contours
Signs and symbols
Raising Cane's Restaurant Building
Roadway Source - Truck Movements
Point Source - Rooftop HVAC/
Trash Collection
Levels in dB(A)
< 45
45 - 50
50 - 55
55 - 60
60 - 65
>= 65
1 : 1704
0 10 20 40 60 80
m
N

Appendix D
Traffic Impact Study for the Natomas Fountains Apartments

Traffic Impact Study

Natomas Fountains Apartments
Sacramento, California

December 10, 2021

Prepared for:

City of Sacramento

Prepared by:

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Sacramento, California 95814

Phone: (916) 858-5800



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INTRODUCTION

Purpose

This report documents the results of a traffic assessment completed for the proposed Natomas Fountains Apartments development project (the "proposed project" or "project"), located at the northwest corner of the Gateway Boulevard intersection with North Freeway Boulevard in Sacramento, California.

The purpose of this study is to prepare a focused traffic access and queuing assessment of the proposed project on the adjacent transportation system, limited to consideration of Cumulative plus Proposed Project Conditions. More specifically, this study has been requested to assess project impacts to the adjacent intersections, and to assess project site access and circulation. Furthermore, the purpose of this study is to determine whether the mitigations proposed in the project's Initial Study/Mitigated Negative Declaration[1] are still required, no longer required, or need revision based on the change in land use. This study was performed in accordance with the City of Sacramento's *Traffic Impact Guidelines*[2] and the 2035 General Plan policies.

Project Description

As detailed in site plan, the project proposes to construct up to 303 apartments initially with future increase of densification to 315 multi-family housing units on the vacant, 12.3-acre project site. The project is expected to access the surrounding roadway network via two full access driveways along the existing Natomas Village Shopping Center driveway and a single right-out (exit) only driveway along Truxel Road. Further, we understand that this project site was previously analyzed as a shopping center in 2016[1], a land use expected to generate more trips than the currently proposed project. The project location and study intersections are shown in Figure 1. The proposed site plan is shown in Figure 2.

Study Area

The following intersections are included in this evaluation:

1. Truxel Road @ North Marketplace
2. Gateway Park Boulevard @ North Freeway Boulevard
3. Truxel Road @ Gateway Park Boulevard

This traffic impact analysis was conducted for the above-listed study facilities for the following scenarios:

A. Cumulative (2035) No Project Conditions
B. Cumulative (2035) plus Proposed Project Conditions

[1] *Final Transportation Impact Study for the Natomas Fountains Project*, Fehr & Peers, June 22, 2016.
[2] *Traffic Impact Guidelines*, City of Sacramento, February 1996 (updated with the adopted LOS policies of the *Sacramento 2035 General Plan*).



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Figure 1
Project Vicinity Map



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Figure 2
Proposed Project Site Plan

ENVIRONMENTAL SETTING

Project Area Roadways

The following are descriptions of the primary roadways near the project site.

- Truxel Road is a north-south arterial roadway bordering the western edge of the project site. Along the project frontage, Truxel Road has three lanes traveling north and four lanes traveling south, separated by a raised median. In addition, sidewalks and bicycle lanes are provided along the proposed project frontage.
- Gateway Park Boulevard is a north-south arterial roadway bordering the eastern edge of the project site. North of the project site, Gateway Park Boulevard has two lanes in each direction and widens to three lanes just south of the project site. In addition, the roadway travel lanes are separated by a raised median. Sidewalk and bicycle lanes are provided along the proposed project frontage.
- North Freeway Boulevard is an east-west frontage road located north of I-80 and southeast of the project site. In the vicinity of the site, North Freeway Boulevard has three lanes in each direction, separated by a raised median. In addition, sidewalks and bicycle lanes are provided along the proposed project frontage.
- Natomas Village Shopping Center driveway is located along the western leg of the intersection of Gateway Park Boulevard with North Freeway Boulevard and extends to Truxel Boulevard. This roadway serves the adjacent shopping center and is restricted to right-turn movements in and out at the intersection with Truxel Road due to the raised center median.
- North Marketplace is an access driveway for the shopping center located southwest of the project site along the southbound travel direction of Truxel Road.

Existing Canal

The project site is located adjacent to a drainage canal with levee access that runs north-south along the western edge of the site. Access to the canal is provide by a maintenance only driveway located south of the bridge along Truxel Road. It is anticipated that this driveway will not be altered by the proposed project.

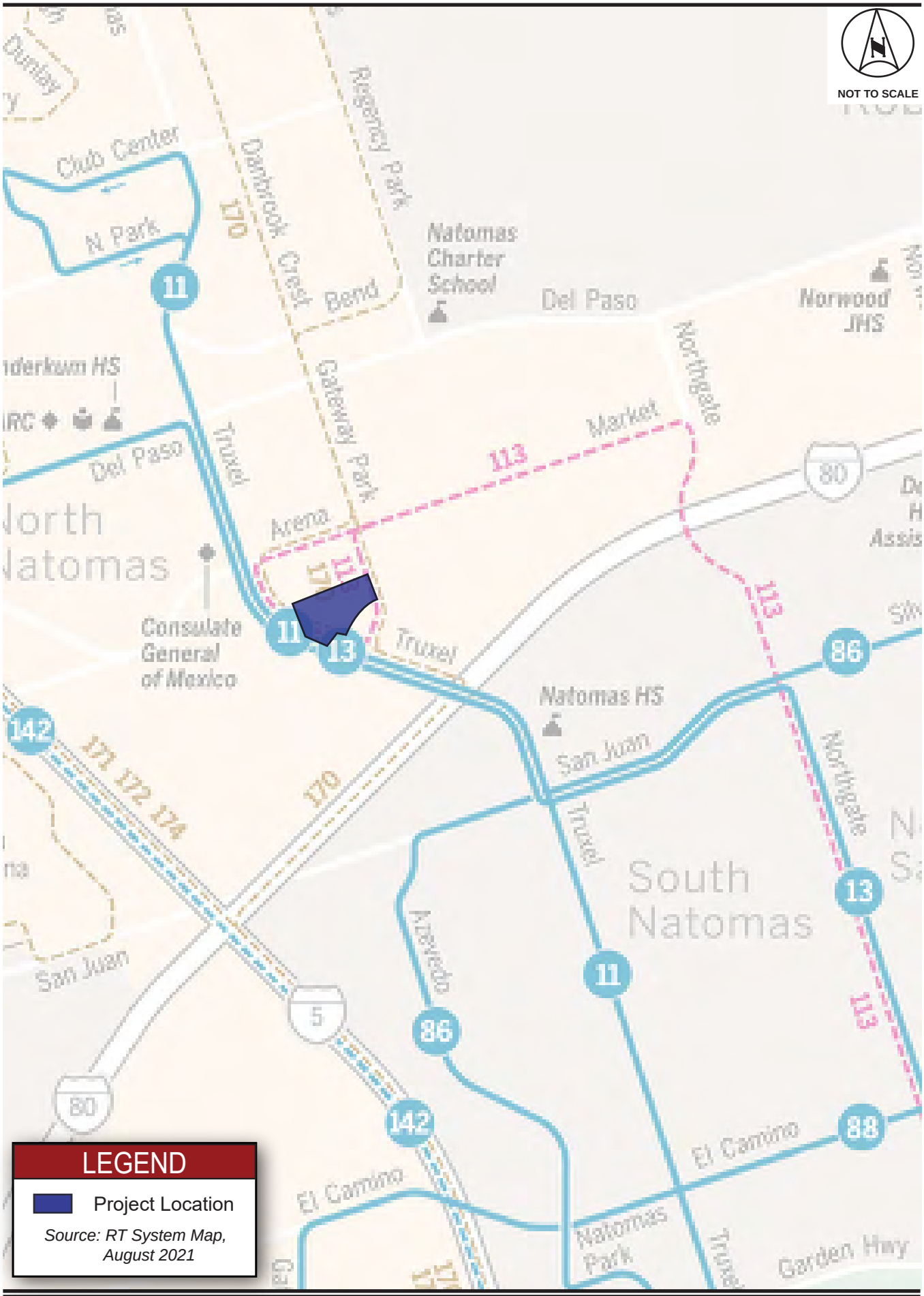
Public Transit System

Sacramento Regional Transit District (RT) provides transit service in the greater Sacramento metropolitan area. The project is directly adjacent to RT Routes 11, 13, and 113 [3]. The nearest transit stops are located on Truxel Road in the immediate vicinity of the intersection of Truxel Road with North Marketplace. Figure 3 depicts the transit routes within the project vicinity.

Existing/Planned Bicycle and Pedestrian Facilities

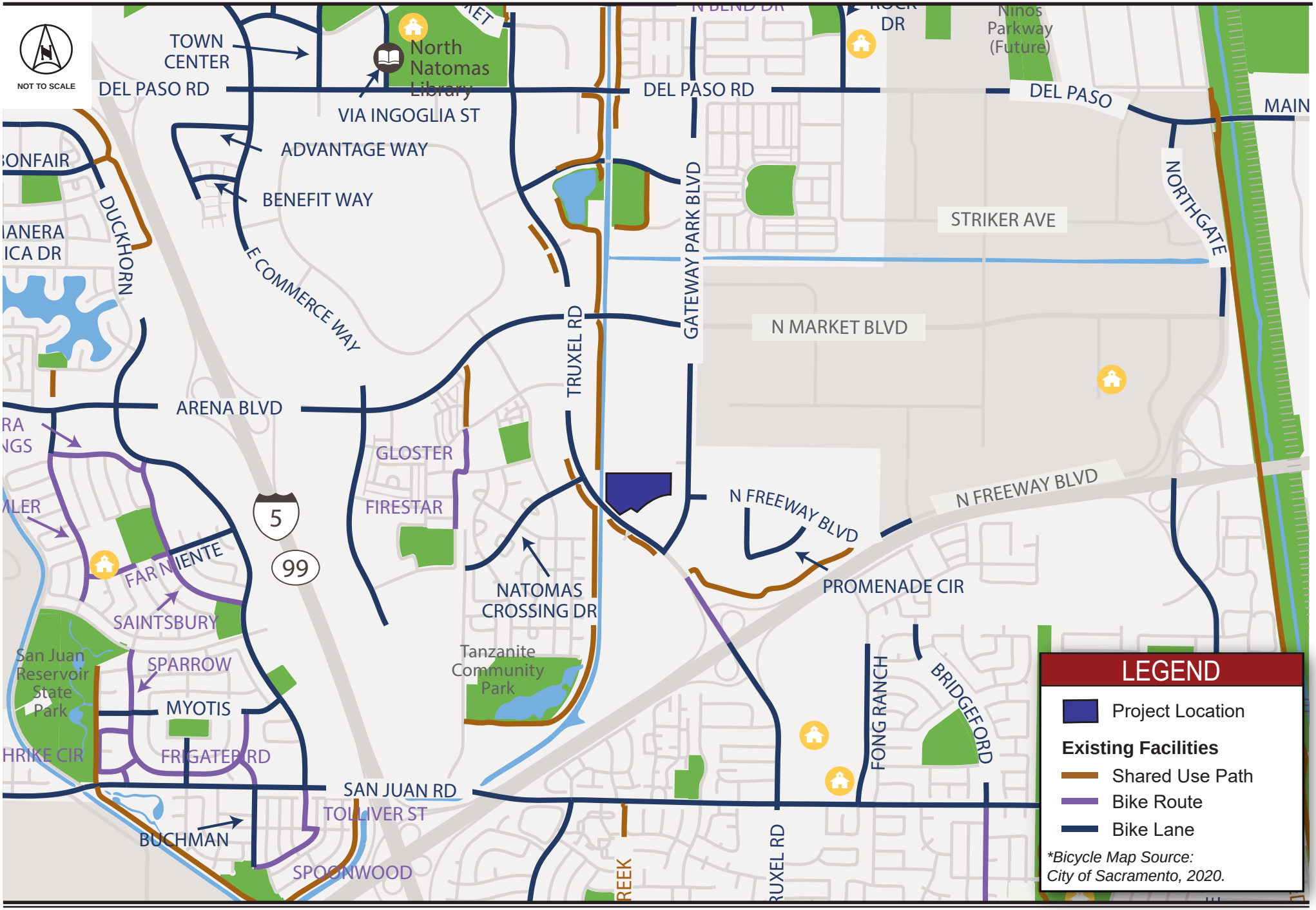
There are currently Class II bike lanes along both sides of Truxel Road, Gateway Park Boulevard, North Freeway Boulevard, North Marketplace, and Natomas Crossing Drive adjacent to the project location. In addition, the drainage canal located west of the project site currently offers an off-street Class I bike path located along the western edge, with proposed expansion along the eastern edge that would provide access along Truxel Road adjacent to the project site, as shown in the City's *Bicycle Master Plan*[4]. This off-street Class I bike path is also proposed to be extended south to connect with Airport Road. Review of aerial imagery shows that this southern extension has been constructed along the western side of the canal from Truxel Road to its terminus at Tanzanite Community Park. Figure 4 provides a detailed map of bicycle facilities within the project vicinity.

[3] Sacramento Regional Transit District, https://www.sacrt.com/systemmap/2021/SacRT_SystemMap_Effective-August-29-2021.pdf.
[4] *Sacramento Bikeway User Map*. City of Sacramento. Summer 2020.



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Figure 3
Sacramento RT Transit System Map



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Figure 4
City of Sacramento Bikeways

There are currently sidewalks along both sides of Truxel Road, Gateway Park Boulevard, and North Freeway Boulevard within the project vicinity. In addition, streetlights are installed along these roadways. At the intersection of Gateway Park Boulevard with North Freeway Boulevard, four striped crosswalks are provided with corresponding pedestrian signal heads. Similarly, at the intersection of Gateway Park Boulevard with Truxel Boulevard, three striped crosswalks are provided with corresponding pedestrian signal heads. Existing and proposed pedestrian facilities are contained in the City's *Pedestrian Master Plan*[5].

Existing Intersection Geometry

Figure 5 illustrates the study facilities, existing traffic control, and existing lane configurations.

Cumulative Traffic Volumes

This study considered Cumulative (2035) No Project traffic volumes to be equivalent to the 2016 traffic study's[1] Cumulative (2035) Plus Proposed Project conditions, which assumed the site is developed consistent with its 2035 General Plan land use (Regional Commercial). While the 2016 study provided traffic volumes and analysis for PM peak-hour conditions, the AM peak-hour conditions were not analyzed due to the previously proposed project's shopping center land use. This study's Cumulative (2035) No Project AM peak-hour traffic volumes were developed separately using existing traffic counts and growth factors from the previous model used by the 2016 traffic study. Traffic volumes for weekday AM and PM peak-hours occur between the hours of 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. Cumulative (2035) turning movement volumes are presented in Figure 6.

REGULATORY SETTING

Methodology

A field review was completed of the immediate project vicinity and study facilities to observe existing operations and lane configurations, vehicle storage lengths, existing traffic control, speed limits, lane utilization, adjacent land uses, and other readily apparently features for the study facilities that were deemed to be relevant to the study. Weekday peak-hour conditions are used as the time period during which to assess the transportation facilities' operations both existing, and with the addition of project traffic volumes.

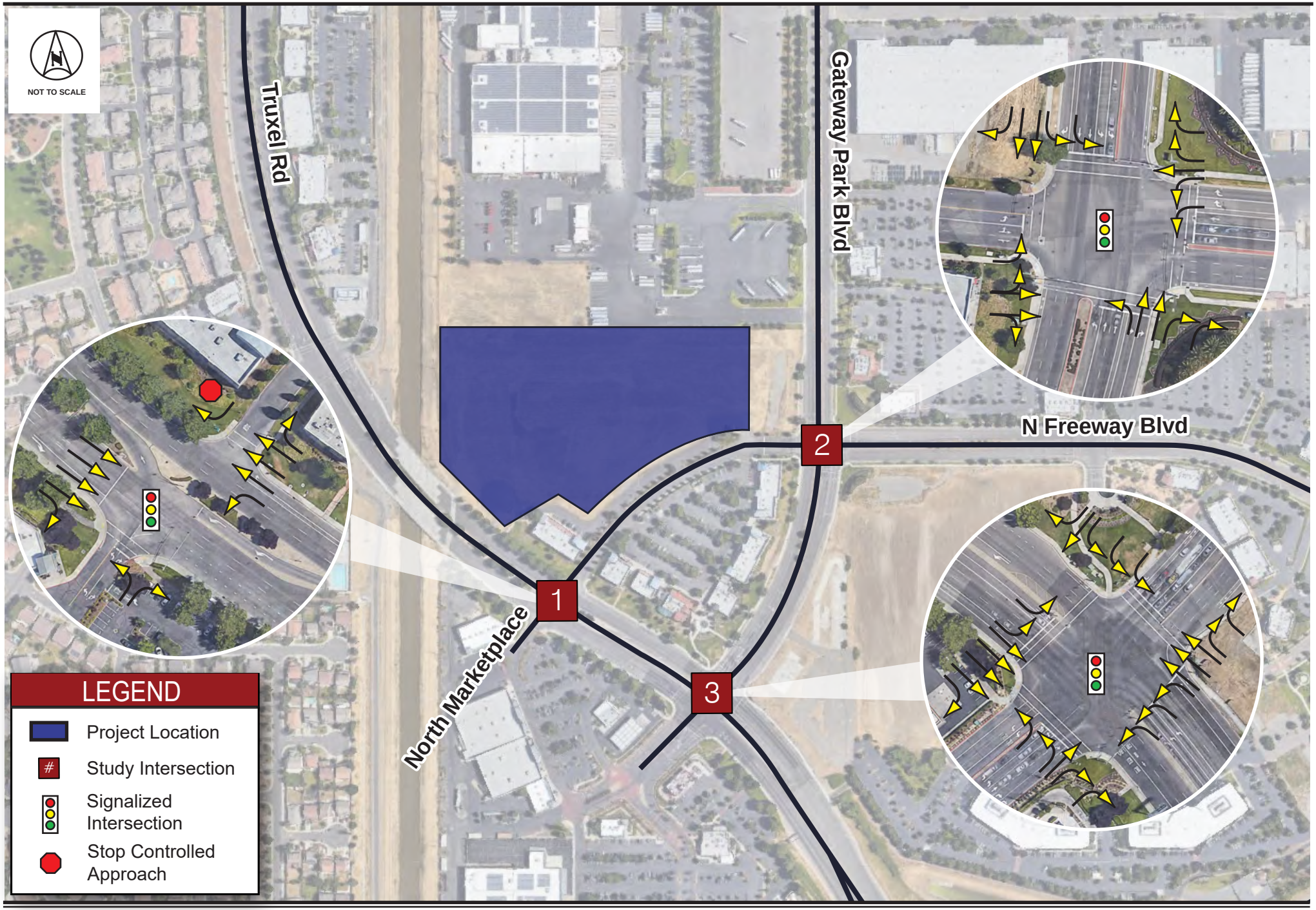
Analysis of transportation facility significant environmental impacts is based on the concept of Level of Service (LOS). The LOS of a facility is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity.

City of Sacramento

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:

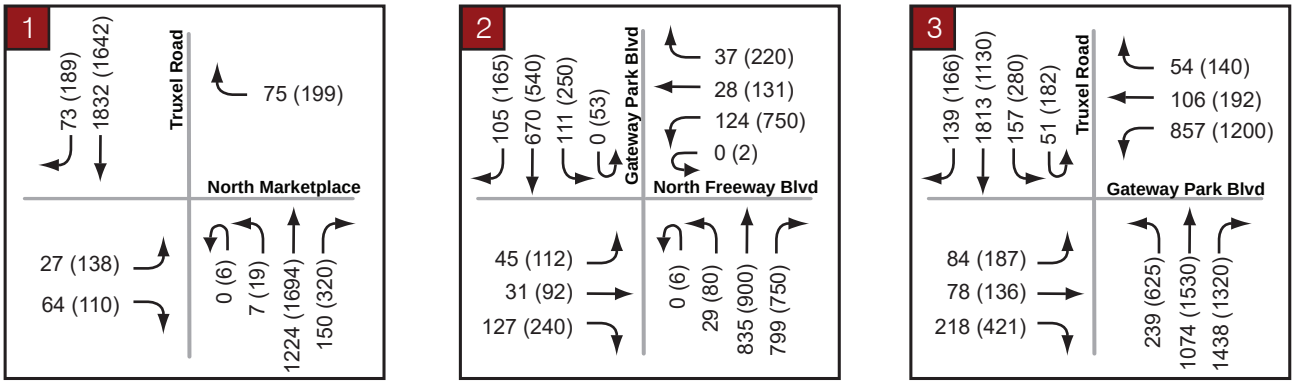
> ***Policy M 1.2.2*** *The City shall implement a flexible context-sensitive Level of Service (LOS) standard, and will measure traffic operations against the vehicle LOS thresholds established in this policy. The City will measure vehicle LOS based on the methodology contained in the latest version 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*

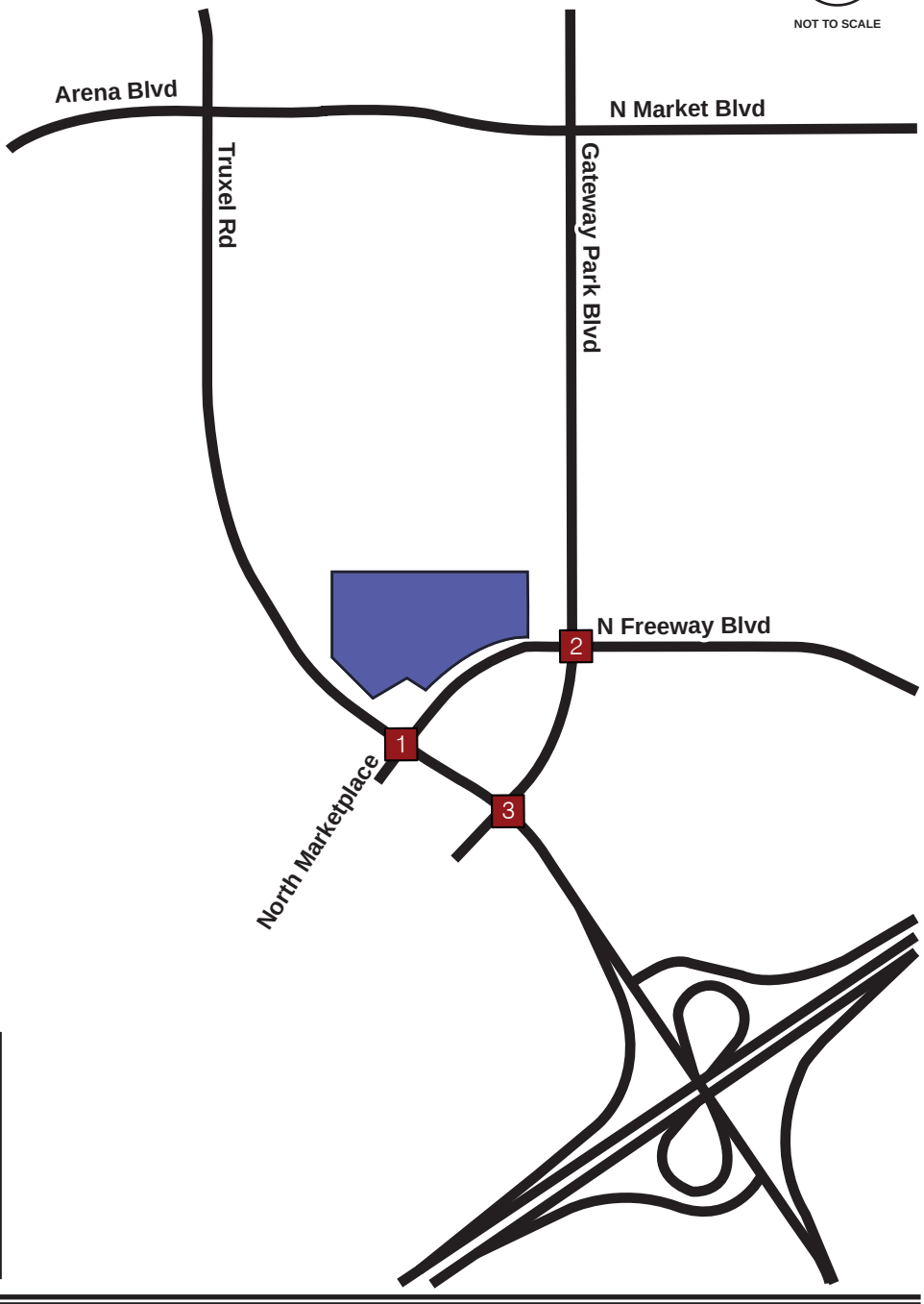
[5] *Pedestrian Master Plan*, City of Sacramento Department of Transportation, September 2006.



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Figure 5
Study Intersections, Traffic Control, and Lane Geometries





LEGEND

#	Study Intersection
XX (XX)	AM (PM) Peak-hour Turning Movement Volumes

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Figure 6
Cumulative (2035) No Project Peak-Hour Traffic Volumes

conditions including AM and PM peak hour with certain exceptions mapped on Figure M1 (and listed in the 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 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).*

In accordance with *General Plan* Policy M 1.2.2, LOS E is considered acceptable for this study as the project will be located within a ½ mile of a light rail station under Cumulative Conditions. As discussed in the 2016 traffic study[1], Regional Transit's proposed expansion of the Green Line light rail route will run parallel to Truxel Road and provide two new light rail stations within the project vicinity. This expansion will improve accessibility of transit systems for bicyclists and pedestrians from the project site.

Intersection Analysis

Levels of Service for this study were determined using methods defined in the *Highway Capacity Manual, 6th Edition* and Simtraffic© software. The HCM includes procedures for analyzing side-street stop controlled (SSSC), all-way stop controlled (AWSC), and signalized intersections. Table 1 presents intersection LOS definitions as defined in the HCM.

Table 1 – Intersection Level of Service Criteria

Level of Service (LOS)	Unsignalized	Signalized
	Average Control Delay (sec/veh)	Control Delay per Vehicle (sec/veh)
A	≤ 10	≤ 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F	> 50	> 80

Source: Highway Capacity Manual, 6th Edition
Note: SSSC delay is based on the worst approach movement.

Results of Cumulative (2035) No Project Conditions Analysis

Table 2 presents the peak-hour intersection operating conditions for this analysis scenario. As indicated in Table 2, the study intersections operate between LOS A and E in the AM and PM peak-hours. Analysis worksheets for this scenario are provided in Appendix A.

Table 2 – Cumulative (2035) No Project Intersection Levels of Service

ID	Intersection	Control	Peak Hour	Cumulative (2035) No Project	
				Delay (sec)	LOS
1	Truxel Road @ North Marketplace[+]	Signal	AM	7.8	A
			PM	70.8	E
2	Gateway Park Boulevard @ North Freeway Boulevard	Signal	AM	27.3	C
			PM	59.0	E
3	Truxel Road @ Gateway Park Boulevard	Signal	AM	37.9	D
			PM	72.7	E

Notes: **Bold** represents unacceptable operations.
Variances in delay and LOS from the 2016 traffic study may be due to differences in Synchro geometries and Simtraffic settings.
[+] Intersection #1 is partially signalized on the west side. Only signalized movements are reflected in the reported delay and LOS. As such, the values in the table are greater than those listed in the Simtraffic report.

INTRODUCTION TO ANALYSIS

Project Land Use and Circulation

Land Use

As previously discussed and shown in Figure 2, the project proposes to construct a maximum of 315 multi-family housing units on the vacant, 12.3-acre project site per current zoning requirements.

Access

The project is located at the northwest corner of the Gateway Park Boulevard intersection with North Freeway Boulevard. The proposed site plan (Figure 2) shows access to the surrounding roadway network is proposed via two full access driveways along the existing Natomas Village Shopping Center private driveway. The site access locations are displayed in Figure 2.

Trip Generation

The number of trips anticipated to be generated by the proposed project in both Near-Term and Cumulative conditions was approximated using data included in the Trip Generation Manual, 10th Edition, published by the Institute of Transportation Engineers (ITE). ITE Land Use Code 221 (Multifamily Housing (Mid-Rise)) was used to represent the apartment development component. The regression equation was used to estimate the number of trips anticipated to be generated by the project. Initially 303 apartment units were used to produce the Near-Term condition while 315 apartment units were used to produce the Cumulative condition. ITE Land Use Code 934 (Fast-Food Restaurant with Drive-Thru) was used to represent the restaurant project component of the eastern parcel development with trips generated based on an anticipated 3,400 SF. ITE Land Use Code 960 (Gasoline Station with Convenience Market) was used to represent the service station project component of the eastern parcel development with trips generated based on the anticipated number of fueling stations (sixteen gasoline, six electric). For the purposes of this analysis, the six electric charging stations were treated as equivalent to three gasoline fuel pumps based primarily on time to complete a transaction. The trips generated by the proposed project for the Near-Term and Cumulative conditions are presented in Table 3 and Table 4 respectively.

Table 3 – Near-Term Proposed Project Trip Generation

Land Use (ITE Code)	Size (ksf/Dwelling Units)	Daily Trips	AM Peak-Hour					PM Peak-Hour				
			Total Trips	In		Out		Total Trips	In		Out	
				%	Trips	%	Trips		%	Trips	%	Trips
2016 Traffic Study[+]												
Retail (820)	55.375	4,624	109	61%	67	39%	41	403	48%	194	52%	210
High-Turnover Sit-Down Restaurant (932)	31.605	4,019	342	55%	188	45%	154	311	60%	187	40%	125
Supermarket (850)	28.9	2,955	98	62%	61	38%	37	311	51%	159	49%	152
Gross Trips		11,598	549		316		232	1,025		540		487
Internal Trips		-580	-7		-4		-3	-80		-42		-38
Pass-by Trips		-4,146	-217		-124		-92	-353		-187		-166
Subtotal of Trips		6,872	325		188		137	592		311		283
Project Land Use Analysis												
Multifamily Housing, Mid-Rise (221)	303	1,650	101	26%	26	74%	75	128	61%	78	39%	50
Subtotal of Trips		**1,650**	**101**		**26**		**75**	**128**		**78**		**50**
Net New External Trips:		**-5,222**	**-224**		**-162**		**-62**	**-464**		**-233**		**-233**

Source: Trip Generation Manual, 10th Edition.

[+] *Final Transportation Impact Study for the Natomas Fountains Project (Trip Generation Manual, 9th Edition).* Fehr & Peers. June 22, 2016.

Table 4 – Cumulative Proposed Project Trip Generation

Land Use (ITE Code)	Size (ksf/Dwelling Units/# of Pumps)	Daily Trips	AM Peak-Hour					PM Peak-Hour				
			Total Trips	In		Out		Total Trips	In		Out	
				%	Trips	%	Trips		%	Trips	%	Trips
2016 Traffic Study[+]												
Retail (820)	55.375	4,624	109	61%	67	39%	41	403	48%	194	52%	210
High-Turnover Sit-Down Restaurant (932)	31.605	4,019	342	55%	188	45%	154	311	60%	187	40%	125
Supermarket (850)	28.9	2,955	98	62%	61	38%	37	311	51%	159	49%	152
Gross Trips		11,598	549		316		232	1,025		540		487
Internal Trips		-580	-7		-4		-3	-80		-42		-38
Pass-by Trips		-4,146	-217		-124		-92	-353		-187		-166
Subtotal of Trips		6,872	325		188		137	592		311		283
Project Land Use Analysis												
Multifamily Housing, Mid-Rise (221)	315	1,716	105	26%	27	74%	78	133	61%	81	39%	52
Drive-Thru Restaurant (934)	3.4	1,602	137	51%	70	49%	67	111	52%	58	48%	53
Convenience Market/Gas Station (960)	19	4,380	534	50%	267	50%	267	436	50%	218	50%	218
Gross Trips		7,698	776		364		412	680		357		323
Internal Trips (-16% of Gross)		-1,232	-124		-62		-62	-231		-118		-116
Pass-by Trips (-35% of Drive-Thru+Gas Station)		-2,094	-268		-135		-133	-191		-98		-93
Subtotal of Trips		4,373	384		167		218	258		142		114
Net New External Trips:		**-2,499**	**59**		**-21**		**81**	**-334**		**-169**		**-169**

Source: Trip Generation Manual, 10th Edition.

[+] *Final Transportation Impact Study for the Natomas Fountains Project (Trip Generation Manual, 9th Edition).* Fehr & Peers. June 22, 2016.

As shown in Table 3, the Near-Term proposed project is estimated to generate 1,650 new daily trips, with 101 and 128 trips occurring during the AM and PM peak-hours, respectively. In comparison to the shopping center land use analyzed in the 2016, the proposed residential project generates fewer daily, AM peak-hour, and PM peak-hour trips. Specifically, a reduction of 5,222 daily trips, 224 AM peak-hour trips, and 464 PM peak-hour trips is anticipated when comparing the proposed apartment land use to the shopping center land use. It should be noted that, as shown in Table 3, the previous shopping center land use implemented trip reductions due to the retail and restaurant components, while the currently proposed near-term land use is residential and would not warrant pass-by or internal trip reductions.

As shown in **Table 4**, the Cumulative proposed project (including both residential and non-residential components) is estimated to generate 4,373 new daily trips, with 384 and 258 trips occurring during the AM and PM peak-hours, respectively. In comparison to the shopping center land use analyzed in the 2016, the proposed residential project generates fewer daily and PM peak-hour trips while generating more AM peak-hour trips. Specifically, a reduction of 2,499 daily trips and 334 PM peak-hour trips with an increase of 59 AM peak-hour trips is anticipated when comparing the proposed project apartment, service station, and drive-thru restaurant land uses to the shopping center land use. While the proposed residential land use component would not warrant pass-by trip reductions, it is included in the internal capture trip reductions, while the pass-by trip reductions were applied to both the service station and drive-thru restaurant land uses consistent with ITE Trip Generation standards (and to be consistent with the prior project's trip generation estimates). Internal trip reduction to assess how the Project's residential and proximate commercial component trips might interact was generated using the NCHRP 684 Trip Capture Estimation Tool[6]. Pass-by trip reduction for the commercial components was generated by averaging the maximum Caltrans pass-by trip rate (15%)[7] and the average of the ITE pass-by trip rates (55%)[6].

Trip Distribution

Project traffic distribution was developed using knowledge of local traffic patterns and engineering judgement. For this study, the project trip assignment represents the difference between the trips generated by the newly proposed apartment land use and the shopping center land use previously proposed in the 2016 traffic study[1]. This comparison results in negative trip generation and trip assignment volumes. The proposed project trip distribution percentages and trip assignment are illustrated in **Figure 7** and **Figure 8**, respectively.

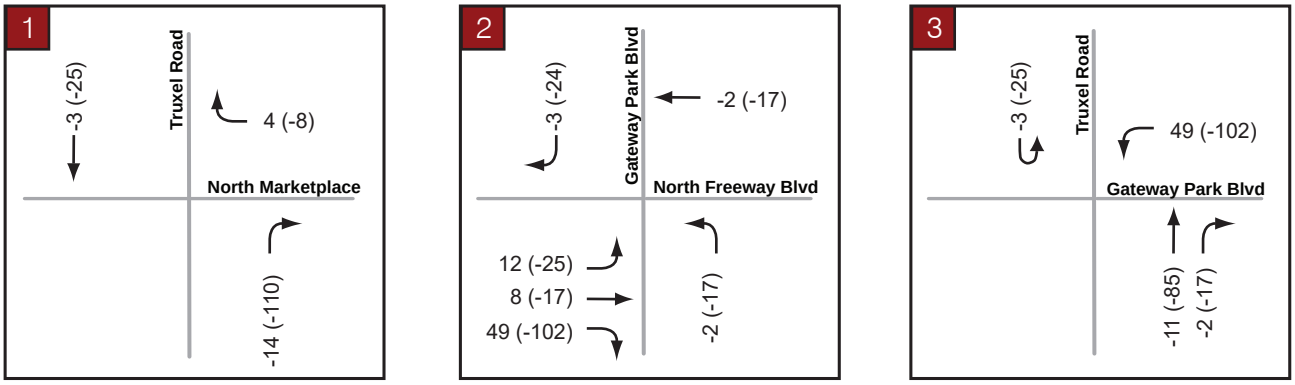
Trips using the intersection of Truxel Road and North Marketplace would be restricted to right-turn movements in and out due to the raised median along Truxel Road. Inbound project trips to the site would be limited to the proposed two driveways along the existing Natomas Village Shopping Center driveway. Due to the restriction of turning movements at the intersection of Truxel Road and North Marketplace, it is anticipated that all inbound trips traveling southbound on Truxel Road will perform a U-turn at the intersection of Truxel Road and Gateway Park Boulevard to access the project site.

[6] *Trip Generation Handbook (3rd Edition.* Institute of Transportation Engineers. August 2014.
[7] *Guide for the Preparation of Traffic Impact Studies.* State of California Department of Transportation. December 2002.

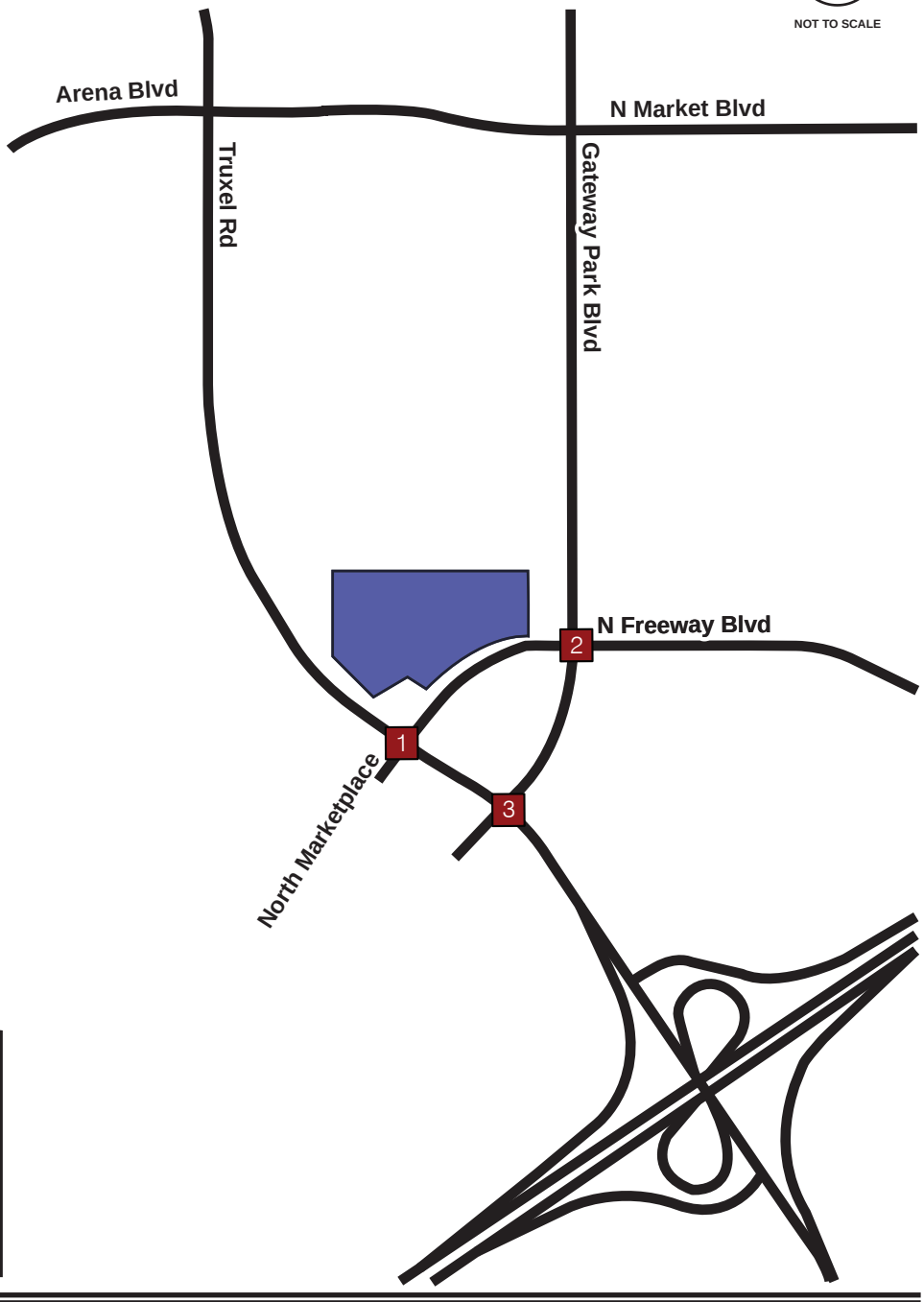


Kimley»Horn

Figure 7
Project Trip Distribution



NOT TO SCALE



LEGEND	
#	Study Intersection
XX (XX)	AM (PM) Peak-hour Turning Movement Volumes

Figure 8
Project Trip Assignment

IMPACTS AND MITIGATION

Method of Analysis

Trip assignment traffic volumes were added to the Cumulative (2035) No Project peak-hour traffic volumes. As the trip assignment volumes represent the change in project land use and are negative values, the resulting Cumulative (2035) plus Proposed Project traffic volumes are smaller than the Cumulative (2035) No Project traffic volumes. The following impact analysis compares traffic operating conditions of Cumulative (2035) No Project conditions and Cumulative (2035) plus Proposed Project conditions to determine whether the change in land use from the 2016 traffic study[1] will result in changes to the mitigations proposed in the 2016 traffic study.

Thresholds of Significance

For purposes of this analysis, an impact is considered significant if implementation of the project would have the effects described below. The standards of significance in this analysis are based upon current practice of the City of Sacramento. Standards defined in the City's *Traffic Impact Analysis Guidelines*[2] and policies defined in the City of Sacramento 2035 General Plan have been applied.

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); or
- 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.

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.

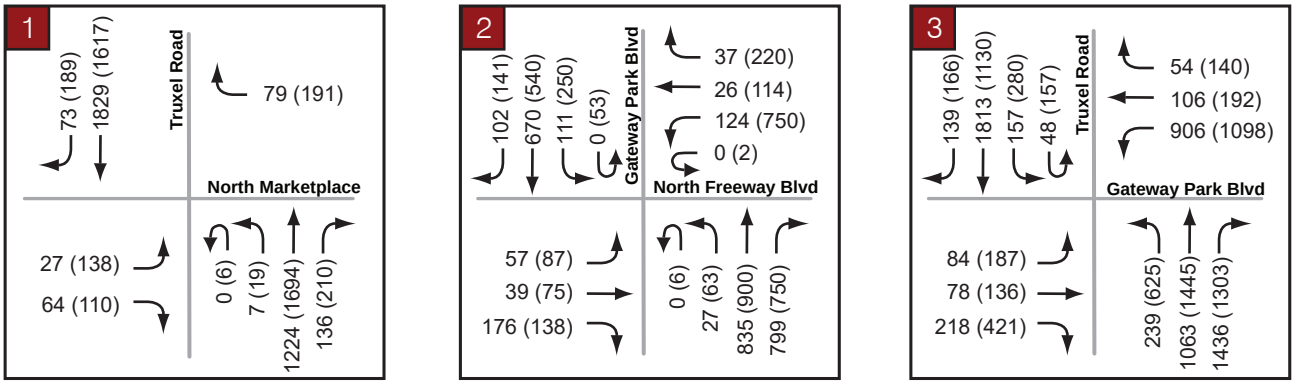
Construction-Related Traffic Impacts

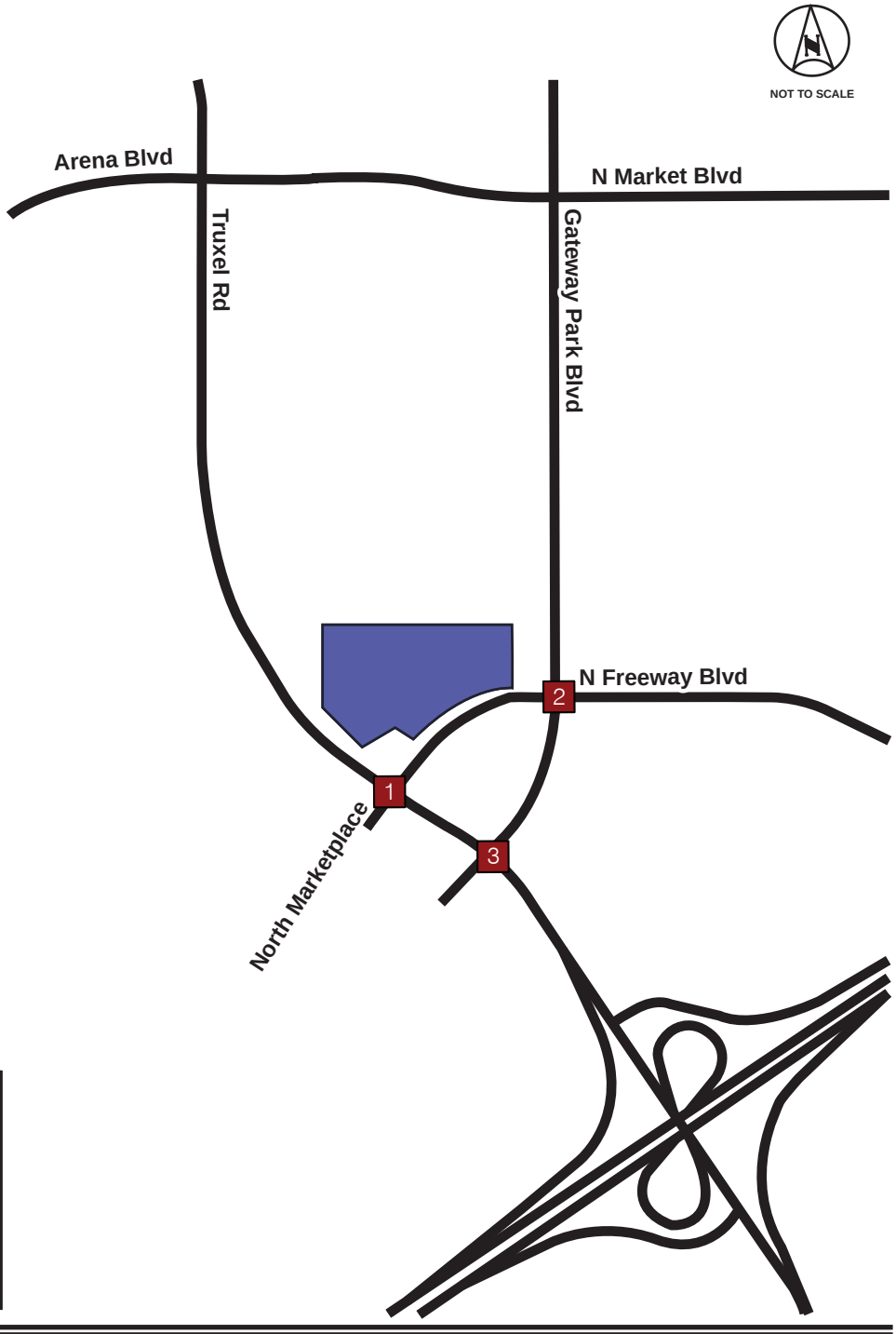
The project would have a temporarily significant impact during construction if it would:

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

Traffic Volumes & Intersection Geometry

Figure 9 provides the AM and PM peak-hour traffic volumes at the study intersections for the Cumulative (2035) plus Proposed Project conditions. There are no changes to traffic controls or lane geometry at the study intersections.





LEGEND

#	Study Intersection
XX (XX)	AM (PM) Peak-hour Turning Movement Volumes

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Figure 9
Cumulative (2035) plus Project Peak-Hour Traffic Volumes

Intersection Operations

As indicated in Table 5, the study intersections operate between LOS A and E with the addition of the proposed project in the AM and PM peak-hours. Analysis worksheets for this scenario are provided in Appendix B.

Table 5 – Cumulative (2035) No Project and Cumulative (2035) plus Proposed Project Intersection Levels of Service

ID	Intersection	Control	Peak Hour	Cumulative (2035) No Project		Cumulative (2035) plus Proposed Project	
				Delay (sec)	LOS	Delay (sec)	LOS
1	Truxel Road @ North Marketplace[+]	Signal	AM	7.8	A	7.4	A
			PM	70.8	E	35.4	D
2	Gateway Park Boulevard @ North Freeway Boulevard	Signal	AM	27.3	C	27.9	C
			PM	59.0	E	53.8	D
3	Truxel Road @ Gateway Park Boulevard	Signal	AM	37.9	D	38.3	D
			PM	72.7	E	71.1	E

Notes: **Bold** represents unacceptable operations.
Variances in delay and LOS from the 2016 traffic study may be due to differences in Synchro geometries and Simtraffic settings.
[+] Intersection #1 is partially signalized on the west side. Only signalized movements are reflected in the reported delay and LOS. As such, the values in the table are greater than those listed in the Simtraffic report.

Project-Specific Impacts and Mitigation Measures

Impact 1: Intersections

With the addition of the project, Intersections #1 and #2 will operate at LOS D or better, resulting in no significant impacts. Intersection #3 operates unacceptably at LOS E under no project and plus project conditions. However, the addition of the project does not increase the delay at this intersection by more than five seconds. Therefore, the project will not result in a significant impact at this study intersection.

Mitigation: No mitigation is required.

Impact 2: Transit System

The project would not adversely affect existing or planned transit operations. The project would not add noticeable transit demand. Any additional demand is anticipated to be adequately accommodated by the existing/planned transit system. The impacts of the project are considered to be ***less than significant***. Accordingly, no mitigation is required.

Mitigation: No mitigation is required.

Impact 3: Bicycle Facilities and Pedestrian Circulation

As previously discussed, there are existing and planned bicycle facilities in the vicinity of the project site. While the project will not result in removal of any existing or planned pedestrian facility or bikeway/bike lane, the project may add pedestrian and bicycle demand within the project site and nearby vicinity. The impacts of the project are considered to be ***less than significant***. Accordingly, no mitigation is required. However, the Project shall accommodate all proposed trails as part of the City's Bicycle Master Plan/General Plan through dedication and/or construction to the City's satisfaction.

Mitigation: No mitigation is required.

Impact 4: Construction-Related Traffic

Construction-related activity may potentially disrupt the existing transportation network in the surrounding project area. Possible temporary lane closures, street closures, sidewalk closures, and bikeway closures may impact pedestrian, bicycle, and transit accessibility. Heavy vehicles will access the site and may need to be staged for construction. As a result of these activities, existing roadway operation conditions may be degraded.

The City Code (City Code 12.20.030) requires that a construction traffic control plan is prepared and approved prior to the beginning of project construction, to the satisfaction of the City Traffic Engineer and subject to review by all affected agencies. All work performed during construction must conform to the conditions and requirements of the approved plan. The plan shall ensure that safe and efficient movement of traffic through the construction work zone(s) is maintained. At a minimum, the plan shall include the following:

- Time and day of street closures
- Proper advance warning and posted signage regarding street closures
- Provision of driveway access plan to ensure safe vehicular, pedestrian, and bicycle movements
- Safe and efficient access routes for emergency vehicles
- Provisions for pedestrian safety
- Use of manual traffic control when necessary
- Number of anticipated truck trips, and time of day of arrival and departure of trucks
- Provision of a truck circulation pattern and staging area with a limitation on the number of trucks that can be waiting and any limitations on the size and type of trucks appropriate for the surrounding transportation network

The plan must be available at the site for inspection by the City representative during all work. With the implementation of the traffic control plan, local roadways and freeway facilities will continue to operate at acceptable operating conditions and the impact of the project would be ***less than significant***.

Mitigation: No mitigation is required.

Comparison to Previous Land Use Mitigations

The purpose of this study is to determine whether the mitigations proposed in the project's Initial Study/Mitigated Negative Declaration are still required, no longer required, or need revision based on the change in land use. As described above, the project impacts are less than significant with the change in land use. Therefore, the previously recommended mitigations are no longer required.

PROJECT ON-SITE OPERATIONS AND ACCESS EVALUATION

On-Site Operations

Based on the project's site plan depicted in Figure 2, the proposed project is to be served by a several drive aisles throughout the site, providing access to buildings and parking. Access to these internal site roadways will be restricted by two security gates located at the full-access project driveways along the existing Natomas Village Shopping Center driveway. Additionally, an exit only vehicle gate will be located on the west side of the parcel.

Project Access

The following is a discussion of each of the project's access driveway intersections. Please note that all signing and striping necessary to accomplish the access conditions described below should be installed in a manner consistent with City of Sacramento standards and the requirements of the *California Manual on Uniform Traffic Control Devices (CMUTCD), 2014 Edition (Revision 6, March 30, 2021).*

While the previously completed analysis considered an exit-only driveway along Truxel Road was constructed, this driveway is no longer being considered by the project applicant. Therefore, a scenario was considered in which the only access to the proposed project is from the two driveways along the private roadway. To determine the impact of the project only having two access/egress points, the project trips that were originally determined to be leaving the project via the exit-only driveway along Truxel Road were rerouted to the westernmost driveway along the private road and were assumed to make a right-turn at

study Intersection #1. This resulted in an additional 8 trips in the AM peak-hour and 5 trips in the PM peak-hour being rerouted to turn right at Intersection #1. As fewer than 10 peak-hour trips for both the AM and PM peak-hours were using this driveway, no modifications were deemed necessary for the westernmost project driveway along the roadway connecting Gateway Park Boulevard to Truxel Road. In addition, the additional trips for the westbound approach at Intersection #1 resulted a minimal change in delay at the intersection and all results summarized previously for the plus project scenario remain. Analysis worksheets for this scenario are provided in **Appendix C**.

The minimum required throat depth (MRTD) was calculated for the Cumulative (2035) plus Proposed Project conditions for both the AM and PM peak-hours. As summarized in **Table 6**, the MRTD was calculated for the westbound approach of Intersection #1 under Cumulative (2035) plus Proposed Project conditions. The MRTD was calculated using methodologies consistent with the state of the practice in the Sacramento region and previously completed traffic studies for the City of Sacramento. To provide clarity, each column in **Table 6** is described in more detail as follows:

- TS: A variable with a value of 1 if a traffic signal is located on the major street within one quarter-mile of the study intersection
- Approach Volume: Hourly traffic volume for the driveway/minor street.
- Conflicting Volume (right): Number of vehicles traveling in conflict of a vehicle attempting to turn right. At the study intersection this includes the northbound through movements.
- RT Out: Number of vehicles attempting to turn right from the driveway/minor street to the major street
- RT%: Percent of right-turns from the total approach volume

As summarized in **Table 6**, the calculated MRTD for Intersection #1 is 75-feet and 150-feet for the AM and PM peak-hours, respectively. The available throat depth for the westbound approach of Intersection #1 is 250-feet. This distance achieves the MRTD and no adjustments to the distance are anticipated to be needed.

Table 6 – Minimum Required Throat Depth

Intersection		Peak-Hour	TS	Approach Volume	ConflVol (Right)	RT Out	RT%	Minimum Required Throat Depth (MRTD)	Available Storage
1	Truxel Road @ North Marketplace	AM	1	79	1224	79	100%	**75**	**250**
		PM	1	191	1694	191	100%	**150**	

In addition, the MRTD was calculated for a scenario in which the driveway along Truxel Road was not constructed. The additional trips did not result in an increase to the MRTD and the findings described previously (no adjustments are needed) hold for this scenario as well.

The existing driveway along the private drive closest to Gateway Park Boulevard (Access Point #1 shown in **Figure 10**) was reviewed to determine whether it is adequate as currently constructed or whether it needs to be relocated or redesigned prior to servicing Parcels 1, 2, and 3. Based on the site plan provided in **Figure 2**, the vehicle queuing described below, and the number of trips anticipated to use this driveway, it was determined that the driveway is adequate for the near-term residential use, but will need to include at least 150 feet (6 vehicles) of throat depth for the future non-residential uses (see **Figure 10** for storage used for vehicles using Access Point #1). However, most vehicles departing from the future non-residential uses will be making a left towards the eastbound approach at the Gateway Park Boulevard intersection with North Freeway Boulevard (Intersection #2) and thus, sufficient storage behind the stop bar should be provided for those vehicles departing from the non-residential uses. Access Point #1 may be restricted from allowing this movement as shown in **Figure 11**, so sufficient storage should be made for these departing

vehicles at Access Point #2 should a concrete barrier be constructed along the eastbound approach at Intersection #2.

Vehicle Queuing at Intersections

To assess the impacts of the project of offsite vehicle queues, the 95th percentile queues were analyzed for the study intersections. Table 7 compares the calculated vehicle queue lengths to available storage for each movement. The shaded cells represent movements where the calculated queues exceed the available storage by more than one vehicle length (25 feet). Under Cumulative (2035) No Project Conditions, the northbound left and the eastbound queues at the intersection of Gateway Park Boulevard at North Freeway Boulevard (Intersection #2) exceed the available storage during the PM peak-hour. The northbound queue is reduced for Cumulative (2035) plus Project Conditions due to the fewer number of vehicle trips generated by the residential land uses, but still exceeds the available storage. It is recommended that the project applicant work with the City to optimize signal timings at Intersection #2 to alleviate the northbound queue.

As shown in Figure 11, the majority of the eastbound traffic at this location is anticipated to queue behind the STOP sign located along the existing Natomas Village Shopping Center driveway (Access Point #1), providing an additional 370-feet of available storage. While the eastbound queues are not anticipated to impact roadway operations if vehicles keep this internal intersection clear, to improve safety if vehicles do not adhere to keeping the intersection clear it is recommended that a physical median be constructed from the stop bar at the intersection back approximately 230-feet as shown in orange in Figure 11. This physical median would restrict left-turning vehicles from Access Point #1 and force them to use the westernmost driveway, Access Point #2. This would affect not only the project and the future non-residential uses, but also the existing retail uses to the south, shaded in teal in Figure 11. However, based on the vehicle travel patterns that exist today, it is unlikely that this will cause many vehicles to have to reroute their trips and will increase the safety for vehicles traveling through this area by removing the issue of queued vehicles blocking vehicles attempting to turn left towards the eastbound approach at Intersection #2.

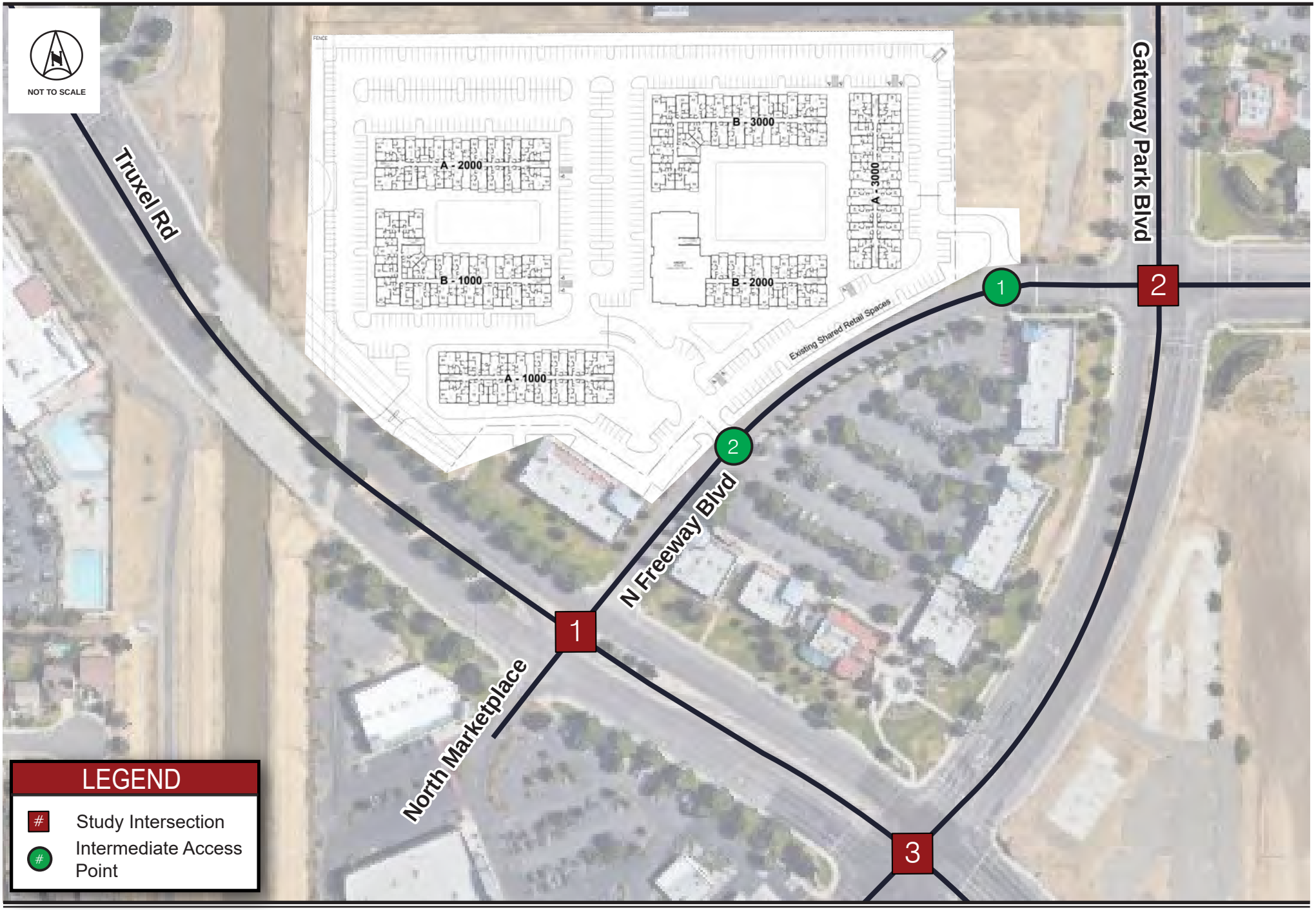
It is important to note that ninety-five percent of the time during peak-hours, the vehicle queuing will be less than or equal to those reported. Analysis sheets that include the anticipated vehicle queues are presented in Appendix A and Appendix B.

Table 7 – Intersection Queuing Evaluation Results

Intersection / Analysis Scenario	Movement	AM Peak-Hour		PM Peak-Hour	
		Available Storage (ft)	95th % Queue (ft)	Available Storage (ft)	95th % Queue (ft)
#1, Truxel Road @ North Marketplace	WBR				
Cumulative (2035)		250	45	250	95
Cumulative (2035) plus Project			49		104
#2, Gateway Park Boulevard @ North Freeway Boulevard	NBL				
Cumulative (2035)		200	147	200	227
Cumulative (2035) plus Project			150		217
	SBR				
Cumulative (2035)		145	112	145	140
Cumulative (2035) plus Project			104		111
	EBLT				
Cumulative (2035)		95	112	95	301
Cumulative (2035) plus Project			171		199
	EBR				
Cumulative (2035)		95	114	95	140
Cumulative (2035) plus Project			130		135

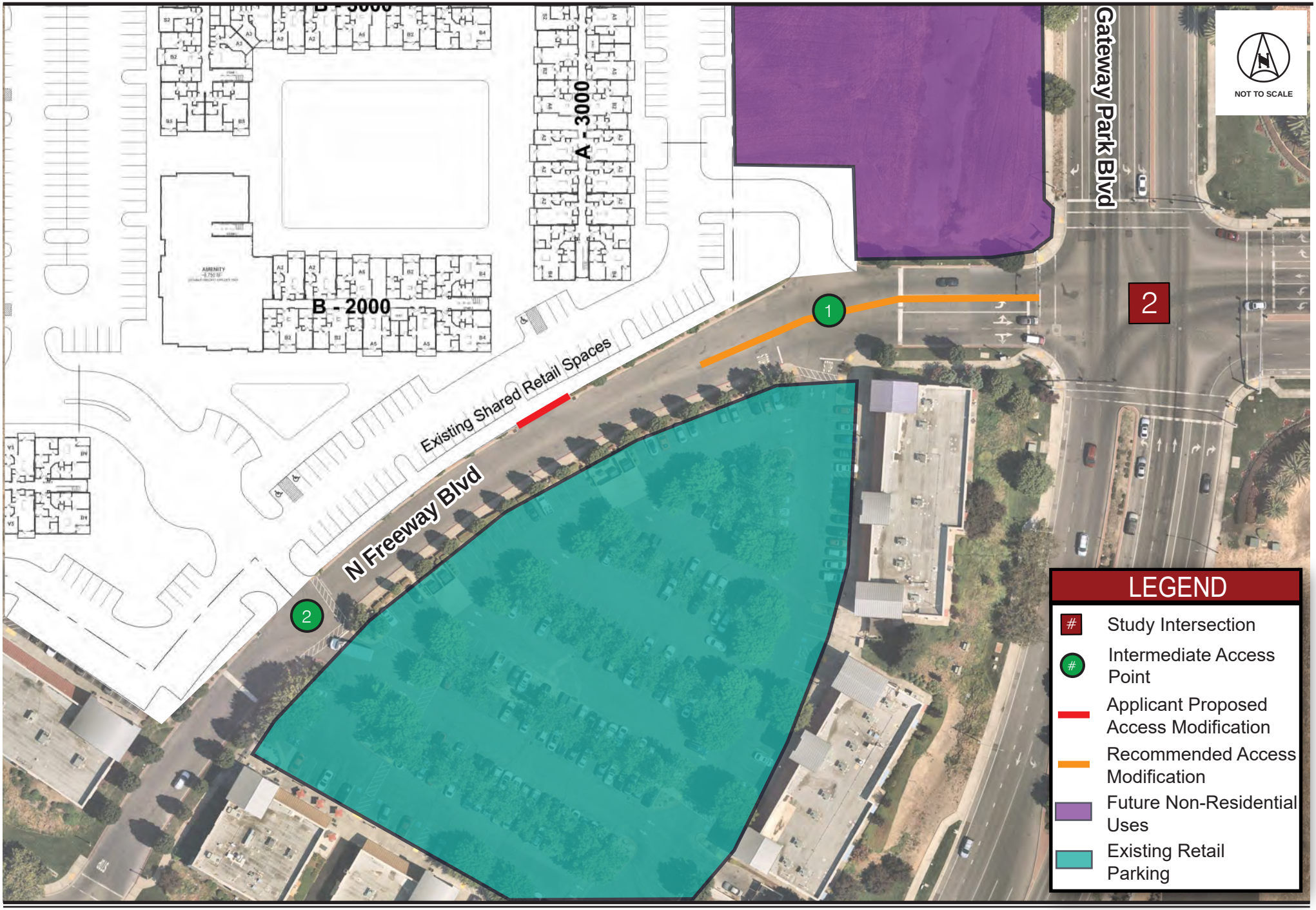
Source: SimTraffic© v10.

Note: Shading indicates queue exceeds storage by more than one vehicle length, assumed to be 25 feet



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Figure 10
Intermediate Access Points



Kimley»Horn

Figure 11
Proposed Access Modifications

Pedestrian Access and Circulation

There are currently sidewalks present along both sides of Truxel Road, Gateway Park Boulevard, and North Freeway Boulevard within the project vicinity. As shown in the proposed project site plan (Figure 2), the project will construct approximately 190-feet of new sidewalk along a portion of the northern edge of the existing Natomas Village Shopping Center driveway. The project site plan does not appear to include sidewalk continuing from the new portion to the existing northwestern curb ramp of the Gateway Park Boulevard intersection. However, it is recommended that sidewalk be constructed where property frontage is present to promote connectivity and allow access for shared-use pedestrians. The project does not propose to extend new sidewalk to Truxel Road, as the project does not have sufficient frontage along the existing Natomas Village Shopping Center private driveway. In addition, crosswalks are present at each study intersection. The project site plan provided in Figure 2 shows a pedestrian access point at the easternmost project driveway. The current pedestrian access and circulation is adequate for the proposed project.

SUMMARY OF RECOMMENDATIONS

Intersections

- All intersections operate under acceptable conditions during Cumulative (2035) plus Proposed Project Conditions.
- Since proposed project's land use does not result in any significant impacts to the study intersections, as opposed to the to the mixed land use analyzed in the 2016 traffic study[1], the proposed mitigations that were identified in the 2016 traffic study are no longer required.

Project Access

- The intersection of Truxel Road at North Marketplace (Intersection #1) meets minimum required throat depth (MRTD) standards.
- All signing and striping should be installed in a manner consistent with City of Sacramento standards and the requirements of the *California Manual on Uniform Traffic Control Devices (CMUTCD), 2014 Edition (Revision 6, March 30, 2021).*
- Without an exit-only driveway along Truxel Road, no impacts or deficiencies were found with the fewer than ten peak-hour additional vehicles using the westernmost driveway along the private road and turning right at Truxel Road at Intersection #1.
- The easternmost driveway along the private road was determined to be sufficient as constructed and no modifications were deemed necessary. However, most vehicles departing from the future non-residential uses will be making a left from the driveway towards the eastbound approach at the Gateway Park Boulevard intersection with North Freeway Boulevard (Intersection #2) and thus, sufficient storage behind the stop bar should be provided for those vehicles departing from the non-residential uses for whichever driveway is used to make this left-turn as this movement may be restricted as described below.

Vehicle Queuing at Intersections

- It is recommended that the project applicant work with the City to optimize signal timings at Intersection #2 (shown in
- Figure 10) to alleviate the northbound queue. While the change in land use resulting in fewer trips than was originally analyzed results in a shorter northbound queue, the queue still exceeds the available storage and thus, the signal timing should be optimized.
- As shown in Figure 11, it is recommended that a physical median be constructed from the stop bar for the eastbound approach at Intersection #2 back approximately 230-feet to restrict left-turning vehicles from Access Point #1 and force them to use Access Point #2. This would affect not only the project and the future non-residential uses, but also the existing retail uses to the south.

However, based on the vehicle travel patterns that exist today, it is unlikely that this will cause many vehicles to have to reroute their trips and will increase the safety for vehicles traveling through this area by removing the issue of queued vehicles blocking vehicles at Access Point #1 attempting to turn left towards the eastbound approach at Intersection #2. The applicant is concurrently requesting a deviation from the map condition to provide reciprocal access easements across all three parcels. To assure adequate throat depth onsite, the physical median should be constructed prior to any construction on the Project site.

Bicycle Facilities

- The Project shall accommodate all proposed trails as part of the City's Bicycle Master Plan/General Plan through dedication and/or construction to the City's satisfaction.

Appendix A

Analysis Worksheets for
Cumulative (2035) No Project Conditions

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6787	6720	6653	6820	6646	6770	6751
Vehs Exited	6846	6763	6688	6837	6680	6790	6805
Starting Vehs	227	226	215	219	228	200	212
Ending Vehs	168	183	180	202	194	180	158
Travel Distance (mi)	2827	2786	2753	2841	2749	2819	2821
Travel Time (hr)	229.6	208.5	200.6	212.4	207.8	206.1	215.0
Total Delay (hr)	125.2	105.7	99.0	107.9	106.5	102.3	110.9
Total Stops	8515	7625	7348	7721	7599	7596	7826
Fuel Used (gal)	133.1	127.8	124.7	130.6	126.2	128.0	130.6

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6659	6617	6839	6728
Vehs Exited	6696	6637	6862	6760
Starting Vehs	228	195	213	215
Ending Vehs	191	175	190	182
Travel Distance (mi)	2773	2745	2848	2796
Travel Time (hr)	205.7	202.3	214.3	210.2
Total Delay (hr)	103.5	101.1	109.5	107.2
Total Stops	7561	7352	7877	7701
Fuel Used (gal)	127.4	125.1	131.3	128.5

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1739	1673	1685	1732	1656	1722	1706
Vehs Exited	1724	1706	1692	1728	1689	1709	1706
Starting Vehs	227	226	215	219	228	200	212
Ending Vehs	242	193	208	223	195	213	212
Travel Distance (mi)	712	700	687	710	689	709	707
Travel Time (hr)	55.6	53.1	50.3	53.5	52.3	50.6	54.6
Total Delay (hr)	29.2	27.4	25.0	27.3	26.9	24.5	28.5
Total Stops	2079	1952	1821	1900	1950	1812	1941
Fuel Used (gal)	32.9	32.3	31.2	32.8	31.8	31.8	33.0

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1670	1598	1747	1690
Vehs Exited	1699	1606	1731	1698
Starting Vehs	228	195	213	215
Ending Vehs	199	187	229	204
Travel Distance (mi)	701	660	716	699
Travel Time (hr)	52.0	48.7	54.4	52.5
Total Delay (hr)	26.2	24.4	27.9	26.7
Total Stops	1844	1695	2006	1900
Fuel Used (gal)	32.3	30.0	32.8	32.1

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1682	1679	1669	1686	1660	1628	1683
Vehs Exited	1704	1688	1663	1684	1656	1667	1691
Starting Vehs	242	193	208	223	195	213	212
Ending Vehs	220	184	214	225	199	174	204
Travel Distance (mi)	708	695	688	709	692	686	711
Travel Time (hr)	63.7	51.0	50.5	53.8	50.8	48.8	54.1
Total Delay (hr)	37.6	25.3	25.1	27.7	25.3	23.5	27.8
Total Stops	2358	1901	1862	2065	1894	1786	1974
Fuel Used (gal)	34.8	31.6	31.1	32.7	31.1	30.8	32.9

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1737	1663	1672	1673
Vehs Exited	1728	1660	1706	1685
Starting Vehs	199	187	229	204
Ending Vehs	208	190	195	202
Travel Distance (mi)	717	690	701	700
Travel Time (hr)	53.9	50.5	51.9	52.9
Total Delay (hr)	27.5	25.0	26.2	27.1
Total Stops	2034	1881	1902	1965
Fuel Used (gal)	33.1	31.4	32.1	32.2

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1673	1695	1649	1670	1615	1744	1683
Vehs Exited	1695	1665	1648	1710	1621	1716	1689
Starting Vehs	220	184	214	225	199	174	204
Ending Vehs	198	214	215	185	193	202	198
Travel Distance (mi)	695	699	682	703	661	722	698
Travel Time (hr)	59.2	54.1	49.0	49.8	49.3	54.2	52.2
Total Delay (hr)	33.4	28.4	23.8	24.1	25.1	27.6	26.4
Total Stops	2106	1950	1763	1778	1771	2012	1858
Fuel Used (gal)	33.5	32.5	30.8	31.7	30.1	33.2	32.2

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1619	1682	1742	1677
Vehs Exited	1647	1632	1695	1671
Starting Vehs	208	190	195	202
Ending Vehs	180	240	242	205
Travel Distance (mi)	678	683	716	694
Travel Time (hr)	50.4	52.1	54.9	52.5
Total Delay (hr)	25.5	26.8	28.6	27.0
Total Stops	1805	1932	2005	1897
Fuel Used (gal)	31.2	31.5	33.3	32.0

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1693	1673	1650	1732	1715	1676	1679
Vehs Exited	1723	1704	1685	1715	1714	1698	1719
Starting Vehs	198	214	215	185	193	202	198
Ending Vehs	168	183	180	202	194	180	158
Travel Distance (mi)	711	692	696	718	707	703	705
Travel Time (hr)	51.1	50.2	50.9	55.3	55.4	52.6	54.1
Total Delay (hr)	25.0	24.6	25.2	28.7	29.3	26.7	28.2
Total Stops	1972	1822	1902	1978	1984	1986	2053
Fuel Used (gal)	31.8	31.3	31.6	33.4	33.2	32.2	32.6

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1633	1674	1678	1681
Vehs Exited	1622	1739	1730	1705
Starting Vehs	180	240	242	205
Ending Vehs	191	175	190	182
Travel Distance (mi)	676	713	715	704
Travel Time (hr)	49.4	51.0	53.2	52.3
Total Delay (hr)	24.3	24.9	26.8	26.4
Total Stops	1878	1844	1964	1936
Fuel Used (gal)	30.8	32.3	33.0	32.2

1: North Marketplace & Truxel Rd Performance by movement

Movement	EBL	EBR	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.2	1.9	0.1
Total Delay (hr)	0.4	1.0	0.0	0.1	0.1	0.9	0.1	2.8	0.0	5.5
Total Del/Veh (s)	51.5	54.0	0.7	2.6	57.1	2.6	2.7	5.6	1.3	5.6
Stop Delay (hr)	0.4	1.0	0.0	0.0	0.1	0.0	0.0	1.4	0.0	3.0
Stop Del/Veh (s)	50.0	53.2	0.4	1.5	53.4	0.1	0.1	2.7	0.6	3.0

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Denied Del/Veh (s)	0.1	0.1	1.1	2.7	0.1	0.1	0.0	0.0	0.0	2.9	0.7	2.9
Total Delay (hr)	0.6	0.5	0.6	1.2	0.2	0.1	0.6	8.9	1.5	2.1	6.4	0.1
Total Del/Veh (s)	55.6	56.3	16.1	35.5	29.7	10.7	68.8	36.4	6.6	67.3	33.5	4.3
Stop Delay (hr)	0.6	0.4	0.5	1.1	0.2	0.1	0.6	7.4	0.9	1.9	5.2	0.1
Stop Del/Veh (s)	52.6	51.9	14.4	33.5	27.3	10.9	64.0	30.1	4.0	61.9	27.2	3.0

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	0.5
Total Delay (hr)	22.8
Total Del/Veh (s)	27.3
Stop Delay (hr)	19.0
Stop Del/Veh (s)	22.8

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.5	2.4	3.9	0.0	0.1	0.4
Denied Del/Veh (s)	3.5	0.4	0.1	0.2	0.0	0.0	8.3	8.2	9.7	2.7	2.4	0.8
Total Delay (hr)	1.6	1.3	1.4	9.1	0.8	0.1	3.9	12.2	5.3	1.0	3.5	26.8
Total Del/Veh (s)	64.7	58.0	22.8	37.4	27.9	6.3	58.9	40.7	13.1	73.4	78.2	52.7
Stop Delay (hr)	1.5	1.2	1.4	7.0	0.7	0.1	3.6	9.7	1.7	0.9	3.2	22.3
Stop Del/Veh (s)	62.0	54.1	22.0	28.8	24.2	6.0	54.1	32.4	4.3	67.0	70.2	43.9

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	SBR	All
Denied Delay (hr)	0.0	7.5
Denied Del/Veh (s)	0.5	4.3
Total Delay (hr)	0.3	67.3
Total Del/Veh (s)	6.7	37.9
Stop Delay (hr)	0.2	53.6
Stop Del/Veh (s)	5.7	30.2

Total Network Performance

Denied Delay (hr)	8.1
Denied Del/Veh (s)	4.3
Total Delay (hr)	99.1
Total Del/Veh (s)	51.4
Stop Delay (hr)	75.8
Stop Del/Veh (s)	39.3

Intersection: 1: North Marketplace & Truxel Rd

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	L	T	T	T	T	T	T	R
Maximum Queue (ft)	84	121	58	42	46	47	258	233	158	90	43
Average Queue (ft)	24	56	22	9	2	2	125	89	41	25	8
95th Queue (ft)	64	106	45	32	47	48	223	191	121	66	32
Link Distance (ft)	143	143	880		460	460	951	951	951	951	
Upstream Blk Time (%)		0				0					
Queuing Penalty (veh)		0				0					
Storage Bay Dist (ft)				355							115
Storage Blk Time (%)										0	
Queuing Penalty (veh)										0	

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	L	L	T	R	R	L	T	T	R
Maximum Queue (ft)	58	154	117	112	79	52	42	5	211	414	428	159
Average Queue (ft)	11	52	62	49	25	11	11	0	49	246	264	65
95th Queue (ft)	39	112	114	98	63	35	30	3	147	357	370	124
Link Distance (ft)		880			704	704	704			702	702	702
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	1	5						0	16		0
Queuing Penalty (veh)	0	2	3						0	5		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	R
Maximum Queue (ft)	121	141	225	452	418	170
Average Queue (ft)	73	21	113	267	193	26
95th Queue (ft)	106	86	237	429	354	112
Link Distance (ft)				438	438	
Upstream Blk Time (%)				1	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0		0	18	5	0
Queuing Penalty (veh)	0		0	20	5	0

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	108	133	149	165	121	272	361	419	140	52	68	200
Average Queue (ft)	7	65	59	78	12	130	196	221	39	9	3	93
95th Queue (ft)	49	123	121	137	53	246	334	365	101	31	37	186
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			0	0								
Queuing Penalty (veh)			0	0								
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	0	3	2				0	1				
Queuing Penalty (veh)	0	2	1				0	4				

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	302	461	548	764	227	212	202	255	481	480	458	402
Average Queue (ft)	143	302	273	223	132	122	79	218	401	389	345	274
95th Queue (ft)	242	418	452	521	205	198	150	331	518	504	465	396
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)	0		0	0					3	2	0	0
Queuing Penalty (veh)	0		0	0					12	6	1	1
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)							0	0	39			
Queuing Penalty (veh)							0	2	81			

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	SB
Directions Served	R
Maximum Queue (ft)	143
Average Queue (ft)	50
95th Queue (ft)	106
Link Distance (ft)	460
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 147

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7971	7698	7727	7857	7699	7745	7735
Vehs Exited	7893	7660	7719	7826	7684	7688	7692
Starting Vehs	287	330	348	320	326	310	351
Ending Vehs	365	368	356	351	341	367	394
Travel Distance (mi)	3219	3131	3152	3195	3139	3143	3162
Travel Time (hr)	625.5	809.1	715.0	615.4	783.4	716.7	767.2
Total Delay (hr)	504.1	691.4	596.2	495.2	665.4	598.4	648.0
Total Stops	13853	13585	13494	13662	13909	13701	14059
Fuel Used (gal)	240.8	280.5	259.7	237.3	274.8	259.2	271.5

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7745	7825	7518	7752
Vehs Exited	7643	7765	7503	7708
Starting Vehs	308	320	348	326
Ending Vehs	410	380	363	369
Travel Distance (mi)	3143	3169	3081	3154
Travel Time (hr)	826.4	683.6	914.7	745.7
Total Delay (hr)	708.0	564.0	798.7	626.9
Total Stops	13804	13753	13421	13724
Fuel Used (gal)	284.2	253.3	303.1	266.4

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2155	1905	1994	2032	2043	2044	2008
Vehs Exited	2098	1935	1992	2021	2023	1979	1958
Starting Vehs	287	330	348	320	326	310	351
Ending Vehs	344	300	350	331	346	375	401
Travel Distance (mi)	851	770	807	820	811	798	804
Travel Time (hr)	93.4	120.5	106.6	97.7	110.3	109.9	136.9
Total Delay (hr)	61.4	91.3	76.3	66.7	79.8	79.9	106.5
Total Stops	3212	3399	3239	3303	3539	3506	3584
Fuel Used (gal)	46.8	51.0	48.7	47.0	49.9	49.7	55.6

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1947	2039	1919	2007
Vehs Exited	1902	2023	1919	1985
Starting Vehs	308	320	348	326
Ending Vehs	353	336	348	345
Travel Distance (mi)	782	815	778	804
Travel Time (hr)	105.6	100.4	126.8	110.8
Total Delay (hr)	76.1	69.6	97.5	80.5
Total Stops	3318	3257	3283	3364
Fuel Used (gal)	47.5	47.8	52.6	49.7

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2014	1992	1876	2028	1946	1906	1988
Vehs Exited	1972	1931	1871	2014	1903	1919	1995
Starting Vehs	344	300	350	331	346	375	401
Ending Vehs	386	361	355	345	389	362	394
Travel Distance (mi)	803	792	770	815	793	785	815
Travel Time (hr)	115.5	172.3	157.1	126.1	166.4	154.6	162.2
Total Delay (hr)	85.2	142.6	128.0	95.3	136.5	125.0	131.4
Total Stops	3540	3379	3415	3492	3485	3355	3504
Fuel Used (gal)	50.8	63.5	59.3	53.7	62.1	58.9	61.9

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2012	1963	1863	1956
Vehs Exited	1955	1933	1835	1932
Starting Vehs	353	336	348	345
Ending Vehs	410	366	376	375
Travel Distance (mi)	807	797	762	794
Travel Time (hr)	176.8	154.5	200.1	158.6
Total Delay (hr)	146.4	124.5	171.4	128.6
Total Stops	3662	3574	3281	3468
Fuel Used (gal)	64.8	59.4	68.9	60.3

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1895	1930	1940	1878	1852	1956	1823
Vehs Exited	1921	1935	1942	1850	1859	1940	1838
Starting Vehs	386	361	355	345	389	362	394
Ending Vehs	360	356	353	373	382	378	379
Travel Distance (mi)	785	799	789	762	762	802	751
Travel Time (hr)	171.9	229.9	207.6	163.3	228.2	199.1	201.2
Total Delay (hr)	142.3	199.9	177.9	134.8	199.4	168.8	173.0
Total Stops	3618	3492	3435	3324	3534	3451	3442
Fuel Used (gal)	63.4	77.0	71.5	60.4	75.5	69.6	68.8

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1907	1936	1893	1900
Vehs Exited	1920	1974	1892	1908
Starting Vehs	410	366	376	375
Ending Vehs	397	328	377	369
Travel Distance (mi)	785	792	782	781
Travel Time (hr)	237.6	193.0	258.2	209.0
Total Delay (hr)	208.1	163.2	228.8	179.6
Total Stops	3381	3560	3456	3469
Fuel Used (gal)	78.4	68.5	83.3	71.6

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1907	1871	1917	1919	1858	1839	1916
Vehs Exited	1902	1859	1914	1941	1899	1850	1901
Starting Vehs	360	356	353	373	382	378	379
Ending Vehs	365	368	356	351	341	367	394
Travel Distance (mi)	780	770	787	797	773	758	793
Travel Time (hr)	244.7	286.4	243.7	228.2	278.5	253.2	266.9
Total Delay (hr)	215.3	257.6	214.0	198.3	249.6	224.7	237.0
Total Stops	3483	3315	3405	3543	3351	3389	3529
Fuel Used (gal)	79.7	89.0	80.1	76.3	87.2	81.0	85.2

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1879	1887	1843	1884
Vehs Exited	1866	1835	1857	1883
Starting Vehs	397	328	377	369
Ending Vehs	410	380	363	369
Travel Distance (mi)	769	765	758	775
Travel Time (hr)	306.3	235.6	329.6	267.3
Total Delay (hr)	277.3	206.8	301.0	238.1
Total Stops	3443	3362	3401	3422
Fuel Used (gal)	93.5	77.7	98.4	84.8

1: North Marketplace & Truxel Rd Performance by movement Interval #1 7:00

Movement	EBL	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Denied Del/Veh (s)	48.6	55.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.9	3.4
Total Delay (hr)	0.3	0.7	0.0	0.1	0.0	0.1	0.4	0.1	2.9	0.0	4.7
Total Del/Veh (s)	39.3	100.9	1.1	9.4	64.7	51.8	3.4	3.9	24.6	3.0	15.5
Stop Delay (hr)	0.3	0.7	0.0	0.1	0.0	0.1	0.0	0.0	2.2	0.0	3.4
Stop Del/Veh (s)	37.5	99.9	0.3	8.2	61.8	47.6	0.1	0.1	18.4	1.5	11.4

1: North Marketplace & Truxel Rd Performance by movement Interval #2 7:15

Movement	EBL	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	3.5	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Denied Del/Veh (s)	314.0	333.8	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.9	23.1
Total Delay (hr)	0.2	1.4	0.0	0.1	0.0	0.1	0.4	0.1	6.0	0.0	8.2
Total Del/Veh (s)	35.1	280.5	1.3	6.5	50.9	64.5	3.5	4.2	49.0	3.4	28.0
Stop Delay (hr)	0.2	1.4	0.0	0.1	0.0	0.1	0.0	0.0	4.9	0.0	6.6
Stop Del/Veh (s)	33.2	279.5	0.3	5.2	48.7	60.0	0.1	0.1	39.9	1.7	22.5

1: North Marketplace & Truxel Rd Performance by movement Interval #3 7:30

Movement	EBL	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	9.3	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	17.6
Denied Del/Veh (s)	577.4	602.4	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.9	58.0
Total Delay (hr)	0.0	1.7	0.0	0.1	0.0	0.1	0.4	0.1	7.9	0.0	10.2
Total Del/Veh (s)	17.9	540.1	1.1	7.8	48.1	61.3	3.5	4.3	63.0	3.5	35.0
Stop Delay (hr)	0.0	1.6	0.0	0.1	0.0	0.1	0.0	0.0	6.7	0.0	8.6
Stop Del/Veh (s)	16.5	539.2	0.3	6.6	46.6	57.0	0.1	0.1	53.7	1.8	29.3

1: North Marketplace & Truxel Rd Performance by movement Interval #4 7:45

Movement	EBL	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	17.1	14.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.2	33.3
Denied Del/Veh (s)	715.1	699.6	0.0	0.0	0.0	0.0	0.0	0.0	17.0	18.2	103.4
Total Delay (hr)	0.0	1.7	0.0	0.1	0.0	0.1	0.4	0.1	9.1	0.1	11.6
Total Del/Veh (s)	24.4	685.1	1.2	8.5	62.0	74.5	3.5	4.4	72.4	5.7	39.6
Stop Delay (hr)	0.0	1.7	0.0	0.1	0.0	0.1	0.0	0.0	8.0	0.0	10.0
Stop Del/Veh (s)	22.2	685.0	0.3	7.2	59.3	69.4	0.1	0.1	63.4	3.2	34.0

1: North Marketplace & Truxel Rd Performance by movement Entire Run

Movement	EBL	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	30.3	25.7	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.3	58.7
Denied Del/Veh (s)	797.4	819.2	0.0	0.0	0.0	0.0	0.0	0.0	5.0	6.2	50.1
Total Delay (hr)	0.6	5.5	0.1	0.4	0.1	0.3	1.5	0.3	25.8	0.2	34.7
Total Del/Veh (s)	36.3	439.6	1.2	8.1	56.4	67.3	3.5	4.3	56.8	4.0	30.6
Stop Delay (hr)	0.5	5.5	0.0	0.3	0.1	0.3	0.0	0.0	21.7	0.1	28.6
Stop Del/Veh (s)	34.4	438.3	0.3	6.9	54.1	62.5	0.1	0.1	47.8	2.1	25.2

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Interval #1 7:00

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Denied Delay (hr)	0.0	0.0	0.0	0.0	4.6	0.7	1.4	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.2	1.1		84.1	81.6	82.5	0.0	0.0	0.0	0.0	2.9
Total Delay (hr)	0.4	0.3	0.5	0.0	7.6	0.5	0.3	0.0	0.3	2.8	0.4	0.2
Total Del/Veh (s)	59.6	62.8	31.7		141.3	65.2	22.6	88.6	71.3	45.5	7.7	63.3
Stop Delay (hr)	0.4	0.3	0.4	0.0	6.9	0.5	0.3	0.0	0.3	2.4	0.3	0.2
Stop Del/Veh (s)	55.4	57.2	28.5		128.5	59.4	21.1	82.1	65.5	38.5	5.2	58.3

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Interval #1 7:00

Movement	SBL	SBT	SBR	All
Denied Delay (hr)	0.1	0.0	0.0	6.9
Denied Del/Veh (s)	2.9	0.9	2.8	24.1
Total Delay (hr)	1.3	1.5	0.1	16.4
Total Del/Veh (s)	69.6	36.1	5.5	55.1
Stop Delay (hr)	1.2	1.3	0.0	14.5
Stop Del/Veh (s)	63.4	30.0	4.1	48.8

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Interval #2 7:15

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Denied Delay (hr)	0.0	0.0	0.0	0.0	10.8	1.8	3.2	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	1.3		175.1	176.2	171.5	0.0	0.0	0.0	0.0	2.9
Total Delay (hr)	0.3	0.3	0.3	0.0	7.5	0.6	0.3	0.0	0.4	3.2	0.4	0.2
Total Del/Veh (s)	34.6	41.3	22.1	96.7	130.6	62.2	22.9	96.0	76.0	55.6	8.1	67.7
Stop Delay (hr)	0.2	0.2	0.3	0.0	6.8	0.5	0.3	0.0	0.4	2.7	0.3	0.2
Stop Del/Veh (s)	30.2	35.5	18.3	87.4	117.3	56.4	21.3	92.0	69.4	47.6	5.8	63.2

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Interval #2 7:15

Movement	SBL	SBT	SBR	All
Denied Delay (hr)	0.1	0.0	0.0	16.0
Denied Del/Veh (s)	2.9	0.9	2.8	53.9
Total Delay (hr)	1.3	1.4	0.1	16.4
Total Del/Veh (s)	65.9	38.3	5.6	55.7
Stop Delay (hr)	1.2	1.2	0.0	14.4
Stop Del/Veh (s)	60.2	32.1	4.1	49.0

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Interval #3 7:30

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Denied Delay (hr)	0.0	0.0	0.0	0.0	16.4	2.6	4.8	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	1.1		241.0	235.3	240.7	0.0	0.0	0.0	0.0	3.5
Total Delay (hr)	0.4	0.3	0.5	0.0	7.7	0.6	0.3	0.0	0.4	2.7	0.4	0.3
Total Del/Veh (s)	57.4	58.3	30.8		139.8	66.1	22.9	48.2	63.9	46.9	7.8	60.2
Stop Delay (hr)	0.4	0.3	0.4	0.0	7.0	0.5	0.3	0.0	0.3	2.3	0.3	0.2
Stop Del/Veh (s)	53.3	52.7	27.7		126.7	60.0	21.3	42.0	58.6	40.0	5.6	55.5

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Interval #3 7:30

Movement	SBL	SBT	SBR	All
Denied Delay (hr)	0.1	0.0	0.0	24.0
Denied Del/Veh (s)	3.0	0.9	3.2	80.8
Total Delay (hr)	1.2	1.6	0.1	16.3
Total Del/Veh (s)	59.9	39.2	6.2	56.0
Stop Delay (hr)	1.1	1.3	0.1	14.5
Stop Del/Veh (s)	54.7	32.9	4.6	49.7

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Interval #4 7:45

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Denied Delay (hr)	0.0	0.0	0.0	0.1	22.1	3.9	6.3	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	1.3		302.8	305.4	308.8	0.0	0.0	0.0	0.0	3.0
Total Delay (hr)	0.3	0.2	0.3	0.0	7.7	0.6	0.2	0.0	0.3	2.7	0.3	0.2
Total Del/Veh (s)	39.3	38.8	20.9		136.8	58.5	19.0	92.8	67.8	48.5	7.6	62.2
Stop Delay (hr)	0.3	0.2	0.3	0.0	6.9	0.5	0.2	0.0	0.3	2.3	0.2	0.2
Stop Del/Veh (s)	35.1	33.4	16.9		123.8	52.8	17.9	86.8	62.3	41.3	5.2	57.6

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Interval #4 7:45

Movement	SBL	SBT	SBR	All
Denied Delay (hr)	0.1	0.0	0.0	32.5
Denied Del/Veh (s)	2.9	1.0	2.7	105.9
Total Delay (hr)	1.3	1.7	0.1	16.1
Total Del/Veh (s)	70.9	42.3	5.6	55.9
Stop Delay (hr)	1.2	1.4	0.0	14.2
Stop Del/Veh (s)	64.9	35.7	3.8	49.3

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Denied Delay (hr)	0.0	0.0	0.1	0.1	53.9	9.1	15.6	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	1.2	480.8	253.4	251.3	251.4	0.0	0.0	0.0	0.0	3.1
Total Delay (hr)	1.4	1.2	1.6	0.1	30.5	2.2	1.2	0.1	1.5	11.4	1.5	1.0
Total Del/Veh (s)	49.5	51.5	26.9	255.2	159.3	68.9	22.7	65.1	74.7	51.4	8.0	66.8
Stop Delay (hr)	1.3	1.0	1.4	0.1	27.6	2.0	1.2	0.1	1.4	9.7	1.0	0.9
Stop Del/Veh (s)	45.1	45.7	23.3	233.6	144.1	62.5	21.2	60.6	68.5	43.7	5.6	61.8

2: Gateway Park Blvd & N Freeway Blvd Performance by movement Entire Run

Movement	SBL	SBT	SBR	All
Denied Delay (hr)	0.2	0.1	0.1	79.4
Denied Del/Veh (s)	2.9	0.9	2.9	70.7
Total Delay (hr)	5.1	6.2	0.3	65.2
Total Del/Veh (s)	71.4	40.2	5.8	59.0
Stop Delay (hr)	4.7	5.2	0.2	57.7
Stop Del/Veh (s)	65.2	33.6	4.2	52.2

3: Truxel Rd & Gateway Park Blvd Performance by movement Interval #1 7:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.3	0.3	0.5	0.0	0.0	0.0	2.7	6.6	5.8	0.0	0.0	0.0
Denied Del/Veh (s)	20.5	26.3	15.3	0.0	0.0	0.0	61.4	60.7	61.4	0.1	0.0	0.0
Total Delay (hr)	1.0	0.7	0.7	3.5	0.4	0.3	4.3	12.9	2.4	2.4	2.9	2.9
Total Del/Veh (s)	70.5	67.9	23.4	43.2	34.3	23.8	99.9	117.2	27.1	172.9	150.7	35.9
Stop Delay (hr)	1.0	0.7	0.7	2.8	0.4	0.3	3.9	11.1	1.2	2.2	2.7	2.3
Stop Del/Veh (s)	67.5	63.9	22.3	34.2	29.9	23.0	89.6	101.3	13.2	163.9	140.9	29.0

3: Truxel Rd & Gateway Park Blvd Performance by movement Interval #1 7:00

Movement	SBR	All
Denied Delay (hr)	0.0	16.1
Denied Del/Veh (s)	0.0	31.3
Total Delay (hr)	0.1	34.5
Total Del/Veh (s)	8.6	65.7
Stop Delay (hr)	0.1	29.3
Stop Del/Veh (s)	6.7	55.7

3: Truxel Rd & Gateway Park Blvd Performance by movement Interval #2 7:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.3	0.3	0.6	0.0	0.0	0.0	8.1	18.9	16.8	0.0	0.0	0.0
Denied Del/Veh (s)	24.6	25.4	20.4	0.0	0.0	0.0	157.6	157.7	159.9	0.0	0.0	0.0
Total Delay (hr)	1.0	0.8	0.8	3.0	0.4	0.2	4.1	13.7	2.5	2.5	3.8	2.5
Total Del/Veh (s)	73.1	74.9	28.3	36.5	28.7	18.5	96.7	121.3	29.0	193.5	185.6	30.7
Stop Delay (hr)	1.0	0.8	0.8	2.2	0.4	0.2	3.7	11.9	1.2	2.3	3.5	2.0
Stop Del/Veh (s)	70.1	70.6	27.2	27.0	24.6	17.9	86.0	105.5	14.0	183.3	174.8	24.5

3: Truxel Rd & Gateway Park Blvd Performance by movement Interval #2 7:15

Movement	SBR	All
Denied Delay (hr)	0.0	45.0
Denied Del/Veh (s)	0.0	83.3
Total Delay (hr)	0.1	35.4
Total Del/Veh (s)	5.8	66.9
Stop Delay (hr)	0.0	30.0
Stop Del/Veh (s)	4.1	56.8

3: Truxel Rd & Gateway Park Blvd Performance by movement Interval #3 7:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	13.6	33.4	27.7	0.0	0.0	0.0
Denied Del/Veh (s)	4.1	2.2	1.4	0.0	0.0	0.0	245.4	243.7	244.6	0.0	0.0	0.0
Total Delay (hr)	0.8	0.6	0.7	3.7	0.4	0.2	3.9	14.0	2.5	2.8	3.6	2.5
Total Del/Veh (s)	61.3	60.7	25.7	45.3	31.4	19.5	93.5	122.5	30.5	203.4	180.5	32.1
Stop Delay (hr)	0.8	0.5	0.7	2.9	0.4	0.2	3.5	12.1	1.3	2.6	3.4	2.0
Stop Del/Veh (s)	58.4	56.6	24.4	35.7	27.4	19.1	83.3	106.5	15.8	193.3	169.6	26.1

3: Truxel Rd & Gateway Park Blvd Performance by movement Interval #3 7:30

Movement	SBR	All
Denied Delay (hr)	0.0	74.8
Denied Del/Veh (s)	0.0	132.6
Total Delay (hr)	0.1	35.7
Total Del/Veh (s)	6.2	69.2
Stop Delay (hr)	0.0	30.5
Stop Del/Veh (s)	4.2	59.0

3: Truxel Rd & Gateway Park Blvd Performance by movement Interval #4 7:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	19.3	49.2	40.7	0.0	0.0	0.0
Denied Del/Veh (s)	4.3	2.4	1.2	0.0	0.0	0.0	316.5	320.8	318.9	0.0	0.0	0.0
Total Delay (hr)	0.8	0.6	0.7	3.1	0.4	0.2	3.6	14.0	2.5	2.6	3.8	2.4
Total Del/Veh (s)	58.6	63.7	23.4	37.4	28.9	18.9	84.8	123.6	31.3	185.3	170.0	31.9
Stop Delay (hr)	0.8	0.5	0.6	2.3	0.3	0.2	3.2	12.2	1.3	2.5	3.5	1.9
Stop Del/Veh (s)	55.5	59.4	22.2	27.3	25.0	18.4	74.6	107.4	16.3	174.7	159.1	26.0

3: Truxel Rd & Gateway Park Blvd Performance by movement Interval #4 7:45

Movement	SBR	All
Denied Delay (hr)	0.0	109.2
Denied Del/Veh (s)	0.0	180.8
Total Delay (hr)	0.1	34.7
Total Del/Veh (s)	6.2	67.4
Stop Delay (hr)	0.0	29.4
Stop Del/Veh (s)	3.9	57.0

3: Truxel Rd & Gateway Park Blvd Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.7	0.5	1.1	0.0	0.0	0.0	43.6	108.1	91.1	0.0	0.0	0.0
Denied Del/Veh (s)	13.7	14.9	9.8	0.0	0.0	0.0	246.9	250.6	248.0	0.0	0.0	0.0
Total Delay (hr)	3.7	2.7	3.0	13.2	1.7	0.8	15.9	54.6	9.9	10.2	14.1	10.3
Total Del/Veh (s)	70.1	70.6	25.6	42.2	31.9	21.2	101.4	141.8	30.9	213.9	195.7	34.8
Stop Delay (hr)	3.5	2.5	2.8	10.1	1.4	0.8	14.2	47.4	5.0	9.7	13.2	8.3
Stop Del/Veh (s)	66.9	66.2	24.4	32.2	27.7	20.6	90.2	123.1	15.5	202.6	183.6	28.1

3: Truxel Rd & Gateway Park Blvd Performance by movement Entire Run

Movement	SBR	All
Denied Delay (hr)	0.0	245.2
Denied Del/Veh (s)	0.0	121.0
Total Delay (hr)	0.3	140.4
Total Del/Veh (s)	7.0	72.7
Stop Delay (hr)	0.2	119.2
Stop Del/Veh (s)	4.9	61.7

Total Network Performance By Interval

Interval Start	7:00	7:15	7:30	7:45	All
Denied Delay (hr)	24.0	67.8	116.4	175.0	383.2
Denied Del/Veh (s)	39.6	105.1	170.0	233.3	161.0
Total Delay (hr)	56.5	60.9	63.2	63.2	243.7
Total Del/Veh (s)	87.3	95.0	99.9	101.0	108.6
Stop Delay (hr)	47.4	51.3	53.7	53.7	206.1
Stop Del/Veh (s)	73.3	80.0	84.9	85.8	91.9

Intersection: 1: North Marketplace & Truxel Rd, Interval #1

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	UL	T	T	T	T	T	T	R
Maximum Queue (ft)	138	156	96	49	6	11	569	487	296	126	77
Average Queue (ft)	76	98	45	19	1	2	342	267	100	53	36
95th Queue (ft)	154	171	108	54	11	15	611	529	240	115	77
Link Distance (ft)	143	143	878		460	460	951	951	951	951	
Upstream Blk Time (%)	2	24					0				
Queuing Penalty (veh)	0	0					0				
Storage Bay Dist (ft)				355							115
Storage Blk Time (%)										1	0
Queuing Penalty (veh)										1	0

Intersection: 1: North Marketplace & Truxel Rd, Interval #2

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	UL	T	T	T	T	T	T	R
Maximum Queue (ft)	78	149	70	55	3	5	820	725	382	201	80
Average Queue (ft)	33	129	35	26	0	1	617	537	180	79	36
95th Queue (ft)	118	185	80	64	0	11	997	944	422	226	81
Link Distance (ft)	143	143	878		460	460	951	951	951	951	
Upstream Blk Time (%)	1	74					2	0			
Queuing Penalty (veh)	0	0					0	0			
Storage Bay Dist (ft)				355							115
Storage Blk Time (%)										2	0
Queuing Penalty (veh)										4	0

Intersection: 1: North Marketplace & Truxel Rd, Interval #3

Movement	EB	EB	WB	NB	NB	SB	SB	SB	SB	SB	
Directions Served	L	R	R	UL	T	T	T	T	T	R	
Maximum Queue (ft)	21	147	75	46	3	902	844	561	164	94	
Average Queue (ft)	7	138	41	21	0	788	730	305	80	40	
95th Queue (ft)	53	172	83	55	6	1101	1057	691	162	93	
Link Distance (ft)	143	143	878		460	951	951	951	951		
Upstream Blk Time (%)	0	89				14	2				
Queuing Penalty (veh)	0	0				0	0				
Storage Bay Dist (ft)				355						115	
Storage Blk Time (%)									3	0	
Queuing Penalty (veh)									5	0	

Intersection: 1: North Marketplace & Truxel Rd, Interval #4

Movement	EB	EB	WB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	UL	T	T	T	T	R
Maximum Queue (ft)	16	152	101	55	922	902	770	210	113
Average Queue (ft)	2	142	44	30	846	798	436	126	56
95th Queue (ft)	33	158	105	62	1116	1079	940	258	133
Link Distance (ft)	143	143	878		951	951	951	951	
Upstream Blk Time (%)	1	91			34	6	0		
Queuing Penalty (veh)	0	0			0	0	0		
Storage Bay Dist (ft)				355					115
Storage Blk Time (%)								7	0
Queuing Penalty (veh)								14	0

Intersection: 1: North Marketplace & Truxel Rd, All Intervals

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	UL	T	T	T	T	T	T	R
Maximum Queue (ft)	144	163	127	68	9	20	947	917	818	266	127
Average Queue (ft)	30	127	41	24	0	1	648	583	255	85	42
95th Queue (ft)	110	184	95	59	5	10	1097	1053	661	204	99
Link Distance (ft)	143	143	878		460	460	951	951	951	951	
Upstream Blk Time (%)	1	70					12	2	0		
Queuing Penalty (veh)	0	0					0	0	0		
Storage Bay Dist (ft)				355							115
Storage Blk Time (%)										3	0
Queuing Penalty (veh)										6	0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	UL	L	T	R	R	UL	T	T	R
Maximum Queue (ft)	92	305	120	225	729	727	695	82	224	394	398	113
Average Queue (ft)	38	158	100	222	714	661	202	17	102	284	290	69
95th Queue (ft)	94	325	144	235	774	941	632	75	232	422	423	113
Link Distance (ft)		878			704	704	704			702	702	702
Upstream Blk Time (%)					73	31	0					
Queuing Penalty (veh)					0	0	0					
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	15	24	64	44		0	0	0	24		0
Queuing Penalty (veh)	2	52	38	239	167		1	0	0	21		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, Interval #1

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	UL	L	T	T	R
Maximum Queue (ft)	125	184	216	362	300	149
Average Queue (ft)	76	126	178	243	169	37
95th Queue (ft)	124	213	254	405	313	125
Link Distance (ft)				438	438	
Upstream Blk Time (%)				2		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0	0	4	11	5	0
Queuing Penalty (veh)	0	1	11	35	9	0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	UL	L	T	R	R	UL	T	T	R
Maximum Queue (ft)	88	284	119	225	738	722	467	88	211	431	432	99
Average Queue (ft)	34	139	95	221	723	679	176	22	129	317	327	65
95th Queue (ft)	91	296	136	237	738	924	572	79	254	470	468	101
Link Distance (ft)		878			704	704	704			702	702	702
Upstream Blk Time (%)					87	35	1					
Queuing Penalty (veh)					0	0	0					
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	7	15	57	43		0			27		0
Queuing Penalty (veh)	0	25	24	212	161		0			23		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, Interval #2

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	UL	L	T	T	R
Maximum Queue (ft)	117	184	224	355	277	132
Average Queue (ft)	78	123	175	222	159	37
95th Queue (ft)	120	204	255	374	321	128
Link Distance (ft)				438	438	
Upstream Blk Time (%)				1	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0	0	3	9	4	0
Queuing Penalty (veh)	1	1	7	26	7	0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	UL	L	T	R	R	UL	T	T	R
Maximum Queue (ft)	93	247	120	225	738	719	585	83	175	367	366	111
Average Queue (ft)	40	146	101	222	723	709	154	21	94	269	284	69
95th Queue (ft)	101	277	139	234	737	750	508	84	203	396	409	116
Link Distance (ft)		878			704	704	704			702	702	702
Upstream Blk Time (%)					85	35	0					
Queuing Penalty (veh)					0	0	0					
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	14	24	68	36		1	0		21		0
Queuing Penalty (veh)	1	48	39	256	136		1	0		18		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, Interval #3

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	UL	L	T	T	R
Maximum Queue (ft)	126	191	224	392	302	155
Average Queue (ft)	79	125	180	235	164	50
95th Queue (ft)	131	220	253	394	327	154
Link Distance (ft)				438	438	
Upstream Blk Time (%)				1	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0	0	1	13	6	0
Queuing Penalty (veh)	1	0	4	39	11	0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	UL	L	T	R	R	UL	T	T	R
Maximum Queue (ft)	95	285	120	225	741	726	461	42	182	404	405	147
Average Queue (ft)	33	139	96	222	723	659	128	11	96	279	287	72
95th Queue (ft)	93	302	140	232	740	950	470	43	208	419	411	177
Link Distance (ft)		878			704	704	704			702	702	702
Upstream Blk Time (%)					82	39	0					
Queuing Penalty (veh)					0	0	0					
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	8	13	61	42		0			23		0
Queuing Penalty (veh)	0	27	21	228	160		0			20		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, Interval #4

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	UL	L	T	T	R
Maximum Queue (ft)	104	195	222	374	334	141
Average Queue (ft)	69	131	185	249	192	49
95th Queue (ft)	108	205	260	409	355	151
Link Distance (ft)				438	438	
Upstream Blk Time (%)				2	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0	0	2	14	6	0
Queuing Penalty (veh)	0	0	6	41	10	0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	UL	L	T	R	R	UL	T	T	R
Maximum Queue (ft)	116	378	120	225	752	736	708	124	224	456	452	174
Average Queue (ft)	36	146	98	222	721	677	165	18	105	287	297	69
95th Queue (ft)	95	301	140	235	754	916	550	72	227	430	431	133
Link Distance (ft)		878			704	704	704			702	702	702
Upstream Blk Time (%)					82	35	0					
Queuing Penalty (veh)					0	0	0					
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	11	19	62	41		0	0	0	24		0
Queuing Penalty (veh)	1	38	30	234	156		0	0	0	20		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd, All Intervals

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	UL	L	T	T	R
Maximum Queue (ft)	145	209	225	442	404	170
Average Queue (ft)	75	126	179	237	171	43
95th Queue (ft)	122	211	256	397	331	140
Link Distance (ft)				438	438	
Upstream Blk Time (%)				2	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0	0	3	12	6	0
Queuing Penalty (veh)	0	1	7	35	9	0

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #1

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	127	139	206	188	132	268	348	354	155	104	251	381
Average Queue (ft)	62	125	155	134	55	200	271	278	84	58	172	280
95th Queue (ft)	162	160	247	207	141	276	365	368	165	122	282	395
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			21	3	1							
Queuing Penalty (veh)			0	0	0							
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	1	25	17				1	1				0
Queuing Penalty (veh)	1	34	31				2	7				0

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #1

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	806	813	849	851	470	207	242	254	467	455	307	199
Average Queue (ft)	574	695	688	691	381	131	229	243	420	333	190	134
95th Queue (ft)	927	913	965	1073	642	208	272	289	594	543	330	219
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)	1	1	3	18					32	1	0	
Queuing Penalty (veh)	0	0	0	0					113	2	0	
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)	2			18	1		30	57	1			
Queuing Penalty (veh)	10			233	3		84	161	4			

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #1

Movement	SB
Directions Served	R
Maximum Queue (ft)	109
Average Queue (ft)	61
95th Queue (ft)	115
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #2

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	116	138	204	197	170	234	338	353	157	110	230	355
Average Queue (ft)	58	125	149	148	80	176	252	264	87	42	173	267
95th Queue (ft)	157	162	262	224	192	254	356	365	167	108	276	376
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			24	4	2							
Queuing Penalty (veh)			0	0	0							
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	1	27	23				0	0				0
Queuing Penalty (veh)	1	37	42				1	3				0

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #2

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	828	861	884	898	495	206	242	255	478	392	314	212
Average Queue (ft)	602	747	754	770	453	125	236	253	467	246	169	123
95th Queue (ft)	949	902	962	1065	617	215	256	258	510	481	317	227
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)	2	2	3	23					57	0	0	
Queuing Penalty (veh)	0	0	0	0					200	2	0	
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)	1			17	1		32	75	0			
Queuing Penalty (veh)	4			226	4		89	212	1			

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #2

Movement	SB
Directions Served	R
Maximum Queue (ft)	94
Average Queue (ft)	48
95th Queue (ft)	98
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #3

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	124	139	202	190	150	268	350	407	139	78	224	338
Average Queue (ft)	53	120	136	142	64	205	289	297	79	38	163	252
95th Queue (ft)	150	165	232	209	160	275	362	421	153	81	269	371
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			8	2	0							
Queuing Penalty (veh)			0	0	0							
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	1	20	8				1	1				0
Queuing Penalty (veh)	1	27	15				3	9				0

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #3

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	869	872	882	898	495	196	242	254	475	288	255	226
Average Queue (ft)	618	748	749	786	458	117	238	253	470	178	165	132
95th Queue (ft)	969	934	975	1078	616	211	249	256	479	333	274	240
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)	2	3	5	26					64	0		
Queuing Penalty (veh)	0	0	0	0					227	0		
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)	1			23	1		38	75	0			
Queuing Penalty (veh)	3			300	5		108	211	0			

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #3

Movement	SB
Directions Served	R
Maximum Queue (ft)	104
Average Queue (ft)	48
95th Queue (ft)	108
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #4

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	124	138	202	184	121	244	348	431	148	93	214	380
Average Queue (ft)	52	121	132	131	50	179	266	283	76	42	141	265
95th Queue (ft)	148	163	242	192	133	250	366	437	151	94	235	389
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			8	1								
Queuing Penalty (veh)			0	0								
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	1	21	10				0	1				0
Queuing Penalty (veh)	1	28	19				2	6				0

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #4

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	872	879	876	907	495	180	242	254	475	269	237	201
Average Queue (ft)	645	749	749	834	464	118	239	253	469	148	145	121
95th Queue (ft)	1020	943	960	1050	616	193	248	254	478	272	253	229
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)	3	4	3	29					65	0		
Queuing Penalty (veh)	0	0	0	0					229	0		
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)	1			24	1		31	73	0			
Queuing Penalty (veh)	6			318	6		87	206	0			

Intersection: 3: Truxel Rd & Gateway Park Blvd, Interval #4

Movement	SB
Directions Served	R
Maximum Queue (ft)	106
Average Queue (ft)	48
95th Queue (ft)	104
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Truxel Rd & Gateway Park Blvd, All Intervals

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	127	140	218	203	185	284	366	503	190	137	280	433
Average Queue (ft)	56	123	143	139	62	190	269	280	82	45	162	266
95th Queue (ft)	155	163	247	209	159	267	366	402	160	103	268	384
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			15	3	1							
Queuing Penalty (veh)			0	0	0							
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	1	23	14				0	1				0
Queuing Penalty (veh)	1	31	27				2	6				0

Intersection: 3: Truxel Rd & Gateway Park Blvd, All Intervals

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	887	888	890	916	495	244	242	255	480	482	409	257
Average Queue (ft)	610	735	735	770	439	123	235	250	456	226	168	128
95th Queue (ft)	969	928	971	1084	636	208	261	275	553	446	297	230
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)	2	2	4	24					55	0	0	
Queuing Penalty (veh)	0	0	0	0					192	1	0	
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)	1			20	1		33	70	0			
Queuing Penalty (veh)	6			269	4		92	198	1			

Intersection: 3: Truxel Rd & Gateway Park Blvd, All Intervals

Movement	SB
Directions Served	R
Maximum Queue (ft)	129
Average Queue (ft)	51
95th Queue (ft)	107
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty, Interval #1: 1263
Network wide Queuing Penalty, Interval #2: 1313
Network wide Queuing Penalty, Interval #3: 1465
Network wide Queuing Penalty, Interval #4: 1436
Network wide Queuing Penalty, All Intervals: 1369

Appendix B

Analysis Worksheets for
Cumulative (2035) plus Proposed Project Conditions

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6790	6781	6709	6870	6882	6661	6870
Vehs Exited	6786	6820	6731	6887	6886	6683	6873
Starting Vehs	194	226	196	213	191	229	202
Ending Vehs	198	187	174	196	187	207	199
Travel Distance (mi)	2825	2810	2794	2848	2854	2759	2831
Travel Time (hr)	212.7	208.5	209.0	217.1	218.5	204.6	214.9
Total Delay (hr)	108.3	104.9	106.1	112.1	113.2	102.9	110.3
Total Stops	7848	7787	7732	7788	8111	7641	8016
Fuel Used (gal)	130.0	128.9	128.1	132.0	132.1	126.0	131.1

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6843	6656	6883	6794
Vehs Exited	6863	6684	6892	6810
Starting Vehs	217	214	219	211
Ending Vehs	197	186	210	192
Travel Distance (mi)	2852	2768	2844	2819
Travel Time (hr)	213.7	205.8	219.9	212.5
Total Delay (hr)	108.5	103.7	114.9	108.5
Total Stops	8029	7549	8015	7855
Fuel Used (gal)	131.5	126.6	132.9	129.9

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1725	1726	1762	1736	1753	1724	1741
Vehs Exited	1690	1752	1717	1724	1744	1766	1727
Starting Vehs	194	226	196	213	191	229	202
Ending Vehs	229	200	241	225	200	187	216
Travel Distance (mi)	699	725	717	719	725	716	707
Travel Time (hr)	53.2	55.3	55.3	55.2	57.7	55.2	53.2
Total Delay (hr)	27.3	28.6	28.9	28.7	30.8	28.9	26.9
Total Stops	1979	2051	2038	1978	2172	1976	2059
Fuel Used (gal)	32.2	33.6	33.4	33.5	34.1	33.2	32.6

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1680	1636	1739	1723
Vehs Exited	1685	1652	1711	1716
Starting Vehs	217	214	219	211
Ending Vehs	212	198	247	213
Travel Distance (mi)	695	686	703	709
Travel Time (hr)	50.3	51.5	54.3	54.1
Total Delay (hr)	24.7	26.3	28.3	27.9
Total Stops	1867	1860	2037	2001
Fuel Used (gal)	31.6	31.2	32.8	32.8

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1686	1722	1627	1721	1705	1590	1656
Vehs Exited	1717	1711	1683	1766	1710	1594	1662
Starting Vehs	229	200	241	225	200	187	216
Ending Vehs	198	211	185	180	195	183	210
Travel Distance (mi)	712	703	691	727	709	667	695
Travel Time (hr)	52.4	53.3	53.1	55.4	51.5	47.7	52.6
Total Delay (hr)	26.2	27.2	27.6	28.8	25.4	23.2	26.9
Total Stops	1988	2031	1971	2038	1933	1835	1951
Fuel Used (gal)	32.5	32.7	32.0	33.7	31.8	29.6	31.9

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1704	1686	1645	1673
Vehs Exited	1667	1659	1704	1688
Starting Vehs	212	198	247	213
Ending Vehs	249	225	188	202
Travel Distance (mi)	696	695	699	699
Travel Time (hr)	53.7	51.7	52.4	52.4
Total Delay (hr)	28.0	26.0	26.6	26.6
Total Stops	1997	1915	1948	1962
Fuel Used (gal)	32.4	31.8	32.3	32.1

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1728	1669	1683	1718	1730	1680	1714
Vehs Exited	1718	1685	1674	1713	1682	1671	1740
Starting Vehs	198	211	185	180	195	183	210
Ending Vehs	208	195	194	185	243	192	184
Travel Distance (mi)	718	693	702	706	707	693	707
Travel Time (hr)	54.8	49.1	50.6	52.2	53.5	51.5	52.6
Total Delay (hr)	28.2	23.7	24.8	26.2	27.4	25.9	26.6
Total Stops	1935	1783	1866	1844	1949	1904	1907
Fuel Used (gal)	33.2	31.2	31.8	32.4	32.5	31.8	32.7

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1728	1663	1748	1707
Vehs Exited	1773	1716	1695	1707
Starting Vehs	249	225	188	202
Ending Vehs	204	172	241	200
Travel Distance (mi)	740	696	714	708
Travel Time (hr)	57.3	52.2	58.3	53.2
Total Delay (hr)	30.1	26.4	32.0	27.1
Total Stops	2082	1889	2000	1918
Fuel Used (gal)	34.6	32.3	34.2	32.7

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1651	1664	1637	1695	1694	1667	1759
Vehs Exited	1661	1672	1657	1684	1750	1652	1744
Starting Vehs	208	195	194	185	243	192	184
Ending Vehs	198	187	174	196	187	207	199
Travel Distance (mi)	696	689	683	697	712	683	723
Travel Time (hr)	52.3	50.8	49.9	54.2	55.8	50.2	56.5
Total Delay (hr)	26.7	25.3	24.8	28.4	29.5	25.0	29.9
Total Stops	1946	1922	1857	1928	2057	1926	2099
Fuel Used (gal)	32.2	31.3	30.9	32.4	33.6	31.4	33.9

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1731	1671	1751	1692
Vehs Exited	1738	1657	1782	1699
Starting Vehs	204	172	241	200
Ending Vehs	197	186	210	192
Travel Distance (mi)	722	690	728	702
Travel Time (hr)	52.4	50.4	54.9	52.8
Total Delay (hr)	25.7	24.9	28.1	26.8
Total Stops	2083	1885	2030	1971
Fuel Used (gal)	33.0	31.2	33.7	32.4

1: North Marketplace & Truxel Rd Performance by movement

Movement	EBL	EBR	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.8	0.1
Total Delay (hr)	0.4	1.0	0.0	0.1	0.1	1.0	0.1	2.6	0.0	5.2
Total Del/Veh (s)	51.8	55.2	0.8	3.0	54.3	2.8	2.8	5.1	1.3	5.3
Stop Delay (hr)	0.4	1.0	0.0	0.0	0.1	0.0	0.0	1.2	0.0	2.7
Stop Del/Veh (s)	50.4	54.4	0.4	1.8	50.8	0.1	0.1	2.3	0.6	2.8

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Denied Del/Veh (s)	0.3	0.2	2.0	2.7	0.1	0.1	0.0	0.0	0.0	2.9	0.6	2.8
Total Delay (hr)	0.9	0.6	0.8	1.3	0.3	0.1	0.6	9.1	1.5	2.2	6.3	0.1
Total Del/Veh (s)	54.4	53.4	17.1	36.3	34.5	9.1	69.7	38.1	6.7	68.9	33.6	4.5
Stop Delay (hr)	0.8	0.6	0.7	1.2	0.2	0.1	0.5	7.6	0.9	2.0	5.1	0.1
Stop Del/Veh (s)	50.8	48.5	14.9	34.3	31.6	9.3	65.4	31.7	4.1	63.5	27.2	3.0

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	0.6
Total Delay (hr)	23.8
Total Del/Veh (s)	27.9
Stop Delay (hr)	19.9
Stop Del/Veh (s)	23.4

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.1	0.0	0.0	0.1	0.0	0.0	0.5	2.2	3.6	0.0	0.1	0.3
Denied Del/Veh (s)	3.7	0.5	0.2	0.2	0.0	0.0	7.7	7.5	9.0	1.9	2.8	0.6
Total Delay (hr)	1.5	1.4	1.4	9.6	0.9	0.1	3.9	12.5	5.2	1.0	3.4	27.2
Total Del/Veh (s)	62.9	60.1	22.7	38.2	29.6	6.5	58.9	41.2	12.8	74.6	78.9	53.4
Stop Delay (hr)	1.4	1.3	1.3	7.4	0.8	0.1	3.6	9.9	1.7	0.9	3.1	22.7
Stop Del/Veh (s)	60.1	56.2	21.9	29.6	25.9	6.3	54.0	32.8	4.2	68.2	71.1	44.6

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	SBR	All
Denied Delay (hr)	0.0	7.0
Denied Del/Veh (s)	0.5	4.0
Total Delay (hr)	0.3	68.3
Total Del/Veh (s)	7.0	38.3
Stop Delay (hr)	0.2	54.4
Stop Del/Veh (s)	6.0	30.6

Total Network Performance

Denied Delay (hr)	7.6
Denied Del/Veh (s)	4.0
Total Delay (hr)	100.9
Total Del/Veh (s)	51.9
Stop Delay (hr)	77.4
Stop Del/Veh (s)	39.8

Intersection: 1: North Marketplace & Truxel Rd

Movement	EB	EB	WB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	L	T	T	T	T	T	R
Maximum Queue (ft)	67	124	60	36	4	254	216	150	91	46
Average Queue (ft)	23	51	25	7	0	117	82	30	22	9
95th Queue (ft)	57	105	49	27	4	209	176	95	62	32
Link Distance (ft)	143	143	880		460	951	951	951	951	
Upstream Blk Time (%)		0								
Queuing Penalty (veh)		0								
Storage Bay Dist (ft)				355						115
Storage Blk Time (%)									0	
Queuing Penalty (veh)									0	

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	L	L	T	R	R	L	T	T	R
Maximum Queue (ft)	76	218	119	120	93	65	38	6	224	409	412	123
Average Queue (ft)	15	77	76	50	28	14	10	0	50	250	263	64
95th Queue (ft)	51	171	130	96	70	45	28	4	150	366	370	97
Link Distance (ft)		880			704	704	704			702	702	702
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	5	7							17		0
Queuing Penalty (veh)	0	10	5							5		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	R
Maximum Queue (ft)	122	132	225	450	410	169
Average Queue (ft)	73	24	121	257	191	23
95th Queue (ft)	107	93	243	404	347	104
Link Distance (ft)				438	438	
Upstream Blk Time (%)				1	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0		0	18	4	0
Queuing Penalty (veh)	0		0	19	4	0

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	73	134	152	163	114	259	365	482	155	51	93	205
Average Queue (ft)	4	66	58	76	16	137	210	234	42	9	5	93
95th Queue (ft)	38	123	120	137	66	243	338	383	107	30	46	189
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			0	0	0			0				
Queuing Penalty (veh)			0	0	0			0				
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	0	2	2				0	1				
Queuing Penalty (veh)	0	1	2				0	5				

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	240	446	598	656	236	228	186	255	482	482	463	403
Average Queue (ft)	141	303	286	209	129	123	75	216	413	396	351	277
95th Queue (ft)	210	408	509	455	209	201	148	332	513	501	467	387
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)			0	0					3	1	0	0
Queuing Penalty (veh)			0	0					12	5	1	0
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)							0	1	41			
Queuing Penalty (veh)							0	2	83			

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	SB
Directions Served	R
Maximum Queue (ft)	123
Average Queue (ft)	51
95th Queue (ft)	95
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 156

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	8143	8074	7849	7773	7955	7926	7798
Vehs Exited	8186	8039	7781	7724	7886	7870	7805
Starting Vehs	333	308	293	287	291	305	323
Ending Vehs	290	343	361	336	360	361	316
Travel Distance (mi)	3284	3257	3166	3151	3216	3202	3176
Travel Time (hr)	397.2	501.5	605.4	539.6	582.2	568.9	543.6
Total Delay (hr)	273.8	378.9	486.5	421.2	461.2	448.7	424.0
Total Stops	12869	13430	13265	12954	13322	13659	12921
Fuel Used (gal)	189.1	213.4	233.8	218.3	230.0	227.0	220.7

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7959	7759	8009	7925
Vehs Exited	7872	7671	7949	7879
Starting Vehs	295	268	306	298
Ending Vehs	382	356	366	343
Travel Distance (mi)	3202	3140	3222	3202
Travel Time (hr)	520.8	536.0	513.4	530.8
Total Delay (hr)	400.3	417.8	392.1	410.5
Total Stops	13616	13166	13678	13289
Fuel Used (gal)	216.5	217.4	214.6	218.1

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2079	2061	2046	2050	2047	2102	1919
Vehs Exited	2082	2020	2014	2015	2008	2071	1915
Starting Vehs	333	308	293	287	291	305	323
Ending Vehs	330	349	325	322	330	336	327
Travel Distance (mi)	830	812	805	813	809	831	781
Travel Time (hr)	87.4	92.9	84.3	76.7	97.1	87.7	96.6
Total Delay (hr)	56.2	62.3	54.0	46.2	66.7	56.4	67.3
Total Stops	3293	3288	2973	2911	3436	3330	3262
Fuel Used (gal)	44.7	45.6	43.3	41.4	46.6	44.7	45.5

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1985	2032	2021	2033
Vehs Exited	1964	1947	1971	1999
Starting Vehs	295	268	306	298
Ending Vehs	316	353	356	332
Travel Distance (mi)	792	800	792	807
Travel Time (hr)	83.1	81.3	95.8	88.3
Total Delay (hr)	53.2	51.1	66.0	57.9
Total Stops	2849	2994	3287	3161
Fuel Used (gal)	42.7	42.6	45.9	44.3

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1986	2043	1941	1972	1864	1951	1967
Vehs Exited	2002	1985	1873	1925	1851	1941	1944
Starting Vehs	330	349	325	322	330	336	327
Ending Vehs	314	407	393	369	343	346	350
Travel Distance (mi)	809	814	779	791	767	793	799
Travel Time (hr)	90.7	118.8	125.0	107.2	130.0	119.5	132.2
Total Delay (hr)	60.4	88.2	95.8	77.5	101.2	89.8	102.1
Total Stops	3020	3401	3490	3441	3393	3516	3265
Fuel Used (gal)	45.0	52.1	52.1	48.7	53.2	51.5	54.4

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2023	1952	2025	1974
Vehs Exited	1957	1931	2008	1941
Starting Vehs	316	353	356	332
Ending Vehs	382	374	373	362
Travel Distance (mi)	804	790	815	796
Travel Time (hr)	109.7	113.0	122.6	116.9
Total Delay (hr)	79.5	83.4	92.0	87.0
Total Stops	3619	3512	3561	3422
Fuel Used (gal)	49.4	49.7	52.5	50.9

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2014	1982	1912	1810	2006	1879	1928
Vehs Exited	2012	2052	1984	1883	2030	1892	2004
Starting Vehs	314	407	393	369	343	346	350
Ending Vehs	316	337	321	296	319	333	274
Travel Distance (mi)	809	817	796	759	830	775	797
Travel Time (hr)	101.5	135.8	173.1	158.1	170.6	166.3	147.7
Total Delay (hr)	71.1	105.1	143.3	129.4	139.3	137.1	117.6
Total Stops	3244	3284	3328	3234	3127	3238	3258
Fuel Used (gal)	47.3	55.7	63.7	59.0	63.8	61.5	58.0

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1979	1889	1993	1937
Vehs Exited	1992	1912	1995	1974
Starting Vehs	382	374	373	362
Ending Vehs	369	351	371	327
Travel Distance (mi)	802	781	809	797
Travel Time (hr)	145.3	151.4	137.5	148.7
Total Delay (hr)	115.2	122.0	107.0	118.7
Total Stops	3599	3257	3342	3294
Fuel Used (gal)	58.0	58.2	55.7	58.1

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2064	1988	1950	1941	2038	1994	1984
Vehs Exited	2090	1982	1910	1901	1997	1966	1942
Starting Vehs	316	337	321	296	319	333	274
Ending Vehs	290	343	361	336	360	361	316
Travel Distance (mi)	836	814	786	788	810	803	800
Travel Time (hr)	117.7	153.9	223.1	197.6	184.5	195.4	167.1
Total Delay (hr)	86.2	123.2	193.4	168.1	153.9	165.3	137.0
Total Stops	3312	3457	3474	3368	3366	3575	3136
Fuel Used (gal)	52.1	60.0	74.7	69.1	66.4	69.3	62.7

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1972	1886	1970	1980
Vehs Exited	1959	1881	1975	1960
Starting Vehs	369	351	371	327
Ending Vehs	382	356	366	343
Travel Distance (mi)	803	769	807	802
Travel Time (hr)	182.7	190.3	157.6	177.0
Total Delay (hr)	152.5	161.4	127.1	146.8
Total Stops	3549	3403	3488	3416
Fuel Used (gal)	66.4	66.9	60.4	64.8

1: North Marketplace & Truxel Rd Performance by movement

Movement	EBL	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	16.8	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	32.1
Denied Del/Veh (s)	451.0	466.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.0	27.7
Total Delay (hr)	1.0	4.0	0.0	0.5	0.1	0.3	1.6	0.2	13.1	0.2	21.0
Total Del/Veh (s)	40.7	175.9	1.2	9.2	68.3	58.8	3.7	3.9	28.7	3.3	18.4
Stop Delay (hr)	1.0	4.0	0.0	0.4	0.1	0.2	0.0	0.0	9.9	0.1	15.8
Stop Del/Veh (s)	38.7	174.7	0.3	8.1	64.6	54.3	0.1	0.1	21.8	1.6	13.8

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Denied Delay (hr)	0.0	0.0	0.0	0.0	22.0	3.2	5.8	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	1.2	155.0	108.3	103.2	100.9	0.0	0.0	0.0	0.0	3.1
Total Delay (hr)	1.2	1.1	0.9	0.1	27.1	1.8	1.2	0.1	1.3	12.0	1.6	0.9
Total Del/Veh (s)	53.9	57.0	24.6	94.4	137.5	60.4	21.6	80.0	77.4	49.3	8.2	62.2
Stop Delay (hr)	1.2	1.0	0.8	0.0	24.3	1.6	1.1	0.1	1.2	10.1	1.1	0.8
Stop Del/Veh (s)	50.2	52.1	21.7	85.1	123.5	54.6	20.2	74.5	71.0	41.4	5.7	57.7

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	SBL	SBT	SBR	All
Denied Delay (hr)	0.2	0.2	0.1	31.6
Denied Del/Veh (s)	3.2	1.1	2.9	28.8
Total Delay (hr)	4.9	5.3	0.2	59.8
Total Del/Veh (s)	68.4	35.0	5.4	54.4
Stop Delay (hr)	4.5	4.4	0.2	52.5
Stop Del/Veh (s)	62.4	29.1	4.0	47.7

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.3	0.2	0.3	0.0	0.0	0.0	22.8	52.3	49.5	0.0	0.0	0.0
Denied Del/Veh (s)	6.6	4.4	2.8	0.0	0.0	0.0	132.1	130.6	135.6	0.0	0.0	0.0
Total Delay (hr)	3.6	2.7	2.8	12.0	1.7	0.8	17.9	53.6	9.9	7.8	13.0	10.8
Total Del/Veh (s)	68.6	68.6	23.3	41.2	32.3	20.7	109.7	138.9	28.9	180.4	167.3	34.4
Stop Delay (hr)	3.5	2.5	2.6	9.3	1.5	0.8	16.0	46.5	4.6	7.3	12.2	8.6
Stop Del/Veh (s)	65.4	64.2	22.2	31.8	28.0	20.1	98.0	120.5	13.6	170.1	156.5	27.6

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	SBR	All
Denied Delay (hr)	0.0	125.4
Denied Del/Veh (s)	0.0	63.0
Total Delay (hr)	0.3	136.9
Total Del/Veh (s)	7.4	69.7
Stop Delay (hr)	0.3	115.6
Stop Del/Veh (s)	5.5	58.9

Total Network Performance

Denied Delay (hr)	189.2
Denied Del/Veh (s)	81.8
Total Delay (hr)	221.3
Total Del/Veh (s)	96.9
Stop Delay (hr)	184.6
Stop Del/Veh (s)	80.8

Intersection: 1: North Marketplace & Truxel Rd

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	UL	T	T	T	T	T	T	T	R
Maximum Queue (ft)	154	162	129	64	3	35	11	696	625	379	177	118
Average Queue (ft)	54	110	47	24	0	2	0	384	319	120	62	39
95th Queue (ft)	146	186	99	56	3	20	9	697	647	296	143	88
Link Distance (ft)	143	143	878		460	460	460	951	951	951	951	
Upstream Blk Time (%)	3	44						0	0			
Queuing Penalty (veh)	0	0						0	0			
Storage Bay Dist (ft)				355								115
Storage Blk Time (%)											2	0
Queuing Penalty (veh)											3	0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	UL	L	T	R	R	UL	T	T	R
Maximum Queue (ft)	116	258	120	225	742	730	648	117	224	498	504	221
Average Queue (ft)	31	101	86	223	670	523	141	16	98	297	311	76
95th Queue (ft)	87	197	136	230	862	1010	474	70	224	447	455	158
Link Distance (ft)		878			704	704	704			702	702	702
Upstream Blk Time (%)					60	27	0			0	0	
Queuing Penalty (veh)					0	0	0			0	0	
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	13	11	61	33		0	0	0	26		0
Queuing Penalty (veh)	0	28	13	229	124		0	0	1	18		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	UL	L	T	T	R
Maximum Queue (ft)	143	211	225	448	400	170
Average Queue (ft)	79	124	177	225	155	30
95th Queue (ft)	122	215	252	394	314	110
Link Distance (ft)				438	438	
Upstream Blk Time (%)				2	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0	0	5	8	4	0
Queuing Penalty (veh)	0	1	12	25	5	0

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	127	140	214	203	171	258	355	396	238	129	286	423
Average Queue (ft)	53	122	144	135	55	175	257	265	90	46	181	285
95th Queue (ft)	151	164	243	205	142	248	345	350	191	103	292	422
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			13	2	0							
Queuing Penalty (veh)			0	0	0							
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	1	21	14				0	0				0
Queuing Penalty (veh)	1	28	27				1	1				0

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	891	888	886	910	495	229	242	255	475	472	325	261
Average Queue (ft)	613	740	709	718	413	130	228	242	392	260	167	132
95th Queue (ft)	983	954	949	1062	646	209	271	288	591	476	280	231
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)	2	3	2	18					34	0	0	
Queuing Penalty (veh)	0	0	0	0					117	1	0	
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)	3			16	1		18	54	1			
Queuing Penalty (veh)	12			210	4		51	151	4			

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	SB
Directions Served	R
Maximum Queue (ft)	144
Average Queue (ft)	56
95th Queue (ft)	112
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1072

Appendix C

Analysis Worksheets for
Cumulative (2035) plus Proposed Project Conditions (No Driveway Along Truxel Road)

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6603	6638	6812	6788	6763	6855	6804
Vehs Exited	6623	6700	6819	6816	6799	6901	6800
Starting Vehs	194	236	203	213	236	229	202
Ending Vehs	174	174	196	185	200	183	206
Travel Distance (mi)	2733	2761	2823	2826	2814	2849	2801
Travel Time (hr)	200.8	206.2	209.6	215.3	233.2	212.0	210.8
Total Delay (hr)	99.7	104.1	105.5	111.1	129.2	106.7	107.3
Total Stops	7475	7503	7608	7850	7782	7709	7887
Fuel Used (gal)	124.0	126.9	130.3	131.1	134.3	130.7	128.7

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6777	6677	6892	6761
Vehs Exited	6795	6670	6942	6786
Starting Vehs	211	208	229	215
Ending Vehs	193	215	179	186
Travel Distance (mi)	2797	2769	2879	2805
Travel Time (hr)	211.9	207.1	217.2	212.4
Total Delay (hr)	108.5	104.8	111.3	108.8
Total Stops	7876	7768	8073	7752
Fuel Used (gal)	129.1	127.3	132.8	129.5

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1649	1661	1736	1743	1681	1746	1741
Vehs Exited	1656	1692	1745	1717	1725	1749	1727
Starting Vehs	194	236	203	213	236	229	202
Ending Vehs	187	205	194	239	192	226	216
Travel Distance (mi)	676	695	716	715	706	727	707
Travel Time (hr)	49.2	51.4	52.7	56.4	59.7	54.9	53.2
Total Delay (hr)	24.2	25.8	26.2	29.9	33.6	28.1	26.9
Total Stops	1842	1885	1887	2044	1928	1911	2059
Fuel Used (gal)	30.6	31.7	33.1	33.7	34.1	33.5	32.6

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1632	1607	1730	1692
Vehs Exited	1645	1626	1733	1702
Starting Vehs	211	208	229	215
Ending Vehs	198	189	226	205
Travel Distance (mi)	674	669	721	701
Travel Time (hr)	49.0	48.4	54.6	53.0
Total Delay (hr)	24.3	23.7	28.1	27.1
Total Stops	1793	1794	1988	1911
Fuel Used (gal)	30.5	30.1	33.5	32.4

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1592	1691	1636	1684	1702	1726	1671
Vehs Exited	1594	1672	1639	1718	1695	1750	1679
Starting Vehs	187	205	194	239	192	226	216
Ending Vehs	185	224	191	205	199	202	208
Travel Distance (mi)	660	689	674	720	709	713	698
Travel Time (hr)	46.6	54.5	49.2	56.4	60.4	53.0	52.5
Total Delay (hr)	22.1	28.8	24.4	29.9	34.1	26.5	26.6
Total Stops	1778	1946	1813	2114	2101	2043	2002
Fuel Used (gal)	29.4	32.5	30.8	33.8	34.1	32.8	31.6

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1743	1707	1738	1687
Vehs Exited	1707	1655	1749	1686
Starting Vehs	198	189	226	205
Ending Vehs	234	241	215	209
Travel Distance (mi)	712	704	721	700
Travel Time (hr)	55.0	52.8	51.8	53.2
Total Delay (hr)	28.5	26.8	25.4	27.3
Total Stops	2076	2044	1932	1985
Fuel Used (gal)	32.9	32.2	32.7	32.3

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1707	1672	1678	1652	1697	1711	1650
Vehs Exited	1674	1714	1647	1684	1685	1713	1672
Starting Vehs	185	224	191	205	199	202	208
Ending Vehs	218	182	222	173	211	200	186
Travel Distance (mi)	697	696	694	689	698	713	683
Travel Time (hr)	54.0	51.8	49.2	50.0	60.9	52.0	50.1
Total Delay (hr)	28.2	26.1	23.6	24.7	35.1	25.8	25.0
Total Stops	1993	1853	1796	1725	1846	1857	1823
Fuel Used (gal)	32.3	32.0	31.3	31.3	34.4	32.4	31.2

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1673	1651	1773	1687
Vehs Exited	1681	1691	1756	1693
Starting Vehs	234	241	215	209
Ending Vehs	226	201	232	205
Travel Distance (mi)	683	691	728	697
Travel Time (hr)	53.4	51.3	58.6	53.1
Total Delay (hr)	28.2	25.7	31.9	27.4
Total Stops	1943	1879	2159	1890
Fuel Used (gal)	32.1	32.0	34.3	32.3

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1655	1614	1762	1709	1683	1672	1742
Vehs Exited	1699	1622	1788	1697	1694	1689	1722
Starting Vehs	218	182	222	173	211	200	186
Ending Vehs	174	174	196	185	200	183	206
Travel Distance (mi)	700	681	739	702	702	697	713
Travel Time (hr)	51.0	48.5	58.6	52.4	52.2	52.1	55.0
Total Delay (hr)	25.2	23.3	31.3	26.5	26.3	26.4	28.8
Total Stops	1862	1819	2112	1967	1907	1898	2003
Fuel Used (gal)	31.7	30.8	35.2	32.1	31.7	31.9	33.3

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1729	1712	1651	1691
Vehs Exited	1762	1698	1704	1707
Starting Vehs	226	201	232	205
Ending Vehs	193	215	179	186
Travel Distance (mi)	729	705	709	708
Travel Time (hr)	54.4	54.6	52.1	53.1
Total Delay (hr)	27.6	28.6	25.9	27.0
Total Stops	2064	2051	1994	1968
Fuel Used (gal)	33.6	33.0	32.3	32.6

1: North Marketplace & Truxel Rd Performance by movement

Movement	EBL	EBR	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.9	0.1
Total Delay (hr)	0.4	1.0	0.0	0.1	0.1	0.9	0.1	2.6	0.0	5.3
Total Del/Veh (s)	51.5	54.6	0.7	2.8	65.0	2.7	2.8	5.2	1.4	5.4
Stop Delay (hr)	0.4	1.0	0.0	0.0	0.1	0.0	0.0	1.2	0.0	2.8
Stop Del/Veh (s)	50.0	53.8	0.4	1.8	61.1	0.1	0.1	2.4	0.6	2.9

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Denied Del/Veh (s)	0.2	0.3	1.9	2.7	0.1	0.1	0.0	0.0	0.0	2.9	0.6	3.0
Total Delay (hr)	0.8	0.6	0.8	1.4	0.2	0.1	0.6	9.4	1.5	2.3	6.3	0.1
Total Del/Veh (s)	54.6	54.1	16.6	36.5	31.4	10.6	73.4	38.6	6.6	70.6	34.0	4.3
Stop Delay (hr)	0.8	0.5	0.7	1.3	0.2	0.1	0.5	7.8	0.9	2.1	5.1	0.1
Stop Del/Veh (s)	51.2	49.3	14.6	34.4	28.8	10.7	68.4	32.1	4.1	65.4	27.5	3.1

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	0.6
Total Delay (hr)	24.1
Total Del/Veh (s)	28.3
Stop Delay (hr)	20.2
Stop Del/Veh (s)	23.7

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.7	3.1	4.8	0.0	0.1	0.3
Denied Del/Veh (s)	3.5	0.4	0.1	0.2	0.1	0.0	10.6	10.5	11.9	2.1	2.3	0.5
Total Delay (hr)	1.5	1.2	1.4	9.5	0.9	0.1	3.9	12.1	5.2	0.9	3.5	25.7
Total Del/Veh (s)	63.4	58.0	22.6	37.6	29.5	6.6	59.9	40.6	12.9	73.1	78.7	51.0
Stop Delay (hr)	1.4	1.1	1.3	7.3	0.7	0.1	3.6	9.6	1.7	0.9	3.1	21.4
Stop Del/Veh (s)	60.6	54.2	21.9	28.8	25.7	6.4	54.9	32.2	4.2	67.0	70.9	42.3

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	SBR	All
Denied Delay (hr)	0.0	9.1
Denied Del/Veh (s)	0.5	5.2
Total Delay (hr)	0.3	66.2
Total Del/Veh (s)	6.7	37.3
Stop Delay (hr)	0.2	52.5
Stop Del/Veh (s)	5.7	29.6

Total Network Performance

Denied Delay (hr)	9.7
Denied Del/Veh (s)	5.2
Total Delay (hr)	99.1
Total Del/Veh (s)	51.2
Stop Delay (hr)	75.8
Stop Del/Veh (s)	39.1

Intersection: 1: North Marketplace & Truxel Rd

Movement	EB	EB	WB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	L	T	T	T	T	T	R
Maximum Queue (ft)	87	130	61	43	4	286	270	158	109	68
Average Queue (ft)	24	54	23	8	0	121	86	33	21	11
95th Queue (ft)	63	110	47	30	4	225	188	98	65	39
Link Distance (ft)	143	143	880		460	951	951	951	951	
Upstream Blk Time (%)		0								
Queuing Penalty (veh)		0								
Storage Bay Dist (ft)				355						115
Storage Blk Time (%)									0	0
Queuing Penalty (veh)									0	0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	L	L	T	R	R	L	T	T	R
Maximum Queue (ft)	82	208	119	133	87	59	41	6	224	400	408	122
Average Queue (ft)	13	70	73	55	27	12	9	0	53	254	268	63
95th Queue (ft)	49	151	123	110	66	38	27	4	167	370	378	97
Link Distance (ft)		880			704	704	704			702	702	702
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	4	7							18		0
Queuing Penalty (veh)	0	9	5							5		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	R
Maximum Queue (ft)	125	120	225	452	411	170
Average Queue (ft)	73	21	125	263	188	21
95th Queue (ft)	109	88	246	419	353	95
Link Distance (ft)				438	438	
Upstream Blk Time (%)				1	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0		0	17	5	0
Queuing Penalty (veh)	0		0	19	5	0

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	94	136	158	158	112	271	367	428	163	51	95	199
Average Queue (ft)	6	63	57	77	14	138	208	228	41	8	4	96
95th Queue (ft)	46	123	119	134	59	253	339	363	109	29	41	191
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			0	0								
Queuing Penalty (veh)			0	0								
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	0	3	1				0	1				
Queuing Penalty (veh)	0	2	1				1	5				

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	235	481	636	828	232	216	175	255	478	489	451	389
Average Queue (ft)	142	296	273	227	131	120	70	215	395	383	332	260
95th Queue (ft)	209	417	456	533	207	195	134	330	510	499	451	368
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)		0	0	0					2	1	0	0
Queuing Penalty (veh)		0	0	0					8	4	0	0
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)							0	0	38			
Queuing Penalty (veh)							0	2	77			

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	SB
Directions Served	R
Maximum Queue (ft)	130
Average Queue (ft)	50
95th Queue (ft)	96
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 144

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7947	8003	7896	8000	7969	7947	7826
Vehs Exited	7883	7977	7848	7923	7891	7911	7775
Starting Vehs	298	332	281	281	280	301	305
Ending Vehs	362	358	329	358	358	337	356
Travel Distance (mi)	3206	3260	3186	3219	3210	3197	3169
Travel Time (hr)	518.1	517.3	528.6	538.8	468.6	613.0	614.5
Total Delay (hr)	397.6	394.8	409.0	417.8	348.1	492.9	495.3
Total Stops	13106	14081	13185	13686	13456	13101	13421
Fuel Used (gal)	214.6	217.2	216.8	221.0	203.7	236.7	236.0

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	8015	7938	7923	7944
Vehs Exited	7923	7851	7885	7887
Starting Vehs	271	319	330	298
Ending Vehs	363	406	368	356
Travel Distance (mi)	3231	3196	3202	3208
Travel Time (hr)	502.2	535.3	518.2	535.5
Total Delay (hr)	380.6	415.1	397.8	414.9
Total Stops	13544	13789	13702	13508
Fuel Used (gal)	212.6	219.5	215.3	219.3

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2040	1991	2053	2078	2015	1970	2030
Vehs Exited	2032	2010	2016	2024	1997	1948	1991
Starting Vehs	298	332	281	281	280	301	305
Ending Vehs	306	313	318	335	298	323	344
Travel Distance (mi)	817	813	812	826	806	779	815
Travel Time (hr)	89.2	92.4	87.9	93.0	79.1	100.8	93.7
Total Delay (hr)	58.4	61.8	57.4	62.0	48.9	71.5	63.1
Total Stops	3260	3246	2979	3361	2993	3279	3252
Fuel Used (gal)	44.5	45.4	44.3	46.1	42.1	46.6	45.7

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2056	2014	2009	2024
Vehs Exited	2003	1992	2009	2000
Starting Vehs	271	319	330	298
Ending Vehs	324	341	330	320
Travel Distance (mi)	809	800	803	808
Travel Time (hr)	80.5	92.8	100.7	91.0
Total Delay (hr)	50.1	62.6	70.4	60.6
Total Stops	2960	3262	3304	3190
Fuel Used (gal)	42.6	45.5	47.1	45.0

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1966	2041	2024	1961	2058	1935	1981
Vehs Exited	1952	1954	1969	1943	1983	1941	1970
Starting Vehs	306	313	318	335	298	323	344
Ending Vehs	320	400	373	353	373	317	355
Travel Distance (mi)	796	813	808	798	817	790	794
Travel Time (hr)	105.6	116.7	114.3	125.0	99.3	151.0	129.9
Total Delay (hr)	75.7	86.1	84.0	94.9	68.5	121.4	99.9
Total Stops	3150	3649	3499	3429	3486	3067	3397
Fuel Used (gal)	48.2	51.3	50.5	52.8	47.2	58.3	53.5

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2077	1985	2071	2008
Vehs Exited	2018	1941	2008	1966
Starting Vehs	324	341	330	320
Ending Vehs	383	385	393	369
Travel Distance (mi)	823	799	820	806
Travel Time (hr)	114.3	117.8	111.3	118.5
Total Delay (hr)	83.3	87.8	80.4	88.2
Total Stops	3750	3588	3381	3440
Fuel Used (gal)	50.9	51.2	50.1	51.4

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1948	1998	1895	1967	1977	2066	1874
Vehs Exited	1949	2039	1928	1956	2004	2030	1903
Starting Vehs	320	400	373	353	373	317	355
Ending Vehs	319	359	340	364	346	353	326
Travel Distance (mi)	784	826	779	796	809	822	779
Travel Time (hr)	139.1	147.7	143.5	149.6	126.2	169.3	170.7
Total Delay (hr)	109.7	116.6	114.4	119.7	96.0	138.5	141.4
Total Stops	3235	3598	3280	3400	3490	3393	3307
Fuel Used (gal)	55.4	58.9	56.4	58.6	53.4	63.5	62.7

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1918	1883	1945	1948
Vehs Exited	1972	1956	1984	1971
Starting Vehs	383	385	393	369
Ending Vehs	329	312	354	341
Travel Distance (mi)	789	772	799	795
Travel Time (hr)	137.2	137.2	134.2	145.5
Total Delay (hr)	107.6	108.2	104.1	115.6
Total Stops	3526	3356	3542	3411
Fuel Used (gal)	55.6	55.0	55.2	57.5

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1993	1973	1924	1994	1919	1976	1941
Vehs Exited	1950	1974	1935	2000	1907	1992	1911
Starting Vehs	319	359	340	364	346	353	326
Ending Vehs	362	358	329	358	358	337	356
Travel Distance (mi)	809	808	787	799	779	806	782
Travel Time (hr)	184.2	160.6	183.0	171.2	164.0	191.8	220.3
Total Delay (hr)	153.8	130.3	153.3	141.2	134.7	161.5	190.9
Total Stops	3461	3588	3427	3496	3487	3362	3465
Fuel Used (gal)	66.5	61.6	65.7	63.4	61.0	68.2	74.1

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1964	2056	1898	1963
Vehs Exited	1930	1962	1884	1944
Starting Vehs	329	312	354	341
Ending Vehs	363	406	368	356
Travel Distance (mi)	811	825	779	798
Travel Time (hr)	170.2	187.5	172.1	180.5
Total Delay (hr)	139.7	156.5	142.8	150.4
Total Stops	3308	3583	3475	3465
Fuel Used (gal)	63.6	67.9	62.8	65.5

1: North Marketplace & Truxel Rd Performance by movement

Movement	EBL	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	15.6	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	29.1
Denied Del/Veh (s)	421.8	422.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.0	25.1
Total Delay (hr)	1.0	4.3	0.0	0.5	0.1	0.3	1.6	0.2	14.2	0.2	22.3
Total Del/Veh (s)	41.4	199.6	1.2	8.9	55.7	58.7	3.7	3.8	31.1	3.3	19.5
Stop Delay (hr)	0.9	4.2	0.0	0.4	0.1	0.3	0.0	0.0	10.8	0.1	16.9
Stop Del/Veh (s)	39.3	198.3	0.3	7.6	53.1	54.0	0.1	0.1	23.7	1.6	14.8

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Denied Delay (hr)	0.0	0.0	0.0	0.1	27.2	4.2	7.7	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	1.2	130.2	129.8	135.7	126.9	0.0	0.0	0.0	0.0	2.8
Total Delay (hr)	1.2	1.2	0.9	0.1	28.8	1.8	1.3	0.1	1.2	11.6	1.6	1.0
Total Del/Veh (s)	52.4	56.0	23.6	137.8	143.3	62.5	22.8	70.2	72.6	48.2	8.1	67.0
Stop Delay (hr)	1.1	1.1	0.8	0.1	25.8	1.6	1.2	0.1	1.1	9.7	1.1	1.0
Stop Del/Veh (s)	48.7	51.0	20.9	124.3	128.6	56.5	21.3	65.8	66.2	40.6	5.7	62.4

2: Gateway Park Blvd & N Freeway Blvd Performance by movement

Movement	SBL	SBT	SBR	All
Denied Delay (hr)	0.2	0.1	0.1	39.7
Denied Del/Veh (s)	2.9	0.9	2.8	36.0
Total Delay (hr)	4.8	5.5	0.2	61.2
Total Del/Veh (s)	67.1	36.0	5.2	55.5
Stop Delay (hr)	4.3	4.5	0.2	53.8
Stop Del/Veh (s)	61.1	29.9	3.9	48.8

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Delay (hr)	0.5	0.3	0.7	0.0	0.0	0.0	22.0	50.0	45.5	0.0	0.0	0.0
Denied Del/Veh (s)	10.3	7.5	5.7	0.0	0.0	0.0	125.2	124.5	126.4	0.0	0.1	0.0
Total Delay (hr)	3.9	2.7	2.8	12.5	1.7	0.8	18.6	53.9	9.8	8.3	13.9	10.7
Total Del/Veh (s)	72.0	69.9	24.3	42.4	32.9	21.0	111.1	138.9	29.0	188.0	178.9	34.4
Stop Delay (hr)	3.7	2.5	2.7	9.7	1.5	0.8	16.6	46.8	4.7	7.8	13.0	8.6
Stop Del/Veh (s)	68.8	65.5	23.2	32.8	28.6	20.4	99.3	120.6	13.9	177.3	167.7	27.5

3: Truxel Rd & Gateway Park Blvd Performance by movement

Movement	SBR	All
Denied Delay (hr)	0.0	118.9
Denied Del/Veh (s)	0.0	59.7
Total Delay (hr)	0.3	140.1
Total Del/Veh (s)	7.4	71.2
Stop Delay (hr)	0.2	118.7
Stop Del/Veh (s)	5.4	60.3

Total Network Performance

Denied Delay (hr)	187.7
Denied Del/Veh (s)	80.9
Total Delay (hr)	227.2
Total Del/Veh (s)	99.2
Stop Delay (hr)	190.1
Stop Del/Veh (s)	83.0

Intersection: 1: North Marketplace & Truxel Rd

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	UL	T	T	T	T	T	T	R
Maximum Queue (ft)	156	165	128	70	93	120	725	662	367	220	138
Average Queue (ft)	53	113	48	24	3	6	406	341	126	66	41
95th Queue (ft)	148	185	101	58	66	72	730	672	298	162	92
Link Distance (ft)	143	143	878		460	460	951	951	951	951	
Upstream Blk Time (%)	3	45			0	0	0	0			
Queuing Penalty (veh)	0	0			0	0	0	0			
Storage Bay Dist (ft)				355							115
Storage Blk Time (%)										2	0
Queuing Penalty (veh)										3	0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	TR	UL	L	T	R	R	UL	T	T	R
Maximum Queue (ft)	114	238	120	225	750	734	712	150	224	485	488	140
Average Queue (ft)	29	96	85	223	701	597	141	23	90	289	304	72
95th Queue (ft)	82	181	135	229	827	1007	480	93	204	429	436	116
Link Distance (ft)		878			704	704	704			702	702	702
Upstream Blk Time (%)					69	30	0					
Queuing Penalty (veh)					0	0	0					
Storage Bay Dist (ft)	95		95	200				150	200			
Storage Blk Time (%)	0	10	11	61	39		1	0	0	25		0
Queuing Penalty (veh)	0	23	14	229	145		1	0	1	17		0

Intersection: 2: Gateway Park Blvd & N Freeway Blvd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	UL	L	T	T	R
Maximum Queue (ft)	152	210	225	441	385	145
Average Queue (ft)	80	125	178	224	147	25
95th Queue (ft)	123	216	251	385	302	96
Link Distance (ft)				438	438	
Upstream Blk Time (%)				1	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)	145	200	200			145
Storage Blk Time (%)	0	0	4	9	4	0
Queuing Penalty (veh)	0	1	10	27	5	0

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	R	R	L	L	L	T	R	L	L
Maximum Queue (ft)	127	140	209	198	171	285	369	490	259	137	308	433
Average Queue (ft)	61	123	147	132	55	183	266	279	89	44	188	289
95th Queue (ft)	158	163	244	203	143	267	366	402	197	105	296	419
Link Distance (ft)			188	188	188			702	702	702		
Upstream Blk Time (%)			17	2	0			0	0			
Queuing Penalty (veh)			0	0	0			0	0			
Storage Bay Dist (ft)	115	115				345	345				420	420
Storage Blk Time (%)	1	24	15				1	1				0
Queuing Penalty (veh)	1	33	28				2	7				0

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	R	UL	L	T	T	T	T
Maximum Queue (ft)	902	889	887	913	495	233	242	255	479	482	344	231
Average Queue (ft)	614	741	711	720	411	127	231	246	424	282	166	128
95th Queue (ft)	986	950	948	1066	644	211	271	285	576	510	284	223
Link Distance (ft)	871	871	871	871					460	460	460	460
Upstream Blk Time (%)	3	4	3	19					37	0	0	
Queuing Penalty (veh)	0	0	0	0					129	1	0	
Storage Bay Dist (ft)					470	470	230	230				
Storage Blk Time (%)	3			17	1		26	62	1			
Queuing Penalty (veh)	11			215	4		74	174	4			

Intersection: 3: Truxel Rd & Gateway Park Blvd

Movement	SB
Directions Served	R
Maximum Queue (ft)	143
Average Queue (ft)	55
95th Queue (ft)	112
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1161