LEMOORE PLANNING COMMISSION
Regular Meeting
AGENDA
Lemoore Council Chamber
429 'C' Street

October 8, 2018
7:00 p.m.

1. Pledge of Allegiance

2. Call to Order and Roll Call

3. Public Comment

This time is reserved for members of the audience to address the Planning Commission on items of interest that are not on the Agenda and are within the subject matter jurisdiction of the Commission. It is recommended that speakers limit their comments to 3 minutes each and it is requested that no comments be made during this period on items on the Agenda. The Commission is prohibited by law from taking any action on matters discussed that are not on the Agenda. Prior to addressing the Commission, any handouts for Commissioners will be provided to the Planning Commission Secretary for distribution to the Commissioners and appropriate staff.

4. Approval – Minutes – Regular Meeting, September 10, 2018

5. Public Hearing – to consider and accept public comment for a request by SIM + PBK on behalf of CV Housing, LLC for Major Site Plan Review No. 2016-03, Zone Change No. 2017-01, and General Plan Amendment No. 2017-01 and on a recommendation to adopt a Mitigated Negative Declaration for a Mixed Use (residential/commercial) development consisting of a 176 multi-family apartment complex on 10.69 acres and 4.57 acres rezoned for future neighborhood commercial development. The site is located at the southeast corner of W. Hanford-Armona Road and SR 41 in the City of Lemoore (APN 021-660-031)

6. Public Hearing – to consider and accept public comment on a recommendation to adopt a Mitigated Negative Declaration and a recommendation to the City Council regarding adoption of an ordinance approving a Development Agreement proposed by and between the City of Lemoore and Kashian (KKAL, LP/Developer) to establish the terms on which City will sell the Property located on the northeast corner of Idaho Avenue and SR 41 to Developer and Developer will acquire from City and construct a manufacturing, distribution and warehouse center consisting of approximately 1,025,000 sq. ft. of building space according to schedule imposed herein; all in consideration of the City constructing the requisite right of way and infrastructure to accommodate the industrial development ("City Improvements") and selling the Property to Developer for the sum disclosed to the City Council in Closed Session ("Project")

7. Director's Report – Judy Holwell

8. Commission's Reports and Requests for Information

9. Adjournment

Upcoming Meetings
Regular Meeting of the Planning Commission, November 12, 2018

Agendas for all Planning Commission meetings are posted at City Hall, located at 119 Fox Street, at least 72 hours prior to the meeting. Any writings or documents provided to a majority of the Planning Commission regarding any item on this agenda will be made available for public inspection at the Community Development Department, located at 711 W. Cinnamon Drive, during normal business hours.

The City of Lemoore complies with the Americans with Disabilities Act (ADA of 1990). The Council Chamber is accessible to the physically disabled. Should you need special assistance, please call (559) 924-6740, at least four (4) business days prior to the meeting.

CERTIFICATION OF POSTING

I, Kristie Baley, Planning Commission Secretary for the City of Lemoore, do hereby declare that I posted the above Planning Commission Agenda for the Regular Meeting of Monday, October 8, 2018 at 7:00 p.m. at City Hall, 119 Fox Street in accordance with applicable legal requirements.

Posted this 5th day of October 2018.

//s//
Kristie Baley, Planning Commission Secretary

Minutes of the
LEMOORE PLANNING COMMISSION
September 10, 2018

PLEDGE OF ALLEGIANACE

MEETING CALLED TO ORDER

At 7:00 p.m., the meeting was called to order.

ROLL CALL	Chair:	Clement
	Vice Chair:	Etchegoin
	Commissioners:	Boerkamp, Franklin, Marvin, Meade
	Absent:	Koelewyn

City Staff and Contract Employees Present: Community Development Director Holwell; City Attorney Linden; City Planner Brandt (QK); Commission Secretary Baley

PUBLIC COMMENTS AND INQUIRIES

ITEM NO. 3 PUBLIC COMMENT

There was no comment.

REQUESTS FOR APPROVAL

ITEM NO. 4 MINUTES – REGULAR MEETING, AUGUST 13, 2018

Motion by Commissioner Meade, seconded by Commissioner Marvin, to approve the Minutes of the Planning Commission Regular Meeting of August 13, 2018.

Ayes: Meade, Marvin, Boerkamp, Franklin, Etchegoin, Clement
Absent: Koelewyn

PUBLIC HEARINGS

ITEM NO. 5 PUBLIC HEARING – CONDITIONAL USE PERMIT NO. 2018-03: A REQUEST BY THE DOLLAR GENERAL STORE TO ALLOW FOR THE OFF-SITE SALE OF ALCOHOLIC BEVERAGES AT 155 SOUTH 19TH AVENUE IN THE CITY OF LEMOORE (APN 023-420-014)

City Planner Brandt presented the project and provided staff's recommendation.

The public hearing opened at 7:07 p.m.

Steve Rawlings, Representative for Dollar General, spoke.

There were no other comments.

The public hearing closed at 7:08 p.m.

Motion by Commissioner Etchegoin, seconded by Commissioner Franklin to approve Resolution No. 2018-07, a Resolution of the Planning Commission approving Conditional Use Permit No. 2018-03 to allow the off-site sale of alcoholic beverages with conditions at 155 S. 19th Avenue.

Ayes: Etchegoin, Franklin, Boerkamp, Meade, Clement
Noes: Marvin
Absent: Koelewyn

ITEM NO. 6 PUBLIC HEARING – TO CONSIDER AND ACCEPT PUBLIC COMMENT ON A RECOMMENDATION TO THE CITY COUNCIL REGARDING ADOPTION OF AN ORDINANCE APPROVING A DEVELOPMENT AGREEMENT PROPOSED BY AND BETWEEN THE CITY OF LEMOORE AND KASHIAN (DEVELOPER) TO ESTABLISH THE TERMS ON WHICH CITY WILL SELL THE PROPERTY LOCATED ON THE NORTHEAST CORNER OF IDAHO AVENUE AND SR 41 TO DEVELOPER AND DEVELOPER WILL ACQUIRE FROM THE CITY AND CONSTRUCT A MANUFACTURING, DISTRIBUTION AND WAREHOUSE CENTER CONSISTING OF APPROXIMATELY 1,025,000 SQ. FT. OF BUILDING SPACE ACCORDING TO SCHEDULE IMPOSED HEREIN; ALL IN CONSIDERATION OF THE CITY CONSTRUCTING THE REQUISITE RIGHT OF WAY AND INFRASTRUCTURE TO ACCOMMODATE THE INDUSTRIAL DEVELOPMENT ("CITY IMPROVEMENTS") AND SELLING THE PROPERTY TO DEVELOPER FOR THE SUM DISCLOSED TO THE CITY COUNCIL IN CLOSED SESSION ("PROJECT")

City Planner Brandt recommended not opening the public hearing and continuing the item to the October 8, 2018 regular meeting of the Planning Commission.

Motion by Commissioner Franklin, seconded by Commissioner Boerkamp to continue the public hearing to the October 8, 2018 meeting.

Ayes: Franklin, Boerkamp, Meade, Marvin, Etchegoin, Clement
Absent: Koelewyn

COMMUNITY DEVELOPMENT DIRECTOR'S REPORT

ITEM NO. 8

Community Development Director Holwell provided the Commission with the following information:

Review of the following projects are tentatively scheduled for the October 8, 2018 agenda:

1) *continuance of the 80 acre industrial development to be located at the North East Corner of SR 41 and Idaho Avenue*
2) *a mixed use development to be located at SR 41 and Hanford-Armona Road*

Cannon Moving and Storage submitted a minor site plan review application to construct an office building on the property located at 583 W. Iona Avenue

White Top Restaurant submitted a temporary use permit application to hold a car show on September 15, 2018

Holwell provided clarification regarding tax credits for the Cinnamon Villas II project and the reciprocal cross access easement for the property located on the southwest corner of 19th Avenue and Bush Street.

COMMISSIONER'S REPORTS AND REQUESTS FOR INFORMATION

ITEM NO. 9

There were no reports or requests for information.

ADJOURNMENT

At 7:23 p.m., the meeting adjourned.

Approved the 8th day of October 2018.

APPROVED:

_____
Bob Clement, Chairperson

ATTEST:

_____
Kristie Baley, Commission Secretary

City of
LEMOORE
CALIFORNIA

711 West Cinnamon Drive ● Lemoore, California 93245 ● Planning (559) 924-6740
Community Development Department

Staff Report

Item No: 5

To: **Lemoore Planning Commission**

From: **Steve Brandt, AICP**

Date: **September 25, 2018** **Meeting Date:** **October 8, 2018**

Subject: **General Plan Amendment No. 2017-01, Zone Change No. 2017-01, and Site Plan Review No. 2016-03:** A request by CV Housing, LLC (agent: Brett Fugman) to change the General Plan land use designations and zoning from Mixed Use (MU) and Neighborhood Commercial (NC) to Medium Density Residential (RMD) and Neighborhood Commercial (NC), and to approve a site plan for a 176-unit multi-family apartment complex, located at the southeast corner of Highway 41 and Hanford-Armona Road (APN 021-660-031).

Proposed Motion:

Motion to adopt Resolution No. 2018-09 recommending approval of General Plan Amendment No. 2017-01, Zone Change No. 2017-01, and Major Site Plan Review No. 2016-03.

Project Proposal:

This proposal is a request for a General Plan Amendment, Zone Change, and Major Site Plan Review to allow for the development of 176 multi-family dwelling units, as well as 4.57 acres of Neighborhood Commercial (NC) for future commercial development. Currently, the southernmost 8 acres of the project site has a land use designation and zoning designation of Mixed Use (MU), and the northwest corner of the site is unzoned. The remaining 5.8 acres of the site is designated and zoned Neighborhood Commercial (NC). The project requires a general plan amendment and a zone change to change the Mixed Use (MU) zoning and land use designation to Medium Density Residential (RMD) to allow for the construction of an apartment complex on 10.69 acres, and designate the unzoned area as Neighborhood Commercial (NC) to allow for future commercial development. The conceptual site plan for the commercial development contains two retail shops, two proposed pad buildings suitable for fast food uses with drive-thru, and a hotel. However, the commercial development is meant to be conceptual, and is not being approved with this application. The project would

be developed in three phases. The first two phases cover the apartment complex. The third phase will consist of the commercial development and will require the application for and approval of a separate site plan review application. Site Plan Review No. 2016-03 reviews the multi-family development and street layout only.

Applicant	CV Housing, LLC (agent: Brett Fugman)
Location	Southeast corner of Highway 41 and Hanford-Armona Road
Existing Land Use	Vacant
APN(s)	021-660-031
Zoning	Existing: Unzoned, MU (Mixed Use), NC (Neighborhood Commercial)
	Proposed: RMD (Medium Density Residential), NC (Neighborhood Commercial)
General Plan	Existing: Undesignated, Mixed Use, Neighborhood Commercial
	Proposed: Medium Density Residential, Neighborhood Commercial

Adjacent Land Use, Zone and General Plan Designation

Direction	Current Use	Zone	General Plan
North	Agricultural	n/a	Low Medium Density Residential
South	Residential	RMD	Medium Density Residential
East	Residential	RLD	Low Density Residential
West	Highway 41	n/a	Agriculture

Previous Relevant Actions:

On December 20, 2017, Major Site Plan Review No. 2016-03 was reviewed by City staff. Based on those comments, the project was to be revised and resubmitted, along with an application for General Plan Amendment and Zone Change. The revised comments for Major Site Plan Review 2016-03 are attached.

Access and Right of Way:

Access to the property will be from three locations. There will be two access driveways on Hanford-Armona Road, and one on Persimmon Street. Staff supports having three access points because it will allow for better circulation in and out of the property for residents, visitors, fire emergency vehicles, and refuse vehicles.

Road improvements are outlined in the attached Site Plan Review Comments. Staff is recommending that all of the south side of Hanford-Armona Road be improved with the development of Phase I of the apartment complex.

Parking / On-site Circulation:

Parking for the multi-family housing will include 359 parking spaces. The number of off-street parking spaces is in accordance with the Municipal Code, as the code requires 1.5 space per one-bedroom unit for multi-family housing and 2 spaces per two- or three-bedroom unit. Phase 3 of the project, the commercial development, is conceptual and will be evaluated at time of submittal of a future site plan review application(s).

Architectural and Site Design Standards:

The site plan for multi-family units and the conceptual site plan for commercial development meet the City's site design standards for height, setbacks, and parking. Adherence to design guidelines is outlined in the attached Site Plan Review Comments.

Signage:

All new signage would be required to meet the City Zoning Ordinance. The project would be allowed building signage and monument signage per the standards in the Ordinance.

Environmental Assessment:

As the Lead Agency under the California Environmental Quality Act (CEQA), the City staff reviewed the project to determine whether it could have a significant effect on the environment because of its development. In accordance with CEQA Guidelines Section 15382, "[s]ignificant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An Initial Study was prepared for the project, and it found that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project in the form of mitigations have been made by or agreed to by the project proponent. A Mitigated Negative Declaration was prepared, and is attached for review.

Project Analysis:

The Project involves General Plan Amendment and a Zone Change. Currently, the southernmost 8 acres of the project site has a General Plan land use designation of Mixed Use and is zoned Mixed Use (MU), and the northwest corner of the site is unzoned and has

no land use designation. The remaining 5.8 acres has a General Plan land use designation and zoning designation of Neighborhood Commercial (NC). The proposed project will result in a General Plan land use designation and zoning designation of Neighborhood Commercial (NC) for the undesignated areas and change the Mixed Use (MU) zoned area and a portion of the Neighborhood Commercial (NC) zoned area to Medium Density Residential (RMD).

Approval of the proposed General Plan Amendment and Zone Change will result in the southern 10.69 acres of land designated and zoned Medium Density Residential (RMD), and the northernmost 4.57 acres designated and zoned as Neighborhood Commercial (NC). The change is supported by staff because Medium Density Residential housing is a permitted use in the Mixed-Use Zone. However, the rezoning is requested because the proposed Project is designed such that the residential development will be separate from the commercial uses and will not include a mix of residential, commercial, or office development on the site. With approval of the General Plan Amendment and Zone Change, the Project will remain consistent with the goals and policies of the City of Lemoore 2030 General Plan; therefore, the findings necessary to support the project can be made.

The Lemoore Housing Element projects proposed numbers of residential units for vacant or underdeveloped sites zoned for residential uses. According to Appendix B Table B-2d: Residential Land Inventory – City of Lemoore of the Housing Element, the project site was anticipated to develop with 71 units. With the proposal to construct 176 units, more than what was projected, the General Plan Amendment is consistent with the Housing Element, keeping the General Plan internally consistent.

Recommended Approval Findings:

Staff recommends that the Commission make the following findings and recommend approval of the project to the City Council:

1. The General Plan Amendment is in the public interest, and the General Plan, as amended, will remain internally consistent.

2. The Zone Change is consistent with the General Plan goals, policies, and implementation programs.

3. The proposed project is consistent with the objectives of the General Plan and complies with applicable zoning regulations, specific plan provisions, and improvement standards adopted by the City.

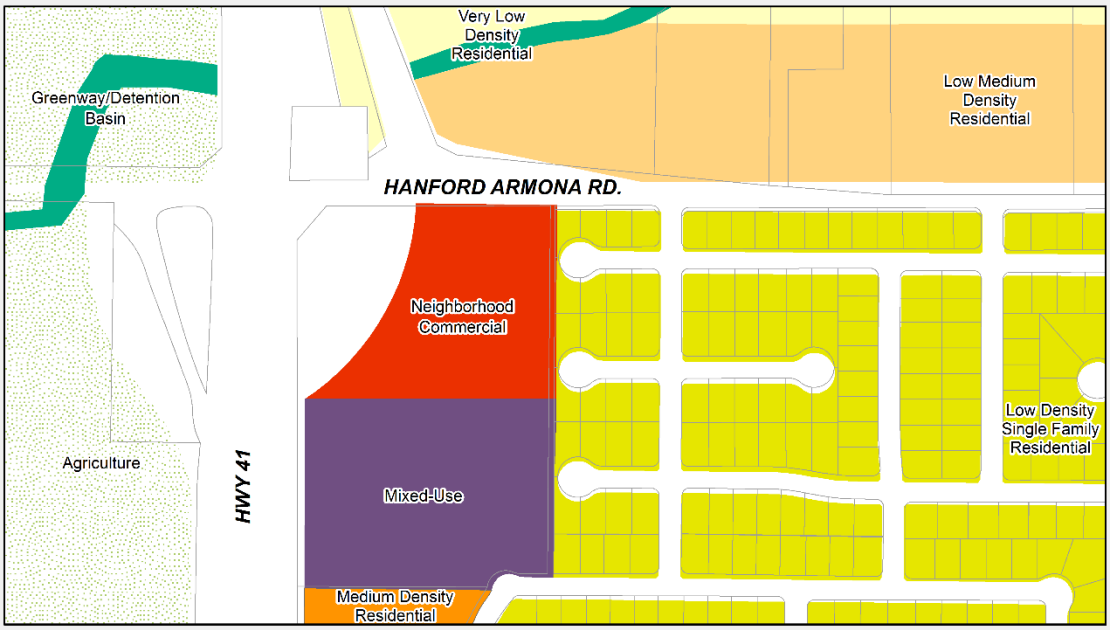
4. The proposed architecture, site design, and landscape are suitable for the purposes of the building and the site and will enhance the character of the neighborhood and community.

5. The architecture, character, and scale of the building and the site are compatible with the character of buildings on adjoining and nearby properties.

6. The proposed project will not create conflicts with vehicular, bicycle, or pedestrian transportation modes of circulation.

Attachments:

Map of Existing and Proposed General Plan Land Use Designations
Draft Resolution
Residential Site Plan and Elevation Plans
Major Site Plan Review No. 2016-03 Comments
Mitigated Negative Declaration

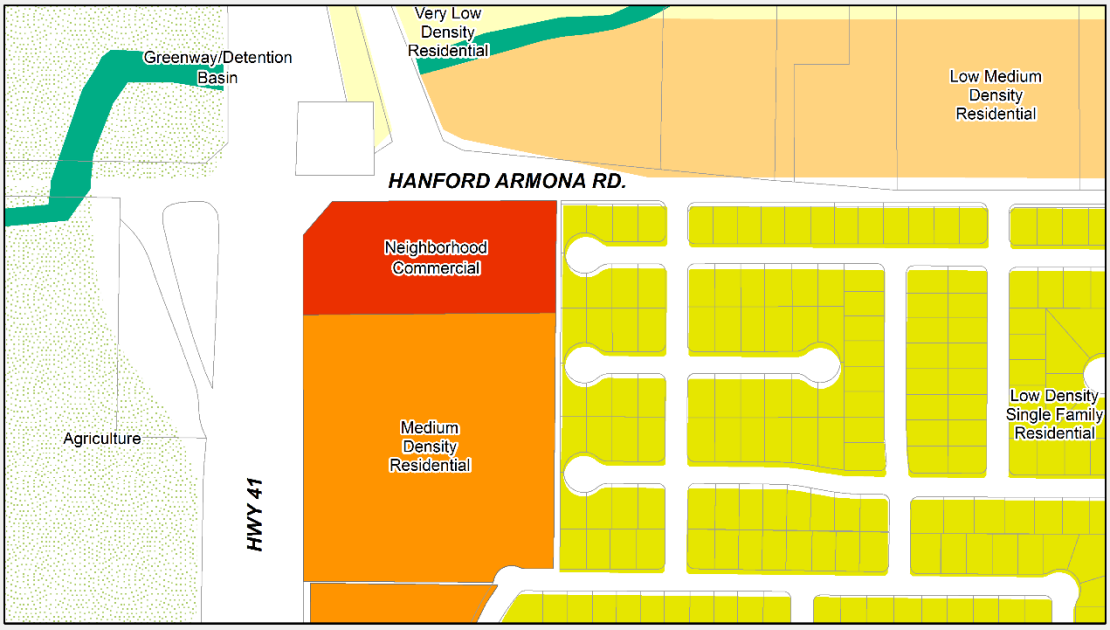


Before General Plan Amendment

N

0 Feet 400

After General Plan Amendment



Map of Existing & Proposed General Plan Land Use Designations

RESOLUTION NO. 2018-09

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF LEMOORE RECOMMENDING APPROVAL OF GENERAL PLAN AMENDMENT NO. 2017-01, ZONE CHANGE NO. 2017-01, AND MAJOR SITE PLAN REVIEW NO. 2016-03 TO ALLOW FOR 176 MULTI-FAMILY UNITS AND 4.67 ACRES OF COMMERCIAL DEVELOPMENT LOCATED AT THE SOUTHEAST CORNER OF HANFORD-ARMONA ROAD AND HIGHWAY 41 IN THE CITY OF LEMOORE

At a Regular Meeting of the Planning Commission of the City of Lemoore (City) duly called and held on October 8, 2018, at 7:00 p.m. on said day, it was moved by Commissioner _____, seconded by Commissioner _____, and carried that the following Resolution be adopted:

WHEREAS, CV Housing, LLC has requested approval of a General Plan Amendment, Zone Change, and Major Site Plan Review for a project located at the southeast corner of Highway 41 and Hanford-Armona Road in the City (APN 021-660-031); and

WHEREAS, the proposed site is 16.19 acres in size, and is zoned both Mixed Use (MU) and Neighborhood Commercial (NC), along with an unzoned portion; and

WHEREAS, the project proposes a General Plan Amendment and Zone Change to designate and zone 10.69 acres for Medium Density Residential (RMD), and 4.57 acres as Neighborhood Commercial (NC); and

WHEREAS, the proposed project contains 176 multi-family units in the portion of the site to be zoned RMD, and 4.57 acres of future commercial development in the portion of the site to be zoned NC; and

WHEREAS, as part of General Plan Amendment No. 2017-01 and Zone Change No. 2017-01, a Mitigated Negative Declaration contemplating approximately 176 multi-family residential units and 4.57 acres of neighborhood commercial development was prepared pursuant to the California Environmental Quality Act (CEQA); and

WHEREAS, the City Planning Commission held a duly noticed public hearing at its October 8, 2018, meeting.

NOW THEREFORE, BE IT RESOLVED that the Planning Commission of the City of Lemoore hereby makes the following findings regarding the proposed projects:

1. The General Plan Amendment is in the public interest, and the General Plan, as amended, will remain internally consistent.

2. The zoning change is consistent with the general plan goals, policies, and implementation programs.

3. The proposed project is consistent with the objectives of the general plan and complies with applicable zoning regulations, specific plan provisions, and improvement standards adopted by the City.

4. The proposed architecture, site design, and landscape are suitable for the purposes of the building and the site and will enhance the character of the neighborhood and community.

5. The architecture, character, and scale of the building and the site are compatible with the character of buildings on adjoining and nearby properties.

6. The proposed project will not create conflicts with vehicular, bicycle, or pedestrian transportation modes of circulation.

7. Any potential significant effects on the environment resulting from the proposed project will be reduced to a level less than significant with the mitigation measures contained in the Mitigated Negative Declaration, and the conditions of approval set forth below.

BE IT FURTHER RESOLVED that the Planning Commission of the City of Lemoore recommends approval of General Plan Amendment 2017-01 and Zone Change 2017-01;

BE IT FURTHER RESOLVED that the Planning Commission of the City of Lemoore recommends approval of Major Site Plan Review No. 2016-03 for 176 multi-family units subject to the following conditions:

1. The site shall be developed consistent with the approved Site Plan, Elevations, and its conditions; Major Site Plan Review No. 2016-03 comments, and applicable development standards found in the Zoning Ordinance and City Municipal Code.
2. The project would be developed in three phases. The first two phases cover the apartment complex. The third phase will consist of the commercial development and will require the application for and approval of a separate site plan review application. Site Plan Review No. 2016-03 reviews the multifamily development and street layout only.
3. All mitigation measures in the Mitigated Negative Declaration approved with General Plan Amendment 2017-01 and Zone Change 2017-01 and Site Plan Review 2016-03 shall be complied with.

4. Plans for all public and private improvements, including but not limited to, water, sewer, storm drainage, road pavement, curb and gutter, sidewalk, street lights, landscaping, and fire hydrants shall be approved by the City Engineer, and these improvements shall be completed in accordance with the approved plans to the satisfaction of the Public Works Department.

5. A public facilities maintenance district (PFMD) shall be formed at time of building permit for Phase 1 to provide the maintenance costs for common landscaping and other improvements, in accordance with existing City policy. Annexation into an existing PFMD is acceptable.

6. The project shall be subject to the applicable development impact fees adopted by resolution of the City Council.

7. A noise and odor easement shall be recorded on the property, in a form acceptable to the City Attorney, to acknowledge the presence of nearby industry and railroad, and the right of the industry and railroad to continue to emit such noise and odors as are otherwise allowable by law and to ensure that industry in these areas is not unreasonable hindered by residential users and owners that move nearby at a later date.

8. The developer shall comply with the standards, provisions, and requirements of the San Joaquin Valley Air Pollution Control District that relate to the project.

9. Fire hydrant types and locations shall be approved by the Lemoore Volunteer Fire Department.

10. Street trees from the city approved street tree list shall be planted with root barriers as per Public Works Standards and Specifications.

11. Street lights shall be provided within the project as per City local street lighting standards.

12. Any existing roadway, sidewalk, or curb and gutter that is damaged during construction shall be repaired or replaced to the satisfaction of the Public Works Department.

13. All signs shall require a sign permit separate from the building permit.

14. The project and all subsequent uses must meet the requirements found in Section 9-5B-2 of the Zoning Ordinance related to noise, odor, and vibration, and maintenance.

15. This Site Plan Review approval shall expire within two years, unless an extension is granted by the City.

Passed and adopted at a Regular Meeting of the Planning Commission of the City of Lemoore held on October 8, 2018, by the following votes:

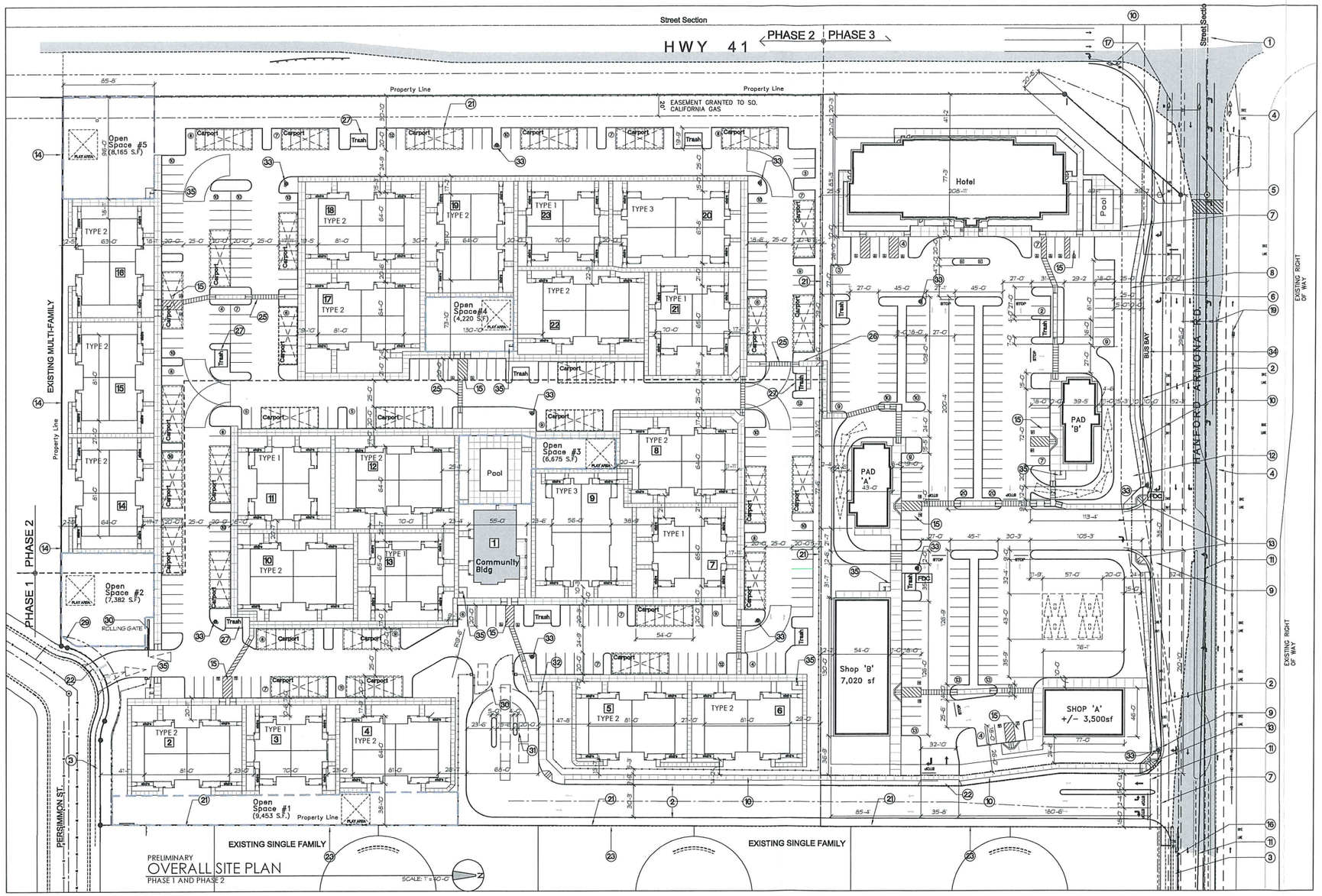
AYES:
NOES:
ABSTAINING:
ABSENT:

APPROVED:

_____
Bob Clement, Chairperson

ATTEST:

_____
Kristie Baley, Planning Commission Secretary



PRELIMINARY

OVERALL SITE PLAN

PHASE 1 AND PHASE 2

SCALE: 1" = 40'-0"

SITE KEYNOTES

No.	Description
1	EXISTING CENTER LINE OF STREET
2	CURB AND GUTTER PER STD P-1
3	EXISTING CURB, GUTTER & SIDEWALK PATCH AND REPAIR AS NEEDED
4	DASHED LINE INDICATES EXISTING EDGE OF AC PAVEMENT OF HANFORD ARMONA RD.
5	PROPOSED ONE LEFT TURN LAN AND MEDIAN ISLAND
6	PROPOSED ONE RIGHT TURN LANE
7	20' SOUTHERN CALIFORNIA GAS PIPE EASEMENT
8	10' PUBLIC UTILITY EASEMENT
9	DRIVE APPROACH WITH 25' RADIUS
10	PUBLIC SIDEWALK NON-CONTIGUOUS PER STD P-3
11	LEFT TURN POCKET
12	LANDSCAPE AREA
13	HANDICAP WHEELCHAIR RAMP PER STD P-2
14	EXISTING 6' HIGH BLOCK WALL
15	ACCESSIBLE PARKING STALL, LOADING AISLE, SIGNAGE AND CURB RAMP
16	EXISTING STREET LIGHT TO REMAIN
17	EXISTING TRAFFIC LIGHT
18	EASEMENT GRANTED TO SOUTHERN CAL GAS
19	EXISTING OVERHEAD POWER LINES
20	NEW ALTERNATE WHEELCHAIR RAMP PER CITY STANDARDS
21	6' HIGH BLOCK WALL PER CITY STD M-5
22	DRIVE APPROACH PER CITY STDS
23	EXISTING 8' HIGH WOOD FENCE
24	EXISTING FIRE HYDRANT
25	PEDESTRIAN PATH OF TRAVEL
26	3' WIDE PEDESTRIAN GATE AND CONNECTIVITY TO COMMERCIAL CENTER
27	TRASH ENCLOSURE PER CITY STDS M-6
28	FIRE & EMERGENCY VEHICULAR SLIDING GATE WITH KNOX BOX PER CITY STANDARDS
29	6' HIGH WROUGHT IRON FENCE
30	6' HIGH WROUGHT IRON SWINGING VEHICULAR GATE AT MAIN ENTRY, AND ROLLING GATE AT SECONDARY ACCESS
31	DIRECTORY CALL BOX AND BY PASS TURNING RADIUS OF 34'
32	3' WIDE WROUGHT IRON PEDESTRIAN GATE WITH LEVER HARDWARE AND PANIC HARDWARE TO EXIT
33	NEW FIRE HYDRANT PER CITY STANDARDS
34	BUS BAY PER CITY STANDARD, P-20
35	5-STALL BIKE RACK ON CONC. PAD

PHASE 1 & 2 (MULTI-FAMILY)

BUILDING AREA:

COMMUNITY BUILDING
OCCUPANCY B
1 STORY BUILDINGS
BUILDING AREA = 3,000 SQ. FT.

APARTMENTS
OCCUPANCY R2
2 STORY BUILDINGS
8 PLEX BUILDINGS

BUILDING TYPE 1:

AT & A2 UNITS	= 1BR/1BA
LIVING	= 607 SF
PATIO	= 84 SF
ENTRY	= 36 SF
WH/STO	= 9 SF
SUB TOTAL	= 930 SF
TOTAL 930 X (8)	= 7,440 SF

BUILDING TYPE 2:

B1 UNITS	= 2BR/2BA
LIVING	= 1039 SF
PATIO/ENTRY	= 120 SF
WH	= 11 SF
SUB TOTAL	= 1,166 SF
TOTAL 1,166 X (4)	= 4,664 SF
B2 UNITS	= 2BR/2BA
LIVING	= 1045 SF
PATIO/ENTRY	= 120 SF
WH	= 11 SF
SUB TOTAL	= 1,179 SF
TOTAL 1,179 X (4)	= 4,716 SF
TOTAL BLDG TYPE 2	= 9,380 SF

BUILDING TYPE 3:

C1 & C2 UNITS	= 3BR/2BA
LIVING	= 1,244 SF
PATIO	= 76 SF
ENTRY	= 39 SF
WH/STO	= 17 SF
SUB TOTAL	= 1,376 SF
TOTAL BLDG TYPE 3 1,376 X (8)	= 11,008 SF

UNIT COUNT & MIX:

TOTAL BUILDING & DWELLING UNIT COUNT:
BUILDING TYPE 1 X (8) = 48 D.U.
BUILDING TYPE 2 X (4) = 112 D.U.
BUILDING TYPE 3 X (2) = 16 D.U.
TOTAL DWELLING UNITS = 176 D.U.

DENSITY (17.0 D.U. PER AC)

MIX RATIO:
UNIT A (1BR/1BA) = 48 D.U. = 27%
UNIT B (2BR/2BA) = 112 D.U. = 63%
UNIT C (3BR/2BA) = 16 D.U. = 10%

PHASE 3 - FUTURE (COMMERCIAL)

OCCUPANCY B, A2, M, R2
5 SINGLE STORY BUILDINGS
PARCEL A = +/- 1.63 AC
BUILDING AREA
SHOP A = 3,500 SQ. FT.
FUEL CANOPY = 2,491 SQ. FT. (8 CAR)
PAD A = 3,000 SQ. FT.
TOTAL = 8,991 SQ. FT.

PARCEL B = +/- 1.73 AC
HOTEL /80 RM = +/- 14,500 SQ. FT.
PER FLOOR * 3 FLOORS = 43,500 SQ. FT.

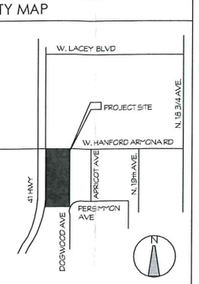
PARCEL C = 1.21 AC
SHOP B = 7,040 SQ. FT.
PAD B = 3,000 SQ. FT.
TOTAL = 10,040 SQ. FT.

TOTAL COMMERCIAL = 62,491 SQ. FT.

RETAIL PARKING:

PROVIDED PARKING	
STANDARD STALLS	= 136
ACCESSIBLE STALLS	= 16
FUEL CANOPY	= 8
DRIVE-THRU	= 10
TOTAL STALLS	= 170 STALLS

VICINITY MAP



PROJECT DATA: PHASE 1 & PHASE 2 (MFR)

PROPOSED 2 STORY FLAT APARTMENT COMMUNITY

SITE ADDRESS: SEC W. HANFORD ARMONA ROAD & HIGHWAY 41, LEMOORE, CA 93245

A.P.N.: 021-66-031

OWNER: CV HOUSING, LLC, ATTN.: BRETT FUGMAN, 680 W. SHAW AVENUE, SUITE 200, FRESNO, CA 93704, TEL: (559) 490-2500

EXISTING ZONING: NC & MU (NEIGHBORHOOD COMMERCIAL & MIXED USE)
EX. GEN. PLAN DESIG.: NEIGHBORHOOD COMMERCIAL & MIXED USE

PROPOSED ZONING: RMD / MU / NC
PROPOSED DENSITY: 17 D.U./AC.
ALLOWABLE DENSITY: 12 - 17 D.U./AC.

PROPOSED GEN. PLAN DESIG.: MEDIUM DENSITY MULTI-FAMILY RESIDENTIAL & NEIGHBORHOOD COMMERCIAL / MIXED USE

BUILDING DATA:

OCCUPANCY USE	OCCUPANCY	NUMBER OF STORIES
DWELLING UNITS	R-2	TWO STORY
COMMUNITY BUILDING	A-3	SINGLE STORY
CARPORTS	U-1	SINGLE STORY
CONSTRUCTION TYPE: DWELLING UNITS, COMMUNITY BUILDING, & CARPORTS	5B	

PARKING:

REQUIRED PARKING: 1-BR UNITS: 1.5 STALL / D.U. (1 STALL/D.U. TO BE COVERED)

2 & 3-BR UNITS: 2.0 STALLS / D.U. (1 STALL/D.U. TO BE COVERED)

		TENANT OPEN	TENANT COVERED	
1 BR	= 48 UNITS x 1.5 D.U.	= 24 STALLS	48 STALLS	
2 BR & 3BR = 128 UNITS x 2.0 D.U.		= 128 STALLS	128 STALLS	
TOTAL STALLS REQUIRED		= 152 STALLS	+ 176 STALLS	= 328 STALLS

PROVIDED PARKING:		TOTAL OPEN	TOTAL COVERED	
OPEN STALLS (TENANTS)	=	152 STALLS		
CARPORT STALLS (TENANTS)	=		179 STALLS	
OPEN STALLS (GUESTS)	=	28 STALLS		
TOTAL STALLS PROVIDED	=	180 STALLS	+ 179 STALLS	= 359 STALLS (2.03 STALLS/ D.U.)

SITE AREA AND COVERAGE:

SITE AREA (OVERALL): ± 16.19 ACRES

SITE AREA (DEDICATIONS): ± 0.93 ACRES (± 40,646 S.F.)

SITE AREA (PHASE 1 & 2): ± 10.69 ACRES (± 465,730 S.F.)
SITE COVERAGE: ± 20.9 %

SITE AREA (FUTURE PHASE 3): ± 4.57 ACRES (± 199,219 S.F.)

SITE AREA AND COVERAGE:

SITE AREA (OVERALL): ± 16.19 ACRES

SITE AREA (DEDICATIONS): ± 0.93 ACRES (± 40,646 S.F.)

SITE AREA (PHASE 1 & 2): ± 10.69 ACRES (± 465,730 S.F.)
SITE COVERAGE: ± 20.9 %

SITE AREA (FUTURE PHASE 3): ± 4.57 ACRES (± 199,219 S.F.)

OPEN SPACE:

REQUIRED OPEN SPACE (5% REQMT) SITE AREA OF 465,730 SF X 5% = 23,286 SF	=	23,286 S.F.
PROPOSED OPEN SPACE		
OPEN SPACE #1	=	9,453 S.F.
OPEN SPACE #2	=	7,382 S.F.
OPEN SPACE #3	=	6,675 S.F.
OPEN SPACE #4	=	4,220 S.F.
OPEN SPACE #5	=	8,165 S.F.
TOTAL PROPOSED OPEN SPACE	=	35,892
PERCENTAGE OF OPEN SPACE ± 35,895 S.F. / ± 465,730 S.F.	=	± 7.7%

RECEIVED
JUN 12 2018
BY: KB

SIMPBK
7991 NORTH INGRAM #101 - FRESNO, CALIFORNIA 93711
T 559 448 8400 - F 559 448 8427 www.simpbk.com

LICENSED ARCHITECT JOSHUA M. SMITH C 15865 RENEWAL 08/31/2019 STATE OF CALIFORNIA

FOR PLANCHECK ONLY

PROJECT NAME
MIXED USE DEVELOPMENT
SWC W. HANFORD ARMONA ROAD & HIGHWAY 41
LEMOORE, CA 93245

REVISIONS No.	DATE	DESCRIPTION
1	11.07.17	SPR / SPA / CZ SUBMITTAL
2	5.23.18	SPR CT REVS.

SHEET NAME: SITE PLAN

PROJECT ARCHITECT: JOHN SMITH	PROJECT NUMBER: 17-43		SHEET NUMBER: A1.1
DRAWN BY: BRYAN SASSANO	SCALE: 1" = 40'-0"		
CHECKED BY:	DATE: 11.07.17		

FRONT ELEVATION - BUILDING TYPE 1

3/16"=1'-0"

SIDE ELEVATION - BUILDING TYPE 1

3/16"=1'-0"

PROPOSED APARTMENT COMPLEX LEMOORE, CALIFORNIA

SIMPBK

FRONT ELEVATION - BUILDING TYPE 2

3/16"=1'-0"

SIDE ELEVATION - BUILDING TYPE 2

3/16"=1'-0"

PROPOSED APARTMENT COMPLEX LEMOORE, CALIFORNIA

SIMPBK

FRONT ELEVATION - BUILDING TYPE 3

3/16"=1'-0"

SIDE ELEVATION - BUILDING TYPE 3

3/16"=1'-0"

PROPOSED APARTMENT COMPLEX LEMOORE, CALIFORNIA

SIMPBK

EAST ELEVATION

NORTH ELEVATION

3/16"=1'-0"

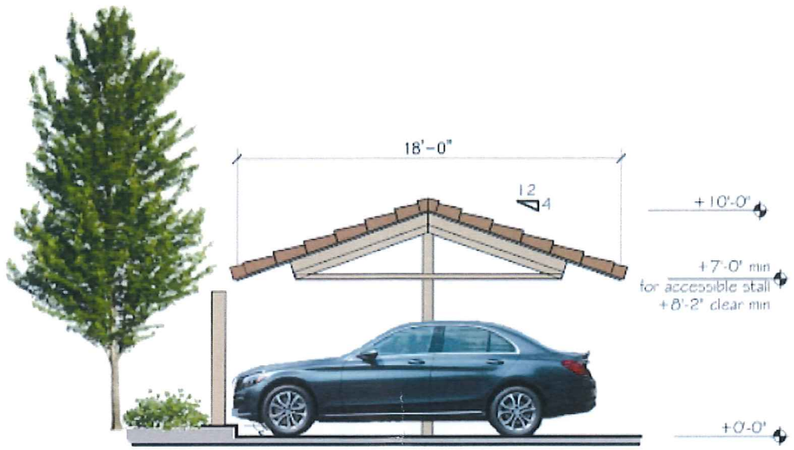
WEST ELEVATION

SOUTH ELEVATION

3/16"=1'-0"

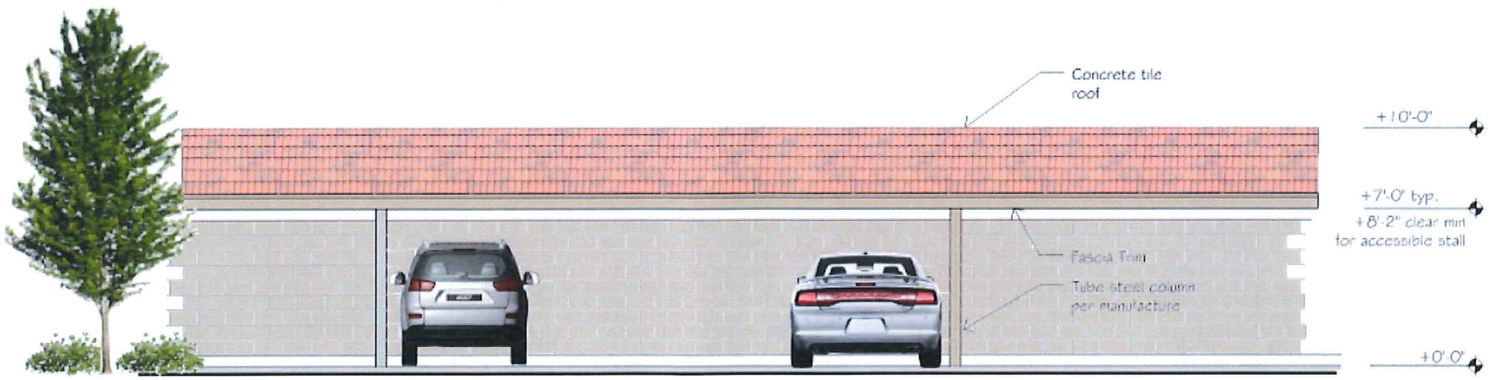
PROPOSED APARTMENT COMPLEX LEMOORE, CALIFORNIA

SIMPBK



SIDE ELEVATION

1/4"=1'-0"



FRONT ELEVATION

1/4"=1'-0"

SHOP B SIDE ELEVATION

1/8"=1'-0"

SHOP B FRONT ELEVATION

1/8"=1'-0"

DRIVE THRU SIDE ELEVATION PAD A

PAD B SIMILAR

1/8"=1'-0"

FRONT ELEVATION PAD A

PAD B SIMILAR

1/8"=1'-0"

SIDE ELEVATION PAD A

PAD B SIMILAR

1/8"=1'-0"

LEMOORE MIXED USE PROJECT

FRONT ELEVATION HOTEL

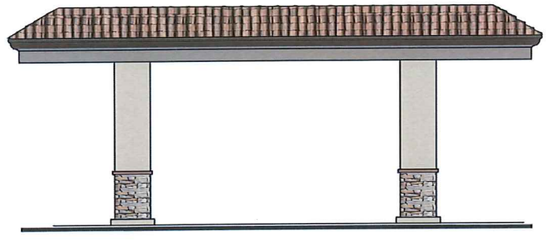
REAR SIMILAR

1/8"=1'-0"

SIDE ELEVATION HOTEL

LEMOORE MIXED USE PROJECT

SIMPBK

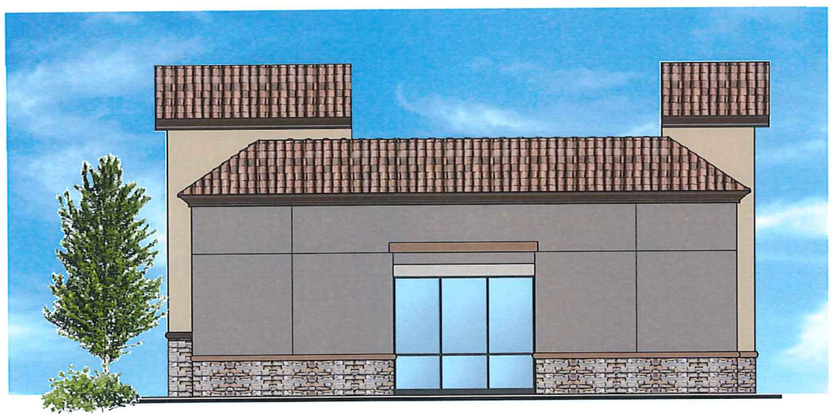


FUEL CANOPY

1/8"=1'-0"

FRONT ELEVATION SHOP A

1/8"=1'-0"



SIDE ELEVATION SHOP A

1/8"=1'-0"

ELEVATION SHOP A

1/8"=1'-0"

LEMOORE MIXED USE PROJECT

SIMPBK

City of
LEMOORE
CALIFORNIA

711 W. Cinnamon Drive ● Lemoore, CA 93245 ● Planning (559) 924-6740
Community Development Department

Site Plan Review

To:	**CV Housing, LLC**
From:	**Steve Brandt, City Planner**
Date:	**September 25, 2018**
Subject:	**Major Site Plan Review No. 2016-03:** a request by CV Housing, LLC for site plan review for a 176-unit multi-family residential apartment complex.

Building plans shall be submitted based on the following comments.

Any deviation from the approved plans shall require an amendment to the prior approvals or approval of a new permit as determined by the City. Phase 1 and 2 consists of a multi-family apartment complex. Phase 3 consists of a commercial site and is not being approved at this time. A Site Plan Application(s) shall be submitted for the commercial development prior to application for building permit of Phase 3.

The proposed residential portion of the site is 10.69 acres. The proposed apartment complex includes a community room and a pool, along with five open spaces each with a children's play area. Provided parking includes carports and uncovered stalls. The two-story buildings will house one-, two-, and three-bedroom units. The commercial portion of the site is 4.57 acres. There will be 0.93 acres dedicated for the widening of the Hanford-Armona Road right of way. It is recognized that the commercial area would be in a future phase.

Zoning/General Plan:

Currently, the southernmost 8 acres of the project site is zoned Mixed Use (MU), the northwest corner of the site is unzoned, and the remaining 5.8 acres is zoned Neighborhood Commercial (NC). The project requires a general plan amendment and a zone change to change the Mixed Use area to Medium Density Residential (RMD) to allow for the construction of an apartment complex on 10.69 acres and change the unzoned area to Neighborhood Commercial (NC) to allow for a total of 4.57 acres of future commercial development. These applications are in process with this site plan review.

The proposed RMD zone will allow multi-family units to a density of up to one unit per 1,700 square feet. The proposed unit count of 176 units is within the allowed density. The conceptual

commercial uses are below the maximum lot coverage ratio and within the allowed floor area ratio for the proposed NC zone.

Right of Way and Access:

The General Plan recommends that the ultimate configuration of Hanford-Armona Road be four travel lanes, bike lanes, and necessary turning lanes with a center median to control turning movements.

Improvements required on Hanford-Armona Road for Phase 1 include the installation of curb, gutter, sidewalk, and paveout from the east property line of the site to the property line where it meets the Caltrans right of way, with an appropriate transition to the Caltrans intersection. The final configuration is to be approved by the City Engineer with Caltrans input.

Coordinate with Kings Area Rural Transit (KART) for the design of the future bus turnout.

If the commercial area (Phase 3) is further subdivided in the future, a shared parking and access easement that runs with the land shall be required so that the commercial area operates as one shopping center.

An encroachment permit shall be obtained prior to commencement of work in a public right of way.

No on-street parking shall be allowed on Hanford Armona Road.

A 15-foot wide landscape setback area will be required on the commercial area (Phase 3) when it is developed in the future.

Area, Setback, Height, and Coverage Standards:

9-5A-4: GENERAL ZONING DISTRICT DEVELOPMENT STANDARDS

The residential portion of the project meets all standards in Table 9-5A-4A. The commercial portion (Phase 3) will be evaluated at a later date.

Design Standards:

All development standards found in Article B of Title 9 of the Zoning Ordinance shall apply. All infrastructure shall meet adopted City standards.

9-5C-3 DESIGN STANDARDS FOR RESIDENTIAL PROJECTS:

The project meets the standards found in this section that are applicable to multi-family developments.

The elevations for the multi-family development include tile roofs, stone-wrapped columns, balconies, shutters, variations in paint colors, and decorative attic vents. The carports include tile roofs.

k. Multi-family project developments with twenty-five (25) units or more shall provide at least one on site recreational area of at least ten thousand (10,000) square feet in size, or five percent (5%) of the overall site, whichever is greater.

The Site Plan proposes five open space areas, totaling 35,892 square feet, that together meet this requirement.

l. Except for senior housing developments, multi-family developments shall provide one play area (e.g., tot lot) for every forty (40) dwelling units in the project. Each play area size shall be a minimum of seven hundred fifty (750) square feet and shall be equally spaced from each other. Each play area shall be fenced and include play equipment.

Proposed 176 units divided by 40 equals 4.4 play areas required. The provision of five play areas meets this requirement.

9-5C-4 DESIGN STANDARDS FOR COMMERCIAL PROJECTS:

The project is required to meet the standards found in this section that are applicable to commercial developments. Since the commercial development is conceptual, no specific changes to the site plan have been identified at this time.

9-5D1-2: LANDSCAPE STANDARDS

A minimum 15 feet width of landscaping is required along Hanford-Armona Road. Future Site Plan Review for Phase 3 will evaluate compliance with this requirement.

Other landscaped locations on the site plan are acceptable.

The applicant shall submit a landscape plan at time of building permit submittal. The landscape plan shall be compliant with MWELO, including but not limited to the following conditions:

a. Plan shall include square footages of landscaped area shown, water use calculations, and the material to be utilized.
b. Turf shall be limited to no more than 25% of total landscape area. Fescue is not a permitted ground cover, per the City Ordinance.
c. Water use classifications shall be based on WUCOLS IV.

Street trees are required along Hanford-Armona Road and Persimmon Street. Species shall be from the City street tree list. Development of Phases 1 and 2 requires street trees be planted along Persimmon Street only. Street trees on Hanford-Armona Road can be deferred to Phase 3.

Meet all landscape planting size, spacing, and planter widths found in Section 9-5D1-2D of the Zoning Ordinance.

Parking:

9-5E-3: GENERAL PARKING REGULATIONS:

The number of multi-family units requires a minimum of 328 parking spaces on site. A total of 359 are shown.

9-5E-5: DESIGN AND DEVELOPMENT STANDARDS FOR OFF STREET PARKING AREAS

The parking areas as shown on the site plan meet the design and development standards (space size, aisle width, etc.) of Section 9-5E-5 of the Zoning Ordinance. The site plan appears to be consistent with these standards. Final review will occur at time of building permit submittal.

9-5E-7: BICYCLE PARKING REQUIREMENTS:

Provide bicycle parking per the building code.

Signage:

All signage shall meet the requirements of Chapter 5F of the Zoning Ordinance. Signs require a sign permit.

Trash Enclosures:

Trash enclosures shall be constructed per City design standards.

Trash enclosures shall be designed to accommodate refuse and recycling bins. The trash enclosures shall also include a roof structure and enclosed by a finished block wall.

Utilities:

The project shall connect to existing sewer, storm drain, and water lines. Sewer, storm drain, and water services shall be installed per plans approved by the City Engineer.

Water lines are available in Persimmon Avenue and Hanford-Armona Road. An easement for a city water line is required in the open space area and the driveway on the east side of the project. This will allow the City to loop the water system. If the City Engineer determines it to be feasible, the new line shall also connect to existing stubbed water lines in the adjacent cul de sacs of Peachwood Circle, Lime Circle, and Orange Circle. A water line shall also be installed in Hanford-Armona Road with plans to be approved by the City Engineer.

Fire hydrant and FDC locations for Phases 1 and 2 are acceptable as submitted. The two fire hydrants shown along Hanford-Armona Road shall be constructed with construction of Hanford-Armona Road.

A storm drainage line and a sewer line are available in Persimmon Avenue. Extension of these lines will also need to be sized to serve Phase 3. During review of the improvement plans, the Public Works Director will determine if the lines should be upsized and put into a City easement so that they can serve other future development sites north of Hanford-Armona Road.

Environmental Assessment:

A Mitigated Negative Declaration has been prepared in accordance with the California Environmental Quality Act (CEQA).

In addition, the State of California requires a Fish & Wildlife fee of $2,370.75 when the environmental document is filed with the County Clerk. A check for State and County filing fees made payable to Kings County to be submitted to the City of Lemoore within 3 days after project approval by the City Council.

The developer shall comply with all applicable San Joaquin Valley Air Pollution Control District (SJVAPCD) standards and all applicable dust control requirements including Rule 9510 (indirect source review) and Regulation VIII (fugitive dust) Rules.

Lighting:

The applicant shall submit a Site Photometric (lighting) Plan at time of building permit submittal consistent with 9-5B-4 of the City Municipal Code. The plan shall demonstrate how project lighting shall be designed, located, installed, and maintained in order to prevent glare, light trespass, and light pollution.

Outdoor lighting shall utilize energy efficient fixtures and lamps, such as LED, high pressure sodium, metal halide, low pressure sodium, hard wired compact fluorescent, or other lighting technology that is of equal or greater efficiency. All new outdoor lighting fixtures shall be energy efficient with a rated average bulb life of not less than ten thousand (10,000) hours.

Architectural features may be illuminated by up lighting, provided that the lamps are low intensity to produce a subtle lighting effect and no glare or light trespass is produced. Wherever feasible, solar powered fixtures should be used.

Other:

Apartment unit identification shall be appropriately sized and located on buildings as directed by police and fire departments. Fire hydrant and fire department connection locations shall be located according to the site plan.

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

CITY OF LEMOORE

HANFORD-ARMONA MIXED DEVELOPMENT

Comments must be received by: October 8, 2018 (20 days after notice)

SEPTEMBER 2018

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

HANFORD-ARMONA MIXED DEVELOPMENT

Prepared for:

City of Lemoore
711 West Cinnamon Drive
Lemoore, CA 93245
Contact Person: Judy Holwell, Community Development Director
Phone: (559) 924-6740

Consultant:

901 East Main Street
Visalia, CA 93292
Contact: Steve Brandt, City Planner
Phone: (559) 733-0440
Fax: (559) 733-7821

September 2018

Project #180002.02

Table of Contents

List of Figures

List of Tables

List of Appendices

MITIGATED NEGATIVE DECLARATION

As Lead Agency under the California Environmental Quality Act (CEQA), the City of Lemoore reviewed the Project described below to determine whether it could have a significant effect on the environment because of its development. In accordance with CEQA Guidelines Section 15382, "[s]ignificant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

Project Name

Hanford-Armona Mixed Development

Project Location

The proposed site is located at the southeast corner of W. Hanford-Armona Road and SR 41 in western region of the City of Lemoore. The Project is within Assessor's Parcel Number (APN) 021-660-031, which totals 16.19 acres in size.

Project Description

A request by SIM + PBK on behalf of CV Housing, LLC for a major site plan review, zone change, and general plan amendment for residential/commercial development. The Project includes 22 apartment buildings with a total of 176 dwellings, along with land zoned for future neighborhood commercial uses. This development would be built in three phases. The site size is approximately 16 acres.

Mailing Address and Phone Number of Contact Person

Bryan Sassano
Authorized Agent
7594 N. Ingram Avenue, Suite 101
Fresno, CA 93711
(559) 448-8400

Findings

As Lead Agency, the City finds that the Project will not have a significant effect on the environment. The Initial Study (IS) (see *Section 3 - Environmental Checklist*) identified one or more potentially significant effects on the environment, but revisions to the Project have been made before the release of this Mitigated Negative Declaration (MND) or mitigation measures would be implemented that reduce all potentially significant impacts to less-than-significant levels. The City further finds that there is no substantial evidence that this Project would have a significant effect on the environment.

Mitigation Measures Included in the Project to Avoid Potentially Significant Effects

MITIGATION MEASURE(S)

MM AQ-1: Construction and operation of the proposed Project shall be conducted in compliance with applicable rules and regulations set forth by the San Joaquin Valley Air Pollution Control District. Dust control measures outlined below shall be implemented where they are applicable and feasible. The list shall not be considered all-inclusive, and any other measures to reduce fugitive dust emissions not listed shall be encouraged.

a. Land Preparation, Excavation, and/or Demolition. The following dust control measures shall be implemented:

   i. All soil excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering shall take place a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.
   ii. All clearing, grading, earth moving, and excavation activities shall cease during periods of winds greater than 20 miles per hour (averaged over one hour), if disturbed material is easily windblown, or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property.
   iii. All fine material transported on-site a freeboard limit of at least six inches shall be maintained and fine material shall be either sufficiently watered or securely covered to prevent excessive dust.
   iv. Areas disturbed by clearing, earth moving, or excavation activities shall be minimized at all times.
   v. Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
   vi. Where acceptable to the Fire Department, weed control shall be accomplished by mowing instead of discing, thereby leaving the ground undisturbed and with a mulch covering.

b. Site Construction. After clearing, grading, earth moving, and/or excavating, the following dust control practices shall be implemented:

   i. Once initial leveling has ceased, all inactive soil areas within the construction site shall be (1) seeded and watered until plant growth is evident, (2) treated with a dust palliative, or (3) watered twice daily until soil has sufficiently crusted to prevent fugitive dust emissions.
   ii. All active disturbed soil areas shall be sufficiently watered at least twice daily to prevent excessive dust.
   iii. The project proponent and/or its contractor(s) shall comply with the provisions of SJVAPCD Rule 4601 - Architectural Coatings, during the construction of all buildings and facilities. Application of architectural coatings shall be completed in

a manner that poses the least emissions impacts whenever such application is deemed proficient.

iv. The project proponent and/or its contractor(s) shall comply with the provisions of SJVAPCD Rule 4641 during the construction and pavement of all roads and parking areas within the project area. Specifically, the applicant shall not allow the use of rapid cure cutback asphalt, medium cure cutback, or slow cure cutback or emulsified asphalt.

c. Vehicular Activities. During all phases of construction, the following vehicular control measures shall be implemented:

i. On-site vehicle speed shall be limited to 15 miles per hour.
ii. All areas with vehicle traffic shall be paved, treated with dust palliatives, or watered a minimum of twice daily.
iii. Streets adjacent to the project site shall be kept clean, and project-related accumulated silt shall be removed.
iv. Access to the site shall be by means of an apron into the project site from adjoining surfaced roadways. The apron shall be surfaced or treated with dust palliatives. If operating on soils that cling to the wheels of vehicles, a grizzly or other such device shall be used on the road exiting the project site, immediately prior to the pavement, in order to remove most of the soil material from vehicle tires.

MM AQ-2: The project proponent and/or its contractor(s) shall implement the following measures during construction of the proposed Project:

a. All equipment shall be maintained as recommended by manufacturer manuals.
b. Equipment shall be shut down when not in use for extended periods of time.
c. Construction equipment shall operate no longer than eight cumulative hours per day.
d. Electric equipment shall be used whenever possible in lieu of diesel- or gasoline-powered equipment.
e. All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_X emissions.
f. On- and off-road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines.
g. On- and off-road diesel equipment shall use cooled exhaust gas recirculation (EGR) if permitted under manufacturer's guidelines.
h. All construction workers shall be encouraged to shuttle (car-pool) to retail establishments or to remain on-site during lunch breaks.
i. All construction activities within the project area shall be discontinued during the first stage smog alerts.
j. Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (one-hour average).

MM AQ-3: Prior to the issuance of building and grading permits, the Project proponent shall provide the City of Lemoore Community Development Department with proof that an

Indirect Source Review application has been approved by the San Joaquin Valley Air Pollution Control District, if applicable.

MM BIO-1: A qualified biologist shall conduct a pre-construction survey on the Project site and within 500 feet of its perimeter within 14 days and no more than 30 days prior to the start of construction activities.

If any evidence of occupation of the Project site by listed or other special-status species is subsequently observed, a buffer shall be established by a qualified biologist that results in sufficient avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the United States Fish and Wildlife Service and California Department of Fish and Game shall be contacted for further guidance and consultation on additional measures. The Project proponent shall obtain any required permits from the appropriate wildlife agency. Copies of all permits and evidence of compliance with applicable regulations shall be submitted to the lead agency.

The following buffer distances shall be established prior to construction activities:

- San Joaquin kit fox or American badger potential den: 50 feet;
- San Joaquin kit fox known den: 100 feet;
- San Joaquin kit fox or American badger pupping den: contact the California Department of Fish and Game and United States Fish and Wildlife Service;
- Burrowing owl burrow outside of breeding season: 160 feet;
- Burrowing owl burrow during breeding season: 250 feet;
- Swainson's hawk nest during breeding season: 0.5 mile;
- Other protected raptor nests during the breeding season: 300 feet;
- Other protected nesting migratory bird nests during the breeding season: 50 feet; and
- Other special-status wildlife species: as recommended by qualified biologist.

MM BIO-2: A qualified biologist shall be obtained to assist in the removal of the on-site trees. The removal of trees shall be done between February 15 to August 15 to avoid potential impacts with nesting birds.

MM BIO-3: If initial grading activities are planned during the potential nesting season for migratory birds/raptors that may nest on or near the Project site, the preconstruction survey shall evaluate the sites and accessible lands within an adequate buffer for active nests of migratory birds/raptors. If any nesting birds/raptors are observed, a qualified biologist shall determine buffer distances and/or the timing of Project activities so that the proposed Project does not cause nest abandonment or destruction of eggs or young. This measure shall be implemented so that the proposed Project remains in compliance with the Migratory Bird Treaty Act and applicable state regulations.

If nesting raptors are identified during the surveys, active raptor nests should be avoided by 500 feet and all other migratory bird nests should be avoided by 250 feet. Avoidance buffers may be reduced if a qualified and approved on-site monitor determines that encroachment into the buffer area is not affecting nest building, the rearing of young, or otherwise affect

the breeding behaviors of the resident birds. Avoidance buffers can also be reduced through consultation with the CDFW and USFWS. If Swainson's hawks are found to nest within the survey area, active Swainson's hawk nests shall be avoided by 0.5 mile unless this avoidance buffer is reduced through consultation with the CDFW and/or USFWS.

No construction or earth-moving activity shall occur within a non-disturbance buffer until it is determined by a qualified biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid Project construction areas. This typically occurs by early July, but September 1 is considered the end of the nesting period unless otherwise determined by a qualified biologist. Once raptors have completed nesting and young have fledged, disturbance buffers will no longer be needed and can be removed, and monitoring can be terminated.

MM BIO-4: If any burrowing owl burrows are observed during the preconstruction survey, avoidance measures shall be consistent and in accordance with protocols outlined in the Burrowing Owl Survey Protocol and Mitigation Guidelines (Burrowing Owl Consortium 1993) and the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Active burrows shall be avoided, but if avoidance is not possible then compensation shall be provided for the active or passive displacement of western burrowing owls, and habitat acquisition and the creation of artificial dens for any western burrowing owls shall be provided for any owls relocated from construction areas. These measures are outlined as follows:

1. A pre-construction survey of construction area, including a 150-meter buffer (500 feet), shall be conducted no less than 14 days and no more than 30 days prior to ground disturbing activities. If more than 30 days lapse between the time of the pre-construction survey and the start of ground-disturbing activities, another pre-construction survey shall be completed. The second survey (or other subsequent surveys if necessary) shall be conducted and timed to occur sometime between 30 days and 24 hours prior to ground disturbance.
2. If western burrowing owls are present on the construction site (or within 500 feet of the construction site), exclusion fencing shall be installed between the nest site or active burrow and any earth-moving activity or other disturbance. Exclusion areas shall extend 160 feet around occupied burrows during the non-breeding season (September 1 through January 31) and extend 250 feet around occupied burrows during the breeding season (February 1 through August 31) as described in The California Burrowing Owl Consortium's Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993).
3. If western burrowing owls are present in the non-breeding season and must be passively relocated from the Project site, passive relocation shall not commence until October 1 and must be completed by February 1. Passive relocation must only be conducted by a qualified biologist or ornithologist and with approval by CDFW. After passive relocation, the area where owls occurred and its immediate vicinity shall be monitored by a qualified biologist daily for one week and once per week for an additional two weeks to document that owls are not reoccupying the site.
4. If permanent impacts to nesting, occupied and satellite burrows, or burrowing owl habitat occur, compensation shall be based upon the number of owls or pairs of owls

relocated from the construction area. Compensation acreage shall be determined as described in the CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012).

MM BIO-5: The measures listed below shall be implemented during construction:

1. Pre-construction surveys shall be conducted no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. If any San Joaquin kit fox dens are found during preconstruction surveys, exclusion zones shall be placed in accordance with USFWS Recommendations using the following:

San Joaquin kit fox USFWS Exclusion Zone Recommendations

Den Type	Recommendation
Potential Den	50-foot radius
Known Den	100-foot radius
Natal/Pupping Den (Occupied and Unoccupied)	Contact U.S. Fish and Wildlife Service for guidance
Atypical Den	50-foot radius

2. If any den must be removed, it must be appropriately monitored and excavated by a trained wildlife biologist. Destruction of natal dens and other "known" kit fox dens must not occur until authorized by USFWS. Replacement dens will be required if such dens are removed. Potential dens that are removed do not need to be replaced if they are determined to be inactive by using standard monitoring techniques (e.g., applying tracking medium around the den opening and monitoring for San Joaquin kit fox tracks for three consecutive nights).
3. Project-related vehicles shall observe a daytime speed limit of 15-mph throughout the site in all Project areas, except on County roads and State and federal highways; this is particularly important at night when kit foxes and badgers are most active. Night-time construction shall be minimized to the extent possible. However, if construction at night does occur, then the speed limit shall be reduced to 10-mph. Off-road traffic outside of designated Project areas shall be prohibited.
4. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than two-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the CDFW shall be contacted at the addresses provided below.
5. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

6. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from a construction or Project sites.
7. No pets, such as dogs or cats, shall be permitted on the Project sites to prevent harassment, mortality of kit foxes, or destruction of dens.
8. Use of rodenticides and herbicides in Project areas shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional Project-related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide shall be used because of a proven lower risk to kit fox.
9. A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the USFWS.
10. An employee education program shall be conducted. The program shall consist of a brief presentation by persons knowledgeable in San Joaquin kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the Project. The program shall include: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the Project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during Project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the previously referenced people and anyone else who may enter the Project sites.
11. Upon completion of the Project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. shall be re-contoured if necessary, and revegetated to promote restoration of the area to pre-Project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the Project, but after Project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the USFWS, CDFW, and revegetation experts.
12. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the USFWS shall be contacted for guidance.

13. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or CDFW representative, the wildlife biologist, at (530) 934-9309. The USFWS shall be contacted at the numbers below.
14. The Sacramento Fish and Wildlife Office of USFWS and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during Project-related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact can be reached at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
15. All sightings of the San Joaquin kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed shall also be provided to the Service at the address below.

MM CUL-1: If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from project implementation.

The qualified archaeologist shall determine the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Any previously undiscovered resources found during construction within the Project area shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance. No further ground disturbance shall occur in the immediate vicinity of the discovery until approved by the qualified archaeologist.

MM CUL-2: Prior to any ground disturbance, the applicant shall offer interested Tribes the opportunity to provide a Native American Monitor during ground disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the Tribe.

MM-CUL 3: Upon coordination with the City of Lemoore Community Development Department, any archaeological artifacts recovered shall be donated to an appropriate Tribal

custodian or a qualified scientific institution where they would be afforded long-term preservation. Documentation for the work shall be provided in accordance with applicable cultural resource laws and guidelines.

MM CUL-4: During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or other appropriate facility regarding any discoveries of paleontological resources. If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from Project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

MM CUL-5: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the county coroner.

MM GEO-1: Prior to final design, a geotechnical study shall be prepared for the Project site and recommendations of the study shall be incorporated into final design of the Project. A copy of the report shall be submitted to the City of Lemoore Community Development Department for review.

MM HYD-1: Prior to ground-disturbing activities, the City shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that specifies best management practices (BMP), with the intent of keeping all products of erosion from moving offsite. The SWPPP shall include contain a site map that shows the construction site perimeter, existing and proposed man-made facilities, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the Project site. Additionally, the SWPPP shall contain a visual monitoring program and a chemical monitoring program for non-visible pollutants to be implemented (if there is a failure of best

management practices). The requirements of the SWPPP and BMPs shall be incorporated into design specifications and construction contracts. Recommended best management practices for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Protecting any existing storm drain inlets and stabilizing disturbed areas;
- Implementing erosion controls;
- Properly managing construction materials; and
- Managing waste, aggressively controlling litter, and implementing sediment controls.

MM TRA-1: Prior to the first development of the commercially zoned site, the Project shall coordinate with Kings Area Rural Transit (KART) to determine the best location for the placement of a bus turnout along the Project's frontage to Hanford-Armona Road.

MM TRA-2: Prior to the first development of the commercially zoned site, the full build-out of the south side of Hanford-Armona Road shall be completed. At the corner of State Route 41 and Hanford-Armona Road, a westbound left-turn lane shall be added, the westbound left-through-right lane shall be modified to a through lane, a westbound right-turn lane shall be added, and the traffic signal shall be modified to accommodate the added lanes while maintaining the east-west split phasing.

SECTION 1 - INTRODUCTION

1.1 - Overview

A request by SIM + PBK on behalf of CV Housing, LLC for a major site plan review, zone change, and general plan amendment for residential/commercial development. The Project includes 22 apartment buildings with a total of 176 dwelling units. The conceptual site plan for the commercial development includes two retail shops, two pad buildings, and a three-story 90-room hotel. Future application(s) for Site Plan review will be required for the commercial development. This Project would be built in three phases. The Project site is approximately 17 acres.

1.2 - CEQA Requirements

The City of Lemoore is the Lead Agency for this Project pursuant to the CEQA Guidelines (Public Resources Code Section 15000 et seq.). The Environmental Checklist (CEQA Guidelines Appendix G) or Initial Study (IS) (see *Section 3 – Initial Study*) provides analysis that examines the potential environmental effects of the construction and operation of the project. Section 15063 of the CEQA Guidelines requires the Lead Agency to prepare an IS to determine whether a discretionary project will have a significant effect on the environment. A Mitigated Negative Declaration (MND) is appropriate when an IS has been prepared and a determination can be made that no significant environmental effects will occur because revisions to the project have been made or mitigation measures will be implemented that reduce all potentially significant impacts to less-than-significant levels. The content of an MND is the same as a Negative Declaration, with the addition of identified mitigation measures and a Mitigation Monitoring and Reporting Program (MMRP) (see *Appendix A – Mitigation Monitoring and Reporting Program*).

Based on the IS, the Lead Agency has determined that the environmental review for the proposed application can be completed with an MND.

1.3 - Impact Terminology

The following terminology is used to describe the level of significance of project environmental impacts.

- A finding of "no impact" is appropriate if the analysis concludes that the project would not affect a topic area in any way.
- An impact is considered "less than significant" if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered "less than significant with mitigation incorporated" if the analysis concludes that it would cause no substantial adverse change to the environment with the inclusion of environmental commitments that have been agreed to by the proponent.

- An impact is considered "potentially significant" if the analysis concludes that it could have a substantial adverse effect on the environment.

1.4 - Document Organization and Contents

The content and format of this IS/MND is designed to meet the requirements of CEQA. The report contains the following sections:

- *Section 1 – Introduction:* This section provides an overview of CEQA requirements, intended uses of the IS/MND, document organization, and a list of regulations that have been incorporated by reference.
- *Section 2– Project Description:* This section describes the Project and provides data on the site's location.
- *Section 3 – Environmental Checklist:* This section contains the evaluation of 18 different environmental resource factors contained in Appendix G of the CEQA Guidelines. Each environmental resource factor is analyzed to determine whether the proposed Project would have an impact. One of four findings is made which include: no impact, less-than-significant impact, less than significant with mitigation, or significant and unavoidable. If the evaluation results in a finding of significant and unavoidable for any of the 18 environmental resource factors, then an Environmental Impact Report will be required.
- *Section 4 – References:* This section contains a full list of references that were used in the preparation of this IS/MND.

SECTION 2 - PROJECT DESCRIPTION

2.1 - Introduction

A request by SIM + PBK on behalf of CV Housing, LLC for a major site plan review, zone change, and general plan amendment for residential/commercial development. The Project includes 22 apartment buildings with a total of 176 dwelling units, along with 4.57 acres of commercial development. This development would be built in three phases. The Project site is approximately 17 acres.

2.2 - Project Location

The proposed site is in Section 4, Township 19 South, Range 20 East, Mount Diablo Base and Meridian, within the incorporated City of Lemoore, County of Kings, California. The site is located at the southeast corner of Hanford-Armona Road and State Route (SR) 41 (Figures 2-1 and 2-2). The Project is identified as Assessor's Parcel Number (APN) 021-660-031, which totals approximately 17 acres of undeveloped land.

2.3 - Surrounding Land Uses

The area surrounding the proposed site consists of undeveloped land to the west (beyond SR 41). Single family residential is located east of the site and multi-family development is to the south. North of the site is undeveloped land, with a small portion dedicated to SoCalGas (public utility). Land uses and development surrounding the site are depicted on Figure 2-4.

2.4 - Proposed Project

SIM + PBK, on behalf of CV Housing requests the approval of a major site plan review, zone change, and general plan amendment for residential/commercial development. The Project includes three phases, two of which are for a total of 176 two-story multi-family residential units. Phase 1 will include 12 apartment buildings with 96 dwelling units, a community center with a leasing office, and a swimming pool. Phase 1 will be on the southeastern portion of the site shown in Figure 2-1. Phase 2 will include 10 apartment buildings with 80 dwelling units. Phase 2 will be on the southwestern portion of the site shown in Figure 2-1. Phase 3 has not been defined in its entirety, but it is currently planned to be commercial development. The types of uses have not yet been fully determined, but the commercial development could include various retail stores, drive-thru restaurants, and services located at the northern portion of the site area shown in Figure 2-1.

Both the current zoning of the Project site and the General Plan land use designations will need to be amended for this Project to take place. Currently, the zoning and land use designations of the Project site is Mixed Use (MU) in the southern portion and Neighborhood Commercial (NC) in the northern portion. The amendment will change the MU designation to Medium Density Residential (RMD).

Figure 2-1
Project Site Map

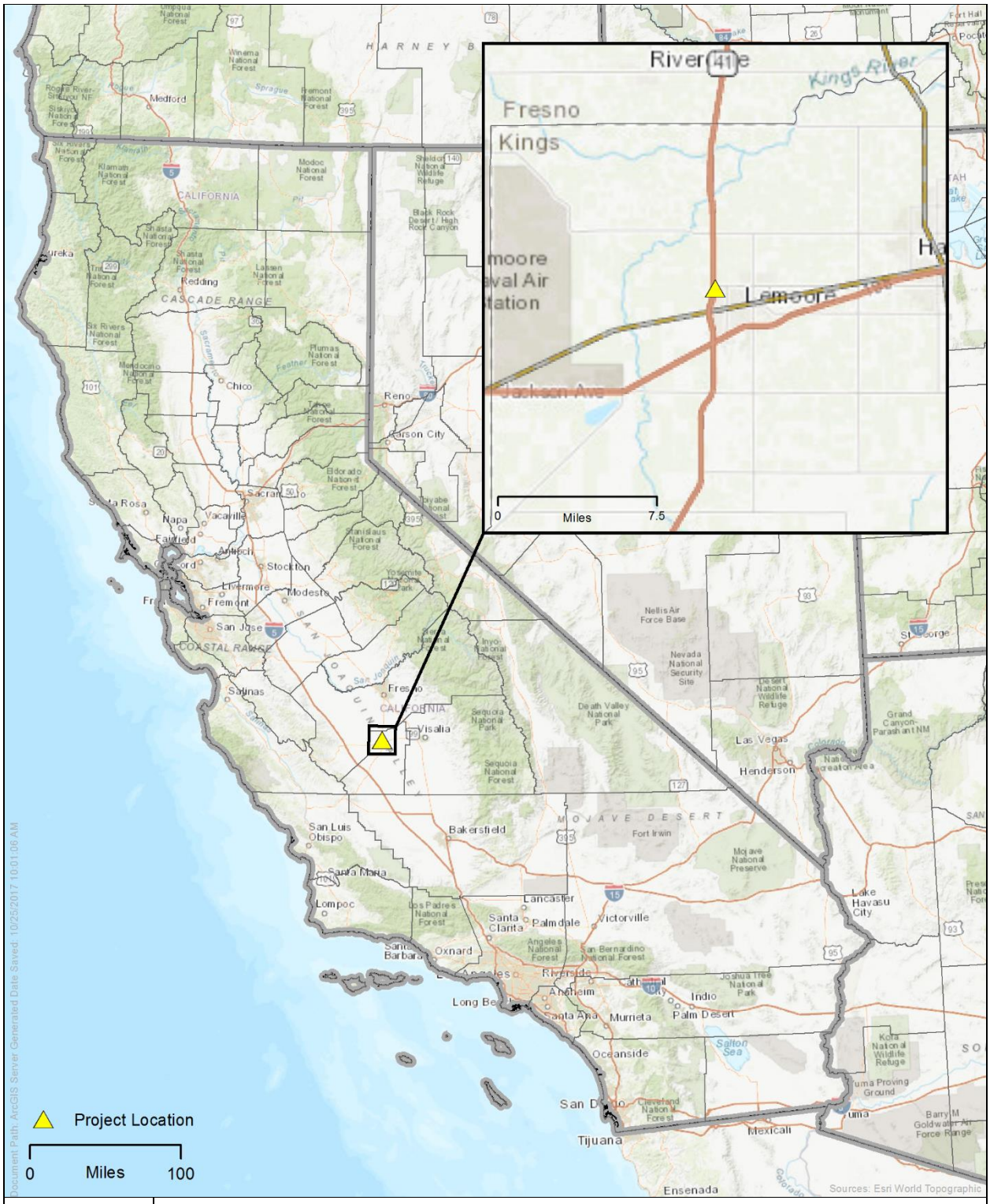


Figure 2-2
Regional Location

Figure 2-3
Project Location

Figure 2-4
Surrounding Land Uses

SECTION 3 - EVALUATION OF ENVIRONMENTAL IMPACTS

3.1 - Environmental Checklist and Discussion

1. **Project Title:**

   Hanford-Armona Mixed Development

2. **Lead Agency Name and Address:**

   City of Lemoore
   119 Fox Street
   Lemoore, CA 93245

3. **Contact Person and Phone Number:**

   Judy Holwell, Community Development Director
   (559) 924-6740

4. **Project Location:**

   The proposed site is located at the southeast corner of Hanford Armona Road and Highway 41 in the City of Lemoore. The Project is within Assessor's Parcel Number (APN) 021-660-031.

5. **Project Sponsor's Name and Address:**

   Bryan Sassano

   7594 N. Ingram Avenue, Suite 101
   Fresno, CA 93711
   (559) 448-8400

6. **General Plan Designation:**

   Mixed Use and Neighborhood Commercial

7. **Zoning:**

   MU & NC

8. **Description of Project:**

   See *Section 2.4 – Proposed Project*.

9. **Surrounding Land Uses and Setting:**

   See *Section 2.3 – Surrounding Land Uses* and Figure 2-4.

10. Other Public Agencies Whose Approval May be Required:

- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- Regional Water Quality Control Board-- Lahontan (RWQCB)
- State Water Resource Control Board (SWRCB)

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

The Santa Rosa Rancheria Tachi Tribe has requested consultation with the City of Lemoore. Letters were sent to the Tribe on July 3, 2018, informing them of the Project.

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

3.2 - Environmental Factors Potentially Affected:

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

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

3.3 - Determination

On the basis of this initial evaluation:

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

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

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

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

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable

standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Judy Holwell, Community Development Director

Date

3.4 - Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review;
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis; and
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a

previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.1 - AESTHETICS					
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion

Impact #3.4.1a – Would the Project have a substantial adverse effect on a scenic vista?

As seen in Figure 2-4, the Project is located in undeveloped land and is surrounded by either undeveloped land or residential development. It is at the southeast corner of Hanford-Armona Road and SR 41 in the northern region of Lemoore.

The City of Lemoore 2030 General Plan states there are currently no buildings or structures listed in the National Register of Historic Places or as California Historic Landmarks. However, there are 37 sites listed as having local historic significance located within the downtown district (City of Lemoore , 2008). There are no local historic resources within the vicinity of the Project site. The Project is not located in an area that would result in substantial adverse effects on any scenic vistas, therefore causing no negative impacts.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact***.

Impact #3.4.1b – Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no listed State scenic highways within or near the City of Lemoore, nor are there scenic highways in Kings County; therefore, the site would not damage scenic resources within a state scenic highway (California Department of Transportation, 2017). The closest eligible scenic highway is SR 41, southwest of SR 33, which is approximately 35 miles southwest of the Project site.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.1c – Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?

The proposed Project would be similar in nature to the existing residential development to the south and east of the site once the zone change has occurred. While the Project is not consistent with the current zoning and land use designations for the area, the Project is consistent with the surrounding urban uses. The visual character of the site would be changed, as vacant land would become developed, but the development would not degrade it. The impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.1d – Would the Project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

The proposed development would comply with all lighting standards established in the City's Zoning Ordinance (Title 9, Chapter 5, Article B, Section 4), and therefore impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact

3.4.2 - AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☒	☐
b.	Conflict with existing zoning for agricultural use or a Williamson Act Contract?	☐	☐	☐	☒
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

Discussion

Impact #3.4.2a – Would the Project Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

The proposed Project will not convert any prime or unique farmland. According to the Department of Conservation's Farmland Mapping and Monitoring Program (FMMP), the

Project site is classified as 'Grazing Land' (see Figure 3.4.2-1) ((CA Department of Conservation, 2016). According to the California Department of Conservation, grazing land is "land on which vegetation is suited to the grazing of livestock" (CA Department of Conservation, 2016). Grazing land is not considered to be protected under CEQA. The site also is not currently used for farming and is not zoned for agricultural use. Considering these factors, the proposed Project will have a less-than-significant impact on conversion of agricultural resources.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.2b – Would the Project conflict with existing zoning for agricultural use or a Williamson Act Contract?

The Project site is currently zoned Mixed Use/Neighborhood Commercial within both the *City of Lemoore 2030 General Plan* and the City of Lemoore's Zoning Ordinance. The Project site is not subject to a Williamson Act contract and would not conflict with any current Williamson Act contracted land in the vicinity (see Figure 3.4.2-2).

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.2c – Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

The Project site and the surrounding areas are not zoned for forest land or timberland by the City of Lemoore Zoning Map. The site will be used for a mix of residential and commercial development. The Project will have no impact on land designated for forest land use.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.2c – Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

The proposed Project site is not considered to be forest land or timberland. The Project is currently undeveloped and surrounded by either undeveloped land or residential development. Further development of the associated use would not result in the conversion of forest land to non-forest use. The proposed Project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.2d – 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?

The proposed Project will allow for the development of a 176-unit multi-family housing complex and approximately 4.57 acres of commercial development. The Project would not involve changes in the existing environment that could result in conversion of farmland no non-agricultural use or conversation of forest land to non-forest use.

The Project site is zoned for a non-agricultural use and its impact on the surrounding agricultural lands to the north and west was previously analyzed in the Lemoore General Plan (City of Lemoore , 2008). Although the proposed Project may cause changes in the existing environment, there is no evidence that the proposed Project would affect adjacent agricultural land during construction or operational activities. Additionally, the Project is not anticipated to cause the removal of farmland from production by the development of a nonagricultural use. In addition, the proposed project would not place additional restrictions on noise, burning, or dust generation on surrounding operations. State Route 41 is in between the Project site and the agricultural land to the west of the site, so the agricultural land would not be affected. The impacts of said land would be deemed less than significant, as the Project will contain itself to the predetermined boundaries shown in Figure 2-1.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant***.

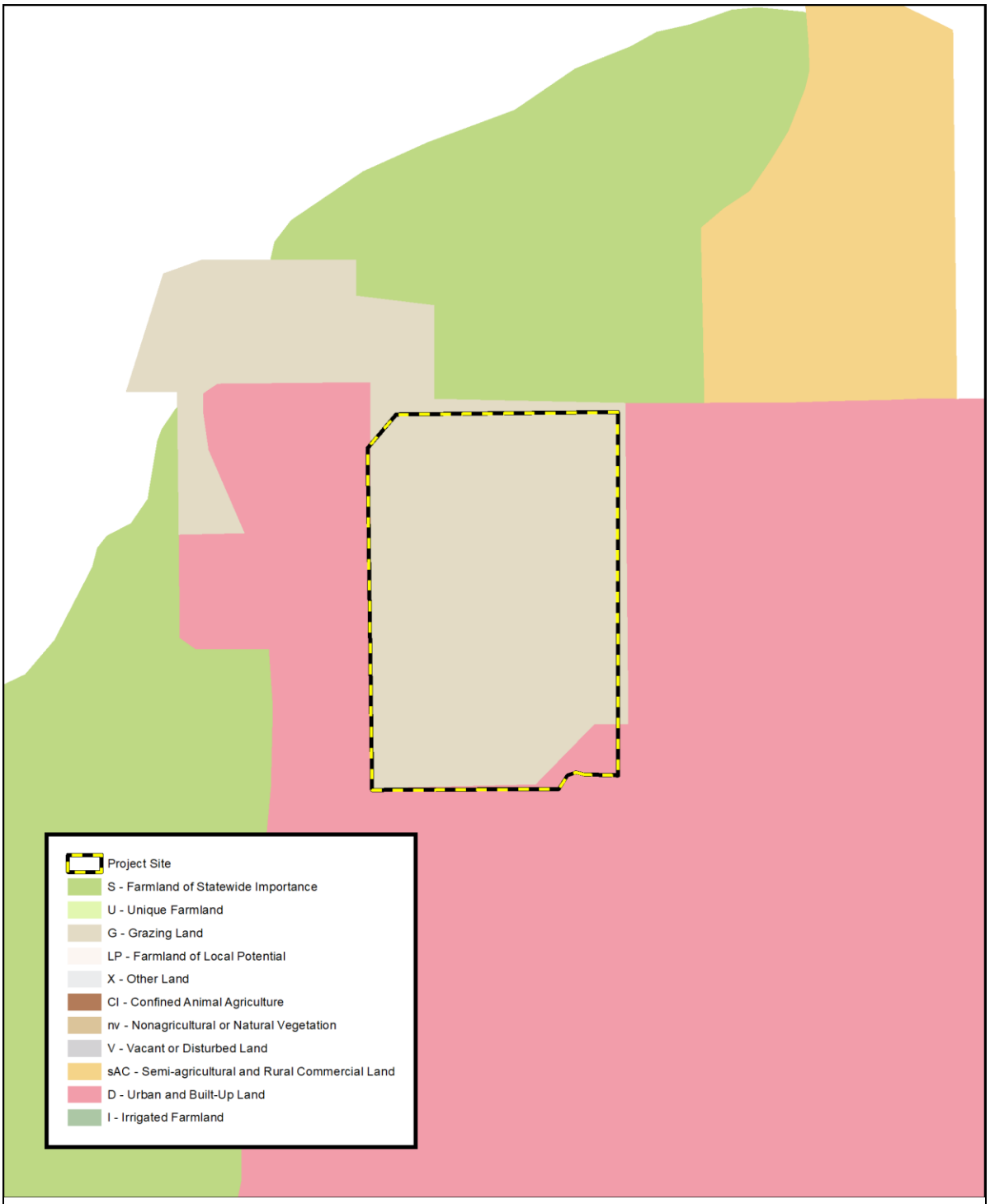


Figure 3.4.2-1
Farmland Mapping and Monitoring Program (FMMP)

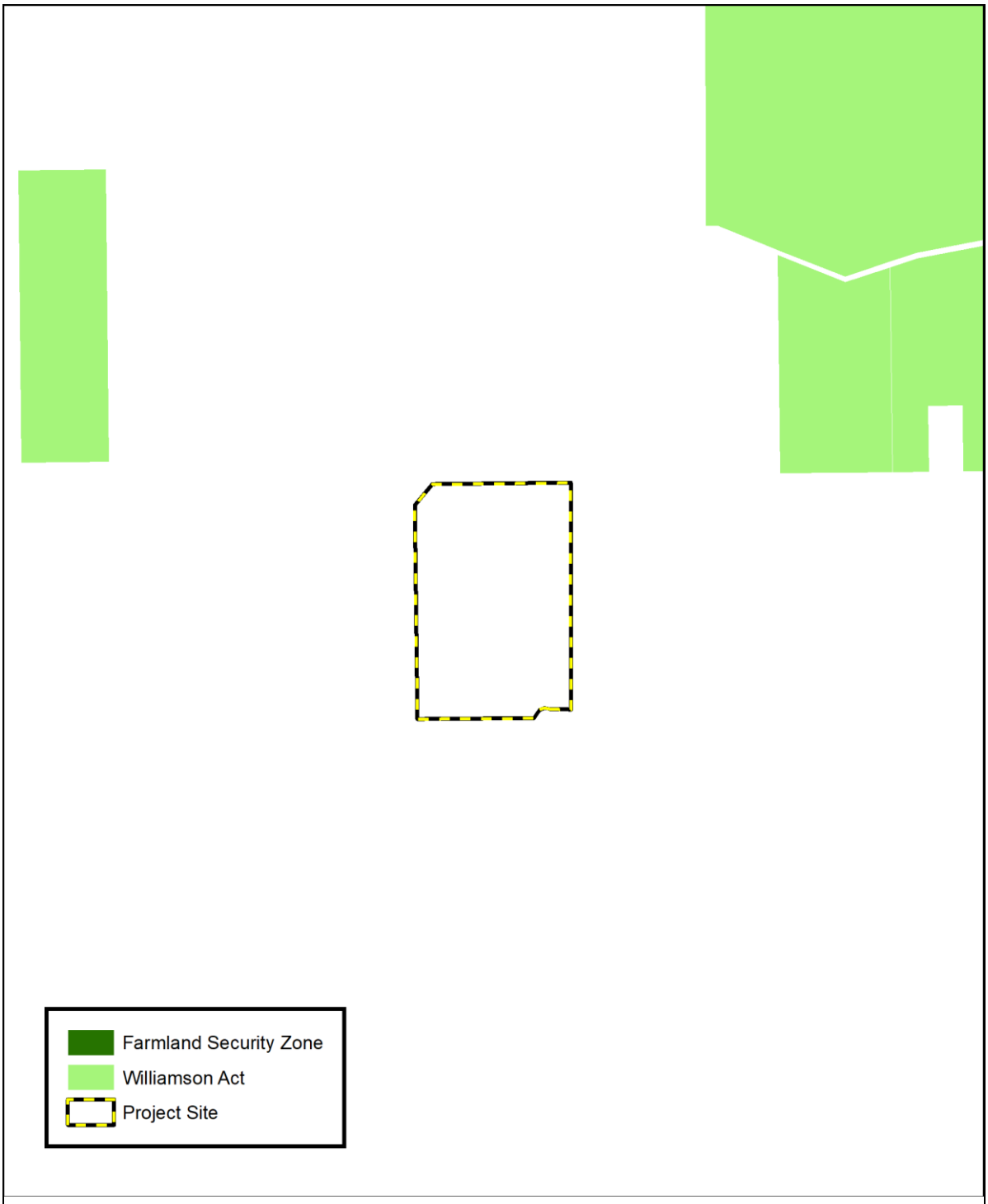


Figure 3.4.2-2
Williamson Act Contracts

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact

3.4.3 - AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e.	Create objectionable odors affecting a substantial number of people?	☐	☒	☐	☐

Discussion

The analysis below is based on an Air Quality Analysis Report prepared to evaluate the air impacts of the proposed Project ((Mitchell Air Quality Consulting, 2018), Appendix A). The analysis assesses the impacts of the project construction and operational criteria pollutant using the CalEEMod 2016.3.2 emission model.

Impact #3.4.3a – Would the Project Conflict with or obstruct implementation of the applicable air quality plan?

The Project is located within the San Joaquin Valley Air Basin (SJVAB), which and under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAB is designated nonattainment of state and Federal health-based air quality standards for ozone and PM2.5. The SJVAB is designated nonattainment of state PM10. To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP documents, including:

- 2016 Ozone Plan;

- 2007 PM10 Maintenance Plan and Request for Redesignation; and
- 2016 PM2.5 Plan.

. Therefore,

Air quality impacts are controlled through policies and provisions of the SJVAPCD, the City of Lemoore General Plan, and the Code of Building Regulations. Each project should also demonstrate consistency with the SJVAPCD's adopted AQAP for ozone and PM10. The SJVAPCD is required to submit a "Rate of Progress" document to the CARB that demonstrates past and planned progress toward reaching attainment for all criteria pollutants. The CCAA requires air pollution control districts with severe or extreme air quality problems to provide for a 5% reduction in nonattainment emissions per year. The AQAP prepared for the San Joaquin Valley by SJVAPCD complies with this requirement. The CARB reviewers approve or amend the document and forward the plan to EPA for final review and approval within the SIP.

Air pollution sources associated with stationary sources are regulated through the permitting authority of the SJVAPCD under the "New and Modified Stationary Source" rule (SJVAPCD Rule 2201). Owners of any new or modified equipment that emits, reduces, or controls air contaminants, except those specifically exempted by the SJVAPCD, are required to apply for an Authority to Construct and Permit to Operate (SJVAPCD Rule 2010). Additionally, best available control technology is required on specific types of stationary equipment. Through this mechanism, the SJVAPCD ensures that all stationary sources within the proposed project area would be subject to the standards of the SJVAPCD and that new developments do not result in net increases in stationary sources of criteria air pollutants.

The SJVAPCD has established thresholds of significance for construction impacts, project operations, and cumulative impacts. The SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) (San Joaquin Valley Air Pollution Control District, 2015) contains significance criteria for evaluating operational-phase emissions from direct and indirect sources associated with a project. Indirect sources include motor vehicle traffic associated with the proposed Project and do not include stationary sources covered under permit with the SJVAPCD. For this evaluation, the proposed Project would be considered to have a significant effect on the environment if it would exceed the following thresholds listed in the "SJVAPCD Threshold of Significance" below. As seen in the "Construction Emissions" and "Operational Emissions" columns, the Project would not exceed any applicable thresholds of significance.

Table 3.4.3-1
SJVAPCD Pollutant Thresholds of Significance

Pollutant	SJVAPCD Threshold of Significance	Construction Emissions	Operational Emissions
PM2.5	15 tons/year	0.42	0.88
PM10	15 tons/year	0.61	3.04
ROG	10 tons/year	1.68	3.18
NOX	10 tons/year	7.33	2.31

Source: SJVAPCD, GAMAQI 2015

Construction and operation of the proposed project would not exceed any established SJVAPCD thresholds; therefore, implementation of the proposed project would not obstruct implementation of an air quality plan during operation

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.3b – Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction

Construction would begin in 2019 and be completed in phases by 2021. Emissions were not estimated for building activity, as the Project building types are not well represented by the activity assumptions in the CalEEMod model, and construction of the facilities would involve minor use of internal combustion off-road equipment.

The primary source of ROG emissions during construction is architectural coatings. The primary source of NOx and PM2.5 is off-road diesel construction equipment and on-road diesel emissions during hauling activities. The primary source of PM10 is from site preparation and grading activities. The highest construction emissions would occur in 2020 when the construction activities for the commercial components of the project are assumed to begin Table 3.4.3-2 shows generated emissions from these activities.

Table 3.4.3-2 shows unmitigated emissions during construction do not exceed the SJVAPCD localized emission screening thresholds and would therefore have a less than significant impact from localized criteria pollutant emissions. The results include credit for compliance with fugitive dust controls required by SJVAPCD Regulation VIII.

Table 3.4.3-2
Unmitigated Construction Emissions

Year	Emissions (tons per year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction 2019	0.34	2.94	2.38	0.34	0.21
Construction 2020	1.68	7.33	6.57	0.61	0.42
Construction 2021	0.66	1.76	1.59	0.12	0.09
Highest Construction Emissions in Any Year	**1.68**	**7.33**	**6.57**	**0.61**	**0.42**
Screening threshold	10	10	100	15	15
Exceed SJVAPCD threshold?	No	No	No	No	No

Notes: ROG = reactive organic gases NO_X = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter Area source emissions include emissions from natural gas, landscape, and painting. Source: Appendix A

As seen in Table 3.4.3-2, emissions from the Project are well below the SJVAPCD's thresholds.

Operation

Operational emissions occur over the lifetime of the project and are from two main sources: area sources such as natural gas combustion for space and water heating and motor vehicles, or mobile sources. Operational emissions are presented in Table 3.4.3-3. The results of the analysis show that emissions are below the annual emission thresholds for each pollutant.

An analysis of maximum daily emissions during operation was conducted to determine if emissions would exceed the 100 pounds per day threshold for any pollutant of concern. The maximum daily operational emissions were assessed assuming full operations in the year 2021. Operational emissions include those generated on-site by area sources such as natural gas combustion and landscape maintenance, and off-site by motor vehicles accessing the project. Most motor vehicle emissions would occur distant from the site and would not contribute to a violation of ambient air quality standards at the project site; therefore, operational emissions only reflect the emissions within one half mile of the project site. The results of the analysis are presented in Table 3.4.3-3. The Project would not exceed SJVAPCD daily operational screening thresholds and would result in less than significant localized impacts.

Table 3.4.3-4
Unmitigated Operational Emissions

Source	Emissions (tons per year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Residential- Apartments (176 units)	1.18	0.75	5.90	1.18	0.33
Gas Station and Convenience Market (8 fueling position)	0.41	0.35	2.34	0.34	0.09
Fast Food Restaurants (2@3,000 sf ea.)	0.73	0.69	5.35	1.00	0.28
Hotel (90 Room)	0.76	0.42	1.99	0.48	0.14
Retail Shopping (7,040 sf)	0.10	0.10	0.66	0.04	0.04
Total Project Emissions	**3.18**	**2.31**	**16.23**	**3.04**	**0.88**
Significance threshold	10	10	100	15	15
Exceed threshold—significant impact?	No	No	No	No	No
Notes: ROG = reactive organic gases NO_X = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter Area source emissions include emissions from natural gas, landscape, and painting. Source: Appendix A					

However, implementation of Mitigation Measures AQ-1 through AQ-3 would ensure that all readily available and feasible air quality control measures would be implemented to reduce emissions associated with construction.

MITIGATION MEASURE(S)

MM AQ-1: Construction and operation of the proposed Project shall be conducted in compliance with applicable rules and regulations set forth by the San Joaquin Valley Air Pollution Control District. Dust control measures outlined below shall be implemented where they are applicable and feasible. The list shall not be considered all-inclusive, and any other measures to reduce fugitive dust emissions not listed shall be encouraged.

a. Land Preparation, Excavation, and/or Demolition. The following dust control measures shall be implemented:

   i. All soil excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering shall take place a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.
   ii. All clearing, grading, earth moving, and excavation activities shall cease during periods of winds greater than 20 miles per hour (averaged over one hour), if disturbed material is easily windblown, or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property.

iii. All fine material transported on-site a freeboard limit of at least six inches shall be maintained and fine material shall be either sufficiently watered or securely covered to prevent excessive dust.
iv. Areas disturbed by clearing, earth moving, or excavation activities shall be minimized at all times.
v. Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
vi. Where acceptable to the Fire Department, weed control shall be accomplished by mowing instead of discing, thereby leaving the ground undisturbed and with a mulch covering.

b. Site Construction. After clearing, grading, earth moving, and/or excavating, the following dust control practices shall be implemented:

i. Once initial leveling has ceased, all inactive soil areas within the construction site shall be (1) seeded and watered until plant growth is evident, (2) treated with a dust palliative, or (3) watered twice daily until soil has sufficiently crusted to prevent fugitive dust emissions.
ii. All active disturbed soil areas shall be sufficiently watered at least twice daily to prevent excessive dust.
iii. The project proponent and/or its contractor(s) shall comply with the provisions of SJVAPCD Rule 4601 - Architectural Coatings, during the construction of all buildings and facilities. Application of architectural coatings shall be completed in a manner that poses the least emissions impacts whenever such application is deemed proficient.
iv. The project proponent and/or its contractor(s) shall comply with the provisions of SJVAPCD Rule 4641 during the construction and pavement of all roads and parking areas within the project area. Specifically, the applicant shall not allow the use of rapid cure cutback asphalt, medium cure cutback, or slow cure cutback or emulsified asphalt.

c. Vehicular Activities. During all phases of construction, the following vehicular control measures shall be implemented:

i. On-site vehicle speed shall be limited to 15 miles per hour.
ii. All areas with vehicle traffic shall be paved, treated with dust palliatives, or watered a minimum of twice daily.
iii. Streets adjacent to the project site shall be kept clean, and project-related accumulated silt shall be removed.
iv. Access to the site shall be by means of an apron into the project site from adjoining surfaced roadways. The apron shall be surfaced or treated with dust palliatives. If operating on soils that cling to the wheels of vehicles, a grizzly or other such device shall be used on the road exiting the project site, immediately prior to the pavement, in order to remove most of the soil material from vehicle tires.

MM AQ-2: The project proponent and/or its contractor(s) shall implement the following measures during construction of the proposed Project:

a. All equipment shall be maintained as recommended by manufacturer manuals.
b. Equipment shall be shut down when not in use for extended periods of time.
c. Construction equipment shall operate no longer than eight cumulative hours per day.
d. Electric equipment shall be used whenever possible in lieu of diesel- or gasoline-powered equipment.
e. All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_X emissions.
f. On- and off-road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines.
g. On- and off-road diesel equipment shall use cooled exhaust gas recirculation (EGR) if permitted under manufacturer's guidelines.
h. All construction workers shall be encouraged to shuttle (car-pool) to retail establishments or to remain on-site during lunch breaks.
i. All construction activities within the project area shall be discontinued during the first stage smog alerts.
j. Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (one-hour average).

MM AQ-3: Prior to the issuance of building and grading permits, the Project proponent shall provide the City of Lemoore Community Development Department with proof that an Indirect Source Review application has been approved by the San Joaquin Valley Air Pollution Control District, if applicable.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant with mitigation incorporated.***

Impact #3.4.3c – Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The nonattainment pollutants for the SJVAPCD are ozone, PM10 and PM2.5. Therefore, the pollutants of concern for this impact are ozone precursors, regional PM10, and PM2.5. As discussed above, the thresholds of significance used for determination of emission significance are shown in Table 3.4.3-1 above. The proposed Project would create ozone, NOX, PM10, and PM2.5 emissions during construction, which would contribute to the current nonattainment status of these pollutants within the SJVAB. As noted in Impact 4.2-2, the Project's emissions during temporary construction activities would not exceed thresholds. Operation of the project would also create additional criteria pollutants, particularly as a result of increased mobile emissions in the project area. However, these impacts also would not exceed thresholds. Although the emissions from the proposed

project may be under the SJVAPCD CEQA thresholds of 10 tons per year for ROG and NOX and 15 tons per year for PM10, CEQA and SJVAPCD's Rule 9510 require that all feasible and reasonable mitigation be applied to the proposed project to reduce air quality impacts from construction and operations.

The General Plan analyzed activities that disturb the soil, such as grading and excavation, infrastructure construction, building demolition, and a variety of construction activities. The General Plan also analyzed operational air quality impacts that would likely occur based on the various land use designations and possible resultant land uses that could occur during buildout of the City.

The General Plan EIR requires that all new development, such as the proposed Project, be subject to Best Management Practices to reduce dust and other air pollutant emissions, as well as mandatory compliance with all applicable SJVAPCDs rules and regulations. These rules and regulations include, but are not limited to, Rule 2201 (New and Modified Station Source Review), Rule 4002 (National Emission Standards for Hazardous Air Pollutants), Regulation VIII (Fugitive PM10 Prohibitions), and Rule 9510 (Indirect Source Review (ISR). The construction and operation of the proposed Project would also be subject to SJVAPCD's Regulation VIII (Fugitive PM10 Prohibitions). Implementation of Mitigation Measures MM AQ-1 through MM AQ-3 requires that the proposed Project comply with applicable SJVAPCD rules and regulations to reduce construction and operational impacts as described in the mitigation. Because Project construction at the project site would not result in significant emissions for which the SJVAPCD and surrounding air districts are in nonattainment, construction emissions would not result in a cumulatively considerable net increase. Further, as the proposed project would not result in significant operational emissions of criteria pollutants, the proposed project would not contribute to a long-term cumulative increase in criteria pollutants.

With implementation of this mitigation, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant.

MITIGATION MEASURE(S)

Implement MM AQ-1 through MM AQ-3.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.3d – Would the Project expose sensitive receptors to substantial pollutant concentration?

The CARB *Air Quality and Land Use Handbook* provides guidance for siting sensitive receptors near sources of Toxic Air Contaminants (TAC) emissions (California Air Resources Board, 2005). The Handbook contains recommendations that will "help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution," including recommendations for distances between sensitive receptors and certain land uses.

The Project includes apartments that would be considered sensitive receptor locations. The Handbook recommends locating gasoline fueling stations at least 50 feet from the nearest residence and 300 feet for high volume gasoline stations exceeding 3.6 million gallons per year. The Project proposes only 8 fueling positions, which does not meet the threshold as a high-volume stations having 16 or more fueling positions. The nearest residences would be located approximately 238 feet from the fueling canopy. Therefore, the fueling station would not result in significant TAC impacts.

As noted in Impact #3.4.3b, the proposed Project i would not create or expose sensitive receptors to substantial pollutant concentrations or emissions. With implementation of Mitigation Measures MM AQ-1 through MM AQ-3, impacts would be considered less than significant.

MITIGATION MEASURE(S)

Implement MM AQ-1 through MM AQ-3.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.3e – Would the Project create objectionable odors affecting a substantial number of people?

Sensitive receptors are defined as locations where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside, such as schools, hospitals, nursing homes, and daycare centers. The Liberty Middle School is approximately 0.6 miles to the east, the Lemoore Elementary School is approximately 1.3 miles southeast and Cinnamon Elementary School is approximately 1.6 miles east. Although emissions from construction-related vehicles are anticipated during temporary construction activities, the proposed project is not expected to affect sensitive receptors.

According to the 2015 SJVAPCD's GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate; and

- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

As proposed, the Project would not generate odors that would impact sensitive receptors. With implementation of Mitigation Measures MM AQ-1 through MM AQ-3, odor impacts that may be generated during temporary construction activities would be reduced to less-than-significant levels.

MITIGATION MEASURE(S)

Implement MM AQ-1 through MM AQ-3.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.4 - BIOLOGICAL RESOURCES				
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Methodology

Database searches were conducted to determine which sensitive biological resources historically occurred on and within 10 miles of the Project site. The California Natural Diversity Database (CNDDB) (CNDDB 2017), California Native Plants Society (CNPS

database (CNPS 2017), U.S. Fish and Wildlife Service (USFWS Threatened and Endangered Species List (USFWS 2017a), and USFWS Critical Habitat database (USFWS 2017b) were reviewed to identify State and federal special-status species were searched. The CNDDB provides element-specific spatial information on individual documented occurrences of special-status species and sensitive natural vegetation communities. The CNPS database provides similar information specific to plant species, but at a much lower spatial resolution. The USFWS query generates a list of federally-protected species known to potentially occur within individual U.S. Geological Survey (USGS quadrangles. Wildlife species designated as "Fully Protected" by California Fish and Game Code Sections 5050 (Fully Protected reptiles and amphibians), 3511 (Fully Protected birds), 5515 (Fully Protected Fish), and 4700 (Fully Protected mammals) are added to the list.

Additional databases that were accessed included the USFWS National Wetlands Inventory (NWI Map (NWI 2017), the USGS topographical maps, National Hydrography Dataset (NHD (NHD 2017), Federal Emergency Management Agency (FEMA 100-year floodplain database (FEMA 2017), and the Recovery Plan for Upland Species of the San Joaquin Valley and Essential Connectivity Habitat Areas for wildlife corridors (Spencer 2010).

Discussion

Impacts #3.4.4a and #3.4.4b – Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; or have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The CNDDB searches listed historical occurrences of five special-status bird species, three special-status plant species, nine special-status wildlife species and one sensitive natural community within a 10-mile buffer around the Project site (Figures 3.4.4-1 through 3.4.4-4). However, none of these records were on or within the immediate vicinity of the Project site.

No USFWS-designated Critical Habitat units occur on the Project site. Critical Habitat for the Buena Vista Lake ornate Shrew (*Sorex ornatus relictus*) is approximately five miles southwest of the site (Figure 3.4.4-5). Riparian habitats are defined as vegetative communities that are influenced by a river or stream, specifically the land area that encompasses the water channel and its current or potential floodplain. No riparian habitat occurs on or near the Project site. No sensitive natural communities or critical habitats occur on or near the Project site.

The proposed Project site is highly disturbed and surrounded by similar commercial uses to the north, west and south. There are several trees on the east portion of the site that would be removed prior to construction of the Project. The potential for special-status species to occur on the site is low; however, a pre-construction survey would need to be completed to ensure there is no evidence of occupation by special-status species on the Project site.

General mitigation measures are included to prevent any potential impacts during construction. Therefore, there would be a less-than-significant impact with mitigation incorporated.

MITIGATION MEASURE(S)

MM BIO-1: A qualified biologist shall conduct a pre-construction survey on the Project site and within 500 feet of its perimeter within 14 days and no more than 30 days prior to the start of construction activities. If no special status or listed species are observed on the site, or buffer area, no further action is required.

If any evidence of occupation of the Project site by listed or other special-status species is subsequently observed, a buffer shall be established by a qualified biologist that results in sufficient avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the United States Fish and Wildlife Service and California Department of Fish and Game shall be contacted for further guidance and consultation on additional measures. The Project proponent shall obtain any required permits from the appropriate wildlife agency. Copies of all permits and evidence of compliance with applicable regulations shall be submitted to the lead agency.

The following buffer distances shall be established prior to construction activities:

- San Joaquin kit fox or American badger potential den: 50 feet;
- San Joaquin kit fox known den: 100 feet;
- San Joaquin kit fox or American badger pupping den: contact the California Department of Fish and Game and United States Fish and Wildlife Service;
- Burrowing owl burrow outside of breeding season: 160 feet;
- Burrowing owl burrow during breeding season: 250 feet;
- Swainson's hawk nest during breeding season: 0.5 mile;
- Other protected raptor nests during the breeding season: 300 feet;
- Other protected nesting migratory bird nests during the breeding season: 50 feet; and
- Other special-status wildlife species: as recommended by qualified biologist.

MM BIO-2: A qualified biologist shall be obtained to assist in the removal of the on-site trees. The removal of trees shall be done between February 15 to August 15 to avoid potential impacts with nesting birds.

MM BIO-3: If initial grading activities are planned during the potential nesting season for migratory birds/raptors that may nest on or near the Project site, the preconstruction survey shall evaluate the sites and accessible lands within an adequate buffer for active nests of migratory birds/raptors. If any nesting birds/raptors are observed, a qualified biologist shall determine buffer distances and/or the timing of Project activities so that the proposed Project does not cause nest abandonment or destruction of eggs or young. This measure shall be implemented so that the proposed Project remains in compliance with the Migratory Bird Treaty Act and applicable state regulations.

If nesting raptors are identified during the surveys, active raptor nests should be avoided by 500 feet and all other migratory bird nests should be avoided by 250 feet. Avoidance buffers may be reduced if a qualified and approved on-site monitor determines that encroachment into the buffer area is not affecting nest building, the rearing of young, or otherwise affect the breeding behaviors of the resident birds. Avoidance buffers can also be reduced through consultation with the CDFW and USFWS. If Swainson's hawks are found to nest within the survey area, active Swainson's hawk nests shall be avoided by 0.5 mile unless this avoidance buffer is reduced through consultation with the CDFW and/or USFWS.

No construction or earth-moving activity shall occur within a non-disturbance buffer until it is determined by a qualified biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid Project construction areas. This typically occurs by early July, but September 1 is considered the end of the nesting period unless otherwise determined by a qualified biologist. Once raptors have completed nesting and young have fledged, disturbance buffers will no longer be needed and can be removed, and monitoring can be terminated.

MM BIO-4: If any burrowing owl burrows are observed during the preconstruction survey, avoidance measures shall be consistent and in accordance with protocols outlined in the Burrowing Owl Survey Protocol and Mitigation Guidelines (Burrowing Owl Consortium 1993) and the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Active burrows shall be avoided, but if avoidance is not possible then compensation shall be provided for the active or passive displacement of western burrowing owls, and habitat acquisition and the creation of artificial dens for any western burrowing owls shall be provided for any owls relocated from construction areas. These measures are outlined as follows:

1. A pre-construction survey of construction area, including a 150-meter buffer (500 feet), shall be conducted no less than 14 days and no more than 30 days prior to ground disturbing activities. If more than 30 days lapse between the time of the pre-construction survey and the start of ground-disturbing activities, another pre-construction survey shall be completed. The second survey (or other subsequent surveys if necessary) shall be conducted and timed to occur sometime between 30 days and 24 hours prior to ground disturbance.
2. If western burrowing owls are present on the construction site (or within 500 feet of the construction site), exclusion fencing shall be installed between the nest site or active burrow and any earth-moving activity or other disturbance. Exclusion areas shall extend 160 feet around occupied burrows during the non-breeding season (September 1 through January 31) and extend 250 feet around occupied burrows during the breeding season (February 1 through August 31) as described in The California Burrowing Owl Consortium's Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993).
3. If western burrowing owls are present in the non-breeding season and must be passively relocated from the Project site, passive relocation shall not commence until October 1 and must be completed by February 1. Passive relocation must only be conducted by a qualified biologist or ornithologist and with approval by CDFW. After passive relocation, the area where owls occurred and its immediate vicinity shall be

monitored by a qualified biologist daily for one week and once per week for an additional two weeks to document that owls are not reoccupying the site.

4. If permanent impacts to nesting, occupied and satellite burrows, or burrowing owl habitat occur, compensation shall be based upon the number of owls or pairs of owls relocated from the construction area. Compensation acreage shall be determined as described in the CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012).

MM BIO-5: The measures listed below shall be implemented during construction:

1. Pre-construction surveys shall be conducted no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. If any San Joaquin kit fox dens are found during preconstruction surveys, exclusion zones shall be placed in accordance with USFWS Recommendations using the following:

San Joaquin kit fox USFWS Exclusion Zone Recommendations

Den Type	Recommendation
Potential Den	50-foot radius
Known Den	100-foot radius
Natal/Pupping Den (Occupied and Unoccupied)	Contact U.S. Fish and Wildlife Service for guidance
Atypical Den	50-foot radius

2. If any den must be removed, it must be appropriately monitored and excavated by a trained wildlife biologist. Destruction of natal dens and other "known" kit fox dens must not occur until authorized by USFWS. Replacement dens will be required if such dens are removed. Potential dens that are removed do not need to be replaced if they are determined to be inactive by using standard monitoring techniques (e.g., applying tracking medium around the den opening and monitoring for San Joaquin kit fox tracks for three consecutive nights).
3. Project-related vehicles shall observe a daytime speed limit of 15-mph throughout the site in all Project areas, except on County roads and State and federal highways; this is particularly important at night when kit foxes and badgers are most active. Night-time construction shall be minimized to the extent possible. However, if construction at night does occur, then the speed limit shall be reduced to 10-mph. Off-road traffic outside of designated Project areas shall be prohibited.
4. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than two-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the CDFW shall be contacted at the addresses provided below.

5. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.
6. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from a construction or Project sites.
7. No pets, such as dogs or cats, shall be permitted on the Project sites to prevent harassment, mortality of kit foxes, or destruction of dens.
8. Use of rodenticides and herbicides in Project areas shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional Project-related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide shall be used because of a proven lower risk to kit fox.
9. A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the USFWS.
10. An employee education program shall be conducted. The program shall consist of a brief presentation by persons knowledgeable in San Joaquin kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the Project. The program shall include: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the Project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during Project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the previously referenced people and anyone else who may enter the Project sites.
11. Upon completion of the Project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. shall be re-contoured if necessary, and revegetated to promote restoration of the area to pre-Project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the Project, but after Project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods

and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the USFWS, CDFW, and revegetation experts.

12. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the USFWS shall be contacted for guidance.
13. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or CDFW representative, the wildlife biologist, at (530) 934-9309. The USFWS shall be contacted at the numbers below.
14. The Sacramento Fish and Wildlife Office of USFWS and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during Project-related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact can be reached at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
15. All sightings of the San Joaquin kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed shall also be provided to the Service at the address below.

Any Project-related information required by the USFWS or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division, 2800 Cottage Way, Suite W 2605, Sacramento, California 95825-1846, phone (916) 414-6620 or (916) 414-6600.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.4c – Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No National Wetlands Inventory (NWI) features or blue-line drainages (as found on USGS topographic maps and in the National Hydrography Dataset) occurred on the Project site (Figure 3.4.4-6).

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.4d – Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The proposed Project site does not occur within a known migration route, significant wildlife corridor, or linkage area as identified in the Recovery Plan for Upland Species in the San Joaquin Valley (USFWS 1998). The site is located within areas of highway commercial development. Wildlife movement corridors are routes that provide shelter and sufficient food supplies to support regular movements of wildlife species. A movement corridor is a continuous geographic extent of habitat that either spatially or functionally links ecosystems across fragmented, or otherwise inhospitable, landscapes. Faunal movement may include seasonal or migration movement, life cycle links, species dispersal, re-colonization of an area, and movement in response to external pressures. Movement corridors typically include riparian habitats, ridgelines, and ravines, as well as other contiguous expanses of natural habitats. Movement corridors may be functional on regional, sub-regional, or local scales.

No significant wildlife movement corridors, core areas, or Essential Habitat Connectivity areas occur on or near the Project site. The Project would not substantially affect migrating birds or other wildlife. The Project will not restrict, eliminate, or significantly alter wildlife movement corridors, core areas, or Essential Habitat Connectivity areas either during construction or after the Project has been constructed. Project construction will not substantially interfere with wildlife movements or reduce breeding opportunities.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be less than significant.

Impacts #3.4.4e and #3.4.4f – Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

The City of Lemoore does not have any local policies or ordinances protecting biological resources nor an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

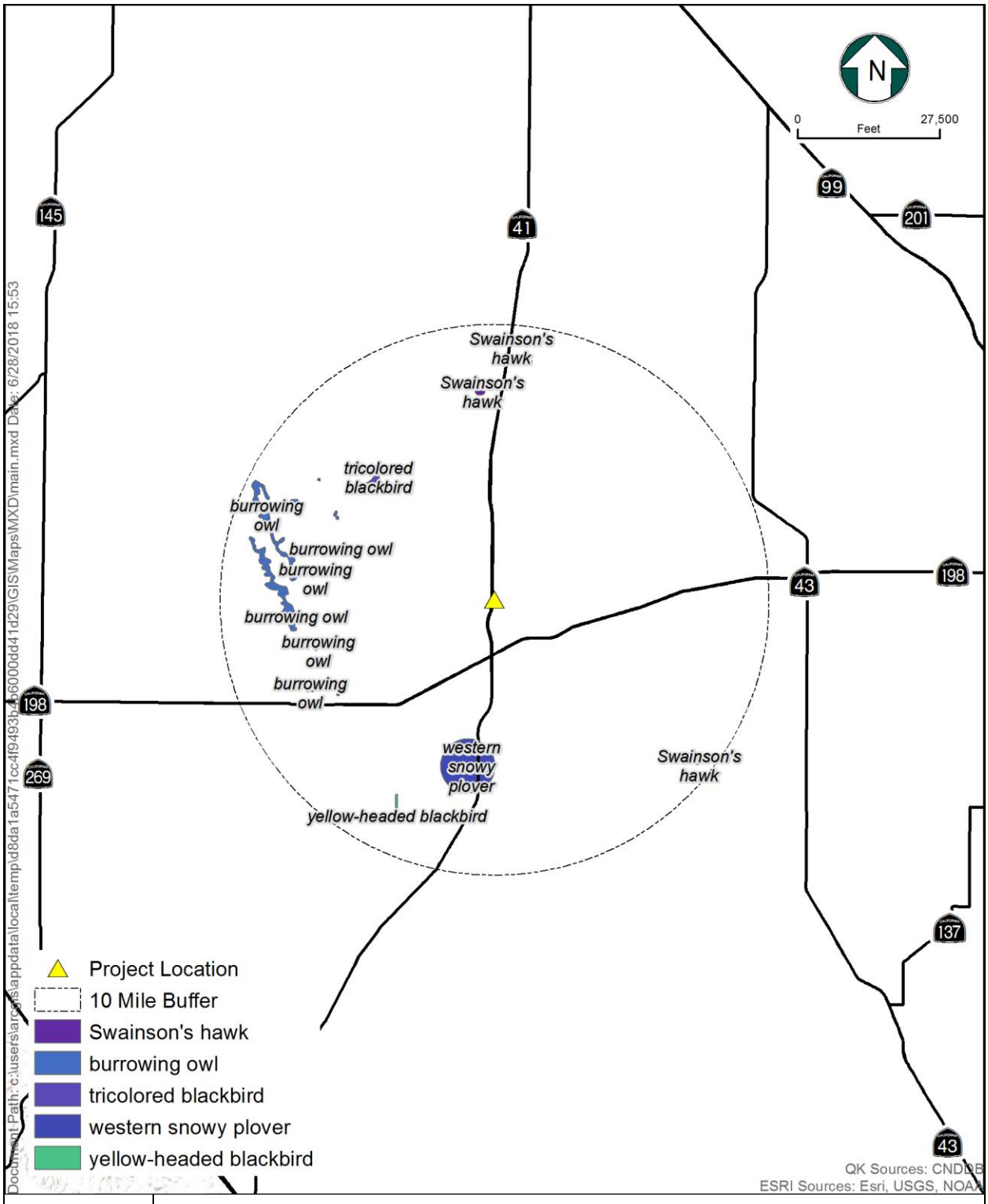


Figure 3.4.4-1
CNDDB Special-Status Birds

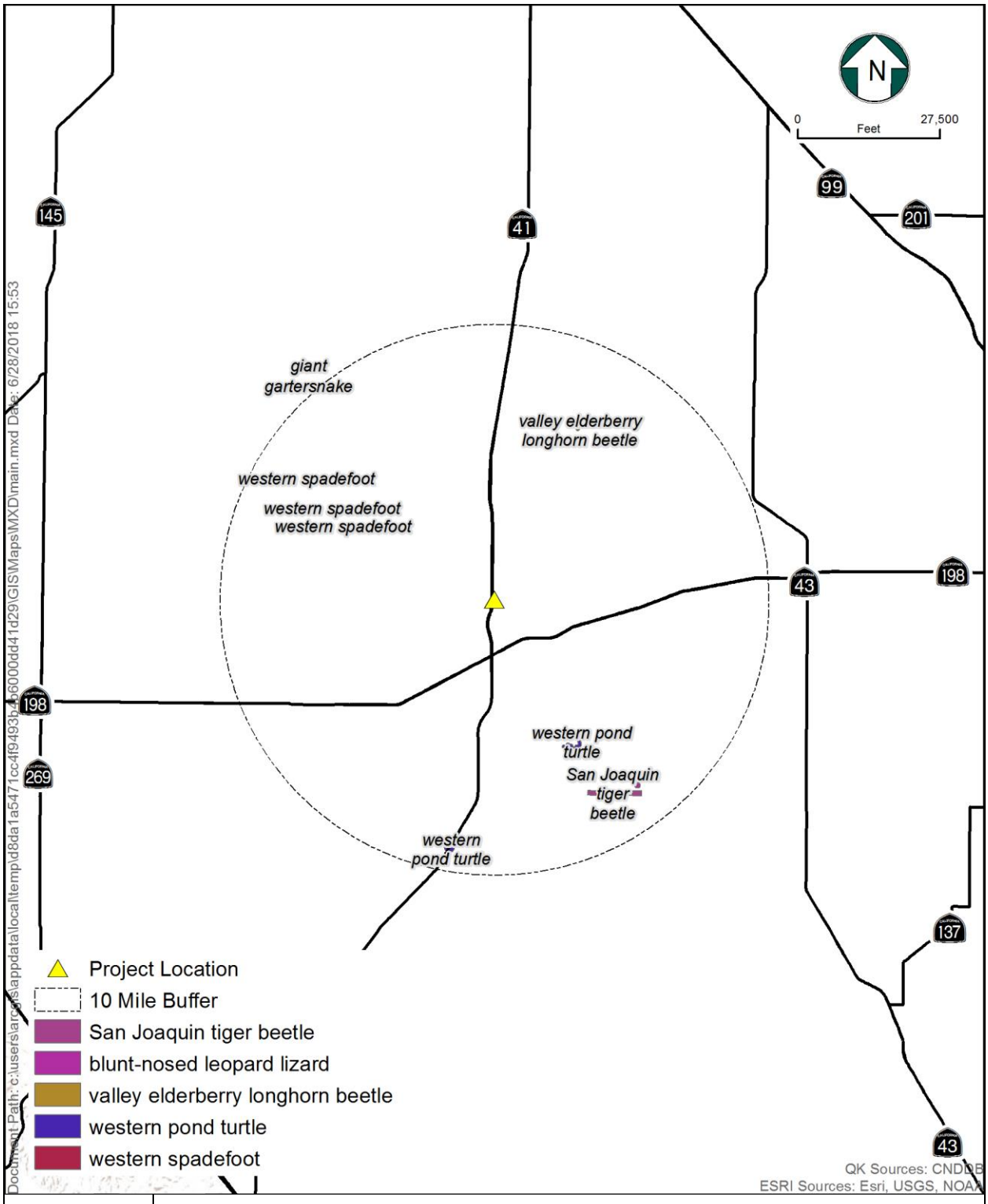


Figure 3.4.4-2
CNDDB Special-Status Invertebrates, Fish, Amphibians and Reptiles

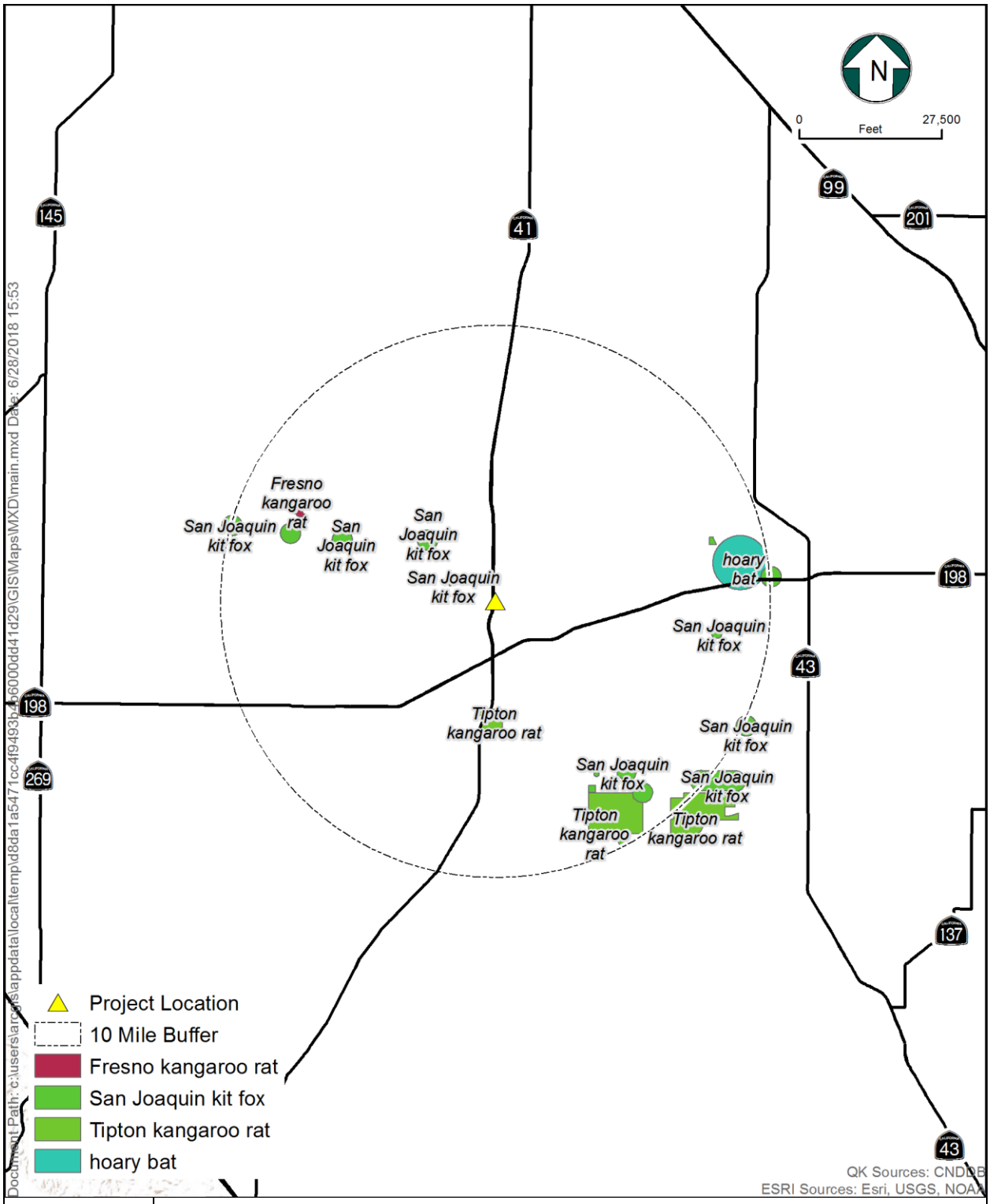


Figure 3.4.4-3
CNDDB Special-Status Mammals

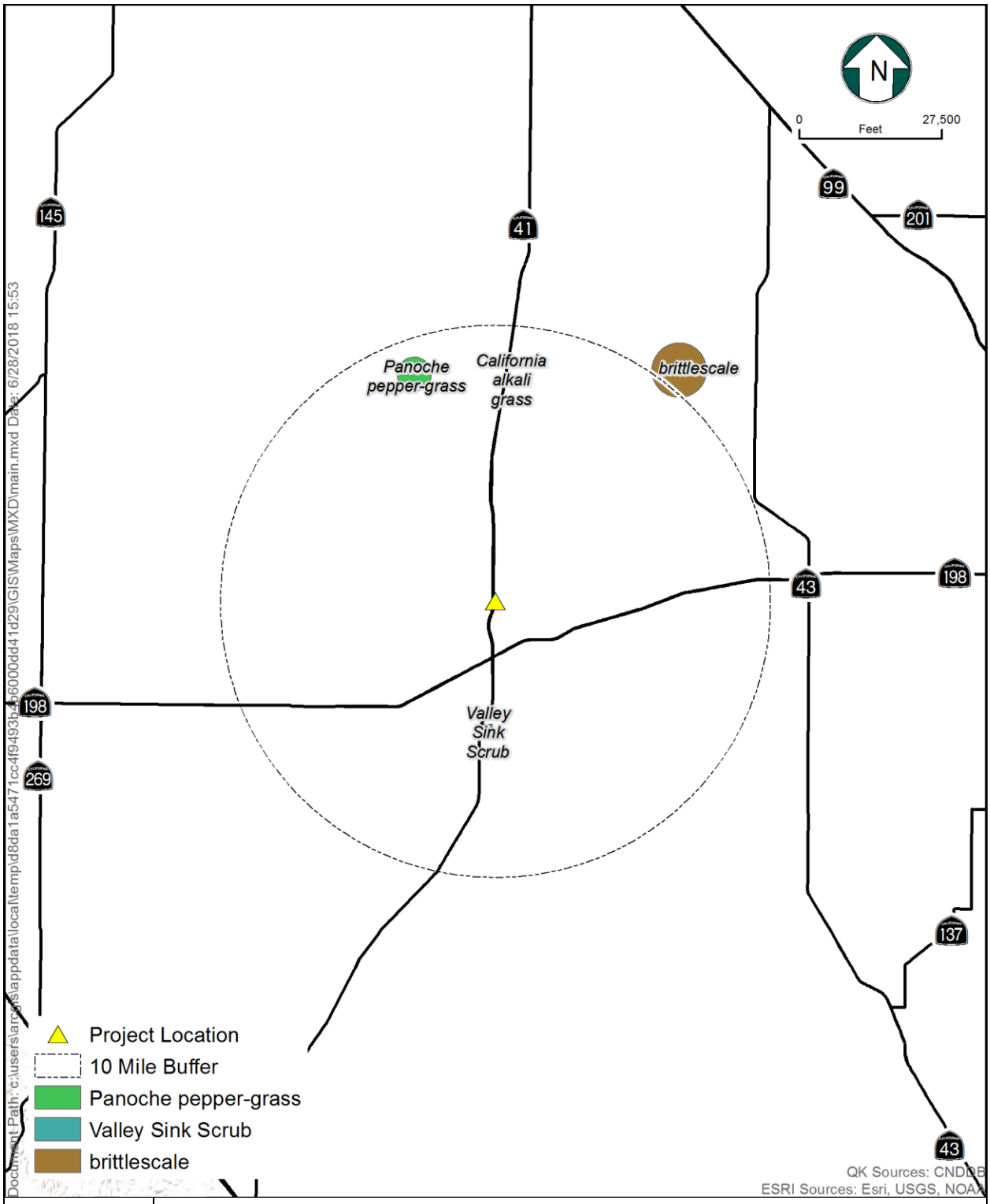


Figure 3.4.4-4
CNDDB Sensitive Natural Communities and Special-Status Plant Species

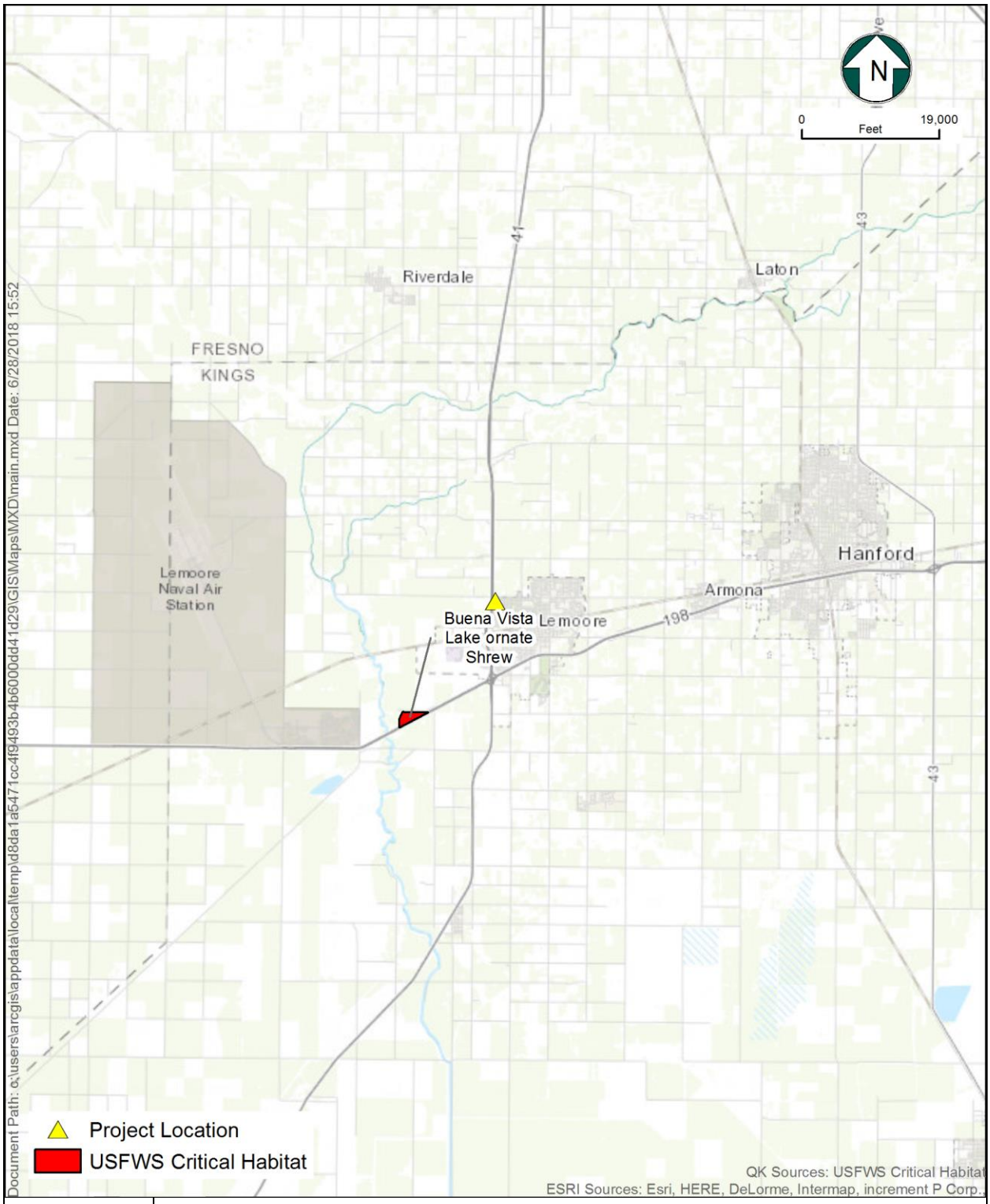


Figure 3.4.4-5
USFWS Critical Habitat

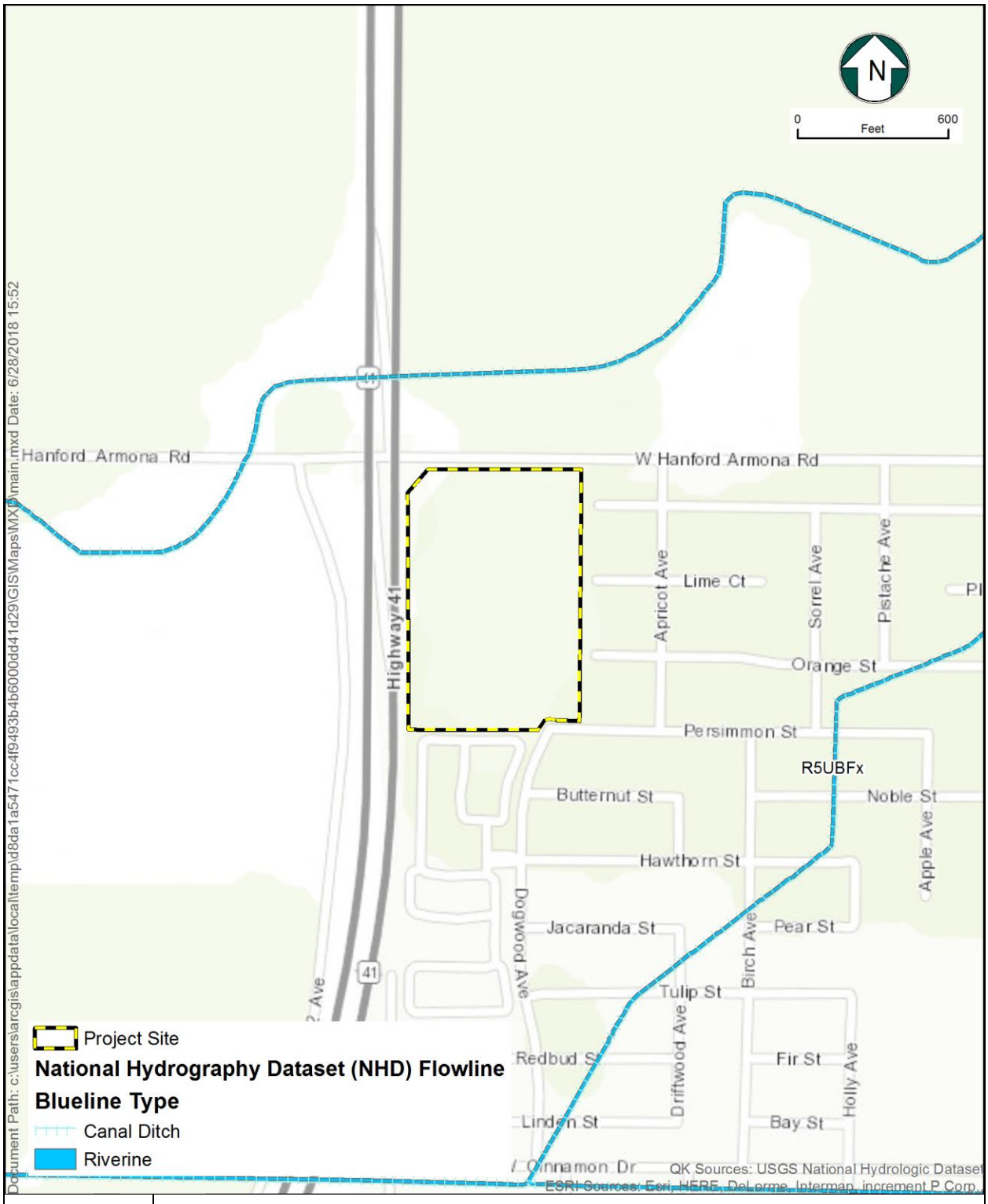


Figure 3.4.4-6
National Wetland Inventory and Hydrologic Information

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact

3.4.5 - CULTURAL RESOURCES

Would the project:

a.	Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	☐	☒	☐	☐
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☒	☐	☐
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion

Impact #3.4.5a – Would the Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

The City of Lemoore 2030 General Plan states there are currently no buildings or structures listed in the National Register of Historic Places or as California Historic Landmarks. However, there are 37 sites listed as having local historic significance located within the downtown district (City of Lemoore , 2008). The proposed Project does not contain and listed historic resources, nor is it located within an identified historic district. The Project would have no impact on registered historic resources.

The City identified the Santa Rosa Rancheria Tachi-Yokut Tribe (Tribe) as being the only Tribe that requested consultation regarding proposed projects within the City. The City initiates consultation with tribes through a Project Review – Consultation Notice once the General Plan Amendment and Zone Change applications were submitted. The Tribe has been notified of their right to request consultation pursuant to Public Resources Code Section 21080.3.

The Project site is an undeveloped area that does not contain any structures that could be potentially historic and there are no tribal lands within the vicinity of the Project. Although no historic resources have been discovered on the Project site, there would be a potentially significant impact if historical resources were uncovered during Project construction.

Implementation of Mitigation Measures MM CUL-1 through MM CUL-3 would reduce potential impacts to a less-than-significant level.

MITIGATION MEASURE(S)

MM CUL-1: If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from project implementation.

The qualified archaeologist shall determine the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Any previously undiscovered resources found during construction within the Project area shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance. No further ground disturbance shall occur in the immediate vicinity of the discovery until approved by the qualified archaeologist.

MM CUL-2: Prior to any ground disturbance, the applicant shall offer interested Tribes the opportunity to provide a Native American Monitor during ground disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the Tribe.

MM-CUL 3: Upon coordination with the City of Lemoore Community Development Department, any historical or archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded long-term preservation. Documentation for the work shall be provided in accordance with applicable cultural resource laws and guidelines.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.5b – Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

See discussion for Impact #3.4.5a above.

Although considered unlikely, since there is no recorded evidence or surface evidence of historical or archaeological resources within the project area or temporary staging area, there is the potential for project-related excavation and construction to potentially damage

or destroy previously undiscovered cultural resources. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. This is considered a potentially significant impact. Mitigation is proposed requiring implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface historic and archaeological resources.

MITIGATION MEASURE(S)

Implement MM CUL-1 through MM CUL-3.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant with mitigation incorporated.***

Impact #3.4.5c – Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

There are no unique geological features or known fossil-bearing sediments in the vicinity of the Project site. It is unlikely that any ground disturbance activities would be of a depth to uncover paleontological resources. However, there remains the possibility for previously unknown, buried paleontological resources or unique geological sites to be uncovered during subsurface construction activities. Therefore, this would be a potentially significant impact. Mitigation is proposed requiring standard inadvertent discovery procedures to be implemented to reduce this impact to a level of less than significant.

MITIGATION MEASURE(S)

MM CUL-4: During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or other appropriate facility regarding any discoveries of paleontological resources. If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from Project implementation.

If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated as outlined in PRC Section 21083.2. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of

treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.5d – Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Human remains are not known to exist within the Project area. However, construction would involve earth-disturbing activities, and it is still possible that human remains may be discovered, possibly in association with archaeological sites. MM CUL-5 has been included in the unlikely event that human remains are found during ground-disturbing activities. Impacts would be less than significant with implementation of mitigation.

MITIGATION MEASURE(S)

MM CUL-6: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the county coroner.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

3.4.6 - GEOLOGY AND SOILS

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

Discussion

Impact #3.4.6a(i) – Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. Per the Department of Conservation, California Geologic Survey Regulatory Maps (California Department of Conservation , 2018)(, the nearest fault line is the Nunez fault, which lies in the Alcade Hills 7.5-minute quadrangle, northwest of Coalinga in Fresno County approximately 35 miles west of the Project site. According to the *City of Lemoore 2030 General Plan*, there are no known major fault systems within Lemoore. The greatest potential for geologic disaster in the City is posed by the San Andres Fault, which is located approximately four miles west of the Kings County boundary line with Monterey County (County of Kings, 2010) The distance from the nearest active faults precludes the possibility of fault rupture on the Project site. Although the Project area could potentially experience ground shaking, the magnitude of the hazard would not be severe as indicated by the General Plan. Therefore, a less than significant impact would occur.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.6a(ii) – Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

According to the Seismic Safety Map contained within the Health and Safety Element of the 2035 Kings County General Plan (Figure HS-2, page HS-10), the Project site is located within an area designated as Zone V1 or Valley Zone 1, which is identified as the area of least expected seismic shaking by the Kings County Seismic Zone Description in the 2035 General Plan (Kings County, 2010). The potential for ground shaking is discussed in terms of the percent probability of exceeding peak ground acceleration (% g) in the next 50 years (Kings County, 2010). The Project site's exceedance probability in the next 50 years is between 20-30 percent, which is the lowest within the county. Although the Project area could potentially experience ground shaking, the magnitude of the hazard would not be severe as indicated by the Health and Safety Element of the 2035 Kings County General Plan. Therefore, a less-than-significant impact would occur.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*

Impact #3.4.6a(iii) - Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

According to the *City of Lemoore Community Profile – Hazard Profiles*, the potential magnitude/geographic extent of expansive liquefaction erosion was deemed 'negligible' and its significance 'low' throughout the City (City of Lemoore, 2012). (City of Lemoore, 2012). Liquefaction is possible in local areas during a strong earthquake or other seismic ground shaking, where unconsolidated sediments coincide with a high-water table.

Structures constructed as part of the Project would be required by State law to be constructed in accordance with all applicable International Building Code (IBC) and California Building Code (CBC) earthquake construction standards, including those relating to soil characteristics. Adherence to all applicable regulations would avoid any potential impacts to structures resulting from liquefaction at the Project site.

Since the Project includes the construction of structures and residences the potential for liquefaction is considered significant. Implementation of Mitigation Measure MM GEO-1 would require the preparation of a geotechnical study that would include recommendations to engineer the site's soils to prevent potential liquefaction in the future. With implementation of this mitigation measure, the Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure including liquefaction. Therefore, the impact would be less than significant with mitigation incorporated.

MITIGATION MEASURE(S)

MM GEO-1: Prior to final design, a geotechnical study shall be prepared for the Project site and recommendations of the study shall be incorporated into final design of the Project. A copy of the report shall be submitted to the City of Lemoore Community Development Department for review.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.6a(iv) – Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The Project site currently consists of undeveloped land and the surrounding area is essentially flat. The site's topography would not change substantially as a result of Project

development. T Since the site is essentially flat in nature from previous activities with no surrounding slopes and it is not considered to be prone to landslides. The Project would not expose people or structures to potential substantial adverse effects from landslides. Therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact***.

Impact #3.4.6b – Would the Project result in substantial soil erosion or the loss of topsoil?

There is one type of soil found within the Project site (Figure 3.4.6-1), which is the Grangeville Sandy Loam. The development of the proposed facilities is not expected to subject the site to any extreme erosion problems. As is noted in Impact #3.4.9a, the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit (No. 2012-0006-DWQ) for stormwater discharges associated with construction and land disturbance activities, the project proponent must develop and implement a Stormwater Pollution Prevision Plan (SWPPP) that specifies best management practices (BMPs) to prevent construction pollutants, including erosion of soils (such as topsoil), from moving offsite. MM HYD-1 below requires the preparation and implementation of a SWPPP to comply with the Construction General Permit requirements. Therefore, with implementation of MM HYD-1, the project would have a less-than-significant impact on soil erosion and loss of topsoil

MITIGATION MEASURE(S)

Implement MM HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant with mitigation incorporated***.

Impact #3.4.6c – Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

As previously discussed, the site soils are considered stable in that there is not a potential of on- or offsite landslides, lateral spreading, subsidence or collapse. However, as discussed in Impact #3.4.6a(iii), the Project site soils are subject to potential liquefaction as identified in the 2035 General Plan. The Project is potentially located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in liquefaction. Furthermore, the structures would be subject to all applicable ordinances of the City of Lemoore Building Ordinance, as well as all applicable IBC and CBC earthquake

construction standards, including those relating to soil characteristics. In addition, the implementation of Mitigation Measure MM GEO-1, which requires the preparation of a geotechnical study, would reduce Project impacts to a less-than-significant impact.

MITIGATION MEASURES

Implement MM GEO-1

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.6d – Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Expansive clay soils are subject to shrinking and swelling due to changes in moisture content over the seasons. These changes can cause damage or failure of foundations, utilities, and pavements. During periods of high moisture content, expansive soils under foundations can heave and result in structures lifting. In dry periods, the same soils can collapse and result in settlement of structures. According to Table 15 – Physical and Chemical Properties of the Soils in the USDA Kings County Soil Survey, the upper five feet of the onsite soil (Sandy Loam) is considered to have low shrink-swell or expansion potential. In addition, the site is not located in an area of expansive soils as shown in Figure HS-4 of the Health and Safety Element of the 2035 Kings County General Plan (Kings County, 2010). Compliance with the policies of the City of Lemoore Development Code, the CBC, as well as implementation of Mitigation Measure MM GEO-1, would reduce potential site-specific impacts to less-than-significant levels.

MITIGATION MEASURES

Implement MM GEO-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.6e – Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

The proposed Project does not include the development or use of septic tanks or alternative wastewater disposal systems as the Project would hook up to the City's existing sewer system.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

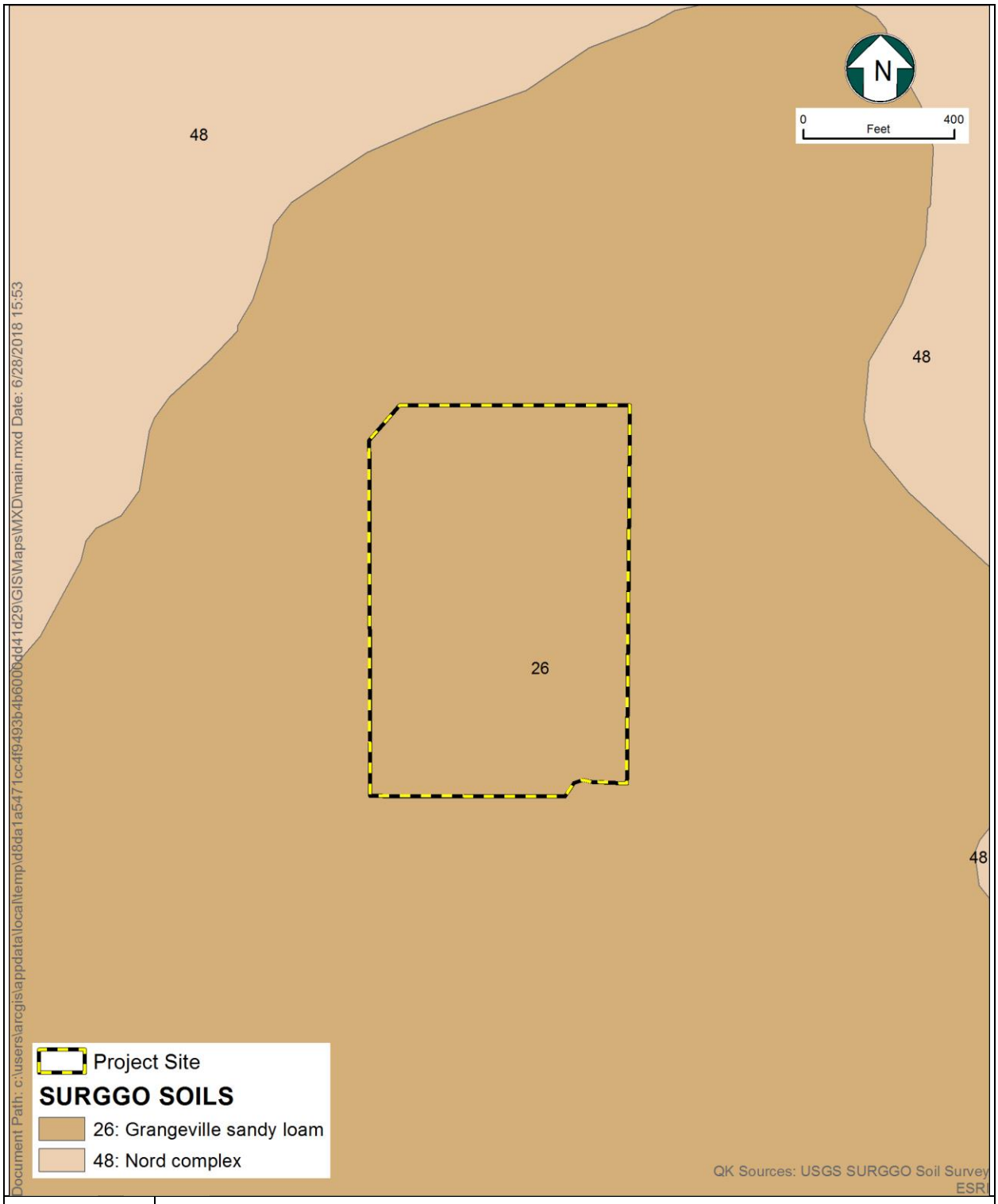


Figure 3.4.6-1
Project Site Soil Map

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

Discussion

There have been significant legislative and regulatory activities that directly and indirectly affect climate change and GHGs in California. The primary climate change legislation in California is AB 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing GHG emissions in California. GHGs, as defined under AB 32, include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and Nitrogen trifluoride. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. The California Air Resources Board (ARB is the state agency charged with monitoring and regulating sources of emissions of GHGs that cause global warning in order to reduce emissions of GHGs. SB 32 was signed by the Governor in 2016, which would require the state board to ensure that statewide greenhouse gas emissions are reduced to 40 percent below the 1990 level by 2030.

Impact #3.4.7a – Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The SJVAPCD has adopted the Final Draft Staff Report, addressing Greenhouse Gas Emissions Impacts under the California Environmental Quality Act (November 5, 2009), that included a recommended methodology for determining significance for stationary source projects and traditional development projects (such as residential, commercial, or industrial projects).

The proposed Project would emit greenhouse gases such as carbon dioxide (CO_2), methane, and nitrous oxide from the exhaust of equipment and the exhaust of vehicles for residents, customers, and delivery trips. The increased rate of greenhouse gas emissions would not be considered cumulatively significant per the California Global Warming Solutions Act of 2006. As stated in the *San Joaquin Valley Unified Air Pollution Control District Guidance for Assessing and Mitigating Air Quality Impacts,* projects whose emissions have been reduced

or mitigated consistent with Assembly Bill 32- California *Global Warming Solutions Act of 2006* should be considered to have a less-than-significant impact on global climate change.

The *City of Lemoore 2030 General Plan* has analyzed greenhouse gas emissions for the City based on land use designations, including emissions for areas designated as Medium Density Residential and Neighborhood Commercial. Construction and operational greenhouse gas emissions as a result have already been analyzed in the General Plan EIR. With implementation of these and other applicable City policies, as well as mandatory compliance with the applicable San Joaquin Valley Unified Air Pollution Control District rules and regulations, Project GHG emissions will be reduced to less-than-significant levels.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant***

Impact #3.4.7b – Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As previously mentioned, the proposed Project falls within the jurisdiction of the San Joaquin Valley Unified Air Pollution Control District and the *City of Lemoore 2030 General Plan*. Both of these entities take into account baseline emissions inventory for light industrial uses for the City of Lemoore. Since the proposed Project is consistent with the applicable General Plan designation of Light Industrial, it can be concluded that the proposed Project would also be in conformance with the approved General Plan.

Because the proposed Project is consistent with the *City of Lemoore 2030 General Plan*, construction and operational GHG emissions as a result have already been analyzed in the General Plan EIR. With implementation of these and other applicable City policies, as well as mandatory compliance with all applicable San Joaquin Valley Unified Air Pollution Control District rules and regulations Project GHG emissions will be reduced to less-than-significant levels.

MITIGATION MEASURES

No mitigation required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant***

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.8 - HAZARDS AND HAZARDOUS MATERIALS				
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Discussion

Impacts #3.4.8a, #3.4.8b, and #3.4.8c – Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment or emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The proposed Project includes the construction of multi-family housing and commercial development. The proposed Project could include the transport and use of small amounts of liquid waste, including cleaning fluids, dust palliative, herbicides, and solvents. Some solid hazardous waste, such as welding materials and dried paint, may also be generated during construction. These materials would be transported to the project site during construction, and any hazardous materials that are produced as a result of the construction of the Project would be collected and transported away from the site. During construction of the project, material safety data sheets for all applicable materials present at the site would be made readily available to onsite personnel. During construction activities, non-hazardous construction debris would be generated and disposed of in local landfills. Sanitary waste would be managed using portable toilets located at a reasonably accessible onsite location

Once the Project is fully constructed, there may be businesses that dispense gasoline and other auto-related chemicals that, if handled improperly, may result in spills. The transport use and storage of hazardous materials would be required to comply with all applicable State and federal regulations, such as requirements that spills would be cleaned up immediately and all wastes and spills control materials would be properly disposed of at approved disposal facilities. Compliance with CCR Title 23, Chapter 16 would also be required for maintenance and monitoring of the USTs for potential leaks. Mitigation Measure MM HYD-1 requires the preparation of a SWPPP includes a list of Best Management Practices (BMPs) to be implemented on the site both during and after construction to minimize potential impacts from accidental spills. With compliance of the SWPPP as well as all local, State, and federal regulations regarding hazardous materials, impacts associated with the use or accidental spill of hazardous materials would be less than significant.

The Liberty Middle School is approximately 0.6 miles to the east, the Lemoore Elementary School is approximately 1.3 miles southeast and Cinnamon Elementary School is approximately 1.6 miles east Given the proximity and the intervening uses there is a very limited potential for the Project to affect any of the schools in the vicinity The proposed Project would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing school.

MITIGATION MEASURE(S)

Implement MM HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.8d – Would the Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Per the Cortese List, there are no hazardous waste and substances sites in the vicinity of the Project site (Cal EPA, 2017). Additionally, the State Water Resources Control Board GeoTracker compiles a list of Leaking Underground Storage Tank (LUST) Sites. There are two LUST Cleanup Sites within the vicinity of the Project site (California Water Resources Board, 2017). Both LUST Cleanup Sites were for gasoline spills; however, have been cleaned up and are closed. The proposed Project site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would therefore not create a significant hazard to the public or the environment.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impacts #3.4.8e and #3.4.8f – For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area; or for a project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?

There are one private airstrip and no public airports within two miles of the Project. The Stone airstrip (private) is approximately 1.5 miles northwest of the Project. The closest public airport is the Visalia Municipal Airport, located approximately 22.5 miles east of the Project. Naval Air Station Lemoore is approximately 6.5 miles to the southwest. There is no adopted airport land use plan for the City of Lemoore. These airports would not be impacted by proposed Project.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.8g –Would the Project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

The City of Lemoore has Emergency Operations Plan that provides guidance to City staff in the event of extraordinary emergency situation associated with natural disaster and technological incidents (City of Lemoore , 2008). The proposed Project would not interfere with the City's adopted emergency response plan; therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact***.

Impact #3.4.8h – Would the Project Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The Lemoore City Volunteer Fire Department, located approximately 1.25 miles southeast, would provide fire protection services to the Project. The proposed Project site is in an unzoned area of the Kings County Fire Hazard Severity Zone Map Local Responsibility Area (LRA). However, Cal Fire has determined that portions of the City of Lemoore are categorized as a Moderate Fire Hazard Severity Zone in LRA. The Project site is not within a wildland area nor is there within the vicinity of the Project site. The Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact***.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.9 - HYDROLOGY AND WATER QUALITY					
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?	☐	☒	☐	☐
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?	☐	☒	☐	☐
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f.	Otherwise substantially degrade water quality?	☐	☒	☐	☐
g.	Place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or flood insurance rate map or other flood hazard delineation map?	☐	☒	☐	☐
h.	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☒	☐	☐

i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j.	Contribute to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion

Impact #3.4.9a – Would the Project violate any water quality standards or waste discharge requirements?

Project construction would cause ground disturbance that could result in soil erosion or siltation and subsequent water quality degradation offsite, which is a potentially significant impact. Construction-related activities would also involve the use of materials such as vehicle fuels, lubricating fluids, solvents, and other materials that could result in polluted runoff, which is also a potentially significant impact. However, the potential consequences of any spill or release of these types of materials are generally small due to the localized, short-term nature of such releases because of construction. The volume of any spills would likely be relatively small because the volume in any single vehicle or container would generally be anticipated to be less than 50 gallons.

As required by the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit (No. 2012-0006-DWQ) for storm water discharges associated with construction and land disturbance activities, the City must develop and implement a SWPPP that specifies BMPs to prevent construction pollutants from contacting storm water, with the intent of keeping all products of erosion from moving offsite. The City is required to comply with the Construction General Permit because Project-related construction activities result in soil disturbances of least one acre of total land area. Mitigation Measure MM HYD-1 below requires the preparation and implementation of a SWPPP to comply with the Construction General Permit requirements.

With implementation of Mitigation Measure MM HYD-1, the Project would not violate any water quality standards or waste discharge requirements (WDRs) during the construction period, and impacts would be less than significant.

MITIGATION MEASURE(S)

MM HYD-1: Prior to ground-disturbing activities, the City shall prepare and implement a Storm water Pollution Prevention Plan (SWPPP) that specifies best management practices (BMP), with the intent of keeping all products of erosion from moving offsite. The SWPPP shall include contain a site map that shows the construction site perimeter, existing and proposed man-made facilities, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the Project site. Additionally, the SWPPP shall contain a visual monitoring program and a chemical

monitoring program for non-visible pollutants to be implemented (if there is a failure of best management practices). The requirements of the SWPPP and BMPs shall be incorporated into design specifications and construction contracts. Recommended best management practices for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Protecting any existing storm drain inlets and stabilizing disturbed areas;
- Implementing erosion controls;
- Properly managing construction materials; and
- Managing waste, aggressively controlling litter, and implementing sediment controls.

Evidence of the approved SWPPP shall be submitted to the Lemoore Community Development Department.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.9b – Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

The City of Lemoore currently utilizes local groundwater as its sole source of supply from underground aquifers via ten active groundwater wells. The groundwater basin underlying the City is the Tulare Lake Basin and the City of Lemoore is immediately adjacent to the south boundary of the Kings subbasin. Water for construction and operation would come from the City of Lemoore's existing water system. Per the City's Urban Water Management Plan, the City's existing system has a total supply capacity of 21,674,000 gallons per day with an average day demand of 8,769,000 gallons (City of Lemoore, 2013). The proposed Project would make a minor contribution to the City's current demand and would comply with the City's water conservation measures and regulations. Since the proposed Project would have minimal impacts on the City's water supply, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.9c – Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?

The Project site is relatively flat, and the Project grading would be minimal and consist of mostly grubbing the site to remove vegetation. The topography of the site would not appreciably change because of grading activities. The site does not contain any blue-line water features, including streams or rivers. With implementation of Mitigation Measure MM HYD-1, impacts would be less than significant.

MITIGATION MEASURE(S)

Implement MM HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.9d – Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?

Please see Impact #3.4.9c, above. Therefore, the Project would not substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-or offsite. With implementation of Mitigation Measure MM HYD-1, impacts would be less than significant

MITIGATION MEASURE(S)

Implement MM HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.9e – Would the Project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Please see Impact #3.4.9a, above. Therefore, the Project would not otherwise substantially degrade water quality. With implementation of Mitigation Measure MM HYD-1, impacts would be less than significant.

MITIGATION MEASURE(S)

Implement MM HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.9f - Otherwise substantially degrade water quality?

Please see Impact #3.4.9a, above. Therefore, the Project would not otherwise substantially degrade water quality. With implementation of Mitigation Measure MM HYD-1, impacts would be less than significant.

MITIGATION MEASURE(S)

Implement MM HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.9g – Would the Project place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or flood insurance rate map or other flood hazard delineation map?

As shown in Figure 3.4.9-1, the Project is not located within a FEMA 100-year floodplain. According to FEMA, the site is located in an area of minimal flood hazard and is located in a zone with a 0.2 percent chance of an annual flood. As the Project would not place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or flood insurance rate map or other flood hazard delineation map.

The placement of impervious surfaces with the proposed residences and commercial buildings could alter or redirect flood flows away from the Project. This could in turn result in flood flows being redirected onto other sites, such that additional flooding could occur or existing flooding could be exacerbated. However, the risk of exposure to flooding is low, since there is no significant risk of flood. The structures will be built to meet City of Lemoore building standards. This impact is considered potentially significant; however, implementation of Mitigation Measure MM HYD-1 would reduce impacts to a less-than-significant level.

MITIGATION MEASURE(S)

Implement MM HYD-1

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.* **Impact #3.4.9h – Would the Project place within a 100-year flood hazard area structures that would impede or redirect flood flows?**

See Impact #3.4.9g, above.

MITIGATION MEASURE(S)

Implement MM HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.9i – Would the Project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

According the Flood Hazards Area map (Figure HS-7, page HS-16) included in the Health and Safety Element of the *2035 Kings County General Plan*, the Project site is located within the Pine Flat Dam inundation zone (Kings County, 2010). If Pine Flat Dam failed while at full capacity, its floodwaters would arrive in Kings County within approximately five hours (Kings County 2010). Dam failure has been adequately planned for through the Kings County Multi-Hazard Mitigation Plan, which identifies a dam failure hazard to be of medium significance and unlikely to occur in the City of Lemoore (Kings County, 2007). With the implementation of the Kings County Multi-Hazard Mitigation Plan, impacts related to dam failure would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.9j – Would the Project contribute to inundation by seiche, tsunami, or mudflow?

The Project site is not located near the ocean or a steep topographic feature (i.e., mountain, hill, bluff, etc.). Additionally, there is no body of water within the vicinity of the Project site. Therefore, there is no potential for the site to be inundated by seiche, tsunami or mudflow. There would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

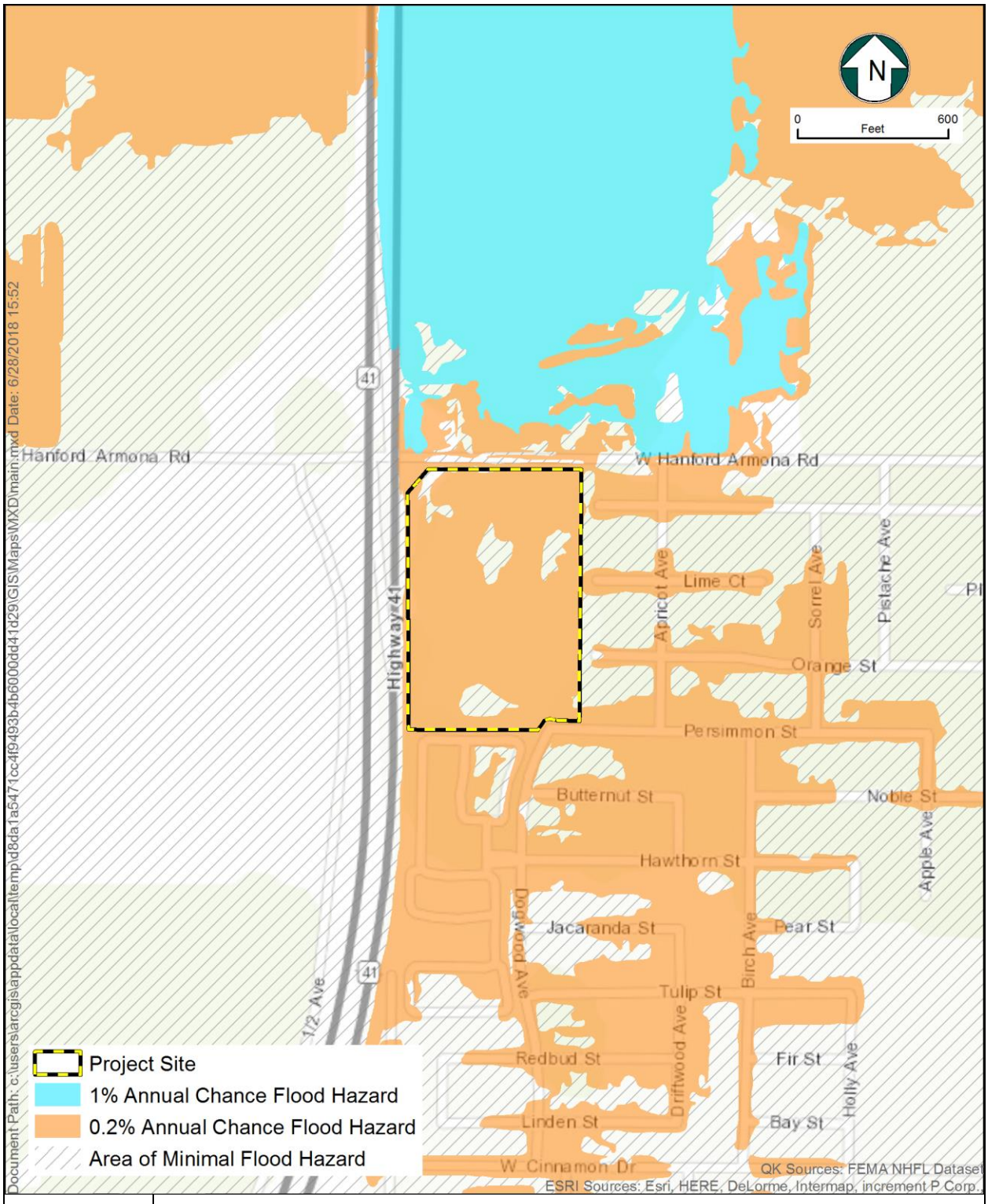


Figure 3.4.9-1
100-Year Floodplain

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.10 - LAND USE AND PLANNING					
Would the project:					
a.	Physically divide an established community?	☐	☐	☐	☒
b.	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?	☐	☐	☐	☒
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion

Impact #3.4.10a – Would the Project physically divide an established community?

The Project is in a rural undeveloped area. The Project does not include the construction of roads or any other physical barrier that would divide a community. The Project itself adds to the community to the east and south of the site because more housing will be built. There would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact***.

Impact #3.4.10b – 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?

The Project site has both a zoning and General Plan land use designation of Mixed Use (MU) and Neighborhood Commercial (NC). The Project involves re-zoning and a General Plan amendment, with the change being from Mixed Use to Medium Density Residential. The change is not significant because Medium Density Residential housing is a permitted in the Mixed-Use Zone. However, the rezoning is requested because the proposed Project only have residential, and will not include a mix of residential, commercial, or office development in that portion of the site. With approval of the zone change and General Plan Amendment, the Project will be consistent with the goals and policies of the *City of Lemoore 2030 General Plan,* Therefore, the impact is less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant***.

Impact #3.4.10c – Would the Project Conflict with any applicable habitat conservation plan or natural community conservation plan?

The Project site is not within the boundaries of an adopted habitat or natural community conservation plan. Therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact***.

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

Discussion

Impact #3.4.11a – Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

The City of Lemoore and the surrounding area are designated as Mineral Resources Zone 1 (MRZ-1) by the State Mining and Geology Board (SMGB). MRZ-1 areas are described as those for which adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence. The Project site is currently not being used for mineral extraction. Additionally, per the California Division of Oil, Gas, and Geothermal Resources (DOGGR), there are no active, inactive, or capped oil wells located within the Project site, and it is not within a DOGGR-recognized oilfield. Therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact***.

Impact #3.4.11b – Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

There are few commercial mining and mineral extraction activities occur in the county and currently, only limited excavation of soil, sand, and some gravel is used for commercial purposes (Kings County, 2010). Additionally, the site is not designated for mineral and petroleum resources activities by the City of Lemoore General Plan. The Project site and

surrounding lands are zoned for light industrial uses. No mining occurs in the Project area or in the nearby vicinity, and there are no anticipated mineral extraction activities to be conducted in the future as a result of the Project. The Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan and would therefore have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.12 - NOISE				
Would the project result in:				
a. Exposure of persons to, or generate, noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☐	☐	☒	☐
b. Exposure of persons to or generate excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f. For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Discussion

Impact #3.4.12a – Would the Project result in exposure of persons to, or generate, noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?

Project construction would generate temporary increases in noise levels. Title 5, Chapter 6 of the City's Municipal Code establishes regulations and enforcement procedures for noise generated in the City. The regulations do not apply to the operation on days other than Sunday of construction equipment or of a construction vehicle, or the performance on days other than Sunday of construction work, between the hours of 7:00 A.M. and 8:00 P.M., provided that all required permits for the operation of such construction equipment or

construction vehicle or the performance of such construction work have been obtained from the appropriate City department (Lemoore Municipal Code 5-6-1-C.4). The City of Lemoore 2030 General Plan (City of Lemoore , 2008) has objectives to minimize residential development noise levels. The proposed Project would comply with all regulations, standards and policies within the City's General Plan and Municipal Code. Therefore, the Project would not result in the exposure of persons to, or generate, noise levels more than standards established in a local general plan or noise ordinance or applicable standards of other agencies. Impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.12b – Would the Project result in exposure of persons to or generate excessive groundborne vibration or groundborne noise levels?

The proposed project is expected to create temporary ground-borne vibration as a result of the construction activities (during site preparation and grading). According to the U.S. Department of Transportation, Federal Railroad Administration, vibration is sound radiated through the ground. The rumbling sound caused by the vibration is called ground-borne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB). The background vibration velocity level in residential areas is usually around 50 VdB. A list of typical vibration-generating equipment is shown in Table 3.4.12-1.

Table 3.4.12-5
Different Levels of Ground-borne Vibration

Vibration Velocity Level	Equipment Type
104 VdB	Pile Driver (impact), typical
93 VdB	Pile Driver (sonic), typical
94 VdB	Vibratory roller
87 VdB	Large bulldozer
87 VdB	Caisson drilling
86 VdB	Loaded trucks
79 VdB	Jackhammer
58 VdB	Small bulldozer

Source: (Federal Transit Administration , 2006)
Note: 25 feet from the corresponding equipment

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximately dividing line between barely perceptible and distinctly perceptible levels for many people.

Typical outdoor sources of perceptible ground-borne vibration are construction equipment and traffic on rough roads. For example, if a roadway is smooth, the ground-borne vibration from traffic is rarely perceptible.

Typically, ground-borne vibration generated by construction activity attenuates rapidly with distance from the source of the vibration. Therefore, vibration issues are generally confined to distances of less than 500 feet (U.S. Department of Transportation, 2005). There are residences located within the surrounding area of the proposed Project site. Potential sources of temporary vibration during construction of the proposed Project would be minimal and would include transportation and use of equipment to the site.

Construction activity would include various site preparation, grading, in fabrication, and site cleanup work. Construction would not involve the use of equipment that would cause high ground-borne vibration levels such as pile-driving or blasting. Once constructed, the proposed project would not have any components that would generate high vibration levels. Thus, construction and operation of the proposed project would not result in any vibration and impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.12c – Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

As shown in Figure 2-4, once constructed, the Project would be consistent with the surrounding land uses and would not cause out of the ordinary noise levels than what is currently established in the area. As noted in Impact 3.4.12-a, above, the construction noise would be temporary, and would be attenuated over a distance to the point where it would not be bothersome to the nearest receptors. The noise levels would not result in a substantial permanent increase in ambient noise levels above the existing environment. The impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.12d – Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?

As noted in Impact 3.4.12-a, above, construction of the Project would generate temporary noise levels. However, construction would be done during the daylight hours and would be temporary so that the surrounding land uses would not be affected by construction of the new development. The Project is consistent with the surrounding land uses and would not cause out of the ordinary noise levels than what is currently established in the area. The impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.12e – For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?

The Project is not within an adopted Airport Land Use plan. There are no public airports within two miles of the Project site. The closest public airport is the Visalia Municipal Airport, located approximately 22.5 miles east of the Project. The Lemoore Naval Air Station is approximately 6.5 miles to the southwest. The Project would not expose people residing or working in the Project area to excessive noise levels. There would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.12f – For a project located within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?

The Project is not within proximity of a private airstrip. The Stone airstrip (private) is approximately 1.5 miles northwest of the Project. This private airstrip has few daily flights. The Project would not expose people residing or working in the Project area to excessive noise levels. There would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

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

Discussion

Impact #3.4.13a – 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 roads or other infrastructure)?

The Project in question could induce a slight population growth in the area because it includes the construction of 176 apartments and new businesses. However, the population is not substantial relative to the total population of the City of Lemoore. The roads to be built for the site would serve the residential and commercial development that induced the roads in the first place, so the roads would not induce more development thereafter. The Lemoore General Plan includes policies to limit development only to areas inside an urban boundary around the city. Any growth inducement could only occur on lands that are designated and have been evaluated for urban development. Therefore, the impact would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.13b – Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The proposed Project would not require demolition of any housing, as the Project site is currently undeveloped. Therefore, there would be no need to construct replacement housing elsewhere. There would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.13c – Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The Project would not require the displacement of substantial numbers of people due to the fact that the Project site is undeveloped. As no housing currently exists, there would be no need to construct replacement housing elsewhere. There would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.14 - PUBLIC SERVICES					
Would the project:					
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services:					
	i. Fire protection?	☐	☐	☒	☐
	ii. Police protection?	☐	☐	☒	☐
	iii. Schools?	☐	☐	☒	☐
	iv. Parks?	☐	☐	☒	☐
	v. Other public facilities?	☐	☐	☒	☐

Discussion

Impact #3.4.14a(i) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – fire protection?

Construction and operation of the proposed Project would not be expected to result in an increase in demand of fire protection services leading to the construction of new or physically altered facilities. Fire suppression support is provided by the City of Lemoore Volunteer Fire Department (LVFD). The LVFD has two stations and the closest station to the Project site is located at 210 Fox Street, approximately 1.25 miles southeast of the Project site. The proposed Project would result in the construction of 176 apartments and various retail stores, drive-thru restaurants, and other neighborhood commercial services in Lemoore. The City of Lemoore will ensure that construction activities would be in accordance with local and State fire codes. Services are adequately planned for within the City's General Plan through policies to ensure the City maintains Fire Department

performance and response standards by allocating the appropriate resources. As stated, the Project applicant is responsible for constructing any infrastructure needed to serve the Project and pay the appropriate impact fees, which would reduce impacts to less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.14a(ii) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – police protection?

Law enforcement and public protection are provided by the City of Lemoore Police Department. The City's police station is located at 657 Fox Street, approximately 1 mile southeast of the Project site. As discussed, the proposed Project would not increase demands for public safety protection. As stated, the Project applicant is responsible for constructing any infrastructure needed to serve the Project and pay the appropriate impact fees. Impacts on police protection services related to population growth would therefore be considered less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.14a(iii) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – schools?

The legislature has deemed under Government Code Section 65996, that all school facilities impacts are mitigated as a consequence of SB 50 Levels 1, 2, and 3 develop fee legislative provisions. The developer will pay appropriate impact fees at time for building permits. Therefore, the impact would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.14a(iv) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – parks?

The proposed Project would not result in enough population growth for the City that would increase demand for public parks. The City is currently maintaining a five acre to 1,000 residents park ratio, which exceeds current City Park Standards and Quimby Act requirements (City of Lemoore, 2008). The proposed project would comply with the goals, policies, and implementation measures of the General Plan. The proposed Project is providing 0.82 acres of open space for recreation on the site for use by the residents. This acreage meets the City standard of providing 5% of a multi-family site for open space. The Project would have a less than significant impact to the City park system.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.14a(v) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – other public facilities?

The proposed Project does not include any impacts to other public facilities such as libraries, hospitals or emergency medical facilities. The proposed project would comply with the goals, policies, and implementation measures of the General Plan.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less–than-Significant Impact	No Impact
3.4.15 - RECREATION				
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

Discussion

Impact #3.4.15a – Would the Project Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

As stated in Impact #3.4.14a(iv) the proposed Project would not induce a significant population growth or affect the City's park system. The City's General Plan indicates that the City is continuing to maintain its parkland dedication standard of five acres of park land per 1,000 residents. There would be no increase to the use of existing parks or the need to construct or expand existing recreational facilities.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.15b – Would the Project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The Project does not require the construction of any new recreational facilities. The proposed project would comply with the goals, policies, and implementation measures of the General Plan. Therefore, it would not generate an adverse physical effect on the environment.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

3.4.16 - TRANSPORTATION AND TRAFFIC

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e.	Result in inadequate emergency access?	☐	☐	☒	☐
f.	Conflict with adopted policies, plans, or Programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☒	☐	☐

Discussion

Potential transportation and circulation impacts that may result from the proposed Project primary involves determining whether a net change would occur in traffic generated by daily vehicle trips related to construction and operation of the Project site.

A Traffic Study was prepared for this Project (JLB Traffic Engineering, Inc, 2018, Appendix C). The Traffic Study was prepared using trip generation and design hour volumes calculated using the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition as well as data provided in the Project description.

The following traffic scenarios were analyzed in the Traffic Study:

- Existing Conditions (2018);
- Existing plus Project Phase 1
- Existing plus Project Buildout;
- Cumulative Year 2040 plus Project (2040); and
- Cumulative 2040 plus Project plus Partial L-9 Interchange (2040).

Hanford-Armona Road is an existing east-west two-lane arterial adjacent to the proposed Project. In this area, Hanford-Armona Road extends through the City of Lemoore's Sphere of Influence (SOI). It's a two-to three-lane arterial divided by a two-way left turn lane between Apricot Avenue and Lemoore Avenue, a four-lane undivided arterial between Lemoore Avenue and Cinnamon Drive, and a two-lane undivided arterial east of Cinnamon Drive. The City of Lemoore 2030 General Plan designates Hanford-Armona Road as a four-lane arterial between College Drive and Cinnamon Drive.

State Route (SR) 41 is an existing north-south two-to four-lane conventional highway adjacent to the proposed Project. State Route 41 serves as the principal connection to various metropolitan areas within the Central San Joaquin Valley and the California Central Coast. In this area, State Route 41 connects to Hanford-Armona Road.

19th Avenue is an existing north-south two-lane arterial divided by a two-way left-turn lane in the vicinity of the proposed Project. In this area, 19th Avenue extends south of Hanford-Armona road through the City of Lemoore's SOI. 19th Avenue is a two-lane divided arterial between Hanford-Armona Road and Silverado Drive, a four-lane arterial between Silverado Drive and Iona Avenue, and a two-land undivided arterial south of Iona Avenue through the City of Lemoore's SOI. The City of Lemoore 2030 General Plan plans to extend 19th Avenue north of Hanford-Armona Road as a two-lane collector and designates 19th Avenue as a four-lane arterial between Hanford-Armona Road and Idaho Avenue.

Cinnamon Drive is an existing east-west two-lane divided collector in the vicinity of the proposed Project. In this area, Cinnamon Drive extends east of its connection to 19th ½ Avenue and changes orientation to intersect Hanford-Armona Road. Cinnamon Drive is a two-lane collector divided by a two-way left-turn lane between 19 ½ Avenue and Lemoore Avenue and a two-lane undivided collector east of Lemoore Avenue and south of Hanford-

Armona Road. The City of Lemoore 2030 General Plan designates Cinnamon Drive as a four-lane collector between 19 ½ and Lemoore Avenue.

Impact #3.4.16a – Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The City's transportation policies and requirements are incorporated in its General Plan. The only such policy which is affected by this Project is one requiring that no Level of Service violations be engendered by a project. Per the City's Circulation Element of the City of Lemoore 2030 General Plan Update (City of Lemoore, 2008), the "City of Lemoore does not currently have any adopted level of service (LOS) standard. However, recent traffic studies have used level of service D as the standard for evaluating project impacts at intersections." A LOS of D is characterized by congestion with average vehicle speeds decreasing below the user's desired level for two and four lane roads.

Caltrans has a target LOS threshold of C, which is what the traffic study used as the basis of its analysis. Phase 1 of the proposed Project (residential development only) is estimated to generate a maximum of 1,288 daily trips, 81 AM peak hour trips and 99 PM peak hour trips. Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to continue operating below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing measures of effectiveness (MOEs) that would need to be maintained. Phase 1 of the Project is projected to add a maximum of 3.3 and 1.1 seconds of average delay during the AM and PM peaks respectively. Also, the addition of an average delay of less than five (5) seconds is often not considered significant impact. Therefore, since the Phase 1 of the Project maintains the existing measures of effectiveness and it adds less than five (5) seconds of delay to existing operations, this impact would not be considered significant.

At project buildout (both residential and commercial), the proposed Project is estimated to generate a maximum of 6,775 daily trips, 471 AM peak hour trips and 488 PM peak hour trips. Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to operate below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained.

Kings Area Rural Transit (KART) operates intercity and intracity bus service in Lemoore. Currently Route 30 operates westbound on Hanford-Armona Road and then turns south on 19th Avenue prior to reaching the site. The City General Plan envisions bus service to future neighborhood shopping centers such as the proposed future development at the Project site.

MITIGATION MEASURE(S)

MM TRA-1: Prior to the first development of the commercially zoned site, the Project shall coordinate with Kings Area Rural Transit (KART) to determine the best location for the placement of a bus turnout along the Project's frontage to Hanford-Armona Road.

MM TRA-2: Prior to the first development of the commercially zoned site, the full build-out of the south side of Hanford-Armona Road shall be completed. At the corner of State Route 41 and Hanford-Armona Road, a westbound left-turn lane shall be added, the westbound left-through-right lane shall be modified to a through lane, a westbound right-turn lane shall be added, and the traffic signal shall be modified to accommodate the added lanes while maintaining the east-west split phasing.

LEVEL OF SIGNIFICANCE

Impact would be *less than significant with mitigation incorporated.*

Impact #3.4.16b – Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Please see Impact #3.4.16a above. With the mitigation measures listed in Impact #3.4.16a, the impacts to the level of service standards would be mitigated.

MITIGATION MEASURE(S)

Implement MM TRA-1 and MM TRA-2.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.16c – Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The Project would not result in a change in air traffic patterns, levels, or changes in location. The Project does not propose to construct tall structures or buildings that could impact air traffic patterns. The airports in the general vicinity of the Project will not be affected. The Project is located within the Military Influence Area (MIA) of the Naval Air Station (NAS) Lemoore. Therefore, according to the NAS Lemoore Master Plan 2030, "development within the MIA should receive special consideration by the overseeing planning agency and an extra level of coordination with NAS Lemoore to ensure compatibility with the mission and operations". According to the NAS Lemoore Joint Land Use Study, the Project site is outside all of the zones that limit land use due to the proximity.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.16d – Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project would not introduce new curves and/or hazardous intersections into the Project vicinity. All roads surrounding the Project sites are straight and set in a grid pattern. No new design or features would be introduced that would result in transportation-related hazards or safety concerns. During construction at the proposed Project site, construction-related delivery trucks would be present. However, these trucks would be traveling along the existing and proposed local roadways and would not interfere with access surrounding the site. Coupled with this, once construction is completed, trucks would cease to access the site with the exception of periodic deliveries and operational maintenance. The proposed Project would not result in an increase in hazards due to a design feature or incompatible use.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.16e – Would the Project result in inadequate emergency access?

The California Fire Code establishes standards by which emergency access may be determined. The proposed Project would have to provide adequate unobstructed space for fire trucks to turn around. The proposed Project site would have adequate internal circulation capacity including entrance and exit routes to provide adequate unobstructed space for fire trucks and other emergency vehicles to gain access and to turn around.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.16f – Would the Project conflict with adopted policies, plans, or Programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Mitigation Measures MM TRA-1 and TRA-2 would prevent any conflicts with the *City of Lemoore Bicycle Plan* or the Circulation Chapter (Chapter 4) of the *City of Lemoore 2030 General Plan.* Implementation of these mitigation measures would require both a Class II bike lane along the Project frontage to Hanford-Armona Road and coordination with Kings Area Rural Transit (KART) to determine the best location for the placement of a bus turnout along the Project's frontage to Hanford-Armona Road.

MITIGATION MEASURE(S)

Implement MM TRA-1 and MM TRA-2.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant with mitigation incorporated.***

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

Discussion

Impact #3.4.17a(i) – Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

Please see Impacts #3.4.5a and #3.4.5b, above. With implementation of Mitigation Measures MM CUL-2 through MM CUL-3, and MM CUL-5 the Project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources.

MITIGATION MEASURE(S)

Implement MM CUL-2 and MM CUL-3, and MM CUL-5.

LEVEL OF SIGNIFICANCE

Impact would be *less than significant with mitigation incorporated.*

Impact #3.14.17a(ii) - Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Please see Impacts #3.4.5a #3.4.5b, above. With implementation of Mitigation Measures MM CUL-2 and MM CUL-3, and MM CUL-6, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource that is a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1.

MITIGATION MEASURE(S)

Implement MM CUL-2 and MM CUL-3, and MM CUL-5.

LEVEL OF SIGNIFICANCE

Impact would be *less than significant with mitigation incorporated.*

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.18 - UTILITIES AND SERVICE SYSTEMS				
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	☐	☐	☒	☐
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion:

Impact #3.4.18a – Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The Project would not necessitate the Regional Water Quality Control Board (RWQCB) to expand their facilities because of the Project. The Project would not exceed wastewater treatment requirements of the applicable RWQCB.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.18b – Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects:

The Project will connect to the existing sewer system. The generation of wastewater and water would be consistent with the City requirements. The proposed increase in water and wastewater usage at the Project site is not anticipated to require the construction of new water or wastewater treatment facilities or the expansion of existing facilities. Impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.18c – Would the Project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The Project will connect to the existing storm drain line on Hanford-Armona Avenue, north of the site. The site engineering and design plans for the proposed Project would be required to implement BMPs, comply with requirements of the City Building and Development Standards and compliance with the NPDES General Permit. Implementation of MM HYD-1 and MM HAZ-1 would reduce impacts on to less than significant

Therefore, Project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities.

MITIGATION MEASURE(S)

Implement MM HYD-1

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant* Impact #3.4.18d – Would the Project have sufficient water supplies available to serve the Project from existing entitlements and resources, or would new or expanded entitlements be needed?

The Project will obtain water from the City of Lemoore. The existing groundwater resources are available and adequate to serve the site. The impact would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.18e – Would the Project result in a determination by the wastewater treatment provider that serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

The Project will connect to the existing City sewer system. The generation of wastewater and water would be consistent with the City requirements. The proposed increase in water and wastewater usage at the Project site is not anticipated to require the construction of new water or wastewater treatment facilities or the expansion of existing facilities. Impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.18f – Would the Project be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?

The City's solid waste disposal program has capacity for, or are planned to maintain capacity for, community growth in accord with the adopted General Plan. As this Project is in accordance with the General Plan, the impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.18g – Would the Project comply with federal, state, and local statutes and regulations related to solid waste?

The Project is subject to the solid disposal ordinance of the City of Lemoore as well as the rules of the contracted waste franchise. The Project is also subject to Title 4- Chapter 1 of the Lemoore Municipal Code that regulates all solid waste activities from disposal, sorting, and recycling of materials. The Lemoore Refuse Department would provide refuse, recycling and green waste collection services. Refuse service fees have been established and would be charged by the City when services are requested.

According to CalRecycle, the implementation of the local requirements has led to Kings County meeting their required diversion and disposal targets. Therefore, the implementation and compliance with the local regulations would lead to a less-than-significant impact for the Project (Cal Recycle, 2017)

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
3.4.19 - 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c.	Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion:

Impact #3.4.19a – 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

As evaluated in this IS/MND, the proposed Project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation measures have been included to lessen the significance of

potential impacts. Similar mitigation measures would be expected of other projects in the surrounding area, most of which share a similar cultural paleontological and biological resources. Consequently, the incremental effects of the proposed Project, after mitigation, would not contribute to an adverse cumulative impact on these resources. Therefore, the Project would have a less-than-significant impact with mitigation incorporated.

MITIGATION MEASURE(S)

Implement MM BIO-1 through MM BIO-5 MM CUL-1 thru MM CUL-5,

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant with mitigation incorporated.***

Impact #3.4.19b - Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described in the impact analyses in Sections 3.4.1 through 3.4.18 of this IS/MND, any potentially significant impacts of the proposed Project would be reduced to a less-than-significant level following incorporation of the mitigation measures listed in *Appendix A – Mitigation Monitoring and Reporting Program*. All planned projects in the vicinity of the proposed Project would be subject to review in separate environmental documents and required to conform to the City of Lemoore General Plan, zoning, mitigate for project-specific impacts, and provide appropriate engineering to ensure the development meets are applicable federal, State and local regulations and codes. As currently designed, and with compliance of the recommended mitigation measures, the proposed Project would not contribute to a cumulative impact. Thus, the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than cumulatively considerable.

MITIGATION MEASURE(S)

Implement MM AQ-1 through AQ-3. MM BIO-1 through MM BIO-5 MM CUL-1 thru MM CUL-5, MM HYD-1, MM HYD-2 and MM TRA-1 and MM TRA-2. Level of Significance

Impacts would be ***less than significant with mitigation incorporated.***

Impact #3.4.19c - Does the Project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

All of the Project's impacts, both direct and indirect, that are attributable to the Project were identified and mitigated to a less-than-significant level. As shown in *Appendix A - Mitigation Monitoring and Reporting Program*, the Project proponent has agreed to implement mitigation substantially reducing or eliminating impacts of the Project. All planned projects in the vicinity of the proposed Project would be subject to review in separate environmental documents and required to conform to the City of Lemoore General Plan, zoning, mitigate for

project-specific impacts, and provide appropriate engineering to ensure the development meets are applicable federal, State and local regulations and codes. Thus, the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than cumulatively considerable. Therefore, the proposed Project would not either directly or indirectly cause substantial adverse effects on human beings because all potentially adverse direct impacts of the proposed Project are identified as having no impact, less than significant impact, or less-than-significant impact with mitigation incorporated.

MITIGATION MEASURE(S)

Implement MM AQ-1 through AQ-3. MM BIO-1 through MM BIO-5 MM CUL-1 thru MM CUL-5, MM HYD-1, MM HYD-2 and MM TRA-1 and MM TRA-2.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant with mitigation incorporated***.

SECTION 4 - REFERENCES

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APPENDIX A

AIR QUALITY IMPACT ANALYSIS

Mitchell Air Quality Consulting

Air Quality Analysis Report
Hanford-Armona Road Mixed Use Development
Lemoore, California

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August 21, 2018

SECTION 1: AIR QUALITY ANALYSIS

1.1: Project Description

The project consists the proposed Mixed-Use Development (Project) located on the southeast corner of State Route 41 and Hanford-Armona Road in the City of Lemoore. The Project proposes to develop a 16.19-acre site with 176 multi-family residential units (apartments), a gasoline/service station (8 fueling positions) with convenience market, a 90-room hotel, 6,000 square feet of fast-food restaurants with drive-through window, and 7,040 square feet of general shopping center uses. The project is required to undergo a General Plan Amendment and Zoning Map Amendment through the City of Lemoore.

1.2: Project Analysis

The City of Lemoore has required the preparation of an air quality analysis to determine if the project would exceed San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds of significance for criteria pollutant emissions. This analysis is based on the Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI).

The District's annual emission significance thresholds used for the project define the substantial contribution for both operational and construction emissions as follows:

- 100 tons per year CO
- 10 tons per year NO_X
- 10 tons per year ROG
- 27 tons per year SO_X
- 15 tons per year PM_{10}
- 15 tons per year $PM_{2.5}$

The SJVAPCD's GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after compliance with Rule 9510 and implementation of all enforceable mitigation measures would require preparation of an ambient air quality analysis. The criteria pollutants of concern for localized impact in the San Joaquin Valley Air Basin are PM_{10}, $PM_{2.5}$, NO_X, and CO. There is no localized emission standard for ROG and most types of ROG are not toxic and have no health-based standard; however, ROG was included for informational purposes only (SJVAPCD 2015).

The SJVAPCD GAMAQI includes screening criteria for potential localized CO impacts that are related to traffic congestion. The SJVAPCD has established that if neither of the following criteria are met at all intersections affected by the project, there is no potential to create a violation of the CO standard:

- A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or
- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project vicinity.

1.3: Modeling Assumptions and Methodology

Project modeling quantifies emissions that will occur during construction and operation of the project. The modeling is based on the size of the project, the timing of construction and operation, the type of land use, trip generation, energy consumption, and other factors.

The project consists of areas devoted to apartments and commercial uses. The apartment phase includes the following:

Project Lot Size – 10.4 acres

Apartment Units: 176

Average Density: 17 DU/Acre

Construction Schedule: May 2019 to March 2020

First Occupancy: 2020

The commercial portion of the project includes the following:

Parcel A: 1.63 Acres

Parcel B: 1.73 Acres

Parcel C 1.21 Acres

Total: 4.57 Acres

Parcel A Uses:

Shop A: 3,500 sf Convenience Store

Fuel Canopy: 4 Pump/8 Position

Pad A: 3,000 sf Fast Food

Parcel B Uses:

Hotel: 90 Room

Building Footprint: 14,000 sf (43,500 sf in 3 floors)

Parcel C Uses:

Shop B: 7,040 sf Retail Shopping Center

Pad B: 3,000 sf Fast Food

Construction Schedule: April 2020 – March 2021

Project Operation Year: 2021

The actual construction start dates and operational dates will vary depending on market demand.

The analysis addresses criteria pollutant emissions. The analysis assesses the impacts of project construction and operational criteria pollutant using the CalEEMod 2016.3.2 emission model.

The following air pollutants are assessed in this analysis:

- Reactive organic gases (ROG)
- Nitrogen oxides (NO_x)
- Carbon monoxide (CO)
- Sulfur dioxide (SO_2)
- Particulate matter less than 10 microns in diameter (PM_{10})
- Particulate matter less than 2.5 microns in diameter ($PM_{2.5}$)

The project does not include sources that will emit substantial quantities of sulfur dioxide; therefore, no further analysis of this pollutant is required. However, the modeling results in Appendix A include all the pollutants listed above for full disclosure.

Construction Modeling Assumptions

The analysis uses default modeling assumptions in CalEEMod 2016.3.2 for diesel construction equipment. The schedule and days per phase and equipment use assumptions are based on CalEEMod defaults. Detailed assumptions are provided in Appendix A modeling results.

Operational Modeling Assumptions

The operational CalEEMod analysis uses default assumptions for Kings County except for truck trip generation rates. CalEEMod default fleet mix modeling assumptions overstate the percentage of truck trips for residential and retail uses. The analysis uses survey data collected for San Joaquin Valley apartment and shopping center projects and the National Cooperative Highway Research Program Synthesis 298 Truck Trip Generation Data to provide project specific truck fleet mixes to more accurately estimate truck related emissions (NCHRP 2001).

Mobile Sources

The analysis uses default trip generation rates from CalEEMod 2016.3.2 which use ITE 9th Edition rates. CalEEMod provides rates for weekday, Saturday, and Sunday which were not available in the traffic study.

Architectural Coatings

The CalEEMod default value for architectural coatings for flat and non-flat paints is 150 grams per liter (g/l). SJVAPCD Rule 4601 – Architectural Coatings has lower limits in place for these paints. Effective January 1, 2012, flat coatings have a limit of 50 g/l. Non-flat coatings currently have a limit of 100 g/l. Approximately 70 percent of interior and exterior coatings used for residential and non-residential purposes are flat so an average of 65 g/l was used in the analysis.

1.4: Regional Air Quality Impact Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable increase of that pollutant and result in a significant cumulative impact.

The San Joaquin Valley Air Basin is in nonattainment for PM_{10}, $PM_{2.5}$, and ozone. Therefore, if the project exceeds the regional thresholds for PM_{10}, or $PM_{2.5}$, then it contributes to a cumulatively considerable impact for those pollutants. If the project exceeds the regional threshold for the ozone precursors NO_X or ROG, then it follows that the project would contribute to a cumulatively considerable impact for ozone.

Regional emissions include those generated from all on-site and off-site activities. Regional significance thresholds have been established by the SJVAPCD because emissions from projects in the Air Basin can potentially contribute to the existing emission burden and possibly affect the attainment and maintenance of ambient air quality standards. Projects within the Air Basin region with regional emissions in excess of any of the thresholds presented previously are considered to have a significant regional air quality impact.

1.4.1 - Construction Emission Analysis

Construction of the multi-family residential component is expected to begin in May 2019 with occupancy expected as early as March 2020. The commercial portion of the project is expected to start construction after completion of the multi-family residential apartments and would not overlap with the commercial phase. The assumed start date for the commercial component is April 2020. All commercial buildings were assumed to start construction at the same time as a conservative assumption; however, actual start dates are likely to vary. The entire project is assumed to be operational by 2021. The SJVAPCD considers construction and operational emissions separately when making significance determinations.

Construction emissions associated with the project are shown for the years 2019, 2020, and 2021 in Table 1. The emissions from each calendar year were compared with the significance thresholds for each pollutant. For assumptions in estimating the emissions, please refer to Section 1.3, Modeling Assumptions and Methodologies and Appendix A.

The primary source of ROG emissions during construction is architectural coatings. The primary source of NO_x and $PM_{2.5}$ is off-road diesel construction equipment and on-road diesel emissions during hauling activities. The primary source of PM_{10} is from site preparation and grading activities. The highest construction emissions would occur in 2020 when the construction activities for the commercial components of the project are assumed to begin.

As shown in Table 1, the emissions are below the significance thresholds in each construction year. Therefore, the emissions would be less than significant on a project basis.

Table 1: Construction Air Pollutant Emissions (Annual)

Year	Emissions (tons per year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction 2019	0.34	2.94	2.38	0.34	0.21
Construction 2020	1.68	7.33	6.57	0.61	0.42
Construction 2021	0.66	1.76	1.59	0.12	0.09
Highest Construction Emissions in Any Year	**1.68**	**7.33**	**6.57**	**0.61**	**0.42**

Table 1 (cont.): Construction Air Pollutant Emissions (Annual)

Year	Emissions (pounds per day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Screening threshold	10	10	100	15	15
Exceed SJVAPCD threshold?	No	No	No	No	No

Notes:
NO_X = nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter
ROG = reactive organic gases
Source: CalEEMod output (Appendix A).

1.4.2 - Operational Emissions Analysis

Operational emissions occur over the lifetime of the project and are from two main sources: area sources such as natural gas combustion for space and water heating and motor vehicles, or mobile sources. Operational emissions were modeled using CalEEMod 2016.3.2 and are presented in Table 2. The results of the analysis show that emissions are below the annual emission thresholds for each pollutant. Therefore, the project's operational emissions would be less than significant.

Table 2: Operational Air Pollutant Emissions at Buildout

Source	Emissions (tons per year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Residential- Apartments (176 units)	1.18	0.75	5.90	1.18	0.33
Gas Station and Convenience Market (8 fueling position)	0.41	0.35	2.34	0.34	0.09
Fast Food Restaurants (2@3,000 sf ea.)	0.73	0.69	5.35	1.00	0.28
Hotel (90 Room)	0.76	0.42	1.99	0.48	0.14
Retail Shopping (7,040 sf)	0.10	0.10	0.66	0.04	0.04
Total Project Emissions	**3.18**	**2.31**	**16.23**	**3.04**	**0.88**
Significance threshold	10	10	100	15	15
Exceed threshold—significant impact?	No	No	No	No	No

Notes:
ROG = reactive organic gases NO_X = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter
Area source emissions include emissions from natural gas, landscape, and painting.
Source: CalEEMod output (Appendix A).

1.4.3 - Impact Summary

The project would not exceed SJVAPCD significance thresholds for regional criteria pollutant emissions during construction and operation and therefore would have a less than significant impact with regard to this criterion.

1.5: Localized Emission Analysis

The SJVAPCD's GAMAQI includes screening thresholds for identifying projects that would need detailed analysis for localized impacts. Projects with emissions below these thresholds are considered to have less than significant impacts for localized criteria pollutant emissions. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after compliance with Rule 9510 and implementation of all enforceable mitigation measures would require preparation of an ambient air quality analysis to determine if the emissions would cause or contribute to a violation of any ambient air quality standards. The criteria pollutants of concern for localized impact in the San Joaquin Valley Air Basin are PM_{10}, $PM_{2.5}$, NO_X, and CO. There is no localized emission standard for ROG and most types of ROG are not toxic and have no health-based standard; however, ROG was included for informational purposes only.

1.5.1 - Maximum Daily Construction Emissions

The highest daily emissions during construction for ROG would occur during application of architectural coatings. Highest NO_X and CO emissions occur during site grading activities, while highest PM_{10}, and $PM_{2.5}$ occur during site preparation activities.

The results of the analysis are summarized in Table 3. As shown in Table 3, unmitigated emissions during construction do not exceed the SJVAPCD localized emission screening thresholds and would therefore have a less than significant impact from localized criteria pollutant emissions. The results include credit for compliance with fugitive dust controls required by SJVAPCD Regulation VIII.

Table 3: Maximum Daily Air Pollutant Emissions during Construction

Maximum Daily Emissions	Maximum On-site Emissions (pounds per day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
2019	4.85	54.59	34.23	20.61	12.17
2020	16.34	67.31	39.48	73.33	12.18
2021	89.07	49.57	16.57	2.82	2.62
Highest Emissions in Any Year	***89.07***	***67.31***	***39.48***	***73.33***	***12.18***
Screening Thresholds (pounds/day)	100	100	100	100	100
Exceeds Threshold (Yes or No)	No	No	No	No	No

Notes:
NO_X = nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter
Summer emissions were used for all pollutants since they differ minimally from winter emissions.
Source: Modeling Results (Appendix A).

1.5.2 - Maximum Daily Operational Emissions

An analysis of maximum daily emissions during operation was conducted to determine if emissions would exceed the 100 pounds per day threshold for any pollutant of concern. The maximum daily operational emissions were assessed assuming full operations in the year 2021. Operational emissions include those generated on-site by area sources such as natural gas combustion and

landscape maintenance, and off-site by motor vehicles accessing the project. Most motor vehicle emissions would occur distant from the site and would not contribute to a violation of ambient air quality standards at the project site; therefore, operational emissions only reflect the emissions within one half mile of the project site. The results of the analysis are presented in Table 4. The project would not exceed SJVAPCD daily operational screening thresholds and would result in less than significant localized impacts.

Table 4: Maximum Daily Air Pollutant Emissions during Operations

Maximum Daily Emissions per Source Category and Phase	Emissions (pounds per day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Residential	4.87	1.03	16.91	0.62	0.26
Gas Station/Convenience Market	0.36	0.16	1.07	0.16	0.04
Fast Food	0.49	0.34	2.88	0.57	0.17
Hotel	3.22	0.98	1.55	0.26	0.12
Retail Shopping Center	0.47	7.37	1.09	0.18	0.06
Total	**9.40**	**9.89**	**23.50**	**1.78**	**0.66**
Screening threshold	100	100	100	100	100
Exceed screening threshold?	No	No	No	No	No

Notes:
NO_X = nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter
N/A = Not applicable
Analysis used summer emissions for all pollutants since they differ minimally from winter emissions. There is no ambient air quality standard for ROG.
Mobile emissions reduced to count only localized emissions at the site using a 0.5-mile trip length
Source: CalEEMod output (Appendix A).

1.5.3 - Carbon Monoxide Hot Spots

Projects that cause or contribute to an exceedance of the 1-hour federal emission standard for CO of 35 ppm or the State 1-hour 20 ppm standard would result in a significant impact from CO emissions. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The project would result in an increase in vehicles trips during construction and operational activities and an increase in congestion at intersections impacted by the project. The SJVAPCD CO hotspot screening criteria state that a project where the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F would require detailed modeling to determine significance.

The project traffic impact analysis indicates that under the existing plus project buildout scenario the State Route 41 and Hanford/Armona Road intersection would fall to LOS E, but would improve to LOS C with mitigation applied. The cumulative year 2040 cumulative plus project scenario indicated that the State Route 41 and Hanford/Armona Road intersection would fall to LOS F, but would improve to LOS C with mitigation (JLB 2018). Therefore, the project would not exceed the SJVAPCD screening criteria for CO hotspots. It should be noted that CO concentrations have declined to the point where

the entire state has attained the CO standards and it is no longer monitored in this area. Therefore, the project would not significantly contribute to an exceedance of state or federal CO standards.

1.5.4 - Toxic Air Contaminant Emissions

The ARB Air Quality and Land Use Handbook provides guidance for siting sensitive receptors near sources of TAC emissions. The Handbook contains recommendations that will "help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution" (ARB 2005), including recommendations for distances between sensitive receptors and certain land uses. The project includes residences that would be considered sensitive receptor locations. The Handbook recommends locating gasoline fueling stations at least 50 feet from the nearest residence and 300 feet for high volume gasoline stations exceeding 3.6 million gallons per year. The project only has 8 fueling positions compared to high volume stations that often have 16 or more fueling positions. The nearest residences are approximately 238 feet from the fueling canopy. Therefore, the fueling station would not result in significant TAC impacts.

1.5.5 - Impact Summary

The project would not exceed SJVAPCD localized significance thresholds for criteria pollutants and does not include sources that would produce substantial TAC emissions based on ARB siting criteria and is therefore, less than significant for this criterion.

References

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Attachments

Appendix A – Modeling Results

- **Modeling Assumptions**
- **Emission Summary**
- **CalEEMod Modeling Output**

Appendix A

Modeling Assumptions and Results

Modeling Assumptions

Lemoore Mixed Use Project

Apartment Phase Information
Project Lot Size – 10.4 acres
Apartment Units: 176
Average Density: 17 DU/Acre
Construction Schedule: May 2019 to March 2020
First Occupancy: 2020

Lot Sizes

Parcel A:	1.63 Acres
Parcel B:	1.73 Acres
Parcel C	1.21 Acres
Total:	**4.57 Acres**

Parcel A Uses:

Shop A: Gas/Conv	3,500 sf
Fuel Canopy:	8 Position
Pad A:	3,000 sf

Parcel B Uses:

Hotel:	90 Room	1.73
Hotel SF Total all Floors	14,000 sf	0.321396
	43500	1.408604

Parcel C Uses:		**Acreage**	**Acreage Parking**
Shop B:	7,040 sf	0.162	1.048
Pad B:	3,000 sf	0.069	0.818
Construction Schedule:	April 2020 – 2021		
Project Operation Year:	2021		

Truck Trip Generation Rates

Truck Trip Generation and Fleet Mix Allocation

Fleet Mix Allocation - Multifamily Residential

Survey Data for Truck Trip Generation Rate for Apartments

	LHD-1	LHD-2	MHD	HHD
Avg Trips/Day/Unit	0.0167	0.0083	0.0016	0.0028
Units	176			
Project Trips/Day	**2.9364**	**1.4609**	**0.2807**	**0.4984**

Land Use Assumptions

LandUseType	LandUseSubTy	LandUseUnitA	LandUseSizeMetric
Residential	Low rise apartr	176	Units

ITE 9th Edition/CalEEMod

Project Trip Generation

VehicleTripsLandUseSubTyp	VehicleTripsL	WD_TR	ST_TR	SU_TR	Daily Avg	LU SF	Trip Gen	LHD1 Frac	LHD1 Trip	LHD2 Frac	LHD2 Trips	MHD Frac	MHD Trips	HHD Frac	HHD Trips
Residential	Apartments	6.59	7.16	6.07	6.60	176	1161.097143	0.02186	25.4	0.0048	0.8425	0.012229	14.2	0.159772	185.5
Total Trips		1159.84					1161.097143		25.4				14.2		185.5

						LHD1 Frac	LHD2 Frac	MHD Frac	HHD Frac	Diff to Allocate
Adjusted Fleet Mix for No HDT Trucks	**LDA**	**LDT1**	**LDT2**	**Total**	Project Est	**0.002529**	**0.00125819**	**0.000242**	**0.000429**	0.004458
Default Fleet Mix	0.487262	0.029057	0.146825	0.663144	Default Frac	0.02186	0.004787	0.012229	0.159772	0.198648
Adjusted Fleet Mix	0.629948	0.037566	0.189820	0.857334	Allocation Fraction					**0.194190**
				0.194190						

2020 CalEEMod Default Fleet Mix for Kings County

	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
Default Fleet Mix	FleetMix	0.487262	0.029057	0.146825	0.126841	0.02186	0.004787	0.012229	0.159772	0.001758	0.001914	0.005918	0.000991	0.000785	0.999999
Revised Fleet Mix		**0.629948**	**0.037566**	**0.189820**	0.126841	**0.002529**	**0.001258185**	**0.000242**	**0.000429**	0.001758	0.001914	0.005918	0.000991	0.000785	0.999999

Fleet Mix Allocation - Hotel

Land Use Assumptions

LandUseType	LandUseSubTy	LandUseUnitA	LandUseSizeMetric
Recreation	Hotel	90	Rooms

ITE 9th Edition/CalEEMod

Project Trip Generation

VehicleTripsLandUseSubTyp	VehicleTripsL	WD_TR	ST_TR	SU_TR	Daily Avg	LU SF	Trip Gen	LHD1 Frac	LHD1 Trip	LHD2 Frac	LHD2 Trips	MHD Frac	MHD Trips	HHD Frac	HHD Trips
Commercial	Hotel	8.17	8.19	5.95	7.86	90	707.0142857	0.020115	14.2	0.0046	0.4118	0.012018	8.5	0.162105	114.6
Total Trips		735.3					707.0142857		14.2				8.5		114.6

						LHD1 Frac	LHD2 Frac	MHD Frac	HHD Frac	Diff to Allocate
Adjusted Fleet Mix for No HDT Trucks	**LDA**	**LDT1**	**LDT2**	**Total**	Project Est	**0.0024247**	**0.00161646**	**0.000404**	**0.001212**	0.005658
Default Fleet Mix	0.493375	0.028385	0.147799	0.669559	Default Frac	0.020115	0.004575	0.012018	0.162105	0.198813
Adjusted Fleet Mix	0.635705	0.036574	0.190436	0.862714	Allocation Fraction					**0.193155**
				0.193155						

2021 CalEEMod Default Fleet Mix for SJVAPCD

	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
Default Fleet Mix	FleetMix	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735	1
Revised Fleet Mix		**0.635705**	**0.036574**	**0.190436**	0.120572	**0.002425**	**0.001616456**	**0.000404**	**0.001212**	0.001742	0.001833	0.005782	0.000964	0.000735	1

Hotel Truck Trip Estimate

	LHD1	LHD2	MHD	HHD	Total All Comm Trucks
Truck Trips/Room	**0.0190**	0.0127	0.0032	0.0095	
Truck Trips/Week	**12**	**8**	**2**	**6**	
Truck Trips/Day	1.7143	1.1429	0.2857	0.8571	4.0000
Trip Fraction	0.002425	0.001616	0.000404	0.001212	
Truck Deliveries by Purpose					
Linen/Laundry Truck	3				
Service Trucks	1	1			
Food Deliveries		1	1		
Beverage/Vending		1			
Refuse				2	
Other	2	1		1	
Total Trucks per Week	**6**	**4**	**1**	**3**	

Alternative Truck Trip Rate form NCHRP 287 Quick Response Freight Manual Final Report September 1996 Appendix D.

Boston MA Study	Hotel	4 Tire Comm Veh	6+ tire vehicles	All Comm Veh
	Trips/KSF	0.012	0.022	0.034
	Trips/KSF		0.04	
	Hotel Square F	43500		
	Truck Trips/Da	0.522	0.957	**1.479**
			1.74	

Fleet Mix Allocation - Retail

Shopping Center Truck Trips

	Sq. Ft.
Shopping Center	7,040

Riverpark Truck Trip Survey Results

	sq Ft	# of Deliveries per Week	LHD Van/Car (small)	MHD (Medium)	Semi (large)
Totals	468,460	386.50	97.00	212.00	78.50
Deliveries per day		55.21	13.86	30.29	11.21
RT Trips/Day		110.43	27.71	60.57	22.43
Trips/1,000 sf	468.46	0.236	**0.059**	**0.129**	**0.048**

	Week Day Trips/KSF	Saturday Trip/KSF	Sunday Trips/KSF	Daily Average
Strip Mall	44.32	42.04	20.43	40.58

Land Use Assumptions

LandUseType	LandUseSubTy	LandUseUnitA	LandUseSize	Metric	LHD1 Trips	LHD2 Trips	MHD Trips	HHD Trips
Retail	Strip Mall	7.04	KSF	Trips	0.21	0.21	0.91	0.34
				Trips/KSF	0.02958	0.02958	0.129299041	0.047877
ITE 9th Edition/CalEEMod				Divided LHD by 2 for LHD1 and LHD2				

Project Trip Generation

VehicleTripsLandUseSubTyp	VehicleTripsL	WD_TR	ST_TR	SU_TR	Daily Avg	LU SF	Trip Gen	LHD1 Frac	LHD1 Trip	LHD2 Frac	LHD2 Trips	MHD Frac	MHD Trips	HHD Frac	HHD Trips
Retail	Strip Mall	44.32	42.04	20.43	40.58	7.04	285.6932571	0.020115	5.7	0.0046	0.0322	0.012018	3.4	0.162105	46.3
Total Trips							285.6932571		5.7				3.4		46.3

Adjusted Fleet Mix for No HDT Trucks	LDA	LDT1	LDT2	Total
Default Fleet Mix	0.493375	0.028385	0.147799	0.669559
Adjusted Fleet Mix	0.635582	0.036567	0.190400	0.862548
				0.192989

	LHD1 Frac	LHD2 Frac	MHD Frac	HHD Frac	Diff to Allocate
Project Est	**0.00073**	**0.00073**	**0.00319**	**0.00118**	0.00582
Default Frac	0.020115	0.004575	0.012018	0.162105	0.198813
Allocation Fraction					**0.192989**

2021 CalEEMod Default Fleet Mix for Kings County

	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
Default Fleet Mix	FleetMix	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735	1
Revised Fleet Mix		**0.635582**	**0.036567**	**0.190400**	0.120572	**0.000729**	**0.00072891**	**0.003186**	**0.001180**	0.001742	0.001833	0.005782	0.000964	0.000735	1.000000

Fleet Mix Allocation - Fast Food Restaurants

Fast Food with Drive Through

Project Size in KSF	3
Two Pads 3,000 SF each	

Deliveries by Trip Purpose	**LHD1**	**LHD2**	**MHD**	**HHD**	**Totals**
Food Deliveries per Week	4	2	1	1	8
Beverage Provider			1		1
Service Trucks	1	1			2
Refuse Haulers				2	2
Total Deliveries Per Week	5	3	2	3	13
Total Trips per Week	10	6	4	6	26
Trips per Day	**1.4286**	**0.8571**	**0.5714**	**0.8571**	**3.7143**
Trips per KSF	**0.4762**	**0.2857**	**0.1905**	**0.2857**	**1.2381**

Alternative Using Fast Food Restaurant Truck Deliveries Riverpark Survey Data

Store	**sq Ft**	**# of Delive**	**LHD Van/Ca**	**MHD (Mediur**	**Semi (large)**
Five Guys Burgers	2400	7		5	2
Jamba Juice	1130	2		1	1
Panera Bread	4205	5	1	4	1
Rubio's Fresh Mex	2310	**7**	**1**	**2**	**4**
Starbucks I	1500	7.0		7.0000	
Starbucks II	2025	9.0	2	7.0	
Subway	1175	**3**	**1**	**2**	
Total Deliveries/M	**14745**	**40**	**5**	**28**	**8**
Deliveries/Day		5.7143	0.7143	4.0000	1.1429
RT Trips/Day		11.4286	1.4286	8.0000	2.2857
Trips/1,000 sf	14.7450	**0.7751**	**0.0969**	**0.5426**	**0.1550**

Alternative Rate from NCHRP

NCHRP Synthesis 298

	4-Tire Comm	**6-tire Comm**	**Total**
Restaurants (trips/ksf)	0.714	0.494	1.209

Used delivery by trip purpose as the most conservative assumption for trucks

Land Use Assumptions

LandUseType	**LandUseSubTy**	**LandUseUnitA**	**LandUseSizeMetric**	**LHD1 Trips**	**LHD2 Trips**	**MHD Trips**	**HHD Trips**
Recreation	Fast Food	6	KSF	0.48	0.29	0.19	0.29
			Trips	2.86	1.71	1.14	1.71

ITE 9th Edition/CalEEMod

Project Trip Generation

VehicleTripsLandUseSubTyp	**VehicleTripsL**	**WD_TR**	**ST_TR**	**SU_TR**	**Daily Avg**	**LU SF**	**Trip Gen**	**LHD1 Frac**	**LHD1 Trip**	**LHD2 Frac**	**LHD2 Trips**	**MHD Frac**	**MHD Trips**	**HHD Frac**	**HHD Trips**
Recreation	Fast Food	496.12	722.03	542.72	535.05	6	3210.3	0.020115	64.6	0.0046	0.0275	0.012018	38.6	0.162105	520.4
Total Trips							3210.3		64.6				38.6		520.4

Adjusted Fleet Mix for No HDT Trucks	**LDA**	**LDT1**	**LDT2**	**Total**
Default Fleet Mix	0.493375	0.028385	0.147799	0.669559
Adjusted Fleet Mix	0.638715	0.036747	0.191338	0.866800
				0.197241

	LHD1 Frac	**LHD2 Frac**	**MHD Frac**	**HHD Frac**	**Diff to Allocate**
Project Est	**0.00089**	**0.00053**	**0.00006**	**0.00009**	0.00157
Default Frac	0.020115	0.004575	0.012018	0.162105	0.198813
Allocation Fraction					**0.197241**

2021 CalEEMod Default Fleet Mix for Kings County

	EmissionType	**LDA**	**LDT1**	**LDT2**	**MDV**	**LHD1**	**LHD2**	**MHD**	**HHD**	**OBUS**	**UBUS**	**MCY**	**SBUS**	**MH**	
Default Fleet Mix	FleetMix	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735	1
Revised Fleet Mix		**0.638715**	**0.036747**	**0.191338**	0.120572	**0.00089**	**0.00053**	**0.000059**	**0.000089**	0.001742	0.001833	0.005782	0.000964	0.000735	1.000000

Fleet Mix Allocation - Gas Station Convenience Market

Fueling Station and Convenience Store

Fuel Tanker Deliveries				
Gallons/Month	300000		**Customers in Trucks**	
Gallons/Year	3,600,000		**LHD1 Trips/day**	**LHD2 Trips/Day**
Tanker Truck Capacity	9,000		64.58	14.69
Tanker Truck Deliveries/Yea	400			
Tanker Truck Deliveries/Day	1.10			
Tanker Trips/Day	2.19			

Convenience Store

Project Size in KSF/pump	3.5	4
Convenience market 3,500 sf		

Deliveries by Trip Purpose	**LHD1**	**LHD2**	**MHD**	**HHD**	**Totals**
Snacks/Dry Good	2	2	1	1	6
Soft Drinks			2		2
Alcoholic Beverages		2	2		4
Milk Products		1			1
Fuel Tanker Trucks				7.7	8
Service Trucks	1	1			2
Refuse Haulers				2	2
Total Deliveries Per Week	**3**	**6**	**5**	**10.6712**	**25**
Total Trips per Week	6	12	10	21.3425	49
Trips per Day	**0.8571**	**1.7143**	**1.4286**	**3.0489**	**7.0489**
Trips per Pump	**0.2143**	**0.4286**	**0.3571**	**0.7622**	**1.7622**

Assuming that LHD1 and LHD2 trucks could also be customers of the gas station/convenience market
No truck parking is provided so MHD and HHD would not be customers.

Alternative Rate from NCHRP

NCHRP Synthesis 298

	4-Tire Comm	6-tire Comm	Total
Retail Convenience (trips/ksf)		0.44	0.44

Land Use Assumptions

LandUseType	LandUseSubTy	LandUseUnitA	LandUseSizeMetric	LHD1 Trips	LHD2 Trips	MHD Trips	HHD Trips
Retail	Gas Station	4	Pump	0.21	0.43	0.36	0.76
			Trips	1.29	2.57	2.14	4.57

ITE 9th Edition/CalEEMod

Project Trip Generation

VehicleTripsLandUseSubTyp	VehicleTripsL	WD_TR	ST_TR	SU_TR	Daily Avg T	LU Pump	Trip Gen	LHD1 Frac	LHD1 Trip	LHD2 Frac	LHD2 Trips	MHD Frac	MHD Trips	HHD Frac	HHD Trips
Retail	Gas Station	542.6	204.47	166.88	440.62	4	1762.485714	0.020115	35.5	0.0046	0.0183	0.012018	21.2	0.162105	285.7
Total Trips							1762.485714		35.5				21.2		285.7

Adjusted Fleet Mix for No HDT Trucks	LDA	LDT1	LDT2	Total
Default Fleet Mix	0.493375	0.028385	0.147799	0.669559
Adjusted Fleet Mix	0.621212	0.035740	0.186095	0.843047
				0.173488

		LHD1 Frac	LHD2 Frac	MHD Frac	HHD Frac	Diff to Allocate
Project Est				**0.00020**	**0.00043**	0.00064
Default Frac				0.012018	0.162105	0.174123
Allocation Fraction						**0.173488**

2021 CalEEMod Default Fleet Mix for Kings County

	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
Default Fleet Mix	FleetMix	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735	1
Revised Fleet Mix		**0.621212**	**0.035740**	**0.186095**	0.120572	0.020115	0.004575	**0.000203**	**0.000432**	0.001742	0.001833	0.005782	0.000964	0.000735	1.000000

4 pumps provide 8 fueling positions.

Emission Summary

Emission Summary - Hanford Armona Rd Lemoore Mixed Use Project

Operations (Mitigated)

	Tons/Year					
	ROG	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Residential 2020	1.18	0.75	5.90	0.01	1.18	0.33
Gas Station and Convenience Market 2021	0.41	0.35	2.34	0.00	0.34	0.09
Fast Food Restaurants 2021	0.73	0.69	5.35	0.01	1.00	0.28
Hotel	0.76	0.42	1.99	0.01	0.48	0.14
Retail Shopping Center 2021	0.10	0.10	0.66	0.00	0.04	0.04
Total Operational Emissions	**3.18**	**2.31**	**16.23**	**0.03**	**3.04**	**0.88**

Construction Max Daily Summer		Pounds/Day					
Residential		**ROG**	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
	2019	4.85	54.59	34.23	0.06	20.61	12.17
	2020	71.95	21.86	0.22	0.043	2.3077	1.3816
Gas Station and Conv Mkt							
	2020	2.84	20.78	0.16	0.03	58.65	3.85
	2021	3.63	17.65	0.15	0.03	0.32	0.98
Fast Food Restuarants							
	2020	8.78	9.42	8.19	0.01	1.30	0.88
Hotel							
	2020	2.56	18.74	16.95	0.04	6.69	3.73
	2021	80.14	17.25	16.28	0.04	1.57	0.91
Retail Shopping							
	2020	2.17	18.37	14.18	0.03	6.69	3.73
	2021	5.30	14.68	0.14	0.03	0.92	0.73
Maximum Daily Emissions Combined All Runs							
	2019	**4.85**	**54.59**	**34.23**	**0.06**	**20.61**	**12.17**
	2020	**16.34**	**67.31**	**39.48**	**0.11**	**73.33**	**12.18**
	2021	**89.07**	**49.57**	**16.57**	**0.09**	**2.82**	**2.62**

Daily runs assume that all commercial phases will be constructed at the same time as a conservative assumptions.
Construction of residential and commercial would not overlap since the commercial starts after the residential is complete.

Residential Construction Annual Emissions

	Tons/Year					
	ROG	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Construction 2019	0.34	2.94	2.38	0.00	0.34	0.21
Construction 2020	0.93	1.73	1.71	0.00	0.18	0.11

Construction Commercial Component Annual Emissions

	Tons/Year					
	ROG	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Site Preparation and Grading 2020	**0.02**	**0.21**	**0.12**	**0.00**	**0.04**	**0.03**
Gas Station and Convenience Mkt						
Building Construction Offsite 2020	0.02	0.15	0.12	0.00	0.03	0.01
Building Construction Onsite 2020	0.19	1.41	1.26	0.00	0.08	0.07
Total for 2020	**0.21**	**1.56**	**1.38**	**0.00**	**0.11**	**0.08**
Building Construction Offsite 2021	0.00	0.01	0.00	0.00	0.00	0.00
Building Construction Onsite 2021	0.01	0.06	0.06	0.00	0.00	0.00
Paving Offsite 2021	0.00	0.00	0.00	0.00	0.00	0.00
Paving Onsite 2021	0.01	0.04	0.04	0.00	0.00	0.00
Architectural Coatings Offsite 2021	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coatings Onsite 2021	0.02	0.01	0.01	0.00	0.00	0.00
Total for 2021	**0.03**	**0.11**	**0.12**	**0.00**	**0.01**	**0.01**

	Tons/Year					
	ROG	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Fast Food Restaurants						
Building Construction Onsite 2020	0.04	0.44	0.37	0.00	0.03	0.02
Building Construction Offsite 2020	0.01	0.05	0.04	0.00	0.00	0.00
Paving Onsite 2020	0.00	0.02	0.02	0.00	0.00	0.00
Paving Offsite 2020	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coatings Onsite 2020	0.02	0.00	0.00	0.00	0.00	0.00
Architectural Coatings Offsite 2020	0.00	0.00	0.00	0.00	0.00	0.00
Total for 2020	**0.07**	**0.51**	**0.43**	**0.00**	**0.03**	**0.03**

	Tons/Year					
Hotel	**ROG**	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Building Construction Offsite 2020	0.05	0.38	0.32	0.00	0.08	0.02
Building Construction Onsite 2020	0.19	1.41	1.26	0.00	0.08	0.07
Total for 2020	**0.24**	**1.80**	**1.58**	**0.00**	**0.16**	**0.10**
Building Construction Offsite 2021	0.00	0.02	0.01	0.00	0.00	0.00
Building Construction Onsite 2021	0.01	0.06	0.06	0.00	0.00	0.00
Paving Offsite	0.00	0.00	0.00	0.00	0.00	0.00
Paving Onsite	0.01	0.04	0.04	0.00	0.00	0.00
Architectural Coatings Offsite	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coatings Onsite	0.40	0.01	0.01	0.00	0.00	0.00
Total for 2021	**0.42**	**0.12**	**0.13**	**0.00**	**0.01**	**0.01**

			Tons/Year			
Retail Shopping	**ROG**	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Building Construction Offsite 2020	0.01	0.11	0.09	0.00	0.02	0.01
Building Construction Onsite 2020	0.19	1.41	1.26	0.00	0.08	0.07
Total for 2020	**0.21**	**1.52**	**1.35**	**0.00**	**0.10**	**0.08**
Building Construction Offsite 2021	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction Onsite 2021	0.01	0.06	0.06	0.00	0.00	0.00
Paving Offsite	0.00	0.00	0.00	0.00	0.00	0.00
Paving Onsite	0.01	0.04	0.04	0.00	0.00	0.00
Architectural Coatings Offsite	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coatings Onsite	0.03	0.01	0.01	0.00	0.00	0.00
Total for 2021	**0.04**	**0.11**	**0.12**	**0.00**	**0.01**	**0.01**

Run assumes that Parcel A, B, and C would be site prepped and graded at one time.

Total Emissions from Residential and Commercial Phases

			Tons/Year			
	ROG	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Total 2019	0.34	2.94	2.38	0.00	0.34	0.21
Total 2020	1.68	7.33	6.57	0.01	0.61	0.42
Total 2021	0.66	1.76	1.59	0.00	0.12	0.09
Highest Emissions in Any Year	**1.68**	**7.33**	**7.33**	**0.01**	**0.61**	**0.42**

Operational Daily Emissions with all Mobile			Pounds/Day			
	ROG	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Residential	7.47	4.26	45.16	0.08	7.23	2.05
Gas Station/Convenience Market	3.54	2.25	15.52	0.03	2.31	0.63
Fast Food	7.12	4.96	41.99	0.09	8.00	2.19
Hotel	4.49	2.30	12.39	0.03	2.82	0.81
Retail Shopping Center	0.98	7.88	5.01	0.02	1.06	0.30
Total	**23.61**	**21.65**	**120.07**	**0.25**	**21.42**	**5.99**

Daily Mobile Source Emissions			Pounds/Day			
	ROG	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Residential	2.79	3.46	30.33	0.08	7.10	1.92
Gas Station/Convenience Market	3.42	2.24	15.51	0.03	2.31	0.63
Fast Food	7.12	4.96	41.99	0.09	7.97	2.16
Hotel	1.36	1.41	11.64	0.03	2.76	0.75
Retail Shopping Center	0.55	0.54	4.22	0.01	0.95	0.26
Total	**15.25**	**12.62**	**103.68**	**0.23**	**21.08**	**5.72**

Localized Fraction 0.5 mi/7.3mi 0.06849315

Daily Mobile within One Half Mile of Project			Pounds/Day			
	ROG	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Residential	0.19	0.24	2.08	0.01	0.49	0.13
Gas Station/Convenience Market	0.23	0.15	1.06	0.00	0.16	0.04
Fast Food	0.49	0.34	2.88	0.01	0.55	0.15
Hotel	0.09	0.10	0.80	0.00	0.19	0.05
Retail Shopping Center	0.04	0.04	0.29	0.00	0.06	0.02
Total	**1.04**	**0.86**	**7.10**	**0.02**	**1.44**	**0.39**
Mobile Emissions Difference	**14.21**	**11.75**	**96.58**	**0.21**	**19.63**	**5.33**

Daily Operational Emissions with Local Mobile	Pounds/Day					
	ROG	**NOX**	**CO**	**SO2**	**PM10**	**PM2.5**
Residential	4.87	1.03	16.91	0.01	0.62	0.26
Gas Station/Convenience Market	0.36	0.16	1.07	0.00	0.16	0.04
Fast Food	0.49	0.34	2.88	0.01	0.57	0.17
Hotel	3.22	0.98	1.55	0.01	0.26	0.12
Retail Shopping Center	0.47	7.37	1.09	0.01	0.18	0.06
Total	**9.40**	**9.89**	**23.50**	**0.04**	**1.78**	**0.66**

CalEEMod Output Multi-Family Residential Annual

Hanford-Armona Mixed Use Apartment 176 Units

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	176.00	Dwelling Unit	10.35	176,000.00	503

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Plan

Construction Phase -

Architectural Coating - Compliance with Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 2.2 miles to Downtown Lemoore

Area Mitigation - Comply with Rule 4601 Architectural Coatings

Fleet Mix - Apartment Fleet Mix based on survey of SJV apartments

Hanford-Armona Mixed Use Apartment 176 Units - Kings County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	65.00
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	65
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	150	65
tblFleetMix	HHD	0.16	4.2900e-004
tblFleetMix	LDA	0.49	0.63
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LHD1	0.02	2.5900e-003
tblFleetMix	LHD2	4.7870e-003	1.2580e-003
tblFleetMix	MHD	0.01	2.4200e-004
tblLandUse	LotAcreage	11.00	10.35
tblWoodstoves	NumberCatalytic	10.35	0.00
tblWoodstoves	NumberNoncatalytic	10.35	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3361	2.9385	2.3809	4.4700e-003	0.3136	0.1509	0.4645	0.1286	0.1409	0.2695	0.0000	399.0609	399.0609	0.0846	0.0000	401.1753
2020	0.9309	1.7264	1.7109	3.2900e-003	0.0852	0.0899	0.1751	0.0229	0.0844	0.1073	0.0000	289.8056	289.8056	0.0536	0.0000	291.1451
Maximum	**0.9309**	**2.9385**	**2.3809**	**4.4700e-003**	**0.3136**	**0.1509**	**0.4645**	**0.1286**	**0.1409**	**0.2695**	**0.0000**	**399.0609**	**399.0609**	**0.0846**	**0.0000**	**401.1753**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3361	2.9385	2.3809	4.4700e-003	0.1924	0.1509	0.3433	0.0716	0.1409	0.2125	0.0000	399.0606	399.0606	0.0846	0.0000	401.1749
2020	0.9309	1.7264	1.7109	3.2900e-003	0.0852	0.0899	0.1751	0.0229	0.0844	0.1073	0.0000	289.8054	289.8054	0.0536	0.0000	291.1449
Maximum	**0.9309**	**2.9385**	**2.3809**	**4.4700e-003**	**0.1924**	**0.1509**	**0.3433**	**0.0716**	**0.1409**	**0.2125**	**0.0000**	**399.0606**	**399.0606**	**0.0846**	**0.0000**	**401.1749**

	ROG	NOx	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**	**30.40**	**0.00**	**18.96**	**37.63**	**0.00**	**15.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2019	6-30-2019	1.4653	1.4653
2	7-1-2019	9-30-2019	0.8928	0.8928
3	10-1-2019	12-31-2019	0.8957	0.8957
4	1-1-2020	3-31-2020	0.8047	0.8047
5	4-1-2020	6-30-2020	0.8024	0.8024
6	7-1-2020	9-30-2020	1.0425	1.0425
		Highest	1.4653	1.4653

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9002	0.0810	1.3392	4.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	78.3792	78.3792	3.5400e-003	1.4000e-003	78.8843
Energy	0.0134	0.1146	0.0488	7.3000e-004		9.2700e-003	9.2700e-003		9.2700e-003	9.2700e-003	0.0000	372.2610	372.2610	0.0134	4.6700e-003	373.9884
Mobile	0.3816	0.6544	4.7935	0.0123	1.2412	8.9300e-003	1.2501	0.3307	8.2900e-003	0.3389	0.0000	1,115.5337	1,115.5337	0.0455	0.0000	1,116.6723
Waste						0.0000	0.0000		0.0000	0.0000	16.4342	0.0000	16.4342	0.9712	0.0000	40.7149
Water						0.0000	0.0000		0.0000	0.0000	3.6380	25.4114	29.0494	0.3748	9.0600e-003	41.1196
Total	**1.2952**	**0.8500**	**6.1815**	**0.0135**	**1.2412**	**0.0307**	**1.2719**	**0.3307**	**0.0301**	**0.3607**	**20.0721**	**1,591.5853**	**1,611.6575**	**1.4085**	**0.0151**	**1,651.3794**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7989	0.0152	1.3112	7.0000e-005		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	2.1347	2.1347	2.0800e-003	0.0000	2.1867
Energy	0.0134	0.1146	0.0488	7.3000e-004		9.2700e-003	9.2700e-003		9.2700e-003	9.2700e-003	0.0000	372.2610	372.2610	0.0134	4.6700e-003	373.9884
Mobile	0.3725	0.6178	4.5351	0.0115	1.1556	8.4000e-003	1.1640	0.3078	7.7900e-003	0.3156	0.0000	1,040.8142	1,040.8142	0.0428	0.0000	1,041.8850
Waste						0.0000	0.0000		0.0000	0.0000	16.4342	0.0000	16.4342	0.9712	0.0000	40.7149
Water						0.0000	0.0000		0.0000	0.0000	3.6380	25.4114	29.0494	0.3748	9.0600e-003	41.1196
Total	**1.1848**	**0.7476**	**5.8950**	**0.0123**	**1.1556**	**0.0249**	**1.1804**	**0.3078**	**0.0243**	**0.3321**	**20.0721**	**1,440.6213**	**1,460.6935**	**1.4043**	**0.0137**	**1,499.8946**

	ROG	NOx	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	**8.52**	**12.05**	**4.63**	**9.23**	**6.90**	**19.04**	**7.19**	**6.90**	**19.34**	**7.94**	**0.00**	**9.49**	**9.37**	**0.30**	**9.25**	**9.17**

3.0 Construction Detail

Construction Phase

Hanford-Armona Mixed Use Apartment 176 Units - Kings County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	4/12/2019	5	10	
2	Grading	Grading	4/13/2019	5/24/2019	5	30	
3	Building Construction	Building Construction	5/25/2019	7/17/2020	5	300	
4	Paving	Paving	7/18/2020	8/14/2020	5	20	
5	Architectural Coating	Architectural Coating	8/15/2020	9/11/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 356,400; Residential Outdoor: 118,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Hanford-Armona Mixed Use Apartment 176 Units - Kings County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	127.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

3.2 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.5000e-004	3.3100e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6328	0.6328	3.0000e-005	0.0000	0.6335
Total	**4.4000e-004**	**3.5000e-004**	**3.3100e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6328**	**0.6328**	**3.0000e-005**	**0.0000**	**0.6335**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0407**	**0.0120**	**0.0526**	**0.0223**	**0.0110**	**0.0333**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

3.2 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.5000e-004	3.3100e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6328	0.6328	3.0000e-005	0.0000	0.6335
Total	**4.4000e-004**	**3.5000e-004**	**3.3100e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6328**	**0.6328**	**3.0000e-005**	**0.0000**	**0.6335**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5520	83.5520	0.0264	0.0000	84.2129
Total	**0.0711**	**0.8178**	**0.5007**	**9.3000e-004**	**0.1301**	**0.0357**	**0.1658**	**0.0540**	**0.0329**	**0.0868**	**0.0000**	**83.5520**	**83.5520**	**0.0264**	**0.0000**	**84.2129**

3.3 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4700e-003	1.1800e-003	0.0110	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.1094	2.1094	9.0000e-005	0.0000	2.1116
Total	**1.4700e-003**	**1.1800e-003**	**0.0110**	**2.0000e-005**	**2.4100e-003**	**2.0000e-005**	**2.4300e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.1094**	**2.1094**	**9.0000e-005**	**0.0000**	**2.1116**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0586	0.0000	0.0586	0.0243	0.0000	0.0243	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5519	83.5519	0.0264	0.0000	84.2128
Total	**0.0711**	**0.8178**	**0.5007**	**9.3000e-004**	**0.0586**	**0.0357**	**0.0943**	**0.0243**	**0.0329**	**0.0572**	**0.0000**	**83.5519**	**83.5519**	**0.0264**	**0.0000**	**84.2128**

3.3 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4700e-003	1.1800e-003	0.0110	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.1094	2.1094	9.0000e-005	0.0000	2.1116
Total	**1.4700e-003**	**1.1800e-003**	**0.0110**	**2.0000e-005**	**2.4100e-003**	**2.0000e-005**	**2.4300e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.1094**	**2.1094**	**9.0000e-005**	**0.0000**	**2.1116**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1854	1.6547	1.3474	2.1100e-003		0.1013	0.1013		0.0952	0.0952	0.0000	184.5568	184.5568	0.0450	0.0000	185.6808
Total	**0.1854**	**1.6547**	**1.3474**	**2.1100e-003**		**0.1013**	**0.1013**		**0.0952**	**0.0952**	**0.0000**	**184.5568**	**184.5568**	**0.0450**	**0.0000**	**185.6808**

3.4 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.4000e-003	0.1973	0.0419	4.3000e-004	9.9300e-003	1.3700e-003	0.0113	2.8700e-003	1.3100e-003	4.1800e-003	0.0000	41.0281	41.0281	4.7400e-003	0.0000	41.1467
Worker	0.0487	0.0393	0.3664	7.8000e-004	0.0801	5.6000e-004	0.0807	0.0213	5.2000e-004	0.0218	0.0000	70.0975	70.0975	2.9200e-003	0.0000	70.1705
Total	**0.0561**	**0.2366**	**0.4083**	**1.2100e-003**	**0.0900**	**1.9300e-003**	**0.0920**	**0.0242**	**1.8300e-003**	**0.0260**	**0.0000**	**111.1256**	**111.1256**	**7.6600e-003**	**0.0000**	**111.3171**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1854	1.6547	1.3474	2.1100e-003		0.1013	0.1013		0.0952	0.0952	0.0000	184.5566	184.5566	0.0450	0.0000	185.6806
Total	**0.1854**	**1.6547**	**1.3474**	**2.1100e-003**		**0.1013**	**0.1013**		**0.0952**	**0.0952**	**0.0000**	**184.5566**	**184.5566**	**0.0450**	**0.0000**	**185.6806**

3.4 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.4000e-003	0.1973	0.0419	4.3000e-004	9.9300e-003	1.3700e-003	0.0113	2.8700e-003	1.3100e-003	4.1800e-003	0.0000	41.0281	41.0281	4.7400e-003	0.0000	41.1467
Worker	0.0487	0.0393	0.3664	7.8000e-004	0.0801	5.6000e-004	0.0807	0.0213	5.2000e-004	0.0218	0.0000	70.0975	70.0975	2.9200e-003	0.0000	70.1705
Total	**0.0561**	**0.2366**	**0.4083**	**1.2100e-003**	**0.0900**	**1.9300e-003**	**0.0920**	**0.0242**	**1.8300e-003**	**0.0260**	**0.0000**	**111.1256**	**111.1256**	**7.6600e-003**	**0.0000**	**111.3171**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1516	1.3718	1.2047	1.9200e-003		0.0799	0.0799		0.0751	0.0751	0.0000	165.6011	165.6011	0.0404	0.0000	166.6112
Total	**0.1516**	**1.3718**	**1.2047**	**1.9200e-003**		**0.0799**	**0.0799**		**0.0751**	**0.0751**	**0.0000**	**165.6011**	**165.6011**	**0.0404**	**0.0000**	**166.6112**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5800e-003	0.1643	0.0334	3.9000e-004	9.0500e-003	8.4000e-004	9.8800e-003	2.6100e-003	8.0000e-004	3.4100e-003	0.0000	37.0374	37.0374	4.1100e-003	0.0000	37.1402
Worker	0.0402	0.0314	0.2950	6.9000e-004	0.0730	4.9000e-004	0.0735	0.0194	4.6000e-004	0.0198	0.0000	61.8606	61.8606	2.2900e-003	0.0000	61.9179
Total	**0.0458**	**0.1957**	**0.3284**	**1.0800e-003**	**0.0820**	**1.3300e-003**	**0.0833**	**0.0220**	**1.2600e-003**	**0.0233**	**0.0000**	**98.8980**	**98.8980**	**6.4000e-003**	**0.0000**	**99.0581**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1516	1.3718	1.2047	1.9200e-003		0.0799	0.0799		0.0751	0.0751	0.0000	165.6009	165.6009	0.0404	0.0000	166.6110
Total	**0.1516**	**1.3718**	**1.2047**	**1.9200e-003**		**0.0799**	**0.0799**		**0.0751**	**0.0751**	**0.0000**	**165.6009**	**165.6009**	**0.0404**	**0.0000**	**166.6110**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5800e-003	0.1643	0.0334	3.9000e-004	9.0500e-003	8.4000e-004	9.8800e-003	2.6100e-003	8.0000e-004	3.4100e-003	0.0000	37.0374	37.0374	4.1100e-003	0.0000	37.1402
Worker	0.0402	0.0314	0.2950	6.9000e-004	0.0730	4.9000e-004	0.0735	0.0194	4.6000e-004	0.0198	0.0000	61.8606	61.8606	2.2900e-003	0.0000	61.9179
Total	**0.0458**	**0.1957**	**0.3284**	**1.0800e-003**	**0.0820**	**1.3300e-003**	**0.0833**	**0.0220**	**1.2600e-003**	**0.0233**	**0.0000**	**98.8980**	**98.8980**	**6.4000e-003**	**0.0000**	**99.0581**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1902
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0136**	**0.1407**	**0.1465**	**2.3000e-004**		**7.5300e-003**	**7.5300e-003**		**6.9300e-003**	**6.9300e-003**	**0.0000**	**20.0282**	**20.0282**	**6.4800e-003**	**0.0000**	**20.1902**

3.5 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	5.2000e-004	4.8700e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0219	1.0219	4.0000e-005	0.0000	1.0228
Total	**6.6000e-004**	**5.2000e-004**	**4.8700e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0219**	**1.0219**	**4.0000e-005**	**0.0000**	**1.0228**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1901
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0136**	**0.1407**	**0.1465**	**2.3000e-004**		**7.5300e-003**	**7.5300e-003**		**6.9300e-003**	**6.9300e-003**	**0.0000**	**20.0282**	**20.0282**	**6.4800e-003**	**0.0000**	**20.1901**

3.5 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	5.2000e-004	4.8700e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0219	1.0219	4.0000e-005	0.0000	1.0228
Total	**6.6000e-004**	**5.2000e-004**	**4.8700e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0219**	**1.0219**	**4.0000e-005**	**0.0000**	**1.0228**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7158					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582
Total	**0.7183**	**0.0168**	**0.0183**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**2.5533**	**2.5533**	**2.0000e-004**	**0.0000**	**2.5582**

3.6 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	8.6000e-004	8.1200e-003	2.0000e-005	2.0100e-003	1.0000e-005	2.0200e-003	5.3000e-004	1.0000e-005	5.5000e-004	0.0000	1.7031	1.7031	6.0000e-005	0.0000	1.7047
Total	**1.1100e-003**	**8.6000e-004**	**8.1200e-003**	**2.0000e-005**	**2.0100e-003**	**1.0000e-005**	**2.0200e-003**	**5.3000e-004**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**1.7031**	**1.7031**	**6.0000e-005**	**0.0000**	**1.7047**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7158					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582
Total	**0.7183**	**0.0168**	**0.0183**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**2.5533**	**2.5533**	**2.0000e-004**	**0.0000**	**2.5582**

3.6 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	8.6000e-004	8.1200e-003	2.0000e-005	2.0100e-003	1.0000e-005	2.0200e-003	5.3000e-004	1.0000e-005	5.5000e-004	0.0000	1.7031	1.7031	6.0000e-005	0.0000	1.7047
Total	**1.1100e-003**	**8.6000e-004**	**8.1200e-003**	**2.0000e-005**	**2.0100e-003**	**1.0000e-005**	**2.0200e-003**	**5.3000e-004**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**1.7031**	**1.7031**	**6.0000e-005**	**0.0000**	**1.7047**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3725	0.6178	4.5351	0.0115	1.1556	8.4000e-003	1.1640	0.3078	7.7900e-003	0.3156	0.0000	1,040.8142	1,040.8142	0.0428	0.0000	1,041.8850
Unmitigated	0.3816	0.6544	4.7935	0.0123	1.2412	8.9300e-003	1.2501	0.3307	8.2900e-003	0.3389	0.0000	1,115.5337	1,115.5337	0.0455	0.0000	1,116.6723

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,159.84	1,260.16	1068.32	3,323,349	3,094,038
Total	1,159.84	1,260.16	1,068.32	3,323,349	3,094,038

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
Apartments Low Rise	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.629948	0.037566	0.189820	0.126841	0.002590	0.001258	0.000242	0.000429	0.001758	0.001914	0.005918	0.000991	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	239.4910	239.4910	0.0108	2.2400e-003	240.4294
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	239.4910	239.4910	0.0108	2.2400e-003	240.4294
NaturalGas Mitigated	0.0134	0.1146	0.0488	7.3000e-004		9.2700e-003	9.2700e-003		9.2700e-003	9.2700e-003	0.0000	132.7701	132.7701	2.5400e-003	2.4300e-003	133.5591
NaturalGas Unmitigated	0.0134	0.1146	0.0488	7.3000e-004		9.2700e-003	9.2700e-003		9.2700e-003	9.2700e-003	0.0000	132.7701	132.7701	2.5400e-003	2.4300e-003	133.5591

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.48802e+006	0.0134	0.1146	0.0488	7.3000e-004		9.2700e-003	9.2700e-003		9.2700e-003	9.2700e-003	0.0000	132.7701	132.7701	2.5400e-003	2.4300e-003	133.5591
Total		**0.0134**	**0.1146**	**0.0488**	**7.3000e-004**		**9.2700e-003**	**9.2700e-003**		**9.2700e-003**	**9.2700e-003**	**0.0000**	**132.7701**	**132.7701**	**2.5400e-003**	**2.4300e-003**	**133.5591**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.48802e+006	0.0134	0.1146	0.0488	7.3000e-004		9.2700e-003	9.2700e-003		9.2700e-003	9.2700e-003	0.0000	132.7701	132.7701	2.5400e-003	2.4300e-003	133.5591
Total		**0.0134**	**0.1146**	**0.0488**	**7.3000e-004**		**9.2700e-003**	**9.2700e-003**		**9.2700e-003**	**9.2700e-003**	**0.0000**	**132.7701**	**132.7701**	**2.5400e-003**	**2.4300e-003**	**133.5591**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	823244	239.4910	0.0108	2.2400e-003	240.4294
Total		**239.4910**	**0.0108**	**2.2400e-003**	**240.4294**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	823244	239.4910	0.0108	2.2400e-003	240.4294
Total		**239.4910**	**0.0108**	**2.2400e-003**	**240.4294**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7989	0.0152	1.3112	7.0000e-005		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	2.1347	2.1347	2.0800e-003	0.0000	2.1867
Unmitigated	0.9002	0.0810	1.3392	4.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	78.3792	78.3792	3.5400e-003	1.4000e-003	78.8843

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1652					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.7000e-003	0.0658	0.0280	4.2000e-004		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	76.2445	76.2445	1.4600e-003	1.4000e-003	76.6976
Landscaping	0.0399	0.0152	1.3112	7.0000e-005		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	2.1347	2.1347	2.0800e-003	0.0000	2.1867
Total	**0.9002**	**0.0810**	**1.3392**	**4.9000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**78.3792**	**78.3792**	**3.5400e-003**	**1.4000e-003**	**78.8843**

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	tons/yr										MT/yr					
Architectural Coating	0.0716					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0399	0.0152	1.3112	7.0000e-005		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	2.1347	2.1347	2.0800e-003	0.0000	2.1867
Total	**0.7989**	**0.0152**	**1.3112**	**7.0000e-005**		**7.2100e-003**	**7.2100e-003**		**7.2100e-003**	**7.2100e-003**	**0.0000**	**2.1347**	**2.1347**	**2.0800e-003**	**0.0000**	**2.1867**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	29.0494	0.3748	9.0600e-003	41.1196
Unmitigated	29.0494	0.3748	9.0600e-003	41.1196

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	11.4671 / 7.22926	29.0494	0.3748	9.0600e-003	41.1196
Total		**29.0494**	**0.3748**	**9.0600e-003**	**41.1196**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	11.4671 / 7.22926	29.0494	0.3748	9.0600e-003	41.1196
Total		**29.0494**	**0.3748**	**9.0600e-003**	**41.1196**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	16.4342	0.9712	0.0000	40.7149
Unmitigated	16.4342	0.9712	0.0000	40.7149

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	80.96	16.4342	0.9712	0.0000	40.7149
Total		**16.4342**	**0.9712**	**0.0000**	**40.7149**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	80.96	16.4342	0.9712	0.0000	40.7149
Total		**16.4342**	**0.9712**	**0.0000**	**40.7149**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Commercial Construction - Site Preparation and Grading Only Annual

Hanford Armona Rd Mixed Use Project Site Prep and Grading

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	7.04	1000sqft	0.16	7,040.00	0
Other Non-Asphalt Surfaces	4.41	Acre	4.41	192,099.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total acreage for Parcel A, B, and C 4.57 acres

Construction Phase -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0204	0.2120	0.1214	2.2000e-004	0.0722	0.0106	0.0828	0.0385	9.7500e-003	0.0483	0.0000	19.4965	19.4965	6.1000e-003	0.0000	19.6490
Maximum	**0.0204**	**0.2120**	**0.1214**	**2.2000e-004**	**0.0722**	**0.0106**	**0.0828**	**0.0385**	**9.7500e-003**	**0.0483**	**0.0000**	**19.4965**	**19.4965**	**6.1000e-003**	**0.0000**	**19.6490**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0204	0.2120	0.1214	2.2000e-004	0.0330	0.0106	0.0436	0.0175	9.7500e-003	0.0272	0.0000	19.4965	19.4965	6.1000e-003	0.0000	19.6490
Maximum	**0.0204**	**0.2120**	**0.1214**	**2.2000e-004**	**0.0330**	**0.0106**	**0.0436**	**0.0175**	**9.7500e-003**	**0.0272**	**0.0000**	**19.4965**	**19.4965**	**6.1000e-003**	**0.0000**	**19.6490**

	ROG	NOx	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**	**54.36**	**0.00**	**47.40**	**54.67**	**0.00**	**43.65**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2020	6-30-2020	0.2200	0.2200
		Highest	0.2200	0.2200

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0488	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Energy	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	20.7111	20.7111	8.3000e-004	2.3000e-004	20.8004
Mobile	0.1002	1.3149	0.8019	3.7900e-003	0.1695	3.7500e-003	0.1732	0.0456	3.5600e-003	0.0491	0.0000	353.6374	353.6374	0.0531	0.0000	354.9645
Waste						0.0000	0.0000		0.0000	0.0000	1.5001	0.0000	1.5001	0.0887	0.0000	3.7164
Water						0.0000	0.0000		0.0000	0.0000	0.1654	1.1463	1.3117	0.0170	4.1000e-004	1.8606
Total	**0.1494**	**1.3186**	**0.8051**	**3.8100e-003**	**0.1695**	**4.0300e-003**	**0.1735**	**0.0456**	**3.8400e-003**	**0.0494**	**1.6655**	**375.4951**	**377.1606**	**0.1596**	**6.4000e-004**	**381.3422**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0488	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Energy	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	20.7111	20.7111	8.3000e-004	2.3000e-004	20.8004
Mobile	0.1002	1.3149	0.8019	3.7900e-003	0.1695	3.7500e-003	0.1732	0.0456	3.5600e-003	0.0491	0.0000	353.6374	353.6374	0.0531	0.0000	354.9645
Waste						0.0000	0.0000		0.0000	0.0000	1.5001	0.0000	1.5001	0.0887	0.0000	3.7164
Water						0.0000	0.0000		0.0000	0.0000	0.1654	1.1463	1.3117	0.0170	4.1000e-004	1.8606
Total	**0.1494**	**1.3186**	**0.8051**	**3.8100e-003**	**0.1695**	**4.0300e-003**	**0.1735**	**0.0456**	**3.8400e-003**	**0.0494**	**1.6655**	**375.4951**	**377.1606**	**0.1596**	**6.4000e-004**	**381.3422**

	ROG	NOx	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	4/1/2020	4/7/2020	5	5	
2	Grading	Grading	4/8/2020	4/17/2020	5	8	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 4.41

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40

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	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1060	0.0538	1.0000e-004		5.4900e-003	5.4900e-003		5.0500e-003	5.0500e-003	0.0000	8.3577	8.3577	2.7000e-003	0.0000	8.4253
Total	**0.0102**	**0.1060**	**0.0538**	**1.0000e-004**	**0.0452**	**5.4900e-003**	**0.0507**	**0.0248**	**5.0500e-003**	**0.0299**	**0.0000**	**8.3577**	**8.3577**	**2.7000e-003**	**0.0000**	**8.4253**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.6000e-004	1.4600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3066	0.3066	1.0000e-005	0.0000	0.3069
Total	**2.0000e-004**	**1.6000e-004**	**1.4600e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3066**	**0.3066**	**1.0000e-005**	**0.0000**	**0.3069**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0203	0.0000	0.0203	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1060	0.0538	1.0000e-004		5.4900e-003	5.4900e-003		5.0500e-003	5.0500e-003	0.0000	8.3577	8.3577	2.7000e-003	0.0000	8.4252
Total	**0.0102**	**0.1060**	**0.0538**	**1.0000e-004**	**0.0203**	**5.4900e-003**	**0.0258**	**0.0112**	**5.0500e-003**	**0.0162**	**0.0000**	**8.3577**	**8.3577**	**2.7000e-003**	**0.0000**	**8.4252**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.6000e-004	1.4600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3066	0.3066	1.0000e-005	0.0000	0.3069
Total	**2.0000e-004**	**1.6000e-004**	**1.4600e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3066**	**0.3066**	**1.0000e-005**	**0.0000**	**0.3069**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1055	0.0642	1.2000e-004		5.0900e-003	5.0900e-003		4.6900e-003	4.6900e-003	0.0000	10.4235	10.4235	3.3700e-003	0.0000	10.5078
Total	**9.7200e-003**	**0.1055**	**0.0642**	**1.2000e-004**	**0.0262**	**5.0900e-003**	**0.0313**	**0.0135**	**4.6900e-003**	**0.0182**	**0.0000**	**10.4235**	**10.4235**	**3.3700e-003**	**0.0000**	**10.5078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.1000e-004	1.9500e-003	0.0000	4.8000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4088	0.4088	2.0000e-005	0.0000	0.4091
Total	**2.7000e-004**	**2.1000e-004**	**1.9500e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.9000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4088**	**0.4088**	**2.0000e-005**	**0.0000**	**0.4091**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0118	0.0000	0.0118	6.0600e-003	0.0000	6.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1055	0.0642	1.2000e-004		5.0900e-003	5.0900e-003		4.6900e-003	4.6900e-003	0.0000	10.4235	10.4235	3.3700e-003	0.0000	10.5078
Total	**9.7200e-003**	**0.1055**	**0.0642**	**1.2000e-004**	**0.0118**	**5.0900e-003**	**0.0169**	**6.0600e-003**	**4.6900e-003**	**0.0108**	**0.0000**	**10.4235**	**10.4235**	**3.3700e-003**	**0.0000**	**10.5078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.1000e-004	1.9500e-003	0.0000	4.8000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4088	0.4088	2.0000e-005	0.0000	0.4091
Total	**2.7000e-004**	**2.1000e-004**	**1.9500e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.9000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4088**	**0.4088**	**2.0000e-005**	**0.0000**	**0.4091**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1002	1.3149	0.8019	3.7900e-003	0.1695	3.7500e-003	0.1732	0.0456	3.5600e-003	0.0491	0.0000	353.6374	353.6374	0.0531	0.0000	354.9645
Unmitigated	0.1002	1.3149	0.8019	3.7900e-003	0.1695	3.7500e-003	0.1732	0.0456	3.5600e-003	0.0491	0.0000	353.6374	353.6374	0.0531	0.0000	354.9645

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	312.01	295.96	143.83	439,977	439,977
Total	312.01	295.96	143.83	439,977	439,977

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
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.487262	0.029057	0.146825	0.126841	0.021860	0.004787	0.012229	0.159772	0.001758	0.001914	0.005918	0.000991	0.000785
Strip Mall	0.487262	0.029057	0.146825	0.126841	0.021860	0.004787	0.012229	0.159772	0.001758	0.001914	0.005918	0.000991	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.6913	16.6913	7.5000e-004	1.6000e-004	16.7567
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.6913	16.6913	7.5000e-004	1.6000e-004	16.7567
NaturalGas Mitigated	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0198	4.0198	8.0000e-005	7.0000e-005	4.0437
NaturalGas Unmitigated	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0198	4.0198	8.0000e-005	7.0000e-005	4.0437

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	75328	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0198	4.0198	8.0000e-005	7.0000e-005	4.0437
Total		**4.1000e-004**	**3.6900e-003**	**3.1000e-003**	**2.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**4.0198**	**4.0198**	**8.0000e-005**	**7.0000e-005**	**4.0437**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	75328	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0198	4.0198	8.0000e-005	7.0000e-005	4.0437
Total		**4.1000e-004**	**3.6900e-003**	**3.1000e-003**	**2.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**4.0198**	**4.0198**	**8.0000e-005**	**7.0000e-005**	**4.0437**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	57376	16.6913	7.5000e-004	1.6000e-004	16.7567
Total		**16.6913**	**7.5000e-004**	**1.6000e-004**	**16.7567**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	57376	16.6913	7.5000e-004	1.6000e-004	16.7567
Total		**16.6913**	**7.5000e-004**	**1.6000e-004**	**16.7567**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0488	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Unmitigated	0.0488	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0399					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Total	**0.0488**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.2000e-004**

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	tons/yr										MT/yr					
Architectural Coating	8.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0399					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.2000e-004
Total	**0.0488**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.3117	0.0170	4.1000e-004	1.8606
Unmitigated	1.3117	0.0170	4.1000e-004	1.8606

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.521471 / 0.319611	1.3117	0.0170	4.1000e-004	1.8606
Total		**1.3117**	**0.0170**	**4.1000e-004**	**1.8606**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.521471 / 0.319611	1.3117	0.0170	4.1000e-004	1.8606
Total		**1.3117**	**0.0170**	**4.1000e-004**	**1.8606**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.5001	0.0887	0.0000	3.7164
Unmitigated	1.5001	0.0887	0.0000	3.7164

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	7.39	1.5001	0.0887	0.0000	3.7164
Total		**1.5001**	**0.0887**	**0.0000**	**3.7164**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	7.39	1.5001	0.0887	0.0000	3.7164
Total		**1.5001**	**0.0887**	**0.0000**	**3.7164**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Gas Station and Convenience Market Construction and Operation Annual

Hanford Armona Rd Mixed Use Gas Station Run

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.55	Acre	1.55	67,518.00	0
Convenience Market With Gas Pumps	4.00	Pump	0.08	3,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 3,500 SF convenience market with 8 fueling position

Construction Phase -

Architectural Coating - Rule 4601 Architectural Coatings

Area Coating - Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings

Fleet Mix - Project specific fleet mix for gas station/convenience store

Hanford Armona Rd Mixed Use Gas Station Run - Kings County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	65.00
tblArchitecturalCoating	EF_Parking	150.00	65.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	65
tblAreaCoating	Area_EF_Nonresidential_Interior	150	65
tblAreaCoating	Area_EF_Parking	150	65
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	65	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	65	150
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	65	150
tblFleetMix	HHD	0.16	4.3200e-004
tblFleetMix	LDA	0.49	0.62
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	MHD	0.01	2.0300e-004
tblLandUse	LandUseSquareFeet	564.70	3,500.00
tblLandUse	LotAcreage	0.01	0.08

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2109	1.5605	1.3776	2.6400e-003	0.0299	0.0769	0.1068	8.1200e-003	0.0742	0.0824	0.0000	223.4837	223.4837	0.0364	0.0000	224.3926
2021	0.0329	0.1144	0.1192	2.1000e-004	2.1700e-003	5.6600e-003	7.8300e-003	5.9000e-004	5.3900e-003	5.9700e-003	0.0000	18.2773	18.2773	3.6200e-003	0.0000	18.3678
Maximum	**0.2109**	**1.5605**	**1.3776**	**2.6400e-003**	**0.0299**	**0.0769**	**0.1068**	**8.1200e-003**	**0.0742**	**0.0824**	**0.0000**	**223.4837**	**223.4837**	**0.0364**	**0.0000**	**224.3926**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2109	1.5604	1.3776	2.6400e-003	0.0299	0.0769	0.1068	8.1200e-003	0.0742	0.0824	0.0000	223.4835	223.4835	0.0364	0.0000	224.3923
2021	0.0329	0.1144	0.1192	2.1000e-004	2.1700e-003	5.6600e-003	7.8300e-003	5.9000e-004	5.3900e-003	5.9700e-003	0.0000	18.2773	18.2773	3.6200e-003	0.0000	18.3678
Maximum	**0.2109**	**1.5604**	**1.3776**	**2.6400e-003**	**0.0299**	**0.0769**	**0.1068**	**8.1200e-003**	**0.0742**	**0.0824**	**0.0000**	**223.4835**	**223.4835**	**0.0364**	**0.0000**	**224.3923**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-9-2020	7-8-2020	0.6024	0.6024
2	7-9-2020	10-8-2020	0.6091	0.6091
3	10-9-2020	1-8-2021	0.6056	0.6056
4	1-9-2021	4-8-2021	0.1011	0.1011
		Highest	0.6091	0.6091

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0197	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.1000e-004
Energy	2.0000e-004	1.8400e-003	1.5400e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	17.1713	17.1713	7.2000e-004	1.8000e-004	17.2427
Mobile	0.3858	0.3613	2.4066	3.9100e-003	0.3540	4.3200e-003	0.3583	0.0944	4.0100e-003	0.0985	0.0000	353.1121	353.1121	0.0191	0.0000	353.5892
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0920	0.1052	1.3700e-003	3.0000e-005	0.1492
Total	**0.4057**	**0.3631**	**2.4082**	**3.9200e-003**	**0.3540**	**4.4600e-003**	**0.3585**	**0.0944**	**4.1500e-003**	**0.0986**	**0.0133**	**370.3755**	**370.3887**	**0.0212**	**2.1000e-004**	**370.9812**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0219	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.1000e-004
Energy	2.0000e-004	1.8400e-003	1.5400e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	17.1713	17.1713	7.2000e-004	1.8000e-004	17.2427
Mobile	0.3832	0.3488	2.3387	3.6800e-003	0.3296	4.1400e-003	0.3337	0.0879	3.8400e-003	0.0918	0.0000	332.0281	332.0281	0.0184	0.0000	332.4870
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0920	0.1052	1.3700e-003	3.0000e-005	0.1492
Total	**0.4053**	**0.3506**	**2.3403**	**3.6900e-003**	**0.3296**	**4.2800e-003**	**0.3338**	**0.0879**	**3.9800e-003**	**0.0919**	**0.0133**	**349.2915**	**349.3048**	**0.0205**	**2.1000e-004**	**349.8791**

	ROG	NOx	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	**0.10**	**3.44**	**2.82**	**5.87**	**6.90**	**4.04**	**6.87**	**6.90**	**4.10**	**6.79**	**0.00**	**5.69**	**5.69**	**3.40**	**0.00**	**5.69**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	4/9/2020	1/13/2021	5	200	
2	Paving	Paving	1/14/2021	1/27/2021	5	10	
3	Architectural Coating	Architectural Coating	1/28/2021	2/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.55

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,250; Non-Residential Outdoor: 1,750; Striped Parking Area: 4,051 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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
Building Construction	7	29.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1939	1.4123	1.2595	2.1100e-003		0.0760	0.0760		0.0734	0.0734	0.0000	173.3727	173.3727	0.0322	0.0000	174.1774
Total	**0.1939**	**1.4123**	**1.2595**	**2.1100e-003**		**0.0760**	**0.0760**		**0.0734**	**0.0734**	**0.0000**	**173.3727**	**173.3727**	**0.0322**	**0.0000**	**174.1774**

3.2 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7100e-003	0.1386	0.0282	3.3000e-004	7.6300e-003	7.1000e-004	8.3400e-003	2.2000e-003	6.8000e-004	2.8800e-003	0.0000	31.2439	31.2439	3.4700e-003	0.0000	31.3306
Worker	0.0123	9.5700e-003	0.0900	2.1000e-004	0.0223	1.5000e-004	0.0224	5.9100e-003	1.4000e-004	6.0500e-003	0.0000	18.8671	18.8671	7.0000e-004	0.0000	18.8846
Total	**0.0170**	**0.1482**	**0.1182**	**5.4000e-004**	**0.0299**	**8.6000e-004**	**0.0307**	**8.1100e-003**	**8.2000e-004**	**8.9300e-003**	**0.0000**	**50.1110**	**50.1110**	**4.1700e-003**	**0.0000**	**50.2152**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1939	1.4123	1.2595	2.1100e-003		0.0760	0.0760		0.0734	0.0734	0.0000	173.3725	173.3725	0.0322	0.0000	174.1771
Total	**0.1939**	**1.4123**	**1.2595**	**2.1100e-003**		**0.0760**	**0.0760**		**0.0734**	**0.0734**	**0.0000**	**173.3725**	**173.3725**	**0.0322**	**0.0000**	**174.1771**

3.2 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7100e-003	0.1386	0.0282	3.3000e-004	7.6300e-003	7.1000e-004	8.3400e-003	2.2000e-003	6.8000e-004	2.8800e-003	0.0000	31.2439	31.2439	3.4700e-003	0.0000	31.3306
Worker	0.0123	9.5700e-003	0.0900	2.1000e-004	0.0223	1.5000e-004	0.0224	5.9100e-003	1.4000e-004	6.0500e-003	0.0000	18.8671	18.8671	7.0000e-004	0.0000	18.8846
Total	**0.0170**	**0.1482**	**0.1182**	**5.4000e-004**	**0.0299**	**8.6000e-004**	**0.0307**	**8.1100e-003**	**8.2000e-004**	**8.9300e-003**	**0.0000**	**50.1110**	**50.1110**	**4.1700e-003**	**0.0000**	**50.2152**

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.1600e-003	0.0614	0.0581	1.0000e-004		3.0800e-003	3.0800e-003		2.9700e-003	2.9700e-003	0.0000	8.1696	8.1696	1.4600e-003	0.0000	8.2061
Total	**8.1600e-003**	**0.0614**	**0.0581**	**1.0000e-004**		**3.0800e-003**	**3.0800e-003**		**2.9700e-003**	**2.9700e-003**	**0.0000**	**8.1696**	**8.1696**	**1.4600e-003**	**0.0000**	**8.2061**

3.2 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.9600e-003	1.1700e-003	2.0000e-005	3.6000e-004	2.0000e-005	3.8000e-004	1.0000e-004	2.0000e-005	1.2000e-004	0.0000	1.4584	1.4584	1.6000e-004	0.0000	1.4624
Worker	5.3000e-004	4.0000e-004	3.8200e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8624	0.8624	3.0000e-005	0.0000	0.8631
Total	**7.2000e-004**	**6.3600e-003**	**4.9900e-003**	**3.0000e-005**	**1.4100e-003**	**3.0000e-005**	**1.4400e-003**	**3.8000e-004**	**3.0000e-005**	**4.0000e-004**	**0.0000**	**2.3208**	**2.3208**	**1.9000e-004**	**0.0000**	**2.3255**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.1600e-003	0.0614	0.0581	1.0000e-004		3.0800e-003	3.0800e-003		2.9700e-003	2.9700e-003	0.0000	8.1696	8.1696	1.4600e-003	0.0000	8.2061
Total	**8.1600e-003**	**0.0614**	**0.0581**	**1.0000e-004**		**3.0800e-003**	**3.0800e-003**		**2.9700e-003**	**2.9700e-003**	**0.0000**	**8.1696**	**8.1696**	**1.4600e-003**	**0.0000**	**8.2061**

3.2 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.9600e-003	1.1700e-003	2.0000e-005	3.6000e-004	2.0000e-005	3.8000e-004	1.0000e-004	2.0000e-005	1.2000e-004	0.0000	1.4584	1.4584	1.6000e-004	0.0000	1.4624
Worker	5.3000e-004	4.0000e-004	3.8200e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8624	0.8624	3.0000e-005	0.0000	0.8631
Total	**7.2000e-004**	**6.3600e-003**	**4.9900e-003**	**3.0000e-005**	**1.4100e-003**	**3.0000e-005**	**1.4400e-003**	**3.8000e-004**	**3.0000e-005**	**4.0000e-004**	**0.0000**	**2.3208**	**2.3208**	**1.9000e-004**	**0.0000**	**2.3255**

3.3 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	2.0300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.9000e-003**	**0.0387**	**0.0443**	**7.0000e-005**		**2.0800e-003**	**2.0800e-003**		**1.9100e-003**	**1.9100e-003**	**0.0000**	**5.8825**	**5.8825**	**1.8600e-003**	**0.0000**	**5.9291**

3.3 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	1.9000e-003	0.0000	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4295	0.4295	1.0000e-005	0.0000	0.4299
Total	**2.6000e-004**	**2.0000e-004**	**1.9000e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4295**	**0.4295**	**1.0000e-005**	**0.0000**	**0.4299**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	2.0300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.9000e-003**	**0.0387**	**0.0443**	**7.0000e-005**		**2.0800e-003**	**2.0800e-003**		**1.9100e-003**	**1.9100e-003**	**0.0000**	**5.8825**	**5.8825**	**1.8600e-003**	**0.0000**	**5.9291**

3.3 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	1.9000e-003	0.0000	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4295	0.4295	1.0000e-005	0.0000	0.4299
Total	**2.6000e-004**	**2.0000e-004**	**1.9000e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4295**	**0.4295**	**1.0000e-005**	**0.0000**	**0.4299**

3.4 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0167					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.0177**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.4 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	8.8000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1983	0.1983	1.0000e-005	0.0000	0.1984
Total	**1.2000e-004**	**9.0000e-005**	**8.8000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1983**	**0.1983**	**1.0000e-005**	**0.0000**	**0.1984**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0167					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.0177**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.4 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	8.8000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1983	0.1983	1.0000e-005	0.0000	0.1984
Total	**1.2000e-004**	**9.0000e-005**	**8.8000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1983**	**0.1983**	**1.0000e-005**	**0.0000**	**0.1984**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3832	0.3488	2.3387	3.6800e-003	0.3296	4.1400e-003	0.3337	0.0879	3.8400e-003	0.0918	0.0000	332.0281	332.0281	0.0184	0.0000	332.4870
Unmitigated	0.3858	0.3613	2.4066	3.9100e-003	0.3540	4.3200e-003	0.3583	0.0944	4.0100e-003	0.0985	0.0000	353.1121	353.1121	0.0191	0.0000	353.5892

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	2,170.40	817.88	667.52	945,405	880,172
Parking Lot	0.00	0.00	0.00		
Total	2,170.40	817.88	667.52	945,405	880,172

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
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.621212	0.035740	0.186095	0.120572	0.020115	0.004575	0.000203	0.000432	0.001742	0.001833	0.005782	0.000964	0.000735
Parking Lot	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15.1729	15.1729	6.9000e-004	1.4000e-004	15.2323
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15.1729	15.1729	6.9000e-004	1.4000e-004	15.2323
NaturalGas Mitigated	2.0000e-004	1.8400e-003	1.5400e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9985	1.9985	4.0000e-005	4.0000e-005	2.0104
NaturalGas Unmitigated	2.0000e-004	1.8400e-003	1.5400e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9985	1.9985	4.0000e-005	4.0000e-005	2.0104

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market With Gas Pumps	37450	2.0000e-004	1.8400e-003	1.5400e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9985	1.9985	4.0000e-005	4.0000e-005	2.0104
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.0000e-004**	**1.8400e-003**	**1.5400e-003**	**1.0000e-005**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**1.9985**	**1.9985**	**4.0000e-005**	**4.0000e-005**	**2.0104**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market With Gas Pumps	37450	2.0000e-004	1.8400e-003	1.5400e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9985	1.9985	4.0000e-005	4.0000e-005	2.0104
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.0000e-004**	**1.8400e-003**	**1.5400e-003**	**1.0000e-005**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**1.9985**	**1.9985**	**4.0000e-005**	**4.0000e-005**	**2.0104**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	28525	8.2983	3.8000e-004	8.0000e-005	8.3308
Parking Lot	23631.3	6.8746	3.1000e-004	6.0000e-005	6.9016
Total		**15.1729**	**6.9000e-004**	**1.4000e-004**	**15.2323**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	28525	8.2983	3.8000e-004	8.0000e-005	8.3308
Parking Lot	23631.3	6.8746	3.1000e-004	6.0000e-005	6.9016
Total		**15.1729**	**6.9000e-004**	**1.4000e-004**	**15.2323**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0219	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.1000e-004
Unmitigated	0.0197	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0180					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.1000e-004
Total	**0.0197**	**0.0000**	**5.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**0.0000**	**1.1000e-004**

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	tons/yr										MT/yr					
Architectural Coating	3.8400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0180					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.1000e-004
Total	**0.0219**	**0.0000**	**5.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**0.0000**	**1.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.1052	1.3700e-003	3.0000e-005	0.1492
Unmitigated	0.1052	1.3700e-003	3.0000e-005	0.1492

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.0418287 / 0.025637	0.1052	1.3700e-003	3.0000e-005	0.1492
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.1052**	**1.3700e-003**	**3.0000e-005**	**0.1492**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.0418287 / 0.025637	0.1052	1.3700e-003	3.0000e-005	0.1492
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.1052**	**1.3700e-003**	**3.0000e-005**	**0.1492**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Construction and Operation
Fast Food Restaurants Annual

Lemoore Mixed Use Fast Food Pads

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	0.82	Acre	0.82	35,632.08	0
Fast Food Restaurant with Drive Thru	6.00	1000sqft	0.14	6,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Plan

Construction Phase -

Architectural Coating - Rule 4601 Architectural Coatings

Area Coating - Rule 4601 Architectural Coatings compliance

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Fleet Mix - Project specfic fleet mix for fast food restaurant

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	65.00
tblArchitecturalCoating	EF_Parking	150.00	65.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	65
tblAreaCoating	Area_EF_Nonresidential_Interior	150	65
tblAreaCoating	Area_EF_Parking	150	65
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFleetMix	HHD	0.16	8.9000e-005
tblFleetMix	LDA	0.49	0.64
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LHD1	0.02	8.9000e-004
tblFleetMix	LHD2	4.5750e-003	5.3000e-004
tblFleetMix	MHD	0.01	5.9000e-005
tblLandUse	LandUseSquareFeet	35,719.20	35,632.08

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0734	0.5103	0.4297	7.7000e-004	9.5800e-003	0.0277	0.0372	2.6000e-003	0.0255	0.0281	0.0000	68.7072	68.7072	0.0182	0.0000	69.1623
Maximum	**0.0734**	**0.5103**	**0.4297**	**7.7000e-004**	**9.5800e-003**	**0.0277**	**0.0372**	**2.6000e-003**	**0.0255**	**0.0281**	**0.0000**	**68.7072**	**68.7072**	**0.0182**	**0.0000**	**69.1623**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0734	0.5103	0.4297	7.7000e-004	9.5800e-003	0.0277	0.0372	2.6000e-003	0.0255	0.0281	0.0000	68.7072	68.7072	0.0182	0.0000	69.1622
Maximum	**0.0734**	**0.5103**	**0.4297**	**7.7000e-004**	**9.5800e-003**	**0.0277**	**0.0372**	**2.6000e-003**	**0.0255**	**0.0281**	**0.0000**	**68.7072**	**68.7072**	**0.0182**	**0.0000**	**69.1622**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-4-2020**	**7-3-2020**	0.3483	0.3483
2	**7-4-2020**	**9-30-2020**	0.2351	0.2351
		Highest	0.3483	0.3483

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0279	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Energy	6.8100e-003	0.0619	0.0520	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	121.5671	121.5671	3.7400e-003	1.7400e-003	122.1798
Mobile	0.7375	0.6877	5.6614	0.0113	1.1196	9.6800e-003	1.1292	0.2981	8.9600e-003	0.3071	0.0000	1,023.8619	1,023.8619	0.0467	0.0000	1,025.0297
Waste						0.0000	0.0000		0.0000	0.0000	14.0287	0.0000	14.0287	0.8291	0.0000	34.7555
Water						0.0000	0.0000		0.0000	0.0000	0.5778	2.9852	3.5629	0.0595	1.4300e-003	5.4758
Total	**0.7722**	**0.7496**	**5.7134**	**0.0117**	**1.1196**	**0.0144**	**1.1339**	**0.2981**	**0.0137**	**0.3118**	**14.6065**	**1,148.4143**	**1,163.0208**	**0.9390**	**3.1700e-003**	**1,187.4409**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0279	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Energy	6.8100e-003	0.0619	0.0520	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	121.5671	121.5671	3.7400e-003	1.7400e-003	122.1798
Mobile	0.7300	0.6597	5.4482	0.0106	1.0423	9.2300e-003	1.0515	0.2776	8.5300e-003	0.2861	0.0000	959.0738	959.0738	0.0445	0.0000	960.1854
Waste						0.0000	0.0000		0.0000	0.0000	14.0287	0.0000	14.0287	0.8291	0.0000	34.7555
Water						0.0000	0.0000		0.0000	0.0000	0.5778	2.9852	3.5629	0.0595	1.4300e-003	5.4758
Total	**0.7647**	**0.7216**	**5.5002**	**0.0110**	**1.0423**	**0.0139**	**1.0562**	**0.2776**	**0.0132**	**0.2908**	**14.6065**	**1,083.6262**	**1,098.2327**	**0.9368**	**3.1700e-003**	**1,122.5967**

	ROG	NOx	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	**0.96**	**3.74**	**3.73**	**6.07**	**6.90**	**3.13**	**6.85**	**6.90**	**3.15**	**6.73**	**0.00**	**5.64**	**5.57**	**0.24**	**0.00**	**5.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	4/4/2020	8/21/2020	5	100	
2	Paving	Paving	8/22/2020	8/28/2020	5	5	
3	Architectural Coating	Architectural Coating	8/29/2020	9/4/2020	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.82

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,000; Non-Residential Outdoor: 3,000; Striped Parking Area: 2,138 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	5	17.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4348
Total	**0.0431**	**0.4426**	**0.3694**	**5.7000e-004**		**0.0261**	**0.0261**		**0.0240**	**0.0240**	**0.0000**	**50.0302**	**50.0302**	**0.0162**	**0.0000**	**50.4348**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4400e-003	0.0423	8.6100e-003	1.0000e-004	2.3300e-003	2.2000e-004	2.5500e-003	6.7000e-004	2.1000e-004	8.8000e-004	0.0000	9.5422	9.5422	1.0600e-003	0.0000	9.5687
Worker	3.7600e-003	2.9400e-003	0.0276	6.0000e-005	6.8300e-003	5.0000e-005	6.8800e-003	1.8100e-003	4.0000e-005	1.8600e-003	0.0000	5.7906	5.7906	2.1000e-004	0.0000	5.7960
Total	**5.2000e-003**	**0.0453**	**0.0362**	**1.6000e-004**	**9.1600e-003**	**2.7000e-004**	**9.4300e-003**	**2.4800e-003**	**2.5000e-004**	**2.7400e-003**	**0.0000**	**15.3328**	**15.3328**	**1.2700e-003**	**0.0000**	**15.3646**

3.2 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4347
Total	**0.0431**	**0.4426**	**0.3694**	**5.7000e-004**		**0.0261**	**0.0261**		**0.0240**	**0.0240**	**0.0000**	**50.0302**	**50.0302**	**0.0162**	**0.0000**	**50.4347**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4400e-003	0.0423	8.6100e-003	1.0000e-004	2.3300e-003	2.2000e-004	2.5500e-003	6.7000e-004	2.1000e-004	8.8000e-004	0.0000	9.5422	9.5422	1.0600e-003	0.0000	9.5687
Worker	3.7600e-003	2.9400e-003	0.0276	6.0000e-005	6.8300e-003	5.0000e-005	6.8800e-003	1.8100e-003	4.0000e-005	1.8600e-003	0.0000	5.7906	5.7906	2.1000e-004	0.0000	5.7960
Total	**5.2000e-003**	**0.0453**	**0.0362**	**1.6000e-004**	**9.1600e-003**	**2.7000e-004**	**9.4300e-003**	**2.4800e-003**	**2.5000e-004**	**2.7400e-003**	**0.0000**	**15.3328**	**15.3328**	**1.2700e-003**	**0.0000**	**15.3646**

3.3 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	1.0700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.0000e-003**	**0.0181**	**0.0178**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**2.3482**	**2.3482**	**6.8000e-004**	**0.0000**	**2.3653**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.6000e-004	1.4600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3066	0.3066	1.0000e-005	0.0000	0.3069
Total	**2.0000e-004**	**1.6000e-004**	**1.4600e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3066**	**0.3066**	**1.0000e-005**	**0.0000**	**0.3069**

3.3 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	1.0700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.0000e-003**	**0.0181**	**0.0178**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**2.3482**	**2.3482**	**6.8000e-004**	**0.0000**	**2.3653**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.6000e-004	1.4600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3066	0.3066	1.0000e-005	0.0000	0.3069
Total	**2.0000e-004**	**1.6000e-004**	**1.4600e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3066**	**0.3066**	**1.0000e-005**	**0.0000**	**0.3069**

3.4 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**0.0219**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	3.0000e-005	2.4000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0511	0.0511	0.0000	0.0000	0.0511
Total	**3.0000e-005**	**3.0000e-005**	**2.4000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0511**	**0.0511**	**0.0000**	**0.0000**	**0.0511**

3.4 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**0.0219**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	3.0000e-005	2.4000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0511	0.0511	0.0000	0.0000	0.0511
Total	**3.0000e-005**	**3.0000e-005**	**2.4000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0511**	**0.0511**	**0.0000**	**0.0000**	**0.0511**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7300	0.6597	5.4482	0.0106	1.0423	9.2300e-003	1.0515	0.2776	8.5300e-003	0.2861	0.0000	959.0738	959.0738	0.0445	0.0000	960.1854
Unmitigated	0.7375	0.6877	5.6614	0.0113	1.1196	9.6800e-003	1.1292	0.2981	8.9600e-003	0.3071	0.0000	1,023.8619	1,023.8619	0.0467	0.0000	1,025.0297

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	2,976.72	4,332.18	3256.32	2,999,464	2,792,501
Parking Lot	0.00	0.00	0.00		
Total	2,976.72	4,332.18	3,256.32	2,999,464	2,792,501

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
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.638715	0.036747	0.191338	0.120572	0.000890	0.000530	0.000059	0.000089	0.001742	0.001833	0.005782	0.000964	0.000735
Parking Lot	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	54.1943	54.1943	2.4500e-003	5.1000e-004	54.4066
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	54.1943	54.1943	2.4500e-003	5.1000e-004	54.4066
NaturalGas Mitigated	6.8100e-003	0.0619	0.0520	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3729	67.3729	1.2900e-003	1.2400e-003	67.7732
NaturalGas Unmitigated	6.8100e-003	0.0619	0.0520	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3729	67.3729	1.2900e-003	1.2400e-003	67.7732

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	1.26252e+006	6.8100e-003	0.0619	0.0520	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3729	67.3729	1.2900e-003	1.2400e-003	67.7732
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.8100e-003**	**0.0619**	**0.0520**	**3.7000e-004**		**4.7000e-003**	**4.7000e-003**		**4.7000e-003**	**4.7000e-003**	**0.0000**	**67.3729**	**67.3729**	**1.2900e-003**	**1.2400e-003**	**67.7732**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	1.26252e+006	6.8100e-003	0.0619	0.0520	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3729	67.3729	1.2900e-003	1.2400e-003	67.7732
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.8100e-003**	**0.0619**	**0.0520**	**3.7000e-004**		**4.7000e-003**	**4.7000e-003**		**4.7000e-003**	**4.7000e-003**	**0.0000**	**67.3729**	**67.3729**	**1.2900e-003**	**1.2400e-003**	**67.7732**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	173820	50.5662	2.2900e-003	4.7000e-004	50.7644
Parking Lot	12471.2	3.6280	1.6000e-004	3.0000e-005	3.6422
Total		**54.1943**	**2.4500e-003**	**5.0000e-004**	**54.4066**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	173820	50.5662	2.2900e-003	4.7000e-004	50.7644
Parking Lot	12471.2	3.6280	1.6000e-004	3.0000e-005	3.6422
Total		**54.1943**	**2.4500e-003**	**5.0000e-004**	**54.4066**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0279	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Unmitigated	0.0279	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0257					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Total	**0.0279**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

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	tons/yr										MT/yr					
Architectural Coating	2.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0257					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Total	**0.0279**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.5629	0.0595	1.4300e-003	5.4758
Unmitigated	3.5629	0.0595	1.4300e-003	5.4758

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	1.8212 / 0.116247	3.5629	0.0595	1.4300e-003	5.4758
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.5629**	**0.0595**	**1.4300e-003**	**5.4758**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	1.8212 / 0.116247	3.5629	0.0595	1.4300e-003	5.4758
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.5629**	**0.0595**	**1.4300e-003**	**5.4758**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.0287	0.8291	0.0000	34.7555
Unmitigated	14.0287	0.8291	0.0000	34.7555

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	69.11	14.0287	0.8291	0.0000	34.7555
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**14.0287**	**0.8291**	**0.0000**	**34.7555**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	69.11	14.0287	0.8291	0.0000	34.7555
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**14.0287**	**0.8291**	**0.0000**	**34.7555**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Construction and Operation
Hotel Annual

Lemoore Mixed Use Project Hotel

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.40	Acre	1.40	60,984.00	0
Hotel	90.00	Room	0.32	130,680.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Plan

Construction Phase -

Architectural Coating - Rule 4601 Architectural Coatings compliance

Area Coating - Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings compliance

Fleet Mix - Project specific truck fleet trip fraction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	65.00
tblArchitecturalCoating	EF_Parking	150.00	65.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	65
tblAreaCoating	Area_EF_Nonresidential_Interior	150	65
tblAreaCoating	Area_EF_Parking	150	65
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFleetMix	HHD	0.16	1.2120e-003
tblFleetMix	LDA	0.49	0.64
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LHD1	0.02	2.4250e-003
tblFleetMix	LHD2	4.5750e-003	1.6160e-003
tblFleetMix	MHD	0.01	4.0400e-004
tblLandUse	LotAcreage	3.00	0.32

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2403	1.7971	1.5836	3.5400e-003	0.0819	0.0783	0.1601	0.0222	0.0756	0.0978	0.0000	306.7839	306.7839	0.0431	0.0000	307.8614
2021	0.4167	0.1247	0.1294	2.6000e-004	5.0200e-003	5.7000e-003	0.0107	1.3600e-003	5.4300e-003	6.7800e-003	0.0000	22.4631	22.4631	3.9400e-003	0.0000	22.5616
Maximum	**0.4167**	**1.7971**	**1.5836**	**3.5400e-003**	**0.0819**	**0.0783**	**0.1601**	**0.0222**	**0.0756**	**0.0978**	**0.0000**	**306.7839**	**306.7839**	**0.0431**	**0.0000**	**307.8614**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2403	1.7971	1.5835	3.5400e-003	0.0819	0.0783	0.1601	0.0222	0.0756	0.0978	0.0000	306.7837	306.7837	0.0431	0.0000	307.8612
2021	0.4167	0.1247	0.1294	2.6000e-004	5.0200e-003	5.7000e-003	0.0107	1.3600e-003	5.4300e-003	6.7800e-003	0.0000	22.4631	22.4631	3.9400e-003	0.0000	22.5616
Maximum	**0.4167**	**1.7971**	**1.5835**	**3.5400e-003**	**0.0819**	**0.0783**	**0.1601**	**0.0222**	**0.0756**	**0.0978**	**0.0000**	**306.7837**	**306.7837**	**0.0431**	**0.0000**	**307.8612**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-9-2020**	**7-8-2020**	0.6924	0.6924
2	**7-9-2020**	**10-8-2020**	0.7002	0.7002
3	**10-9-2020**	**1-8-2021**	0.6975	0.6975
4	**1-9-2021**	**4-8-2021**	0.4885	0.4885
		Highest	0.7002	0.7002

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5543	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6300e-003	1.6300e-003	0.0000	0.0000	1.7400e-003
Energy	0.0177	0.1611	0.1353	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	483.4444	483.4444	0.0173	6.1000e-003	485.6937
Mobile	0.1879	0.2743	1.9525	4.9100e-003	0.5017	3.7600e-003	0.5055	0.1337	3.4900e-003	0.1371	0.0000	444.8131	444.8131	0.0185	0.0000	445.2766
Waste						0.0000	0.0000		0.0000	0.0000	10.0014	0.0000	10.0014	0.5911	0.0000	24.7780
Water						0.0000	0.0000		0.0000	0.0000	0.7243	3.8520	4.5763	0.0746	1.7900e-003	6.9747
Total	**0.7599**	**0.4354**	**2.0886**	**5.8800e-003**	**0.5017**	**0.0160**	**0.5177**	**0.1337**	**0.0157**	**0.1494**	**10.7257**	**932.1112**	**942.8368**	**0.7015**	**7.8900e-003**	**962.7247**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5543	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6300e-003	1.6300e-003	0.0000	0.0000	1.7400e-003
Energy	0.0177	0.1611	0.1353	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	483.4444	483.4444	0.0173	6.1000e-003	485.6937
Mobile	0.1845	0.2608	1.8569	4.5900e-003	0.4671	3.5500e-003	0.4706	0.1244	3.2900e-003	0.1277	0.0000	415.5329	415.5329	0.0175	0.0000	415.9712
Waste						0.0000	0.0000		0.0000	0.0000	10.0014	0.0000	10.0014	0.5911	0.0000	24.7780
Water						0.0000	0.0000		0.0000	0.0000	0.7243	3.8520	4.5763	0.0746	1.7900e-003	6.9747
Total	**0.7566**	**0.4219**	**1.9931**	**5.5600e-003**	**0.4671**	**0.0158**	**0.4829**	**0.1244**	**0.0155**	**0.1400**	**10.7257**	**902.8309**	**913.5566**	**0.7005**	**7.8900e-003**	**933.4193**

	ROG	NOx	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	**0.44**	**3.11**	**4.57**	**5.44**	**6.90**	**1.31**	**6.73**	**6.90**	**1.27**	**6.30**	**0.00**	**3.14**	**3.11**	**0.14**	**0.00**	**3.04**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	4/9/2020	1/13/2021	5	200	
2	Paving	Paving	1/14/2021	1/27/2021	5	10	
3	Architectural Coating	Architectural Coating	1/28/2021	2/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 196,020; Non-Residential Outdoor: 65,340; Striped Parking Area: 3,659 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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
Building Construction	7	81.00	31.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1939	1.4123	1.2595	2.1100e-003		0.0760	0.0760		0.0734	0.0734	0.0000	173.3727	173.3727	0.0322	0.0000	174.1774
Total	**0.1939**	**1.4123**	**1.2595**	**2.1100e-003**		**0.0760**	**0.0760**		**0.0734**	**0.0734**	**0.0000**	**173.3727**	**173.3727**	**0.0322**	**0.0000**	**174.1774**

3.2 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0122	0.3581	0.0728	8.5000e-004	0.0197	1.8200e-003	0.0215	5.6900e-003	1.7500e-003	7.4400e-003	0.0000	80.7133	80.7133	8.9600e-003	0.0000	80.9374
Worker	0.0342	0.0267	0.2513	5.8000e-004	0.0622	4.2000e-004	0.0626	0.0165	3.9000e-004	0.0169	0.0000	52.6979	52.6979	1.9500e-003	0.0000	52.7467
Total	**0.0464**	**0.3848**	**0.3241**	**1.4300e-003**	**0.0819**	**2.2400e-003**	**0.0841**	**0.0222**	**2.1400e-003**	**0.0243**	**0.0000**	**133.4112**	**133.4112**	**0.0109**	**0.0000**	**133.6840**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1939	1.4123	1.2595	2.1100e-003		0.0760	0.0760		0.0734	0.0734	0.0000	173.3725	173.3725	0.0322	0.0000	174.1771
Total	**0.1939**	**1.4123**	**1.2595**	**2.1100e-003**		**0.0760**	**0.0760**		**0.0734**	**0.0734**	**0.0000**	**173.3725**	**173.3725**	**0.0322**	**0.0000**	**174.1771**

3.2 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0122	0.3581	0.0728	8.5000e-004	0.0197	1.8200e-003	0.0215	5.6900e-003	1.7500e-003	7.4400e-003	0.0000	80.7133	80.7133	8.9600e-003	0.0000	80.9374
Worker	0.0342	0.0267	0.2513	5.8000e-004	0.0622	4.2000e-004	0.0626	0.0165	3.9000e-004	0.0169	0.0000	52.6979	52.6979	1.9500e-003	0.0000	52.7467
Total	**0.0464**	**0.3848**	**0.3241**	**1.4300e-003**	**0.0819**	**2.2400e-003**	**0.0841**	**0.0222**	**2.1400e-003**	**0.0243**	**0.0000**	**133.4112**	**133.4112**	**0.0109**	**0.0000**	**133.6840**

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.1600e-003	0.0614	0.0581	1.0000e-004		3.0800e-003	3.0800e-003		2.9700e-003	2.9700e-003	0.0000	8.1696	8.1696	1.4600e-003	0.0000	8.2061
Total	**8.1600e-003**	**0.0614**	**0.0581**	**1.0000e-004**		**3.0800e-003**	**3.0800e-003**		**2.9700e-003**	**2.9700e-003**	**0.0000**	**8.1696**	**8.1696**	**1.4600e-003**	**0.0000**	**8.2061**

3.2 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8000e-004	0.0154	3.0200e-003	4.0000e-005	9.3000e-004	5.0000e-005	9.8000e-004	2.7000e-004	4.0000e-005	3.1000e-004	0.0000	3.7674	3.7674	4.1000e-004	0.0000	3.7778
Worker	1.4800e-003	1.1200e-003	0.0107	3.0000e-005	2.9300e-003	2.0000e-005	2.9500e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.4088	2.4088	8.0000e-005	0.0000	2.4108
Total	**1.9600e-003**	**0.0165**	**0.0137**	**7.0000e-005**	**3.8600e-003**	**7.0000e-005**	**3.9300e-003**	**1.0500e-003**	**6.0000e-005**	**1.1100e-003**	**0.0000**	**6.1762**	**6.1762**	**4.9000e-004**	**0.0000**	**6.1885**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.1600e-003	0.0614	0.0581	1.0000e-004		3.0800e-003	3.0800e-003		2.9700e-003	2.9700e-003	0.0000	8.1696	8.1696	1.4600e-003	0.0000	8.2061
Total	**8.1600e-003**	**0.0614**	**0.0581**	**1.0000e-004**		**3.0800e-003**	**3.0800e-003**		**2.9700e-003**	**2.9700e-003**	**0.0000**	**8.1696**	**8.1696**	**1.4600e-003**	**0.0000**	**8.2061**

3.2 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8000e-004	0.0154	3.0200e-003	4.0000e-005	9.3000e-004	5.0000e-005	9.8000e-004	2.7000e-004	4.0000e-005	3.1000e-004	0.0000	3.7674	3.7674	4.1000e-004	0.0000	3.7778
Worker	1.4800e-003	1.1200e-003	0.0107	3.0000e-005	2.9300e-003	2.0000e-005	2.9500e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.4088	2.4088	8.0000e-005	0.0000	2.4108
Total	**1.9600e-003**	**0.0165**	**0.0137**	**7.0000e-005**	**3.8600e-003**	**7.0000e-005**	**3.9300e-003**	**1.0500e-003**	**6.0000e-005**	**1.1100e-003**	**0.0000**	**6.1762**	**6.1762**	**4.9000e-004**	**0.0000**	**6.1885**

3.3 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.7000e-003**	**0.0387**	**0.0443**	**7.0000e-005**		**2.0800e-003**	**2.0800e-003**		**1.9100e-003**	**1.9100e-003**	**0.0000**	**5.8825**	**5.8825**	**1.8600e-003**	**0.0000**	**5.9291**

3.3 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	1.9000e-003	0.0000	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4295	0.4295	1.0000e-005	0.0000	0.4299
Total	**2.6000e-004**	**2.0000e-004**	**1.9000e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4295**	**0.4295**	**1.0000e-005**	**0.0000**	**0.4299**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.7000e-003**	**0.0387**	**0.0443**	**7.0000e-005**		**2.0800e-003**	**2.0800e-003**		**1.9100e-003**	**1.9100e-003**	**0.0000**	**5.8825**	**5.8825**	**1.8600e-003**	**0.0000**	**5.9291**

3.3 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	1.9000e-003	0.0000	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4295	0.4295	1.0000e-005	0.0000	0.4299
Total	**2.6000e-004**	**2.0000e-004**	**1.9000e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4295**	**0.4295**	**1.0000e-005**	**0.0000**	**0.4299**

3.4 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3992					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.4003**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.4 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.5000e-004	2.3400e-003	1.0000e-005	6.4000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5287	0.5287	2.0000e-005	0.0000	0.5291
Total	**3.3000e-004**	**2.5000e-004**	**2.3400e-003**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**6.5000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5287**	**0.5287**	**2.0000e-005**	**0.0000**	**0.5291**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3992					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.4003**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.4 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.5000e-004	2.3400e-003	1.0000e-005	6.4000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5287	0.5287	2.0000e-005	0.0000	0.5291
Total	**3.3000e-004**	**2.5000e-004**	**2.3400e-003**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**6.5000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5287**	**0.5287**	**2.0000e-005**	**0.0000**	**0.5291**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1845	0.2608	1.8569	4.5900e-003	0.4671	3.5500e-003	0.4706	0.1244	3.2900e-003	0.1277	0.0000	415.5329	415.5329	0.0175	0.0000	415.9712
Unmitigated	0.1879	0.2743	1.9525	4.9100e-003	0.5017	3.7600e-003	0.5055	0.1337	3.4900e-003	0.1371	0.0000	444.8131	444.8131	0.0185	0.0000	445.2766

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	735.30	737.10	535.50	1,343,278	1,250,592
Parking Lot	0.00	0.00	0.00		
Total	735.30	737.10	535.50	1,343,278	1,250,592

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
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.635705	0.036574	0.190436	0.120572	0.002425	0.001616	0.000404	0.001212	0.001742	0.001833	0.005782	0.000964	0.000735
Parking Lot	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	308.0588	308.0588	0.0139	2.8800e-003	309.2659
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	308.0588	308.0588	0.0139	2.8800e-003	309.2659
NaturalGas Mitigated	0.0177	0.1611	0.1353	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.3856	175.3856	3.3600e-003	3.2200e-003	176.4278
NaturalGas Unmitigated	0.0177	0.1611	0.1353	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.3856	175.3856	3.3600e-003	3.2200e-003	176.4278

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	3.2866e+006	0.0177	0.1611	0.1353	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.3856	175.3856	3.3600e-003	3.2200e-003	176.4278
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0177**	**0.1611**	**0.1353**	**9.7000e-004**		**0.0122**	**0.0122**		**0.0122**	**0.0122**	**0.0000**	**175.3856**	**175.3856**	**3.3600e-003**	**3.2200e-003**	**176.4278**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	3.2866e+006	0.0177	0.1611	0.1353	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.3856	175.3856	3.3600e-003	3.2200e-003	176.4278
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0177**	**0.1611**	**0.1353**	**9.7000e-004**		**0.0122**	**0.0122**		**0.0122**	**0.0122**	**0.0000**	**175.3856**	**175.3856**	**3.3600e-003**	**3.2200e-003**	**176.4278**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	1.0376e +006	301.8495	0.0137	2.8200e-003	303.0322
Parking Lot	21344.4	6.2093	2.8000e-004	6.0000e-005	6.2337
Total		**308.0588**	**0.0139**	**2.8800e-003**	**309.2659**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	1.0376e +006	301.8495	0.0137	2.8200e-003	303.0322
Parking Lot	21344.4	6.2093	2.8000e-004	6.0000e-005	6.2337
Total		**308.0588**	**0.0139**	**2.8800e-003**	**309.2659**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5543	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6300e-003	1.6300e-003	0.0000	0.0000	1.7400e-003
Unmitigated	0.5543	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6300e-003	1.6300e-003	0.0000	0.0000	1.7400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0399					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6300e-003	1.6300e-003	0.0000	0.0000	1.7400e-003
Total	**0.5543**	**1.0000e-005**	**8.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6300e-003**	**1.6300e-003**	**0.0000**	**0.0000**	**1.7400e-003**

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	tons/yr										MT/yr					
Architectural Coating	0.0399					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6300e-003	1.6300e-003	0.0000	0.0000	1.7400e-003
Total	**0.5543**	**1.0000e-005**	**8.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6300e-003**	**1.6300e-003**	**0.0000**	**0.0000**	**1.7400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.5763	0.0746	1.7900e-003	6.9747
Unmitigated	4.5763	0.0746	1.7900e-003	6.9747

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.28301 / 0.253668	4.5763	0.0746	1.7900e-003	6.9747
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**4.5763**	**0.0746**	**1.7900e-003**	**6.9747**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.28301 / 0.253668	4.5763	0.0746	1.7900e-003	6.9747
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**4.5763**	**0.0746**	**1.7900e-003**	**6.9747**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.0014	0.5911	0.0000	24.7780
Unmitigated	10.0014	0.5911	0.0000	24.7780

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	49.27	10.0014	0.5911	0.0000	24.7780
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**10.0014**	**0.5911**	**0.0000**	**24.7780**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	49.27	10.0014	0.5911	0.0000	24.7780
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**10.0014**	**0.5911**	**0.0000**	**24.7780**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Construction and Operation
Retail Shopping Center Annual

Lemoore Mixed Use Retail Shopping Center

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.05	Acre	1.05	45,650.88	0
Strip Mall	7.04	1000sqft	0.16	7,040.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Plan Data

Construction Phase -

Architectural Coating - Rule 4601 Architectural Coatings compliance

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings compliance

Fleet Mix - Fleet mix revised to reflect truck survey data for retail shops

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	65.00
tblArchitecturalCoating	EF_Parking	150.00	65.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	65
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	65
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	150	65
tblFleetMix	HHD	0.16	1.1800e-003
tblFleetMix	LDA	0.49	0.64
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LHD1	0.02	7.2900e-004
tblFleetMix	LHD2	4.5750e-003	7.2900e-004
tblFleetMix	MHD	0.01	3.1860e-003
tblLandUse	LandUseSquareFeet	45,738.00	45,650.88

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2063	1.5232	1.3457	2.5000e-003	0.0218	0.0767	0.0985	5.9300e-003	0.0740	0.0800	0.0000	210.4681	210.4681	0.0353	0.0000	211.3504
2021	0.0407	0.1127	0.1176	2.1000e-004	1.7100e-003	5.6500e-003	7.3600e-003	4.6000e-004	5.3800e-003	5.8400e-003	0.0000	17.6087	17.6087	3.5700e-003	0.0000	17.6980
Maximum	**0.2063**	**1.5232**	**1.3457**	**2.5000e-003**	**0.0218**	**0.0767**	**0.0985**	**5.9300e-003**	**0.0740**	**0.0800**	**0.0000**	**210.4681**	**210.4681**	**0.0353**	**0.0000**	**211.3504**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2063	1.5232	1.3457	2.5000e-003	0.0218	0.0767	0.0985	5.9300e-003	0.0740	0.0800	0.0000	210.4678	210.4678	0.0353	0.0000	211.3502
2021	0.0407	0.1127	0.1176	2.1000e-004	1.7100e-003	5.6500e-003	7.3600e-003	4.6000e-004	5.3800e-003	5.8400e-003	0.0000	17.6087	17.6087	3.5700e-003	0.0000	17.6980
Maximum	**0.2063**	**1.5232**	**1.3457**	**2.5000e-003**	**0.0218**	**0.0767**	**0.0985**	**5.9300e-003**	**0.0740**	**0.0800**	**0.0000**	**210.4678**	**210.4678**	**0.0353**	**0.0000**	**211.3502**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-9-2020	7-8-2020	0.5883	0.5883
2	7-9-2020	10-8-2020	0.5948	0.5948
3	10-9-2020	1-8-2021	0.5912	0.5912
4	1-9-2021	4-8-2021	0.1084	0.1084
		Highest	0.5948	0.5948

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0363	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Energy	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	25.3593	25.3593	1.0400e-003	2.7000e-004	25.4668
Mobile	0.0721	0.0998	0.6839	1.6300e-003	0.1644	1.2800e-003	0.1657	0.0438	1.1900e-003	0.0450	0.0000	147.9464	147.9464	6.3700e-003	0.0000	148.1058
Waste						0.0000	0.0000		0.0000	0.0000	1.5001	0.0000	1.5001	0.0887	0.0000	3.7164
Water						0.0000	0.0000		0.0000	0.0000	0.1654	1.1463	1.3117	0.0170	4.1000e-004	1.8606
Total	**0.1088**	**0.1034**	**0.6871**	**1.6500e-003**	**0.1644**	**1.5600e-003**	**0.1660**	**0.0438**	**1.4700e-003**	**0.0453**	**1.6655**	**174.4521**	**176.1176**	**0.1131**	**6.8000e-004**	**179.1497**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0330	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Energy	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	25.3593	25.3593	1.0400e-003	2.7000e-004	25.4668
Mobile	0.0710	0.0953	0.6526	1.5300e-003	0.1531	1.2100e-003	0.1543	0.0408	1.1200e-003	0.0419	0.0000	138.3107	138.3107	6.0400e-003	0.0000	138.4618
Waste						0.0000	0.0000		0.0000	0.0000	1.5001	0.0000	1.5001	0.0887	0.0000	3.7164
Water						0.0000	0.0000		0.0000	0.0000	0.1654	1.1463	1.3117	0.0170	4.1000e-004	1.8606
Total	**0.1044**	**0.0990**	**0.6558**	**1.5500e-003**	**0.1531**	**1.4900e-003**	**0.1546**	**0.0408**	**1.4000e-003**	**0.0422**	**1.6655**	**164.8164**	**166.4819**	**0.1128**	**6.8000e-004**	**169.5057**

	ROG	NOx	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	**4.06**	**4.29**	**4.55**	**6.06**	**6.90**	**4.49**	**6.88**	**6.92**	**4.76**	**6.80**	**0.00**	**5.52**	**5.47**	**0.29**	**0.00**	**5.38**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	4/9/2020	1/13/2021	5	200	
2	Paving	Paving	1/14/2021	1/27/2021	5	10	
3	Architectural Coating	Architectural Coating	1/28/2021	2/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.05

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 10,560; Non-Residential Outdoor: 3,520; Striped Parking Area: 2,739 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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
Building Construction	7	21.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1939	1.4123	1.2595	2.1100e-003		0.0760	0.0760		0.0734	0.0734	0.0000	173.3727	173.3727	0.0322	0.0000	174.1774
Total	**0.1939**	**1.4123**	**1.2595**	**2.1100e-003**		**0.0760**	**0.0760**		**0.0734**	**0.0734**	**0.0000**	**173.3727**	**173.3727**	**0.0322**	**0.0000**	**174.1774**

3.2 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5300e-003	0.1040	0.0211	2.5000e-004	5.7200e-003	5.3000e-004	6.2500e-003	1.6500e-003	5.1000e-004	2.1600e-003	0.0000	23.4329	23.4329	2.6000e-003	0.0000	23.4980
Worker	8.8700e-003	6.9300e-003	0.0652	1.5000e-004	0.0161	1.1000e-004	0.0162	4.2800e-003	1.0000e-004	4.3800e-003	0.0000	13.6624	13.6624	5.1000e-004	0.0000	13.6751
Total	**0.0124**	**0.1109**	**0.0863**	**4.0000e-004**	**0.0218**	**6.4000e-004**	**0.0225**	**5.9300e-003**	**6.1000e-004**	**6.5400e-003**	**0.0000**	**37.0953**	**37.0953**	**3.1100e-003**	**0.0000**	**37.1730**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1939	1.4123	1.2595	2.1100e-003		0.0760	0.0760		0.0734	0.0734	0.0000	173.3725	173.3725	0.0322	0.0000	174.1771
Total	**0.1939**	**1.4123**	**1.2595**	**2.1100e-003**		**0.0760**	**0.0760**		**0.0734**	**0.0734**	**0.0000**	**173.3725**	**173.3725**	**0.0322**	**0.0000**	**174.1771**

3.2 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5300e-003	0.1040	0.0211	2.5000e-004	5.7200e-003	5.3000e-004	6.2500e-003	1.6500e-003	5.1000e-004	2.1600e-003	0.0000	23.4329	23.4329	2.6000e-003	0.0000	23.4980
Worker	8.8700e-003	6.9300e-003	0.0652	1.5000e-004	0.0161	1.1000e-004	0.0162	4.2800e-003	1.0000e-004	4.3800e-003	0.0000	13.6624	13.6624	5.1000e-004	0.0000	13.6751
Total	**0.0124**	**0.1109**	**0.0863**	**4.0000e-004**	**0.0218**	**6.4000e-004**	**0.0225**	**5.9300e-003**	**6.1000e-004**	**6.5400e-003**	**0.0000**	**37.0953**	**37.0953**	**3.1100e-003**	**0.0000**	**37.1730**

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.1600e-003	0.0614	0.0581	1.0000e-004		3.0800e-003	3.0800e-003		2.9700e-003	2.9700e-003	0.0000	8.1696	8.1696	1.4600e-003	0.0000	8.2061
Total	**8.1600e-003**	**0.0614**	**0.0581**	**1.0000e-004**		**3.0800e-003**	**3.0800e-003**		**2.9700e-003**	**2.9700e-003**	**0.0000**	**8.1696**	**8.1696**	**1.4600e-003**	**0.0000**	**8.2061**

3.2 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.4700e-003	8.8000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0938	1.0938	1.2000e-004	0.0000	1.0968
Worker	3.8000e-004	2.9000e-004	2.7700e-003	1.0000e-005	7.6000e-004	0.0000	7.6000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.6245	0.6245	2.0000e-005	0.0000	0.6250
Total	**5.2000e-004**	**4.7600e-003**	**3.6500e-003**	**2.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.8000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.7183**	**1.7183**	**1.4000e-004**	**0.0000**	**1.7218**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.1600e-003	0.0614	0.0581	1.0000e-004		3.0800e-003	3.0800e-003		2.9700e-003	2.9700e-003	0.0000	8.1696	8.1696	1.4600e-003	0.0000	8.2061
Total	**8.1600e-003**	**0.0614**	**0.0581**	**1.0000e-004**		**3.0800e-003**	**3.0800e-003**		**2.9700e-003**	**2.9700e-003**	**0.0000**	**8.1696**	**8.1696**	**1.4600e-003**	**0.0000**	**8.2061**

3.2 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.4700e-003	8.8000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0938	1.0938	1.2000e-004	0.0000	1.0968
Worker	3.8000e-004	2.9000e-004	2.7700e-003	1.0000e-005	7.6000e-004	0.0000	7.6000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.6245	0.6245	2.0000e-005	0.0000	0.6250
Total	**5.2000e-004**	**4.7600e-003**	**3.6500e-003**	**2.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.8000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.7183**	**1.7183**	**1.4000e-004**	**0.0000**	**1.7218**

3.3 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.2500e-003**	**0.0387**	**0.0443**	**7.0000e-005**		**2.0800e-003**	**2.0800e-003**		**1.9100e-003**	**1.9100e-003**	**0.0000**	**5.8825**	**5.8825**	**1.8600e-003**	**0.0000**	**5.9291**

3.3 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	1.9000e-003	0.0000	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4295	0.4295	1.0000e-005	0.0000	0.4299
Total	**2.6000e-004**	**2.0000e-004**	**1.9000e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4295**	**0.4295**	**1.0000e-005**	**0.0000**	**0.4299**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	1.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.2500e-003**	**0.0387**	**0.0443**	**7.0000e-005**		**2.0800e-003**	**2.0800e-003**		**1.9100e-003**	**1.9100e-003**	**0.0000**	**5.8825**	**5.8825**	**1.8600e-003**	**0.0000**	**5.9291**

3.3 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	1.9000e-003	0.0000	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4295	0.4295	1.0000e-005	0.0000	0.4299
Total	**2.6000e-004**	**2.0000e-004**	**1.9000e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4295**	**0.4295**	**1.0000e-005**	**0.0000**	**0.4299**

3.4 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.0264**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.4 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	5.9000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1322	0.1322	0.0000	0.0000	0.1323
Total	**8.0000e-005**	**6.0000e-005**	**5.9000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1322**	**0.1322**	**0.0000**	**0.0000**	**0.1323**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.0264**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.4 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	5.9000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1322	0.1322	0.0000	0.0000	0.1323
Total	**8.0000e-005**	**6.0000e-005**	**5.9000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1322**	**0.1322**	**0.0000**	**0.0000**	**0.1323**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0710	0.0953	0.6526	1.5300e-003	0.1531	1.2100e-003	0.1543	0.0408	1.1200e-003	0.0419	0.0000	138.3107	138.3107	6.0400e-003	0.0000	138.4618
Unmitigated	0.0721	0.0998	0.6839	1.6300e-003	0.1644	1.2800e-003	0.1657	0.0438	1.1900e-003	0.0450	0.0000	147.9464	147.9464	6.3700e-003	0.0000	148.1058

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Strip Mall	312.01	295.96	143.83	439,977	409,619
Total	312.01	295.96	143.83	439,977	409,619

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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735
Strip Mall	0.635582	0.036567	0.190400	0.120572	0.000729	0.000729	0.003186	0.001180	0.001742	0.001833	0.005782	0.000964	0.000735

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	21.3395	21.3395	9.6000e-004	2.0000e-004	21.4231
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	21.3395	21.3395	9.6000e-004	2.0000e-004	21.4231
NaturalGas Mitigated	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0198	4.0198	8.0000e-005	7.0000e-005	4.0437
NaturalGas Unmitigated	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0198	4.0198	8.0000e-005	7.0000e-005	4.0437

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	75328	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0198	4.0198	8.0000e-005	7.0000e-005	4.0437
Total		**4.1000e-004**	**3.6900e-003**	**3.1000e-003**	**2.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**4.0198**	**4.0198**	**8.0000e-005**	**7.0000e-005**	**4.0437**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	75328	4.1000e-004	3.6900e-003	3.1000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0198	4.0198	8.0000e-005	7.0000e-005	4.0437
Total		**4.1000e-004**	**3.6900e-003**	**3.1000e-003**	**2.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**4.0198**	**4.0198**	**8.0000e-005**	**7.0000e-005**	**4.0437**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	15977.8	4.6481	2.1000e-004	4.0000e-005	4.6663
Strip Mall	57376	16.6913	7.5000e-004	1.6000e-004	16.7567
Total		**21.3395**	**9.6000e-004**	**2.0000e-004**	**21.4231**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	15977.8	4.6481	2.1000e-004	4.0000e-005	4.6663
Strip Mall	57376	16.6913	7.5000e-004	1.6000e-004	16.7567
Total		**21.3395**	**9.6000e-004**	**2.0000e-004**	**21.4231**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0330	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Unmitigated	0.0363	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Total	**0.0363**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

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	tons/yr										MT/yr					
Architectural Coating	2.5300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Total	**0.0330**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.3117	0.0170	4.1000e-004	1.8606
Unmitigated	1.3117	0.0170	4.1000e-004	1.8606

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.521471 / 0.319611	1.3117	0.0170	4.1000e-004	1.8606
Total		**1.3117**	**0.0170**	**4.1000e-004**	**1.8606**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.521471 / 0.319611	1.3117	0.0170	4.1000e-004	1.8606
Total		**1.3117**	**0.0170**	**4.1000e-004**	**1.8606**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.5001	0.0887	0.0000	3.7164
Unmitigated	1.5001	0.0887	0.0000	3.7164

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	7.39	1.5001	0.0887	0.0000	3.7164
Total		**1.5001**	**0.0887**	**0.0000**	**3.7164**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	7.39	1.5001	0.0887	0.0000	3.7164
Total		**1.5001**	**0.0887**	**0.0000**	**3.7164**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Multi-Family Residential Summer Daily

Hanford-Armona Mixed Use Apartment 176 Units

Kings County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	176.00	Dwelling Unit	10.35	176,000.00	503

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Plan

Construction Phase -

Architectural Coating - Compliance with Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - 2.2 miles to Downtown Lemoore

Area Mitigation - Comply with Rule 4601 Architectural Coatings

Fleet Mix - Apartment Fleet Mix based on survey of SJV apartments

Hanford-Armona Mixed Use Apartment 176 Units - Kings County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	65.00
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	65
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	150	65
tblFleetMix	HHD	0.16	4.2900e-004
tblFleetMix	LDA	0.49	0.63
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LHD1	0.02	2.5900e-003
tblFleetMix	LHD2	4.7870e-003	1.2580e-003
tblFleetMix	MHD	0.01	2.4200e-004
tblLandUse	LotAcreage	11.00	10.35
tblWoodstoves	NumberCatalytic	10.35	0.00
tblWoodstoves	NumberNoncatalytic	10.35	0.00

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					
2019	4.8492	54.5935	34.2265	0.0637	18.2141	2.3914	20.6055	9.9699	2.2001	12.1700	0.0000	6,309.9610	6,309.9610	1.9498	0.0000	6,358.7066
2020	71.9498	21.8599	22.0657	0.0430	1.1721	1.1356	2.3077	0.3138	1.0678	1.3816	0.0000	4,177.5982	4,177.5982	0.7224	0.0000	4,195.6575
Maximum	**71.9498**	**54.5935**	**34.2265**	**0.0637**	**18.2141**	**2.3914**	**20.6055**	**9.9699**	**2.2001**	**12.1700**	**0.0000**	**6,309.9610**	**6,309.9610**	**1.9498**	**0.0000**	**6,358.7066**

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					
2019	4.8492	54.5935	34.2265	0.0637	8.2777	2.3914	10.6691	4.5080	2.2001	6.7081	0.0000	6,309.9610	6,309.9610	1.9498	0.0000	6,358.7066
2020	71.9498	21.8599	22.0657	0.0430	1.1721	1.1356	2.3077	0.3138	1.0678	1.3816	0.0000	4,177.5982	4,177.5982	0.7224	0.0000	4,195.6575
Maximum	**71.9498**	**54.5935**	**34.2265**	**0.0637**	**8.2777**	**2.3914**	**10.6691**	**4.5080**	**2.2001**	**6.7081**	**0.0000**	**6,309.9610**	**6,309.9610**	**1.9498**	**0.0000**	**6,358.7066**

	ROG	NOx	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**	**51.26**	**0.00**	**43.37**	**53.11**	**0.00**	**40.30**	**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	5.3031	1.7742	15.2518	0.0110		0.2099	0.2099		0.2099	0.2099	0.0000	2,076.0276	2,076.0276	0.0648	0.0376	2,088.8463
Energy	0.0735	0.6282	0.2673	4.0100e-003		0.0508	0.0508		0.0508	0.0508		801.9394	801.9394	0.0154	0.0147	806.7049
Mobile	2.8506	3.6679	32.1873	0.0803	7.5676	0.0533	7.6210	2.0125	0.0495	2.0620		8,018.9423	8,018.9423	0.3186		8,026.9063
Total	**8.2272**	**6.0703**	**47.7064**	**0.0954**	**7.5676**	**0.3141**	**7.8817**	**2.0125**	**0.3102**	**2.3227**	**0.0000**	**10,896.9093**	**10,896.9093**	**0.3987**	**0.0523**	**10,922.4576**

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	4.6023	0.1685	14.5685	7.7000e-004		0.0801	0.0801		0.0801	0.0801	0.0000	26.1452	26.1452	0.0255	0.0000	26.7826
Energy	0.0735	0.6282	0.2673	4.0100e-003		0.0508	0.0508		0.0508	0.0508		801.9394	801.9394	0.0154	0.0147	806.7049
Mobile	2.7926	3.4637	30.3266	0.0750	7.0455	0.0501	7.0956	1.8736	0.0465	1.9201		7,480.5030	7,480.5030	0.2990		7,487.9774
Total	**7.4684**	**4.2604**	**45.1624**	**0.0797**	**7.0455**	**0.1810**	**7.2265**	**1.8736**	**0.1774**	**2.0510**	**0.0000**	**8,308.5876**	**8,308.5876**	**0.3398**	**0.0147**	**8,321.4649**

	ROG	NOx	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	**9.22**	**29.82**	**5.33**	**16.39**	**6.90**	**42.36**	**8.31**	**6.90**	**42.81**	**11.70**	**0.00**	**23.75**	**23.75**	**14.77**	**71.88**	**23.81**

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	4/1/2019	4/12/2019	5	10	
2	Grading	Grading	4/13/2019	5/24/2019	5	30	
3	Building Construction	Building Construction	5/25/2019	7/17/2020	5	300	
4	Paving	Paving	7/18/2020	8/14/2020	5	20	
5	Architectural Coating	Architectural Coating	8/15/2020	9/11/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 356,400; Residential Outdoor: 118,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Hanford-Armona Mixed Use Apartment 176 Units - Kings County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	127.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

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	0.0993	0.0660	0.7648	1.5400e-003	0.1479	1.0100e-003	0.1489	0.0392	9.3000e-004	0.0402		152.9473	152.9473	6.4700e-003		153.1091
Total	**0.0993**	**0.0660**	**0.7648**	**1.5400e-003**	**0.1479**	**1.0100e-003**	**0.1489**	**0.0392**	**9.3000e-004**	**0.0402**		**152.9473**	**152.9473**	**6.4700e-003**		**153.1091**

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**8.1298**	**2.3904**	**10.5202**	**4.4688**	**2.1991**	**6.6679**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

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	0.0993	0.0660	0.7648	1.5400e-003	0.1479	1.0100e-003	0.1489	0.0392	9.3000e-004	0.0402		152.9473	152.9473	6.4700e-003		153.1091
Total	**0.0993**	**0.0660**	**0.7648**	**1.5400e-003**	**0.1479**	**1.0100e-003**	**0.1489**	**0.0392**	**9.3000e-004**	**0.0402**		**152.9473**	**152.9473**	**6.4700e-003**		**153.1091**

3.3 Grading - 2019

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

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	0.1103	0.0733	0.8498	1.7100e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0400e-003	0.0446		169.9415	169.9415	7.1900e-003		170.1212
Total	**0.1103**	**0.0733**	**0.8498**	**1.7100e-003**	**0.1643**	**1.1300e-003**	**0.1654**	**0.0436**	**1.0400e-003**	**0.0446**		**169.9415**	**169.9415**	**7.1900e-003**		**170.1212**

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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.9030**	**2.3827**	**6.2857**	**1.6184**	**2.1920**	**3.8105**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

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	0.1103	0.0733	0.8498	1.7100e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0400e-003	0.0446		169.9415	169.9415	7.1900e-003		170.1212
Total	**0.1103**	**0.0733**	**0.8498**	**1.7100e-003**	**0.1643**	**1.1300e-003**	**0.1654**	**0.0436**	**1.0400e-003**	**0.0446**		**169.9415**	**169.9415**	**7.1900e-003**		**170.1212**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.4 Building Construction - 2019

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	0.0930	2.4738	0.4986	5.5900e-003	0.1289	0.0174	0.1462	0.0371	0.0166	0.0537		584.0879	584.0879	0.0632		585.6675
Worker	0.7005	0.4654	5.3960	0.0109	1.0433	7.1500e-003	1.0504	0.2767	6.5900e-003	0.2833		1,079.1283	1,079.1283	0.0457		1,080.2696
Total	**0.7935**	**2.9391**	**5.8946**	**0.0165**	**1.1721**	**0.0245**	**1.1966**	**0.3138**	**0.0232**	**0.3370**		**1,663.2162**	**1,663.2162**	**0.1088**		**1,665.9371**

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.4 Building Construction - 2019

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	0.0930	2.4738	0.4986	5.5900e-003	0.1289	0.0174	0.1462	0.0371	0.0166	0.0537		584.0879	584.0879	0.0632		585.6675
Worker	0.7005	0.4654	5.3960	0.0109	1.0433	7.1500e-003	1.0504	0.2767	6.5900e-003	0.2833		1,079.1283	1,079.1283	0.0457		1,080.2696
Total	**0.7935**	**2.9391**	**5.8946**	**0.0165**	**1.1721**	**0.0245**	**1.1966**	**0.3138**	**0.0232**	**0.3370**		**1,663.2162**	**1,663.2162**	**0.1088**		**1,665.9371**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

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	0.0768	2.2653	0.4346	5.5400e-003	0.1289	0.0116	0.1405	0.0371	0.0111	0.0482		578.9150	578.9150	0.0601		580.4167
Worker	0.6335	0.4085	4.7826	0.0105	1.0433	6.9100e-003	1.0502	0.2767	6.3700e-003	0.2831		1,045.6202	1,045.6202	0.0395		1,046.6063
Total	**0.7103**	**2.6739**	**5.2172**	**0.0161**	**1.1721**	**0.0185**	**1.1907**	**0.3138**	**0.0175**	**0.3313**		**1,624.5352**	**1,624.5352**	**0.0995**		**1,627.0230**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

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	0.0768	2.2653	0.4346	5.5400e-003	0.1289	0.0116	0.1405	0.0371	0.0111	0.0482		578.9150	578.9150	0.0601		580.4167
Worker	0.6335	0.4085	4.7826	0.0105	1.0433	6.9100e-003	1.0502	0.2767	6.3700e-003	0.2831		1,045.6202	1,045.6202	0.0395		1,046.6063
Total	**0.7103**	**2.6739**	**5.2172**	**0.0161**	**1.1721**	**0.0185**	**1.1907**	**0.3138**	**0.0175**	**0.3313**		**1,624.5352**	**1,624.5352**	**0.0995**		**1,627.0230**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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	0.0748	0.0483	0.5649	1.2400e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		123.4984	123.4984	4.6600e-003		123.6149
Total	**0.0748**	**0.0483**	**0.5649**	**1.2400e-003**	**0.1232**	**8.2000e-004**	**0.1240**	**0.0327**	**7.5000e-004**	**0.0334**		**123.4984**	**123.4984**	**4.6600e-003**		**123.6149**

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

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	0.0748	0.0483	0.5649	1.2400e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		123.4984	123.4984	4.6600e-003		123.6149
Total	**0.0748**	**0.0483**	**0.5649**	**1.2400e-003**	**0.1232**	**8.2000e-004**	**0.1240**	**0.0327**	**7.5000e-004**	**0.0334**		**123.4984**	**123.4984**	**4.6600e-003**		**123.6149**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	71.5829					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**71.8251**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.6 Architectural Coating - 2020

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	0.1247	0.0804	0.9415	2.0700e-003	0.2054	1.3600e-003	0.2067	0.0545	1.2500e-003	0.0557		205.8307	205.8307	7.7700e-003		206.0249
Total	**0.1247**	**0.0804**	**0.9415**	**2.0700e-003**	**0.2054**	**1.3600e-003**	**0.2067**	**0.0545**	**1.2500e-003**	**0.0557**		**205.8307**	**205.8307**	**7.7700e-003**		**206.0249**

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	71.5829					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**71.8251**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.6 Architectural Coating - 2020

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	0.1247	0.0804	0.9415	2.0700e-003	0.2054	1.3600e-003	0.2067	0.0545	1.2500e-003	0.0557		205.8307	205.8307	7.7700e-003		206.0249
Total	**0.1247**	**0.0804**	**0.9415**	**2.0700e-003**	**0.2054**	**1.3600e-003**	**0.2067**	**0.0545**	**1.2500e-003**	**0.0557**		**205.8307**	**205.8307**	**7.7700e-003**		**206.0249**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	2.7926	3.4637	30.3266	0.0750	7.0455	0.0501	7.0956	1.8736	0.0465	1.9201		7,480.5030	7,480.5030	0.2990		7,487.9774
Unmitigated	2.8506	3.6679	32.1873	0.0803	7.5676	0.0533	7.6210	2.0125	0.0495	2.0620		8,018.9423	8,018.9423	0.3186		8,026.9063

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,159.84	1,260.16	1068.32	3,323,349	3,094,038
Total	1,159.84	1,260.16	1,068.32	3,323,349	3,094,038

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
Apartments Low Rise	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.629948	0.037566	0.189820	0.126841	0.002590	0.001258	0.000242	0.000429	0.001758	0.001914	0.005918	0.000991	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0735	0.6282	0.2673	4.0100e-003		0.0508	0.0508		0.0508	0.0508		801.9394	801.9394	0.0154	0.0147	806.7049
NaturalGas Unmitigated	0.0735	0.6282	0.2673	4.0100e-003		0.0508	0.0508		0.0508	0.0508		801.9394	801.9394	0.0154	0.0147	806.7049

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					
Apartments Low Rise	6816.48	0.0735	0.6282	0.2673	4.0100e-003		0.0508	0.0508		0.0508	0.0508		801.9394	801.9394	0.0154	0.0147	806.7049
Total		**0.0735**	**0.6282**	**0.2673**	**4.0100e-003**		**0.0508**	**0.0508**		**0.0508**	**0.0508**		**801.9394**	**801.9394**	**0.0154**	**0.0147**	**806.7049**

5.2 Energy by Land Use - NaturalGas

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					
Apartments Low Rise	6.81648	0.0735	0.6282	0.2673	4.0100e-003		0.0508	0.0508		0.0508	0.0508		801.9394	801.9394	0.0154	0.0147	806.7049
Total		**0.0735**	**0.6282**	**0.2673**	**4.0100e-003**		**0.0508**	**0.0508**		**0.0508**	**0.0508**		**801.9394**	**801.9394**	**0.0154**	**0.0147**	**806.7049**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive 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	4.6023	0.1685	14.5685	7.7000e-004		0.0801	0.0801		0.0801	0.0801	0.0000	26.1452	26.1452	0.0255	0.0000	26.7826
Unmitigated	5.3031	1.7742	15.2518	0.0110		0.2099	0.2099		0.2099	0.2099	0.0000	2,076.0276	2,076.0276	0.0648	0.0376	2,088.8463

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	0.9052					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1879	1.6057	0.6833	0.0103		0.1298	0.1298		0.1298	0.1298	0.0000	2,049.8824	2,049.8824	0.0393	0.0376	2,062.0638
Landscaping	0.4436	0.1685	14.5685	7.7000e-004		0.0801	0.0801		0.0801	0.0801		26.1452	26.1452	0.0255		26.7826
Total	**5.3031**	**1.7742**	**15.2518**	**0.0110**		**0.2099**	**0.2099**		**0.2099**	**0.2099**	**0.0000**	**2,076.0276**	**2,076.0276**	**0.0648**	**0.0376**	**2,088.8463**

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	0.3922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4436	0.1685	14.5685	7.7000e-004		0.0801	0.0801		0.0801	0.0801		26.1452	26.1452	0.0255		26.7826
Total	**4.6023**	**0.1685**	**14.5685**	**7.7000e-004**		**0.0801**	**0.0801**		**0.0801**	**0.0801**	**0.0000**	**26.1452**	**26.1452**	**0.0255**	**0.0000**	**26.7826**

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 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Gas Station Convenience Market Summer Daily

Hanford Armona Rd Mixed Use Gas Station Run

Kings County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.55	Acre	1.55	67,518.00	0
Convenience Market With Gas Pumps	4.00	Pump	0.08	3,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 3,500 SF convenience market with 8 fueling position

Construction Phase -

Architectural Coating - Rule 4601 Architectural Coatings

Area Coating - Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings

Fleet Mix - Project specific fleet mix for gas station/convenience store

Hanford Armona Rd Mixed Use Gas Station Run - Kings County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	65.00
tblArchitecturalCoating	EF_Parking	150.00	65.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	65
tblAreaCoating	Area_EF_Nonresidential_Interior	150	65
tblAreaCoating	Area_EF_Parking	150	65
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	65	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	65	150
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	65	150
tblFleetMix	HHD	0.16	4.3200e-004
tblFleetMix	LDA	0.49	0.62
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	MHD	0.01	2.0300e-004
tblLandUse	LandUseSquareFeet	564.70	3,500.00
tblLandUse	LotAcreage	0.01	0.08

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					
2018	2.8366	20.7809	15.6368	0.0282	5.8653	1.0726	6.8180	2.9711	1.0354	3.8476	0.0000	2,656.9178	2,656.9178	0.5435	0.0000	2,668.4570
2019	3.6289	17.6488	15.0341	0.0281	0.3196	0.9284	1.2480	0.0866	0.8965	0.9832	0.0000	2,633.3352	2,633.3352	0.4383	0.0000	2,644.2920
Maximum	**3.6289**	**20.7809**	**15.6368**	**0.0282**	**5.8653**	**1.0726**	**6.8180**	**2.9711**	**1.0354**	**3.8476**	**0.0000**	**2,656.9178**	**2,656.9178**	**0.5435**	**0.0000**	**2,668.4570**

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					
2018	2.8366	20.7809	15.6368	0.0282	2.6755	1.0726	3.6283	1.3466	1.0354	2.2231	0.0000	2,656.9178	2,656.9178	0.5435	0.0000	2,668.4570
2019	3.6289	17.6488	15.0341	0.0281	0.3196	0.9284	1.2480	0.0866	0.8965	0.9832	0.0000	2,633.3352	2,633.3352	0.4383	0.0000	2,644.2920
Maximum	**3.6289**	**20.7809**	**15.6368**	**0.0282**	**2.6755**	**1.0726**	**3.6283**	**1.3466**	**1.0354**	**2.2231**	**0.0000**	**2,656.9178**	**2,656.9178**	**0.5435**	**0.0000**	**2,668.4570**

	ROG	NOx	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**	**51.57**	**0.00**	**39.55**	**53.13**	**0.00**	**33.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1080	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2100e-003	1.2100e-003	0.0000		1.3000e-003
Energy	1.1100e-003	0.0101	8.4500e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		12.0709	12.0709	2.3000e-004	2.2000e-004	12.1426
Mobile	3.4419	2.3219	16.0670	0.0286	2.4487	0.0293	2.4780	0.6521	0.0272	0.6793		2,844.5436	2,844.5436	0.1403		2,848.0509
Total	**3.5510**	**2.3320**	**16.0760**	**0.0286**	**2.4487**	**0.0300**	**2.4787**	**0.6521**	**0.0279**	**0.6801**		**2,856.6157**	**2,856.6157**	**0.1405**	**2.2000e-004**	**2,860.1949**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1199	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2100e-003	1.2100e-003	0.0000		1.3000e-003
Energy	1.1100e-003	0.0101	8.4500e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		12.0709	12.0709	2.3000e-004	2.2000e-004	12.1426
Mobile	3.4234	2.2426	15.5141	0.0269	2.2797	0.0280	2.3078	0.6071	0.0260	0.6331		2,672.8445	2,672.8445	0.1344		2,676.2040
Total	**3.5444**	**2.2527**	**15.5232**	**0.0269**	**2.2797**	**0.0288**	**2.3085**	**0.6071**	**0.0268**	**0.6339**		**2,684.9167**	**2,684.9167**	**0.1346**	**2.2000e-004**	**2,688.3479**

	ROG	NOx	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	**0.19**	**3.40**	**3.44**	**5.97**	**6.90**	**4.10**	**6.87**	**6.90**	**4.12**	**6.79**	**0.00**	**6.01**	**6.01**	**4.21**	**0.00**	**6.01**

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	8/17/2018	8/20/2018	5	2	
2	Grading	Grading	8/21/2018	8/24/2018	5	4	
3	Building Construction	Building Construction	8/25/2018	5/31/2019	5	200	
4	Paving	Paving	6/1/2019	6/14/2019	5	10	
5	Architectural Coating	Architectural Coating	6/15/2019	6/28/2019	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 1.55

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,250; Non-Residential Outdoor: 1,750; Striped Parking Area: 4,051 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	29.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 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					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.8061	20.7472	8.0808	0.0172		0.9523	0.9523		0.8761	0.8761		1,735.3630	1,735.3630	0.5402		1,748.8690
Total	**1.8061**	**20.7472**	**8.0808**	**0.0172**	**5.7996**	**0.9523**	**6.7518**	**2.9537**	**0.8761**	**3.8298**		**1,735.3630**	**1,735.3630**	**0.5402**		**1,748.8690**

3.2 Site Preparation - 2018

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	0.0494	0.0337	0.3875	7.1000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		70.0592	70.0592	3.2900e-003		70.1413
Total	**0.0494**	**0.0337**	**0.3875**	**7.1000e-004**	**0.0657**	**4.7000e-004**	**0.0662**	**0.0174**	**4.3000e-004**	**0.0179**		**70.0592**	**70.0592**	**3.2900e-003**		**70.1413**

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					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.8061	20.7472	8.0808	0.0172		0.9523	0.9523		0.8761	0.8761	0.0000	1,735.3630	1,735.3630	0.5402		1,748.8690
Total	**1.8061**	**20.7472**	**8.0808**	**0.0172**	**2.6098**	**0.9523**	**3.5621**	**1.3292**	**0.8761**	**2.2052**	**0.0000**	**1,735.3630**	**1,735.3630**	**0.5402**		**1,748.8690**

3.2 Site Preparation - 2018

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	0.0494	0.0337	0.3875	7.1000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		70.0592	70.0592	3.2900e-003		70.1413
Total	**0.0494**	**0.0337**	**0.3875**	**7.1000e-004**	**0.0657**	**4.7000e-004**	**0.0662**	**0.0174**	**4.3000e-004**	**0.0179**		**70.0592**	**70.0592**	**3.2900e-003**		**70.1413**

3.3 Grading - 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					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311		1,421.2605	1,421.2605	0.4425		1,432.3219
Total	**1.4972**	**17.0666**	**6.7630**	**0.0141**	**4.9143**	**0.7947**	**5.7090**	**2.5256**	**0.7311**	**3.2568**		**1,421.2605**	**1,421.2605**	**0.4425**		**1,432.3219**

3.3 Grading - 2018

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	0.0494	0.0337	0.3875	7.1000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		70.0592	70.0592	3.2900e-003		70.1413
Total	**0.0494**	**0.0337**	**0.3875**	**7.1000e-004**	**0.0657**	**4.7000e-004**	**0.0662**	**0.0174**	**4.3000e-004**	**0.0179**		**70.0592**	**70.0592**	**3.2900e-003**		**70.1413**

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					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311	0.0000	1,421.2605	1,421.2605	0.4425		1,432.3219
Total	**1.4972**	**17.0666**	**6.7630**	**0.0141**	**2.2114**	**0.7947**	**3.0061**	**1.1365**	**0.7311**	**1.8677**	**0.0000**	**1,421.2605**	**1,421.2605**	**0.4425**		**1,432.3219**

3.3 Grading - 2018

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	0.0494	0.0337	0.3875	7.1000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		70.0592	70.0592	3.2900e-003		70.1413
Total	**0.0494**	**0.0337**	**0.3875**	**7.1000e-004**	**0.0657**	**4.7000e-004**	**0.0662**	**0.0174**	**4.3000e-004**	**0.0179**		**70.0592**	**70.0592**	**3.2900e-003**		**70.1413**

3.4 Building Construction - 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					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216		2,030.8389	2,030.8389	0.4088		2,041.0596
Total	**2.5919**	**17.4280**	**13.8766**	**0.0220**		**1.0580**	**1.0580**		**1.0216**	**1.0216**		**2,030.8389**	**2,030.8389**	**0.4088**		**2,041.0596**

3.4 Building Construction - 2018

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	0.0658	1.6513	0.3554	3.5600e-003	0.0814	0.0129	0.0942	0.0234	0.0123	0.0357		372.1145	372.1145	0.0408		373.1351
Worker	0.1789	0.1222	1.4048	2.5600e-003	0.2382	1.6900e-003	0.2399	0.0632	1.5600e-003	0.0648		253.9645	253.9645	0.0119		254.2623
Total	**0.2447**	**1.7736**	**1.7602**	**6.1200e-003**	**0.3196**	**0.0145**	**0.3341**	**0.0866**	**0.0139**	**0.1005**		**626.0789**	**626.0789**	**0.0527**		**627.3974**

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	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216	0.0000	2,030.8389	2,030.8389	0.4088		2,041.0596
Total	**2.5919**	**17.4280**	**13.8766**	**0.0220**		**1.0580**	**1.0580**		**1.0216**	**1.0216**	**0.0000**	**2,030.8389**	**2,030.8389**	**0.4088**		**2,041.0596**

3.4 Building Construction - 2018

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	0.0658	1.6513	0.3554	3.5600e-003	0.0814	0.0129	0.0942	0.0234	0.0123	0.0357		372.1145	372.1145	0.0408		373.1351
Worker	0.1789	0.1222	1.4048	2.5600e-003	0.2382	1.6900e-003	0.2399	0.0632	1.5600e-003	0.0648		253.9645	253.9645	0.0119		254.2623
Total	**0.2447**	**1.7736**	**1.7602**	**6.1200e-003**	**0.3196**	**0.0145**	**0.3341**	**0.0866**	**0.0139**	**0.1005**		**626.0789**	**626.0789**	**0.0527**		**627.3974**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846		2,018.0224	2,018.0224	0.3879		2,027.7210
Total	**2.2721**	**15.9802**	**13.4870**	**0.0220**		**0.9158**	**0.9158**		**0.8846**	**0.8846**		**2,018.0224**	**2,018.0224**	**0.3879**		**2,027.7210**

3.4 Building Construction - 2019

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	0.0587	1.5624	0.3149	3.5300e-003	0.0814	0.0110	0.0923	0.0234	0.0105	0.0339		368.8976	368.8976	0.0399		369.8953
Worker	0.1599	0.1063	1.2322	2.4800e-003	0.2382	1.6300e-003	0.2399	0.0632	1.5000e-003	0.0647		246.4151	246.4151	0.0104		246.6757
Total	**0.2187**	**1.6686**	**1.5471**	**6.0100e-003**	**0.3196**	**0.0126**	**0.3322**	**0.0866**	**0.0120**	**0.0986**		**615.3128**	**615.3128**	**0.0503**		**616.5710**

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	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210
Total	**2.2721**	**15.9802**	**13.4870**	**0.0220**		**0.9158**	**0.9158**		**0.8846**	**0.8846**	**0.0000**	**2,018.0224**	**2,018.0224**	**0.3879**		**2,027.7210**

3.4 Building Construction - 2019

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	0.0587	1.5624	0.3149	3.5300e-003	0.0814	0.0110	0.0923	0.0234	0.0105	0.0339		368.8976	368.8976	0.0399		369.8953
Worker	0.1599	0.1063	1.2322	2.4800e-003	0.2382	1.6300e-003	0.2399	0.0632	1.5000e-003	0.0647		246.4151	246.4151	0.0104		246.6757
Total	**0.2187**	**1.6686**	**1.5471**	**6.0100e-003**	**0.3196**	**0.0126**	**0.3322**	**0.0866**	**0.0120**	**0.0986**		**615.3128**	**615.3128**	**0.0503**		**616.5710**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815		1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.4061					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3099**	**9.1743**	**8.9025**	**0.0135**		**0.5225**	**0.5225**		**0.4815**	**0.4815**		**1,325.0953**	**1,325.0953**	**0.4112**		**1,335.3751**

3.5 Paving - 2019

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	0.0717	0.0476	0.5524	1.1100e-003	0.1068	7.3000e-004	0.1075	0.0283	6.7000e-004	0.0290		110.4620	110.4620	4.6700e-003		110.5788
Total	**0.0717**	**0.0476**	**0.5524**	**1.1100e-003**	**0.1068**	**7.3000e-004**	**0.1075**	**0.0283**	**6.7000e-004**	**0.0290**		**110.4620**	**110.4620**	**4.6700e-003**		**110.5788**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815	0.0000	1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.4061					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3099**	**9.1743**	**8.9025**	**0.0135**		**0.5225**	**0.5225**		**0.4815**	**0.4815**	**0.0000**	**1,325.0953**	**1,325.0953**	**0.4112**		**1,335.3751**

3.5 Paving - 2019

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	0.0717	0.0476	0.5524	1.1100e-003	0.1068	7.3000e-004	0.1075	0.0283	6.7000e-004	0.0290		110.4620	110.4620	4.6700e-003		110.5788
Total	**0.0717**	**0.0476**	**0.5524**	**1.1100e-003**	**0.1068**	**7.3000e-004**	**0.1075**	**0.0283**	**6.7000e-004**	**0.0290**		**110.4620**	**110.4620**	**4.6700e-003**		**110.5788**

3.6 Architectural Coating - 2019

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	3.3294					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**3.5958**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.6 Architectural Coating - 2019

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	0.0331	0.0220	0.2549	5.1000e-004	0.0493	3.4000e-004	0.0496	0.0131	3.1000e-004	0.0134		50.9824	50.9824	2.1600e-003		51.0364
Total	**0.0331**	**0.0220**	**0.2549**	**5.1000e-004**	**0.0493**	**3.4000e-004**	**0.0496**	**0.0131**	**3.1000e-004**	**0.0134**		**50.9824**	**50.9824**	**2.1600e-003**		**51.0364**

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	3.3294					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**3.5958**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.6 Architectural Coating - 2019

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	0.0331	0.0220	0.2549	5.1000e-004	0.0493	3.4000e-004	0.0496	0.0131	3.1000e-004	0.0134		50.9824	50.9824	2.1600e-003		51.0364
Total	**0.0331**	**0.0220**	**0.2549**	**5.1000e-004**	**0.0493**	**3.4000e-004**	**0.0496**	**0.0131**	**3.1000e-004**	**0.0134**		**50.9824**	**50.9824**	**2.1600e-003**		**51.0364**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	3.4234	2.2426	15.5141	0.0269	2.2797	0.0280	2.3078	0.6071	0.0260	0.6331		2,672.8445	2,672.8445	0.1344		2,676.2040
Unmitigated	3.4419	2.3219	16.0670	0.0286	2.4487	0.0293	2.4780	0.6521	0.0272	0.6793		2,844.5436	2,844.5436	0.1403		2,848.0509

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	2,170.40	817.88	667.52	945,405	880,172
Parking Lot	0.00	0.00	0.00		
Total	2,170.40	817.88	667.52	945,405	880,172

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
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.621212	0.035740	0.186095	0.120572	0.020115	0.004575	0.000203	0.000432	0.001742	0.001833	0.005782	0.000964	0.000735
Parking Lot	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.1100e-003	0.0101	8.4500e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		12.0709	12.0709	2.3000e-004	2.2000e-004	12.1426
NaturalGas Unmitigated	1.1100e-003	0.0101	8.4500e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		12.0709	12.0709	2.3000e-004	2.2000e-004	12.1426

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					
Convenience Market With Gas Pumps	102.603	1.1100e-003	0.0101	8.4500e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		12.0709	12.0709	2.3000e-004	2.2000e-004	12.1426
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.1100e-003**	**0.0101**	**8.4500e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**		**12.0709**	**12.0709**	**2.3000e-004**	**2.2000e-004**	**12.1426**

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					
Convenience Market With Gas Pumps	0.102603	1.1100e-003	0.0101	8.4500e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		12.0709	12.0709	2.3000e-004	2.2000e-004	12.1426
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.1100e-003**	**0.0101**	**8.4500e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**		**12.0709**	**12.0709**	**2.3000e-004**	**2.2000e-004**	**12.1426**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1199	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2100e-003	1.2100e-003	0.0000		1.3000e-003
Unmitigated	0.1080	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2100e-003	1.2100e-003	0.0000		1.3000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.1200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2100e-003	1.2100e-003	0.0000		1.3000e-003
Total	**0.1080**	**1.0000e-005**	**5.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.2100e-003**	**1.2100e-003**	**0.0000**		**1.3000e-003**

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	0.0211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2100e-003	1.2100e-003	0.0000		1.3000e-003
Total	**0.1199**	**1.0000e-005**	**5.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.2100e-003**	**1.2100e-003**	**0.0000**		**1.3000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Fast Food Restaurants
Summer Daily

Lemoore Mixed Use Fast Food Pads

Kings County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	6.00	1000sqft	0.14	6,000.00	0
Parking Lot	0.82	Acre	0.82	35,632.08	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Plan

Construction Phase -

Architectural Coating - Rule 4601 Architectural Coatings

Fleet Mix - Project specfic fleet mix for fast food restaurant

Area Coating - Rule 4601 Architectural Coatings compliance

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	65.00
tblArchitecturalCoating	EF_Parking	150.00	65.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	65
tblAreaCoating	Area_EF_Nonresidential_Interior	150	65
tblAreaCoating	Area_EF_Parking	150	65
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFleetMix	HHD	0.16	8.9000e-005
tblFleetMix	LDA	0.49	0.64
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LHD1	0.02	8.9000e-004
tblFleetMix	LHD2	4.5750e-003	5.3000e-004
tblFleetMix	MHD	0.01	5.9000e-005
tblLandUse	LandUseSquareFeet	35,719.20	35,632.08

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	8.7760	9.7416	8.1878	0.0148	0.8349	0.5276	1.3027	0.4356	0.4855	0.8817	0.0000	1,456.2275	1,456.2275	0.3841	0.0000	1,465.8309
Maximum	**8.7760**	**9.7416**	**8.1878**	**0.0148**	**0.8349**	**0.5276**	**1.3027**	**0.4356**	**0.4855**	**0.8817**	**0.0000**	**1,456.2275**	**1,456.2275**	**0.3841**	**0.0000**	**1,465.8309**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	8.7760	9.7416	8.1878	0.0148	0.4209	0.5276	0.8886	0.2080	0.4855	0.6542	0.0000	1,456.2275	1,456.2275	0.3841	0.0000	1,465.8309
Maximum	**8.7760**	**9.7416**	**8.1878**	**0.0148**	**0.4209**	**0.5276**	**0.8886**	**0.2080**	**0.4855**	**0.6542**	**0.0000**	**1,456.2275**	**1,456.2275**	**0.3841**	**0.0000**	**1,465.8309**

Lemoore Mixed Use Fast Food Pads - Kings County, Summer

	ROG	NOx	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**	**49.59**	**0.00**	**31.78**	**52.25**	**0.00**	**25.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1528	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Energy	0.0373	0.3391	0.2849	2.0300e-003		0.0258	0.0258		0.0258	0.0258		406.9363	406.9363	7.8000e-003	7.4600e-003	409.3546
Mobile	7.1826	4.8120	43.6110	0.0915	8.4874	0.0719	8.5593	2.2563	0.0665	2.3228		9,113.9727	9,113.9727	0.3891		9,123.6989
Total	**7.3727**	**5.1511**	**43.8965**	**0.0935**	**8.4874**	**0.0976**	**8.5851**	**2.2563**	**0.0922**	**2.3486**		**9,520.9106**	**9,520.9106**	**0.3969**	**7.4600e-003**	**9,533.0551**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1528	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Energy	0.0373	0.3391	0.2849	2.0300e-003		0.0258	0.0258		0.0258	0.0258		406.9363	406.9363	7.8000e-003	7.4600e-003	409.3546
Mobile	7.1237	4.6180	41.7000	0.0857	7.9018	0.0685	7.9703	2.1007	0.0633	2.1640		8,533.1156	8,533.1156	0.3689		8,542.3390
Total	**7.3137**	**4.9571**	**41.9855**	**0.0877**	**7.9018**	**0.0943**	**7.9960**	**2.1007**	**0.0891**	**2.1898**		**8,940.0535**	**8,940.0535**	**0.3767**	**7.4600e-003**	**8,951.6951**

	ROG	NOx	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	**0.80**	**3.77**	**4.35**	**6.22**	**6.90**	**3.47**	**6.86**	**6.90**	**3.40**	**6.76**	**0.00**	**6.10**	**6.10**	**5.07**	**0.00**	**6.10**

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	4/1/2020	4/1/2020	5	1	
2	Grading	Grading	4/2/2020	4/3/2020	5	2	
3	Building Construction	Building Construction	4/4/2020	8/21/2020	5	100	
4	Paving	Paving	8/22/2020	8/28/2020	5	5	
5	Architectural Coating	Architectural Coating	8/29/2020	9/4/2020	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.82

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,000; Non-Residential Outdoor: 3,000; Striped Parking Area: 2,138 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	17.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085		943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.5303**	**0.3353**	**0.8656**	**0.0573**	**0.3085**	**0.3658**		**943.4872**	**943.4872**	**0.3051**		**951.1158**

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	0.0249	0.0161	0.1883	4.1000e-004	0.0411	2.7000e-004	0.0414	0.0109	2.5000e-004	0.0112		41.1662	41.1662	1.5500e-003		41.2050
Total	**0.0249**	**0.0161**	**0.1883**	**4.1000e-004**	**0.0411**	**2.7000e-004**	**0.0414**	**0.0109**	**2.5000e-004**	**0.0112**		**41.1662**	**41.1662**	**1.5500e-003**		**41.2050**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085	0.0000	943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.2386**	**0.3353**	**0.5740**	**0.0258**	**0.3085**	**0.3343**	**0.0000**	**943.4872**	**943.4872**	**0.3051**		**951.1158**

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	0.0249	0.0161	0.1883	4.1000e-004	0.0411	2.7000e-004	0.0414	0.0109	2.5000e-004	0.0112		41.1662	41.1662	1.5500e-003		41.2050
Total	**0.0249**	**0.0161**	**0.1883**	**4.1000e-004**	**0.0411**	**2.7000e-004**	**0.0414**	**0.0109**	**2.5000e-004**	**0.0112**		**41.1662**	**41.1662**	**1.5500e-003**		**41.2050**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.7528**	**0.4672**	**1.2200**	**0.4138**	**0.4457**	**0.8595**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

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	0.0499	0.0322	0.3766	8.3000e-004	0.0822	5.4000e-004	0.0827	0.0218	5.0000e-004	0.0223		82.3323	82.3323	3.1100e-003		82.4100
Total	**0.0499**	**0.0322**	**0.3766**	**8.3000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**5.0000e-004**	**0.0223**		**82.3323**	**82.3323**	**3.1100e-003**		**82.4100**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.3387**	**0.4672**	**0.8059**	**0.1862**	**0.4457**	**0.6319**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

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	0.0499	0.0322	0.3766	8.3000e-004	0.0822	5.4000e-004	0.0827	0.0218	5.0000e-004	0.0223		82.3323	82.3323	3.1100e-003		82.4100
Total	**0.0499**	**0.0322**	**0.3766**	**8.3000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**5.0000e-004**	**0.0223**		**82.3323**	**82.3323**	**3.1100e-003**		**82.4100**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**		**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

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	0.0283	0.8346	0.1601	2.0400e-003	0.0475	4.2800e-003	0.0518	0.0137	4.0900e-003	0.0178		213.2845	213.2845	0.0221		213.8377
Worker	0.0848	0.0547	0.6402	1.4100e-003	0.1397	9.3000e-004	0.1406	0.0370	8.5000e-004	0.0379		139.9649	139.9649	5.2800e-003		140.0969
Total	**0.1131**	**0.8893**	**0.8003**	**3.4500e-003**	**0.1871**	**5.2100e-003**	**0.1923**	**0.0507**	**4.9400e-003**	**0.0557**		**353.2494**	**353.2494**	**0.0274**		**353.9346**

3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**	**0.0000**	**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

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	0.0283	0.8346	0.1601	2.0400e-003	0.0475	4.2800e-003	0.0518	0.0137	4.0900e-003	0.0178		213.2845	213.2845	0.0221		213.8377
Worker	0.0848	0.0547	0.6402	1.4100e-003	0.1397	9.3000e-004	0.1406	0.0370	8.5000e-004	0.0379		139.9649	139.9649	5.2800e-003		140.0969
Total	**0.1131**	**0.8893**	**0.8003**	**3.4500e-003**	**0.1871**	**5.2100e-003**	**0.1923**	**0.0507**	**4.9400e-003**	**0.0557**		**353.2494**	**353.2494**	**0.0274**		**353.9346**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669		1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.4297					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2012**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**		**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

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	0.0898	0.0579	0.6779	1.4900e-003	0.1479	9.8000e-004	0.1489	0.0392	9.0000e-004	0.0401		148.1981	148.1981	5.5900e-003		148.3379
Total	**0.0898**	**0.0579**	**0.6779**	**1.4900e-003**	**0.1479**	**9.8000e-004**	**0.1489**	**0.0392**	**9.0000e-004**	**0.0401**		**148.1981**	**148.1981**	**5.5900e-003**		**148.3379**

3.5 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669	0.0000	1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.4297					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2012**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**	**0.0000**	**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

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	0.0898	0.0579	0.6779	1.4900e-003	0.1479	9.8000e-004	0.1489	0.0392	9.0000e-004	0.0401		148.1981	148.1981	5.5900e-003		148.3379
Total	**0.0898**	**0.0579**	**0.6779**	**1.4900e-003**	**0.1479**	**9.8000e-004**	**0.1489**	**0.0392**	**9.0000e-004**	**0.0401**		**148.1981**	**148.1981**	**5.5900e-003**		**148.3379**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.5189					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**8.7610**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	0.0150	9.6500e-003	0.1130	2.5000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003		24.6997	24.6997	9.3000e-004		24.7230
Total	**0.0150**	**9.6500e-003**	**0.1130**	**2.5000e-004**	**0.0246**	**1.6000e-004**	**0.0248**	**6.5400e-003**	**1.5000e-004**	**6.6900e-003**		**24.6997**	**24.6997**	**9.3000e-004**		**24.7230**

3.6 Architectural Coating - 2020

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	8.5189					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**8.7610**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	0.0150	9.6500e-003	0.1130	2.5000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003		24.6997	24.6997	9.3000e-004		24.7230
Total	**0.0150**	**9.6500e-003**	**0.1130**	**2.5000e-004**	**0.0246**	**1.6000e-004**	**0.0248**	**6.5400e-003**	**1.5000e-004**	**6.6900e-003**		**24.6997**	**24.6997**	**9.3000e-004**		**24.7230**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	7.1237	4.6180	41.7000	0.0857	7.9018	0.0685	7.9703	2.1007	0.0633	2.1640		8,533.1156	8,533.1156	0.3689		8,542.3390
Unmitigated	7.1826	4.8120	43.6110	0.0915	8.4874	0.0719	8.5593	2.2563	0.0665	2.3228		9,113.9727	9,113.9727	0.3891		9,123.6989

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	2,976.72	4,332.18	3256.32	2,999,464	2,792,501
Parking Lot	0.00	0.00	0.00		
Total	2,976.72	4,332.18	3,256.32	2,999,464	2,792,501

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
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.638715	0.036747	0.191338	0.120572	0.000890	0.000530	0.000059	0.000089	0.001742	0.001833	0.005782	0.000964	0.000735
Parking Lot	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0373	0.3391	0.2849	2.0300e-003		0.0258	0.0258		0.0258	0.0258		406.9363	406.9363	7.8000e-003	7.4600e-003	409.3546
NaturalGas Unmitigated	0.0373	0.3391	0.2849	2.0300e-003		0.0258	0.0258		0.0258	0.0258		406.9363	406.9363	7.8000e-003	7.4600e-003	409.3546

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					
Fast Food Restaurant with Drive Thru	3458.96	0.0373	0.3391	0.2849	2.0300e-003		0.0258	0.0258		0.0258	0.0258		406.9363	406.9363	7.8000e-003	7.4600e-003	409.3546
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0373**	**0.3391**	**0.2849**	**2.0300e-003**		**0.0258**	**0.0258**		**0.0258**	**0.0258**		**406.9363**	**406.9363**	**7.8000e-003**	**7.4600e-003**	**409.3546**

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					
Fast Food Restaurant with Drive Thru	3.45896	0.0373	0.3391	0.2849	2.0300e-003		0.0258	0.0258		0.0258	0.0258		406.9363	406.9363	7.8000e-003	7.4600e-003	409.3546
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0373**	**0.3391**	**0.2849**	**2.0300e-003**		**0.0258**	**0.0258**		**0.0258**	**0.0258**		**406.9363**	**406.9363**	**7.8000e-003**	**7.4600e-003**	**409.3546**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1528	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Unmitigated	0.1528	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Total	**0.1528**	**1.0000e-005**	**7.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4900e-003**	**1.4900e-003**	**0.0000**		**1.5900e-003**

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	0.0117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Total	**0.1528**	**1.0000e-005**	**7.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4900e-003**	**1.4900e-003**	**0.0000**		**1.5900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Hotel Summer Daily

Lemoore Mixed Use Project Hotel

Kings County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.40	Acre	1.40	60,984.00	0
Hotel	90.00	Room	0.32	130,680.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Plan

Construction Phase -

Architectural Coating - Rule 4601 Architectural Coatings compliance

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings compliance

Fleet Mix - Project specific truck fleet trip fraction

Area Coating - Rule 4601 Architectural Coatings

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	65.00
tblArchitecturalCoating	EF_Parking	150.00	65.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	65
tblAreaCoating	Area_EF_Nonresidential_Interior	150	65
tblAreaCoating	Area_EF_Parking	150	65
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFleetMix	HHD	0.16	1.2120e-003
tblFleetMix	LDA	0.49	0.64
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LHD1	0.02	2.4250e-003
tblFleetMix	LHD2	4.5750e-003	1.6160e-003
tblFleetMix	MHD	0.01	4.0400e-004
tblLandUse	LotAcreage	3.00	0.32

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.5599	18.7448	16.9475	0.0378	5.8653	0.8214	6.6867	2.9711	0.7910	3.7268	0.0000	3,612.5966	3,612.5966	0.5418	0.0000	3,624.9630
2021	80.1358	17.2474	16.2796	0.0375	0.8756	0.6989	1.5745	0.2370	0.6745	0.9116	0.0000	3,583.7880	3,583.7880	0.4753	0.0000	3,595.6707
Maximum	**80.1358**	**18.7448**	**16.9475**	**0.0378**	**5.8653**	**0.8214**	**6.6867**	**2.9711**	**0.7910**	**3.7268**	**0.0000**	**3,612.5966**	**3,612.5966**	**0.5418**	**0.0000**	**3,624.9630**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.5599	18.7448	16.9475	0.0378	2.6755	0.8214	3.4969	1.3466	0.7910	2.1023	0.0000	3,612.5966	3,612.5966	0.5418	0.0000	3,624.9630
2021	80.1358	17.2474	16.2796	0.0375	0.8756	0.6989	1.5745	0.2370	0.6745	0.9116	0.0000	3,583.7880	3,583.7880	0.4753	0.0000	3,595.6707
Maximum	**80.1358**	**18.7448**	**16.9475**	**0.0378**	**2.6755**	**0.8214**	**3.4969**	**1.3466**	**0.7910**	**2.1023**	**0.0000**	**3,612.5966**	**3,612.5966**	**0.5418**	**0.0000**	**3,624.9630**

Lemoore Mixed Use Project Hotel - Kings County, Summer

	ROG	NOx	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**	**47.32**	**0.00**	**38.61**	**50.64**	**0.00**	**35.02**	**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	3.0378	9.0000e-005	9.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0200	0.0200	5.0000e-005		0.0213
Energy	0.0971	0.8828	0.7415	5.3000e-003		0.0671	0.0671		0.0671	0.0671		1,059.3399	1,059.3399	0.0203	0.0194	1,065.6350
Mobile	1.3769	1.4854	12.2982	0.0307	2.9384	0.0216	2.9599	0.7814	0.0200	0.8014		3,066.1532	3,066.1532	0.1225		3,069.2153
Total	**4.5118**	**2.3682**	**13.0491**	**0.0360**	**2.9384**	**0.0887**	**3.0271**	**0.7814**	**0.0871**	**0.8685**		**4,125.5131**	**4,125.5131**	**0.1428**	**0.0194**	**4,134.8716**

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	3.0378	9.0000e-005	9.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0200	0.0200	5.0000e-005		0.0213
Energy	0.0971	0.8828	0.7415	5.3000e-003		0.0671	0.0671		0.0671	0.0671		1,059.3399	1,059.3399	0.0203	0.0194	1,065.6350
Mobile	1.3562	1.4129	11.6370	0.0287	2.7356	0.0204	2.7560	0.7275	0.0189	0.7463		2,863.5724	2,863.5724	0.1155		2,866.4601
Total	**4.4911**	**2.2957**	**12.3879**	**0.0340**	**2.7356**	**0.0875**	**2.8231**	**0.7275**	**0.0860**	**0.8135**		**3,922.9322**	**3,922.9322**	**0.1359**	**0.0194**	**3,932.1164**

	ROG	NOx	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	**0.46**	**3.06**	**5.07**	**5.64**	**6.90**	**1.36**	**6.74**	**6.90**	**1.30**	**6.34**	**0.00**	**4.91**	**4.91**	**4.88**	**0.00**	**4.90**

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	4/1/2020	4/2/2020	5	2	
2	Grading	Grading	4/3/2020	4/8/2020	5	4	
3	Building Construction	Building Construction	4/9/2020	1/13/2021	5	200	
4	Paving	Paving	1/14/2021	1/27/2021	5	10	
5	Architectural Coating	Architectural Coating	1/28/2021	2/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 1.4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 196,020; Non-Residential Outdoor: 65,340; Striped Parking Area: 3,659 (Architectural Coating – sqft)

OffRoad Equipment

Lemoore Mixed Use Project Hotel - Kings County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	81.00	31.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**5.7996**	**0.8210**	**6.6205**	**2.9537**	**0.7553**	**3.7090**		**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.2 Site Preparation - 2020

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	0.0399	0.0257	0.3013	6.6000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		65.8658	65.8658	2.4800e-003		65.9280
Total	**0.0399**	**0.0257**	**0.3013**	**6.6000e-004**	**0.0657**	**4.4000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**65.8658**	**65.8658**	**2.4800e-003**		**65.9280**

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					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**2.6098**	**0.8210**	**3.4308**	**1.3292**	**0.7553**	**2.0844**	**0.0000**	**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.2 Site Preparation - 2020

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	0.0399	0.0257	0.3013	6.6000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		65.8658	65.8658	2.4800e-003		65.9280
Total	**0.0399**	**0.0257**	**0.3013**	**6.6000e-004**	**0.0657**	**4.4000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**65.8658**	**65.8658**	**2.4800e-003**		**65.9280**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.9143**	**0.6844**	**5.5986**	**2.5256**	**0.6296**	**3.1552**		**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.3 Grading - 2020

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	0.0399	0.0257	0.3013	6.6000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		65.8658	65.8658	2.4800e-003		65.9280
Total	**0.0399**	**0.0257**	**0.3013**	**6.6000e-004**	**0.0657**	**4.4000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**65.8658**	**65.8658**	**2.4800e-003**		**65.9280**

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					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**2.2114**	**0.6844**	**2.8958**	**1.1365**	**0.6296**	**1.7662**	**0.0000**	**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.3 Grading - 2020

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	0.0399	0.0257	0.3013	6.6000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		65.8658	65.8658	2.4800e-003		65.9280
Total	**0.0399**	**0.0257**	**0.3013**	**6.6000e-004**	**0.0657**	**4.4000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**65.8658**	**65.8658**	**2.4800e-003**		**65.9280**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.4 Building Construction - 2020

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	0.1254	3.6960	0.7091	9.0300e-003	0.2102	0.0189	0.2292	0.0605	0.0181	0.0787		944.5456	944.5456	0.0980		946.9957
Worker	0.4040	0.2606	3.0503	6.7100e-003	0.6654	4.4100e-003	0.6698	0.1765	4.0600e-003	0.1806		666.8916	666.8916	0.0252		667.5206
Total	**0.5294**	**3.9566**	**3.7594**	**0.0157**	**0.8756**	**0.0234**	**0.8990**	**0.2370**	**0.0222**	**0.2592**		**1,611.4372**	**1,611.4372**	**0.1232**		**1,614.5162**

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.4 Building Construction - 2020

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	0.1254	3.6960	0.7091	9.0300e-003	0.2102	0.0189	0.2292	0.0605	0.0181	0.0787		944.5456	944.5456	0.0980		946.9957
Worker	0.4040	0.2606	3.0503	6.7100e-003	0.6654	4.4100e-003	0.6698	0.1765	4.0600e-003	0.1806		666.8916	666.8916	0.0252		667.5206
Total	**0.5294**	**3.9566**	**3.7594**	**0.0157**	**0.8756**	**0.0234**	**0.8990**	**0.2370**	**0.0222**	**0.2592**		**1,611.4372**	**1,611.4372**	**0.1232**		**1,614.5162**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

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	0.1056	3.3799	0.6224	8.9500e-003	0.2102	0.0102	0.2205	0.0605	9.8000e-003	0.0703		935.6662	935.6662	0.0957		938.0584
Worker	0.3710	0.2314	2.7578	6.5000e-003	0.6654	4.2800e-003	0.6697	0.1765	3.9500e-003	0.1804		646.9018	646.9018	0.0224		647.4606
Total	**0.4766**	**3.6113**	**3.3802**	**0.0155**	**0.8756**	**0.0145**	**0.8902**	**0.2370**	**0.0138**	**0.2508**		**1,582.5680**	**1,582.5680**	**0.1180**		**1,585.5190**

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

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	0.1056	3.3799	0.6224	8.9500e-003	0.2102	0.0102	0.2205	0.0605	9.8000e-003	0.0703		935.6662	935.6662	0.0957		938.0584
Worker	0.3710	0.2314	2.7578	6.5000e-003	0.6654	4.2800e-003	0.6697	0.1765	3.9500e-003	0.1804		646.9018	646.9018	0.0224		647.4606
Total	**0.4766**	**3.6113**	**3.3802**	**0.0155**	**0.8756**	**0.0145**	**0.8902**	**0.2370**	**0.0138**	**0.2508**		**1,582.5680**	**1,582.5680**	**0.1180**		**1,585.5190**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1407**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.5 Paving - 2021

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	0.0596	0.0372	0.4426	1.0400e-003	0.1068	6.9000e-004	0.1075	0.0283	6.3000e-004	0.0290		103.8237	103.8237	3.5900e-003		103.9134
Total	**0.0596**	**0.0372**	**0.4426**	**1.0400e-003**	**0.1068**	**6.9000e-004**	**0.1075**	**0.0283**	**6.3000e-004**	**0.0290**		**103.8237**	**103.8237**	**3.5900e-003**		**103.9134**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1407**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.5 Paving - 2021

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	0.0596	0.0372	0.4426	1.0400e-003	0.1068	6.9000e-004	0.1075	0.0283	6.3000e-004	0.0290		103.8237	103.8237	3.5900e-003		103.9134
Total	**0.0596**	**0.0372**	**0.4426**	**1.0400e-003**	**0.1068**	**6.9000e-004**	**0.1075**	**0.0283**	**6.3000e-004**	**0.0290**		**103.8237**	**103.8237**	**3.5900e-003**		**103.9134**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	79.8436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**80.0625**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

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	0.0733	0.0457	0.5448	1.2800e-003	0.1314	8.5000e-004	0.1323	0.0349	7.8000e-004	0.0356		127.7831	127.7831	4.4200e-003		127.8934
Total	**0.0733**	**0.0457**	**0.5448**	**1.2800e-003**	**0.1314**	**8.5000e-004**	**0.1323**	**0.0349**	**7.8000e-004**	**0.0356**		**127.7831**	**127.7831**	**4.4200e-003**		**127.8934**

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	79.8436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**80.0625**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

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	0.0733	0.0457	0.5448	1.2800e-003	0.1314	8.5000e-004	0.1323	0.0349	7.8000e-004	0.0356		127.7831	127.7831	4.4200e-003		127.8934
Total	**0.0733**	**0.0457**	**0.5448**	**1.2800e-003**	**0.1314**	**8.5000e-004**	**0.1323**	**0.0349**	**7.8000e-004**	**0.0356**		**127.7831**	**127.7831**	**4.4200e-003**		**127.8934**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3562	1.4129	11.6370	0.0287	2.7356	0.0204	2.7560	0.7275	0.0189	0.7463		2,863.5724	2,863.5724	0.1155		2,866.4601
Unmitigated	1.3769	1.4854	12.2982	0.0307	2.9384	0.0216	2.9599	0.7814	0.0200	0.8014		3,066.1532	3,066.1532	0.1225		3,069.2153

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	735.30	737.10	535.50	1,343,278	1,250,592
Parking Lot	0.00	0.00	0.00		
Total	735.30	737.10	535.50	1,343,278	1,250,592

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
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.635705	0.036574	0.190436	0.120572	0.002425	0.001616	0.000404	0.001212	0.001742	0.001833	0.005782	0.000964	0.000735
Parking Lot	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0971	0.8828	0.7415	5.3000e-003		0.0671	0.0671		0.0671	0.0671		1,059.3399	1,059.3399	0.0203	0.0194	1,065.6350
NaturalGas Unmitigated	0.0971	0.8828	0.7415	5.3000e-003		0.0671	0.0671		0.0671	0.0671		1,059.3399	1,059.3399	0.0203	0.0194	1,065.6350

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					
Hotel	9004.39	0.0971	0.8828	0.7415	5.3000e-003		0.0671	0.0671		0.0671	0.0671		1,059.3399	1,059.3399	0.0203	0.0194	1,065.6350
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0971**	**0.8828**	**0.7415**	**5.3000e-003**		**0.0671**	**0.0671**		**0.0671**	**0.0671**		**1,059.3399**	**1,059.3399**	**0.0203**	**0.0194**	**1,065.6350**

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					
Hotel	9.00439	0.0971	0.8828	0.7415	5.3000e-003		0.0671	0.0671		0.0671	0.0671		1,059.3399	1,059.3399	0.0203	0.0194	1,065.6350
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0971**	**0.8828**	**0.7415**	**5.3000e-003**		**0.0671**	**0.0671**		**0.0671**	**0.0671**		**1,059.3399**	**1,059.3399**	**0.0203**	**0.0194**	**1,065.6350**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	3.0378	9.0000e-005	9.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0200	0.0200	5.0000e-005		0.0213
Unmitigated	3.0378	9.0000e-005	9.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0200	0.0200	5.0000e-005		0.0213

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	0.2188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8182					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.8000e-004	9.0000e-005	9.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0200	0.0200	5.0000e-005		0.0213
Total	**3.0378**	**9.0000e-005**	**9.3700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0200**	**0.0200**	**5.0000e-005**		**0.0213**

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	0.2188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8182					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.8000e-004	9.0000e-005	9.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0200	0.0200	5.0000e-005		0.0213
Total	**3.0378**	**9.0000e-005**	**9.3700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0200**	**0.0200**	**5.0000e-005**		**0.0213**

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 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Retail Shopping Center Summer Daily

Lemoore Mixed Use Retail

Kings County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.05	Acre	1.05	45,650.88	0
Strip Mall	7.04	1000sqft	0.16	7,040.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site Plan Data

Construction Phase -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings compliance

Fleet Mix - Fleet mix revised to reflect truck survey data for retail shops

Architectural Coating - Rule 4601 Architectural Coatings compliance

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	65.00
tblArchitecturalCoating	EF_Parking	150.00	65.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	65
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	65
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	150	65
tblFleetMix	HHD	0.16	1.1800e-003
tblFleetMix	LDA	0.49	0.64
tblFleetMix	LDT1	0.03	0.04
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LHD1	0.02	7.2900e-004
tblFleetMix	LHD2	4.5750e-003	7.2891e-004
tblFleetMix	MHD	0.01	3.1860e-003
tblLandUse	LandUseSquareFeet	45,738.00	45,650.88

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1716	18.3721	14.1848	0.0264	5.8653	0.8214	6.6867	2.9711	0.7751	3.7268	0.0000	2,448.2802	2,448.2802	0.5418	0.0000	2,458.4418
2021	5.3044	14.6773	13.7951	0.0263	0.2335	0.6884	0.9220	0.0633	0.6647	0.7280	0.0000	2,440.5803	2,440.5803	0.4147	0.0000	2,450.3514
Maximum	**5.3044**	**18.3721**	**14.1848**	**0.0264**	**5.8653**	**0.8214**	**6.6867**	**2.9711**	**0.7751**	**3.7268**	**0.0000**	**2,448.2802**	**2,448.2802**	**0.5418**	**0.0000**	**2,458.4418**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1716	18.3721	14.1848	0.0264	2.6755	0.8214	3.4969	1.3466	0.7751	2.1023	0.0000	2,448.2802	2,448.2802	0.5418	0.0000	2,458.4418
2021	5.3044	14.6773	13.7951	0.0263	0.2335	0.6884	0.9220	0.0633	0.6647	0.7280	0.0000	2,440.5803	2,440.5803	0.4147	0.0000	2,450.3514
Maximum	**5.3044**	**18.3721**	**14.1848**	**0.0264**	**2.6755**	**0.8214**	**3.4969**	**1.3466**	**0.7751**	**2.1023**	**0.0000**	**2,448.2802**	**2,448.2802**	**0.5418**	**0.0000**	**2,458.4418**

	ROG	NOx	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**	**52.30**	**0.00**	**41.92**	**53.54**	**0.00**	**36.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1989	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7700e-003	1.7700e-003	0.0000		1.8900e-003
Energy	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
Mobile	0.5584	0.5680	4.4419	0.0107	1.0086	7.7000e-003	1.0163	0.2683	7.1300e-003	0.2754		1,067.0205	1,067.0205	0.0437		1,068.1140
Total	**0.7595**	**0.5882**	**4.4597**	**0.0108**	**1.0086**	**9.2400e-003**	**1.0179**	**0.2683**	**8.6700e-003**	**0.2770**		**1,091.3021**	**1,091.3021**	**0.0442**	**4.5000e-004**	**1,092.5399**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1808	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7700e-003	1.7700e-003	0.0000		1.8900e-003
Energy	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
Mobile	0.5513	0.5430	4.2153	9.9900e-003	0.9390	7.2800e-003	0.9463	0.2498	6.7500e-003	0.2565		997.2133	997.2133	0.0414		998.2470
Total	**0.7343**	**0.5633**	**4.2331**	**0.0101**	**0.9390**	**8.8200e-003**	**0.9479**	**0.2498**	**8.2900e-003**	**0.2581**		**1,021.4948**	**1,021.4948**	**0.0418**	**4.5000e-004**	**1,022.6729**

	ROG	NOx	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	**3.32**	**4.24**	**5.08**	**6.48**	**6.90**	**4.55**	**6.88**	**6.90**	**4.38**	**6.82**	**0.00**	**6.40**	**6.40**	**5.41**	**0.00**	**6.39**

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	4/1/2020	4/2/2020	5	2	
2	Grading	Grading	4/3/2020	4/8/2020	5	4	
3	Building Construction	Building Construction	4/9/2020	1/13/2021	5	200	
4	Paving	Paving	1/14/2021	1/27/2021	5	10	
5	Architectural Coating	Architectural Coating	1/28/2021	2/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 1.05

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 10,560; Non-Residential Outdoor: 3,520; Striped Parking Area: 2,739 (Architectural Coating – sqft)

OffRoad Equipment

Lemoore Mixed Use Retail - Kings County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	21.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**5.7996**	**0.8210**	**6.6205**	**2.9537**	**0.7553**	**3.7090**		**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.2 Site Preparation - 2020

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	0.0399	0.0257	0.3013	6.6000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		65.8658	65.8658	2.4800e-003		65.9280
Total	**0.0399**	**0.0257**	**0.3013**	**6.6000e-004**	**0.0657**	**4.4000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**65.8658**	**65.8658**	**2.4800e-003**		**65.9280**

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					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**2.6098**	**0.8210**	**3.4308**	**1.3292**	**0.7553**	**2.0844**	**0.0000**	**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.2 Site Preparation - 2020

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	0.0399	0.0257	0.3013	6.6000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		65.8658	65.8658	2.4800e-003		65.9280
Total	**0.0399**	**0.0257**	**0.3013**	**6.6000e-004**	**0.0657**	**4.4000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**65.8658**	**65.8658**	**2.4800e-003**		**65.9280**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.9143**	**0.6844**	**5.5986**	**2.5256**	**0.6296**	**3.1552**		**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.3 Grading - 2020

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	0.0399	0.0257	0.3013	6.6000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		65.8658	65.8658	2.4800e-003		65.9280
Total	**0.0399**	**0.0257**	**0.3013**	**6.6000e-004**	**0.0657**	**4.4000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**65.8658**	**65.8658**	**2.4800e-003**		**65.9280**

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					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**2.2114**	**0.6844**	**2.8958**	**1.1365**	**0.6296**	**1.7662**	**0.0000**	**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.3 Grading - 2020

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	0.0399	0.0257	0.3013	6.6000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		65.8658	65.8658	2.4800e-003		65.9280
Total	**0.0399**	**0.0257**	**0.3013**	**6.6000e-004**	**0.0657**	**4.4000e-004**	**0.0662**	**0.0174**	**4.0000e-004**	**0.0178**		**65.8658**	**65.8658**	**2.4800e-003**		**65.9280**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.4 Building Construction - 2020

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	0.0364	1.0731	0.2059	2.6200e-003	0.0610	5.5000e-003	0.0665	0.0176	5.2600e-003	0.0228		274.2229	274.2229	0.0285		274.9342
Worker	0.1048	0.0676	0.7908	1.7400e-003	0.1725	1.1400e-003	0.1737	0.0458	1.0500e-003	0.0468		172.8978	172.8978	6.5200e-003		173.0609
Total	**0.1411**	**1.1406**	**0.9967**	**4.3600e-003**	**0.2335**	**6.6400e-003**	**0.2402**	**0.0633**	**6.3100e-003**	**0.0697**		**447.1207**	**447.1207**	**0.0350**		**447.9951**

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.4 Building Construction - 2020

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	0.0364	1.0731	0.2059	2.6200e-003	0.0610	5.5000e-003	0.0665	0.0176	5.2600e-003	0.0228		274.2229	274.2229	0.0285		274.9342
Worker	0.1048	0.0676	0.7908	1.7400e-003	0.1725	1.1400e-003	0.1737	0.0458	1.0500e-003	0.0468		172.8978	172.8978	6.5200e-003		173.0609
Total	**0.1411**	**1.1406**	**0.9967**	**4.3600e-003**	**0.2335**	**6.6400e-003**	**0.2402**	**0.0633**	**6.3100e-003**	**0.0697**		**447.1207**	**447.1207**	**0.0350**		**447.9951**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

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	0.0306	0.9813	0.1807	2.6000e-003	0.0610	2.9700e-003	0.0640	0.0176	2.8400e-003	0.0204		271.6450	271.6450	0.0278		272.3396
Worker	0.0962	0.0600	0.7150	1.6900e-003	0.1725	1.1100e-003	0.1736	0.0458	1.0200e-003	0.0468		167.7153	167.7153	5.7900e-003		167.8601
Total	**0.1268**	**1.0413**	**0.8957**	**4.2900e-003**	**0.2335**	**4.0800e-003**	**0.2376**	**0.0633**	**3.8600e-003**	**0.0672**		**439.3603**	**439.3603**	**0.0336**		**440.1997**

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

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	0.0306	0.9813	0.1807	2.6000e-003	0.0610	2.9700e-003	0.0640	0.0176	2.8400e-003	0.0204		271.6450	271.6450	0.0278		272.3396
Worker	0.0962	0.0600	0.7150	1.6900e-003	0.1725	1.1100e-003	0.1736	0.0458	1.0200e-003	0.0468		167.7153	167.7153	5.7900e-003		167.8601
Total	**0.1268**	**1.0413**	**0.8957**	**4.2900e-003**	**0.2335**	**4.0800e-003**	**0.2376**	**0.0633**	**3.8600e-003**	**0.0672**		**439.3603**	**439.3603**	**0.0336**		**440.1997**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.2751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0490**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.5 Paving - 2021

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	0.0596	0.0372	0.4426	1.0400e-003	0.1068	6.9000e-004	0.1075	0.0283	6.3000e-004	0.0290		103.8237	103.8237	3.5900e-003		103.9134
Total	**0.0596**	**0.0372**	**0.4426**	**1.0400e-003**	**0.1068**	**6.9000e-004**	**0.1075**	**0.0283**	**6.3000e-004**	**0.0290**		**103.8237**	**103.8237**	**3.5900e-003**		**103.9134**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.2751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0490**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.5 Paving - 2021

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	0.0596	0.0372	0.4426	1.0400e-003	0.1068	6.9000e-004	0.1075	0.0283	6.3000e-004	0.0290		103.8237	103.8237	3.5900e-003		103.9134
Total	**0.0596**	**0.0372**	**0.4426**	**1.0400e-003**	**0.1068**	**6.9000e-004**	**0.1075**	**0.0283**	**6.3000e-004**	**0.0290**		**103.8237**	**103.8237**	**3.5900e-003**		**103.9134**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.0671					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.2860**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

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	0.0183	0.0114	0.1362	3.2000e-004	0.0329	2.1000e-004	0.0331	8.7200e-003	1.9000e-004	8.9100e-003		31.9458	31.9458	1.1000e-003		31.9734
Total	**0.0183**	**0.0114**	**0.1362**	**3.2000e-004**	**0.0329**	**2.1000e-004**	**0.0331**	**8.7200e-003**	**1.9000e-004**	**8.9100e-003**		**31.9458**	**31.9458**	**1.1000e-003**		**31.9734**

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	5.0671					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.2860**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

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	0.0183	0.0114	0.1362	3.2000e-004	0.0329	2.1000e-004	0.0331	8.7200e-003	1.9000e-004	8.9100e-003		31.9458	31.9458	1.1000e-003		31.9734
Total	**0.0183**	**0.0114**	**0.1362**	**3.2000e-004**	**0.0329**	**2.1000e-004**	**0.0331**	**8.7200e-003**	**1.9000e-004**	**8.9100e-003**		**31.9458**	**31.9458**	**1.1000e-003**		**31.9734**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5513	0.5430	4.2153	9.9900e-003	0.9390	7.2800e-003	0.9463	0.2498	6.7500e-003	0.2565		997.2133	997.2133	0.0414		998.2470
Unmitigated	0.5584	0.5680	4.4419	0.0107	1.0086	7.7000e-003	1.0163	0.2683	7.1300e-003	0.2754		1,067.0205	1,067.0205	0.0437		1,068.1140

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Strip Mall	312.01	295.96	143.83	439,977	409,619
Total	312.01	295.96	143.83	439,977	409,619

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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.493375	0.028385	0.147799	0.120572	0.020115	0.004575	0.012018	0.162105	0.001742	0.001833	0.005782	0.000964	0.000735
Strip Mall	0.635582	0.036567	0.190400	0.120572	0.000729	0.000729	0.003186	0.001180	0.001742	0.001833	0.005782	0.000964	0.000735

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
NaturalGas Unmitigated	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	206.378	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
Total		**2.2300e-003**	**0.0202**	**0.0170**	**1.2000e-004**		**1.5400e-003**	**1.5400e-003**		**1.5400e-003**	**1.5400e-003**		**24.2798**	**24.2798**	**4.7000e-004**	**4.5000e-004**	**24.4241**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.206378	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
Total		**2.2300e-003**	**0.0202**	**0.0170**	**1.2000e-004**		**1.5400e-003**	**1.5400e-003**		**1.5400e-003**	**1.5400e-003**		**24.2798**	**24.2798**	**4.7000e-004**	**4.5000e-004**	**24.4241**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1808	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7700e-003	1.7700e-003	0.0000		1.8900e-003
Unmitigated	0.1989	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7700e-003	1.7700e-003	0.0000		1.8900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0320					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7700e-003	1.7700e-003	0.0000		1.8900e-003
Total	**0.1990**	**1.0000e-005**	**8.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.7700e-003**	**1.7700e-003**	**0.0000**		**1.8900e-003**

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	0.0139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7700e-003	1.7700e-003	0.0000		1.8900e-003
Total	**0.1808**	**1.0000e-005**	**8.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.7700e-003**	**1.7700e-003**	**0.0000**		**1.8900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output Site Preparation and Grading Summer Daily

Hanford Armona Rd Mixed Use Project Site Prep and Grading

Kings County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	7.04	1000sqft	0.16	7,040.00	0
Other Non-Asphalt Surfaces	4.41	Acre	4.41	192,099.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total acreage for Parcel A, B, and C 4.57 acres

Construction Phase -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.1663	42.4752	22.1915	0.0395	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	3,833.2997	3,833.2997	1.1974	0.0000	3,863.2354
Maximum	**4.1663**	**42.4752**	**22.1915**	**0.0395**	**18.2141**	**2.1984**	**20.4125**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**3,833.2997**	**3,833.2997**	**1.1974**	**0.0000**	**3,863.2354**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.1663	42.4752	22.1915	0.0395	8.2777	2.1984	10.4761	4.5080	2.0225	6.5306	0.0000	3,833.2997	3,833.2997	1.1974	0.0000	3,863.2354
Maximum	**4.1663**	**42.4752**	**22.1915**	**0.0395**	**8.2777**	**2.1984**	**10.4761**	**4.5080**	**2.0225**	**6.5306**	**0.0000**	**3,833.2997**	**3,833.2997**	**1.1974**	**0.0000**	**3,863.2354**

	ROG	NOx	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**	**54.55**	**0.00**	**48.68**	**54.78**	**0.00**	**45.54**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2676	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5100e-003	2.5100e-003	1.0000e-005		2.6700e-003
Energy	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
Mobile	0.7097	7.8601	4.9958	0.0239	1.0389	0.0221	1.0611	0.2789	0.0210	0.2999		2,456.3138	2,456.3138	0.3359		2,464.7118
Total	**0.9795**	**7.8804**	**5.0140**	**0.0240**	**1.0389**	**0.0237**	**1.0626**	**0.2789**	**0.0225**	**0.3015**		**2,480.5960**	**2,480.5960**	**0.3364**	**4.5000e-004**	**2,489.1386**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2676	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5100e-003	2.5100e-003	1.0000e-005		2.6700e-003
Energy	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
Mobile	0.7097	7.8601	4.9958	0.0239	1.0389	0.0221	1.0611	0.2789	0.0210	0.2999		2,456.3138	2,456.3138	0.3359		2,464.7118
Total	**0.9795**	**7.8804**	**5.0140**	**0.0240**	**1.0389**	**0.0237**	**1.0626**	**0.2789**	**0.0225**	**0.3015**		**2,480.5960**	**2,480.5960**	**0.3364**	**4.5000e-004**	**2,489.1386**

	ROG	NOx	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	4/1/2020	4/7/2020	5	5	
2	Grading	Grading	4/8/2020	4/17/2020	5	8	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 4.41

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40

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	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.2 Site Preparation - 2020

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	0.0898	0.0579	0.6779	1.4900e-003	0.1479	9.8000e-004	0.1489	0.0392	9.0000e-004	0.0401		148.1981	148.1981	5.5900e-003		148.3379
Total	**0.0898**	**0.0579**	**0.6779**	**1.4900e-003**	**0.1479**	**9.8000e-004**	**0.1489**	**0.0392**	**9.0000e-004**	**0.0401**		**148.1981**	**148.1981**	**5.5900e-003**		**148.3379**

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**8.1298**	**2.1974**	**10.3272**	**4.4688**	**2.0216**	**6.4904**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.2 Site Preparation - 2020

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	0.0898	0.0579	0.6779	1.4900e-003	0.1479	9.8000e-004	0.1489	0.0392	9.0000e-004	0.0401		148.1981	148.1981	5.5900e-003		148.3379
Total	**0.0898**	**0.0579**	**0.6779**	**1.4900e-003**	**0.1479**	**9.8000e-004**	**0.1489**	**0.0392**	**9.0000e-004**	**0.0401**		**148.1981**	**148.1981**	**5.5900e-003**		**148.3379**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.5523**	**1.2734**	**7.8258**	**3.3675**	**1.1716**	**4.5390**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.3 Grading - 2020

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	0.0748	0.0483	0.5649	1.2400e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		123.4984	123.4984	4.6600e-003		123.6149
Total	**0.0748**	**0.0483**	**0.5649**	**1.2400e-003**	**0.1232**	**8.2000e-004**	**0.1240**	**0.0327**	**7.5000e-004**	**0.0334**		**123.4984**	**123.4984**	**4.6600e-003**		**123.6149**

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					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**2.9486**	**1.2734**	**4.2220**	**1.5154**	**1.1716**	**2.6869**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.3 Grading - 2020

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	0.0748	0.0483	0.5649	1.2400e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		123.4984	123.4984	4.6600e-003		123.6149
Total	**0.0748**	**0.0483**	**0.5649**	**1.2400e-003**	**0.1232**	**8.2000e-004**	**0.1240**	**0.0327**	**7.5000e-004**	**0.0334**		**123.4984**	**123.4984**	**4.6600e-003**		**123.6149**

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	0.7097	7.8601	4.9958	0.0239	1.0389	0.0221	1.0611	0.2789	0.0210	0.2999		2,456.3138	2,456.3138	0.3359		2,464.7118
Unmitigated	0.7097	7.8601	4.9958	0.0239	1.0389	0.0221	1.0611	0.2789	0.0210	0.2999		2,456.3138	2,456.3138	0.3359		2,464.7118

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	312.01	295.96	143.83	439,977	439,977
Total	312.01	295.96	143.83	439,977	439,977

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
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.487262	0.029057	0.146825	0.126841	0.021860	0.004787	0.012229	0.159772	0.001758	0.001914	0.005918	0.000991	0.000785
Strip Mall	0.487262	0.029057	0.146825	0.126841	0.021860	0.004787	0.012229	0.159772	0.001758	0.001914	0.005918	0.000991	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
NaturalGas Unmitigated	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241

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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	206.378	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
Total		**2.2300e-003**	**0.0202**	**0.0170**	**1.2000e-004**		**1.5400e-003**	**1.5400e-003**		**1.5400e-003**	**1.5400e-003**		**24.2798**	**24.2798**	**4.7000e-004**	**4.5000e-004**	**24.4241**

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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.206378	2.2300e-003	0.0202	0.0170	1.2000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003		24.2798	24.2798	4.7000e-004	4.5000e-004	24.4241
Total		**2.2300e-003**	**0.0202**	**0.0170**	**1.2000e-004**		**1.5400e-003**	**1.5400e-003**		**1.5400e-003**	**1.5400e-003**		**24.2798**	**24.2798**	**4.7000e-004**	**4.5000e-004**	**24.4241**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2676	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5100e-003	2.5100e-003	1.0000e-005		2.6700e-003
Unmitigated	0.2676	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5100e-003	2.5100e-003	1.0000e-005		2.6700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0488					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5100e-003	2.5100e-003	1.0000e-005		2.6700e-003
Total	**0.2676**	**1.0000e-005**	**1.1800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5100e-003**	**2.5100e-003**	**1.0000e-005**		**2.6700e-003**

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	0.0488					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.5100e-003	2.5100e-003	1.0000e-005		2.6700e-003
Total	**0.2676**	**1.0000e-005**	**1.1800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5100e-003**	**2.5100e-003**	**1.0000e-005**		**2.6700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

TRAFFIC IMPACT REPORT

Final Traffic Impact Analysis

Mixed-Use Development

On the Southeast Corner of State Route 41 and Hanford-Armona Road

In the City of Lemoore, California

Prepared for:

CVIF II, LLC.
680 W. Shaw Ave., Ste. 200
Fresno, CA 93704

July 19, 2018

Project No. 039-001

JLB Traffic Engineering, Inc.

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JLB Traffic Engineering, Inc.

Traffic Engineering, Transportation Planning, & Parking Solutions

Final Traffic Impact Analysis

For the Mixed-Use Development located on the Southeast Corner of State Route 41 and Hanford-Armona Road

In the City of Lemoore, CA

July 19, 2018

This Draft Technical Letter has been prepared under the direction of a licensed Traffic Engineer. The licensed Traffic Engineer attests to the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data from which recommendations, conclusions, and decisions are based.

Prepared by:

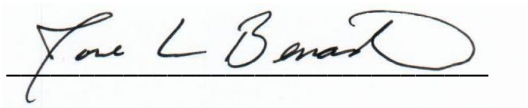

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Table of Contents

List of Tables

List of Figures

List of Appendices

Introduction and Summary

Introduction

This report describes a Traffic Impact Analysis (TIA) prepared by JLB Traffic Engineering, Inc. (JLB) for the proposed Mixed-Use Development (Project) located on the southeast corner of State Route 41 and Hanford-Armona Road in the City of Lemoore. The Project proposes to develop a 16.19-acre site with 176 multi-family residential units (apartments), a gasoline/service station (8 fueling positions) with convenience market, a 90-room hotel, 6,000 square feet of fast-food restaurant with drive-through window, and 7,040 square feet of general shopping center. Based on information provided to JLB, the Project will undergo a General Plan Amendment and Zoning Map Amendment through the City of Lemoore. Figure 1 shows the location of the proposed Project site relative to the surrounding roadway network.

The purpose of this TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures, and identify any critical traffic issues that should be addressed in the on-going planning process. The scope of work was prepared via consultation with City of Lemoore, County of Kings and Caltrans staff.

Summary

The potential traffic impacts of the proposed Project were evaluated in accordance with the standards set forth by the level of service (LOS) policy of the City of Lemoore, County of Kings and Caltrans.

Existing Traffic Conditions

- At present, the intersection of State Route 41 and Hanford-Armona Road operates below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. However, to improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be considered.
  - State Route 41 and Hanford-Armona Road
    - Modify the westbound left-through-right lane to a left-through lane;
    - Add a westbound right-turn lane; and
    - Modify the traffic signal to accommodate the added lane.
- At present, all arterial and highway segments operate at an acceptable LOS.

Existing plus Project Phase 1 Traffic Conditions

- Phase 1 of the proposed Project is estimated to generate a maximum of 1,288 daily trips, 81 AM peak hour trips and 99 PM peak hour trips.
- Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to continue operating below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. Phase 1 of the Project is projected to add a maximum of 3.3 and 1.1 seconds of average delay during the AM and PM peaks respectively. Also, the addition of an average delay of less than five (5) seconds is often not considered a significant impact. Therefore, since the Phase 1 of the Project maintains the existing measures of effectiveness and it adds less than five (5) seconds of delay to existing operations, this impact would not be considered significant. However, if improvements were made to improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be implemented.
  - State Route 41 and Hanford-Armona Road
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through lane;
    - Add a westbound right-turn lane; and
    - Modify the traffic signal to accommodate the added lanes while maintaining the east-west split phasing.
- Under this scenario, all arterial and highway segments are projected to operate at an acceptable LOS.

Existing plus Project Buildout Traffic Conditions

- JLB analyzed the conceptual roadways within an earlier version of the Project site plan. Based on this review, it was recommended that the Project consider relocating the gasoline/service station (Shop A) and fast-food restaurant (Pad A) located near the northwest corner of the Project Site Plan further east and relocating the hotel in their place. The gasoline/service station and fast-food restaurant are estimated to attract higher volumes than those estimated to be generated by the hotel. Based on these comments, the Project site plan was revised to relocate the proposed Hotel and gasoline/service station as recommended by JLB. To further minimize traffic impacts, the latest Project site plan also included a reduction on the number of driveways to Hanford-Armona Road. By incorporating these modifications to the Project Site Plan, on-site and off-site traffic operations and circulation have been improved.
- It is recommended that the Project coordinate with KART to determine the best location for the placement of a bus turnout along the Project's frontage to Hanford-Armona Road.
- It is recommended that the Project implement Class II bike lanes along its frontage to Hanford-Armona Road.
- At buildout, the proposed Project is estimated to generate a maximum of 6,775 daily trips, 471 AM peak hour trips and 488 PM peak hour trips.

- Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to operate below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. To improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be implemented.
  - State Route 41 and Hanford-Armona Road
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through lane;
    - Add a westbound right-turn lane; and
    - Modify the traffic signal to accommodate the added lanes while maintaining the east-west split phasing.
- Under this scenario, all arterial and highway segments are projected to operate at an acceptable LOS.

Cumulative Year 2040 plus Project Traffic Conditions

- Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to operate below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. To improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be implemented.
  - State Route 41 and Hanford-Armona Road
    - Add an eastbound left-turn lane;
    - Modify the eastbound left-through-right lane to a through-right lane;
    - Add two westbound left-turn lanes;
    - Modify the westbound left-through-right lane to a through lane;
    - Add a westbound right-turn lane;
    - Add a second southbound left-turn lane;
    - Implement overlap phasing of the westbound right-turn with the southbound left-turn phase;
    - Implement overlap phasing of the northbound right-turn with the westbound left-turn phase;
    - Implement protective left-turn phasing in all directions; and
    - Modify the traffic signal to accommodate the added lanes.
- Under this scenario, the intersections of Project Driveway 2 and Hanford-Armona Road and 19th Avenue and Cinnamon Drive are projected to exceed their LOS threshold during both peak periods. To improve the LOS at these intersections, it is recommended that the following improvements be implemented.
  - Project Driveway 2 and Hanford-Armona Road
    - Modify the eastbound right turn lane to an eastbound through-right lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the modified lane geometrics.
  - 19th Avenue and Cinnamon Drive
    - Signalize the intersection with protective left-turn phasing in all directions.

- Under this scenario, the arterial segment of Hanford-Armona Road between State Route 41 and Project Driveway 2 is anticipated to exceed its LOS threshold. To improve its LOS, it is recommended that this segment of Hanford-Armona Road be widened to accommodate two lanes in each direction and be divided by a raised median island or a continuous two-way left-turn lane.
- Under this scenario, all highway segments are projected to operate at an acceptable LOS.

Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Traffic Conditions

- Under this scenario, the intersections of Project Driveway 2 and Hanford-Armona Road and 19th Avenue and Cinnamon Drive are projected to exceed their LOS threshold during both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented.
  - Project Driveway 2 and Hanford-Armona Road
    - Modify the eastbound right turn lane to an eastbound through-right lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the modified lane geometrics.
  - 19th Avenue and Cinnamon Drive
    - Signalize the intersection with protective left-turn phasing in all directions.
- Under this scenario, the arterial segment of Hanford-Armona Road between State Route 41 and Project Driveway 2 is anticipated to exceed its LOS threshold. To improve its LOS, it is recommended that this segment of Hanford-Armona Road be widened to accommodate two lanes in each direction and be divided by a raised median island or a continuous two-way left-turn lane.
- Under this scenario, all highway segments and the ramp segment are projected to operate at an acceptable LOS.

Queuing Analysis

- It is recommended that the City consider left- and right-turn lane storage lengths as indicated in the Queuing Analysis.

Project's Equitable Fair Share

- It is recommended that the Project contribute its equitable Fair Share as presented in Table XXIII.

TIA Scope of Work

The study focused on evaluating traffic conditions at the existing study intersections and segments that may potentially be impacted by the proposed Project. On January 30, 2018, a Draft Scope of Work for the preparation of a Traffic Impact Analysis for this Project was provided to the City of Lemoore, County of Kings and Caltrans for their review and comment. Any comments to the Draft Scope of Work were to be provided by February 20, 2018.

On Friday, February 16, 2018, Caltrans responded to the Draft Scope of Work. Caltrans indicated that the "Cumulative Year 2035 does not satisfy standard practice future analysis for this project" and requested that it be replaced with a Cumulative Year 2040 instead. Furthermore, Caltrans requested that the PM peak analysis for the intersection of State Route 41 and Hanford-Armona Road be analyzed between 3 pm and 5 pm. On Thursday, February 22, 2018, the County of Kings accepted the Draft Scope of Work as presented. On Friday, February 23, 2018, the City of Lemoore responded to the Draft Scope of Work. While the City had no comments to the Draft Scope of Work, it was requested that Project Trip Distribution percentages for each of the ingress/egress points be submitted for their review and approval. On March 8, 2018, JLB provided the Project Trip Distribution percentages for all of the ingress/egress points to the City for review. On March 28, 2018, the City approved the Project Trip Distribution Percentages and Draft Scope of Work.

Based on the comments received, this TIA includes the analysis of the Cumulative Year 2040 scenarios as requested by Caltrans. The Draft Scope of Work that was presented and the comments received from the lead agency and responsible agencies are included in Appendix A.

Study Scenarios

Existing Traffic Conditions

This scenario evaluates the Existing Traffic Conditions based on existing traffic volumes and roadway conditions from traffic counts and field surveys conducted in the year 2018.

Existing plus Project Phase 1 Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Existing plus Project Phase 1 Traffic Conditions. The Existing plus Project Phase 1 traffic volumes were obtained by adding the Phase 1 Project Only Trips to the Existing Traffic Conditions scenario. The Phase 1 Project Only Trips to the study intersections were based on existing travel patterns, data provided by the developer, knowledge of the study area, engineering judgement, residential and commercial densities and the City's General Plan.

Existing plus Project Buildout Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Existing plus Project Buildout Traffic Conditions. The Existing plus Project Buildout traffic volumes were obtained by adding the Buildout Project Only Trips to the Existing Traffic Conditions scenario. The Buildout Project Only Trips to the study intersections were based on existing travel patterns, data provided by the developer, knowledge of the study area, engineering judgement, residential and commercial densities and the City's General Plan.

Cumulative Year 2040 plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Cumulative Year 2040 plus Project Traffic Conditions. To arrive at future year forecast volumes, JLB determined the annual growth rate for State Route 41. Based on a review of the Annual Average Daily Traffic (AADT) volumes obtained from Caltrans, the 20-year average growth rate of State Route 41 was determined to be 2.04 percent. Thus, JLB utilized an annual growth rate of 2.04 percent to expand the existing traffic volumes by 22 years. The 2.04 percent annual growth rate was presented in the Draft Scope of Work that was submitted to the City of Lemoore, County of Kings and Caltrans for review and approval. The use of the 2.04 annual growth rate was explicitly approved by Caltrans. Finally, JLB added the Cumulative Project Only Trips to the expanded existing traffic volumes to arrive at the Cumulative Year 2040 plus Project traffic volumes.

Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Traffic Conditions. The Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange traffic volumes are the same as those determined in the previous scenario. However, under this scenario, it is assumed that the State Route 41 and Hanford-Armona Road at-grade highway intersection has been removed and replaced with a partial Type L-9 interchange. As a result, traffic volumes were rerouted as appropriate.

Study Facilities

The existing peak hour turning movement and segment volume counts were conducted at the study intersections and segments in January and March 2018, while schools in the vicinity of the proposed Project were in session. The intersection turning movement counts included pedestrian volumes. The traffic counts for the existing study intersections and segments are contained in Appendix B. The existing intersection turning movement volumes, intersection geometrics and traffic controls are illustrated in Figure 2.

Existing, Existing plus Project, and Cumulative Year 2040 plus Project Scenarios

Study Intersections:

1. State Route 41 / Hanford-Armona Road
2. Project Driveway 1 / Hanford-Armona Road
3. Project Driveway 2 / Hanford-Armona Road
4. 19th Avenue / Hanford-Armona Road
5. 19th Avenue / Cinnamon Drive

Arterial Study Segments:

1. Hanford-Armona Road between State Route 41 and Project Driveway 2
2. Hanford-Armona Road between Project Driveway 2 and 19th Avenue

Highway Study Segments:

1. State Route 41 between:
   a. Glendale Avenue and Hanford-Armona Road (Northbound)
   b. Glendale Avenue and Hanford-Armona Road (Southbound)
   c. Hanford-Armona Road and Bush Street (Northbound)
   d. Hanford-Armona Road and Bush Street (Southbound)

Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Scenario Only

Study Intersections:

6. State Route 41 SB Ramps / Hanford-Armona Road
7. State Route 41 NB Ramps / Hanford-Armona Road
3. Project Driveway 2 / Hanford-Armona Road
4. 19th Avenue / Hanford-Armona Road
5. 19th Avenue / Cinnamon Drive

Arterial Study Segments:

1. Hanford-Armona Road between State Route 41 and Project Driveway 2
2. Hanford-Armona Road between Project Driveway 2 and 19th Avenue

Highway Study Segments:

1. State Route 41 between:
   a. Glendale Avenue and Hanford-Armona Road (Northbound)
   b. Glendale Avenue and Hanford-Armona Road (Southbound)
   c. Hanford-Armona Road and Bush Street (Northbound)
   d. Hanford-Armona Road and Bush Street (Southbound)

Ramp Study Segment:

1. State Route 41 NB Ramps to Hanford-Armona Road

Level of Service Analysis Methodology

Level of Service (LOS) is a qualitative index of the performance of an element of the transportation system. LOS is a rating scale running from “A” to “F”, with “A” indicating no congestion of any kind and “F” indicating unacceptable congestion and delays. LOS in this study describes the operating conditions for signalized and unsignalized intersections.

The *2010 Highway Capacity Manual* (HCM) is the standard reference published by the Transportation Research Board and contains the specific criteria and methods to be used in assessing LOS. U-turn movements were analyzed using HCM 2000 methodologies and would yield more accurate results for the reason that HCM 2010 methodologies do not allow the analysis of U-turns or some shared turn lane movements. Synchro software was used to define LOS in this study. Details regarding these calculations are included in Appendix C.

Criteria of Significance

The City of Lemoore 2030 General Plan does not currently have any adopted LOS standard. However, recent traffic studies have utilized LOS D as the acceptable level of traffic congestion. Therefore, LOS D is used to evaluate the potential significance of LOS impacts to City of Lemoore roadway facilities.

The County of Kings 2035 General Plan has established a "minimum" LOS standard within the County, which shall be no lower than LOS E for urban areas and LOS D for rural areas. For this study, LOS D is used to evaluate the potential significance of LOS impacts to intersections within the County of Kings.

Caltrans endeavors to maintain a target LOS at the transition between LOS C and D on State highway facilities consistent with the Caltrans Guide for the Preparation of Traffic Impact Studies dated December 2002. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS threshold, then the existing measures of effectiveness (MOE) should be maintained. In this case, one of the study intersection is currently operating at LOS D. At locations where the existing LOS has dropped below the Caltrans LOS C to D transition, the existing MOEs should be maintained. Furthermore, the addition of an average delay of less than five seconds is often not considered a significant impact. The existing MOEs are described in the Existing Traffic Conditions scenario.

Operational Analysis Assumptions and Defaults

The following operational analysis values, assumptions and defaults were used in this study to ensure a consistent analysis of LOS among the various scenarios.

- Yellow time consistent with the California Manual of Uniform Traffic Control Devices (CA MUTCD) based on approach speeds
- Yellow time of 3.2 seconds for left-turn phases
- All-red clearance intervals of 1.0 second for all phases
- Walk intervals of 7.0 seconds
- Flashing Don't Walk based on 3.5 feet/second walking speed with yellow plus all-red clearance subtracted and 2.0 seconds added
- All new or modified signals utilize protective left-turn phasing
- The heavy vehicle percentage factors utilized in this study varied from location to location based on actual count data and data from the State Route 41 Transportation Concept Report. The heavy vehicle factors were: 13 percent for traffic on State Route 41, 11 percent for traffic on Hanford-Armona Road, and three (3) percent at the Project driveways and the remaining study segments.
- An average of 3 pedestrian calls per hour at signalized intersections
- The number of observed pedestrians at existing intersections was utilized under all study scenarios
- At existing intersections, the observed approach Peak Hour Factor (PHF) is utilized in the Existing, Existing plus Project Phase 1 and Existing plus Project Buildout scenarios
- A PHF of 0.92, or the existing PHF if higher, is utilized in the Cumulative Year 2040 plus Project and Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange scenarios

Existing Traffic Conditions

Roadway Network

The Project site and surrounding study area are illustrated in Figure 1. Important roadways serving the Project are discussed below.

Hanford-Armona Road is an existing east-west two-lane arterial adjacent to the proposed Project. In this area, Hanford-Armona Road extends through the City of Lemoore SOI. Hanford-Armona Road is a two- to three-lane arterial divided by a two-way left-turn lane between Apricot Avenue and Lemoore Avenue, a four-lane undivided arterial between Lemoore Avenue and Cinnamon Drive, and a two-lane undivided arterial east of Cinnamon Drive. The City of Lemoore 2030 General Plan designates Hanford-Armona Road as a four-lane arterial between College Drive and Cinnamon Drive.

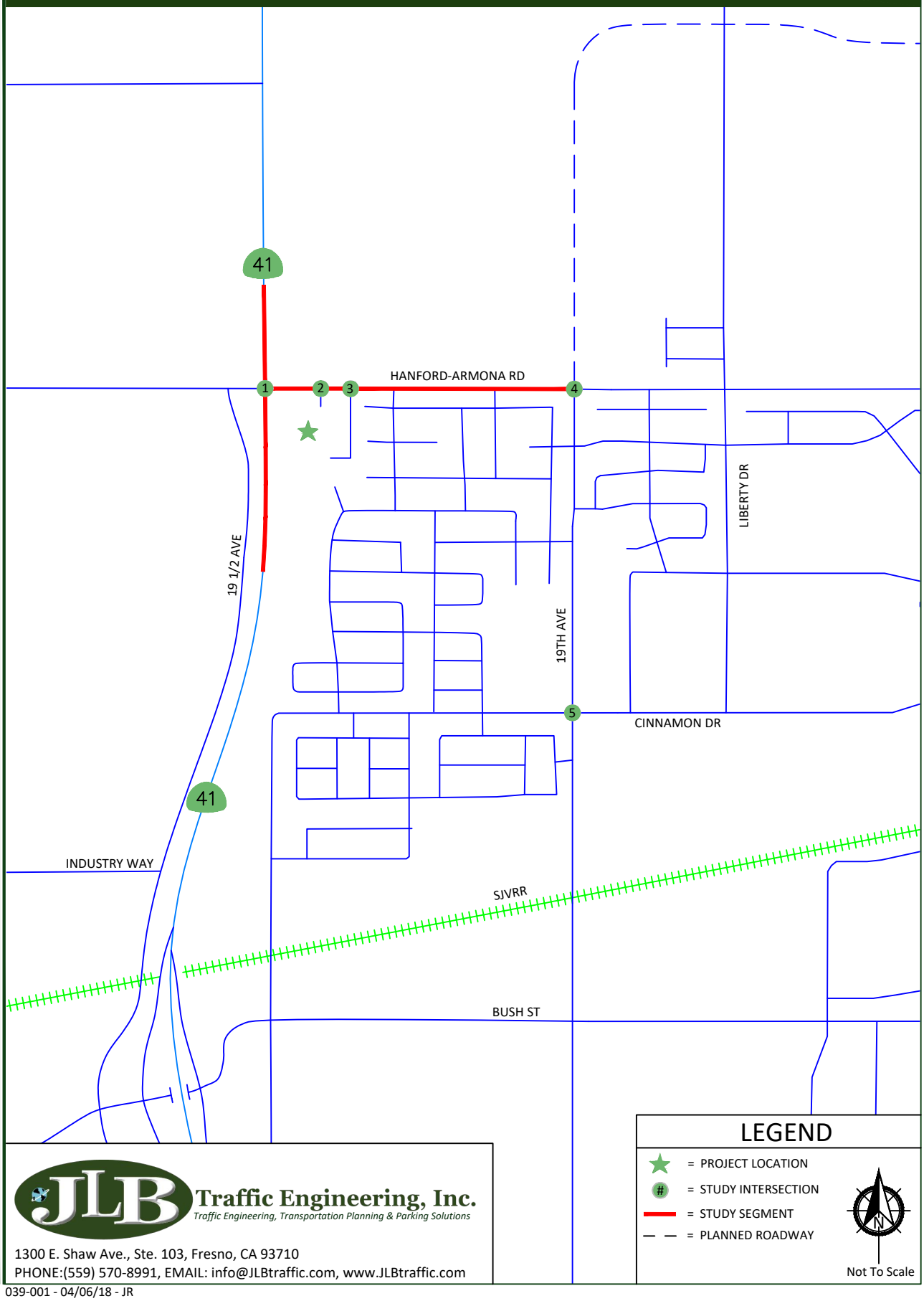
State Route (SR) 41 is an existing north-south two- to four-lane expressway adjacent to the proposed Project. State Route 41 serves as the principal connection to various metropolitan areas within the Central San Joaquin Valley and the California Central Coast. In this area, State Route 41 connects to Hanford-Armona Road.

19th Avenue is an existing north-south two-lane arterial divided by a two-way left-turn lane in the vicinity of the proposed Project. In this area, 19th Avenue extends south of Hanford-Armona Road through the City of Lemoore SOI. 19th Avenue is a two-lane divided arterial between Hanford-Armona Road and Silverado Drive, a four-lane arterial between Silverado Drive and Iona Avenue, and a two-lane undivided arterial south of Iona Avenue through the City of Lemoore SOI. The City of Lemoore 2030 General Plan plans to extend 19th Avenue north of Hanford-Armona Road as a two-lane collector and designates 19th Avenue as a four-lane arterial between Hanford-Armona Road and Idaho Avenue.

Cinnamon Drive is an existing east-west two-lane divided collector in the vicinity of the proposed Project. In this area, Cinnamon Drive extends east of its connection to 19th ½ Avenue and changes orientation to intersect Hanford-Armona Road. Cinnamon Drive is a two-lane collector divided by a two-way left-turn lane between 19th ½ Avenue and Lemoore Avenue and a two-lane undivided collector east of Lemoore Avenue and south of Hanford-Armona Road. The City of Lemoore 2030 General Plan designates Cinnamon Drive as a four-lane collector between 19th ½ Avenue and Lemoore Avenue.

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Vicinity Map

Figure 1



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Results of Existing Level of Service Analysis

Figure 2 illustrates the Existing Traffic Conditions turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing Traffic Conditions scenario are provided in Appendix D. Table I presents a summary of the Existing peak hour LOS at the study intersections, Table II presents a summary of the Existing LOS for the arterial study segments, and Table III presents a summary of the Existing LOS for the highway study segments.

At present, the intersection of State Route 41 and Hanford-Armona Road operates below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. However, to improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be considered.

- State Route 41 and Hanford-Armona Road
  - Modify the westbound left-through-right lane to a left-through lane;
  - Add a westbound right-turn lane; and
  - Modify the traffic signal to accommodate the added lane.

At present, all arterial and highway segments operate at an acceptable LOS.

Table I: Existing Intersection LOS Results

ID	*Intersection*	*Intersection Control*	*AM Peak Hour*		*PM Peak Hour*	
			Average Delay (sec/veh)	*LOS*	*Average Delay (sec/veh)*	*LOS*
1	State Route 41 / Hanford-Armona Road	Signalized	**42.1**	**D**	**36.2**	**D**
		Signalized (Improved)	30.9	C	31.0	C
2	Project Driveway 1 / Hanford-Armona Road	Does Not Exist	N/A	N/A	N/A	N/A
3	Project Driveway 2 / Hanford-Armona Road	Does Not Exist	N/A	N/A	N/A	N/A
4	19th Avenue / Hanford-Armona Road	All-Way Stop	12.0	B	12.8	B
5	19th Avenue / Cinnamon Drive	All-Way Stop	20.3	C	12.1	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table II: Existing Arterial Segment LOS Results

ID	*Segment*	*Limits*	*Lanes*	*24-hour Volume*	*LOS*
1	Hanford-Armona Road	State Route 41 and Project Driveway 2	2	7,465	C
2	Hanford-Armona Road	Project Driveway 2 and 19th Avenue	2	7,465	C

Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Table III: Existing Highway Segment LOS Results

ID	Segment	Limits	Lanes	AM			PM		
				Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
1	State Route 41	Glendale Avenue and Hanford-Armona Road (Northbound)	2	628	6.34	A	762	7.69	A
2	State Route 41	Glendale Avenue and Hanford-Armona Road (Southbound)	2	675	6.81	A	754	7.61	A
3	State Route 41	Hanford-Armona Road and Bush Street (Northbound)	2	495	5.00	A	814	8.22	A
4	State Route 41	Hanford-Armona Road and Bush Street (Southbound)	2	666	6.72	A	566	5.71	A

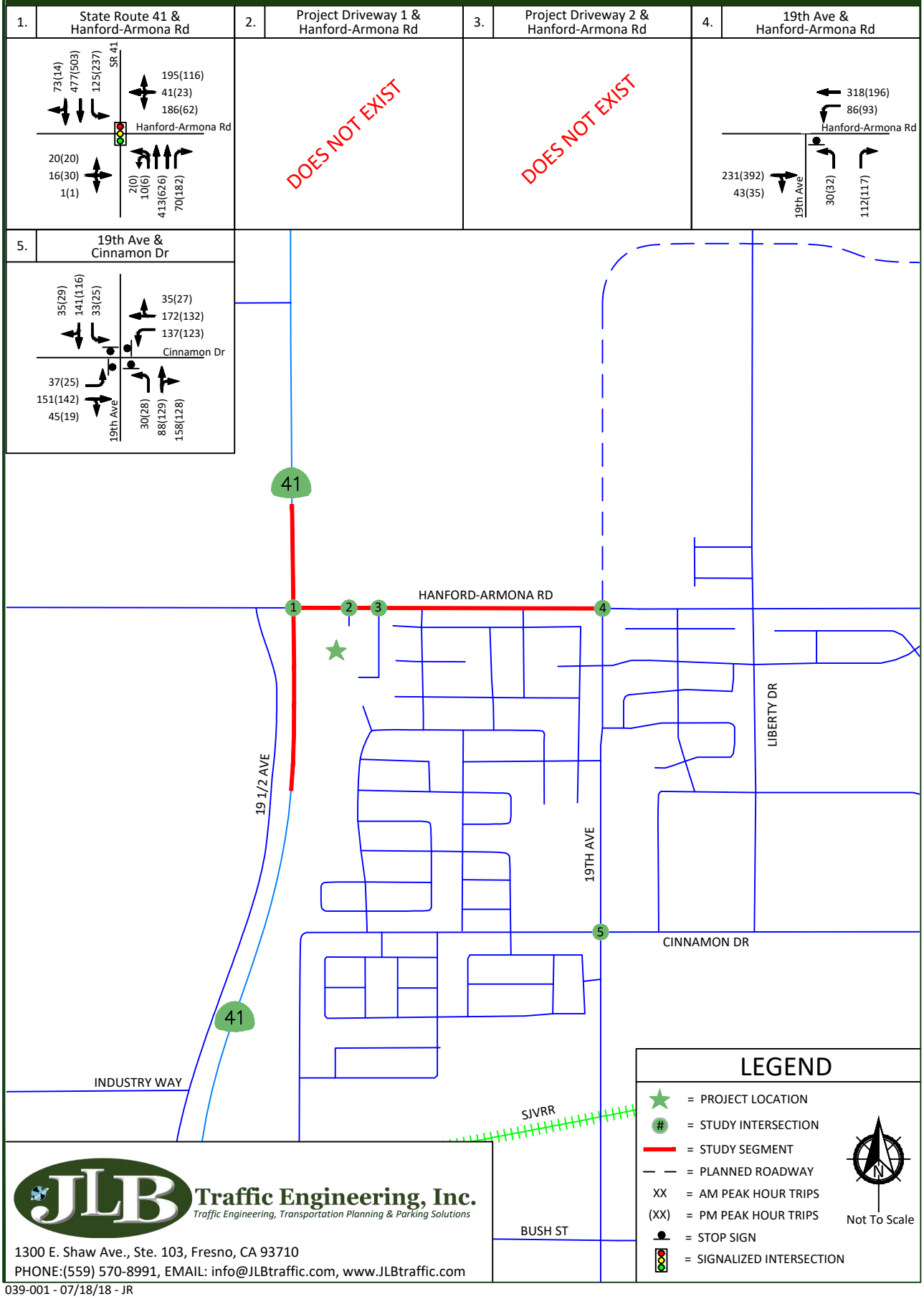
Note: LOS = Level of Service pursuant to Exhibit 11-5 and 14-2 of HCM 6

Traffic Signal Warrants

Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Existing Traffic Conditions scenario. These warrants are found in Appendix I. These warrants were prepared pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, none of the unsignalized intersections satisfy the peak hour signal warrant.

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Existing - Traffic Volumes, Geometrics and Controls

Figure 2



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Existing plus Project Phase 1 Traffic Conditions

Project Phase 1 Description

Under Phase 1, the Project proposes to develop a 10.69-acre site with 176 multi-family residential units (apartments). Based on information provided to JLB, the Project will undergo a General Plan Amendment and a Zoning Map Amendment to change the proposed residential area to High-Density Residential. Figure 3 illustrates the latest Project Site Plan.

Project Phase 1 Access

Based on the latest Project Site Plan, access to and from the Project site under Phase 1 will be from a total of two (2) points. The access driveway (Project Driveway 2) along Hanford-Armona Road is located at a point approximately 700 feet east of State Route 41 and is proposed as a full access. The other access driveway is located on the northwest corner of the intersection of Persimmon Street and Dogwood Avenue and is also proposed to have full access.

JLB analyzed the location of the proposed access points relative to the existing local roads and driveways in the Project's vicinity. Considering the current traffic controls at the intersection of State Route 41 and Hanford-Armona-Road and the proposed dedicated eastbound right-turn lanes, a review of the proposed placement of the Project driveways indicates that they are located at points that minimize traffic operational impacts to the existing roadway network.

JLB also analyzed the conceptual roadways within the earlier Project Site Plan. Based on this review, it was recommended that the Project consider relocating the gasoline/service station (Shop A) and fast-food restaurant (Pad A) located near the northwest corner of the Project Site Plan further east and relocating the hotel in their place. The gasoline/service station and fast-food restaurant are estimated to attract higher volumes than those estimated to be generated by the hotel. Based on these comments the Project site plan was revised to relocate the proposed Hotel and gasoline/service station as recommended by JLB. Further to minimize impacts the Project site plan reduced the number of driveways to Hanford-Armona Road. By incorporating these modifications to the Project Site Plan, on-site and off-site traffic operations and circulation would be improved.

Project Phase I Trip Generation

Trip generation rates for the proposed Project were obtained from the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table IV presents the trip generation for the proposed Phase 1 Project with trip generation rates for Multifamily Housing. Phase 1 of the proposed Project is estimated to generate a maximum of 1,288 daily trips, 81 AM peak hour trips and 99 PM peak hour trips.

Table IV: Project Phase I Trip Generation (General Plan Amendment)

Land Use (ITE Code)	Size	Unit	Daily		AM Peak Hour						PM Peak Hour					
			Rate	Total	Trip Rate	In %	Out %	In	Out	Total	Trip Rate	In %	Out %	In	Out	Total
Multifamily Housing (Low-Rise) (220)	176	d.u.	7.32	1,288	0.46	23	77	19	62	81	0.56	63	37	62	37	99
Total Project Trips				**1,288**				**19**	**62**	**81**				**62**	**37**	**99**

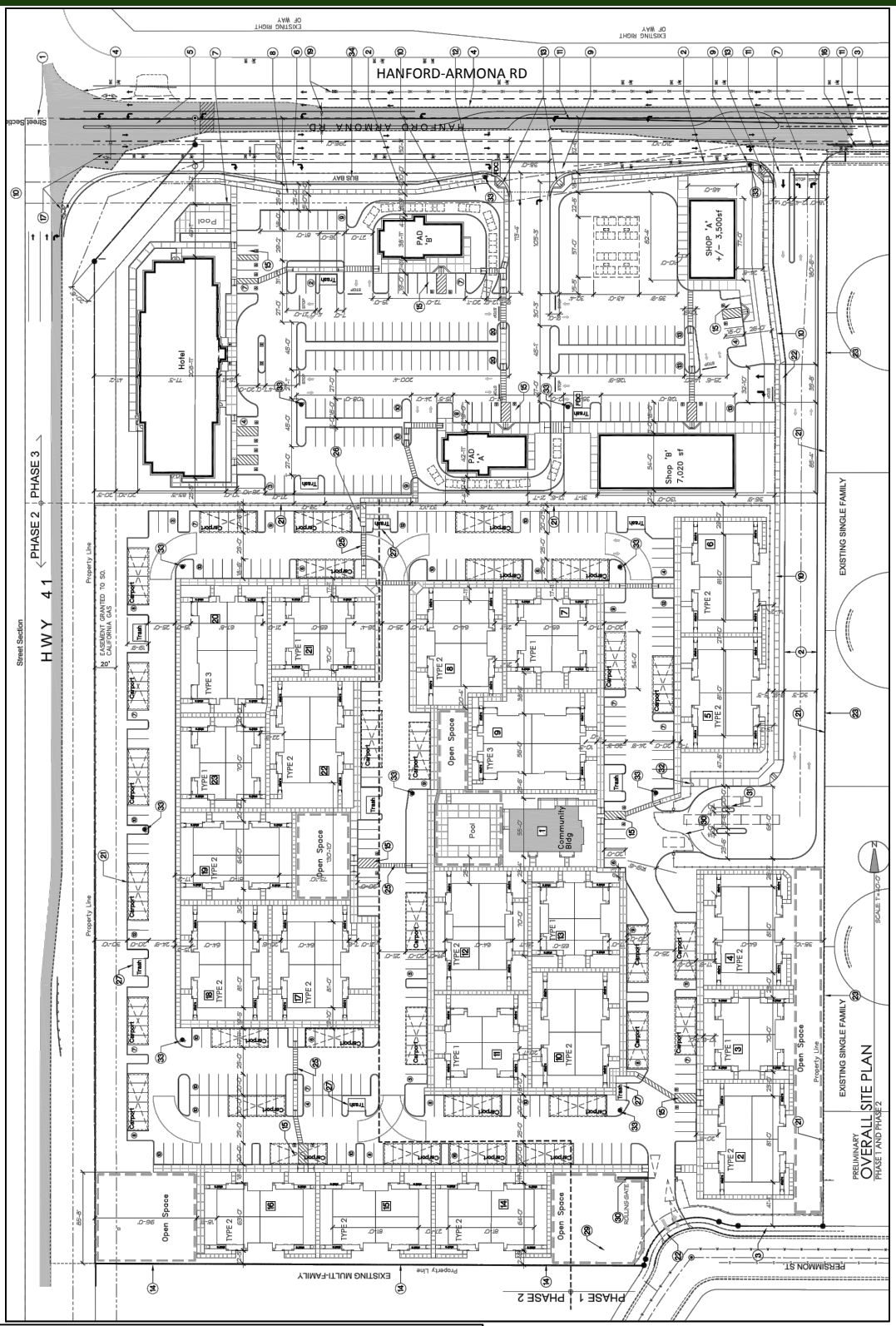
Note: d.u. = Dwelling Units
f.p. = Fueling Positions
o.r. = Occupied Rooms
k.s.f. = Thousand Square Feet

Project Phase 1 Trip Distribution

The Phase 1 trip distribution assumptions were developed based on existing travel patterns, data provided by the developer, knowledge of the study area and the City's General Plan. Project trip distribution percentages for Phase 1 of the Project was submitted to the City for review and approval. The trip distribution percentages that were utilized to distribute Phase 1 Project Only Trips to the study intersections are provided in Figure 4. Figure 5 illustrates the Phase 1 Project Only Trips to the study intersections.

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Project Site Plan

Figure 3



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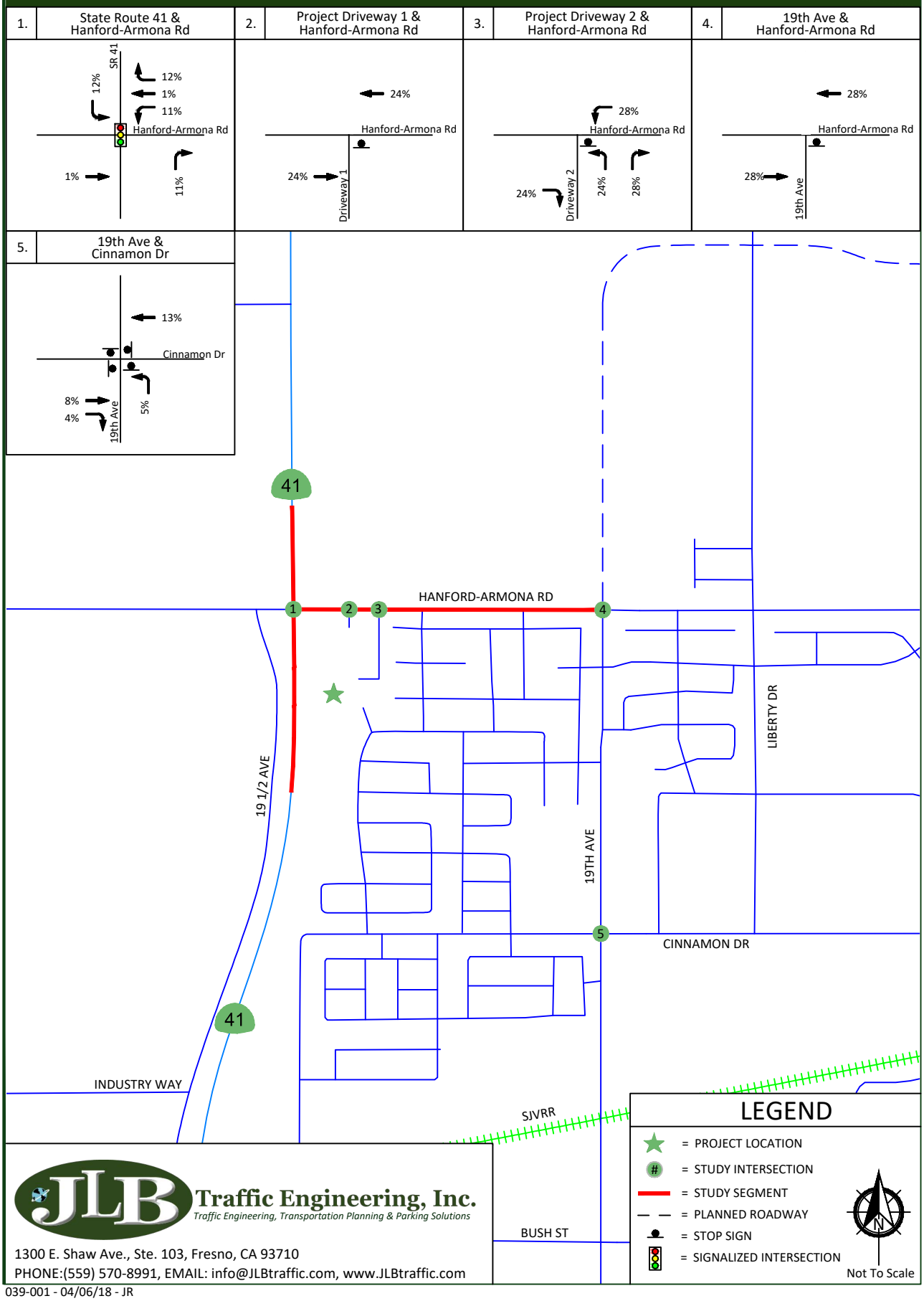
Not To Scale

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Multifamily Housing Percent Distribution

Figure 4



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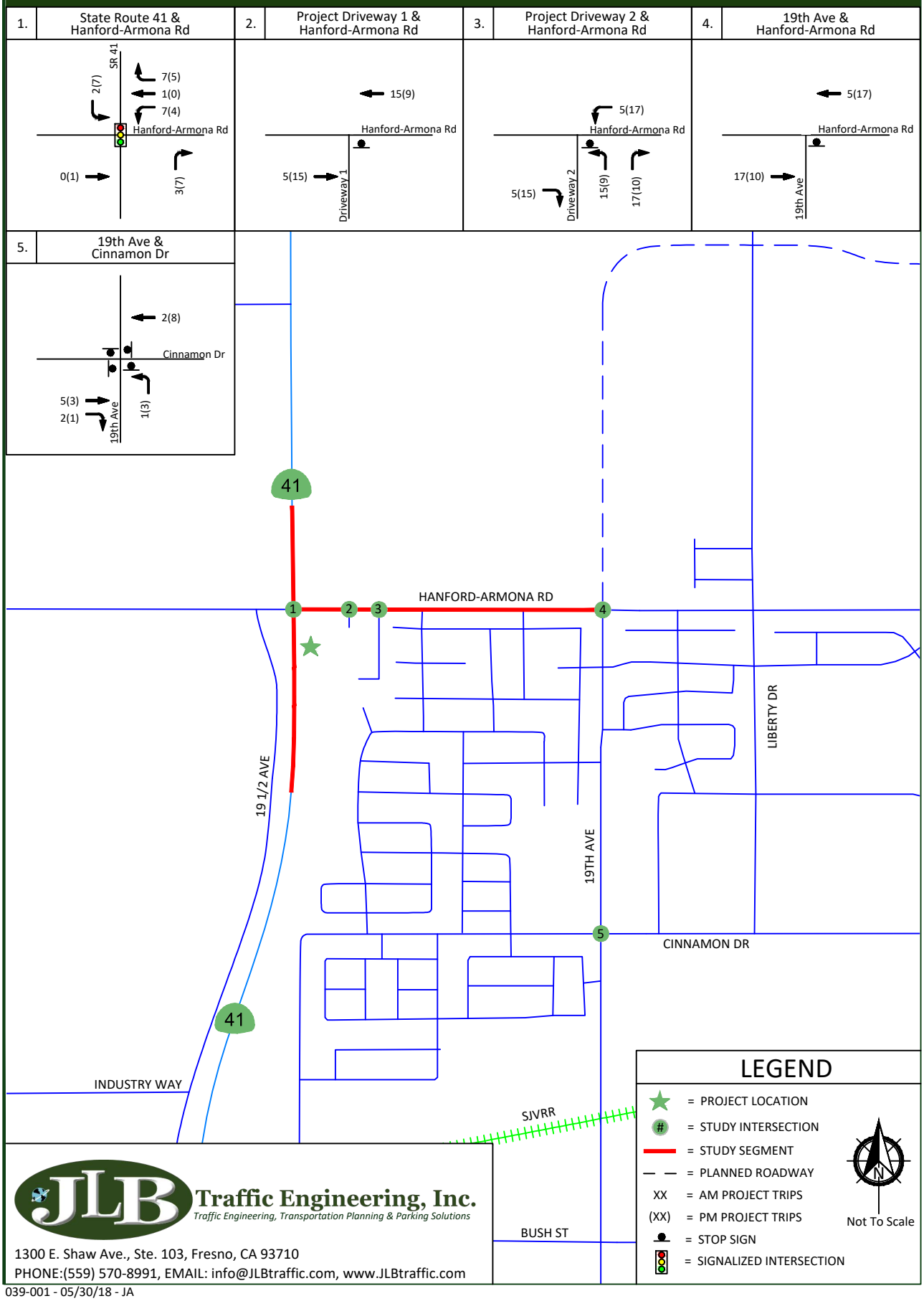
City of Lemoore - Hanford-Armona Road Mixed-Use Development
Phase 1 - Project Only Trips

Figure 5



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Results of Existing plus Project Phase 1 Level of Service Analysis

The Existing plus Project Phase 1 Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place. Figure 6 illustrates the Existing plus Project Phase 1 turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing plus Project Traffic Conditions scenario are provided in Appendix E. Table V presents a summary of the Existing plus Project Phase 1 peak hour LOS at the study intersections, Table VI presents a summary of the Existing plus Project Phase 1 LOS for the arterial study segments, and Table VII presents a summary of the Existing plus Project Phase 1 LOS for the highway study segments.

Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to continue operating below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. Phase 1 of the Project is projected to add 3.3 and 1.1 seconds of average delay during the AM and PM peaks respectively. Also, the addition of an average delay of less than five (5) seconds is often not considered a significant impact. Therefore, since the Phase 1 of the Project maintains the existing MOE's and it adds less than five (5) seconds of average delay to existing operations, this impact would not be considered significant. However, if improvements were made to improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be implemented.

- State Route 41 and Hanford-Armona Road
  - Option 1
    - Modify the westbound left-through-right lane to a left-through lane;
    - Add a westbound right-turn lane; and
    - Modify the traffic signal to accommodate the added lanes while maintaining the east-west split phasing.
  - Option 2
    - Modify the westbound left-through-right lane to a left-turn lane;
    - Add a westbound through-right lane; and
    - Modify the traffic signal to accommodate the added lanes while maintaining the east-west split phasing.

Under this scenario, all arterial and highway segments are projected to operate at an acceptable LOS.

Table V: Existing plus Project Phase 1 Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	State Route 41 / Hanford-Armona Road	Signalized	**45.4**	**D**	**37.3**	**D**
		Signalized (Mitigated Option 1)	31.8	C	31.2	C
		Signalized (Mitigated Option 2)	29.7	C	31.0	C
2	Project Driveway 1 / Hanford-Armona Road	Does Not Exist	N/A	N/A	N/A	N/A
3	Project Driveway 2 / Hanford-Armona Road	One-Way Stop	11.8	B	13.0	B
4	19th Avenue / Hanford-Armona Road	All-Way Stop	12.2	B	12.9	B
5	19th Avenue / Cinnamon Drive	All-Way Stop	21.3	C	12.2	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table VI: Existing plus Project Phase 1 Arterial Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Hanford-Armona Road	State Route 41 and Project Driveway 2	2	7,705	C
2	Hanford-Armona Road	Project Driveway 2 and 19th Avenue	2	7,725	C

Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Table VII: Existing plus Project Phase 1 Highway Segment LOS Results

ID	Segment	Limits	Lanes	AM			PM		
				Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
1	State Route 41	Glendale Avenue and Hanford-Armona Road (Northbound)	2	635	6.41	A	767	7.74	A
2	State Route 41	Glendale Avenue and Hanford-Armona Road (Southbound)	2	677	6.83	A	761	7.68	A
3	State Route 41	Hanford-Armona Road and Bush Street (Northbound)	2	498	5.03	A	821	8.29	A
4	State Route 41	Hanford-Armona Road and Bush Street (Southbound)	2	673	6.79	A	570	5.75	A

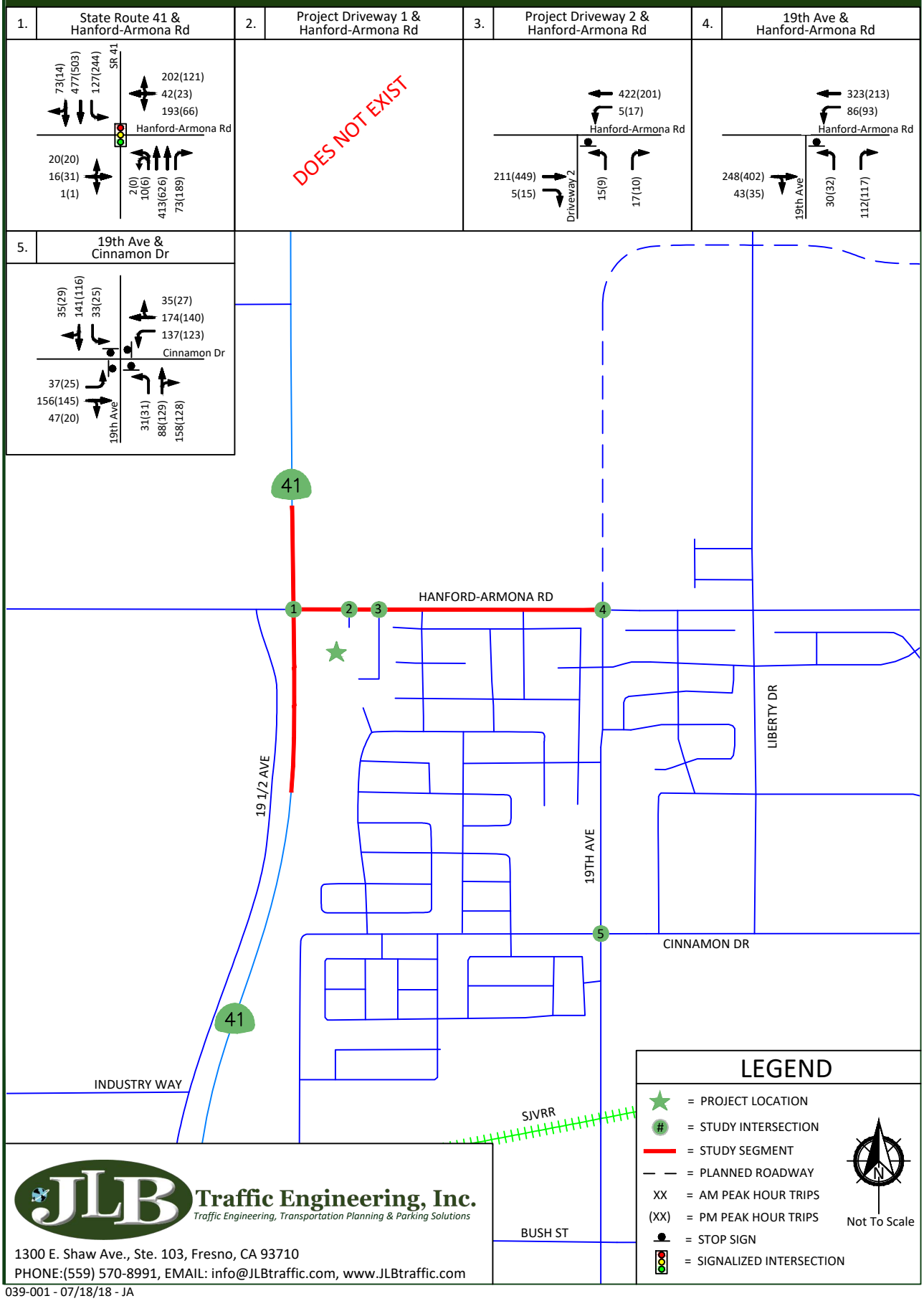
Note: LOS = Level of Service pursuant to Exhibit 11-5 and 14-2 of HCM 6

Traffic Signal Warrants

Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Existing plus Project Phase 1 Traffic Conditions scenario. These warrants are found in Appendix I. The effects of right-turning traffic from the minor approach onto the major approach were taken into account using engineering judgement pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, none of the unsignalized intersections satisfy the peak hour signal warrant.

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Existing plus Project Phase 1 - Traffic Volumes, Geometrics and Controls

Figure 6



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Existing plus Project Buildout Traffic Conditions

Project Buildout Description

The Project at Buildout proposes to develop a 16.19-acre site with 176 multi-family residential units (apartments), a gasoline/service station (8 fueling positions) with convenience market, a 90-room hotel, 6,000 square feet of fast-food restaurant with drive-through window, and 7,040 square feet of general shopping center. Based on information provided to JLB, the Project will undergo a General Plan Amendment and a Zoning Map Amendment to change the proposed residential area to High-Density Residential and RHD zoning and the proposed commercial area to Neighborhood Commercial and NC zoning through the City of Lemoore. Figure 3 illustrates the latest Project Site Plan.

Project Buildout Access

Based on the latest Project Site Plan, access to and from the Project site at buildout will be from a total of three (3) points. Two (2) of the proposed access points are located along the south side of Hanford-Armona Road. The first access driveway (Project Driveway 1) along Hanford-Armona Road is located at a point approximately 500 feet east of State Route 41 and is proposed to provide right-in, right-out, and left-in access. The second access driveway (Project Driveway 2) along Hanford-Armona Road is located at a point approximately 700 feet east of State Route 41 and is proposed as a full access. The final access driveway is located on the northwest corner of the intersection of Persimmon Street and Dogwood Avenue and is proposed to have full access.

JLB analyzed the location of the proposed access points relative to the existing local roads and driveways in the Project's vicinity. Based on the current traffic controls at the intersection of State Route 41 and Hanford-Armona-Road coupled with the proposed dedicated eastbound right-turn lanes, a review of the proposed placement of the Project driveways indicates that they are located at points that minimize the traffic operational impacts to the existing roadway network. However, further analysis of this layout is provided within the Stopping Sight Distance Analysis.

JLB also analyzed the conceptual roadways within an earlier version of the Project Site Plan. Based on this review, it was recommended that the Project consider relocating the gasoline/service station (Shop A) and fast-food restaurant (Pad A) located near the northwest corner of the Project Site Plan further east and relocating the hotel in their place. The gasoline/service station and fast-food restaurant are estimated to attract higher volumes than those estimated to be generated by the hotel. Based on these comments, the Project site plan was revised to relocate the proposed Hotel and gasoline/service station as recommended by JLB. To further minimize traffic impacts, the latest Project site plan also included a reduction on the number of driveways to Hanford-Armona Road. By incorporating these modifications to the Project Site Plan, on-site and off-site traffic operations and circulation have been improved.

Project Buildout Trip Generation

Trip generation rates for the proposed Project Buildout were obtained from the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table VIII presents the trip generation for the proposed Project with trip generation rates for Multifamily Housing, Gasoline/Service Station with Convenience Market, Hotel, Fast-Food Restaurant with Drive-Through Window and General Shopping Center. At buildout, the proposed Project is estimated to generate a maximum of 6,775 daily trips, 471 AM peak hour trips and 488 PM peak hour trips. However, assuming that the proposed Project were developed entirely consistent with the City's General Plan, the anticipated trip generation could be slightly higher. Table IX presents the trip generation for the proposed Project with trip generation rates for the same land uses, but with a modified size to be consistent with the City of Lemoore 2030 General Plan. Based on this, the Project Site under the current General Plan has the potential to generate a maximum of 7,199 daily trips, 472 AM peak hour trips and 536 PM peak hour trips. Compared to the land use consistent with the 2030 General Plan, the proposed Project is estimated to generate less traffic by 424 daily trips, 1 AM peak hour trip and 48 PM peak hour trips. It should be noted that the trip generation analyzed within this TIA is that which is presented on Table VIII. The difference in trip generation is summarized in Table X.

Table VIII: Proposed Project Buildout Trip Generation (General Plan Amendment)

Land Use (ITE Code)	*Size*	*Unit*	*Daily*		*AM Peak Hour*						*PM Peak Hour*					
			Rate	*Total*	*Trip Rate*	*In*	*Out*	*In*	*Out*	*Total*	*Trip Rate*	*In*	*Out*	*In*	*Out*	*Total*
						%						*%*				
Multifamily Housing (Low-Rise) (220)	176	d.u.	7.32	1,288	0.46	23	77	19	62	81	0.56	63	37	62	37	99
Gasoline/Service Station with Convenience Market (945)	8	f.p.	205.36	1,643	12.47	51	49	51	49	100	13.99	51	49	57	55	112
Hotel (310)	90	o.r.	8.36	752	0.47	59	41	25	17	42	0.60	51	49	28	26	54
Fast-Food Restaurant with Drive-Through Window (934)	6.000	k.s.f.	470.95	2,826	40.19	51	49	123	118	241	32.67	52	48	102	94	196
Shopping Center (820)	7.040	k.s.f.	37.75	266	0.94	62	38	4	3	7	3.81	48	52	13	14	27
Total Project Trips				**6,775**				**222**	**249**	**471**				**262**	**226**	**488**

Note: d.u. = Dwelling Units
f.p. = Fueling Positions
o.r. = Occupied Rooms
k.s.f. = Thousand Square Feet

Table IX: Project Site Trip Generation (Consistent with the 2030 General Plan)

Land Use (ITE Code)	Size	Unit	Daily		AM Peak Hour						PM Peak Hour					
			Rate	Total	Trip Rate	In %	Out %	In	Out	Total	Trip Rate	In %	Out %	In	Out	Total
Multifamily Housing (Low-Rise) (220)	144	d.u.	7.32	1,054	0.46	23	77	15	51	66	0.56	63	37	51	30	81
Gasoline/Service Station with Convenience Market (945)	8	f.p.	205.36	1,643	12.47	51	49	51	49	100	13.99	51	49	57	55	112
Hotel (310)	90	o.r.	8.36	752	0.47	59	41	25	17	42	0.60	51	49	28	26	54
Fast-Food Restaurant with Drive-Through Window (934)	6.000	k.s.f.	470.95	2,826	40.19	51	49	123	118	241	32.67	52	48	102	94	196
Shopping Center (820)	24.464	k.s.f.	37.75	924	0.94	62	38	14	9	23	3.81	48	52	45	48	93
Total Project Trips				**7,199**				**228**	**244**	**472**				**283**	**253**	**536**

Note: d.u. = Dwelling Units
f.p. = Fueling Positions
o.r. = Occupied Rooms
k.s.f. = Thousand Square Feet

Table X: Difference in Trip Generation

	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Project Trip Generation (General Plan Amendment)	6,775	222	249	471	262	226	488
Proposed Project Trip Generation (Consistent with the 2030 General Plan)	7,199	228	244	472	283	253	536
Change in Trip Generation	**-424**	**-6**	**5**	**-1**	**-21**	**-27**	**-48**

Project Buildout Trip Distribution

The trip distribution assumptions were developed based on existing travel patterns, data provided by the developer, knowledge of the study area and the City's General Plan. The Project Buildout trip distribution percentages for each of the proposed Project's land uses were submitted to the City for review and approval. The trip distribution percentages that were utilized to distribute Project Only Trips to the study intersections are provided in Figures 7A-D. Figure 8 illustrates the Buildout Project Only Trips to the study intersections.

Bikeways

Currently, bike lanes exist in the vicinity of the proposed Project site along Hanford-Armona Road, 19th Avenue and Cinnamon Drive. The City of Lemoore 2030 General Plan recommends that Class II Bike Lanes be implemented on: 1) Hanford-Armona Road east of State Route 41, 2) 19th Avenue north and south of Hanford-Armona Road, and 3) Cinnamon Drive east of 19th ½ Avenue. Therefore, it is recommended that the Project implement Class II bike lanes along its frontage to Hanford-Armona Road.

Transit

Kings Area Rural Transit (KART), the transit operator in the City of Lemoore, provides fixed-route and demand-response (Dial-A-Ride) service. At present, there are no KART fixed routes that operate in the vicinity of the proposed Project. The closest is KART Route 30, which runs on Hanford-Armona Road, approximately 0.50 miles to the east of the proposed Project. KART Dial-A-Ride services are offered each weekday within the communities of Hanford, Lemoore, Armona and Avenal and meet the needs of the disabled community who might not be able to access the fixed route services. Dial-A-Ride service is used for rides to the Lemoore Senior Center, medical appointments, and shopping. Retention of the existing and expansion of future transit routes is dependent on transit ridership demand and available funding.

The Hanford-Armona-Lemoore Route runs in the vicinity of the proposed Project via Hanford-Armona Road. This Route provides a direct connection to the cities of Hanford, Armona and Lemoore. The closest stop is located on Hanford-Armona Road, approximately 0.56 miles to the east of the proposed Project.

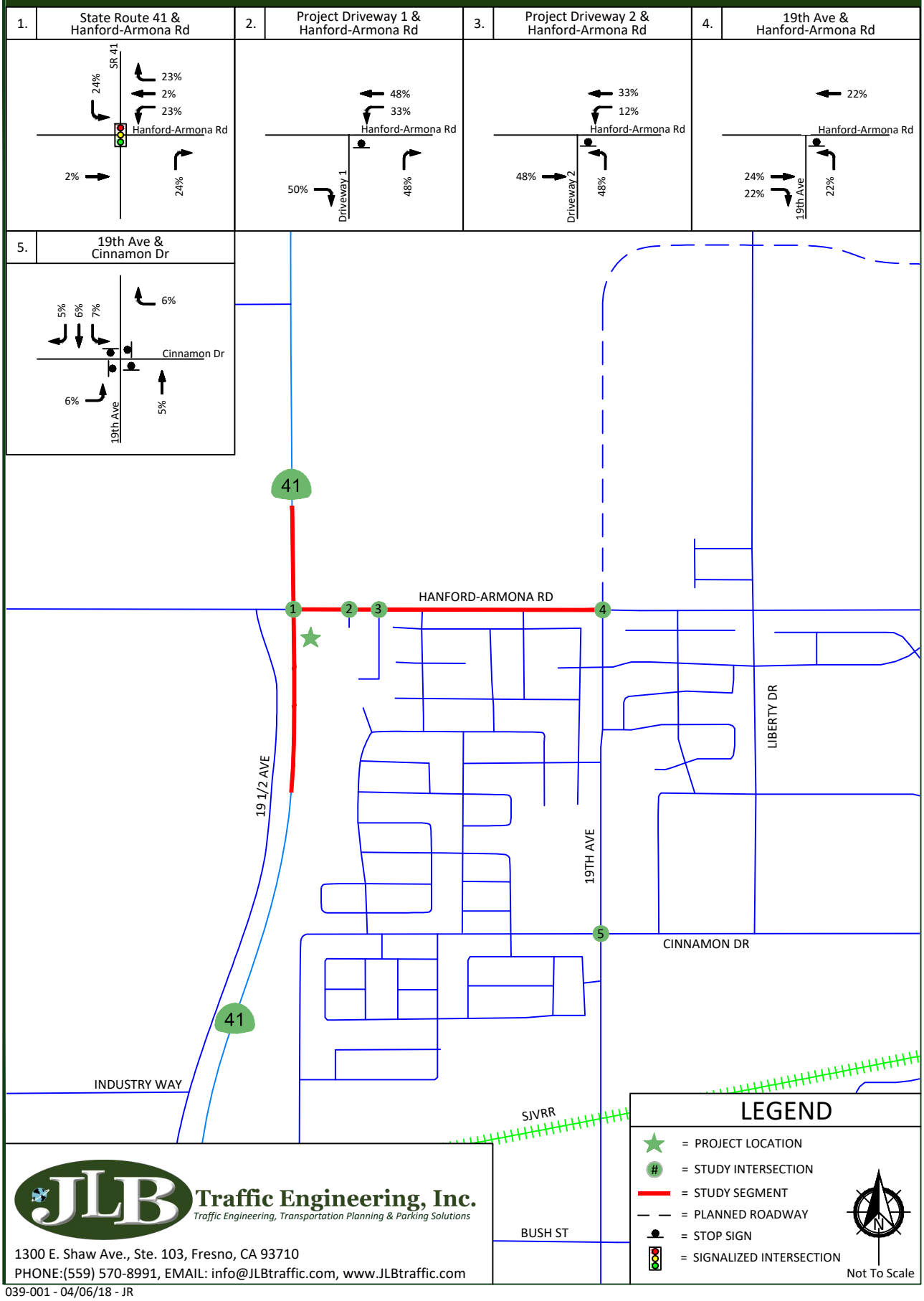
The City of Lemoore has indicated that the Project should accommodate a bus turnout on the south side of Hanford-Armona Road at a location that provides a direction walkway connection to the proposed residential development. Based on this concern, it is recommended that the Project coordinate with KART to determine the best location for the bus turnout.

Stopping Sight Distance

JLB conducted a planning level Stopping Sight Distance evaluation per the Caltrans Highway Design Manual Topic 201 for eastbound through traffic towards each of the proposed Project driveways. The purpose of the stopping sight distance evaluation is to determine if the proposed location of the Project driveways meet the standard stopping sight distance given the speed of traffic on Hanford-Armona Road. At present, since the speed limit for Hanford-Armona Road is 45 MPH and there are no dedicated right-turn lanes, the appropriate stopping sight distance would be 360 feet. For this Project, however, in an effort to minimize a deterioration of traffic operations, dedicated right-turn lanes are planned to be part of Project Driveways 1 and 2. Per AASHTO's *A Policy on Geometric Design of Highways and Streets*, "vehicles interfere little with through traffic when making right turns from an arterial." Moreover, the inclusion of a right-turn lane on an arterial reduces the potential interference of right-turning traffic with the through traffic. Also, the inclusion of right-turn lanes would provide for a comfortable deceleration of up to 10 MPH. With this in mind, the critical speed for the determination of the necessary stopping sight distance can be based on 35 MPH, or 250 feet. Therefore, based on the assumption that the Project is planning the inclusion of the dedicated right-turn lanes, the proposed Project driveways will provide the necessary stopping sight distance of 250 feet.

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Gasoline/Service Station with Convenience Market Percent Distribution

Figure 7A



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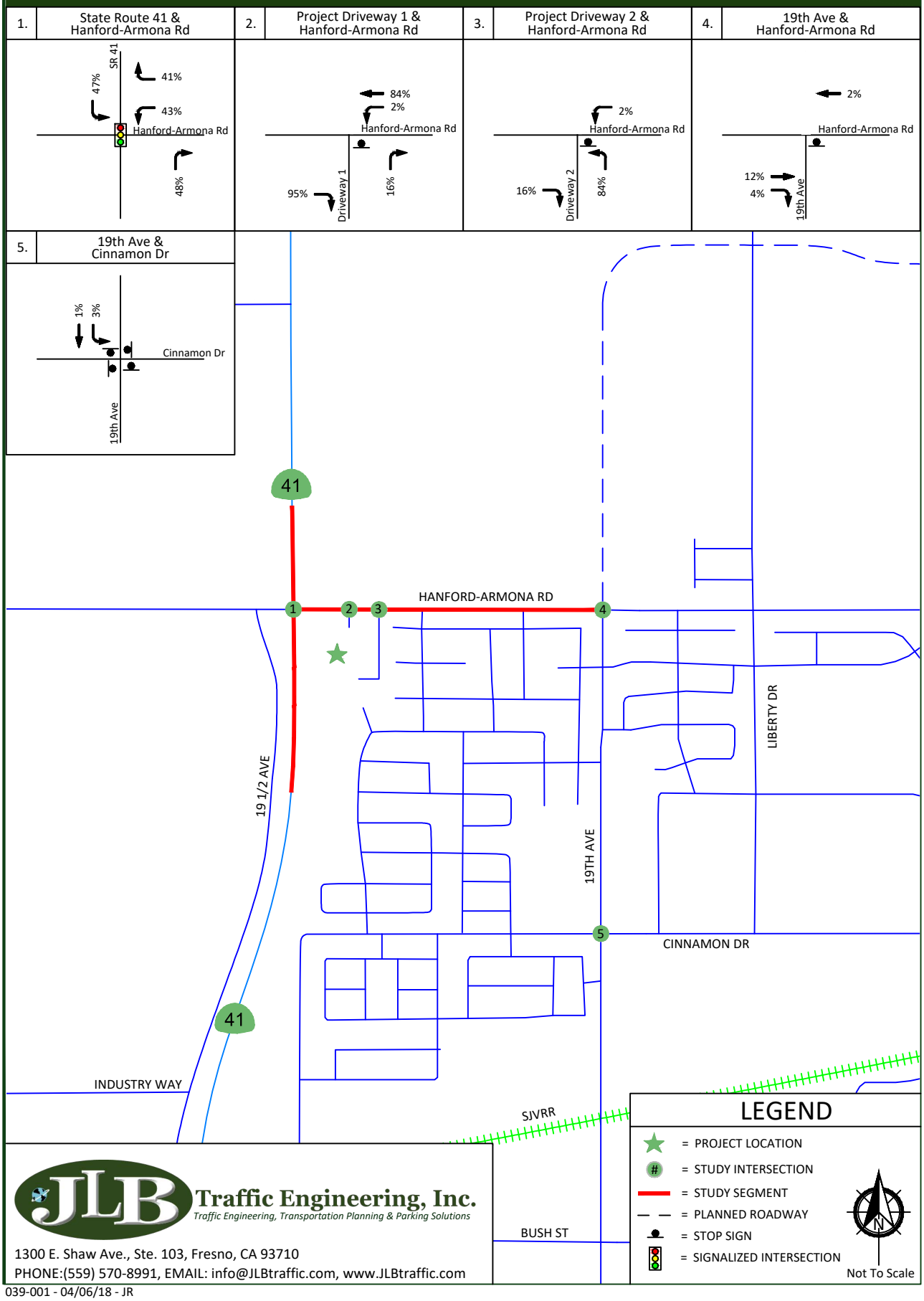
City of Lemoore - Hanford-Armona Road Mixed-Use Development
Hotel Percent Distribution

Figure 7B



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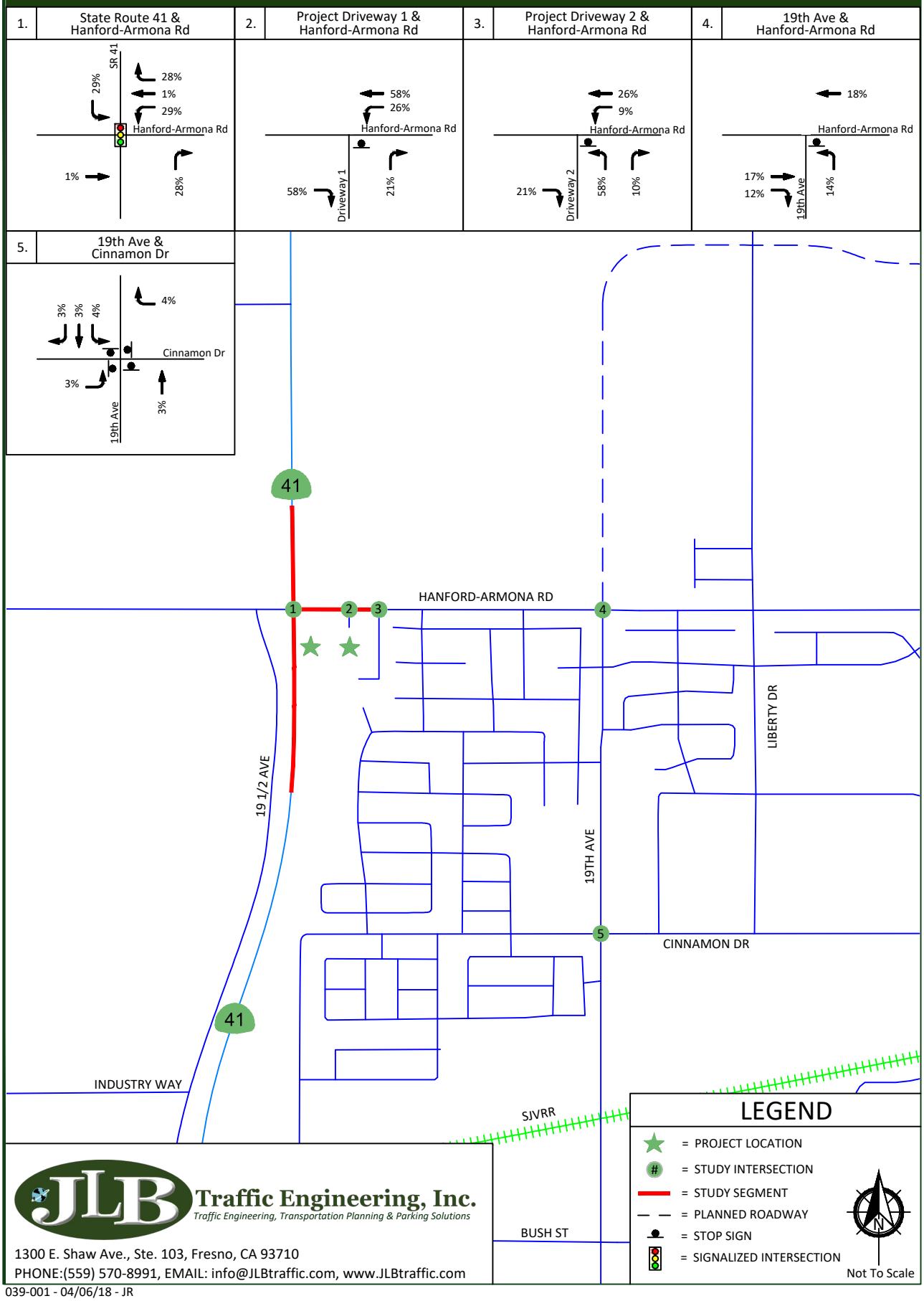
City of Lemoore - Hanford-Armona Road Mixed-Use Development
Fast-Food Restaurant with Drive-Through Window Percent Distribution

Figure 7C



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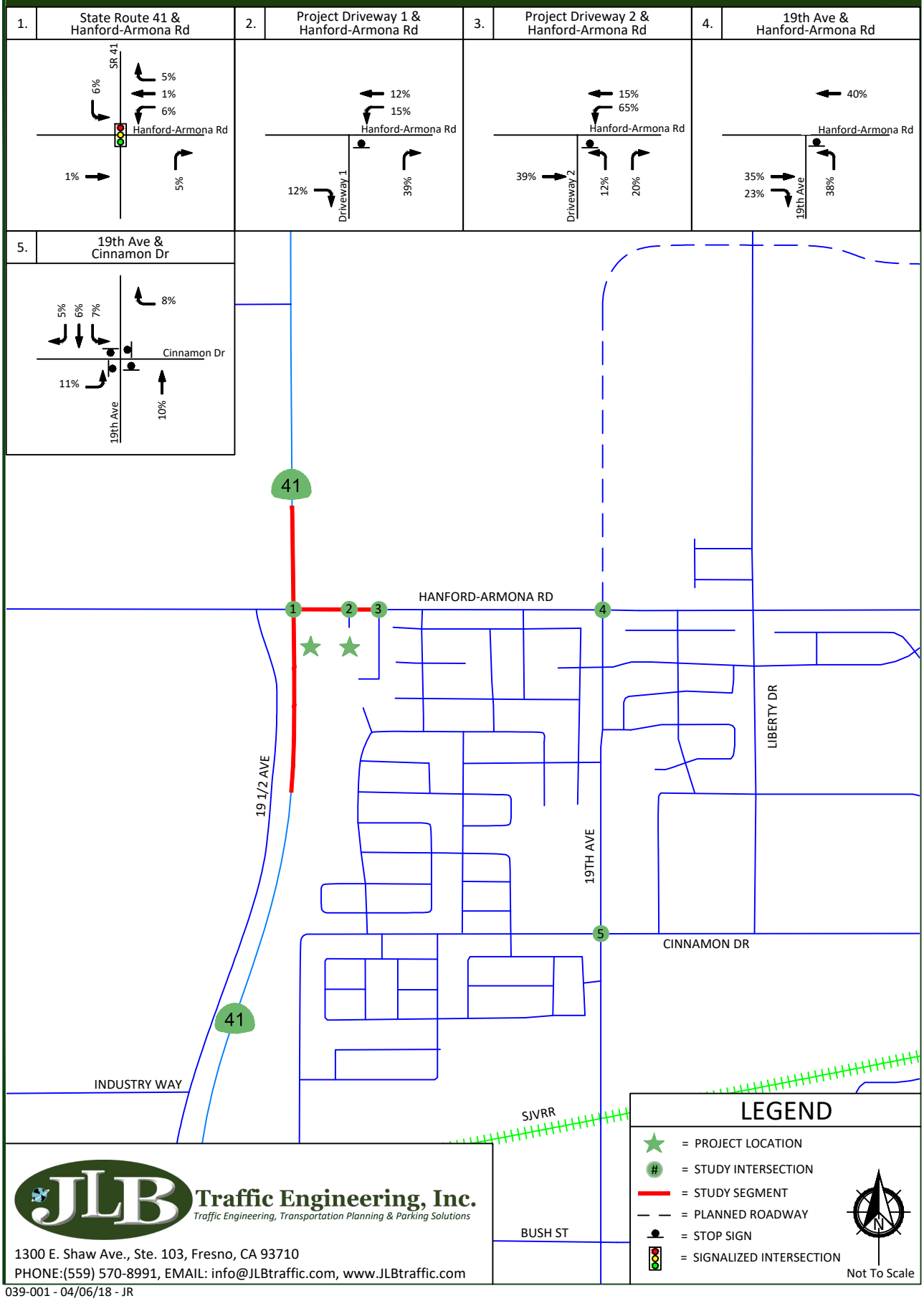
City of Lemoore - Hanford-Armona Road Mixed-Use Development
Shopping Center Percent Distribution

Figure 7D



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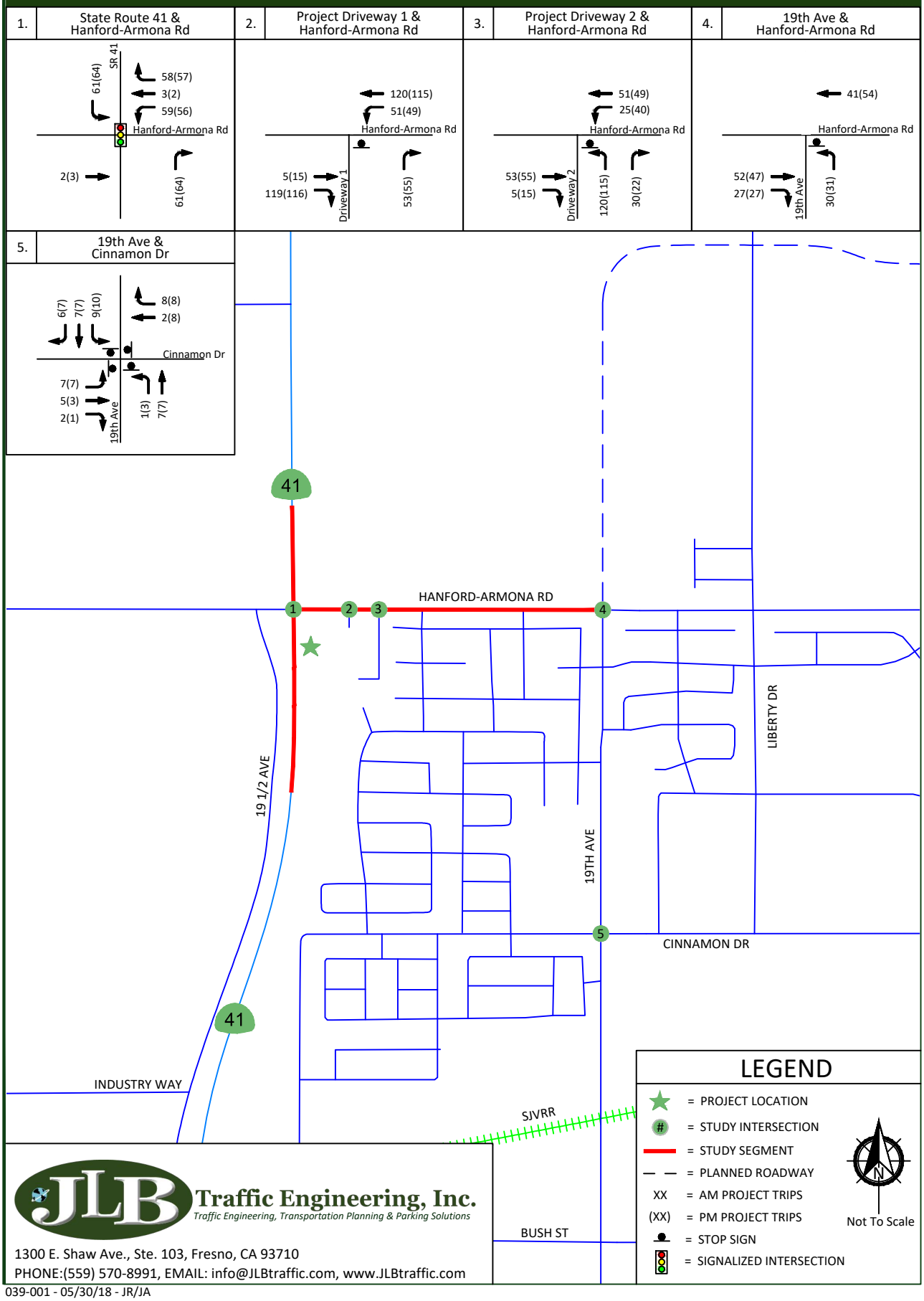
City of Lemoore - Hanford-Armona Road Mixed-Use Development
Buildout - Project Only Trips

Figure 8



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Results of Existing plus Project Buildout Level of Service Analysis

The Existing plus Project Buildout Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place. Figure 9 illustrates the Existing plus Project Buildout turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing plus Project Buildout Traffic Conditions scenario are provided in Appendix F. Table XI presents a summary of the Existing plus Project Buildout peak hour LOS at the study intersections, Table XII presents a summary of the Existing plus Project Buildout LOS for the arterial study segments, and Table XIII presents a summary of the Existing plus Project Buildout LOS for the highway study segments.

Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to operate below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. To improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be implemented.

- State Route 41 and Hanford-Armona Road
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through lane;
  - Add a westbound right-turn lane; and
  - Modify the traffic signal to accommodate the added lanes while maintaining the east-west split phasing.

Under this scenario, all arterial and highway segments are projected to operate at an acceptable LOS.

Table XI: Existing plus Project Buildout Intersection LOS Results

ID	*Intersection*	*Intersection Control*	*AM Peak Hour*		*PM Peak Hour*	
			Average Delay (sec/veh)	*LOS*	*Average Delay (sec/veh)*	*LOS*
1	State Route 41 / Hanford-Armona Road	Signalized	**57.4**	**E**	**52.1**	**D**
		Signalized (Mitigated)	34.1	C	34.4	C
2	Project Driveway 1 / Hanford-Armona Road	One-Way Stop	10.1	B	12.5	B
3	Project Driveway 2 / Hanford-Armona Road	One-Way Stop	21.0	C	23.9	C
4	19th Avenue / Hanford-Armona Road	All-Way Stop	14.1	B	14.4	B
5	19th Avenue / Cinnamon Drive	All-Way Stop	23.2	C	12.7	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table XII: Existing plus Project Buildout Arterial Segment LOS Results

ID	*Segment*	*Limits*	*Lanes*	*24-hour Volume*	*LOS*
1	Hanford-Armona Road	State Route 41 and Project Driveway 2	2	9,925	C
2	Hanford-Armona Road	Project Driveway 2 and 19th Avenue	2	9,125	C

Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Table XIII: Existing plus Project Buildout Highway Segment LOS Results

ID	Segment	Limits	Lanes	AM			PM		
				Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
1	State Route 41	Glendale Avenue and Hanford-Armona Road (Northbound)	2	686	6.92	A	819	8.27	A
2	State Route 41	Glendale Avenue and Hanford-Armona Road (Southbound)	2	736	7.43	A	818	8.26	A
3	State Route 41	Hanford-Armona Road and Bush Street (Northbound)	2	556	5.61	A	878	8.86	A
4	State Route 41	Hanford-Armona Road and Bush Street (Southbound)	2	725	7.32	A	622	6.28	A

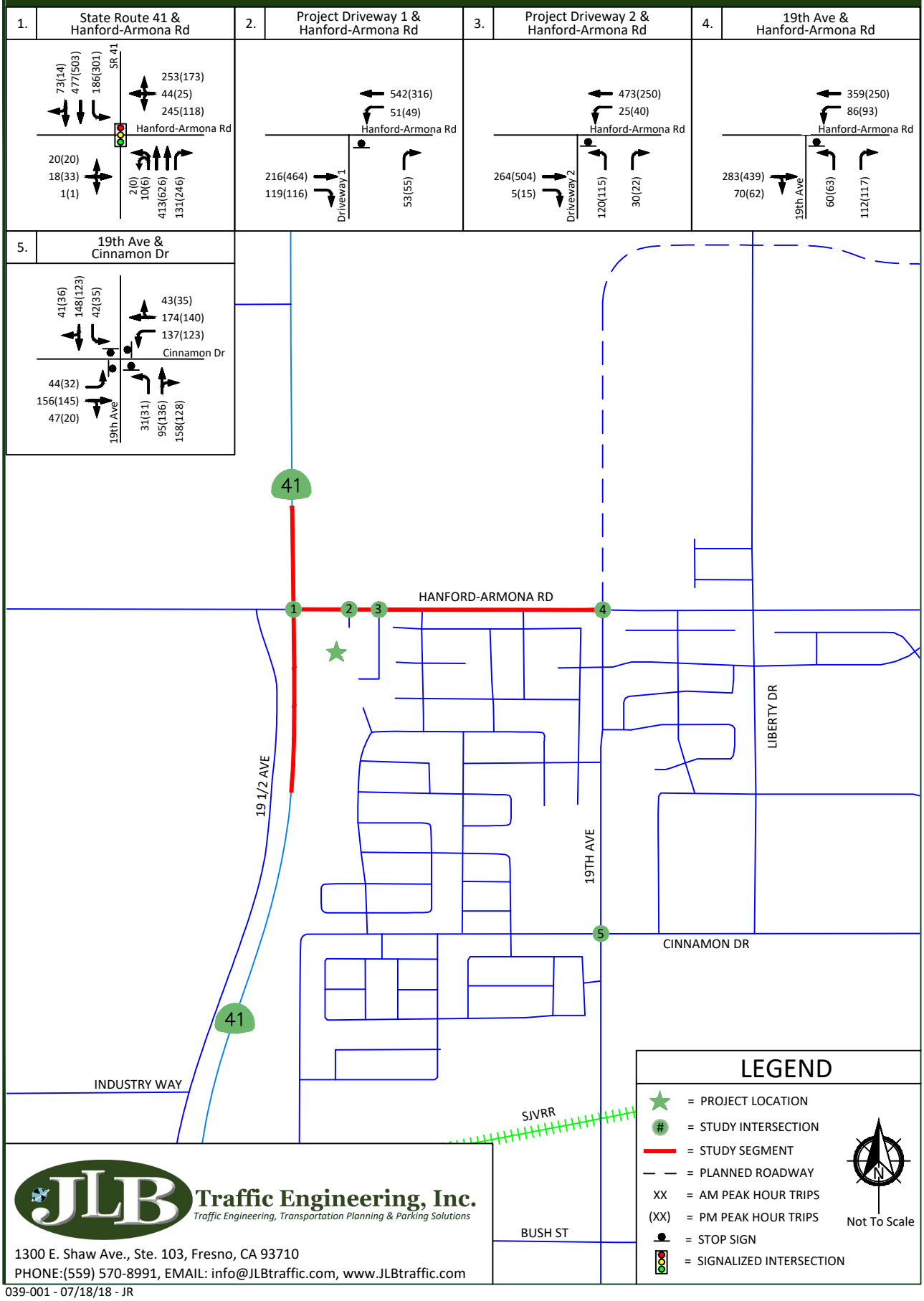
Note: LOS = Level of Service pursuant to Exhibit 11-5 and 14-2 of HCM 6

Traffic Signal Warrants

Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Existing plus Project Buildout Traffic Conditions scenario. These warrants are found in Appendix I. The effects of right-turning traffic from the minor approach onto the major approach were taken into account using engineering judgement pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, the intersections of Project Driveway 2 and Hanford-Armona Road and 19th Avenue and Hanford-Armona Road satisfy the peak hour signal warrant during both peak periods. Based on the signal warrants and engineering judgement, signalization of these intersections is not recommended, especially since both intersections are projected to operate at an acceptable LOS during both peak periods. It is worth noting that the CA MUTCD states that "satisfaction of a signal warrant or warrants shall not in itself require the installation of a traffic signal." Therefore, it is recommended that prior to the installation of a traffic signal, investigation of CA MUTCD warrants 1, 4 and 7, as applicable, be conducted for these intersections.

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Existing plus Project Buildout - Traffic Volumes, Geometrics and Controls

Figure 9



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Cumulative Year 2040 plus Project Traffic Conditions

Description of Approved and Pipeline Projects

Approved and Pipeline Projects consist of developments that are either under construction, built but not fully occupied, are not built but have final site development review (SDR) approval, or for which the lead agency or responsible agencies have knowledge of. The City of Lemoore, County of Kings and Caltrans staff were consulted throughout the preparation of this TIA regarding approved and/or known projects that could potentially impact the study intersections. JLB staff conducted a reconnaissance of the surrounding area to confirm the Cumulative Projects. Subsequently, it was agreed that the projects listed in Table XIV were approved, near approval, or in the pipeline within the proximity of the proposed Project.

The trip generation listed in Table XIV is that which is anticipated to be added to the streets and highways by these projects between the time of the preparation of this report and 20 years after buildout of the proposed Project. As shown in Table XIV, the total trip generation for the Cumulative Projects is 2,122 daily trips, 133 AM peak hour trips and 197 PM peak hour trips. Figure 10 illustrates the location of the approved, near approval, or pipeline projects and their combined trip assignment to the study intersections and segments under the Cumulative Year 2040 plus Project Traffic Conditions scenario. These Cumulative Project trips were included as part of the Cumulative Year 2040 plus Project traffic volumes.

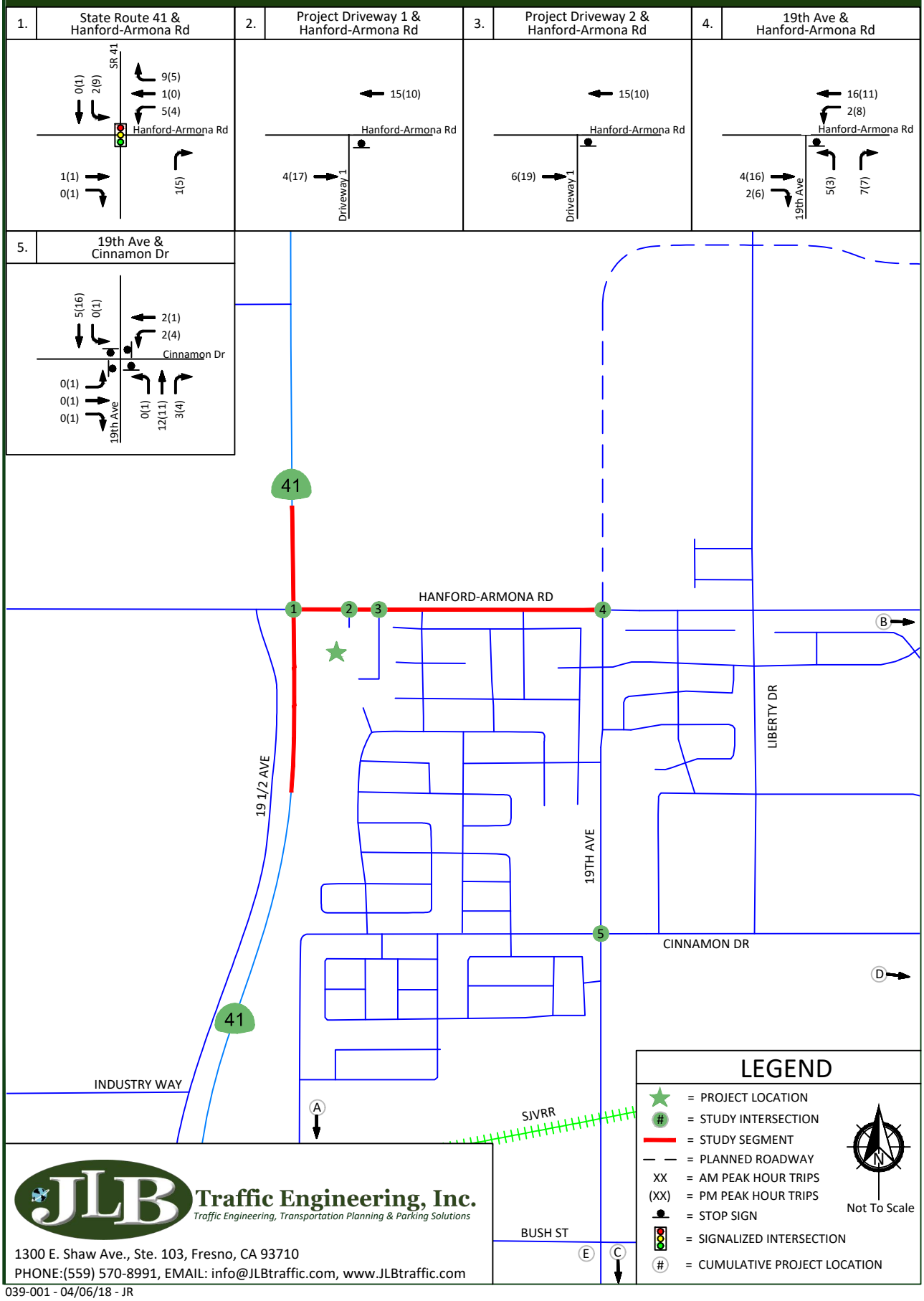
Table XIV: Cumulative Projects' Trip Generation

Approved Project Location	*Approved or Pipeline Project Name*	*Daily Trips*	*AM Peak Hour*	*PM Peak Hour*
A	Silvia Estates Patio Homes[1]	220	14	17
B	Parkview Estates[1]	831	65	87
C	Park Meadows[1]	189	15	20
D	Oleander Terrace[1]	483	30	37
E	Dollar General[1]	399	9	36
Total Approved and Pipeline Project Trips		**2,122**	**133**	**197**

Note: 1 = Trip Generation prepared by JLB Traffic Engineering, Inc. based on readily available information

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Cumulative Projects' Trip Assignment

Figure 10



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Results of Cumulative Year 2040 plus Project Level of Service Analysis

The Cumulative Year 2040 plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place. Figure 11 illustrates the Cumulative Year 2040 plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Cumulative Year 2040 plus Project Traffic Conditions scenario are provided in Appendix G. Table XV presents a summary of the Cumulative Year 2040 plus Project peak hour LOS at the study intersections, Table XVI presents a summary of the Cumulative Year 2040 plus Project LOS for the arterial study segments, and Table XVII presents a summary of the Cumulative Year 2040 plus Project LOS for the highway study segments.

Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to operate below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. To improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be implemented.

- State Route 41 and Hanford-Armona Road
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add two westbound left-turn lanes;
  - Modify the westbound left-through-right lane to a through lane;
  - Add a westbound right-turn lane;
  - Add a second southbound left-turn lane;
  - Implement overlap phasing of the westbound right-turn with the southbound left-turn phase;
  - Implement overlap phasing of the northbound right-turn with the westbound left-turn phase;
  - Implement protective left-turn phasing in all directions; and
  - Modify the traffic signal to accommodate the added lanes.

Under this scenario, the intersections of Project Driveway 2 and Hanford-Armona Road and 19th Avenue and Cinnamon Drive are projected to exceed their LOS threshold during both peak periods. To improve the LOS at these intersections, it is recommended that the following improvements be implemented.

- Project Driveway 2 and Hanford-Armona Road
  - Modify the eastbound right turn lane to a through-right lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the modified lane geometrics.
- 19th Avenue and Cinnamon Drive
  - Signalize the intersection with protective left-turn phasing in all directions.

Under this scenario, the arterial segment of Hanford-Armona Road between State Route 41 and Project Driveway 2 is projected to exceed its LOS threshold. To improve its LOS, it is recommended that this segment of Hanford-Armona Road be widened to accommodate two lanes in each direction and be divided by a raised median island or a continuous two-way left-turn lane.

Under this scenario, all highway segments are projected to operate at an acceptable LOS.

Table XV: Cumulative Year 2040 plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	State Route 41 / Hanford-Armona Road	Signalized	**121.9**	**F**	**101.9**	**F**
		Signalized (Mitigated)	27.8	C	34.0	C
2	Project Driveway 1 / Hanford-Armona Road	One-Way Stop	11.1	B	16.3	C
3	Project Driveway 2 / Hanford-Armona Road	One-Way Stop	**49.2**	**E**	**62.3**	**F**
		Signalized (Mitigated)	8.8	A	20.0	B
4	19th Avenue / Hanford-Armona Road	All-Way Stop	17.9	C	23.4	C
5	19th Avenue / Cinnamon Drive	All-Way Stop	**53.2**	**F**	**33.4**	**D**
		Signalized (Mitigated)	34.0	C	26.1	C

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table XVI: Cumulative Year 2040 plus Project Arterial Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Hanford-Armona Road	State Route 41 and Project Driveway 2	2	12,590	**E**
			4 (Mitigated)		C
2	Hanford-Armona Road	Project Driveway 2 and 19th Avenue	2	11,880	D

Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Table XVII: Cumulative Year 2040 plus Project Highway Segment LOS Results

ID	Segment	Limits	Lanes	AM			PM		
				Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
1	State Route 41	Glendale Avenue and Hanford-Armona Road (Northbound)	2	1,037	10.47	A	1,244	12.56	B
2	State Route 41	Glendale Avenue and Hanford-Armona Road (Southbound)	2	1,114	11.24	B	1,239	12.50	B
3	State Route 41	Hanford-Armona Road and Bush Street (Northbound)	2	833	8.41	A	1,333	13.45	B
4	State Route 41	Hanford-Armona Road and Bush Street (Southbound)	2	1,098	11.08	B	939	9.48	A

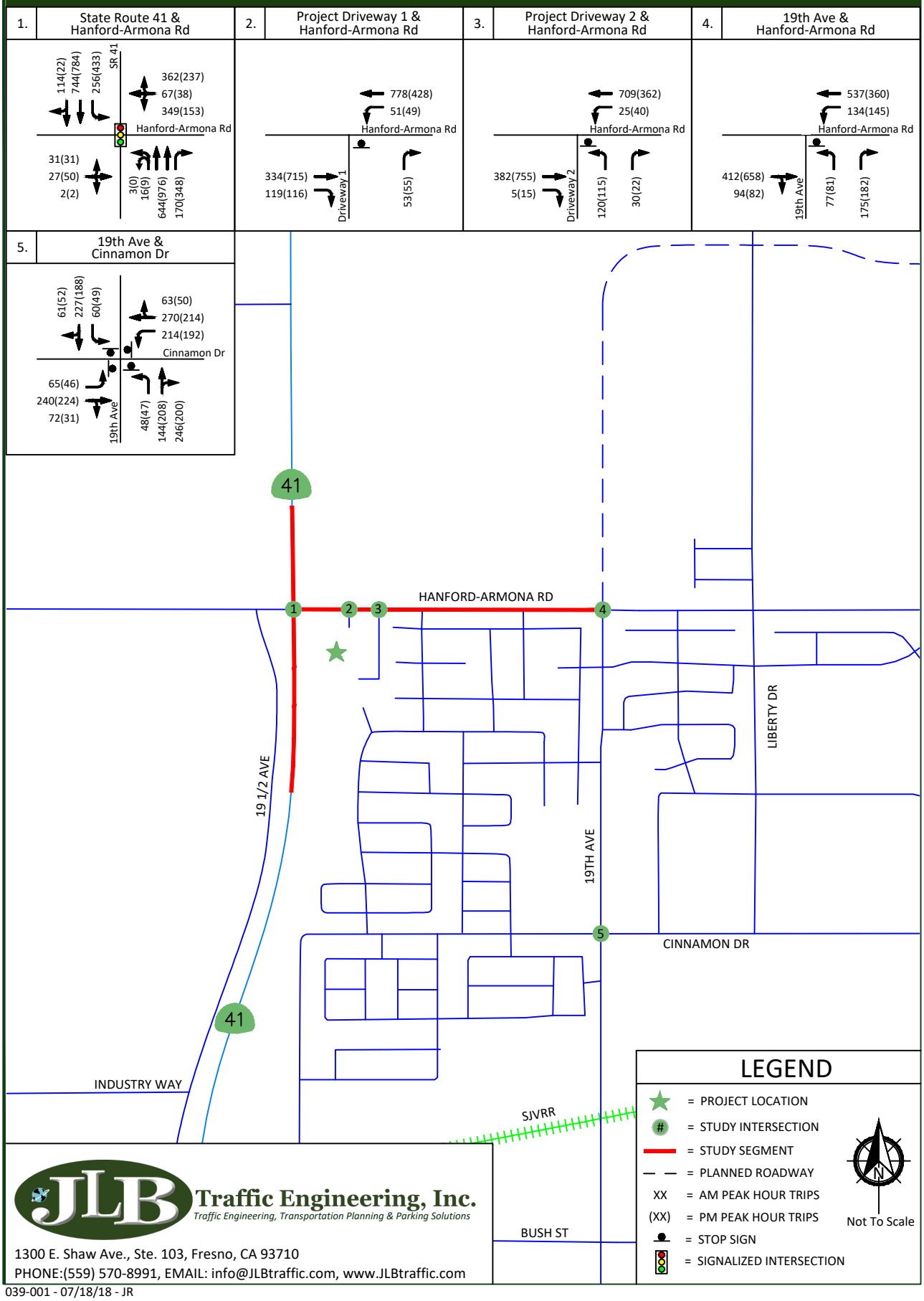
Note: LOS = Level of Service pursuant to Exhibit 11-5 and 14-2 of HCM 6

Traffic Signal Warrants

Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Cumulative Year 2040 plus Project Traffic Conditions scenario. These warrants are found in Appendix I. The effects of right-turning traffic from the minor approach onto the major approach were taken into account using engineering judgement pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, the intersections of Project Driveway 2 and Hanford-Armona Road, 19th Avenue and Hanford-Armona Road, and 19th Avenue and Cinnamon Drive satisfy the peak hour signal warrant during both peak periods. Based on the signal warrants and engineering judgement, signalization of the intersections of Project Driveway 2 and Hanford-Armona Road and 19th Avenue and Cinnamon Drive is recommended, while signalization of the intersection of 19th Avenue and Hanford-Armona Road is not recommended, especially since it is projected to operate at an acceptable LOS during both peak periods. It is worth noting that the CA MUTCD states that "satisfaction of a signal warrant or warrants shall not in itself require the installation of a traffic signal." Therefore, it is recommended that prior to the installation of a traffic signal, investigation of CA MUTCD warrants 1, 4, and 7, as applicable, be conducted for the intersection of 19th Avenue and Hanford-Armona Road.

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Cumulative Year 2040 plus Project - Traffic Volumes, Geometrics and Controls

Figure 11



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Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Traffic Conditions

The Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place with one exception. For purposes of this TIA, it was assumed that the State Route 41 and Hanford-Armona Road at-grade highway intersection has been removed and replaced with a partial Type L-9 interchange.

Results of Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Level of Service Analysis

The Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Traffic Conditions scenario assumes that the State Route 41 and Hanford-Armona Road at-grade highway intersection is modified to accommodate a partial Type L-9 interchange. Figure 12 illustrates the Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Traffic Conditions scenario are provided in Appendix H. Table XVIII presents a summary of the Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange peak hour LOS at the study intersections, Table XIX presents a summary of the Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange LOS for the arterial study segments, Table XX presents a summary of the Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange LOS for the highway study segments, and Table XXI presents a summary of the Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange LOS for the ramp study segment.

Under this scenario, the intersections of Project Driveway 2 and Hanford-Armona Road and 19th Avenue and Cinnamon Drive are projected to exceed their LOS threshold during both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented.

- Project Driveway 2 and Hanford-Armona Road
  - Modify the eastbound right turn lane to an eastbound through-right lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the modified lane geometrics.
- 19th Avenue and Cinnamon Drive
  - Signalize the intersection with protective left-turn phasing in all directions.

Under this scenario, the arterial segment of Hanford-Armona Road between State Route 41 and Project Driveway 2 is projected to exceed its LOS threshold. To improve its LOS, it is recommended that this segment of Hanford-Armona Road be widened to accommodate two lanes in each direction and be divided by a raised median island or a continuous two-way left-turn lane.

Under this scenario, all highway segments and the ramp segment are projected to operate at an acceptable LOS.

Table XVIII: Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
6	SR 41 SB Ramps / Hanford-Armona Road	Signalized	8.0	A	10.3	B
7	SR 41 NB Ramps / Hanford-Armona Road	Signalized	12.4	B	15.5	B
2	Project Driveway 1 / Hanford-Armona Road	One-Way Stop	9.9	A	11.9	B
3	Project Driveway 2 / Hanford-Armona Road	One-Way Stop	**58.0**	**F**	**76.6**	**F**
		Signalized (Mitigated)	9.6	A	6.3	A
4	19th Avenue / Hanford-Armona Road	All-Way Stop	20.2	C	25.1	D
5	19th Avenue / Cinnamon Drive	All-Way Stop	**53.2**	**F**	**33.2**	**D**
		Signalized (Mitigated)	40.7	D	25.9	C

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table XIX: Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Arterial Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Hanford-Armona Road	State Route 41 and Project Driveway 2	2	12,590	**E**
			4 (Mitigated)		C
2	Hanford-Armona Road	Project Driveway 2 and 19th Avenue	2	11,880	D

Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Table XX: Cumulative Year 2040 plus Project plus Partial L-9 Interchange Highway Segment LOS Results

ID	Segment	Limits	Lanes	AM			PM		
				Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
1	State Route 41	Glendale Avenue and Hanford-Armona Road (Northbound)	2	1,037	10.47	A	1,244	12.56	B
2	State Route 41	Glendale Avenue and Hanford-Armona Road (Southbound)	2	1,114	11.24	B	1,239	12.50	B
3	State Route 41	Hanford-Armona Road and Bush Street (Northbound)	2	833	8.41	A	1,333	13.45	B
4	State Route 41	Hanford-Armona Road and Bush Street (Southbound)	2	1,098	11.08	B	939	9.48	A

Note: LOS = Level of Service pursuant to Exhibit 11-5 and 14-2 of HCM 6

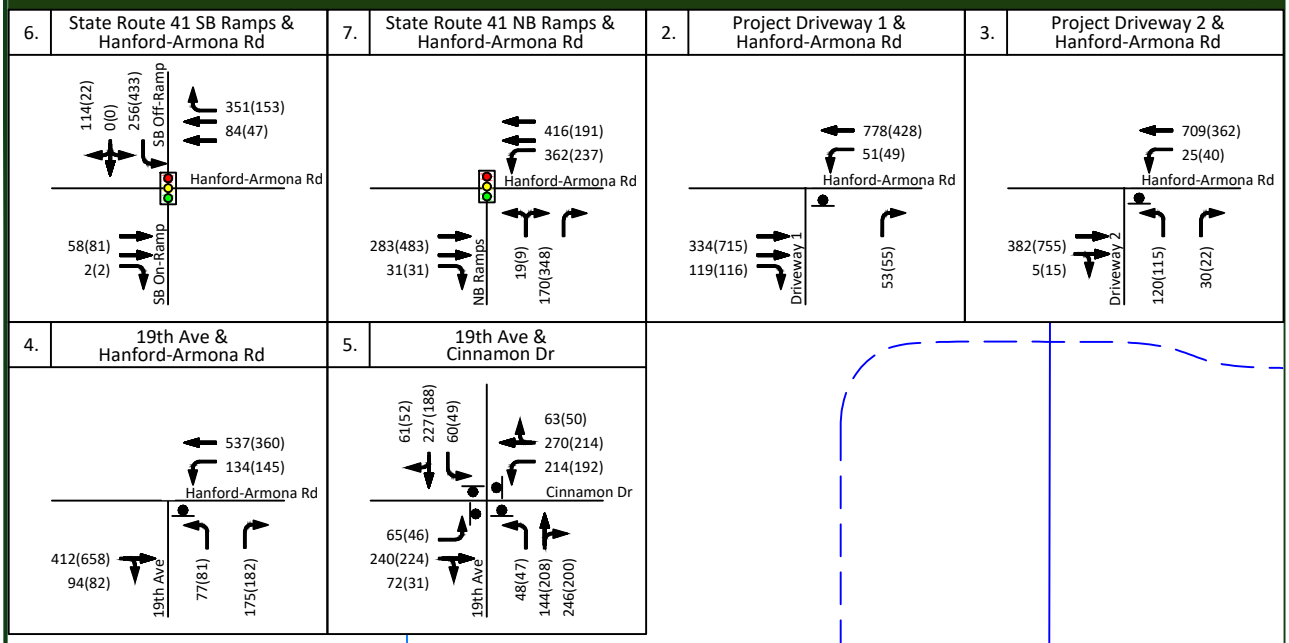
Table XXI: Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Ramp Segment LOS Results

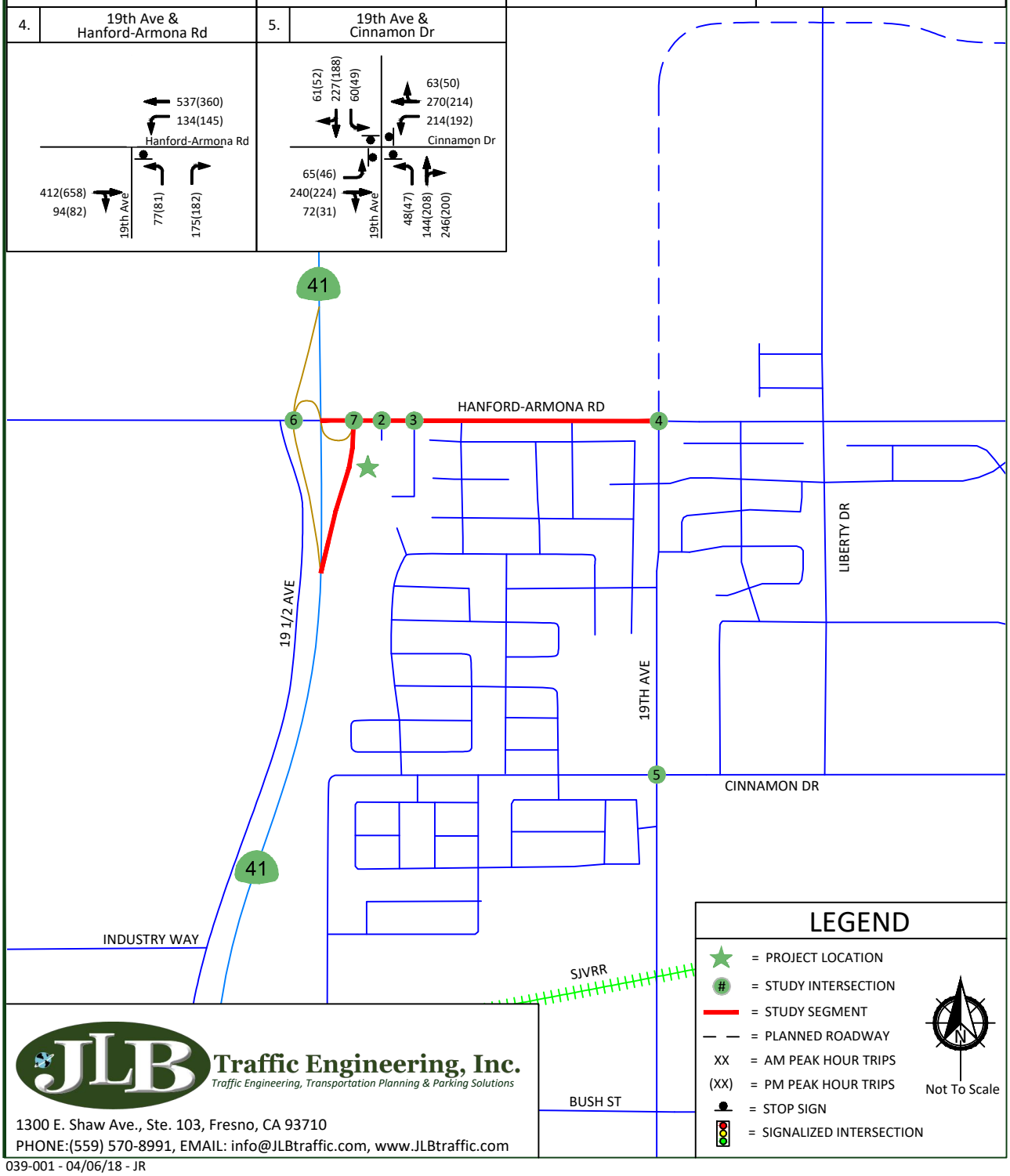
ID	Limits	Lanes	AM			PM		
			Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
1	State Route 41 NB Ramps to Hanford-Armona Road	1	189	19.7	B	357	22.5	B

Note: LOS = Level of Service pursuant to Exhibit 11-5 and 14-2 of HCM 6

City of Lemoore - Hanford-Armona Road Mixed-Use Development
Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange - Traffic Volumes, Geometrics and Controls

Figure 12





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Queuing Analysis

Table XXII provides a queue length summary for left-turn and right-turn lanes at the study intersections under all study scenarios. The queuing analyses for the study intersections are contained in the LOS worksheets for the respective scenarios. Appendix C contains the methodologies used to evaluate these intersections.

Queuing analyses were completed using Sim Traffic output information. Synchro provides both 50th and 95th percentile maximum queue lengths (in feet). According to the Synchro manual, "the 50th percentile maximum queue is the maximum back of queue on a typical cycle and the 95th percentile queue is the maximum back of queue with 95th percentile volumes." The queues shown on Table XXII are the 95th percentile queue lengths for the respective lane movements.

The Highway Design Manual (HDM) provides guidance for determining deceleration lengths for the left-turn and right-turn lanes based on design speeds. Per the HDM criteria, "tapers for right-turn lanes are usually un-necessary since the main line traffic need not be shifted laterally to provide space for the right-turn lane. If, in some rare instances, a lateral shift were needed, the approach taper would use the same formula as for a left-turn lane." Therefore, a bay taper length pursuant to the Caltrans HDM would need to be added, as necessary, to the recommended storage lengths presented in Table XXII.

Based on the SimTraffic output files and engineering judgement, it is recommended that the storage capacity for the following be considered for the Cumulative Year 2040 plus Project Traffic Conditions scenario.

- State Route 41 and Hanford-Armona Road
  - Consider setting the storage capacity of the eastbound left-turn lane to 100 feet.
  - Consider setting the storage capacity of the dual westbound left-turn lanes to 200 feet.
  - Consider setting the storage capacity of the westbound right-turn lane to 175 feet.
  - Consider setting the storage capacity of the dual southbound left-turn lanes to 200 feet.
- Project Driveway 1 and Hanford-Armona Road
  - Consider setting the storage capacity of the eastbound right-turn lane to 75 feet.
  - Consider setting the storage capacity of the westbound left-turn lane to 100 feet.
  - In an effort to improve on-site and off-site circulation, it is recommended that Project Driveway 1 have a minimum throat depth of 50 feet before any vehicular openings to the east.
- Project Driveway 2 and Hanford-Armona Road
  - Consider setting the storage capacity of the westbound left-turn lane to 150 feet.
  - Consider setting the storage capacity of the northbound left-turn lane to 125 feet.
  - Consider setting the storage capacity of the northbound right-turn lane to 125 feet.
- 19th Avenue and Cinnamon Drive
  - Consider increasing the storage capacity of the eastbound left-turn lane to 150 feet.
  - Consider increasing the storage capacity of the westbound left-turn lane to 200 feet.
  - Consider setting the storage capacity of the northbound left-turn lane to 125 feet.
  - Consider setting the storage capacity of the southbound left-turn lane to 125 feet.

Table XXII: Queuing Analysis

ID	Intersection	Existing Queue Storage Length (ft.)		Existing		Existing plus Project Phase 1		Existing plus Project Buildout		Cumulative Year 2040 plus Project		Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	State Route 41 / Hanford-Armona Road	EB Left	*	*	*	*	*	*	*	75	88	*	*
		WB Left	*	*	*	*	*	267	118	*	*	*	*
		WB Dual Lefts	*	*	*	*	*	*	*	183	86	*	*
		WB Right	*	92	84	101	83	138	95	169	151	*	*
		NB Left	845	12	18	42	10	43	10	37	27	*	*
		NB Right	500	47	89	65	77	79	92	69	152	*	*
		SB Left	855	131	259	153	308	212	423	*	*	*	*
		SB Dual Lefts	855	*	*	*	*	*	*	135	193	*	*
2	Project Driveway 1 / Hanford-Armona Road	EB Right	*	*	*	*	*	25	13	7	10	10	0
		WB Left	*	*	*	*	*	42	46	39	55	54	49
		NB Right	*	*	*	*	*	59	53	32	50	39	45
3	Project Driveway 2 / Hanford-Armona Road	WB Left	*	*	*	9	18	26	41	58	66	45	67
		NB Left	*	*	*	31	22	82	80	121	89	103	118
		NB Right	*	*	*	29	34	36	36	62	44	46	61
4	19th Avenue / Hanford-Armona Road	WB Left	245	59	61	44	62	54	68	63	125	88	94
		NB Left	245	52	49	64	46	72	70	94	85	73	113
		NB Right	>300	63	59	62	61	66	67	79	91	91	95
5	19th Avenue / Cinnamon Drive	EB Left	100	53	47	48	39	53	47	122	84	138	131
		WB Left	100	81	73	68	86	73	71	243	186	200	193
		NB Left	95	44	39	43	45	47	46	81	100	118	103
		SB Left	80	48	41	41	49	58	50	102	63	113	74
6	Hanford Armona Road / State Route 41 SB Ramps	EB Right	*	*	*	*	*	*	*	*	*	15	0
		WB Right	*	*	*	*	*	*	*	*	*	86	93
		SB Left	*	*	*	*	*	*	*	*	*	97	100
7	Hanford Armona Road / State Route 41 NB Ramp	EB Right	*	*	*	*	*	*	*	*	*	42	47
		WB Left	*	*	*	*	*	*	*	*	*	175	173
		NB Right	*	*	*	*	*	*	*	*	*	59	137

Note: * = Does not exist or is not projected to exist

Project's Pro-Rata Fair Share of Future Transportation Improvements

The Project's fair share percentage impact to study intersections projected to fall below their LOS threshold and that are not covered by an existing impact fee program is provided in Table XXIII. The Project's fair share percentage impacts were calculated pursuant to the Caltrans Guide for the Preparation of Traffic Impact Studies. The Project's pro-rata fair shares were calculated utilizing the Existing volumes, Project Only Trips and Cumulative Year 2040 plus Project volumes. Figure 2 illustrates the Existing traffic volumes, Figure 8 illustrates the Buildout Project Only Trips, and Figure 11 illustrates the Cumulative Year 2040 plus Project traffic volumes. Since the critical peak period for the study facilities was determined to be during the PM peak, the PM peak volumes are utilized to determine the Project's pro-rata fair share.

It is recommended that the Project contribute its equitable fair share as listed in Table XXIII for the future improvements necessary to maintain an acceptable LOS. However, fair share contributions should only be made for those facilities or portion thereof currently not funded by the responsible agencies roadway impact fee program(s), as appropriate. For those improvements not presently covered by local and regional roadway impact fee programs, it is recommended that the Project contribute its equitable fair share. Payment of the Project's equitable fair share in addition to the local and regional impact fee programs would satisfy the Project's traffic mitigation measures.

This study does not provide construction costs for the recommended mitigation measures; therefore, if the recommended mitigation measures are implemented, it is recommended that the developer work with the City of Lemoore to develop the estimated construction cost.

Table XXIII: Project's Fair Share of Future Roadway Improvements

ID	*Intersection*	*Existing Traffic Volumes (PM Peak)*	*Cumulative Year 2040 plus Project Traffic Volumes (PM Peak)*	*Project Only Trips (PM Peak)*	*Project's Fair Share (%)*
1	State Route 41 / Hanford-Armona Road	1,820	3,083	246	19.48%
4	Project Driveway 2 / Hanford-Armona Road	650	1,309	296	44.92%
6	19th Avenue / Cinnamon Drive	923	1,501	61	10.55%
ID	***Hanford-Armona Road between:***	*Existing Traffic Volumes (Daily)*	*Cumulative Year 2040 plus Project Traffic Volumes (Daily)*	*Project Only Trips (Daily)*	*Project's Fair Share (%)*
1	State Route 41 and Project Driveway 2	7,465	12,590	2.460	48.00%

Note: Project Fair Share = ((Buildout Project Only Trips) / (Cumulative Year 2040 plus Project Traffic Volumes - Existing Traffic Volumes)) x 100

Conclusions and Recommendations

Conclusions and recommendations regarding the proposed Project are presented below.

Existing Traffic Conditions

- At present, the intersection of State Route 41 and Hanford-Armona Road operates below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. However, to improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be considered.
  - State Route 41 and Hanford-Armona Road
    - Modify the westbound left-through-right lane to a left-through lane;
    - Add a westbound right-turn lane; and
    - Modify the traffic signal to accommodate the added lane.
- At present, all arterial and highway segments operate at an acceptable LOS.

Existing plus Project Phase 1 Traffic Conditions

- Phase 1 of the proposed Project is estimated to generate a maximum of 1,288 daily trips, 81 AM peak hour trips and 99 PM peak hour trips.
- Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to continue operating below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. Phase 1 of the Project is projected to add a maximum of 3.3 and 1.1 seconds of average delay during the AM and PM peaks respectively. Also, the addition of an average delay of less than five (5) seconds is often not considered a significant impact. Therefore, since the Phase 1 of the Project maintains the existing measures of effectiveness and it adds less than five (5) seconds of delay to existing operations, this impact would not be considered significant. However, if improvements were made to improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be implemented.
  - State Route 41 and Hanford-Armona Road
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through lane;
    - Add a westbound right-turn lane; and
    - Modify the traffic signal to accommodate the added lanes while maintaining the east-west split phasing.
- Under this scenario, all arterial and highway segments are projected to operate at an acceptable LOS.

Existing plus Project Buildout Traffic Conditions

- JLB analyzed the conceptual roadways within an earlier version of the Project site plan. Based on this review, it was recommended that the Project consider relocating the gasoline/service station (Shop A) and fast-food restaurant (Pad A) located near the northwest corner of the Project Site Plan further east and relocating the hotel in their place. The gasoline/service station and fast-food restaurant are estimated to attract higher volumes than those estimated to be generated by the hotel. Based on these comments, the Project site plan was revised to relocate the proposed Hotel and gasoline/service station as recommended by JLB. To further minimize traffic impacts, the latest Project site plan also included a reduction on the number of driveways to Hanford-Armona Road. By incorporating these modifications to the Project Site Plan, on-site and off-site traffic operations and circulation have been improved.
- It is recommended that the Project coordinate with KART to determine the best location for the placement of a bus turnout along the Project's frontage to Hanford-Armona Road.
- It is recommended that the Project implement Class II bike lanes along its frontage to Hanford-Armona Road.
- At buildout, the proposed Project is estimated to generate a maximum of 6,775 daily trips, 471 AM peak hour trips and 488 PM peak hour trips.
- Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to operate below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. To improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be implemented.
  - State Route 41 and Hanford-Armona Road
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through lane;
    - Add a westbound right-turn lane; and
    - Modify the traffic signal to accommodate the added lanes while maintaining the east-west split phasing.
- Under this scenario, all arterial and highway segments are projected to operate at an acceptable LOS.

Cumulative Year 2040 plus Project Traffic Conditions

- Under this scenario, the intersection of State Route 41 and Hanford-Armona Road is projected to operate below its respective LOS threshold (LOS C) during both peak periods. For the intersections that currently operate below the Caltrans target LOS C threshold, the existing LOS operations would be the existing MOEs that would need to be maintained. To improve the LOS at the intersection of State Route 41 and Hanford-Armona Road, it is recommended that the following improvements be implemented.
  - State Route 41 and Hanford-Armona Road
    - Add an eastbound left-turn lane;
    - Modify the eastbound left-through-right lane to a through-right lane;
    - Add two westbound left-turn lanes;
    - Modify the westbound left-through-right lane to a through lane;
    - Add a westbound right-turn lane;
    - Add a second southbound left-turn lane;
    - Implement overlap phasing of the westbound right-turn with the southbound left-turn phase;
    - Implement overlap phasing of the northbound right-turn with the westbound left-turn phase;
    - Implement protective left-turn phasing in all directions; and
    - Modify the traffic signal to accommodate the added lanes.
- Under this scenario, the intersections of Project Driveway 2 and Hanford-Armona Road and 19th Avenue and Cinnamon Drive are projected to exceed their LOS threshold during both peak periods. To improve the LOS at these intersections, it is recommended that the following improvements be implemented.
  - Project Driveway 2 and Hanford-Armona Road
    - Modify the eastbound right turn lane to an eastbound through-right lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the modified lane geometrics.
  - 19th Avenue and Cinnamon Drive
    - Signalize the intersection with protective left-turn phasing in all directions.
- Under this scenario, the arterial segment of Hanford-Armona Road between State Route 41 and Project Driveway 2 is anticipated to exceed its LOS threshold. To improve its LOS, it is recommended that this segment of Hanford-Armona Road be widened to accommodate two lanes in each direction and be divided by a raised median island or a continuous two-way left-turn lane.
- Under this scenario, all highway segments are projected to operate at an acceptable LOS.

Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Traffic Conditions

- Under this scenario, the intersections of Project Driveway 2 and Hanford-Armona Road and 19th Avenue and Cinnamon Drive are projected to exceed their LOS threshold during both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented.
  - Project Driveway 2 and Hanford-Armona Road
    - Modify the eastbound right turn lane to an eastbound through-right lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the modified lane geometrics.
  - 19th Avenue and Cinnamon Drive
    - Signalize the intersection with protective left-turn phasing in all directions.
- Under this scenario, the arterial segment of Hanford-Armona Road between State Route 41 and Project Driveway 2 is anticipated to exceed its LOS threshold. To improve its LOS, it is recommended that this segment of Hanford-Armona Road be widened to accommodate two lanes in each direction and be divided by a raised median island or a continuous two-way left-turn lane.
- Under this scenario, all highway segments and the ramp segment are projected to operate at an acceptable LOS.

Queuing Analysis

- It is recommended that the City consider left- and right-turn lane storage lengths as indicated in the Queuing Analysis.

Project's Equitable Fair Share

- It is recommended that the Project contribute its equitable Fair Share as presented in Table XXIII.

Study Participants

JLB Traffic Engineering, Inc. Personnel:

Jose Luis Benavides, PE, TE	Project Manager
Susana Maciel, EIT	Engineer I/II
Alan Miao, EIT	Engineer I/II
Javier Rios	Engineer I/II
Jove Alcazar	Engineer I/II
Dennis Wynn	Sr. Engineering Technician

Persons Consulted:

Steve Brandt	City of Lemoore
Dominic Tyburski, PE	County of Kings
Michael Navarro	Caltrans
Brett Fugman	CVIF II, LLC.

References

1. City of Lemoore, *2030 General Plan*.
2. *A Policy on Geometric Design of Highways and Streets*. 4th ed., American Association of State Highway and Transportation Officials, 2011.
3. *Guide for the Preparation of Traffic Impact Studies*, Caltrans, dated December 2002.
4. *Trip Generation,* 10th Edition, Washington D.C., Institute of Transportation Engineers, 2017.
5. *2014 California Manual on Uniform Traffic Control Devices*, Caltrans, November 7, 2014.

Appendix A: Scope of Work

January 30, 2017

Steve Brandt
City Planner
City of Lemoore
711 West Cinnamon Drive
Lemoore, CA 93245

Via Email Only: sbrandt@lemoore.com

Subject: ***Proposed Draft Scope of Work for the Preparation of a Traffic Impact Analysis for a Project at the Southeast Corner of the Hanford-Armona Road and State Route 41 in the City of Lemoore (JLB Project 039-001)***

Dear Mr. Brandt,

JLB Traffic Engineering, Inc. (JLB) hereby submits this Draft Scope of Work for the preparation of a Traffic Impact Analysis (TIA) for the Project described below. The Project proposes to develop a 16.19-acre site on the southeast corner of Hanford-Armona Road and State Route 41 in the City of Lemoore. The Project will construct 176 multi-family residential units (apartments), a gasoline/service station (8 fueling positions) with convenience market, a 90-room hotel, 6,000 square feet of fast-food restaurant with drive-through window, and a 7,040 square-foot general shopping center. Per information provided to JLB, the Project will undergo a General Plan Amendment through the City of Lemoore. An aerial of the Project vicinity is shown in Exhibit A, while the Project Site Plan is shown in Exhibit B.

The purpose of this TIA is to evaluate the potential on- and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures, and identify any critical traffic issues that should be addressed in the on-going planning process. In order to evaluate the onsite and offsite traffic impacts of the proposed Project, JLB proposes the following draft scope of work.

Scope of Work

- To arrive at the future year forecast volumes, JLB proposes to utilize an annual growth rate for State Route 41. Based on a review of the Annual Average Daily Traffic (AADT) volumes obtained from Caltrans, the twenty-year average growth rate of State Route 41 is 2.04 percent. Therefore, JLB will utilize an annual growth rate of 2.04 percent to expand the existing traffic volumes by 17 years to arrive at the Cumulative Year 2035 plus Project scenario.
- JLB will evaluate existing and forecast levels of service (LOS) at the study intersection(s). JLB will use HCM 2010 methodologies within Synchro to perform this analysis for the AM and PM peak hours. JLB will identify the causes of poor LOS.
- Evaluate on-site circulation and provide recommendations as necessary to improve circulation to the site and within the Project site.
- JLB will qualitatively analyze existing and planned transit routes in the Project's vicinity.
- JLB will qualitatively analyze existing and planned bikeways in the Project's vicinity.

- JLB will conduct a corner sight-distance from the Project driveways to the intersection of Hanford-Armona Road and State Route 41 pursuant to HDM Topic 405.1(2a).
- As necessary, obtain recent (less than two years) or schedule and conduct new traffic counts at the study facility(ies).
- Perform a site visit to observe existing traffic conditions, especially during the AM and PM peak hours. Existing roadway conditions, including geometrics and traffic controls, will be verified.
- Forecast trip distribution based on turn count information and knowledge of the existing and planned circulation network in the vicinity of the Project.
- Prepare California Manual on Uniform Traffic Control Devices (CA MUTCD) peak hour signal warrants for un-signalized study intersections.

Study Scenarios:

1. Existing Traffic Conditions with proposed improvement measures (if any)
2. Existing plus Project Traffic Conditions with proposed mitigation measures (if any)
3. Cumulative Year 2035 plus Project Traffic Conditions with proposed mitigation measures (if any)
4. Cumulative Year 2035 plus Project plus Partial Type L-9 Interchange with proposed mitigation measures (if any)

Weekday peak hours to be analyzed (Tuesday through Thursday only):

1. 7-9 AM peak period
2. 4-6 PM peak period

Study Intersections:

1. Hanford-Armona Road / State Route 41
2. Hanford-Armona Road / Project Driveway 1
3. Hanford-Armona Road / Project Driveway 2
4. Hanford-Armona Road / Project Driveway 3
5. Hanford-Armona Road / 19th Avenue
6. Cinnamon Drive / 19th Avenue

Queuing analysis is included in the proposed scope of work for the study intersections listed above under all study scenarios. This analysis will be utilized to recommend minimum storage lengths for left-turn and right-turn lanes at all study intersections.

Study Segments:

1. Hanford-Armona Road between State Route 41 and 19th Avenue

Project Only Trip Assignment to the Following State Facilities:

1. None

Trip Generation

The trip generation rates for the Proposed Project and Existing General Plan Land Use designations were obtained form the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table I presents the trip generation for the proposed Project with trip generation rates for Multifamily Housing, Gasoline/Service Station with Convenience Market, Hotel, Fast-Food Restaurant with Drive-Through Window and General Shopping Center. The proposed Project is estimated to generate a maximum of 6,775 daily trips, 471 AM peak hour trips and 488 PM peak hour

trips. Table II presents the trip generation for the Existing Land Use with trip generation rates for Multifamily Housing, Gasoline/Service Station with Convenience Market, Hotel, Fast-Food Restaurant with Drive-Through Window and General Shopping Center. The Existing General Plan Land Use is anticipated to generate a maximum of 7,199 daily trips, 472 AM peak hour trips and 536 PM peak hour trips. Compared to the Existing General Plan Land Use, the proposed Project is estimated to reduce traffic generation by 424 Daily, 1 AM peak hour and 48 PM peak hour trips. The difference in trip generation is summarized in Table III.

Table I: Proposed Project Land Use Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		AM Peak Hour						PM Peak Hour					
			Rate	Total	Trip Rate	In %	Out %	In	Out	Total	Trip Rate	In %	Out %	In	Out	Total
Multifamily Housing (Low-Rise) (220)	176	d.u.	7.32	1,288	0.46	23	77	19	62	81	0.56	63	37	62	37	99
Gasoline/Service Station with Convenience Market (945)	8	f.p.	205.36	1,643	12.47	51	49	51	49	100	13.99	51	49	57	55	112
Hotel (310)	90	o.r.	8.36	752	0.47	59	41	25	17	42	0.60	51	49	28	26	54
Fast-Food Restaurant with Drive-Through Window (934)	6.000	k.s.f.	470.95	2,826	40.19	51	49	123	118	241	32.67	52	48	102	94	196
Shopping Center (820)	7.040	k.s.f.	37.75	266	0.94	62	38	4	3	7	3.81	48	52	13	14	27
Total Project Trips				**6,775**				**222**	**249**	**471**				**262**	**226**	**488**

Note: d.u. = Dwelling Units
f.p. = Fueling Positions
o.r. = Occupied Rooms
k.s.f. = Thousand Square Feet

Table II: Existing General Plan Land Use Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		AM Peak Hour						PM Peak Hour					
			Rate	Total	Trip Rate	In %	Out %	In	Out	Total	Trip Rate	In %	Out %	In	Out	Total
Multifamily Housing (Low-Rise) (220)	144	d.u.	7.32	1,054	0.46	23	77	15	51	66	0.56	63	37	51	30	81
Gasoline/Service Station with Convenience Market (945)	8	f.p.	205.36	1,643	12.47	51	49	51	49	100	13.99	51	49	57	55	112
Hotel (310)	90	o.r.	8.36	752	0.47	59	41	25	17	42	0.60	51	49	28	26	54
Fast-Food Restaurant with Drive-Through Window (934)	6.000	k.s.f.	470.95	2,826	40.19	51	49	123	118	241	32.67	52	48	102	94	196
Shopping Center (820)	24.464	k.s.f.	37.75	924	0.94	62	38	14	9	23	3.81	48	52	45	48	93
Total Project Trips				**7,199**				**228**	**244**	**472**				**283**	**253**	**536**

Note: d.u. = Dwelling Units
f.p. = Fueling Positions
o.r. = Occupied Rooms
k.s.f. = Thousand Square Feet

Table III: Difference in Trip Generation

	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Project Land Use Trip Generation	6,775	222	249	471	262	226	488
Existing General Plan Land Use Trip Generation	7,199	228	244	472	283	253	536
Change in Trip Generation	**-424**	**-6**	**5**	**-1**	**-21**	**-27**	**-48**

Access to the Project

Access to and from the Project site is from four (4) points. Three (3) of the proposed access points are located along the south side of Hanford-Armona Road. The first access driveway located on the south side of Hanford-Armona Road is located at a point approximately 275 feet east of State Route 41 and is proposed as a right-in, right-out access. The second access driveway located on the south side of Hanford-Armona Road is located at a point approximately 520 feet east of State Route 41 and is proposed as a right-in, right-out access. The third access driveway located on the south side of Hanford-Armona Road is located at a point approximately 725 feet east of State Route 41 and is proposed as a right-in, right-out access. The final access driveway is located on the northwest corner of the intersection of Persimmon Street and Dogwood Avenue and is proposed as a full access.

Near Term Projects to be Included

JLB is unaware of other projects in the vicinity of the proposed Project that have the ability to impact traffic operations in the Cumulative Year plus Project scenario. However, JLB will include in the Cumulative Year plus Project scenario near term projects provided to us by other responsible agencies. These would include Near Term Projects the City of Lemoore, County of Kings or Caltrans has knowledge of and for which it is anticipated that said project(s) is/are projected to be whole or partially built by the Near Term Project Year, and for which the City of Lemoore, County of Kings or Caltrans, as appropriate, provides JLB with near term project details. Near term project details include project description, location, proposed land uses with breakdowns and type of residential units and amount of square footages for non-residential uses.

The above scope of work is based on our understanding of this Project and our experience with similar Traffic Impact Analysis Projects. In the absence of comments by February 20, 2018, it will be assumed that the above scope of work is acceptable to the agency(ies) that have not submitted any comments to the proposed TIA Scope of Work.

If you have any questions or require additional information, please do not hesitate to contact me. I can be reached by phone at (559) 570-8991 or by e-mail at smaciel@JLBtraffic.com.

Sincerely,

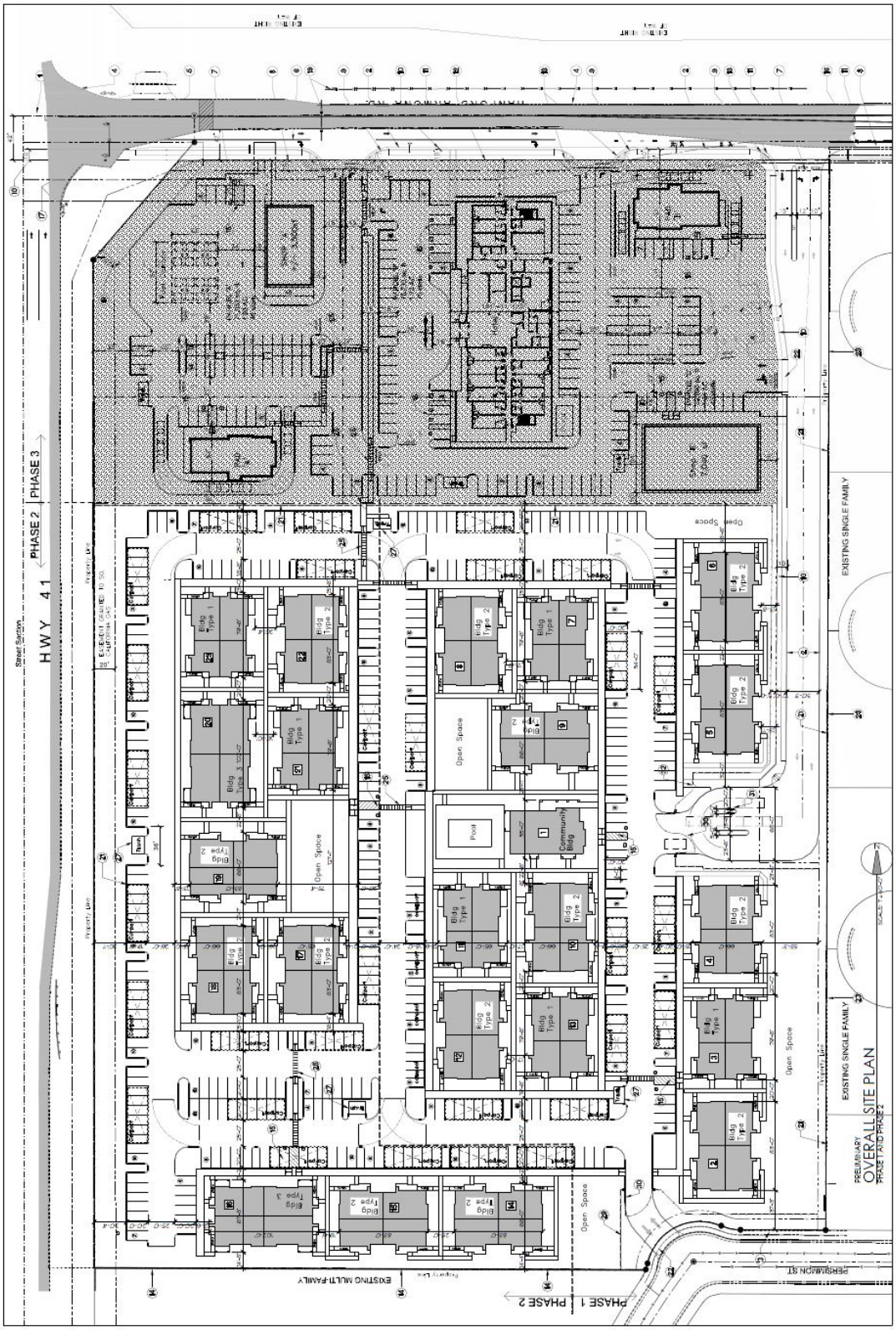
Susana Maciel

Susana Maciel, EIT
Engineer I/II

cc: Dominic Tyburski, County of Kings
Michael Navarro, Caltrans
Jose Luis Benavides, JLB Traffic Engineering, Inc.

Exhibit A – Aerial

Exhibit B – Site Plan



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February 16, 2018

06-KIN-41-R42.15
Mixed-use Development
Scope of Work

Mr. Steven Brandt
City of Lemoore
711 W. Cinnamon Drive
Lemoore, CA 93245

Dear Mr. Brandt:

Thank you for the opportunity to review the Scope of Work and Site Plan for a proposal to develop a 16.19-acre site. The project will include 176 multi-family residential units, a gasoline/service station with convenience market, a 6,000 square-foot (SF) fast-food restaurant with drive-through window, a 7,040 SF general shopping center, and a 90-room hotel. The project is located at the southeast corner of State Route (SR) 41 and Hanford Armona Road in the City of Lemoore.

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. To ensure a safe and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation network.

Based on the information provided, Caltrans has the *following comments* consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. The SR 41 and Hanford-Armona Road intersection has been identified in the City of Lemoore Freeway Agreement with Caltrans as a location of a future interchange. The planning concept design for this interchange is a partial L-9 configuration with proposed northbound ramps and a structure on Hanford Armona Road crossing over SR 41, all of which will impact the proposed development. The TIS should also evaluate the need for the future interchange at this location.

2. Based on the site plan provided, Caltrans has the following concerns:

    a. The proposed carports, "Pad A", and "Fuel Canopy" appear to be situated inside the future proposed northbound ramps. Caltrans recommends no structures be built within the footprint of the future proposed northbound

ramps. According to Caltrans Transportation Concept Report (TCR), the ultimate configuration for the mainline of this segment of SR 41 is a 6-lane freeway requiring 305 feet of right-of-way (ROW). Caltrans ROW maps show this segment existing at 166 feet. An irrevocable offer of dedication to Caltrans will be needed to accommodate the ultimate mainline configuration of SR 41.

b. The two proposed western driveways appear to be within the footprint of the northbound ramps. In addition, the elevation differences between the future proposed Hanford Armona Road overcrossing and the existing elevation of the proposed development will make construction of the two western driveways difficult to achieve. Please also be advised that it is unlikely these proposed driveways meet the stopping sight distance (SSD) specified in Topic 201 of the Caltrans Highway Design Manual (HDM). It appears the speed limit at this location is 45-55 miles per hour (MPH). There is a posted speed limit of 45 MPH on Hanford Armona Road, east of the project location near Apricot Avenue. Assuming the speed is currently 45 MPH, the minimum required SSD would be 360 feet per Topic 201 of the HDM.

c. The eastern driveway may be too close to the future ramp intersection and may affect traffic operations. In addition to corner sight distance, a queue analysis will be required to ensure that queueing from the proposed driveway to the intersection does not occur.

3. The Scope of Work does not indicate when traffic/turning counts will be collected. Please ensure that they are done in a month where schools are in session. A peak month factor may need to be applied. Please use PM peak hours of 3:00-6:00 PM for the traffic/turning counts on SR 41 at Hanford Armona Road.

4. Page 1, first bullet, last sentence: Please be advised that Caltrans projects typically use 20 years after construction (or build-out year). The proposed Cumulative Year 2035 does not satisfy standard practice future analysis for this project. Please use Cumulative year 2040 (or the 2040 model year). The proposed annual growth rate of 2.04 percent is acceptable.

5. Page 2, under 'Study Scenarios': Please use Cumulative Year 2040 or 20 years after the construction year.

6. Page 3, Tables I-III: Caltrans disagrees with the methodology used in these Tables. Please be advised that there is currently no development and no traffic generated from this location. Therefore, taking the trip differences from Tables I and II to result in Table III is not typical engineering practice in project development.

7. The draft Scope of Work does not include any fair share calculation or mitigation as is typical in a TIS.

8. There is an existing Class II bicycle lane on Hanford Armona Road near the east side of the proposed project. Locals will likely request for the Class II bicycle lane to continue within the project location on Hanford Armona Road. Please show this on the revised site plan.

If you have any questions, please feel free to contact Kevin Lum, Transportation Planner, at (559) 488-4260.

Sincerely,

Michael Navarro, Acting Chief
Transportation Planning - South

DEPARTMENT OF TRANSPORTATION
CENTRAL REGION SOUTHEAST SURVEYS
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CALTRANS DISTRICT 6

CENTRAL REGION SOUTHEAST SURVEYS OFFICE

REQUIRED INFORMATION FOR R/W DEDICATIONS

1. A Copy of the vesting deed(s) for the subject property (or a copy of the Title Report, if you have one).

2. Copy of the Assessor's Map.

3. Assessor's Parcel Number (APN) of the property.

4. State whether the property is within city limits or in an unincorporated area.

5. If the property is a lot of a Tract or a parcel of a Parcel Map, provide a copy of the recorded map(s).

6. Provide copies of any record map or deed cited in the documents provided.

7. A Legal description of the dedication parcel signed and sealed by a Licensed Professional Land Surveyor or a Civil Engineer registered prior to 1982 on 81/2" X 11" paper. Label EXHIBIT "A" at the top of the legal description (see attached sample legal).

8. A Plat showing pertinent survey data, such as basis of bearings, bearings, distances, and curve data, where applicable, and the area of the dedication parcel on 81/2" X 11" or 11" X 17" paper. If the parcel is located in unsubdivided land, show ties to the nearest two section corners and/or quarter-section corners (see attached sample plat).

9. A Copy of the traverse calculations for the dedication parcel to include error of closure and area.

(continued)

10. A Copy of the **CONDITIONS OF APPROVAL** by the local agency (City/County) for the Parcel Map, Tract Map, or development plans describing the location and amount of right-of-way to be dedicated.

11. Any requirements from **CALTRANS PERMITS** or **CALTRANS PLANNING** describing the location and amount of right-of-way to be dedicated.

NOTE:

If any of the above listed items are not submitted, it will either cause a delay or halt in the Dedication process.

If there are any questions, please contact Kuldeep Brar, Caltrans Surveys Department, at 559-445-6573.

Mail packet of information to:

DEPARTMENT OF TRANSPORTATION
CENTRAL REGION SOUTHEAST SURVEYS
855 "M" STREET
SUITE 200
FRESNO, CA. 93721

ATTN: Kuldeep Brar

Rev. 1/25/11

Jose Benavides

From: Tyburski, Dominic <Dominic.Tyburski@co.kings.ca.us>
Sent: Thursday, February 22, 2018 4:22 PM
To: Jose Benavides; sbrandt@leemoore.com
Cc: Kinney, Chuck; Susana Maciel
Subject: RE: Mixed-Use Development (Hanford-Armona Road and State Route 41) TIA - Draft Scope of Work

Hi Jose,

I have reviewed your proposed draft scope of work for the subject project TIA, Public Works does not have any comment at this point. Please submit a copy of your report to us for review upon completion of the draft, thank you.

Dominic Tyburski, P.E.
Chief Engineer | Division of Engineering

County of Kings | Public Works Department
1400 W. Lacey Blvd. | Hanford, CA 93230

Direct 559-852-2698 | Fax 559-582-2506
Dominic.Tyburski@co.kings.ca.us | www.countyofkings.com

From: Jose Benavides [mailto:jbenavides@jlbtraffic.com]
Sent: Thursday, February 22, 2018 4:18 PM
To: sbrandt@leemoore.com; Tyburski, Dominic
Cc: Kinney, Chuck; Susana Maciel
Subject: FW: Mixed-Use Development (Hanford-Armona Road and State Route 41) TIA - Draft Scope of Work

Good afternoon Steve and Dominic,

I am following up with the two of you to check once more if either the City of Lemoore or the County of Kings have any comments to the proposed TIA scope of work?

We have already received comments from Caltrans, and would like to move forward with the analysis.

Thank you for reviewing this item, and we look forward to your input. However, if you have no comment, let us know as well.

Sincerely,

Jose Luis Benavides, P.E., T.E.
President

JLB Traffic Engineering, Inc.

Traffic Engineering, Transportation Planning and Parking Solutions
Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
Office: (559) 570-8991
Cell: (559) 694-6000
www.JLBtraffic.com

From: Susana Maciel
Sent: Tuesday, January 30, 2018 2:56 PM
To: sbrandt@lemoore.com
Cc: dominic.tyburski (dominic.tyburski@co.kings.ca.us) <dominic.tyburski@co.kings.ca.us>; michael.navarro@dot.ca.gov; Jose Benavides <jbenavides@jlbtraffic.com>
Subject: Mixed-Use Development (Hanford-Armona Road and State Route 41) TIA - Draft Scope of Work

Good afternoon Mr. Brandt,

Attached you will find a Draft Scope of Work for the preparation of a Traffic Impact Analysis for a Project in the City of Lemoore.

I kindly ask that you take a moment to review and comment on the proposed Scope of Work. In the absence of comments by February 20, 2018, it will be assumed that the proposed Scope of Work is acceptable to the agency(ies) that have not submitted any comments.

Please do not hesitate to contact me if you have any questions or require any additional information. I can be reached by phone at 559.570.8991 or by e-mail at smaciel@JLBtraffic.com. I sincerely appreciate your time and attention to this matter and look forward to hearing from you soon.

Best,

Susana Maciel, EIT
Engineer I/II
JLB Traffic Engineering, Inc.
1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
Office: 559.570.8991
Cell: 559.232.9474
E-mail: SMaciel@JLBtraffic.com
Web: www.JLBtraffic.com

Susana Maciel

From: Steve Brandt <Steve.Brandt@qkinc.com>
Sent: Friday, February 23, 2018 12:10 PM
To: Susana Maciel
Cc: jholwell@lemoore.com; Joel R. Joyner
Subject: FW: SR 41 & Hanford Armona Dev. Scope of Work comments
Attachments: KIN-41-R42.1 (Scope of Work comments).pdf; ROW Dedication Requirements.pdf

Hello Susana,

Thanks for the reminder. I meant to get these to you this week. The City of Lemoore has reviewed the scope and has no comments at this time. We would like you to submit to the City staff for our review and acceptance your estimated trip distribution percentages for each of the ingress/egress points. Once you submit it, we should be able to get a response back to you in a few days.

I have also included the letter response we received from Caltrans, in case you did not receive a similar letter directly.

Steve

(559) 733-0440 Office
(559) 259-1466 Cell

From: Steve Brandt [mailto:sbrandt@lemoore.com]
Sent: Friday, February 16, 2018 2:59 PM
To: Steve Brandt <Steve.Brandt@qkinc.com>
Subject: FW: SR 41 & Hanford Armona Dev. Scope of Work comments

---

From: Lum, Kevin@DOT
Sent: Friday, February 16, 2018 2:58:59 PM (UTC-08:00) Pacific Time (US & Canada)
To: Steve Brandt
Cc: smaciel@jlbtraffic.com; Navarro, Michael@DOT; Boucher, Beverly J@DOT
Subject: SR 41 & Hanford Armona Dev. Scope of Work comments

Good afternoon Steve,

Thank you for the opportunity to review the Scope of Work for the SR 41 & Hanford Armona Mixed-use Development. Attached are Caltrans' comments. A hard copy will follow by mail.

Please feel free to contact me if you have any questions or concerns.

Sincerely,

Kevin Lum
Caltrans District 6
Planning South Branch
1352 W. Olive Avenue
Fresno, CA 93728

Desk: (559)488-4260

Appendix B: Traffic Counts

Prepared by National Data & Surveying Services

SR 41 & Hanford-Armona Rd

Peak Hour Turning Movement Count

ID: 18-02010-001
City: Lemoore

Day: Thursday
Date: 01/25/2018

PEAK HOURS		COUNT PERIODS
AM	07:00 AM - 08:00 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

SR 41 — SOUTHBOUND

	Right	Through	Left	U-Turn	Departing
AM	73	477	125	0	628
NOON	0	0	0	0	0
PM	17	453	269	0	663
Peds/Bikes	0	0	0	0	

Hanford-Armona Rd — EASTBOUND

	AM	NOON	PM	
Departing	124	0	32	
U-Turn	0	0	0	0
Left	20	0	28	0
Through	16	0	22	0
Right	1	0	3	0

Hanford-Armona Rd — WESTBOUND

		PM	NOON	AM
Left	0	139	0	195
Through	0	14	0	41
Right	0	56	0	186
U-Turn	0	0	0	0
Departing		463	0	211

SR 41 — NORTHBOUND

	Departing	U-Turn	Left	Through	Right
Peds/Bikes		0	0	0	0
PM	512	0	1	496	172
NOON	0	0	0	0	0
AM	666	2	10	413	70

CONTROL

0

	AM	NOON	PM
TEV	1629	0	1670
PHF	0.92		0.93

Total Vehicles (AM)

SB: 73, 477, 125; EB: 20, 16, 1; WB: 195, 41, 186; NB: 10, 413, 70

Total Vehicles (Noon)

All movements: N/A

Total Vehicles (PM)

SB: 17, 453, 269; EB: 28, 22, 3; WB: 139, 14, 56; NB: 1, 496, 172

Bikes (AM)

All movements: 0

Bikes (NOON)

All movements: N/A

Bikes (PM)

All movements: 0

Pedestrians (Crosswalks)

All crosswalks (AM, NOON, PM): 0

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 41 & Hanford-Armona Rd
City: Lemoore
Control:

Project ID: 18-02010-001
Date: 1/25/2018

Total

NS/EW Streets:	SR 41				SR 41				Hanford-Armona Rd				Hanford-Armona Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	110	6	0	19	94	6	0	7	3	0	0	38	0	57	0	340
7:15 AM	0	91	15	1	31	140	11	0	3	3	0	0	50	4	58	0	407
7:30 AM	0	119	19	0	35	117	15	0	7	5	1	0	67	14	41	0	440
7:45 AM	10	93	30	1	40	126	41	0	3	5	0	0	31	23	39	0	442
8:00 AM	1	86	15	0	38	106	1	0	9	7	0	0	24	5	32	0	324
8:15 AM	0	85	14	0	18	87	3	0	3	2	0	0	25	4	26	0	267
8:30 AM	0	66	8	0	16	104	2	0	6	4	1	0	11	4	27	0	249
8:45 AM	1	67	11	0	31	106	4	0	1	0	2	0	20	3	11	0	257
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	12	717	118	2	228	880	83	0	39	29	4	0	266	57	291	0	2726
APPROACH %'s :	1.41%	84.45%	13.90%	0.24%	19.14%	73.89%	6.97%	0.00%	54.17%	40.28%	5.56%	0.00%	43.32%	9.28%	47.39%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	10	413	70	2	125	477	73	0	20	16	1	0	186	41	195	0	1629
PEAK HR FACTOR :	0.250	0.868	0.583	0.500	0.781	0.852	0.445	0.000	0.714	0.800	0.250	0.000	0.694	0.446	0.841	0.000	0.921
	0.897				0.815				0.712				0.865				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	139	42	0	59	117	5	0	4	5	1	0	15	4	39	0	430
4:15 PM	0	119	47	0	59	98	5	0	9	5	0	0	13	3	27	0	385
4:30 PM	0	118	45	0	87	121	4	0	6	8	1	0	14	3	41	0	448
4:45 PM	1	120	38	0	64	117	3	0	9	4	1	0	14	4	32	0	407
5:00 PM	0	135	36	0	56	103	2	0	2	1	2	0	11	2	32	0	382
5:15 PM	2	111	41	0	53	90	3	0	4	6	0	0	17	4	31	0	362
5:30 PM	2	95	28	0	54	93	3	0	6	7	2	0	14	4	34	0	342
5:45 PM	0	132	36	0	59	68	2	0	3	2	0	0	12	5	36	0	355
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	969	313	0	491	807	27	0	43	38	7	0	110	29	272	0	3111
APPROACH %'s :	0.39%	75.29%	24.32%	0.00%	37.06%	60.91%	2.04%	0.00%	48.86%	43.18%	7.95%	0.00%	26.76%	7.06%	66.18%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	1	496	172	0	269	453	17	0	28	22	3	0	56	14	139	0	1670
PEAK HR FACTOR :	0.250	0.892	0.915	0.000	0.773	0.936	0.850	0.000	0.778	0.688	0.750	0.000	0.933	0.875	0.848	0.000	0.932
	0.924				0.871				0.883				0.901				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 41 & Hanford-Armona Rd
City: Lemoore
Project ID: 18-02010-001
Date: 1/25/2018

Pedestrians (Crosswalks)

NS/EW Streets:	SR 41		SR 41		Hanford-Armona Rd		Hanford-Armona Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**07:00 AM - 08:00 AM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**04:00 PM - 05:00 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

JLB Traffic Engineering, Inc.

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Traffic Engineering, Transportation Planning & Parking Solutions
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File Name : SR 41 at Hanford Armona Rd
Site Code : 00000000
Start Date : 3/8/2018
Page No : 1

Groups Printed- Unshifted

	SR 41 Southbound					HANFORD ARMONA RD Westbound					SR 41 Northbound					HANFORD ARMONA RD 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	Int. Total
03:00 PM	78	108	10	0	196	19	4	30	0	53	2	128	30	0	160	9	4	0	0	13	422
03:15 PM	48	89	4	0	141	15	5	29	0	49	0	155	28	0	183	6	1	0	0	7	380
03:30 PM	43	97	4	0	144	16	7	35	0	58	1	169	34	0	204	7	16	0	0	23	429
03:45 PM	64	111	4	0	179	17	7	26	0	50	4	149	44	0	197	3	6	0	0	9	435
Total	233	405	22	0	660	67	23	120	0	210	7	601	136	0	744	25	27	0	0	52	1666
04:00 PM	62	140	7	0	209	12	5	33	0	50	1	165	33	0	199	5	10	1	0	16	474
04:15 PM	55	120	2	0	177	21	4	24	0	49	1	138	53	0	192	4	8	0	0	12	430
04:30 PM	56	132	1	0	189	12	7	33	0	52	0	174	52	0	226	8	6	0	0	14	481
04:45 PM	77	121	5	0	203	15	6	26	0	47	3	132	33	0	168	1	5	1	0	7	425
Total	250	513	15	0	778	60	22	116	0	198	5	609	171	0	785	18	29	2	0	49	1810
Grand Total	483	918	37	0	1438	127	45	236	0	408	12	1210	307	0	1529	43	56	2	0	101	3476
Apprch %	33.6	63.8	2.6	0		31.1	11	57.8	0		0.8	79.1	20.1	0		42.6	55.4	2	0		
Total %	13.9	26.4	1.1	0	41.4	3.7	1.3	6.8	0	11.7	0.3	34.8	8.8	0	44	1.2	1.6	0.1	0	2.9	

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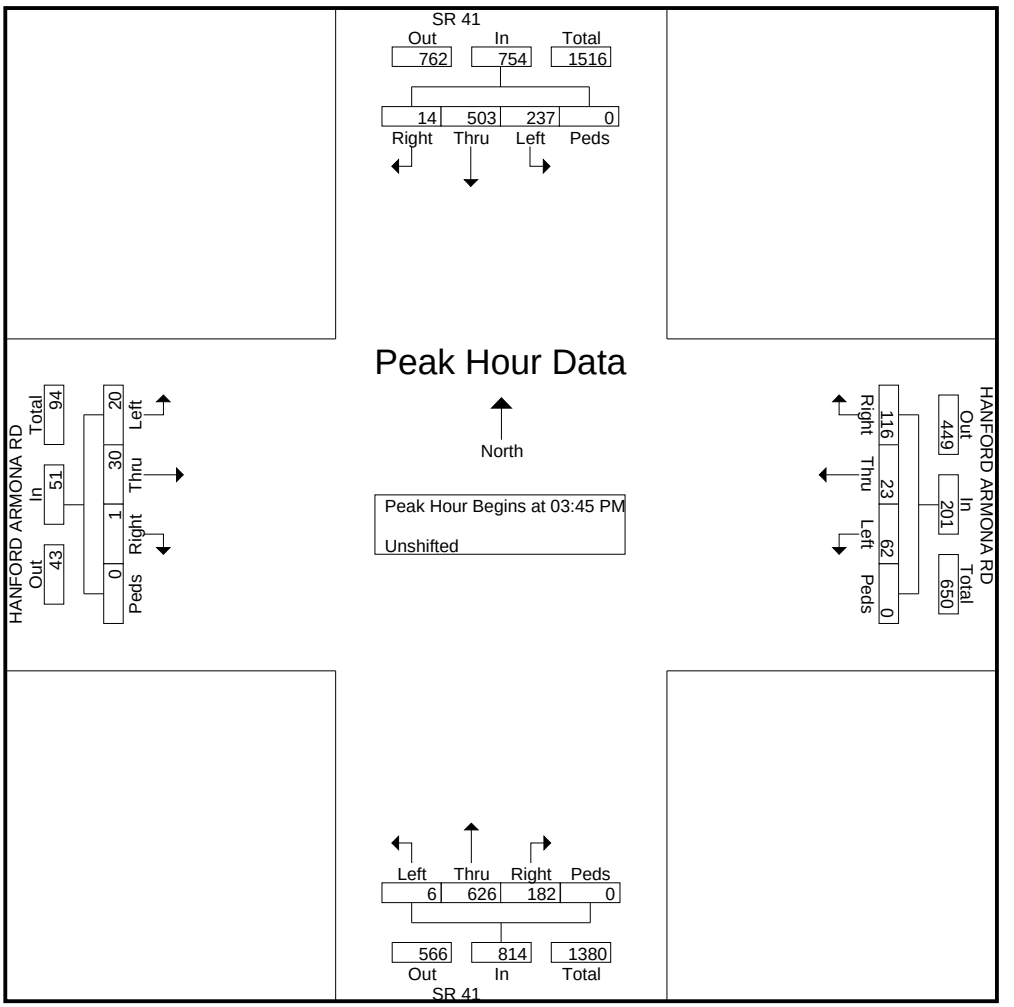
File Name : SR 41 at Hanford Armona Rd
Site Code : 00000000
Start Date : 3/8/2018
Page No : 2

	SR 41 Southbound					HANFORD ARMONA RD Westbound					SR 41 Northbound					HANFORD ARMONA RD 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	Int. Total
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	**64**	111	4	0	179	17	**7**	26	0	50	**4**	149	44	0	197	3	6	0	0	9	435
04:00 PM	62	**140**	**7**	0	**209**	12	5	**33**	0	50	1	165	33	0	199	5	**10**	**1**	0	**16**	474
04:15 PM	55	120	2	0	177	**21**	4	24	0	49	1	138	**53**	0	192	4	8	0	0	12	430
04:30 PM	56	132	1	0	189	12	7	33	0	**52**	0	**174**	52	0	**226**	**8**	6	0	0	14	**481**
Total Volume	237	503	14	0	754	62	23	116	0	201	6	626	182	0	814	20	30	1	0	51	1820
% App. Total	31.4	66.7	1.9	0		30.8	11.4	57.7	0		0.7	76.9	22.4	0		39.2	58.8	2	0		
PHF	.926	.898	.500	.000	.902	.738	.821	.879	.000	.966	.375	.899	.858	.000	.900	.625	.750	.250	.000	.797	.946



Prepared by National Data & Surveying Services

19th Ave & Hanford-Armona Rd

Peak Hour Turning Movement Count

ID: 18-02010-002
City: Lemoore

Day: Thursday
Date: 01/25/2018

PEAK HOURS

AM: 07:15 AM - 08:15 AM
NOON: NONE
PM: 04:00 PM - 05:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

SOUTHBOUND — 19th Ave

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Hanford-Armona Rd

AM	NOON	PM	
348	0	228	⇦
0	0	0	↶ 0
0	0	0	↱ 0
231	0	392	→ 0
43	0	35	↴ 0
AM	NOON	PM	

WESTBOUND — Hanford-Armona Rd

PM	NOON	AM	
0	0	0	0 ↰
196	0	318	0 ←
93	0	86	0 ↰
0	0	0	0 ↰
509	0	343	⇨
PM	NOON	AM	

CONTROL

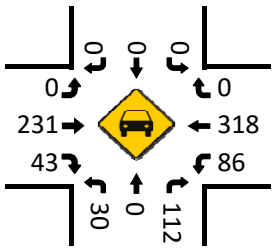
0

TEV	820 AM	0 NOON	865 PM
PHF	0.81		0.93

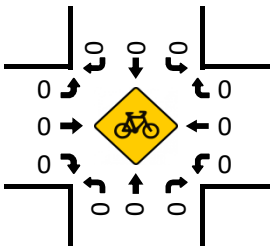
NORTHBOUND — 19th Ave

PM	128	0	32	0	117	PM
NOON	0	0	0	0	0	NOON
AM	129	0	30	0	112	AM

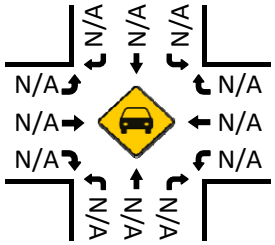
Total Vehicles (AM)



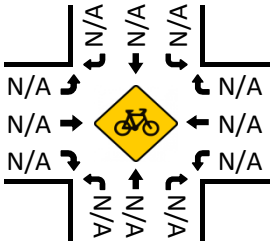
Bikes (AM)



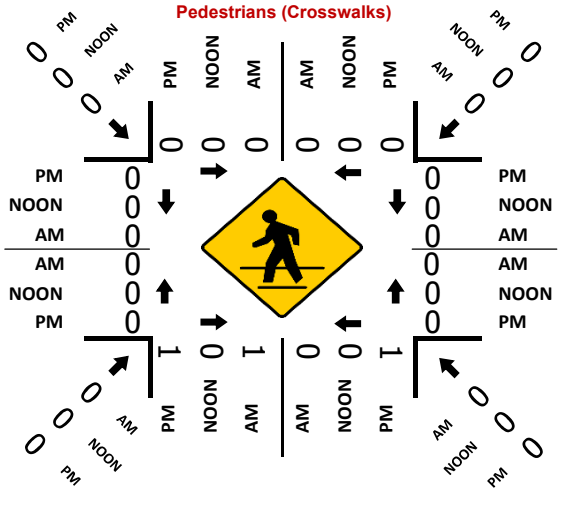
Total Vehicles (Noon)



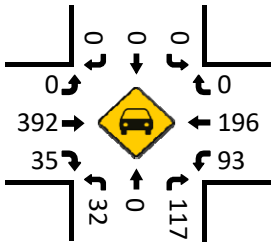
Bikes (NOON)



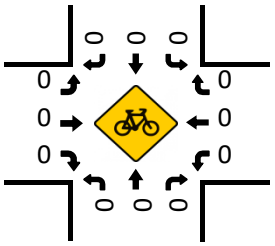
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: 19th Ave & Hanford-Armona Rd
City: Lemoore
Control:

Project ID: 18-02010-002
Date: 1/25/2018

Total

NS/EW Streets:	19th Ave				19th Ave				Hanford-Armona Rd				Hanford-Armona Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	14	0	14	0	0	0	0	0	0	26	8	0	10	61	0	0	133
7:15 AM	11	0	22	0	0	0	0	0	0	35	8	0	13	94	0	0	183
7:30 AM	8	0	23	0	0	0	0	0	0	66	9	0	17	97	0	0	220
7:45 AM	7	0	40	0	0	0	0	0	0	82	12	0	34	77	0	0	252
8:00 AM	4	0	27	0	0	0	0	0	0	48	14	0	22	50	0	0	165
8:15 AM	7	0	21	0	0	0	0	0	0	25	4	0	13	50	0	0	120
8:30 AM	6	0	15	0	1	0	0	0	1	27	6	0	12	29	0	0	97
8:45 AM	4	0	13	0	0	0	0	0	0	37	7	0	14	32	0	0	107
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	61	0	175	0	1	0	0	0	1	346	68	0	135	490	0	0	1277
APPROACH %'s :	25.85%	0.00%	74.15%	0.00%	100.00%	0.00%	0.00%	0.00%	0.24%	83.37%	16.39%	0.00%	21.60%	78.40%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	30	0	112	0	0	0	0	0	0	231	43	0	86	318	0	0	820
PEAK HR FACTOR :	0.682	0.000	0.700	0.000	0.000	0.000	0.000	0.000	0.000	0.704	0.768	0.000	0.632	0.820	0.000	0.000	0.813
	0.755				0.000				0.729				0.886				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	8	0	35	0	0	0	0	0	0	92	5	0	21	50	0	0	211
4:15 PM	6	0	23	0	0	0	0	0	0	94	11	0	26	44	0	0	204
4:30 PM	10	0	32	0	0	0	0	0	0	109	6	0	20	56	0	0	233
4:45 PM	8	0	27	0	0	0	0	0	0	97	13	0	26	46	0	0	217
5:00 PM	8	0	26	0	0	0	0	0	0	84	3	0	27	51	0	0	199
5:15 PM	6	0	37	0	0	0	0	0	0	90	3	0	26	47	0	0	209
5:30 PM	6	0	24	0	0	0	0	0	0	67	10	0	30	54	1	0	192
5:45 PM	10	0	32	0	0	0	0	0	0	81	14	0	38	51	0	0	226
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	62	0	236	0	0	0	0	0	0	714	65	0	214	399	1	0	1691
APPROACH %'s :	20.81%	0.00%	79.19%	0.00%					0.00%	91.66%	8.34%	0.00%	34.85%	64.98%	0.16%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	32	0	117	0	0	0	0	0	0	392	35	0	93	196	0	0	865
PEAK HR FACTOR :	0.800	0.000	0.836	0.000	0.000	0.000	0.000	0.000	0.000	0.899	0.673	0.000	0.894	0.875	0.000	0.000	0.928
	0.866								0.928				0.951				

National Data & Surveying Services Intersection Turning Movement Count

Location: 19th Ave & Hanford-Armona Rd
City: Lemoore
Project ID: 18-02010-002
Date: 1/25/2018

Pedestrians (Crosswalks)

NS/EW Streets:	19th Ave		19th Ave		Hanford-Armona Rd		Hanford-Armona Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	1	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	1	0	0	0	0	0	1
APPROACH %'s :			100.00%	0.00%					
PEAK HR :	**07:15 AM - 08:15 AM**								TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :			0.250						0.250
			0.250						

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	3	1	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	5	2	0	0	0	0	7
APPROACH %'s :			71.43%	28.57%					
PEAK HR :	**04:00 PM - 05:00 PM**								TOTAL
PEAK HR VOL :	0	0	1	1	0	0	0	0	2
PEAK HR FACTOR :			0.250	0.250					0.500
			0.500						

Prepared by National Data & Surveying Services

19th Ave & Cinnamon Dr

Peak Hour Turning Movement Count

ID: 18-02010-003
City: Lemoore

Day: Thursday
Date: 01/25/2018

PEAK HOURS

AM: 07:15 AM - 08:15 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

19th Ave — SOUTHBOUND

AM	35	141	33	0	160	AM
NOON	0	0	0	0	0	NOON
PM	29	116	25	0	181	PM

Cinnamon Dr — EASTBOUND

AM	NOON	PM	
237	0	189	⇦
0	0	0	↶ 0
37	0	25	↱ 0
151	0	142	→ 0
45	0	19	↴ 0
AM	NOON	PM	

CONTROL

0

TEV	1062	0	923
	AM	NOON	PM
PHF	0.74		0.95

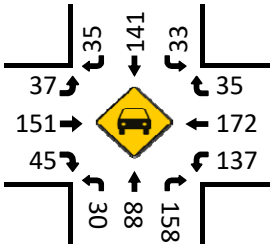
Cinnamon Dr — WESTBOUND

PM	NOON	AM	
27	0	35	0 ↰
132	0	172	0 ←
123	0	137	0 ↰
0	0	0	0 ↰
295	0	342	⇨
PM	NOON	AM	

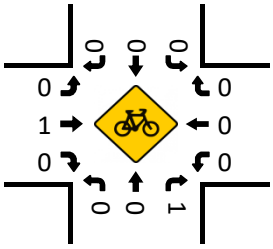
19th Ave — NORTHBOUND

PM	258	0	28	129	128	PM
NOON	0	0	0	0	0	NOON
AM	323	0	30	88	158	AM

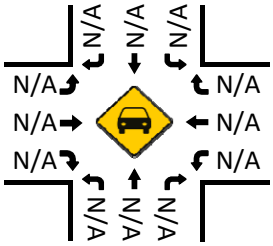
Total Vehicles (AM)



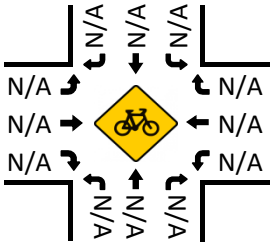
Bikes (AM)



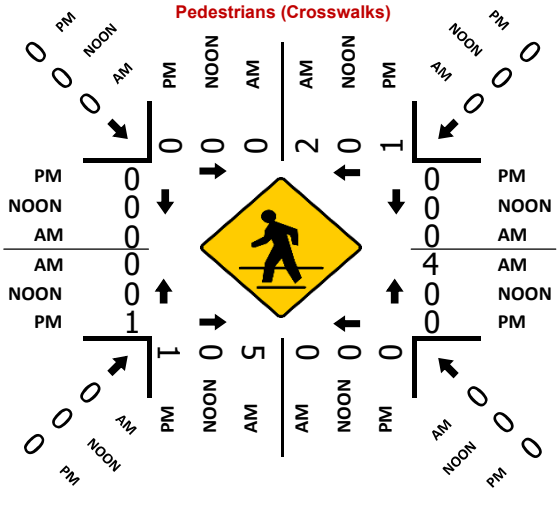
Total Vehicles (NOON)



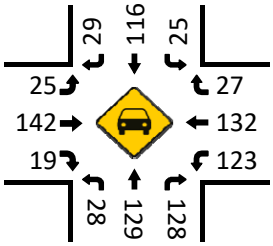
Bikes (NOON)



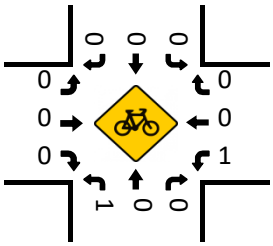
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: 19th Ave & Cinnamon Dr
City: Lemoore
Control:

Project ID: 18-02010-003
Date: 1/25/2018

Total

NS/EW Streets:	19th Ave				19th Ave				Cinnamon Dr				Cinnamon Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	9	13	0	3	17	4	0	3	10	3	0	9	25	10	0	108
7:15 AM	4	16	22	0	4	24	5	0	8	22	8	0	24	31	6	0	174
7:30 AM	7	20	54	0	14	39	11	0	5	38	19	0	34	53	5	0	299
7:45 AM	6	29	48	0	12	48	13	0	16	53	12	0	54	59	10	0	360
8:00 AM	13	23	34	0	3	30	6	0	8	38	6	0	25	29	14	0	229
8:15 AM	3	17	17	0	6	17	3	0	7	17	8	0	18	27	5	0	145
8:30 AM	1	10	13	0	4	14	4	0	5	16	5	0	11	21	5	0	109
8:45 AM	6	9	18	0	4	14	8	0	4	17	4	0	16	26	1	0	127
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	42	133	219	0	50	203	54	0	56	211	65	0	191	271	56	0	1551
APPROACH %'s :	10.66%	33.76%	55.58%	0.00%	16.29%	66.12%	17.59%	0.00%	16.87%	63.55%	19.58%	0.00%	36.87%	52.32%	10.81%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	30	88	158	0	33	141	35	0	37	151	45	0	137	172	35	0	1062
PEAK HR FACTOR :	0.577	0.759	0.731	0.000	0.589	0.734	0.673	0.000	0.578	0.712	0.592	0.000	0.634	0.729	0.625	0.000	0.738
		0.831				0.716				0.719				0.699			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	6	35	33	0	2	14	7	0	4	37	5	0	19	30	12	0	204
4:15 PM	1	27	31	0	1	25	6	0	6	44	6	0	35	34	11	0	227
4:30 PM	7	30	22	0	8	25	6	0	10	29	16	0	18	35	2	0	208
4:45 PM	8	29	28	0	3	28	8	0	6	28	4	0	34	25	8	0	209
5:00 PM	8	30	32	0	6	18	8	0	5	34	5	0	29	27	5	0	207
5:15 PM	6	36	31	0	4	21	2	0	8	43	5	0	36	38	2	0	232
5:30 PM	9	35	28	0	8	39	10	0	8	33	3	0	28	32	8	0	241
5:45 PM	5	28	37	0	7	38	9	0	4	32	6	0	30	35	12	0	243
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	50	250	242	0	39	208	56	0	51	280	50	0	229	256	60	0	1771
APPROACH %'s :	9.23%	46.13%	44.65%	0.00%	12.87%	68.65%	18.48%	0.00%	13.39%	73.49%	13.12%	0.00%	42.02%	46.97%	11.01%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	28	129	128	0	25	116	29	0	25	142	19	0	123	132	27	0	923
PEAK HR FACTOR :	0.778	0.896	0.865	0.000	0.781	0.744	0.725	0.000	0.781	0.826	0.792	0.000	0.854	0.868	0.563	0.000	0.950
		0.976				0.746				0.830				0.916			

National Data & Surveying Services Intersection Turning Movement Count

Location: 19th Ave & Cinnamon Dr
City: Lemoore
Project ID: 18-02010-003
Date: 1/25/2018

Pedestrians (Crosswalks)

NS/EW Streets:	19th Ave		19th Ave		Cinnamon Dr		Cinnamon Dr		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	3	0	2	0	0	0	5
7:30 AM	0	0	1	0	2	0	0	0	3
7:45 AM	0	2	1	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	1	0	0	0	0	1
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	2	5	1	4	0	0	0	13
APPROACH %'s :	33.33%	66.67%	83.33%	16.67%	100.00%	0.00%			
PEAK HR :	**07:15 AM - 08:15 AM**								TOTAL
PEAK HR VOL :	0	2	5	0	4	0	0	0	11
PEAK HR FACTOR :		0.250	0.417		0.500				0.550
	0.250		0.417		0.500				

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	1	0	0	2	0	0	0	0	3
4:15 PM	0	1	0	1	0	0	0	0	2
4:30 PM	0	0	0	0	1	1	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	1	0	2
5:15 PM	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	2	1	3	1	1	1	0	10
APPROACH %'s :	33.33%	66.67%	25.00%	75.00%	50.00%	50.00%	100.00%	0.00%	
PEAK HR :	**05:00 PM - 06:00 PM**								TOTAL
PEAK HR VOL :	0	1	1	0	0	0	1	0	3
PEAK HR FACTOR :		0.250	0.250				0.250		0.375
	0.250		0.250				0.250		

Prepared by National Data & Surveying Services

CLASSIFICATION

Hanford-Armona Rd Bet. SR 41 & 19th Ave

Day: Thursday
Date: 1/25/2018

City: Lemoore
Project #: CA18_2011_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	35	7	0	3	0	0	0	0	0	0	0	0	45
01:00	0	44	4	0	5	0	0	0	0	0	0	0	0	53
02:00	0	18	3	0	3	1	0	0	0	0	0	0	0	25
03:00	0	37	4	0	2	0	0	0	0	0	0	0	0	43
04:00	0	58	14	0	5	0	0	0	1	0	0	0	0	78
05:00	0	199	42	0	39	0	0	2	0	0	0	0	0	282
06:00	0	313	42	3	44	1	0	1	1	0	0	0	0	405
07:00	1	493	72	3	61	2	0	3	3	0	0	0	0	638
08:00	1	280	41	2	37	0	0	1	1	0	0	0	0	363
09:00	0	223	33	2	28	2	0	1	3	0	0	0	0	292
10:00	0	234	31	2	33	0	0	1	2	0	0	0	0	303
11:00	0	283	46	0	40	0	0	0	2	0	0	0	0	371
12:00 PM	2	306	51	1	43	0	0	1	6	0	0	0	0	410
13:00	1	309	45	1	40	0	0	0	2	0	0	0	0	398
14:00	0	394	48	1	41	0	0	2	7	0	0	0	0	493
15:00	0	493	49	1	69	0	0	3	4	0	0	0	0	619
16:00	1	528	86	2	54	0	0	2	5	0	0	0	0	678
17:00	0	459	71	1	50	0	0	2	4	0	0	0	0	587
18:00	0	364	54	0	34	0	0	1	3	0	0	0	0	456
19:00	1	223	24	0	24	0	0	0	4	0	0	0	0	276
20:00	2	147	15	0	14	0	0	0	2	0	0	0	0	180
21:00	0	182	18	0	13	1	0	0	1	0	0	0	0	215
22:00	1	115	15	0	14	0	0	1	0	0	0	0	0	146
23:00	0	89	8	2	10	0	0	0	0	0	0	0	0	109
Totals	**10**	**5826**	**823**	**21**	**706**	**7**		**21**	**51**					**7465**
% of Totals	0%	78%	11%	0%	9%	0%		0%	1%					100%

AM Volumes	2	2217	339	12	300	6	0	9	13	0	0	0	0	2898
% AM	0%	30%	5%	0%	4%	0%		0%	0%					39%
Peak Hour	07:00	07:00	07:00	06:00	07:00	07:00		07:00	07:00					07:00
Volume	1	493	72	3	61	2		3	3					638
PM Volumes	8	3609	484	9	406	1	0	12	38	0	0	0	0	4567
% PM	0%	48%	6%	0%	5%	0%		0%	1%					61%
Peak Hour	12:00	16:00	16:00	16:00	15:00	21:00		15:00	14:00					16:00
Volume	2	528	86	2	69	1		3	7					678

Peak Periods / All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	1001	13%	808	11%	1265	17%	4391	59%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Hanford-Armona Rd Bet. SR 41 & 19th Ave

Day: Thurday
Date: 1/25/2018

City: Lemoore
Project #: CA18_2011_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	####	####	7,465

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00	0	0	14		4		18		12:00	0	0	57		57		114	
00:15	0	0	5		3		8		12:15	0	0	47		47		94	
00:30	0	0	6		1		7		12:30	0	0	40		45		85	
00:45	0	0	9	34	3	11	12	45	12:45	0	0	57	201	60	209	117	410
01:00	0	0	9		6		15		13:00	0	0	42		52		94	
01:15	0	0	11		5		16		13:15	0	0	48		56		104	
01:30	0	0	8		3		11		13:30	0	0	50		47		97	
01:45	0	0	6	34	5	19	11	53	13:45	0	0	52	192	51	206	103	398
02:00	0	0	3		2		5		14:00	0	0	47		65		112	
02:15	0	0	4		0		4		14:15	0	0	67		61		128	
02:30	0	0	6		3		9		14:30	0	0	66		51		117	
02:45	0	0	2	15	5	10	7	25	14:45	0	0	91	271	45	222	136	493
03:00	0	0	2		4		6		15:00	0	0	119		58		177	
03:15	0	0	6		8		14		15:15	0	0	74		51		125	
03:30	0	0	0		10		10		15:30	0	0	92		65		157	
03:45	0	0	5	13	8	30	13	43	15:45	0	0	106	391	54	228	160	619
04:00	0	0	5		10		15		16:00	0	0	101		54		155	
04:15	0	0	6		14		20		16:15	0	0	122		48		170	
04:30	0	0	3		10		13		16:30	0	0	131		56		187	
04:45	0	0	6	20	24	58	30	78	16:45	0	0	117	471	49	207	166	678
05:00	0	0	9		43		52		17:00	0	0	98		49		147	
05:15	0	0	8		57		65		17:15	0	0	93		46		139	
05:30	0	0	14		67		81		17:30	0	0	81		53		134	
05:45	0	0	16	47	68	235	84	282	17:45	0	0	116	388	51	199	167	587
06:00	0	0	14		76		90		18:00	0	0	71		53		124	
06:15	0	0	29		67		96		18:15	0	0	71		40		111	
06:30	0	0	24		83		107		18:30	0	0	54		53		107	
06:45	0	0	40	107	72	298	112	405	18:45	0	0	64	260	50	196	114	456
07:00	0	0	28		96		124		19:00	0	0	46		31		77	
07:15	0	0	42		110		152		19:15	0	0	47		32		79	
07:30	0	0	70		123		193		19:30	0	0	34		26		60	
07:45	0	0	78	218	91	420	169	638	19:45	0	0	38	165	22	111	60	276
08:00	0	0	61		54		115		20:00	0	0	25		24		49	
08:15	0	0	38		57		95		20:15	0	0	22		23		45	
08:30	0	0	29		40		69		20:30	0	0	22		18		40	
08:45	0	0	46	174	38	189	84	363	20:45	0	0	28	97	18	83	46	180
09:00	0	0	28		38		66		21:00	0	0	37		24		61	
09:15	0	0	33		48		81		21:15	0	0	25		25		50	
09:30	0	0	30		38		68		21:30	0	0	22		32		54	
09:45	0	0	38	129	39	163	77	292	21:45	0	0	29	113	21	102	50	215
10:00	0	0	31		29		60		22:00	0	0	19		15		34	
10:15	0	0	35		39		74		22:15	0	0	21		13		34	
10:30	0	0	32		37		69		22:30	0	0	40		8		48	
10:45	0	0	68	166	32	137	100	303	22:45	0	0	24	104	6	42	30	146
11:00	0	0	55		51		106		23:00	0	0	20		5		25	
11:15	0	0	62		41		103		23:15	0	0	24		12		36	
11:30	0	0	49		35		84		23:30	0	0	20		3		23	
11:45	0	0	35	201	43	170	78	371	23:45	0	0	19	83	6	26	25	109
TOTALS				1158		1740		**2898**	**TOTALS**				2736		1831		**4567**
SPLIT %				40.0%		60.0%		**38.8%**	**SPLIT %**				59.9%		40.1%		**61.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	####	####	7,465

AM Peak Hour			07:15	07:00	**07:00**	**PM Peak Hour**			16:00	13:45	**16:00**
AM Pk Volume			251	420	**638**	**PM Pk Volume**			471	228	**678**
Pk Hr Factor			0.804	0.854	**0.826**	**Pk Hr Factor**			0.899	0.877	**0.906**
7 - 9 Volume	0	0	392	609	**1001**	**4 - 6 Volume**	0	0	859	406	**1265**
7 - 9 Peak Hour			07:15	07:00	**07:00**	**4 - 6 Peak Hour**			16:00	16:00	**16:00**
7 - 9 Pk Volume	0	0	251	420	**638**	**4 - 6 Pk Volume**	0	0	471	207	**678**
Pk Hr Factor	0.000	0.000	0.804	0.854	**0.826**	**Pk Hr Factor**	0.000	0.000	0.899	0.924	**0.906**

Appendix C: Methodology

Levels of Service Methodology

The description and procedures for calculating capacity and level of service (LOS) are found in the Transportation Research Board, Highway Capacity Manual (HCM). The HCM 2010 represents the research on capacity and quality of service for transportation facilities.

Quality of service requires quantitative measures to characterize operational conditions within a traffic stream. Level of service is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience.

Six levels of service are defined for each type of facility that has analysis procedures available. Letters designate each level of service (LOS), from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each LOS represents a range of operating conditions and the driver's perception of these conditions. Safety is not included in the measures that establish a LOS.

Urban Streets (Automobile Mode)

The term "urban streets" refers to urban arterials and collectors, including those in downtown areas. Arterial streets are roads that primarily serve longer through trips. However, providing access to abutting commercial and residential land uses is also an important function of arterials. Collector streets provide both land access and traffic circulation within residential, commercial and industrial areas. Their access function is more important than that of arterials, and unlike arterials their operation is not always dominated by traffic signals. Downtown streets are signalized facilities that often resemble arterials. They not only move through traffic but also provide access to local businesses for passenger cars, transit buses, and trucks. Pedestrian conflicts and lane obstructions created by stopping or standing taxicabs, buses, trucks and parking vehicles that cause turbulence in the traffic flow are typical of downtown streets.

Flow Characteristics

The speed of vehicles on urban streets is influenced by three main factors, street environment, interaction among vehicles and traffic control.

The street environment includes the geometric characteristics of the facility, the character of roadside activity, and adjacent land uses. Thus, the environment reflects the number and width of lanes, type of median, driveway/access point density, spacing between signalized intersections, existence of parking, level of pedestrian and bicyclist activity and speed limit.

The interaction among vehicles is determined by traffic density, the proportion of trucks and buses, and turning movements. This interaction affects the operation of vehicles at intersections and, to a lesser extent, between signals.

Traffic controls (including signals and signs) forces a portion of all vehicles to slow or stop. The delays and speed changes caused by traffic control devices reduce vehicle speeds; however, such controls are needed to establish right-of-way.

Levels of Service (automobile Mode)

The average travel speed for through vehicles along an urban street is the determinant of the operating level of service (LOS). The travel speed along a segment, section or entire length of an urban street is dependent on the running speed between signalized intersections and the amount of control delay incurred at signalized intersections.

LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal. Travel speeds exceed 85 of the base free flow speed (FFS).

LOS B describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67 and 85 percent of the base FFS.

LOS C describes stable operations. The ability to maneuver and change lanes in midblock location may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50 and 67 percent of the base FFS.

LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volumes, inappropriate signal timing, at the boundary intersections. The travel speed is between 40 and 50 percent of the base FFS.

LOS E is characterized unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30 and 40 percent of the base FFS.

LOS F is characterized by street flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30 percent or less of the base FFS.

Table A-1: Urban Street Levels of Service (Automobile Mode)

Travel Speed as a Percentage of Base Free-Flow Speed (%)	LOS by Critical Volume-to-Capacity Ratio[a]	
	≤1.0	>1.0
>85	A	F
>67 to 85	B	F
>50 to 67	C	F
>40 to 50	D	F
>30 to 40	E	F
≤30	F	F

a = The Critical volume-to-capacity ratio is based on consideration of the through movement-to-capacity ratio at each boundary intersection in the subject direction of travel. The critical volume-to-capacity ratio is the largest ratio of those considered.
Source: Highway Capacity Manual 2010, Exhibit 16-4. Urban Street LOS Criteria (Automobile Mode)

Intersection Levels of Service

One of the more important elements limiting, and often interrupting the flow of traffic on a highway is the intersection. Flow on an interrupted facility is usually dominated by points of fixed operation such as traffic signals, stop and yield signs.

Signalized Intersections – Performance Measures

For signalized intersections the performance measures include automobile volume-to-capacity ratio, automobile delay, queue storage length, ratio of pedestrian delay, pedestrian circulation area, pedestrian perception score, bicycle delay, and bicycle perception score. LOS is also considered a performance measure. For the automobile mode average control delay per vehicle per approach is determined for the peak hour. A weighted average of control delay per vehicle is then determined for the intersection. A LOS designation is given to the weighted average control delay to better describe the level of operation. A description of LOS for signalized intersections is found in Table A-2.

Table A-2: Signalized Intersection Level of Service Description (Automobile Mode)

Level of Service	Description	Average Control Delay (seconds per vehicle)
A	Operations with a control delay of 10 seconds/vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is and either progression is exceptionally favorable or the cycle length is very short. If it's due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Operations with control delay between 10.1 to 20.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	>10.0 to 20.0
C	Operations with average control delays between 20.1 to 35.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 to 35
D	Operations with control delay between 35.1 to 55.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop, and i ndividual cycle failures are noticeable.	>35 to 55
E	Operations with control delay between 55.1 to 80.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	>55 to 80
F	Operations with unacceptable control delay exceeding 80.0 seconds/vehicle and a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80

Source: Highway Capacity Manual 2010

Unsignalized Intersections

The HCM 2010 procedures use control delay as a measure of effectiveness to determine level of service. Delay is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, i. e., in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Control delay is the increased time of travel for a vehicle approaching and passing through an unsignalized intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection.

All-Way Stop Controlled Intersections

All-way stop controlled intersections is a form of traffic controls in which all approaches to an intersection are required to stop. Similar to signalized intersections, at all-way stop controlled intersections the average control delay per vehicle per approach is determined for the peak hour. A weighted average of control delay per vehicle is then determined for the intersection as a whole. In other words the delay measured for all-way stop controlled intersections is a measure of the average delay for all vehicles passing through the intersection during the peak hour. A LOS designation is given to the weighted average control delay to better describe the level of operation.

Two-Way Stop Controlled Intersections

Two-way stop controlled (TWSC) intersections in which stop signs are used to assign the right-of-way, are the most prevalent type of intersection in the United States. At TWSC intersections the stop-controlled approaches are referred as the minor street approaches and can be either public streets or private driveways. The approaches that are not controlled by stop signs are referred to as the major street approaches.

The capacity of movements subject to delay are determined using the "critical gap" method of capacity analysis. Expected average control delay based on movement volume and movement capacity is calculated. A LOS for TWSC intersection is determined by the computed or measured control delay for each minor movement. LOS is not defined for the intersection as a whole for three main reasons: (a) major-street through vehicles are assumed to experience zero delay; (b) the disproportionate number of major-street through vehicles at the typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay from all vehicles; and (c) the resulting low delay can mask important LOS deficiencies for minor movements. Table A-3 provides a description of LOS at unsignalized intersections.

Table A-3: Unsignalized Intersection Level of Service Description (Automobile Mode)

Control Delay (seconds per vehicle)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	**v/c > 1.0**
≤10	A	F
>10 to 15	B	F
>15 to 25	C	F
>25 to 35	D	F
>35 to 50	E	F
>50	F	F

Source: HCM 2010 Exhibit 19-1.

Appendix D: Existing Traffic Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	16	1	186	41	195	2	10	413	70	125	477
Future Volume (vph)	20	16	1	186	41	195	2	10	413	70	125	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0			5.7	7.9	7.9	5.4	7.9
Lane Util. Factor		1.00			1.00			1.00	0.95	1.00	1.00	0.95
Frt		1.00			0.94			1.00	1.00	0.85	1.00	0.98
Flt Protected		0.97			0.98			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1660			1570			1619	3195	1429	1597	3131
Flt Permitted		0.97			0.98			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1660			1570			1619	3195	1429	1597	3131
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	17	1	202	45	212	2	11	449	76	136	518
RTOR Reduction (vph)	0	1	0	0	33	0	0	0	0	61	0	12
Lane Group Flow (vph)	0	39	0	0	426	0	0	13	449	15	136	585
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	3%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	5	2		1	6
Permitted Phases										2		
Actuated Green, G (s)		4.8			27.0			1.2	17.3	17.3	9.8	25.6
Effective Green, g (s)		4.8			27.0			1.2	17.3	17.3	9.8	25.6
Actuated g/C Ratio		0.05			0.30			0.01	0.19	0.19	0.11	0.28
Clearance Time (s)		8.8			9.0			5.7	7.9	7.9	5.4	7.9
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		88			471			21	614	274	173	890
v/s Ratio Prot		c0.02			c0.27			0.01	0.14		c0.09	c0.19
v/s Ratio Perm										0.01		
v/c Ratio		0.44			0.90			0.62	0.73	0.05	0.79	0.66
Uniform Delay, d1		41.3			30.3			44.2	34.2	29.7	39.1	28.3
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.5			20.6			43.9	7.5	0.4	20.5	3.8
Delay (s)		44.8			50.8			88.1	41.7	30.0	59.6	32.1
Level of Service		D			D			F	D	C	E	C
Approach Delay (s)		44.8			50.8				41.2			37.2
Approach LOS		D			D				D			D

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	73
Future Volume (vph)	73
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	79
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	13%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	231	43	86	318	30	112
Future Vol, veh/h	231	43	86	318	30	112
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	285	53	106	393	37	138

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	339	0	918	313
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	605	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1215	-	300	725
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1215	-	274	724
Mov Cap-2 Maneuver	-	-	-	-	387	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	496	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	387	724	-	-	1215	-
HCM Lane V/C Ratio	0.096	0.191	-	-	0.087	-
HCM Control Delay (s)	15.3	11.1	-	-	8.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.7	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	20.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	151	45	137	172	35	30	88	158	33	141	35
Future Vol, veh/h	37	151	45	137	172	35	30	88	158	33	141	35
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	50	204	61	185	232	47	41	119	214	45	191	47
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	19.6	19.3	23.8	18.3
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	36%	0%	77%	0%	83%	0%	80%
Vol Right, %	0%	64%	0%	23%	0%	17%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	246	37	196	137	207	33	176
LT Vol	30	0	37	0	137	0	33	0
Through Vol	0	88	0	151	0	172	0	141
RT Vol	0	158	0	45	0	35	0	35
Lane Flow Rate	41	332	50	265	185	280	45	238
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.095	0.687	0.118	0.576	0.424	0.591	0.107	0.527
Departure Headway (Hd)	8.42	7.441	8.514	7.832	8.245	7.608	8.634	7.973
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	424	482	419	458	435	473	413	450
Service Time	6.21	5.23	6.313	5.629	6.042	5.404	6.431	5.769
HCM Lane V/C Ratio	0.097	0.689	0.119	0.579	0.425	0.592	0.109	0.529
HCM Control Delay	12.1	25.2	12.5	20.9	17	20.9	12.5	19.4
HCM Lane LOS	B	D	B	C	C	C	B	C
HCM 95th-tile Q	0.3	5.2	0.4	3.6	2.1	3.7	0.4	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	30	1	62	23	116	6	626	182	237	503	14
Future Volume (vph)	20	30	1	62	23	116	6	626	182	237	503	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0		5.7	7.9	7.9	5.4	7.9	
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	
Frt		1.00			0.92		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1660			1540		1597	3195	1429	1597	3181	
Flt Permitted		0.98			0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1660			1540		1597	3195	1429	1597	3181	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	32	1	65	24	122	6	659	192	249	529	15
RTOR Reduction (vph)	0	1	0	0	55	0	0	0	137	0	2	0
Lane Group Flow (vph)	0	53	0	0	156	0	6	659	55	249	542	0
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%	13%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		6.4			10.2		1.2	25.7	25.7	16.6	40.8	
Effective Green, g (s)		6.4			10.2		1.2	25.7	25.7	16.6	40.8	
Actuated g/C Ratio		0.07			0.11		0.01	0.29	0.29	0.18	0.45	
Clearance Time (s)		8.8			9.0		5.7	7.9	7.9	5.4	7.9	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		118			174		21	912	408	294	1442	
v/s Ratio Prot		c0.03			c0.10		0.00	c0.21		c0.16	0.17	
v/s Ratio Perm									0.04			
v/c Ratio		0.45			0.90		0.29	0.72	0.13	0.85	0.38	
Uniform Delay, d1		40.1			39.4		44.0	28.9	23.9	35.5	16.2	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.7			39.8		7.4	4.9	0.7	19.6	0.7	
Delay (s)		42.8			79.2		51.3	33.9	24.6	55.1	17.0	
Level of Service		D			E		D	C	C	E	B	
Approach Delay (s)		42.8			79.2			31.9			28.9	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	392	35	93	196	32	117
Future Vol, veh/h	392	35	93	196	32	117
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	12	3	3	12	3	3
Mvmt Flow	422	38	100	211	34	126

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	461	0	853	442
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	411	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1095	-	328	613
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	667	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1095	-	297	612
Mov Cap-2 Maneuver	-	-	-	-	420	-
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	420	612	-	-	1095	-
HCM Lane V/C Ratio	0.082	0.206	-	-	0.091	-
HCM Control Delay (s)	14.3	12.4	-	-	8.6	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.8	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	142	19	123	132	27	28	129	128	25	116	29
Future Vol, veh/h	25	142	19	123	132	27	28	129	128	25	116	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	26	149	20	129	139	28	29	136	135	26	122	31
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.8	11.6	13.2	11.3
HCM LOS	B	B	B	B

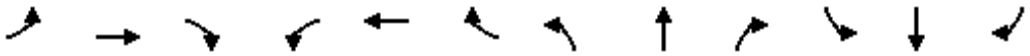
Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	50%	0%	88%	0%	83%	0%	80%
Vol Right, %	0%	50%	0%	12%	0%	17%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	257	25	161	123	159	25	145
LT Vol	28	0	25	0	123	0	25	0
Through Vol	0	129	0	142	0	132	0	116
RT Vol	0	128	0	19	0	27	0	29
Lane Flow Rate	29	271	26	169	129	167	26	153
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.056	0.45	0.051	0.302	0.246	0.289	0.052	0.271
Departure Headway (Hd)	6.852	5.99	7.013	6.42	6.843	6.215	7.046	6.395
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	521	598	509	558	523	576	506	559
Service Time	4.613	3.751	4.779	4.187	4.604	3.975	4.815	4.163
HCM Lane V/C Ratio	0.056	0.453	0.051	0.303	0.247	0.29	0.051	0.274
HCM Control Delay	10	13.6	10.2	12	11.8	11.5	10.2	11.5
HCM Lane LOS	A	B	B	B	B	B	B	B
HCM 95th-tile Q	0.2	2.3	0.2	1.3	1	1.2	0.2	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	16	1	186	41	195	2	10	413	70	125	477
Future Volume (vph)	20	16	1	186	41	195	2	10	413	70	125	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0	9.0		5.7	7.9	7.9	5.4	7.9
Lane Util. Factor		1.00			1.00	1.00		1.00	0.95	1.00	1.00	0.95
Frt		1.00			1.00	0.85		1.00	1.00	0.85	1.00	0.98
Flt Protected		0.97			0.96	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1660			1644	1455		1619	3195	1429	1597	3131
Flt Permitted		0.97			0.96	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1660			1644	1455		1619	3195	1429	1597	3131
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	17	1	202	45	212	2	11	449	76	136	518
RTOR Reduction (vph)	0	1	0	0	0	169	0	0	0	55	0	11
Lane Group Flow (vph)	0	39	0	0	247	43	0	13	449	21	136	586
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	3%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA	Perm	Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	5	2		1	6
Permitted Phases						3				2		
Actuated Green, G (s)		4.8			18.4	18.4		1.2	24.3	24.3	11.4	34.2
Effective Green, g (s)		4.8			18.4	18.4		1.2	24.3	24.3	11.4	34.2
Actuated g/C Ratio		0.05			0.20	0.20		0.01	0.27	0.27	0.13	0.38
Clearance Time (s)		8.8			9.0	9.0		5.7	7.9	7.9	5.4	7.9
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		88			336	297		21	862	385	202	1189
v/s Ratio Prot		c0.02			c0.15			0.01	0.14		c0.09	c0.19
v/s Ratio Perm						0.03				0.01		
v/c Ratio		0.44			0.74	0.15		0.62	0.52	0.05	0.67	0.49
Uniform Delay, d1		41.3			33.5	29.4		44.2	27.9	24.3	37.5	21.3
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.5			8.1	0.2		43.9	2.2	0.3	8.5	1.5
Delay (s)		44.8			41.6	29.6		88.1	30.2	24.6	46.1	22.8
Level of Service		D			D	C		F	C	C	D	C
Approach Delay (s)		44.8			36.1				30.8			27.1
Approach LOS		D			D				C			C

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	73
Future Volume (vph)	73
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	79
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	13%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	30	1	62	23	116	6	626	182	237	503	14
Future Volume (vph)	20	30	1	62	23	116	6	626	182	237	503	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0	9.0	5.7	7.9	7.9	5.4	7.9	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1660			1637	1442	1597	3195	1429	1597	3181	
Flt Permitted		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1660			1637	1442	1597	3195	1429	1597	3181	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	32	1	65	24	122	6	659	192	249	529	15
RTOR Reduction (vph)	0	1	0	0	0	109	0	0	135	0	2	0
Lane Group Flow (vph)	0	53	0	0	89	13	6	659	57	249	542	0
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%	13%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3			2			
Actuated Green, G (s)		6.4			9.3	9.3	1.2	26.6	26.6	16.6	41.7	
Effective Green, g (s)		6.4			9.3	9.3	1.2	26.6	26.6	16.6	41.7	
Actuated g/C Ratio		0.07			0.10	0.10	0.01	0.30	0.30	0.18	0.46	
Clearance Time (s)		8.8			9.0	9.0	5.7	7.9	7.9	5.4	7.9	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		118			169	149	21	944	422	294	1473	
v/s Ratio Prot		c0.03			c0.05		0.00	c0.21		c0.16	0.17	
v/s Ratio Perm						0.01			0.04			
v/c Ratio		0.45			0.53	0.08	0.29	0.70	0.13	0.85	0.37	
Uniform Delay, d1		40.1			38.3	36.5	44.0	28.1	23.3	35.5	15.6	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.7			2.9	0.2	7.4	4.3	0.7	19.6	0.7	
Delay (s)		42.8			41.2	36.7	51.3	32.4	23.9	55.1	16.3	
Level of Service		D			D	D	D	C	C	E	B	
Approach Delay (s)		42.8			38.6			30.6			28.5	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection: 1: SR 41 & Hanford-Armona Road/Hanford Armona Road

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	UL	T	T	R	L	T	TR
Maximum Queue (ft)	89	371	129	20	192	179	82	157	127	145
Average Queue (ft)	29	157	49	3	83	70	17	76	63	53
95th Queue (ft)	81	268	92	12	145	140	47	131	109	106
Link Distance (ft)	5170	2602			3824	3824			2651	2651
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			250	845			500	855		
Storage Blk Time (%)		2								
Queuing Penalty (veh)		5								

Intersection: 5: 19th Avenue & Hanford Armona Road

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	92	76	71
Average Queue (ft)	22	27	38
95th Queue (ft)	59	52	63
Link Distance (ft)			1729
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	245	245	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	55	128	107	96	51	88	52	90
Average Queue (ft)	25	55	48	50	21	50	22	48
95th Queue (ft)	53	86	81	75	44	74	48	77
Link Distance (ft)		2549		3232		1711		981
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)		0	0	0		0		0
Queuing Penalty (veh)		0	1	0		0		0

Zone Summary

Zone wide Queuing Penalty: 6

Intersection: 1: SR 41 & Hanford-Armona Road

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	UL	T	T	R	L	T	TR
Maximum Queue (ft)	114	195	88	19	240	247	87	295	112	107
Average Queue (ft)	42	74	43	5	122	121	42	151	50	53
95th Queue (ft)	84	155	84	18	204	210	89	259	109	106
Link Distance (ft)	5170	2598			3824	3824			2651	2651
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			250	845			495	855		
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 5: 19th Avenue & Hanford-Armona Road

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	20	72	52	77
Average Queue (ft)	1	28	25	35
95th Queue (ft)	6	61	49	59
Link Distance (ft)	2598			1725
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		245	245	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	50	120	101	87	30	112	48	94
Average Queue (ft)	18	50	44	48	15	54	17	40
95th Queue (ft)	47	88	73	73	39	93	41	67
Link Distance (ft)		2545		3228		1707		977
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)		0	0	0		0		0
Queuing Penalty (veh)		0	0	0		0		0

Network Summary

Network wide Queuing Penalty: 1

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg NB AM) Prepared By: AM

Scenario: Existing Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	628
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

(V_p):	380.29

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Density (pc/mi/ln): 6.34 $\frac{V_p}{S}$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg NB PM) Prepared By: AM

Scenario: Existing Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	762
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

(V_p):	461.43

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Density (pc/mi/ln): 7.69 $\frac{V_p}{S}$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg SB AM) Prepared By: AM

Scenario: Existing Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	675
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	408.75

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 6.81 $\frac{V_p}{S}$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg SB PM) Prepared By: AM

Scenario: Existing Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	754
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

(V_p):	456.59

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Density (pc/mi/ln): 7.61 $\frac{V_p}{S}$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (South Leg NB AM) Prepared By: AM

Scenario: Existing Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	495
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	299.75

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 5.00

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (South Leg NB PM) Prepared By: AM

Scenario: Existing Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	814
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	492.92

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 8.22 $\frac{V_p}{S}$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (South Leg SB AM) Prepared By: AM

Scenario: Existing Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	666
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5 See Exhibit 14-12
PCE RV (E_r):	0 See Exhibit 14-12
(f_{HV}):	0.92

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	403.30

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 6.72

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 2/2/2018

Segment: SR 41 Hanford Armona RD (South Leg SB PM) Prepared By: AM

Scenario: Existing Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	566
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	342.74

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 5.71 $\frac{V_p}{S}$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Appendix E: Existing plus Project Phase 1 Traffic Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	16	1	193	42	202	2	10	413	73	127	477
Future Volume (vph)	20	16	1	193	42	202	2	10	413	73	127	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0			5.7	7.9	7.9	5.4	7.9
Lane Util. Factor		1.00			1.00			1.00	0.95	1.00	1.00	0.95
Frt		1.00			0.94			1.00	1.00	0.85	1.00	0.98
Flt Protected		0.97			0.98			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1660			1570			1619	3195	1429	1597	3131
Flt Permitted		0.97			0.98			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1660			1570			1619	3195	1429	1597	3131
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	17	1	210	46	220	2	11	449	79	138	518
RTOR Reduction (vph)	0	1	0	0	27	0	0	0	0	59	0	9
Lane Group Flow (vph)	0	39	0	0	449	0	0	13	449	20	138	588
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	3%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	5	2		1	6
Permitted Phases										2		
Actuated Green, G (s)		6.4			38.1			2.4	30.0	30.0	14.4	41.7
Effective Green, g (s)		6.4			38.1			2.4	30.0	30.0	14.4	41.7
Actuated g/C Ratio		0.05			0.32			0.02	0.25	0.25	0.12	0.35
Clearance Time (s)		8.8			9.0			5.7	7.9	7.9	5.4	7.9
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		88			498			32	798	357	191	1088
v/s Ratio Prot		c0.02			c0.29			0.01	0.14		c0.09	c0.19
v/s Ratio Perm										0.01		
v/c Ratio		0.44			0.90			0.41	0.56	0.06	0.72	0.54
Uniform Delay, d1		55.1			39.1			58.1	39.3	34.2	50.9	31.5
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.5			19.3			8.2	2.9	0.3	12.7	1.9
Delay (s)		58.6			58.4			66.3	42.1	34.5	63.5	33.4
Level of Service		E			E			E	D	C	E	C
Approach Delay (s)		58.6			58.4				41.6			39.0
Approach LOS		E			E				D			D

Intersection Summary			
HCM 2000 Control Delay	45.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	73
Future Volume (vph)	73
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	79
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	13%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	211	5	5	422	15	17
Future Vol, veh/h	211	5	5	422	15	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	175	-	90	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	229	5	5	459	16	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	229	0	699	229
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	470	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1333	-	405	808
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	627	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1333	-	403	808
Mov Cap-2 Maneuver	-	-	-	-	403	-
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	625	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	403	808	-	-	1333	-
HCM Lane V/C Ratio	0.04	0.023	-	-	0.004	-
HCM Control Delay (s)	14.3	9.6	-	-	7.7	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	248	43	86	323	30	112
Future Vol, veh/h	248	43	86	323	30	112
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	306	53	106	399	37	138

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	360	0	945	334
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	611	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1193	-	289	706
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	540	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1193	-	263	705
Mov Cap-2 Maneuver	-	-	-	-	380	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	492	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	12.2
HCM LOS			B

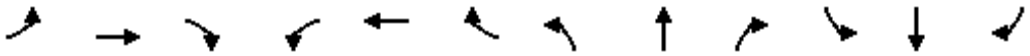
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	380	705	-	-	1193	-
HCM Lane V/C Ratio	0.097	0.196	-	-	0.089	-
HCM Control Delay (s)	15.5	11.3	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.7	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	21.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	156	47	137	174	35	31	88	158	33	141	35
Future Vol, veh/h	37	156	47	137	174	35	31	88	158	33	141	35
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	50	211	64	185	235	47	42	119	214	45	191	47
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	20.8	20.1	25	18.8
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	36%	0%	77%	0%	83%	0%	80%
Vol Right, %	0%	64%	0%	23%	0%	17%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	246	37	203	137	209	33	176
LT Vol	31	0	37	0	137	0	33	0
Through Vol	0	88	0	156	0	174	0	141
RT Vol	0	158	0	47	0	35	0	35
Lane Flow Rate	42	332	50	274	185	282	45	238
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.1	0.705	0.12	0.607	0.432	0.609	0.109	0.538
Departure Headway (Hd)	8.612	7.631	8.647	7.962	8.396	7.759	8.799	8.137
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	419	475	415	453	430	466	408	442
Service Time	6.312	5.331	6.398	5.713	6.147	5.51	6.549	5.887
HCM Lane V/C Ratio	0.1	0.699	0.12	0.605	0.43	0.605	0.11	0.538
HCM Control Delay	12.3	26.6	12.6	22.3	17.4	21.9	12.6	20
HCM Lane LOS	B	D	B	C	C	C	B	C
HCM 95th-tile Q	0.3	5.5	0.4	3.9	2.1	4	0.4	3.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	31	1	66	23	121	6	626	189	244	503	14
Future Volume (vph)	20	31	1	66	23	121	6	626	189	244	503	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0		5.7	7.9	7.9	5.4	7.9	
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	
Frt		1.00			0.92		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1676			1554		1597	3195	1429	1597	3181	
Flt Permitted		0.98			0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1676			1554		1597	3195	1429	1597	3181	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	33	1	69	24	127	6	659	199	257	529	15
RTOR Reduction (vph)	0	1	0	0	54	0	0	0	144	0	2	0
Lane Group Flow (vph)	0	54	0	0	166	0	6	659	55	257	542	0
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	13%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		6.4			10.7		1.2	25.0	25.0	16.8	40.3	
Effective Green, g (s)		6.4			10.7		1.2	25.0	25.0	16.8	40.3	
Actuated g/C Ratio		0.07			0.12		0.01	0.28	0.28	0.19	0.45	
Clearance Time (s)		8.8			9.0		5.7	7.9	7.9	5.4	7.9	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		119			184		21	887	396	298	1424	
v/s Ratio Prot		c0.03			c0.11		0.00	c0.21		c0.16	0.17	
v/s Ratio Perm									0.04			
v/c Ratio		0.45			0.90		0.29	0.74	0.14	0.86	0.38	
Uniform Delay, d1		40.1			39.1		44.0	29.6	24.4	35.5	16.5	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.7			40.0		7.4	5.6	0.7	21.7	0.8	
Delay (s)		42.9			79.2		51.3	35.2	25.2	57.2	17.3	
Level of Service		D			E		D	D	C	E	B	
Approach Delay (s)		42.9			79.2			33.0			30.1	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	449	15	17	201	9	10
Future Vol, veh/h	449	15	17	201	9	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	175	-	90	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	488	16	18	218	10	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	488	0	743	488
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	255	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1070	-	381	578
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	785	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1070	-	375	578
Mov Cap-2 Maneuver	-	-	-	-	375	-
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	375	578	-	-	1070	-
HCM Lane V/C Ratio	0.026	0.019	-	-	0.017	-
HCM Control Delay (s)	14.9	11.3	-	-	8.4	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	402	35	93	213	32	117
Future Vol, veh/h	402	35	93	213	32	117
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	432	38	100	229	34	126

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	471	0	881	452
Stage 1	-	-	-	-	452	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1086	-	316	605
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1086	-	287	604
Mov Cap-2 Maneuver	-	-	-	-	412	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	595	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.6	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	412	604	-	-	1086	-
HCM Lane V/C Ratio	0.084	0.208	-	-	0.092	-
HCM Control Delay (s)	14.5	12.5	-	-	8.7	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.8	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	145	20	123	140	27	31	129	128	25	116	29
Future Vol, veh/h	25	145	20	123	140	27	31	129	128	25	116	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	26	153	21	129	147	28	33	136	135	26	122	31
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.9	11.8	13.3	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	50%	0%	88%	0%	84%	0%	80%
Vol Right, %	0%	50%	0%	12%	0%	16%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	257	25	165	123	167	25	145
LT Vol	31	0	25	0	123	0	25	0
Through Vol	0	129	0	145	0	140	0	116
RT Vol	0	128	0	20	0	27	0	29
Lane Flow Rate	33	271	26	174	129	176	26	153
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.063	0.453	0.051	0.311	0.247	0.305	0.052	0.273
Departure Headway (Hd)	6.896	6.034	7.044	6.449	6.868	6.246	7.098	6.446
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	518	595	506	554	522	573	502	554
Service Time	4.658	3.796	4.816	4.22	4.632	4.009	4.87	4.218
HCM Lane V/C Ratio	0.064	0.455	0.051	0.314	0.247	0.307	0.052	0.276
HCM Control Delay	10.1	13.7	10.2	12.1	11.9	11.8	10.3	11.6
HCM Lane LOS	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.2	2.3	0.2	1.3	1	1.3	0.2	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	16	1	193	42	202	2	10	413	73	127	477
Future Volume (vph)	20	16	1	193	42	202	2	10	413	73	127	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0	9.0		5.7	7.9	7.9	5.4	7.9
Lane Util. Factor		1.00			1.00	1.00		1.00	0.95	1.00	1.00	0.95
Frt		1.00			1.00	0.85		1.00	1.00	0.85	1.00	0.98
Flt Protected		0.97			0.96	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1660			1644	1455		1619	3195	1429	1597	3131
Flt Permitted		0.97			0.96	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1660			1644	1455		1619	3195	1429	1597	3131
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	17	1	210	46	220	2	11	449	79	138	518
RTOR Reduction (vph)	0	1	0	0	0	180	0	0	0	62	0	14
Lane Group Flow (vph)	0	39	0	0	256	40	0	13	449	17	138	583
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	3%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA	Perm	Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	5	2		1	6
Permitted Phases						3				2		
Actuated Green, G (s)		4.8			13.7	13.7		1.2	16.5	16.5	8.9	23.9
Effective Green, g (s)		4.8			13.7	13.7		1.2	16.5	16.5	8.9	23.9
Actuated g/C Ratio		0.06			0.18	0.18		0.02	0.22	0.22	0.12	0.32
Clearance Time (s)		8.8			9.0	9.0		5.7	7.9	7.9	5.4	7.9
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		106			300	265		25	702	314	189	997
v/s Ratio Prot		c0.02			c0.16			0.01	0.14		c0.09	c0.19
v/s Ratio Perm						0.03				0.01		
v/c Ratio		0.37			0.85	0.15		0.52	0.64	0.06	0.73	0.58
Uniform Delay, d1		33.6			29.7	25.8		36.6	26.6	23.1	31.9	21.4
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.2			20.3	0.3		18.1	4.4	0.3	13.5	2.5
Delay (s)		35.8			50.0	26.0		54.7	31.0	23.4	45.4	23.9
Level of Service		D			D	C		D	C	C	D	C
Approach Delay (s)		35.8			38.9				30.4			27.9
Approach LOS		D			D				C			C

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	73
Future Volume (vph)	73
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	79
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	13%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

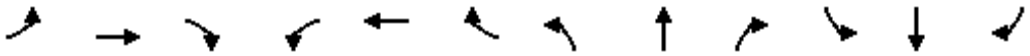
Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	16	1	193	42	202	2	10	413	73	127	477
Future Volume (vph)	20	16	1	193	42	202	2	10	413	73	127	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8		9.0	9.0			5.7	7.9	7.9	5.4	7.9
Lane Util. Factor		1.00		1.00	1.00			1.00	0.95	1.00	1.00	0.95
Frt		1.00		1.00	0.88			1.00	1.00	0.85	1.00	0.98
Flt Protected		0.97		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1660		1626	1499			1619	3195	1429	1597	3131
Flt Permitted		0.97		0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1660		1626	1499			1619	3195	1429	1597	3131
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	17	1	210	46	220	2	11	449	79	138	518
RTOR Reduction (vph)	0	1	0	0	184	0	0	0	0	60	0	14
Lane Group Flow (vph)	0	39	0	210	82	0	0	13	449	19	138	583
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	3%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	5	2		1	6
Permitted Phases										2		
Actuated Green, G (s)		4.8		12.4	12.4			1.2	17.8	17.8	8.9	25.2
Effective Green, g (s)		4.8		12.4	12.4			1.2	17.8	17.8	8.9	25.2
Actuated g/C Ratio		0.06		0.17	0.17			0.02	0.24	0.24	0.12	0.34
Clearance Time (s)		8.8		9.0	9.0			5.7	7.9	7.9	5.4	7.9
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		106		268	247			25	758	339	189	1052
v/s Ratio Prot		c0.02		c0.13	0.05			0.01	0.14		c0.09	c0.19
v/s Ratio Perm										0.01		
v/c Ratio		0.37		0.78	0.33			0.52	0.59	0.06	0.73	0.55
Uniform Delay, d1		33.6		30.0	27.6			36.6	25.4	22.1	31.9	20.3
Progression Factor		1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.2		13.9	0.8			18.1	3.4	0.3	13.5	2.1
Delay (s)		35.8		43.9	28.4			54.7	28.8	22.4	45.4	22.4
Level of Service		D		D	C			D	C	C	D	C
Approach Delay (s)		35.8			35.3				28.5			26.7
Approach LOS		D			D				C			C

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

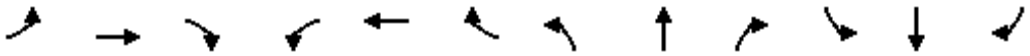
Movement	SBR
Lane Configurations	
Traffic Volume (vph)	73
Future Volume (vph)	73
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	79
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	13%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	31	1	66	23	121	6	626	189	244	503	14
Future Volume (vph)	20	31	1	66	23	121	6	626	189	244	503	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0	9.0	5.7	7.9	7.9	5.4	7.9	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1676			1650	1455	1597	3195	1429	1597	3181	
Flt Permitted		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1676			1650	1455	1597	3195	1429	1597	3181	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	33	1	69	24	127	6	659	199	257	529	15
RTOR Reduction (vph)	0	1	0	0	0	114	0	0	147	0	2	0
Lane Group Flow (vph)	0	54	0	0	93	13	6	659	52	257	542	0
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	13%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3			2			
Actuated Green, G (s)		4.8			8.1	8.1	1.2	21.1	21.1	14.9	34.5	
Effective Green, g (s)		4.8			8.1	8.1	1.2	21.1	21.1	14.9	34.5	
Actuated g/C Ratio		0.06			0.10	0.10	0.01	0.26	0.26	0.19	0.43	
Clearance Time (s)		8.8			9.0	9.0	5.7	7.9	7.9	5.4	7.9	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		100			167	147	23	842	376	297	1371	
v/s Ratio Prot		c0.03			c0.06		0.00	c0.21		c0.16	0.17	
v/s Ratio Perm						0.01			0.04			
v/c Ratio		0.54			0.56	0.09	0.26	0.78	0.14	0.87	0.40	
Uniform Delay, d1		36.5			34.2	32.6	39.0	27.3	22.5	31.6	15.6	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.9			4.0	0.3	6.0	7.2	0.8	22.1	0.9	
Delay (s)		42.4			38.2	32.9	44.9	34.5	23.3	53.7	16.5	
Level of Service		D			D	C	D	C	C	D	B	
Approach Delay (s)		42.4			35.1			32.0			28.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	31	1	66	23	121	6	626	189	244	503	14
Future Volume (vph)	20	31	1	66	23	121	6	626	189	244	503	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8		9.0	9.0		5.7	7.9	7.9	5.4	7.9	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		1.00		1.00	0.87		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1676		1626	1496		1597	3195	1429	1597	3181	
Flt Permitted		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1676		1626	1496		1597	3195	1429	1597	3181	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	33	1	69	24	127	6	659	199	257	529	15
RTOR Reduction (vph)	0	1	0	0	114	0	0	0	146	0	2	0
Lane Group Flow (vph)	0	54	0	69	37	0	6	659	53	257	542	0
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	13%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		4.8		8.0	8.0		1.2	21.2	21.2	14.9	34.6	
Effective Green, g (s)		4.8		8.0	8.0		1.2	21.2	21.2	14.9	34.6	
Actuated g/C Ratio		0.06		0.10	0.10		0.01	0.26	0.26	0.19	0.43	
Clearance Time (s)		8.8		9.0	9.0		5.7	7.9	7.9	5.4	7.9	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		100		162	149		23	846	378	297	1375	
v/s Ratio Prot		c0.03		c0.04	0.02		0.00	c0.21		c0.16	0.17	
v/s Ratio Perm									0.04			
v/c Ratio		0.54		0.43	0.25		0.26	0.78	0.14	0.87	0.39	
Uniform Delay, d1		36.5		33.8	33.2		39.0	27.2	22.4	31.6	15.5	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.9		1.8	0.9		6.0	7.0	0.8	22.1	0.8	
Delay (s)		42.4		35.6	34.1		44.9	34.2	23.2	53.7	16.4	
Level of Service		D		D	C		D	C	C	D	B	
Approach Delay (s)		42.4			34.6			31.8			28.4	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection: 1: SR 41 & Hanford-Armona Road

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	UL	T	T	R	L	T	TR
Maximum Queue (ft)	96	240	121	72	189	190	89	191	171	130
Average Queue (ft)	36	137	55	12	95	100	29	81	82	66
95th Queue (ft)	82	213	101	42	168	167	65	153	138	121
Link Distance (ft)	5155	666	666		3822	3822			2650	2650
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)				845			500	855		
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 3: Driveway 2 & Hanford Armona Road

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	27	26	40
Average Queue (ft)	1	11	10
95th Queue (ft)	9	31	29
Link Distance (ft)			334
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	175	90	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: 19th Avenue & Hanford Armona Road

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	51	100	72
Average Queue (ft)	15	28	40
95th Queue (ft)	44	64	62
Link Distance (ft)			1729
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	245	245	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	55	114	86	93	47	121	30	136
Average Queue (ft)	21	50	43	57	24	58	19	51
95th Queue (ft)	48	85	68	87	43	98	41	92
Link Distance (ft)		2549		3232		1711		981
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)		0	0	0		1		1
Queuing Penalty (veh)		0	0	0		0		0

Network Summary

Network wide Queuing Penalty: 1

Intersection: 1: SR 41 & Hanford-Armona Road

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	UL	T	T	R	L	T	TR
Maximum Queue (ft)	75	147	133	23	225	220	102	374	114	116
Average Queue (ft)	32	55	40	1	133	118	45	192	49	46
95th Queue (ft)	69	106	83	10	194	194	77	308	104	98
Link Distance (ft)	5155	666	666		3822	3822			2650	2650
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)				845			500	855		
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 3: Driveway 2 & Hanford Armona Road

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	28	26	43
Average Queue (ft)	3	5	12
95th Queue (ft)	18	22	34
Link Distance (ft)			334
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	175	90	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: 19th Avenue & Hanford Armona Road

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	22	96	52	77
Average Queue (ft)	1	25	23	37
95th Queue (ft)	7	62	46	61
Link Distance (ft)	1853			1729
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		245	245	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	32	91	135	148	52	111	73	71
Average Queue (ft)	14	43	44	48	21	54	18	43
95th Queue (ft)	39	72	86	84	45	85	49	67
Link Distance (ft)		2549		3232		1711		981
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)		0	1			0	0	0
Queuing Penalty (veh)		0	2			0	0	0

Network Summary

Network wide Queuing Penalty: 2

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 5/31/2018

Segment: SR 41 Hanford Armona RD (North Leg NB AM) Prepared By: AM

Scenario: Existing Plus Phase I Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	635
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	384.53

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 6.41

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 5/31/2018

Segment: SR 41 Hanford Armona RD (North Leg NB PM) Prepared By: AM

Scenario: Existing Plus Phase I Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	767
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	464.46

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 7.74

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway
Segment: SR 41 Hanford Armona RD (North Leg SB AM)
Scenario: Existing Plus Phase I

Date: 5/31/2018
Prepared By: AM
Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	677
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12
See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	409.96

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 6.83

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 5/31/2018

Segment: SR 41 Hanford Armona RD (North Leg SB PM) Prepared By: AM

Scenario: Existing Plus Phase I Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	761
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	460.83

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 7.68

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 5/31/2018

Segment: SR 41 Hanford Armona RD (South Leg NB AM) Prepared By: AM

Scenario: Existing Plus Phase I Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	498
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	301.57

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 5.03

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 5/31/2018

Segment: SR 41 Hanford Armona RD (South Leg NB PM) Prepared By: AM

Scenario: Existing Plus Phase I Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	821
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	497.16

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 8.29

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 5/31/2018

Segment: SR 41 Hanford Armona RD (South Leg SB AM) Prepared By: AM

Scenario: Existing Plus Phase I Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	673
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	407.54

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 6.79

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway
Segment: SR 41 Hanford Armona RD (South Leg SB PM)
Scenario: Existing Plus Phase I

Date: 5/31/2018
Prepared By: AM
Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	570
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12
See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	345.17

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 5.75

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Appendix F: Existing plus Project Buildout Traffic Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	18	1	245	44	253	2	10	413	131	186	477
Future Volume (vph)	20	18	1	245	44	253	2	10	413	131	186	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0			5.7	7.9	7.9	5.4	7.9
Lane Util. Factor		1.00			1.00			1.00	0.95	1.00	1.00	0.95
Frt		1.00			0.94			1.00	1.00	0.85	1.00	0.98
Flt Protected		0.98			0.98			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1664			1568			1619	3195	1429	1597	3131
Flt Permitted		0.98			0.98			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1664			1568			1619	3195	1429	1597	3131
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	20	1	266	48	275	2	11	449	142	202	518
RTOR Reduction (vph)	0	1	0	0	26	0	0	0	0	116	0	10
Lane Group Flow (vph)	0	42	0	0	563	0	0	13	449	26	202	587
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	3%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	5	2		1	6
Permitted Phases										2		
Actuated Green, G (s)		6.4			44.1			2.4	21.7	21.7	16.7	35.7
Effective Green, g (s)		6.4			44.1			2.4	21.7	21.7	16.7	35.7
Actuated g/C Ratio		0.05			0.37			0.02	0.18	0.18	0.14	0.30
Clearance Time (s)		8.8			9.0			5.7	7.9	7.9	5.4	7.9
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		88			576			32	577	258	222	931
v/s Ratio Prot		c0.03			c0.36			0.01	c0.14		c0.13	0.19
v/s Ratio Perm										0.02		
v/c Ratio		0.48			0.98			0.41	0.78	0.10	0.91	0.63
Uniform Delay, d1		55.2			37.5			58.1	46.9	41.0	50.9	36.4
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		4.0			31.5			8.2	10.0	0.8	36.3	3.2
Delay (s)		59.2			68.9			66.3	56.8	41.8	87.2	39.7
Level of Service		E			E			E	E	D	F	D
Approach Delay (s)		59.2			68.9				53.5			51.7
Approach LOS		E			E				D			D

Intersection Summary			
HCM 2000 Control Delay	57.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	73
Future Volume (vph)	73
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	79
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	13%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	216	119	51	542	0	53
Future Vol, veh/h	216	119	51	542	0	53
Conflicting Peds, #/hr	0	10	0	0	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	150	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	0	11	0	3
Mvmt Flow	235	129	55	589	0	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	245	0	-	255
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.327
Pot Cap-1 Maneuver	-	-	1333	-	0	781
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1320	-	-	766
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	766	-	-	1320	-
HCM Lane V/C Ratio	0.075	-	-	0.042	-
HCM Control Delay (s)	10.1	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	264	5	25	473	120	30
Future Vol, veh/h	264	5	25	473	120	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	175	-	90	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	287	5	27	514	130	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	287	0	855	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	568	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1269	-	327	750
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	565	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1269	-	320	750
Mov Cap-2 Maneuver	-	-	-	-	320	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	320	750	-	-	1269	-
HCM Lane V/C Ratio	0.408	0.043	-	-	0.021	-
HCM Control Delay (s)	23.8	10	-	-	7.9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	283	70	86	359	60	112
Future Vol, veh/h	283	70	86	359	60	112
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	349	86	106	443	74	138

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	437	0	1050	394
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	656	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1117	-	251	653
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1117	-	227	652
Mov Cap-2 Maneuver	-	-	-	-	349	-
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	465	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	14.1
HCM LOS			B

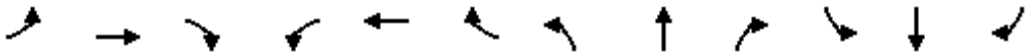
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	349	652	-	-	1117	-
HCM Lane V/C Ratio	0.212	0.212	-	-	0.095	-
HCM Control Delay (s)	18.1	12	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.8	0.8	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	23.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	156	47	137	174	43	31	95	158	42	148	41
Future Vol, veh/h	44	156	47	137	174	43	31	95	158	42	148	41
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	59	211	64	185	235	58	42	128	214	57	200	55
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	21.9	22	28	20.6
HCM LOS	C	C	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	38%	0%	77%	0%	80%	0%	78%
Vol Right, %	0%	62%	0%	23%	0%	20%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	253	44	203	137	217	42	189
LT Vol	31	0	44	0	137	0	42	0
Through Vol	0	95	0	156	0	174	0	148
RT Vol	0	158	0	47	0	43	0	41
Lane Flow Rate	42	342	59	274	185	293	57	255
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.102	0.742	0.147	0.626	0.444	0.65	0.142	0.589
Departure Headway (Hd)	8.788	7.818	8.9	8.214	8.642	7.982	8.98	8.304
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	408	462	403	439	417	452	400	434
Service Time	6.535	5.564	6.648	5.961	6.39	5.73	6.729	6.052
HCM Lane V/C Ratio	0.103	0.74	0.146	0.624	0.444	0.648	0.142	0.588
HCM Control Delay	12.5	29.9	13.2	23.8	18.1	24.4	13.2	22.3
HCM Lane LOS	B	D	B	C	C	C	B	C
HCM 95th-tile Q	0.3	6.1	0.5	4.2	2.2	4.5	0.5	3.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	33	1	118	25	173	6	626	246	301	503	14
Future Volume (vph)	20	33	1	118	25	173	6	626	246	301	503	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0		5.7	7.9	7.9	5.4	7.9	
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	
Frt		1.00			0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1677			1556		1597	3195	1429	1597	3181	
Flt Permitted		0.98			0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1677			1556		1597	3195	1429	1597	3181	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	35	1	124	26	182	6	659	259	317	529	15
RTOR Reduction (vph)	0	1	0	0	43	0	0	0	202	0	2	0
Lane Group Flow (vph)	0	56	0	0	289	0	6	659	57	317	542	0
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	13%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		6.4			19.6		1.2	22.0	22.0	20.9	41.4	
Effective Green, g (s)		6.4			19.6		1.2	22.0	22.0	20.9	41.4	
Actuated g/C Ratio		0.06			0.20		0.01	0.22	0.22	0.21	0.41	
Clearance Time (s)		8.8			9.0		5.7	7.9	7.9	5.4	7.9	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		107			304		19	702	314	333	1316	
v/s Ratio Prot		c0.03			c0.19		0.00	c0.21		c0.20	0.17	
v/s Ratio Perm									0.04			
v/c Ratio		0.52			0.95		0.32	0.94	0.18	0.95	0.41	
Uniform Delay, d1		45.3			39.7		49.0	38.3	31.7	39.1	20.7	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		4.6			38.7		9.3	21.9	1.3	36.6	1.0	
Delay (s)		49.9			78.4		58.3	60.2	33.0	75.6	21.7	
Level of Service		D			E		E	E	C	E	C	
Approach Delay (s)		49.9			78.4			52.6			41.5	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	52.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	464	116	49	316	0	55
Future Vol, veh/h	464	116	49	316	0	55
Conflicting Peds, #/hr	0	10	0	0	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	150	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	0	11	0	3
Mvmt Flow	504	126	53	343	0	60

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	514	0	-	524
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.327
Pot Cap-1 Maneuver	-	-	1062	-	0	551
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1052	-	-	541
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	541	-	-	1052	-
HCM Lane V/C Ratio	0.111	-	-	0.051	-
HCM Control Delay (s)	12.5	-	-	8.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	504	15	40	250	115	22
Future Vol, veh/h	504	15	40	250	115	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	175	-	90	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	548	16	43	272	125	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	548	0	907	548
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	359	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1016	-	305	534
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1016	-	292	534
Mov Cap-2 Maneuver	-	-	-	-	292	-
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	674	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	23.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	292	534	-	-	1016	-
HCM Lane V/C Ratio	0.428	0.045	-	-	0.043	-
HCM Control Delay (s)	26.2	12.1	-	-	8.7	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	2	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	439	62	93	250	63	117
Future Vol, veh/h	439	62	93	250	63	117
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	472	67	100	269	68	126

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	540	0	975	506
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	469	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1023	-	278	564
Stage 1	-	-	-	-	603	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1023	-	251	563
Mov Cap-2 Maneuver	-	-	-	-	381	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	567	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	381	563	-	-	1023	-
HCM Lane V/C Ratio	0.178	0.223	-	-	0.098	-
HCM Control Delay (s)	16.5	13.2	-	-	8.9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	0.8	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	145	20	123	140	35	31	136	128	35	123	36
Future Vol, veh/h	32	145	20	123	140	35	31	136	128	35	123	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	34	153	21	129	147	37	33	143	135	37	129	38
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	12.2	12.2	14.1	11.8
HCM LOS	B	B	B	B

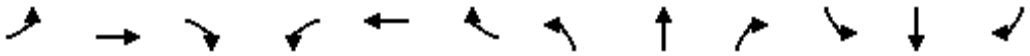
Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	52%	0%	88%	0%	80%	0%	77%
Vol Right, %	0%	48%	0%	12%	0%	20%	0%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	264	32	165	123	175	35	159
LT Vol	31	0	32	0	123	0	35	0
Through Vol	0	136	0	145	0	140	0	123
RT Vol	0	128	0	20	0	35	0	36
Lane Flow Rate	33	278	34	174	129	184	37	167
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.064	0.476	0.067	0.318	0.252	0.325	0.074	0.303
Departure Headway (Hd)	7.015	6.162	7.191	6.595	7.009	6.358	7.193	6.522
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	508	581	495	542	510	562	496	547
Service Time	4.788	3.935	4.977	4.38	4.787	4.136	4.975	4.304
HCM Lane V/C Ratio	0.065	0.478	0.069	0.321	0.253	0.327	0.075	0.305
HCM Control Delay	10.3	14.5	10.5	12.5	12.2	12.2	10.6	12.1
HCM Lane LOS	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.2	2.6	0.2	1.4	1	1.4	0.2	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	18	1	245	44	253	2	10	413	131	186	477
Future Volume (vph)	20	18	1	245	44	253	2	10	413	131	186	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8		9.0	9.0	9.0		5.7	7.9	7.9	5.4	7.9
Lane Util. Factor		1.00		1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95
Frt		1.00		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.98
Flt Protected		0.98		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1664		1626	1712	1455		1619	3195	1429	1597	3131
Flt Permitted		0.98		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1664		1626	1712	1455		1619	3195	1429	1597	3131
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	20	1	266	48	275	2	11	449	142	202	518
RTOR Reduction (vph)	0	1	0	0	0	223	0	0	0	112	0	13
Lane Group Flow (vph)	0	42	0	266	48	52	0	13	449	30	202	584
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	3%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA	Perm	Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	5	2		1	6
Permitted Phases						3				2		
Actuated Green, G (s)		4.8		15.2	15.2	15.2		1.2	16.7	16.7	12.2	27.4
Effective Green, g (s)		4.8		15.2	15.2	15.2		1.2	16.7	16.7	12.2	27.4
Actuated g/C Ratio		0.06		0.19	0.19	0.19		0.01	0.21	0.21	0.15	0.34
Clearance Time (s)		8.8		9.0	9.0	9.0		5.7	7.9	7.9	5.4	7.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		99		308	325	276		24	666	298	243	1072
v/s Ratio Prot		c0.03		c0.16	0.03			0.01	c0.14		c0.13	0.19
v/s Ratio Perm						0.04				0.02		
v/c Ratio		0.42		0.86	0.15	0.19		0.54	0.67	0.10	0.83	0.54
Uniform Delay, d1		36.3		31.4	27.0	27.2		39.1	29.1	25.6	32.9	21.3
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.9		21.3	0.2	0.3		22.7	5.4	0.7	20.8	2.0
Delay (s)		39.2		52.7	27.2	27.6		61.8	34.5	26.2	53.7	23.2
Level of Service		D		D	C	C		E	C	C	D	C
Approach Delay (s)		39.2			38.9				33.2			31.0
Approach LOS		D			D				C			C

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	73
Future Volume (vph)	73
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	79
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	13%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	33	1	118	25	173	6	626	246	301	503	14
Future Volume (vph)	20	33	1	118	25	173	6	626	246	301	503	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8		9.0	9.0	9.0	5.7	7.9	7.9	5.4	7.9	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1677		1626	1712	1455	1597	3195	1429	1597	3181	
Flt Permitted		0.98		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1677		1626	1712	1455	1597	3195	1429	1597	3181	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	35	1	124	26	182	6	659	259	317	529	15
RTOR Reduction (vph)	0	1	0	0	0	165	0	0	186	0	2	0
Lane Group Flow (vph)	0	56	0	124	26	17	6	659	73	317	542	0
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	13%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3			2			
Actuated Green, G (s)		4.3		8.2	8.2	8.2	1.1	24.2	24.2	18.1	40.9	
Effective Green, g (s)		4.3		8.2	8.2	8.2	1.1	24.2	24.2	18.1	40.9	
Actuated g/C Ratio		0.05		0.10	0.10	0.10	0.01	0.28	0.28	0.21	0.48	
Clearance Time (s)		8.8		9.0	9.0	9.0	5.7	7.9	7.9	5.4	7.9	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		83		155	163	138	20	900	402	336	1514	
v/s Ratio Prot		c0.03		c0.08	0.02		0.00	c0.21		c0.20	0.17	
v/s Ratio Perm						0.01			0.05			
v/c Ratio		0.68		0.80	0.16	0.13	0.30	0.73	0.18	0.94	0.36	
Uniform Delay, d1		40.1		38.0	35.7	35.6	42.0	27.9	23.4	33.4	14.2	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		19.6		24.8	0.5	0.4	8.3	3.1	0.2	34.4	0.1	
Delay (s)		59.7		62.8	36.1	36.0	50.3	31.0	23.6	67.8	14.4	
Level of Service		E		E	D	D	D	C	C	E	B	
Approach Delay (s)		59.7			46.0			29.1			34.0	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	31.4
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection: 1: SR 41 & Hanford-Armona Road

Movement	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	T	R	UL	T	T	R	L	T	TR
Maximum Queue (ft)	107	328	63	200	69	220	202	96	231	163	167
Average Queue (ft)	26	156	24	68	16	94	91	39	137	68	74
95th Queue (ft)	66	267	55	138	43	162	156	79	212	127	134
Link Distance (ft)	5154		400			3816	3816			2646	2646
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		250		250	845			500	855		
Storage Blk Time (%)		1									
Queuing Penalty (veh)		4									

Intersection: 2: Driveway 1 & Hanford Armona Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	R	L	T	R
Maximum Queue (ft)	53	53	73	96	67
Average Queue (ft)	6	3	12	4	30
95th Queue (ft)	32	25	42	34	59
Link Distance (ft)	400	400		218	239
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			150		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Driveway 2 & Hanford Armona Road

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	53	131	44
Average Queue (ft)	5	39	17
95th Queue (ft)	26	82	36
Link Distance (ft)			334
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	175	90	
Storage Blk Time (%)		1	
Queuing Penalty (veh)		0	

Intersection: 4: 19th Avenue & Hanford Armona Road

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	52	53	101	79
Average Queue (ft)	6	28	38	41
95th Queue (ft)	26	54	72	66
Link Distance (ft)	1853			1729
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		245	245	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	54	116	77	115	54	92	73	97
Average Queue (ft)	22	62	45	52	20	52	25	57
95th Queue (ft)	53	104	73	79	47	77	58	87
Link Distance (ft)		2549		3232		1711		981
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)		1		0		0	0	1
Queuing Penalty (veh)		0		0		0	0	0

Network Summary

Network wide Queuing Penalty: 6

Intersection: 1: SR 41 & Hanford-Armona Road

Movement	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	T	R	UL	T	T	R	L	T	TR
Maximum Queue (ft)	96	135	81	129	21	295	300	97	536	136	177
Average Queue (ft)	42	63	20	50	1	148	142	61	221	53	55
95th Queue (ft)	91	118	53	95	10	231	227	92	423	114	125
Link Distance (ft)	5154		398			3816	3816			2646	2646
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		250		250	845			500	855		
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Driveway 1 & Hanford Armona Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	R	L	T	R
Maximum Queue (ft)	109	41	50	51	53
Average Queue (ft)	7	1	20	3	29
95th Queue (ft)	50	13	46	20	53
Link Distance (ft)	398	398		220	239
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			150		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Driveway 2 & Hanford Armona Road

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	50	96	56
Average Queue (ft)	15	46	14
95th Queue (ft)	41	80	36
Link Distance (ft)			333
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	175	90	
Storage Blk Time (%)		1	
Queuing Penalty (veh)		0	

Intersection: 4: 19th Avenue & Hanford Armona Road

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	68	96	116	72
Average Queue (ft)	2	29	38	42
95th Queue (ft)	22	68	70	67
Link Distance (ft)	1853			1729
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		245	245	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	53	110	92	72	52	155	52	99
Average Queue (ft)	21	53	43	43	22	63	24	46
95th Queue (ft)	47	84	71	64	46	104	50	77
Link Distance (ft)		2549		3232		1711		981
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)		0	0			1		0
Queuing Penalty (veh)		0	0			0		0

Network Summary

Network wide Queuing Penalty: 1

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018
Segment: SR 41 Hanford Armona RD (North Leg NB AM) Prepared By: AM
Scenario: Existing Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	686
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12
See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	415.41

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 6.92

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg NB PM) Prepared By: AM

Scenario: Existing Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	819
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	495.95

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 8.27

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg SB AM) Prepared By: AM

Scenario: Existing Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	736
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	445.69

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 7.43

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway
Segment: SR 41 Hanford Armona RD (North Leg SB PM)
Scenario: Existing Plus Project

Date: 4/2/2018
Prepared By: AM
Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	818
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12
See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	495.34

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 8.26

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (South Leg NB AM) Prepared By: AM

Scenario: Existing Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	556
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	336.69

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 5.61 $\frac{V_p}{S}$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (South Leg NB PM) Prepared By: AM

Scenario: Existing Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	878
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	531.68

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 8.86

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (South Leg SB AM) Prepared By: AM

Scenario: Existing Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	725
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	439.03

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 7.32

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 2/2/2018

Segment: SR 41 Hanford Armona RD (South Leg SB PM) Prepared By: AM

Scenario: Existing Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	622
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

(V_p):	376.66

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Density (pc/mi/ln): 6.28 $\frac{V_p}{S}$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Appendix G: Cumulative Year 2040 plus Project Traffic Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	31	27	2	349	67	362	3	16	644	170	256	744
Future Volume (vph)	31	27	2	349	67	362	3	16	644	170	256	744
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0			5.7	7.9	7.9	5.4	7.9
Lane Util. Factor		1.00			1.00			1.00	0.95	1.00	1.00	0.95
Frt		1.00			0.94			1.00	1.00	0.85	1.00	0.98
Flt Protected		0.97			0.98			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1661			1569			1619	3195	1429	1597	3131
Flt Permitted		0.97			0.98			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1661			1569			1619	3195	1429	1597	3131
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	29	2	379	73	393	3	17	700	185	278	809
RTOR Reduction (vph)	0	1	0	0	17	0	0	0	0	147	0	7
Lane Group Flow (vph)	0	64	0	0	828	0	0	20	700	38	278	926
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	3%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	5	2		1	6
Permitted Phases										2		
Actuated Green, G (s)		8.0			77.0			3.7	37.3	37.3	26.6	59.9
Effective Green, g (s)		8.0			77.0			3.7	37.3	37.3	26.6	59.9
Actuated g/C Ratio		0.04			0.43			0.02	0.21	0.21	0.15	0.33
Clearance Time (s)		8.8			9.0			5.7	7.9	7.9	5.4	7.9
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		73			671			33	662	296	236	1041
v/s Ratio Prot		c0.04			c0.53			0.01	c0.22		c0.17	0.30
v/s Ratio Perm										0.03		
v/c Ratio		0.88			1.23			0.61	1.06	0.13	1.18	0.89
Uniform Delay, d1		85.5			51.5			87.4	71.3	58.1	76.7	56.9
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		64.4			117.8			27.6	51.1	0.9	115.2	11.4
Delay (s)		150.0			169.3			115.0	122.5	59.0	191.9	68.3
Level of Service		F			F			F	F	E	F	E
Approach Delay (s)		150.0			169.3				109.3			96.7
Approach LOS		F			F				F			F

Intersection Summary			
HCM 2000 Control Delay	121.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	114
Future Volume (vph)	114
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	124
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	13%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	334	119	51	778	0	53
Future Vol, veh/h	334	119	51	778	0	53
Conflicting Peds, #/hr	0	10	0	0	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	150	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	0	11	0	3
Mvmt Flow	363	129	55	846	0	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	373	0	-	383
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.327
Pot Cap-1 Maneuver	-	-	1197	-	0	662
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1186	-	-	649
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	649	-	-	1186	-
HCM Lane V/C Ratio	0.089	-	-	0.047	-
HCM Control Delay (s)	11.1	-	-	8.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	382	5	25	709	120	30
Future Vol, veh/h	382	5	25	709	120	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	175	-	90	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	415	5	27	771	130	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	415	0	1240	415
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	825	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1139	-	193	635
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	429	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1139	-	188	635
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	419	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	49.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	188	635	-	-	1139	-
HCM Lane V/C Ratio	0.694	0.051	-	-	0.024	-
HCM Control Delay (s)	58.8	11	-	-	8.2	-
HCM Lane LOS	F	B	-	-	A	-
HCM 95th %tile Q(veh)	4.3	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	412	94	134	537	77	175
Future Vol, veh/h	412	94	134	537	77	175
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	448	102	146	584	84	190

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	551	0	1375	500
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	875	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1014	-	159	569
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	406	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1014	-	136	568
Mov Cap-2 Maneuver	-	-	-	-	257	-
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	348	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	17.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	257	568	-	-	1014	-
HCM Lane V/C Ratio	0.326	0.335	-	-	0.144	-
HCM Control Delay (s)	25.6	14.5	-	-	9.1	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	1.4	1.5	-	-	0.5	-

Intersection	
Intersection Delay, s/veh	53.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	240	72	214	270	63	48	144	246	60	227	61
Future Vol, veh/h	65	240	72	214	270	63	48	144	246	60	227	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	71	261	78	233	293	68	52	157	267	65	247	66
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	44.6	45.8	81.6	38.4
HCM LOS	E	E	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	37%	0%	77%	0%	81%	0%	79%
Vol Right, %	0%	63%	0%	23%	0%	19%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	390	65	312	214	333	60	288
LT Vol	48	0	65	0	214	0	60	0
Through Vol	0	144	0	240	0	270	0	227
RT Vol	0	246	0	72	0	63	0	61
Lane Flow Rate	52	424	71	339	233	362	65	313
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.144	1.052	0.194	0.868	0.625	0.909	0.181	0.812
Departure Headway (Hd)	9.924	8.938	10.302	9.606	10.099	9.435	10.393	9.71
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	360	407	350	380	361	387	348	376
Service Time	7.721	6.734	8.002	7.306	7.799	7.135	8.093	7.41
HCM Lane V/C Ratio	0.144	1.042	0.203	0.892	0.645	0.935	0.187	0.832
HCM Control Delay	14.4	89.9	15.5	50.7	28.2	57.1	15.4	43.2
HCM Lane LOS	B	F	C	F	D	F	C	E
HCM 95th-tile Q	0.5	13.9	0.7	8.4	4	9.4	0.7	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	50	2	153	38	237	9	976	348	433	784	22
Future Volume (vph)	31	50	2	153	38	237	9	976	348	433	784	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.8			9.0		5.7	7.9	7.9	5.4	7.9	
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	
Frt		1.00			0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1675			1556		1597	3195	1429	1597	3182	
Flt Permitted		0.98			0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1675			1556		1597	3195	1429	1597	3182	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	33	53	2	161	40	249	9	1027	366	456	825	23
RTOR Reduction (vph)	0	1	0	0	26	0	0	0	256	0	1	0
Lane Group Flow (vph)	0	87	0	0	424	0	9	1027	110	456	847	0
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	13%	13%	13%	13%	13%	13%
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		8.2			38.0		2.4	51.1	51.1	41.6	90.0	
Effective Green, g (s)		8.2			38.0		2.4	51.1	51.1	41.6	90.0	
Actuated g/C Ratio		0.05			0.22		0.01	0.30	0.30	0.24	0.53	
Clearance Time (s)		8.8			9.0		5.7	7.9	7.9	5.4	7.9	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		80			347		22	960	429	390	1684	
v/s Ratio Prot		c0.05			c0.27		0.01	c0.32		c0.29	0.27	
v/s Ratio Perm									0.08			
v/c Ratio		1.09			1.22		0.41	1.07	0.26	1.17	0.50	
Uniform Delay, d1		80.9			66.0		83.1	59.5	45.1	64.2	25.7	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		126.6			122.6		11.9	49.6	1.4	100.4	1.1	
Delay (s)		207.5			188.6		95.0	109.1	46.5	164.6	26.7	
Level of Service		F			F		F	F	D	F	C	
Approach Delay (s)		207.5			188.6			92.6			74.9	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	101.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	715	116	49	428	0	55
Future Vol, veh/h	715	116	49	428	0	55
Conflicting Peds, #/hr	0	10	0	0	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	150	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	0	11	0	3
Mvmt Flow	777	126	53	465	0	60

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	787	0	-	797
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.327
Pot Cap-1 Maneuver	-	-	841	-	0	385
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	833	-	-	378
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	378	-	-	833	-
HCM Lane V/C Ratio	0.158	-	-	0.064	-
HCM Control Delay (s)	16.3	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.2	-

Intersection	
Int Delay, s/veh	6.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	755	15	40	362	115	22
Future Vol, veh/h	755	15	40	362	115	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	175	-	90	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	821	16	43	393	125	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	821	0	1301	821
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	480	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	804	-	177	373
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	620	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	804	-	168	373
Mov Cap-2 Maneuver	-	-	-	-	168	-
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	62.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	168	373	-	-	804	-
HCM Lane V/C Ratio	0.744	0.064	-	-	0.054	-
HCM Control Delay (s)	71.3	15.3	-	-	9.7	-
HCM Lane LOS	F	C	-	-	A	-
HCM 95th %tile Q(veh)	4.7	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	658	82	145	360	81	182
Future Vol, veh/h	658	82	145	360	81	182
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	708	88	156	387	87	196

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	797	0	1452	753
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	699	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	821	-	143	408
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	821	-	116	408
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	398	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	23.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	248	408	-	-	821	-
HCM Lane V/C Ratio	0.351	0.48	-	-	0.19	-
HCM Control Delay (s)	27.2	21.7	-	-	10.4	-
HCM Lane LOS	D	C	-	-	B	-
HCM 95th %tile Q(veh)	1.5	2.5	-	-	0.7	-

Intersection	
Intersection Delay, s/veh	33.4
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	224	31	192	214	50	47	208	200	49	188	52
Future Vol, veh/h	46	224	31	192	214	50	47	208	200	49	188	52
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	48	236	33	202	225	53	49	219	211	52	198	55
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	24.7	23.7	55.7	22.5
HCM LOS	C	C	F	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	51%	0%	88%	0%	81%	0%	78%
Vol Right, %	0%	49%	0%	12%	0%	19%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	408	46	255	192	264	49	240
LT Vol	47	0	46	0	192	0	49	0
Through Vol	0	208	0	224	0	214	0	188
RT Vol	0	200	0	31	0	50	0	52
Lane Flow Rate	49	429	48	268	202	278	52	253
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.122	0.956	0.126	0.654	0.51	0.651	0.135	0.611
Departure Headway (Hd)	8.891	8.017	9.378	8.768	9.091	8.434	9.388	8.708
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	403	451	382	411	396	428	382	414
Service Time	6.647	5.773	7.141	6.531	6.856	6.198	7.153	6.473
HCM Lane V/C Ratio	0.122	0.951	0.126	0.652	0.51	0.65	0.136	0.611
HCM Control Delay	12.9	60.6	13.5	26.7	21	25.7	13.6	24.3
HCM Lane LOS	B	F	B	D	C	D	B	C
HCM 95th-tile Q	0.4	11.5	0.4	4.5	2.8	4.5	0.5	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	31	27	2	349	67	362	3	16	644	170	256	744
Future Volume (vph)	31	27	2	349	67	362	3	16	644	170	256	744
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.5		7.9	7.5	5.7		5.7	7.9	7.9	5.7	7.9
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00		1.00	0.95	1.00	0.97	0.95
Frt	1.00	0.99		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.98
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1626	1695		3155	1712	1455		1619	3195	1429	3099	3131
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1626	1695		3155	1712	1455		1619	3195	1429	3099	3131
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	29	2	379	73	393	3	17	700	185	278	809
RTOR Reduction (vph)	0	2	0	0	0	164	0	0	0	105	0	13
Lane Group Flow (vph)	34	29	0	379	73	229	0	20	700	80	278	920
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	3%	13%	13%	13%	13%	13%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	5	2	3	1	6
Permitted Phases						8				2		
Actuated Green, G (s)	3.2	3.2		11.9	14.1	27.4		2.4	22.6	34.5	13.3	33.5
Effective Green, g (s)	3.2	3.2		11.9	14.1	27.4		2.4	22.6	34.5	13.3	33.5
Actuated g/C Ratio	0.04	0.04		0.15	0.18	0.34		0.03	0.28	0.43	0.17	0.42
Clearance Time (s)	5.7	7.5		7.9	7.5	5.7		5.7	7.9	7.9	5.7	7.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	65	67		469	301	498		48	902	616	515	1311
v/s Ratio Prot	0.02	0.02		c0.12	0.04	c0.08		0.01	c0.22	0.02	0.09	c0.29
v/s Ratio Perm						0.08				0.04		
v/c Ratio	0.52	0.43		0.81	0.24	0.46		0.42	0.78	0.13	0.54	0.70
Uniform Delay, d1	37.7	37.5		32.9	28.4	20.5		38.1	26.4	13.7	30.5	19.1
Progression Factor	1.00	1.00		0.98	0.89	0.96		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.4	4.5		8.4	0.4	0.6		5.8	6.5	0.1	1.1	3.2
Delay (s)	45.1	42.0		40.7	25.7	20.3		43.9	32.9	13.8	31.6	22.3
Level of Service	D	D		D	C	C		D	C	B	C	C
Approach Delay (s)		43.6			29.9				29.2			24.4
Approach LOS		D			C				C			C

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	114
Future Volume (vph)	114
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	124
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	13%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	382	5	25	709	120	30
Future Volume (veh/h)	382	5	25	709	120	30
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1713	1900	1845	1712	1845	1845
Adj Flow Rate, veh/h	415	5	27	771	130	33
Adj No. of Lanes	2	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	11	11	3	11	3	3
Cap, veh/h	2296	28	50	1332	171	152
Arrive On Green	1.00	1.00	0.03	0.78	0.10	0.10
Sat Flow, veh/h	3379	40	1757	1712	1757	1568
Grp Volume(v), veh/h	205	215	27	771	130	33
Grp Sat Flow(s),veh/h/ln	1628	1706	1757	1712	1757	1568
Q Serve(g_s), s	0.0	0.0	1.2	14.6	5.8	1.6
Cycle Q Clear(g_c), s	0.0	0.0	1.2	14.6	5.8	1.6
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1135	1189	50	1332	171	152
V/C Ratio(X)	0.18	0.18	0.55	0.58	0.76	0.22
Avail Cap(c_a), veh/h	1135	1189	123	1332	303	270
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	38.4	3.6	35.2	33.3
Incr Delay (d2), s/veh	0.3	0.3	9.0	1.8	6.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.7	7.3	3.1	0.7
LnGrp Delay(d),s/veh	0.3	0.3	47.4	5.4	42.1	34.0
LnGrp LOS	A	A	D	A	D	C
Approach Vol, veh/h	420			798	163	
Approach Delay, s/veh	0.3			6.8	40.5	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		12.0	6.5	61.6				68.0
Change Period (Y+Rc), s		* 4.2	* 4.2	5.8				5.8
Max Green Setting (Gmax), s		* 14	* 5.6	46.4				56.2
Max Q Clear Time (g_c+I1), s		7.8	3.2	2.0				16.6
Green Ext Time (p_c), s		0.2	0.0	9.6				9.4

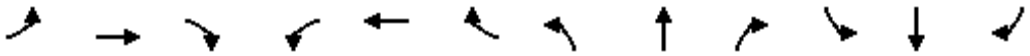
Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	240	72	214	270	63	48	144	246	60	227	61
Future Volume (veh/h)	65	240	72	214	270	63	48	144	246	60	227	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1918	1900	1845	1918	1900	1845	1918	1900	1845	1845	1900
Adj Flow Rate, veh/h	71	261	78	233	293	68	52	157	267	65	247	66
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	93	362	108	236	507	118	80	193	329	90	434	116
Arrive On Green	0.05	0.26	0.26	0.13	0.34	0.34	0.05	0.30	0.30	0.05	0.31	0.31
Sat Flow, veh/h	1757	1416	423	1757	1505	349	1757	637	1082	1757	1401	374
Grp Volume(v), veh/h	71	0	339	233	0	361	52	0	424	65	0	313
Grp Sat Flow(s),veh/h/ln	1757	0	1839	1757	0	1854	1757	0	1719	1757	0	1776
Q Serve(g_s), s	2.8	0.0	11.9	9.4	0.0	11.3	2.1	0.0	16.1	2.6	0.0	10.4
Cycle Q Clear(g_c), s	2.8	0.0	11.9	9.4	0.0	11.3	2.1	0.0	16.1	2.6	0.0	10.4
Prop In Lane	1.00		0.23	1.00		0.19	1.00		0.63	1.00		0.21
Lane Grp Cap(c), veh/h	93	0	471	236	0	625	80	0	522	90	0	550
V/C Ratio(X)	0.76	0.00	0.72	0.99	0.00	0.58	0.65	0.00	0.81	0.73	0.00	0.57
Avail Cap(c_a), veh/h	154	0	674	236	0	766	124	0	647	124	0	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	0.0	24.0	30.5	0.0	19.3	33.2	0.0	22.7	33.0	0.0	20.4
Incr Delay (d2), s/veh	11.9	0.0	2.1	54.6	0.0	0.8	8.8	0.0	6.4	12.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	6.3	8.0	0.0	6.0	1.2	0.0	8.5	1.5	0.0	5.3
LnGrp Delay(d),s/veh	44.9	0.0	26.1	85.1	0.0	20.1	41.9	0.0	29.1	45.2	0.0	21.4
LnGrp LOS	D		C	F		C	D		C	D		C
Approach Vol, veh/h		410			594			476			378	
Approach Delay, s/veh		29.4			45.6			30.5			25.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	26.0	14.0	22.6	7.7	26.4	8.3	28.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	26.6	9.5	25.9	5.0	26.6	6.2	29.2
Max Q Clear Time (g_c+I1), s	4.6	18.1	11.4	13.9	4.1	12.4	4.8	13.3
Green Ext Time (p_c), s	0.0	3.0	0.0	3.4	0.0	4.0	0.0	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.0
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	50	2	153	38	237	9	976	348	433	784	22
Future Volume (vph)	31	50	2	153	38	237	9	976	348	433	784	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.5		7.9	7.5	5.7	5.7	7.9	7.9	5.7	7.9	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1626	1702		3155	1712	1455	1597	3195	1429	3099	3182	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1626	1702		3155	1712	1455	1597	3195	1429	3099	3182	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	33	53	2	161	40	249	9	1027	366	456	825	23
RTOR Reduction (vph)	0	1	0	0	0	117	0	0	104	0	2	0
Lane Group Flow (vph)	33	54	0	161	40	132	9	1027	262	456	846	0
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	13%	13%	13%	13%	13%	13%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	4.8	7.2		8.2	12.8	34.5	1.2	33.9	42.1	21.7	54.4	
Effective Green, g (s)	4.8	7.2		8.2	12.8	34.5	1.2	33.9	42.1	21.7	54.4	
Actuated g/C Ratio	0.05	0.07		0.08	0.13	0.34	0.01	0.34	0.42	0.22	0.54	
Clearance Time (s)	5.7	7.5		7.9	7.5	5.7	5.7	7.9	7.9	5.7	7.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	78	122		258	219	501	19	1083	601	672	1731	
v/s Ratio Prot	0.02	c0.03		c0.05	0.02	c0.06	0.01	c0.32	0.04	c0.15	0.27	
v/s Ratio Perm						0.03			0.15			
v/c Ratio	0.42	0.44		0.62	0.18	0.26	0.47	0.95	0.44	0.68	0.49	
Uniform Delay, d1	46.3	44.5		44.4	38.9	23.6	49.1	32.2	20.5	35.9	14.2	
Progression Factor	1.00	1.00		0.96	0.97	1.22	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.7	2.6		4.4	0.4	0.3	17.5	17.4	0.5	2.7	1.0	
Delay (s)	49.9	47.0		47.1	38.3	29.1	66.6	49.6	21.0	38.7	15.2	
Level of Service	D	D		D	D	C	E	D	C	D	B	
Approach Delay (s)		48.1			36.4			42.3			23.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	755	15	40	362	115	22
Future Volume (veh/h)	755	15	40	362	115	22
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1714	1900	1845	1712	1845	1845
Adj Flow Rate, veh/h	821	16	43	393	125	24
Adj No. of Lanes	2	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	11	11	3	11	3	3
Cap, veh/h	1087	21	445	1202	171	153
Arrive On Green	0.22	0.22	0.25	0.70	0.10	0.10
Sat Flow, veh/h	3352	64	1757	1712	1757	1568
Grp Volume(v), veh/h	409	428	43	393	125	24
Grp Sat Flow(s),veh/h/ln	1628	1702	1757	1712	1757	1568
Q Serve(g_s), s	11.7	11.7	0.9	4.4	3.5	0.7
Cycle Q Clear(g_c), s	11.7	11.7	0.9	4.4	3.5	0.7
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	542	567	445	1202	171	153
V/C Ratio(X)	0.75	0.75	0.10	0.33	0.73	0.16
Avail Cap(c_a), veh/h	677	708	445	1202	330	295
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	17.5	14.3	2.9	21.9	20.7
Incr Delay (d2), s/veh	9.4	9.0	0.1	0.7	5.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	6.9	0.5	2.3	1.9	0.3
LnGrp Delay(d),s/veh	26.9	26.6	14.4	3.6	27.7	21.1
LnGrp LOS	C	C	B	A	C	C
Approach Vol, veh/h	837			436	149	
Approach Delay, s/veh	26.7			4.7	26.7	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.1	18.5	22.4				40.9
Change Period (Y+Rc), s		* 4.2	5.8	* 5.8				5.8
Max Green Setting (Gmax), s		* 9.4	5.6	* 21				30.6
Max Q Clear Time (g_c+I1), s		5.5	2.9	13.7				6.4
Green Ext Time (p_c), s		0.1	0.6	2.9				2.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	224	31	192	214	50	47	208	200	49	188	52
Future Volume (veh/h)	46	224	31	192	214	50	47	208	200	49	188	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1918	1900	1845	1918	1900	1845	1918	1900	1845	1845	1900
Adj Flow Rate, veh/h	48	236	33	202	225	53	49	219	211	52	198	55
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	79	367	51	245	477	112	80	277	267	83	432	120
Arrive On Green	0.04	0.22	0.22	0.14	0.32	0.32	0.05	0.31	0.31	0.05	0.31	0.31
Sat Flow, veh/h	1757	1645	230	1757	1500	353	1757	896	863	1757	1388	386
Grp Volume(v), veh/h	48	0	269	202	0	278	49	0	430	52	0	253
Grp Sat Flow(s),veh/h/ln	1757	0	1875	1757	0	1853	1757	0	1759	1757	0	1774
Q Serve(g_s), s	1.7	0.0	8.3	7.2	0.0	7.7	1.8	0.0	14.3	1.9	0.0	7.3
Cycle Q Clear(g_c), s	1.7	0.0	8.3	7.2	0.0	7.7	1.8	0.0	14.3	1.9	0.0	7.3
Prop In Lane	1.00		0.12	1.00		0.19	1.00		0.49	1.00		0.22
Lane Grp Cap(c), veh/h	79	0	418	245	0	589	80	0	544	83	0	552
V/C Ratio(X)	0.61	0.00	0.64	0.82	0.00	0.47	0.61	0.00	0.79	0.63	0.00	0.46
Avail Cap(c_a), veh/h	181	0	758	269	0	841	181	0	722	137	0	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	22.6	26.8	0.0	17.5	30.0	0.0	20.2	30.0	0.0	17.7
Incr Delay (d2), s/veh	7.4	0.0	1.7	17.2	0.0	0.6	7.4	0.0	4.4	7.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.5	4.7	0.0	4.0	1.0	0.0	7.6	1.1	0.0	3.7
LnGrp Delay(d),s/veh	37.5	0.0	24.2	44.0	0.0	18.1	37.5	0.0	24.6	37.6	0.0	18.3
LnGrp LOS	D		C	D		B	D		C	D		B
Approach Vol, veh/h		317			480			479			305	
Approach Delay, s/veh		26.2			29.0			25.9			21.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	24.3	13.4	18.8	7.4	24.4	7.4	24.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	26.3	9.8	25.9	6.6	24.7	6.6	29.1
Max Q Clear Time (g_c+I1), s	3.9	16.3	9.2	10.3	3.8	9.3	3.7	9.7
Green Ext Time (p_c), s	0.0	3.0	0.0	2.9	0.0	3.8	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Intersection: 1: SR 41 & Hanford-Armona Road

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	L	T	R	UL	T	T	R	L	L
Maximum Queue (ft)	117	101	224	211	190	223	53	226	248	91	131	226
Average Queue (ft)	25	33	109	122	55	84	12	143	140	33	73	76
95th Queue (ft)	75	74	175	190	111	169	37	218	222	69	122	147
Link Distance (ft)		5154			383			3811	3811			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250		250	250		250	845			500	855	855
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SR 41 & Hanford-Armona Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	194	205
Average Queue (ft)	101	94
95th Queue (ft)	175	172
Link Distance (ft)	2639	2639
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Driveway 1 & Hanford Armona Road

Movement	EB	EB	EB	WB	WB	NB
Directions Served	T	T	R	L	T	R
Maximum Queue (ft)	31	453	21	53	55	22
Average Queue (ft)	1	15	1	12	5	19
95th Queue (ft)	10	149	7	39	26	32
Link Distance (ft)	383	383			236	165
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			150	150		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Driveway 2 & Hanford Armona Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	178	128	94	246	170	109
Average Queue (ft)	72	20	22	90	62	21
95th Queue (ft)	150	82	58	193	121	62
Link Distance (ft)	236	236		883		334
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			175		90	
Storage Blk Time (%)				1	3	0
Queuing Penalty (veh)				0	1	0

Intersection: 4: 19th Avenue & Hanford Armona Road

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	22	74	136	98
Average Queue (ft)	2	32	54	49
95th Queue (ft)	13	63	94	79
Link Distance (ft)	922			1729
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		245	245	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	154	241	200	425	113	250	168	202
Average Queue (ft)	58	118	160	246	39	127	43	101
95th Queue (ft)	122	188	243	418	81	210	102	171
Link Distance (ft)		2549		3232		1711		981
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)	1	15	56	14	1	18	3	11
Queuing Penalty (veh)	4	10	187	30	2	9	8	7

Network Summary

Network wide Queuing Penalty: 257

Intersection: 1: SR 41 & Hanford-Armona Road

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	L	T	R	UL	T	T	R	L	L
Maximum Queue (ft)	121	105	74	111	86	172	45	392	323	171	231	212
Average Queue (ft)	36	41	40	61	25	88	7	221	219	83	129	109
95th Queue (ft)	88	94	73	99	65	151	27	323	315	152	206	179
Link Distance (ft)		5154			383			3811	3811			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250		250	250		250	845			500	855	855
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SR 41 & Hanford-Armona Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	149	146
Average Queue (ft)	76	73
95th Queue (ft)	142	141
Link Distance (ft)	2639	2639
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Driveway 1 & Hanford Armona Road

Movement	EB	EB	EB	WB	WB	NB
Directions Served	T	T	R	L	T	R
Maximum Queue (ft)	73	31	30	87	50	68
Average Queue (ft)	5	2	1	20	2	23
95th Queue (ft)	32	15	10	55	16	50
Link Distance (ft)	383	383			236	165
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			150	150		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Driveway 2 & Hanford Armona Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	243	161	74	119	101	65
Average Queue (ft)	138	50	32	39	57	16
95th Queue (ft)	241	131	66	96	89	44
Link Distance (ft)	236	236		882		334
Upstream Blk Time (%)	1					
Queuing Penalty (veh)	2					
Storage Bay Dist (ft)			175		90	
Storage Blk Time (%)					2	
Queuing Penalty (veh)					0	

Intersection: 4: 19th Avenue & Hanford Armona Road

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	51	164	96	118
Average Queue (ft)	3	65	49	57
95th Queue (ft)	20	125	85	91
Link Distance (ft)	923			1729
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		245	245	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	154	180	199	217	159	504	72	189
Average Queue (ft)	38	121	107	115	38	162	33	87
95th Queue (ft)	84	178	186	202	100	334	63	148
Link Distance (ft)		2549		3232		1711		981
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)		15	14	6		22	0	9
Queuing Penalty (veh)		7	37	12		11	1	4

Network Summary

Network wide Queuing Penalty: 74

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg NB AM) Prepared By: AM

Scenario: Cumulative Year 2040 plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	1037
PHF:	0.90
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	627.96

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 10.47

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg NB PM) Prepared By: AM

Scenario: Cumulative Year 2040 Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	1244
PHF:	0.90
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	753.31

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 12.56

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg SB AM) Prepared By: AM

Scenario: Cumulative Year 2040 Plus Project Checked By: JLB

Demand Flow Rate (V_p)		
Volume (V):	1114	
PHF:	0.9	
# Lanes in each Direction (N):	2	
Driver Population Type (f_p):	1.0	
Heavy Vehicle Factor (f_{HV})		
Truck Percentage (P_T):	18.00%	
RV Percentage (P_R):	0.00%	
PCE Truck (E_T):	1.5	See Exhibit 14-12
PCE RV (E_r):	0	See Exhibit 14-12
(f_{HV}):	0.92	

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	674.59

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 11.24

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (North Leg SB PM) Prepared By: AM

Scenario: Cumulative Year 2040 Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	1239
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	750.28

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 12.50

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (South Leg NB AM) Prepared By: AM

Scenario: Cumulative Year 2040 Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	833
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	504.43

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 8.41

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (South Leg NB PM) Prepared By: AM

Scenario: Cumulative Year 2040 Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	1333
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	807.21

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 13.45

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 4/2/2018

Segment: SR 41 Hanford Armona RD (South Leg SB AM) Prepared By: AM

Scenario: Cumulative Year 2040 Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	1098
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	664.90

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 11.08

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions

Multilane Highway Date: 2/2/2018

Segment: SR 41 Hanford Armona RD (South Leg SB PM) Prepared By: AM

Scenario: Cumulative Year 2040 Plus Project Checked By: JLB

Demand Flow Rate (V_p)	
Volume (V):	939
PHF:	0.9
# Lanes in each Direction (N):	2
Driver Population Type (f_p):	1.0
Heavy Vehicle Factor (f_{HV})	
Truck Percentage (P_T):	18.00%
RV Percentage (P_R):	0.00%
PCE Truck (E_T):	1.5
PCE RV (E_r):	0
(f_{HV}):	0.92

See Exhibit 14-12

See Exhibit 14-12

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$$

(V_p):	568.62

$$V_p = \frac{V}{PHF \cdot N \cdot f_{HV} \cdot f_\rho}$$

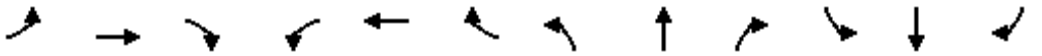
Capacity (S)	
Free Flow Speed (FFS)	
BFFS	60
f_{LW}:	0
f_{LC}:	0
f_M:	0
f_A:	0
FFS	60
S:	60

Density (pc/mi/ln): 9.48

$$\frac{V_p}{S}$$

LOS TABLE Exhibit 11-5		
LOS	FFS(mi/h)	Density (pc/mi/ln)
A	All	> 0-11
B	All	> 11-18
C	All	> 18-26
D	All	> 26-35
E	60	> 35-40
	55	> 35-41
	50	> 35-43
	45	> 35-45
F	60	> 40
	55	> 41
	50	> 43
	45	> 45

Appendix H: Cumulative Year 2040 plus Project plus Partial Type L-9 Interchange Traffic Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	58	2	0	84	351	0	0	0	256	0	114
Future Volume (vph)	0	58	2	0	84	351	0	0	0	256	0	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		5.8	5.8				4.2	4.6	
Lane Util. Factor		0.95	1.00		0.95	1.00				0.95	0.95	
Frt		1.00	0.85		1.00	0.85				1.00	0.90	
Flt Protected		1.00	1.00		1.00	1.00				0.95	0.98	
Satd. Flow (prot)		3252	1455		3252	1455				1517	1419	
Flt Permitted		1.00	1.00		1.00	1.00				0.95	0.98	
Satd. Flow (perm)		3252	1455		3252	1455				1517	1419	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	63	2	0	91	382	0	0	0	278	0	124
RTOR Reduction (vph)	0	0	1	0	0	217	0	0	0	0	93	0
Lane Group Flow (vph)	0	63	1	0	91	165	0	0	0	208	101	0
Heavy Vehicles (%)	0%	11%	11%	0%	11%	11%	0%	0%	0%	13%	0%	13%
Turn Type		NA	Perm		NA	Perm				Prot	NA	
Protected Phases		4			8					1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		13.4	13.4		13.4	13.4				7.7	7.7	
Effective Green, g (s)		13.4	13.4		13.4	13.4				7.7	7.7	
Actuated g/C Ratio		0.43	0.43		0.43	0.43				0.25	0.25	
Clearance Time (s)		5.8	5.8		5.8	5.8				4.2	4.6	
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)		1401	626		1401	626				375	351	
v/s Ratio Prot		0.02			0.03					c0.14	0.07	
v/s Ratio Perm			0.00			c0.11						
v/c Ratio		0.04	0.00		0.06	0.26				0.55	0.29	
Uniform Delay, d1		5.1	5.0		5.2	5.7				10.2	9.5	
Progression Factor		1.00	1.00		1.00	1.00				1.00	1.00	
Incremental Delay, d2		0.0	0.0		0.0	0.2				1.8	0.5	
Delay (s)		5.1	5.0		5.2	5.9				12.0	9.9	
Level of Service		A	A		A	A				B	A	
Approach Delay (s)		5.1			5.8			0.0			11.0	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	31.1	Sum of lost time (s)	10.4
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	283	31	362	416	19	170
Future Volume (vph)	283	31	362	416	19	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	4.6	5.8	4.6	4.6
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	0.95
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	0.88	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.99	1.00
Satd. Flow (prot)	3252	1408	1626	3252	1465	1358
Flt Permitted	1.00	1.00	0.95	1.00	0.99	1.00
Satd. Flow (perm)	3252	1408	1626	3252	1465	1358
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	308	34	393	452	21	185
RTOR Reduction (vph)	0	25	0	0	76	93
Lane Group Flow (vph)	308	9	393	452	28	9
Confl. Peds. (#/hr)		10				
Heavy Vehicles (%)	11%	11%	11%	11%	13%	13%
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	11.7	11.7	15.6	31.9	4.0	4.0
Effective Green, g (s)	11.7	11.7	15.6	31.9	4.0	4.0
Actuated g/C Ratio	0.25	0.25	0.34	0.69	0.09	0.09
Clearance Time (s)	5.8	5.8	4.6	5.8	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	821	355	547	2240	126	117
v/s Ratio Prot	c0.09		c0.24	0.14	c0.02	
v/s Ratio Perm		0.01				0.01
v/c Ratio	0.38	0.02	0.72	0.20	0.22	0.08
Uniform Delay, d1	14.3	13.0	13.4	2.6	19.7	19.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	4.5	0.0	0.9	0.3
Delay (s)	14.6	13.0	17.9	2.6	20.6	19.7
Level of Service	B	B	B	A	C	B
Approach Delay (s)	14.4			9.8	20.2	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	334	119	51	778	0	53
Future Vol, veh/h	334	119	51	778	0	53
Conflicting Peds, #/hr	0	10	0	0	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	150	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	0	11	0	3
Mvmt Flow	363	129	55	846	0	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	502	0	-	202
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.3285
Pot Cap-1 Maneuver	-	-	1073	-	0	803
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1063	-	-	788
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	788	-	-	1063	-
HCM Lane V/C Ratio	0.073	-	-	0.052	-
HCM Control Delay (s)	9.9	-	-	8.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	382	5	25	709	120	30
Future Vol, veh/h	382	5	25	709	120	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	90	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	415	5	27	771	130	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	420	0	1243	210
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	825	-
Critical Hdwy	-	-	4.145	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	1131	-	178	794
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	427	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1131	-	174	794
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	427	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	58
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	174	794	-	-	1131	-
HCM Lane V/C Ratio	0.75	0.041	-	-	0.024	-
HCM Control Delay (s)	70.1	9.7	-	-	8.3	-
HCM Lane LOS	F	A	-	-	A	-
HCM 95th %tile Q(veh)	4.8	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	412	94	134	537	77	175
Future Vol, veh/h	412	94	134	537	77	175
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	448	102	146	584	84	190

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	551	0	1376	500
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	876	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1014	-	159	569
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	406	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1013	-	136	568
Mov Cap-2 Maneuver	-	-	-	-	210	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	406	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	20.2
HCM LOS			C

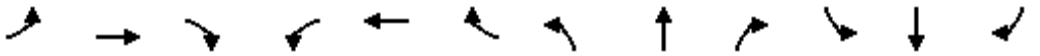
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	210	568	-	-	1013	-
HCM Lane V/C Ratio	0.399	0.335	-	-	0.144	-
HCM Control Delay (s)	33.1	14.5	-	-	9.2	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	1.8	1.5	-	-	0.5	-

Intersection	
Intersection Delay, s/veh	53.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	240	72	214	270	63	48	144	246	60	227	61
Future Vol, veh/h	65	240	72	214	270	63	48	144	246	60	227	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	71	261	78	233	293	68	52	157	267	65	247	66
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	44.6	45.8	81.6	38.4
HCM LOS	E	E	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	37%	0%	77%	0%	81%	0%	79%
Vol Right, %	0%	63%	0%	23%	0%	19%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	390	65	312	214	333	60	288
LT Vol	48	0	65	0	214	0	60	0
Through Vol	0	144	0	240	0	270	0	227
RT Vol	0	246	0	72	0	63	0	61
Lane Flow Rate	52	424	71	339	233	362	65	313
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.144	1.052	0.194	0.868	0.625	0.909	0.181	0.812
Departure Headway (Hd)	9.924	8.938	10.302	9.606	10.099	9.435	10.393	9.71
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	360	407	350	380	361	387	348	376
Service Time	7.721	6.734	8.002	7.306	7.799	7.135	8.093	7.41
HCM Lane V/C Ratio	0.144	1.042	0.203	0.892	0.645	0.935	0.187	0.832
HCM Control Delay	14.4	89.9	15.5	50.7	28.2	57.1	15.4	43.2
HCM Lane LOS	B	F	C	F	D	F	C	E
HCM 95th-tile Q	0.5	13.9	0.7	8.4	4	9.4	0.7	7.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	81	2	0	47	153	0	0	0	433	0	22
Future Volume (vph)	0	81	2	0	47	153	0	0	0	433	0	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		5.8	5.8				4.2	4.6	
Lane Util. Factor		0.95	1.00		0.95	1.00				0.95	0.95	
Frt		1.00	0.85		1.00	0.85				1.00	0.99	
Flt Protected		1.00	1.00		1.00	1.00				0.95	0.96	
Satd. Flow (prot)		3252	1455		3252	1455				1517	1506	
Flt Permitted		1.00	1.00		1.00	1.00				0.95	0.96	
Satd. Flow (perm)		3252	1455		3252	1455				1517	1506	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	88	2	0	51	166	0	0	0	471	0	24
RTOR Reduction (vph)	0	0	2	0	0	139	0	0	0	0	19	0
Lane Group Flow (vph)	0	88	0	0	51	27	0	0	0	250	226	0
Heavy Vehicles (%)	0%	11%	11%	0%	11%	11%	0%	0%	0%	13%	0%	13%
Turn Type		NA	Perm		NA	Perm				Prot	NA	
Protected Phases		4			8					1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		8.9	8.9		8.9	8.9				36.1	36.1	
Effective Green, g (s)		8.9	8.9		8.9	8.9				36.1	36.1	
Actuated g/C Ratio		0.16	0.16		0.16	0.16				0.66	0.66	
Clearance Time (s)		5.8	5.8		5.8	5.8				4.2	4.6	
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)		526	235		526	235				995	988	
v/s Ratio Prot		c0.03			0.02					c0.16	0.15	
v/s Ratio Perm			0.00			0.02						
v/c Ratio		0.17	0.00		0.10	0.11				0.25	0.23	
Uniform Delay, d1		19.9	19.3		19.6	19.7				3.9	3.8	
Progression Factor		1.00	1.00		0.84	1.04				1.00	1.00	
Incremental Delay, d2		0.7	0.0		0.4	1.0				0.1	0.1	
Delay (s)		20.5	19.3		16.9	21.5				4.0	3.9	
Level of Service		C	B		B	C				A	A	
Approach Delay (s)		20.5			20.5			0.0			4.0	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	10.4
Intersection Capacity Utilization	25.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	483	31	237	191	9	348
Future Volume (vph)	483	31	237	191	9	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	4.6	5.8	4.6	4.6
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	0.95
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	0.86	0.85
Flt Protected	1.00	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3252	1404	1626	3252	1438	1358
Flt Permitted	1.00	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3252	1404	1626	3252	1438	1358
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	525	34	258	208	10	378
RTOR Reduction (vph)	0	21	0	0	163	171
Lane Group Flow (vph)	525	13	258	208	32	22
Confl. Peds. (#/hr)		10				
Heavy Vehicles (%)	11%	11%	11%	11%	13%	13%
Turn Type	NA	Perm	Prot	NA	Prot	Prot
Protected Phases	4		3	8	2	2
Permitted Phases		4				
Actuated Green, G (s)	20.9	20.9	12.7	38.2	6.4	6.4
Effective Green, g (s)	20.9	20.9	12.7	38.2	6.4	6.4
Actuated g/C Ratio	0.38	0.38	0.23	0.69	0.12	0.12
Clearance Time (s)	5.8	5.8	4.6	5.8	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1235	533	375	2258	167	158
v/s Ratio Prot	c0.16		c0.16	0.06	c0.02	0.02
v/s Ratio Perm		0.01				
v/c Ratio	0.43	0.02	0.69	0.09	0.19	0.14
Uniform Delay, d1	12.6	10.7	19.3	2.7	22.0	21.8
Progression Factor	0.84	0.57	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.1	5.2	0.1	0.6	0.4
Delay (s)	11.6	6.1	24.5	2.8	22.5	22.2
Level of Service	B	A	C	A	C	C
Approach Delay (s)	11.3			14.8	22.4	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	715	116	49	428	0	55
Future Vol, veh/h	715	116	49	428	0	55
Conflicting Peds, #/hr	0	10	0	0	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	150	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	0	11	0	3
Mvmt Flow	777	126	53	465	0	60

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	913	0	-	409
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.3285
Pot Cap-1 Maneuver	-	-	755	-	0	590
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	748	-	-	579
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	579	-	-	748	-
HCM Lane V/C Ratio	0.103	-	-	0.071	-
HCM Control Delay (s)	11.9	-	-	10.2	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-

Intersection	
Int Delay, s/veh	8.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	755	15	40	362	115	22
Future Vol, veh/h	755	15	40	362	115	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	90	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	821	16	43	393	125	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	837	0	1308	419
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	479	-
Critical Hdwy	-	-	4.145	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	790	-	162	581
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	619	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	790	-	153	581
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	619	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	76.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	153	581	-	-	790	-
HCM Lane V/C Ratio	0.817	0.041	-	-	0.055	-
HCM Control Delay (s)	89.1	11.5	-	-	9.8	-
HCM Lane LOS	F	B	-	-	A	-
HCM 95th %tile Q(veh)	5.3	0.1	-	-	0.2	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	658	82	145	360	81	182
Future Vol, veh/h	658	82	145	360	81	182
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	245	-	245	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	3	3	11	3	3
Mvmt Flow	708	88	156	387	87	196

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	797	0	1452	753
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	699	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	821	-	143	408
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	820	-	116	408
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	491	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	25.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	214	408	-	-	820	-
HCM Lane V/C Ratio	0.407	0.48	-	-	0.19	-
HCM Control Delay (s)	32.9	21.7	-	-	10.4	-
HCM Lane LOS	D	C	-	-	B	-
HCM 95th %tile Q(veh)	1.8	2.5	-	-	0.7	-

Intersection	
Intersection Delay, s/veh	33.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	224	31	192	214	50	47	208	200	49	188	52
Future Vol, veh/h	46	224	31	192	214	50	47	208	200	49	188	52
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	48	236	33	202	225	53	49	219	211	52	198	52
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

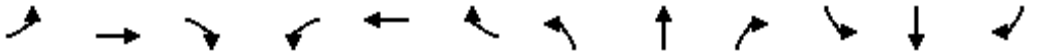
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	24.6	23.6	55.4	22.2
HCM LOS	C	C	F	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	51%	0%	88%	0%	81%	0%	78%
Vol Right, %	0%	49%	0%	12%	0%	19%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	408	46	255	192	264	49	240
LT Vol	47	0	46	0	192	0	49	0
Through Vol	0	208	0	224	0	214	0	188
RT Vol	0	200	0	31	0	50	0	52
Lane Flow Rate	49	429	48	268	202	278	52	250
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.122	0.955	0.126	0.652	0.509	0.65	0.134	0.604
Departure Headway (Hd)	8.877	8.004	9.361	8.751	9.074	8.417	9.382	8.702
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	404	455	383	413	396	428	382	415
Service Time	6.631	5.757	7.125	6.515	6.838	6.181	7.145	6.465
HCM Lane V/C Ratio	0.121	0.943	0.125	0.649	0.51	0.65	0.136	0.602
HCM Control Delay	12.9	60.3	13.5	26.6	20.9	25.6	13.6	24
HCM Lane LOS	B	F	B	D	C	D	B	C
HCM 95th-tile Q	0.4	11.5	0.4	4.5	2.8	4.5	0.5	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	382	5	25	709	120	30
Future Volume (veh/h)	382	5	25	709	120	30
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1713	1900	1845	1712	1845	1845
Adj Flow Rate, veh/h	415	5	27	771	130	33
Adj No. of Lanes	2	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	11	11	3	11	3	3
Cap, veh/h	2029	24	53	1237	183	163
Arrive On Green	0.62	0.62	0.03	0.72	0.10	0.10
Sat Flow, veh/h	3380	40	1757	1712	1757	1568
Grp Volume(v), veh/h	205	215	27	771	130	33
Grp Sat Flow(s),veh/h/ln	1628	1706	1757	1712	1757	1568
Q Serve(g_s), s	3.3	3.3	0.9	13.6	4.3	1.2
Cycle Q Clear(g_c), s	3.3	3.3	0.9	13.6	4.3	1.2
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1002	1051	53	1237	183	163
V/C Ratio(X)	0.20	0.20	0.51	0.62	0.71	0.20
Avail Cap(c_a), veh/h	1002	1051	146	1237	656	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.1	5.1	28.7	4.2	26.0	24.6
Incr Delay (d2), s/veh	0.5	0.4	7.4	2.4	5.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.7	0.6	7.0	2.4	0.5
LnGrp Delay(d),s/veh	5.5	5.5	36.0	6.6	31.1	25.2
LnGrp LOS	A	A	D	A	C	C
Approach Vol, veh/h	420			798	163	
Approach Delay, s/veh	5.5			7.6	29.9	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.8	6.4	42.8				49.2
Change Period (Y+Rc), s		4.6	4.6	5.8				5.8
Max Green Setting (Gmax), s		22.4	5.0	17.6				27.2
Max Q Clear Time (g_c+I1), s		6.3	2.9	5.3				15.6
Green Ext Time (p_c), s		0.4	0.0	1.9				3.9

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	240	72	214	270	63	48	144	246	60	227	61
Future Volume (veh/h)	65	240	72	214	270	63	48	144	246	60	227	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1918	1900	1845	1918	1900	1845	1918	1900	1845	1845	1900
Adj Flow Rate, veh/h	71	261	78	233	293	68	52	157	267	65	247	66
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	91	459	137	266	638	148	71	172	292	83	388	104
Arrive On Green	0.05	0.32	0.32	0.15	0.42	0.42	0.04	0.27	0.27	0.05	0.28	0.28
Sat Flow, veh/h	1757	1417	423	1757	1505	349	1757	636	1082	1757	1401	374
Grp Volume(v), veh/h	71	0	339	233	0	361	52	0	424	65	0	313
Grp Sat Flow(s),veh/h/ln	1757	0	1840	1757	0	1854	1757	0	1718	1757	0	1775
Q Serve(g_s), s	3.6	0.0	13.7	11.7	0.0	12.5	2.6	0.0	21.5	3.3	0.0	13.9
Cycle Q Clear(g_c), s	3.6	0.0	13.7	11.7	0.0	12.5	2.6	0.0	21.5	3.3	0.0	13.9
Prop In Lane	1.00		0.23	1.00		0.19	1.00		0.63	1.00		0.21
Lane Grp Cap(c), veh/h	91	0	597	266	0	786	71	0	464	83	0	492
V/C Ratio(X)	0.78	0.00	0.57	0.87	0.00	0.46	0.73	0.00	0.91	0.78	0.00	0.64
Avail Cap(c_a), veh/h	182	0	597	269	0	786	98	0	494	98	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	25.2	37.3	0.0	18.5	42.7	0.0	31.8	42.4	0.0	28.6
Incr Delay (d2), s/veh	13.2	0.0	3.9	25.6	0.0	1.9	16.3	0.0	20.7	28.8	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	7.6	7.5	0.0	6.8	1.6	0.0	12.8	2.3	0.0	7.1
LnGrp Delay(d),s/veh	55.3	0.0	29.1	62.9	0.0	20.5	59.0	0.0	52.5	71.2	0.0	31.0
LnGrp LOS	E		C	E		C	E		D	E		C
Approach Vol, veh/h		410			594			476			378	
Approach Delay, s/veh		33.6			37.1			53.2			37.9	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	29.4	17.8	34.3	7.8	30.0	8.9	43.3
Change Period (Y+Rc), s	* 4.2	5.1	* 4.2	5.1	* 4.2	5.1	* 4.2	5.1
Max Green Setting (Gmax), s	* 5	25.9	* 14	26.7	* 5	25.9	* 9.3	31.2
Max Q Clear Time (g_c+I1), s	5.3	23.5	13.7	15.7	4.6	15.9	5.6	14.5
Green Ext Time (p_c), s	0.0	0.6	0.0	1.5	0.0	1.2	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	40.7
HCM 2010 LOS	D

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	755	15	40	362	115	22
Future Volume (veh/h)	755	15	40	362	115	22
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1714	1900	1845	1712	1845	1845
Adj Flow Rate, veh/h	821	16	43	393	125	24
Adj No. of Lanes	2	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	11	11	3	11	3	3
Cap, veh/h	2071	40	73	1275	172	153
Arrive On Green	1.00	1.00	0.04	0.74	0.10	0.10
Sat Flow, veh/h	3353	64	1757	1712	1757	1568
Grp Volume(v), veh/h	409	428	43	393	125	24
Grp Sat Flow(s),veh/h/ln	1628	1703	1757	1712	1757	1568
Q Serve(g_s), s	0.0	0.0	1.6	5.0	4.6	0.9
Cycle Q Clear(g_c), s	0.0	0.0	1.6	5.0	4.6	0.9
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1032	1079	73	1275	172	153
V/C Ratio(X)	0.40	0.40	0.59	0.31	0.73	0.16
Avail Cap(c_a), veh/h	1032	1079	144	1275	596	532
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	31.1	2.8	28.9	27.3
Incr Delay (d2), s/veh	1.1	1.1	7.5	0.6	5.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.9	2.5	2.5	0.4
LnGrp Delay(d),s/veh	1.1	1.1	38.6	3.4	34.7	27.8
LnGrp LOS	A	A	D	A	C	C
Approach Vol, veh/h	837			436	149	
Approach Delay, s/veh	1.1			6.9	33.6	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.0	7.3	47.6				55.0
Change Period (Y+Rc), s		4.6	4.6	5.8				5.8
Max Green Setting (Gmax), s		22.4	5.4	23.2				33.2
Max Q Clear Time (g_c+I1), s		6.6	3.6	2.0				7.0
Green Ext Time (p_c), s		0.3	0.0	5.3				2.2

Intersection Summary	
HCM 2010 Ctrl Delay	6.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	224	31	192	214	50	47	208	200	49	188	52
Future Volume (veh/h)	46	224	31	192	214	50	47	208	200	49	188	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1918	1900	1845	1918	1900	1845	1918	1900	1845	1845	1900
Adj Flow Rate, veh/h	48	236	33	202	225	53	49	219	211	52	198	52
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	341	48	246	452	106	81	269	259	84	424	111
Arrive On Green	0.05	0.21	0.21	0.14	0.30	0.30	0.05	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1757	1645	230	1757	1499	353	1757	896	863	1757	1407	370
Grp Volume(v), veh/h	48	0	269	202	0	278	49	0	430	52	0	250
Grp Sat Flow(s),veh/h/ln	1757	0	1875	1757	0	1853	1757	0	1759	1757	0	1777
Q Serve(g_s), s	1.6	0.0	8.1	6.8	0.0	7.5	1.7	0.0	13.8	1.8	0.0	7.0
Cycle Q Clear(g_c), s	1.6	0.0	8.1	6.8	0.0	7.5	1.7	0.0	13.8	1.8	0.0	7.0
Prop In Lane	1.00		0.12	1.00		0.19	1.00		0.49	1.00		0.21
Lane Grp Cap(c), veh/h	80	0	388	246	0	558	81	0	528	84	0	536
V/C Ratio(X)	0.60	0.00	0.69	0.82	0.00	0.50	0.60	0.00	0.82	0.62	0.00	0.47
Avail Cap(c_a), veh/h	190	0	821	254	0	878	144	0	748	144	0	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	22.4	25.5	0.0	17.5	28.5	0.0	19.8	28.5	0.0	17.3
Incr Delay (d2), s/veh	7.0	0.0	2.2	18.7	0.0	0.7	7.0	0.0	4.7	7.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	4.4	4.6	0.0	3.9	1.0	0.0	7.4	1.0	0.0	3.5
LnGrp Delay(d),s/veh	35.5	0.0	24.6	44.2	0.0	18.2	35.5	0.0	24.5	35.6	0.0	17.9
LnGrp LOS	D		C	D		B	D		C	D		B
Approach Vol, veh/h		317			480			479			302	
Approach Delay, s/veh		26.2			29.1			25.6			21.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	23.4	12.7	17.7	7.0	23.5	7.0	23.5
Change Period (Y+Rc), s	* 4.2	5.1	* 4.2	5.1	* 4.2	5.1	* 4.2	5.1
Max Green Setting (Gmax), s	* 5	25.9	* 8.8	26.7	* 5	25.9	* 6.6	28.9
Max Q Clear Time (g_c+I1), s	3.8	15.8	8.8	10.1	3.7	9.0	3.6	9.5
Green Ext Time (p_c), s	0.0	1.9	0.0	1.3	0.0	1.2	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

Intersection: 2: Driveway 1 & Hanford Armona Road

Movement	EB	EB	EB	WB	WB	NB
Directions Served	T	T	R	L	T	R
Maximum Queue (ft)	55	31	22	56	54	46
Average Queue (ft)	2	1	1	25	8	22
95th Queue (ft)	18	10	10	54	37	39
Link Distance (ft)	189	189			149	225
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			150	150		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Driveway 2 & Hanford Armona Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	154	119	68	221	115	50
Average Queue (ft)	58	33	17	94	62	19
95th Queue (ft)	128	95	45	196	103	46
Link Distance (ft)	149	149		1157		334
Upstream Blk Time (%)	0					
Queuing Penalty (veh)	1					
Storage Bay Dist (ft)			175		90	
Storage Blk Time (%)				1	2	
Queuing Penalty (veh)				0	1	

Intersection: 4: 19th Avenue & Hanford Armona Road

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	23	116	118	102
Average Queue (ft)	2	41	36	57
95th Queue (ft)	13	88	73	91
Link Distance (ft)	648			1729
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		245	245	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	154	207	199	494	159	425	169	290
Average Queue (ft)	66	131	125	168	50	180	48	140
95th Queue (ft)	138	206	200	311	118	320	113	248
Link Distance (ft)		2549		3232		1711		981
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)	1	17	19	14	0	31	2	23
Queuing Penalty (veh)	4	11	65	30	0	15	5	14

Intersection: 6: Hanford-Armona Road & SR 41 SB Off-Ramp

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	T	T	R	T	R	L	LTR
Maximum Queue (ft)	47	71	27	70	99	104	145
Average Queue (ft)	5	13	2	17	58	62	78
95th Queue (ft)	25	46	15	46	86	97	148
Link Distance (ft)	406	406		659		129	129
Upstream Blk Time (%)							7
Queuing Penalty (veh)							12
Storage Bay Dist (ft)			250		250		
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 7: SR 41 NB Ramps & Hanford Armona Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	LR	R
Maximum Queue (ft)	111	120	53	188	200	117	106	74
Average Queue (ft)	55	58	15	122	22	32	54	29
95th Queue (ft)	96	104	42	175	102	81	87	59
Link Distance (ft)	659	659			189	189	139	139
Upstream Blk Time (%)				1	0			
Queuing Penalty (veh)				0	2			
Storage Bay Dist (ft)			250	200				
Storage Blk Time (%)				1	0			
Queuing Penalty (veh)				1	2			

Intersection: 2: Driveway 1 & Hanford Armona Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	T	L	T	R
Maximum Queue (ft)	93	50	55	54	68
Average Queue (ft)	14	3	21	2	21
95th Queue (ft)	60	20	49	18	45
Link Distance (ft)	189	189		149	225
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			150		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Driveway 2 & Hanford Armona Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	210	120	73	134	156	131
Average Queue (ft)	83	38	29	37	63	19
95th Queue (ft)	170	102	67	97	118	61
Link Distance (ft)	149	149		1144		334
Upstream Blk Time (%)	2					
Queuing Penalty (veh)	7					
Storage Bay Dist (ft)			175		90	
Storage Blk Time (%)					4	
Queuing Penalty (veh)					1	

Intersection: 4: 19th Avenue & Hanford Armona Road

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	23	98	135	119
Average Queue (ft)	4	55	59	60
95th Queue (ft)	17	94	113	95
Link Distance (ft)	661			1729
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		245	245	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: 19th Avenue & Cinnamon Drive

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	154	184	199	348	160	294	72	332
Average Queue (ft)	53	115	115	125	45	154	42	94
95th Queue (ft)	131	176	193	275	103	248	74	186
Link Distance (ft)		2549		3232		1711		981
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		95		80	
Storage Blk Time (%)		14	25	3	3	25	0	10
Queuing Penalty (veh)		7	66	7	12	12	0	5

Intersection: 6: Hanford-Armona Road & SR 41 SB Off-Ramp

Movement	EB	EB	WB	WB	SB	SB
Directions Served	T	T	T	R	L	LTR
Maximum Queue (ft)	62	76	61	128	129	86
Average Queue (ft)	16	17	12	43	61	32
95th Queue (ft)	49	53	34	93	100	71
Link Distance (ft)	406	406	659		129	129
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					0	
Storage Bay Dist (ft)				250		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 7: SR 41 NB Ramps & Hanford Armona Road

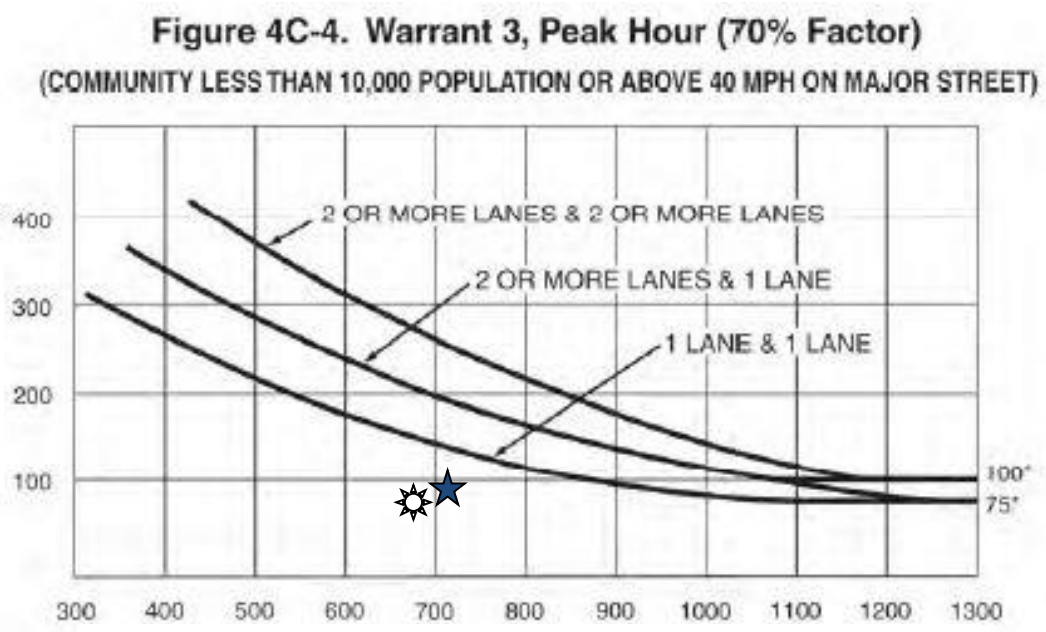
Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	LR	R
Maximum Queue (ft)	194	202	67	174	189	173	155	157
Average Queue (ft)	108	99	19	121	16	46	111	81
95th Queue (ft)	165	171	47	173	73	102	157	137
Link Distance (ft)	659	659			189	189	139	139
Upstream Blk Time (%)				0	0	0	2	0
Queuing Penalty (veh)				0	0	0	4	1
Storage Bay Dist (ft)			250	200				
Storage Blk Time (%)				0	0			
Queuing Penalty (veh)				0	0			

Appendix I: Signal Warrants

Peak Hour Signal Warrant (Rural Areas)

Existing Traffic Conditions
4. 19th Avenue / Hanford-Armona Road
AM (PM) Peak Hour

19th Avenue Highest Approach Volume = 86 (91) VPH



Hanford-Armona Road Total of Both Approaches = 678 (716) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

☼ **AM Peak Hour – Signal Warrant is Not Met**

★ **PM Peak Hour – Signal Warrant is Not Met**

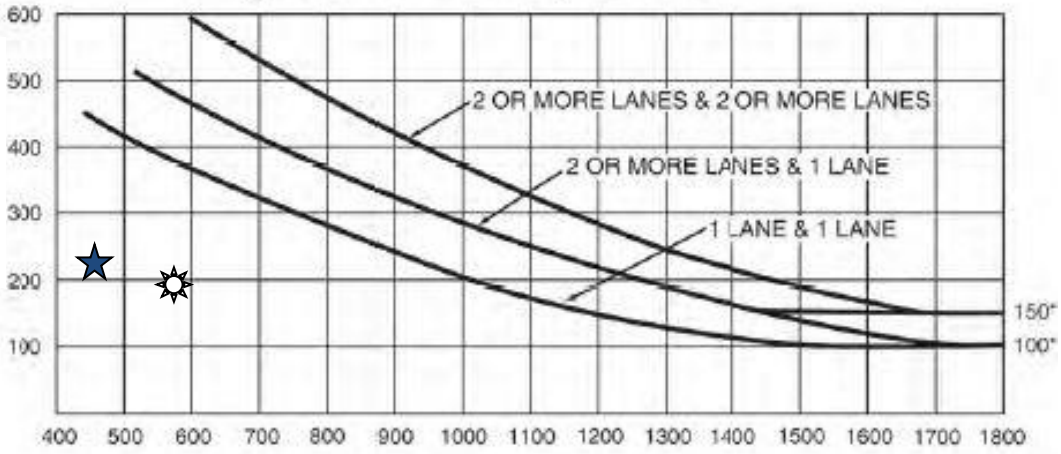
Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Urban Areas)

Existing Traffic Conditions
5. 19th Avenue / Cinnamon Drive
AM (PM) Peak Hour

19th Avenue Highest Approach Volume = 197 (221) VPH

Figure 4C-3. Warrant 3, Peak Hour



Cinnamon Drive Total of Both Approaches = 577 (468) VPH

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

AM Peak Hour – Signal Warrant is Not Met

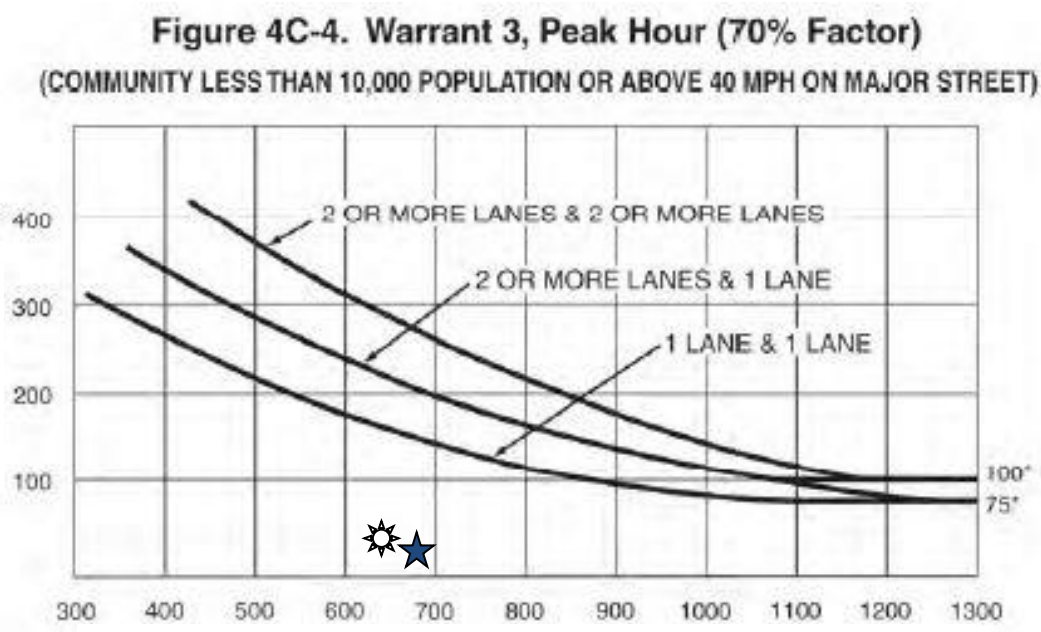
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Rural Areas)

Existing plus Project Phase 1 Traffic Conditions
3. Project Driveway 2 / Hanford-Armona Road
AM (PM) Peak Hour

Project Driveway 2 Highest Approach Volume = 24 (14) VPH



Hanford-Armona Road Total of Both Approaches = 643 (682) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

AM Peak Hour – Signal Warrant is Not Met

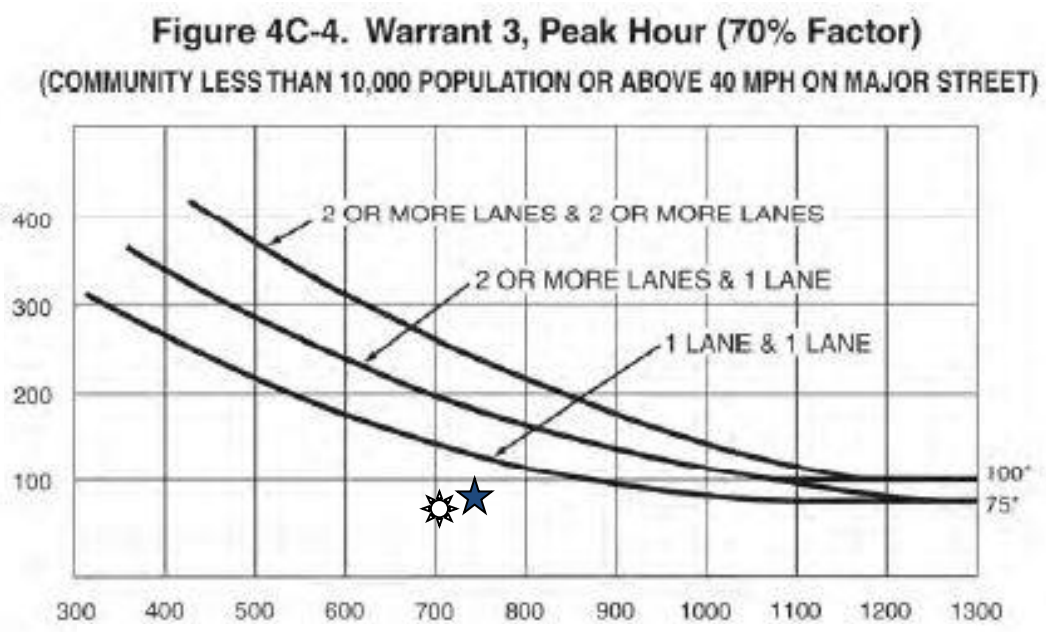
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Rural Areas)

Existing plus Project Phase 1 Traffic Conditions
4. 19th Avenue / Hanford-Armona Road
AM (PM) Peak Hour

19th Avenue Highest Approach Volume = 86 (91) VPH



Hanford-Armona Road Total of Both Approaches = 700 (743) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

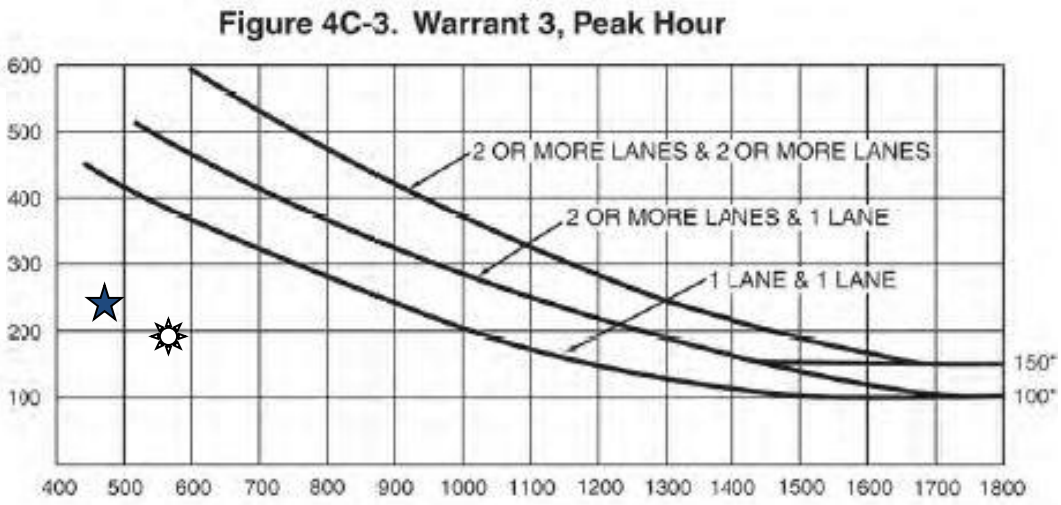
☼ **AM Peak Hour – Signal Warrant is Not Met**
★ **PM Peak Hour – Signal Warrant is Not Met**

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Urban Areas)

Existing plus Project Phase 1 Traffic Conditions
5. 19th Avenue / Cinnamon Drive
AM (PM) Peak Hour

19th Avenue Highest Approach Volume = 198 (224) VPH



Cinnamon Drive Total of Both Approaches = 586 (480) VPH

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

AM Peak Hour – Signal Warrant is Not Met

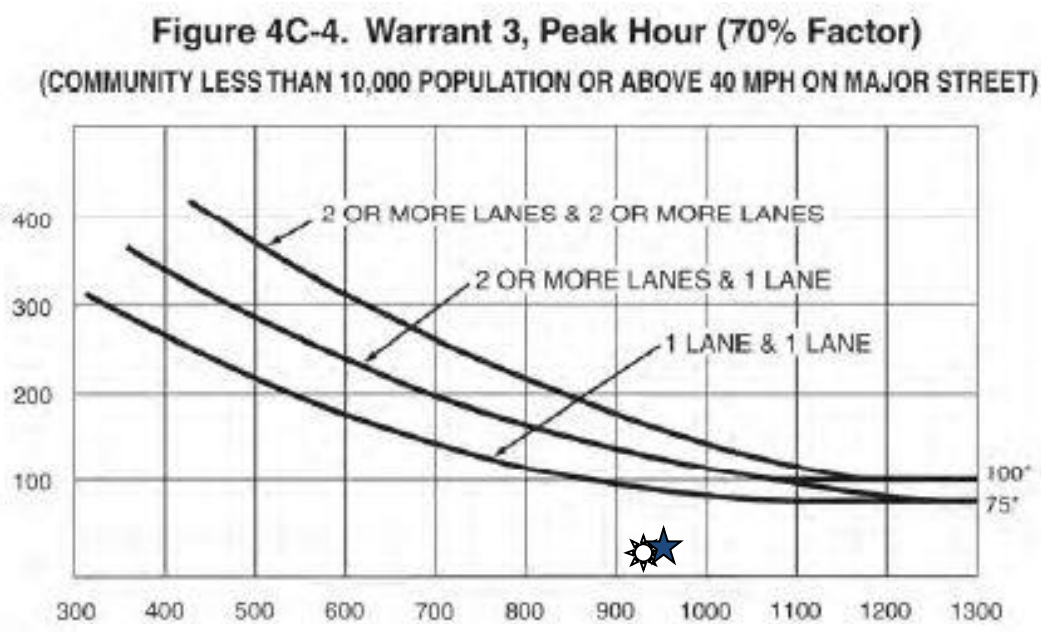
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Rural Areas)

Existing plus Project Buildout Traffic Conditions
2. Project Driveway 1 / Hanford-Armona Road
AM (PM) Peak Hour

Project Driveway 1 Highest Approach Volume = 27 (28) VPH



Hanford-Armona Road Total of Both Approaches = 928 (945) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

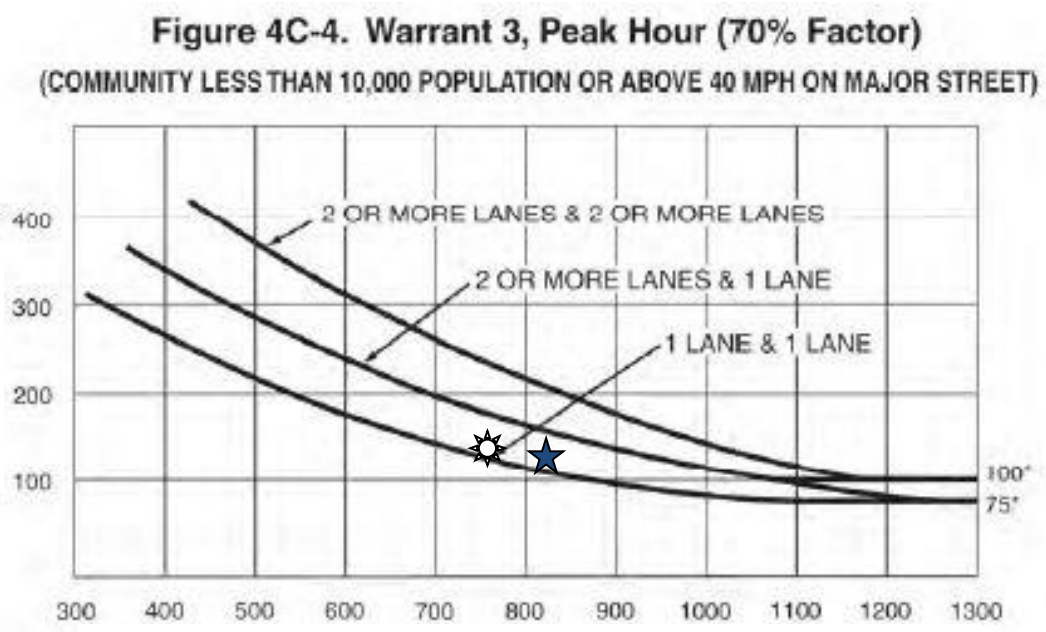
☼ **AM Peak Hour – Signal Warrant is Not Met**
★ **PM Peak Hour – Signal Warrant is Not Met**

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Rural Areas)

Existing plus Project Buildout Traffic Conditions
3. Project Driveway 2 / Hanford-Armona Road
AM (PM) Peak Hour

Project Driveway 2 Highest Approach Volume = 135 (126) VPH



Hanford-Armona Road Total of Both Approaches = 767 (809) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

☼ **AM Peak Hour – Signal Warrant is Met**

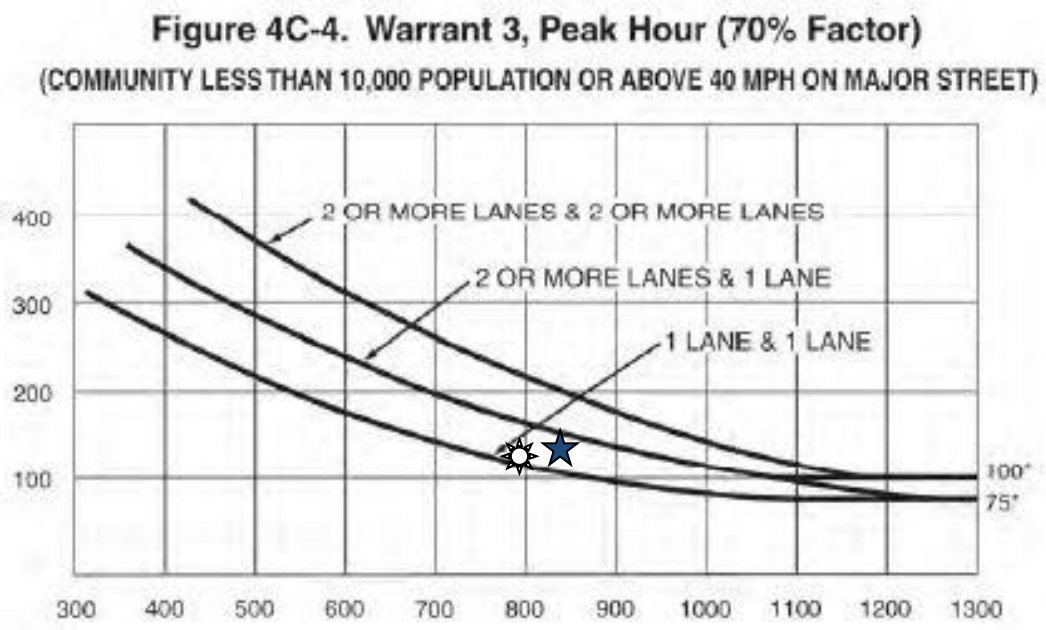
★ **PM Peak Hour – Signal Warrant is Met**

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Rural Areas)

Existing plus Project Buildout Traffic Conditions
4. 19th Avenue / Hanford-Armona Road
AM (PM) Peak Hour

19th Avenue Highest Approach Volume = 116 (122) VPH



Hanford-Armona Road Total of Both Approaches = 798 (844) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

☼ **AM Peak Hour – Signal Warrant is Met**

★ **PM Peak Hour – Signal Warrant is Met**

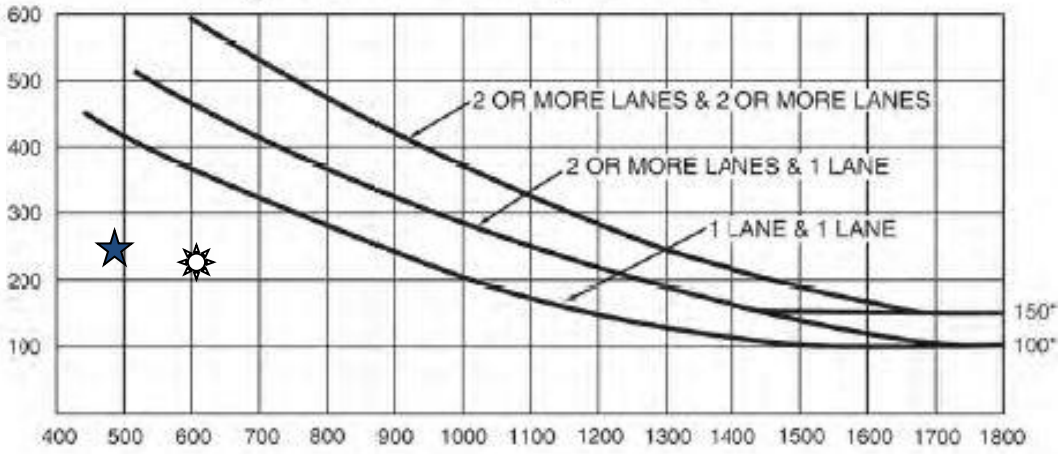
Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Urban Areas)

Existing plus Project Buildout Traffic Conditions
5. 19th Avenue / Cinnamon Drive
AM (PM) Peak Hour

19th Avenue Highest Approach Volume = 211 (231) VPH

Figure 4C-3. Warrant 3, Peak Hour



Cinnamon Drive Total of Both Approaches = 601 (495) VPH

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

AM Peak Hour – Signal Warrant is Not Met

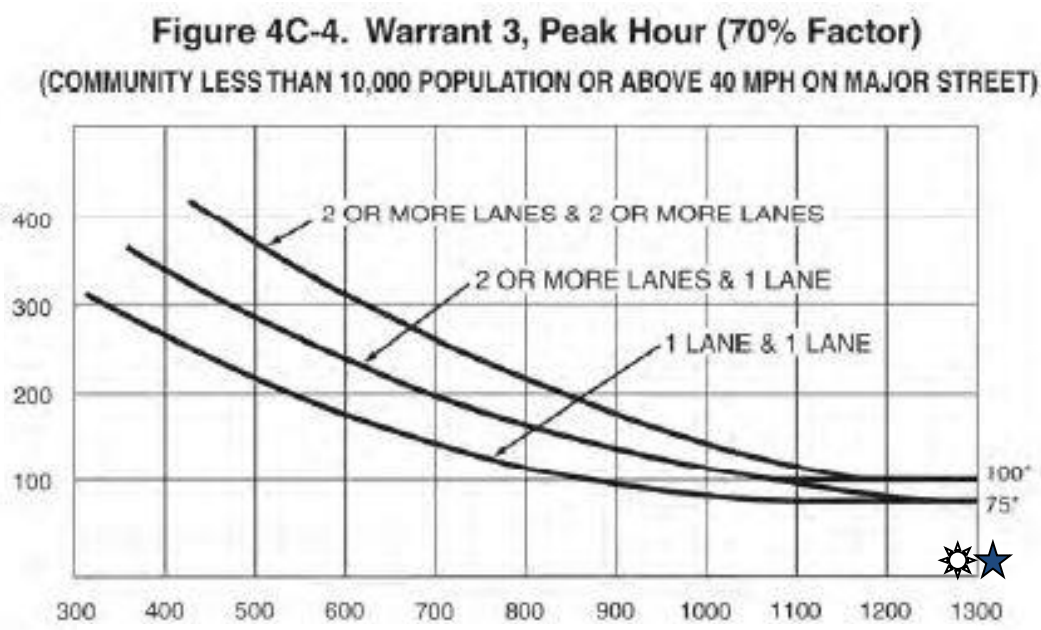
PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Rural Areas)

Cumulative Year 2040 plus Project Traffic Conditions
2. Project Driveway 1 / Hanford-Armona Road
AM (PM) Peak Hour

Project Driveway 1 Highest Approach Volume = 27 (28) VPH



Hanford-Armona Road Total of Both Approaches = 1,282 (1,308) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

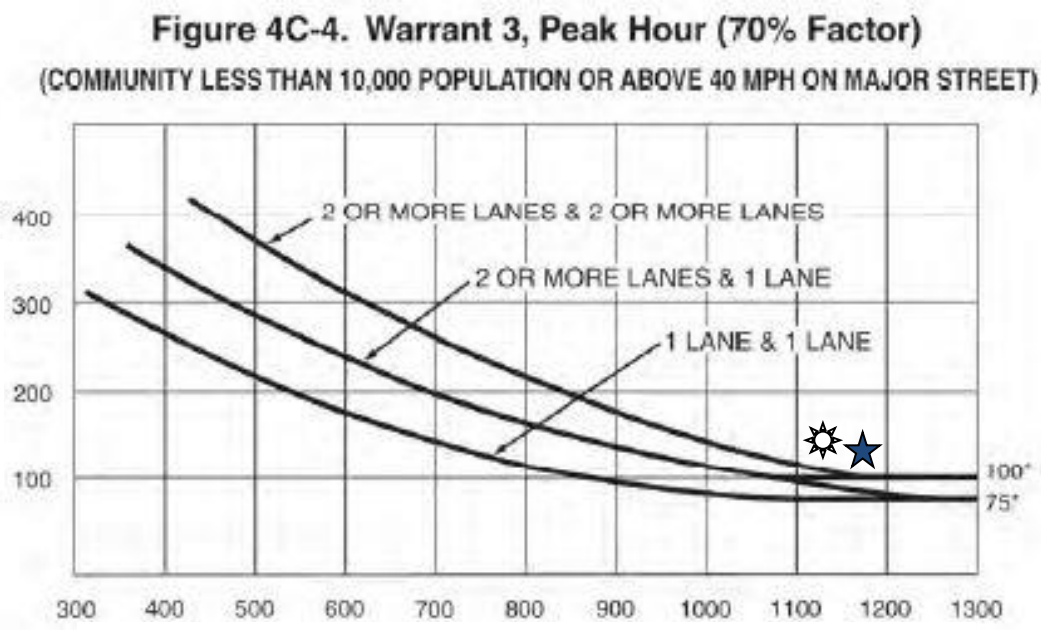
☼ **AM Peak Hour – Signal Warrant is Not Met**
★ **PM Peak Hour – Signal Warrant is Not Met**

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Rural Areas)

Cumulative Year 2040 plus Project Traffic Conditions
3. Project Driveway 2 / Hanford-Armona Road
AM (PM) Peak Hour

Project Driveway 2 Highest Approach Volume = 135 (126) VPH



Hanford-Armona Road Total of Both Approaches =

1121 (1172) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

AM Peak Hour – Signal Warrant is Met

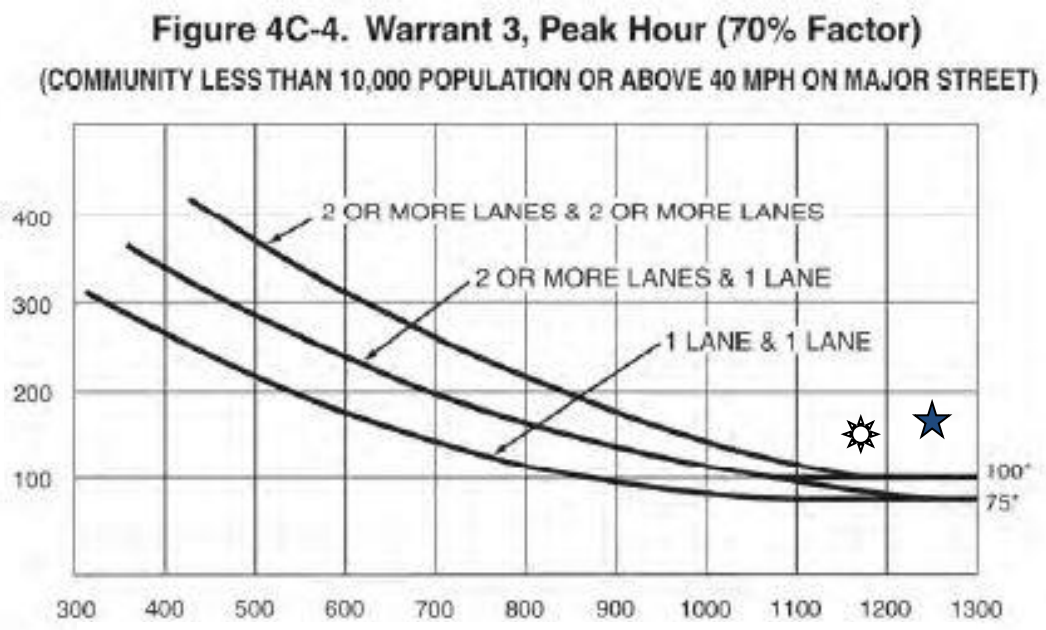
PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Rural Areas)

Cumulative Year 2040 plus Project Traffic Conditions
4. 19th Avenue / Hanford-Armona Road
AM (PM) Peak Hour

19th Avenue Highest Approach Volume = 165 (172) VPH



Hanford-Armona Road Total of Both Approaches = 1,177 (1,245) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

AM Peak Hour – Signal Warrant is Met

PM Peak Hour – Signal Warrant is Met

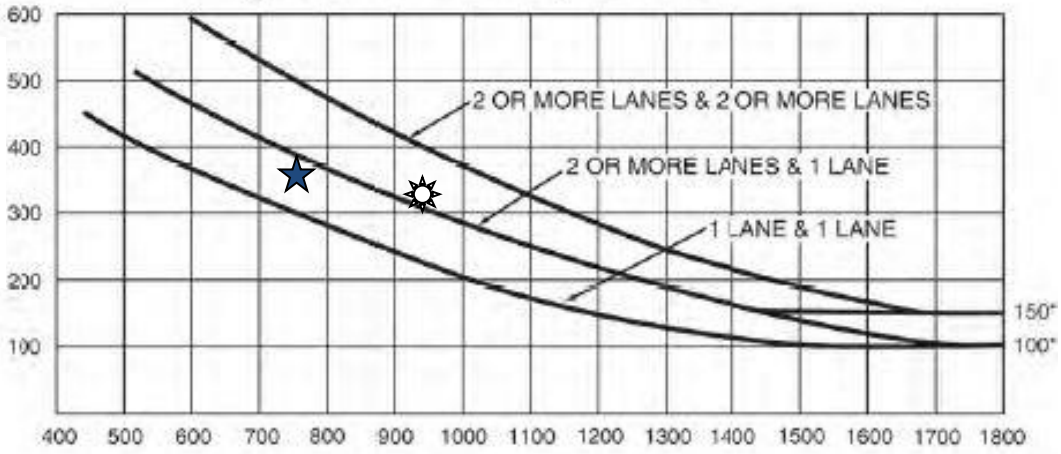
Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

Peak Hour Signal Warrant (Urban Areas)

Cumulative Year 2040 plus Project Traffic Conditions
5. 19th Avenue / Cinnamon Drive
AM (PM) Peak Hour

19th Avenue Highest Approach Volume = 318 (355) VPH

Figure 4C-3. Warrant 3, Peak Hour



Cinnamon Drive Total of Both Approaches = 924 (757) VPH

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

AM Peak Hour – Signal Warrant is Met

PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

City of
LEMOORE
CALIFORNIA

711 West Cinnamon Drive ● Lemoore, California 93245 ● (559) 924-6700 ● Fax (559) 924-9003

Staff Report

Item No: 6

To: **Lemoore Planning Commission**

From: **Michelle Speer, Assistant City Manager**

Date: **September 27, 2018** **Meeting Date:** **October 8, 2018**

Subject: **Consideration of Mitigated Negative Declaration and Disposition and Development Agreement between the City of Lemoore and KKAL, LP.**

Proposed Motion:
Move to approve Resolution No. 2018-08, recommending adoption of the Mitigated Negative Declaration (MND) and approval of the Disposition and Development Agreement (DDA) between the City of Lemoore and KKAL, LP for development of approximately 83.5 acres.

Subject/Discussion:
The City of Lemoore owns real property located near the Northeast corner of State Route (SR) 41 and Idaho Avenue, consisting of approximately 83.5 acres. It is planned Light Industrial pursuant to the Lemoore 2030 General Plan. The City has attempted to find a developer willing to develop the property in order to promote economic growth in the community.

Since 2017, the City has been in discussion with KKAL, LP, regarding potential development on the site. The proposed DDA outlines the requirements of both parties, should the City Council approve the document.

The proposed DDA would allow KKAL to purchase the property for ten (10) dollars. In exchange, the developer will develop a manufacturing, distribution, and warehouse center consisting of approximately 1,025,000 square feet of building space, create approximately 1300 jobs, increase the property tax base and provide secondary economic benefits to the City of Lemoore.

The project will be developed in phases; twelve (12) acres every two (2) years over six (6) phases. The City of Lemoore will be responsible for constructing the necessary infrastructure for the project; including water, sewer, storm water, and streets, curbs, and gutters.

City staff has been working with KKAL, LP to establish terms that are agreeable to both parties. The development of the property has the potential to create jobs in the community, stimulate economic growth through property tax revenues, and encourage interest from other developers for future projects.

The Mitigated Negative Declaration evaluated the proposed project under the DDA and concludes that the initial study identified potentially significant effects, but:

1. Revisions in the project plans or proposals made by or agreed to by the applicant before a proposed mitigated negative declaration and initial study were released for public review avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

2. There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

The DDA describes an alternative site plan approval process where the conceptual site plan and elevations are conceptually approved, and then the detailed site plans will be submitted and expedited when they are consistent with the conceptual site plan. The site plan, elevations, and parcel map attached to the DDA are conceptual at this point. They will be formally reviewed at a later date.

Mitigated Negative Declaration

During the public review of the Mitigated Negative Declaration, the Tachi Tribe formally contacted the City staff to request mitigation measures that would protect the site in the event that there are sensitive artifacts at the site. These specific mitigation measures will be proposed to be added to the Mitigated Negative Declaration at the public hearing.

Alternatives or Pros/Cons:

Pros:

- Job creation
- Economic benefits though tax generation
- Potential stimulation of future growth

Cons

- Financial responsibility for necessary infrastructure is not budgeted

Staff Recommendation:

City Staff recommends adoption of resolution recommending approval of the MND and ordinance adopting the DDA with KKAL, LP and the City of Lemoore for the development of approximately 83.5 acres into a manufacturing, warehousing, and distribution center.

Attachments:

Draft Resolution
Disposition and Development Agreement
Mitigated Negative Declaration

RESOLUTION NO. 2018-08

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF LEMOORE RECOMMENDING ADOPTION OF THE CEQA INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION AND APPROVAL OF THE DISPOSITION AND DEVELOPMENT AGREEMENT BETWEEN THE CITY OF LEMOORE AND KKAL, LP FOR DEVELOPMENT OF APPROXIMATELY 83.5 ACRES LOCATED ON THE NORTHEAST CORNER OF STATE ROUTE 41 AND IDAHO AVENUE IN THE CITY OF LEMOORE (APN 024-051-031)

At a Regular Meeting of the Planning Commission of the City of Lemoore duly called and held on October 8, 2018, at 7:00 p.m. on said day, it was moved by Commissioner _____, seconded by Commissioner _____, and carried that the following Resolution be adopted:

WHEREAS, KKAL, LP has requested a Disposition and Development Agreement (DDA) between KKAL, LP and the City of Lemoore on property owned by the City of Lemoore consisting of approximately 83.5 acres located within the jurisdictional boundaries of the City of Lemoore (APN 024-051-031); and

WHEREAS, the proposed site is vacant; and

WHEREAS, the zoning on the parcel is ML (Light Industrial); and

WHEREAS, the Initial Study and Mitigated Negative Declaration were made available for public comment for 20-days, beginning on August 1, 2018 and ending August 21, 2018; and

WHEREAS, a Notice of Intent to Adopt the Initial Study and Mitigated Negative Declaration was published in the Hanford Sentinel, in compliance with the California Environmental Quality Act (CEQA); and

WHEREAS, the public hearing for this item was duly noticed for the Planning Commission's September 10, 2018, meeting and was continued to the October 8, 2018 meeting.

NOW THEREFORE, BE IT RESOLVED that the Planning Commission of the City of Lemoore hereby makes the following findings regarding the proposed Initial Study/Negative Declaration and the DDA:

1. The Initial Study and Mitigated Negative Declaration identified that the project would result in less than significant or no impacts after mitigation have been included in the project for all environmental issue areas including: Aesthetics/Shadows, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Construction Effects, Geology/Soils, Greenhouse Gas Emissions, Hazards/Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Neighborhood Effects, Population and Housing, Public Services, Transportation/Circulation, Utilities and Mandatory Findings of Significance.

2. The Planning Commission finds, based on the whole record before it, including the Initial Study and Mitigated Negative Declaration and any comments received, that there is no substantial evidence that the project will have a significant effect on the environment with the application of the mitigation measures set forth in the Mitigated Negative Declaration, and that the Mitigated Negative Declaration reflects the City's independent judgement and analysis.

3. The proposed DDA is consistent with the objectives, policies, and general land uses specified in the general plan and applicable specific plans.

4. The proposed DDA is compatible and in conformity with public convenience, general welfare, and good land use and zoning practice.

5. The proposed DDA will not be detrimental to the health, safety, and general welfare of the City of Lemoore.

6. The proposed DDA will not adversely affect the orderly development of property or the preservation of property values.

BE IT FURTHER RESOLVED that the Planning Commission of the City of Lemoore hereby recommends that the City Council adopt the Mitigated Negative Declaration and approve the DDA.

Passed and adopted at a Regular Meeting of the Planning Commission of the City of Lemoore held on October 8, 2018, by the following votes:

AYES:
NOES:
ABSTAINING:
ABSENT:

APPROVED:

_____
Bob Clement, Chairperson

ATTEST:

_____
Kristie Baley, Commission Secretary

Recorded By and For the Benefit of,
And When Recorded Return to:

CITY OF LEMOORE
119 Fox Street
Lemoore, California 93245
ATTN: City Clerk

(Space Above for Recorder's Use)

DISPOSITION AND DEVELOPMENT AGREEMENT AND JOINT ESCROW INSTRUCTIONS

LEMOORE, CA

APN # 024-051-031

CITY OF LEMOORE
a California municipal corporation

AND

KKAL, LP, a California limited partnership ("Developer")

NOTICE OF REVERSIONARY INTEREST

PURSUANT TO ARTICLE 5 OF THIS DISPOSITION AND DEVELOPMENT AGREEMENT AND JOINT ESCROW INSTRUCTIONS, IF DEVELOPER, OR ITS SUCCESSORS AND ASSIGNS, FAILS TO TIMELY COMPLY WITH THE TERMS AND CONDITIONS OF THIS AGREEMENT THE PROPERTY WILL REVERT BACK TO CITY.

DISPOSITION AND DEVELOPMENT AGREEMENT
AND JOINT ESCROW INSTRUCTIONS

This Disposition and Development Agreement and Joint Escrow Instructions ("Agreement") dated _____for identification purposes_ ("Effective Date" is defined herein) is entered into between the City of Lemoore, a California municipal corporation ("City") and KKAL, LP, a California limited partnership ("Developer"), with respect to the following Recitals, which are a substantive part of this Agreement:

RECITALS

A. City owns real property near the North East Corner of State Route 41 and Idaho Avenue, consisting of approximately 84.22 acres, planned Light Industrial pursuant to the Lemoore 2030 General Plan; and zoned consistent with the designated land use (APN 024-051-031) legally described and depicted in **Attachment No. 1** ("Property").

B. Developer and City intend to enter into this Agreement to establish the terms on which City will sell the Property to Developer and Developer will acquire from City and construct a manufacturing, distribution and warehouse center consisting of approximately 1,025,000 sq. ft. of building space according to schedule imposed herein; all in consideration of the City constructing the requisite right of way and infrastructure to accommodate the industrial development ("City Improvements") and selling the Property to Developer for the sum disclosed to the City Council in Closed Session ("Project").

C. Completion of the Project will provide public benefit including; a significant increase in the local property tax base, creation of an estimated 1,366 new jobs and related secondary economic benefits to the City.

D. Developer is an experienced developer or has otherwise contracted with experienced developers, contractors, architects, and other professionals for the purposes of developing the Property. City desires to sell the Property to Developer for the purposes set forth in these Recitals based upon Developer's proposal, as further described in this Agreement.

E. Developer has submitted Developer's Preliminary Site Plan ("Preliminary Site Plan") and Elevations ("Preliminary Elevations") (attached hereto as **Attachments No. 2** and **No. 3**) which has been reviewed and preliminarily approved by City staff; which, upon approval of this Agreement, shall become the Approved Preliminary Site Plan and Approved Elevations.

F. As provided herein, concurrently with City's construction of City's Improvements, Developer will process a Parcel Map (described in Article 4) for City approval, which will subdivide the Property into legal parcels, including a separate parcel to be dedicated to the City for City Improvements.

G. Before commencement of construction of the Developer Improvements (Article 3 Section A) or other related works of improvement upon or adjacent to the Property, Developer shall, at its own expense, secure or cause to be secured any and all necessary governmental approvals, including, but not limited to the approval of Parcel Specific Site Plans, Improvement Plans, building permits, and grading permits.

H. Developer has submitted evidence, all to the satisfaction of the City that Developer has the necessary experience and financial wherewithal to complete the Project in the manner provided for herein.

I. Developer has provided the City with evidence of adequate insurance as required by the City.

J. To strengthen the public planning process, encourage private participation in comprehensive planning and reduce the economic risk of development, the California Legislature adopted Government Code Section 65864 et seq., hereinafter referred to as "Development Agreement Statute," which authorizes any city, county, or city and county to enter into a development agreement with an applicant for a development project establishing certain development rights in the property which is the subject of the development project application.

K. In accordance with the Development Agreement Statute, City has adopted Chapter 9-2B-21 of the Municipal Code ("Enabling Ordinance"), incorporated herein by reference, establishing rules, regulations, procedures, and requirements, including fees, for consideration of development agreements.

L. The Planning Commission of the City of Lemoore, serving as City's planning agency for the purpose of development agreements, reviewed this Agreement pursuant to Government Code Section 65867 and Chapter 9-2B-21 of the Municipal Code and recommended approval of this Agreement to the City Council.

M. The Application for this Agreement was considered by the City at a duly noticed public hearing in accordance with the Development Agreement Statute and the City Enabling Ordinance.

N. Pursuant to Chapter 9-2B-21 of the Lemoore Municipal Code, the City Council finds the Project and this Agreement are:

(1) Consistent with the objectives, policies, and general land uses specified in the general plan and any applicable specific plans;
(2) Compatible and in conformity with public convenience, general welfare, and good land use and zoning practice;
(3) Not detrimental to the health, safety, and general welfare of the city;
(4) Not adversely affecting the orderly development of property or the preservation of property values.
(5) In the best interest of City and that the public health, safety, and welfare will be served by entering into this Agreement.
(6) Will contribute to the economic growth of City.

O. City further finds the construction, completion and operation of the Project, pursuant to the terms of this Agreement, are in the vital and best interest of the City and the health, safety, and welfare of its residents, and will serve the public purpose of economic development in City and that due to the large scope of the Project, estimated length of time for full Project build out, and unforeseen future market conditions, Developer desires this Agreement, which will impact multiple aspects of the Project, in order to ensure the Project is financially viable and marketable now and in the future.

P. In order to ensure certain dedications, commitments, standards, and to facilitate economic growth and the successful completion and full build out of the Project, City is willing to enter into this Agreement.

Q. All procedures of the California Environmental Quality Act ("CEQA") have been met with respect to the Project and this Agreement by the approval of City Council Resolution No. _____ adopted on _____, 2018, which certified a Mitigated Negative Declaration.

NOW, THEREFORE, City and Developer agree as follows:

ARTICLE 1
CONVEYANCE OF PROPERTY

A. Disposition of the Property. Developer agrees to purchase the Property from City, and City agrees to sell the Property to Developer, in accordance with and subject to all of the terms, covenants, and conditions of this Agreement, for the "Purchase Price" set forth below. The conveyance of the Property shall be by "Grant Deed" substantially in the form of **Attachment No. 4**.

B. Purchase Price and Deposit. The purchase price for the Property shall be $10.00 ("Purchase Price"). The parties agree that the Purchase Price constitutes the fair market value of the Property and the rights conveyed in consideration of the Development benefits provided by Developer to the public under this Agreement. Upon opening of Escrow, Developer shall deposit the Purchase Price in Escrow ("Developer Deposit"). The Developer Deposit shall not be refundable to Developer.

C. Escrow. Within three (3) days after the Effective Date of this Agreement by both parties, the parties shall open escrow ("Escrow") with Old Republic Title Company in its Fresno office, or another escrow company mutually satisfactory to both parties ("Escrow Agent").

D. Costs of Escrow. Developer shall be solely responsible for all costs incurred during Escrow, including but not limited to: (1) the premium for the Title Policy as set forth in Article 1.K. hereof; (2) the documentary transfer taxes due, if any, with respect to the conveyance of the Property; and (3) all other usual fees, charges, and costs which arise from Escrow.

E. Escrow Instructions. This Agreement constitutes the joint escrow instructions of Developer and City, and Escrow Agent to whom these instructions are delivered is hereby empowered to act under this Agreement. The parties hereto agree to do all acts reasonably necessary to close this Escrow in the shortest possible time.

If in the opinion of either party it is necessary or convenient in order to accomplish the Closing, such party may require that the parties sign supplemental escrow instructions; provided that if there is any inconsistency between this Agreement and the supplemental escrow instructions, then the provisions of this Agreement shall control. The parties agree to execute such other and further documents as may be reasonably necessary, helpful or appropriate to effectuate the provisions of this Agreement.

F. Authority of Escrow Agent. Escrow Agent is authorized to, and shall:

(1) Pay and charge Developer for the premium of the Title Policy and any endorsements thereto as set forth in Article 1.K. and any amount necessary to place title in the condition necessary to satisfy Article 1.J. of this Agreement.

(2) Pay and charge Developer for any escrow fees, charges, and costs payable under Article 1.D. of this Agreement.

(3) Disburse funds and deliver and record the Grant Deed when both the Developer Conditions of Closing and the City Conditions of Closing have been fulfilled or waived by Developer and City.

(4) Do such other actions as necessary to fulfill its obligations under this Agreement.

(5) Do such other actions as necessary to comply with any federal, state, or local reporting requirements, including directing City and Developer to execute any required forms, statements or certificates.

G. Closing. This transaction shall close escrow ("Closing") within forty-five (45) days of the filing of the Notice of Determination pursuant to CEQA, provided all of City and Developer Conditions of Closing as set forth in Article 1.L. of this Agreement are met, but in no event later than one hundred and eighty (180) days after Effective Date ("Closing Deadline"), unless otherwise extended by written agreement of the parties. Closing shall mean the time and day the Grant Deed is filed for record with the Kings County Recorder.

H. Termination. If Escrow is not in condition to close by the Closing Deadline, then either party which has fully performed under this Agreement may, in writing, demand termination of the Escrow. Under these circumstances, Escrow Agent shall return all money, papers and documents deposited in Escrow to the respective depositing party, except that Developer Deposit shall be delivered to City in accordance with Article 1.B. above unless otherwise provided in Article 1.B. If either party makes a written demand for termination of Escrow, Escrow shall not terminate until ten (10) days after Escrow Agent shall have delivered copies of such demand to the other party at the address shown in this Agreement. If any objections are raised within that ten (10) day period, Escrow Agent is authorized to hold all money, papers, and documents until instructed by a court of competent jurisdiction or by mutual written instructions of the parties. Termination of Escrow shall be without prejudice as to whatever legal rights either party may have against the other arising from this Agreement. If no demands are made, Escrow Agent shall proceed with Closing as soon as possible.

I. Closing Procedure. Escrow Agent shall close Escrow as follows:

(1) Record the Grant Deed with instructions for the Kings County Recorder to deliver the Grant Deed to Developer.

(2) Instruct the Title Company to deliver the Title Policy to Developer and a copy of the Title Policy to City.

(3) File and deliver any informational reports, forms, statements, and certificates as required by federal, state or local law.

(4) Forward to both Developer and City a separate accounting of all funds received and disbursed for each party and copies of all executed and recorded or filed documents deposited into Escrow, with such recording and filing date and information endorsed thereon.

J. Review of Title. City shall cause Old Republic Title Company, or another title company mutually agreeable to both parties ("Title Company"), to deliver to Developer a standard preliminary title report ("Title Report") with respect to title to the Property, together with legible copies of the documents underlying the exceptions ("Exceptions") set forth in the Title Report, within fifteen (15) days after the Escrow is opened. Developer shall have the right to reasonably approve or disapprove the Exceptions; provided, however, that Developer hereby approves the following Exceptions:

(1) Property interests held by a public body or public bodies, including without limitation easements, franchises, licenses, or other property interests of the public body or public bodies, on the Property and/or within the public rights-of-way around the perimeter of the Property.

(2) The lien of any non-delinquent property taxes and assessments (to be prorated at Closing).

(3) Any incidental easements or other matters affecting title which do not preclude Developer's use of the Property as proposed herein.

(4) Such other exceptions to title as may hereafter be mutually approved by City and Developer.

Developer shall have forty-five (45) days from the date of its receipt of the Title Report to give written notice to City and Escrow Agent of Developer's approval or disapproval of any of the Exceptions. Developer's failure to give written disapproval of the Title Report within such time limit shall be deemed approval of the Title Report. If Developer notifies City of its disapproval of any Exceptions in the Title Report, City shall have the right, but not the obligation, to remove any disapproved Exceptions within fifteen (15) days after receiving written notice of the Developer's disapproval or provide assurances satisfactory to Developer that such Exception(s) will be removed on or before Closing. If City cannot or does not elect to remove any of the disapproved Exceptions within that period, Developer shall have fifteen (15) days after the expiration of the fifteen (15) day period to either give City written notice that Developer elects to proceed with purchase of the Property subject to the previously disapproved Exceptions or to give City written notice that Developer elects to terminate this Agreement. The Exceptions to title approved by Developer as provided herein shall hereinafter be referred to as the "Condition of Title."

K. Title Insurance. Upon recordation of the Grant Deed, the Title Company shall issue to Developer a California Land Title Association (CLTA) policy of title insurance ("Title Policy"), together with such endorsements as are reasonably requested by Developer, issued by the Title Company insuring that the title to the Property is vested in Developer in the condition required by Article 1.J. of this Agreement. The Title Policy shall be for the amount of $_____ [which shall not be less than the current value of the Property]. The Title Company shall provide City with a copy of the Title Policy. Developer shall be responsible for the cost of providing the Title Policy and any additional endorsements Developer desires.

L. Conditions of Closing. Closing is conditioned upon satisfaction of the following terms and conditions within the times designated below.

(1) City's Conditions of Closing. City's obligation to proceed with Closing is subject to the fulfillment by Developer or waiver by City of each and all of the conditions precedent (a) through (h), inclusive, described below ("City Conditions of Closing"), which are solely for the benefit of City, and which shall be fulfilled or waived by the time periods provided for herein:

a. City Council Approval. Prior to City's obligation to sell the Property to Developer, the City Council shall have approved this Agreement and authorized the City Manager to enter into and execute this Agreement on behalf of the City.

b. No Default. Prior to the Close of Escrow, Developer shall not be in default in any of its obligations under the terms of this Agreement and all representations and warranties of Developer contained herein shall be true and correct in all material respects.

c. Execution of Documents. City shall have executed the Grant Deed and any other documents required hereunder and delivered such documents into Escrow.

d. Payment of Funds. Prior to Closing, Developer shall have deposited all required costs of Closing into Escrow in accordance with Articles 1.B. and 1.D. hereof.

(2) Developer's Conditions of Closing. Developer's obligation to proceed with Closing of the purchase of the Property is subject to the fulfillment by City or waiver by Developer of each and all of the conditions precedent (a) through (e), inclusive, described below ("Developer Conditions of Closing"), which are solely for the benefit of Developer, and which shall be fulfilled or waived by the time periods provided for herein:

a. No Default. Prior to the Close of Escrow, City shall not be in default in any of its obligations under the terms of this Agreement and all representations and warranties of City contained herein shall be true and correct in all material respects.

b. Execution of Documents. City shall have executed the Grant Deed and any other documents required hereunder and delivered such documents into Escrow.

c. Review and Approval of Title. Developer shall have reviewed and approved the condition of title of the Property, as provided in Article 1.J. hereof.

d. Title Policy. The Title Company shall, upon payment by Developer of Title Company's regularly scheduled premium, have agreed to provide to Developer the Title Policy for the Property upon Close of Escrow, in accordance with Article 1.K. hereof.

M. Representations and Warranties.

(1) City Representations. City represents and warrants to Developer as follows:

a. Authority. City has the full right, power and lawful authority to acquire, grant, sell and convey the Property as provided herein, and the execution, performance and delivery of this Agreement by City has been fully authorized by all requisite actions on the part of City.

b. FIRPTA. City is not a "foreign person" within the parameters of the Foreign Investment in Real Property Act of 1980 ("FIRPTA") or any similar state statute, or is exempt from the provisions of FIRPTA or any similar state statute, or that City has complied and will comply with all the requirements under FIRPTA or any similar state statute.

c. No Conflict. To the best of City's knowledge, City's execution, delivery and performance of its obligations under this Agreement will not constitute a default or a breach under any contract, agreement or order to which City is a party or by which it is bound.

d. Litigation. To the best of City's knowledge, there are no actions, suits, material claims, legal proceedings or any other proceedings affecting the Property, or any portion thereof, at law or in equity, before any court or governmental agency, domestic or foreign.

e. Disclosure. City hereby represents and warrants that it

has no actual knowledge, and has not received any notice or communication from any government agency having jurisdiction over the Property, notifying such party of the presence of surface or subsurface zone Hazardous Materials in, on, or under the Property, or any portion thereof. "Actual knowledge," as used herein, shall not impose a duty of investigation, and shall be limited to the actual knowledge of current City staff and its Councilmembers, City Manager, department heads and employees.

Until Closing, City shall, upon learning of any material fact or condition that would cause any of the warranties and representations in this Article not to be true as of Closing, immediately give written notice of such fact or condition to Developer. Such exception(s) to a representation shall not be deemed a breach by City hereunder but shall constitute an exception which Developer shall have a right to approve or disapprove if such exception would have an effect on the value and/or operation of the Property. If Developer elects to close Escrow following disclosure of such information, City's representations and warranties contained herein shall be deemed to have been made as of Closing, subject to such exception(s). If, following the disclosure of such information, Developer elects to not close Escrow, then this Agreement and Escrow shall automatically terminate, and neither party shall have any further rights, obligations or liabilities hereunder. Under these circumstances the Developer Deposit and any accrued interest shall be returned to Developer.

All of the representations and warranties set forth in this Article are made with the acknowledgment that they are material, and with the intention that Developer shall rely upon them as inducements to enter into this Agreement and to perform its obligations hereunder and to close the transactions contemplated herein. The representations and warranties contained in this Article shall each survive the execution of this Agreement and Closing.

(2) Developer Representations. Developer represents and warrants to City as follows:

a. Authority. Developer has the full right, power and lawful authority to purchase and accept the conveyance of the Property, or any portion thereof, and undertake all obligations as provided herein and the execution, performance and delivery of this Agreement by Developer has been fully authorized by all requisite actions on the part of Developer.

b. Experience. Developer is an experienced developer and operator of commercial properties, or has otherwise contracted with experienced commercial developers, contractors, architects, and other professionals for the purposes of developing the Property.

c. No Conflict. To the best of Developer's knowledge, Developer's execution, delivery and performance of its obligations under this Agreement will not constitute a default or a breach under any contract, agreement or order to which Developer is a party or by which it is bound.

d. No Developer Bankruptcy. Developer is not the subject of a bankruptcy or other insolvency proceeding.

e. FIRPTA. Developer is not a "foreign person" within the parameters of FIRPTA or any similar state statute or is exempt from the provisions of FIRPTA or any similar state statute, or Developer has complied and will comply with all the requirements under FIRPTA or any similar state statute.

f. Deliveries. All documents, instruments and other information delivered by Developer to City pursuant to this Agreement are, to the best of Developer's knowledge, true, correct and complete.

g. Commissions. To the best of the Developer's knowledge, there are no broker's commissions or finder's fees payable in connection with the Property.

h. No Further Warranties As To Property; Release of City. Notwithstanding any provisions of this Agreement to the contrary, the conveyance of all or any portion of the Property shall be conveyed to the Developer in an "AS IS" condition, with no warranty, express or implied by City, as to the condition of improvements on the Property, the soil, its geology, the presence of known or unknown faults or Hazardous Materials. Any soils and environmental reports relating to the Property that City knows to be in its possession shall be provided to Developer.

i. Developer Precautions After Closing. Upon Closing, Developer shall take all necessary precautions to prevent the release into the environment of any Hazardous Materials which are located in, on or under the Property. Such precautions shall include compliance with all governmental requirements with respect to Hazardous Materials. In addition, Developer shall install and utilize such equipment and implement and adhere to such procedures as are consistent with commercially reasonable standards as respects the disclosure, storage, use, removal and disposal of Hazardous Materials.

j. Hazardous Materials Definition. For purposes of this Article, Hazardous Materials means any substance, material, or waste which is or becomes defined and is regulated as hazardous by any governmental authority, the State of California, or the United States government, but shall not include commercially reasonable amounts of such materials in the ordinary course of the development and operation of the Property which are used and stored in accordance with all applicable environmental laws, ordinances and regulations.

Until Closing, the Developer shall, upon learning of any material fact or condition which would cause any of the warranties and representations in this Article not to be true as of the Closing, immediately give written notice of such fact or condition to City. Such exception(s) to a representation shall not be deemed a breach by Developer hereunder but shall constitute an exception which City shall have a right to approve or disapprove if such exception would have an effect on the value and/or operation of the Property. If City elects to close Escrow following disclosure of such information, Developer's representations and warranties contained herein shall be deemed to have been made as of Closing, subject to such exception(s). If, following the disclosure of such information, City elects to not close Escrow, then this Agreement and Escrow shall automatically terminate, and neither party shall have any further rights, obligations or liabilities hereunder.

All of the representations and warranties set forth in this Article are made with the acknowledgment that they are material, and with the intention that City shall rely upon them as inducements to enter into this Agreement and to perform its obligations hereunder and to close the transactions contemplated herein. The representations and warranties contained in this Article shall each survive the execution of this Agreement and Closing.

N. Developer Indemnity. Upon Closing, Developer agrees to indemnify, defend and hold City, and its officers, agents, employees, and volunteers, harmless from and against any claim, action, suit, proceeding, loss, cost, damage, liability, deficiency, fine, penalty, punitive damage, or expense (including, without limitation, attorneys' fees), resulting from, arising out of, or based upon: (a) the presence, release, use, generation, discharge, storage or disposal of any Hazardous Materials on, under, in or about, or the transportation of any such Hazardous Materials to or from, the Property which occurs after Closing and is caused, directly or indirectly by the activities of Developer, including, but not limited to Developer's agents, invitees, contractors or subcontractors; or (b) the violation, or alleged violation, of any statute, ordinance, order, rule, regulation, permit, judgment or license relating to the use, generation, release, discharge, storage, disposal or transportation of Hazardous Materials on, under, in or about, to or from, the Property which occurs after Closing and is caused, directly or indirectly by the activities of Developer, including, but not limited to Developer's agents, invitees, contractors or subcontractors. For avoidance of doubt, Developer shall be responsible for and indemnify the City, as provided herein for occurrences after Closing, even in the event that the City reacquires all or a portion of the Property pursuant to the reversionary procedures outlined herein. This indemnity shall include, without limitation, any damage, liability, fine, penalty, parallel indemnity after closing cost or expense arising from or out of any claim, action, suit or proceeding for personal injury (including sickness, disease or death), tangible or intangible property damage, compensation for lost wages, business income, profits or other economic loss, damage to the natural resource or the environment, nuisance, contamination, leak, spill, release or other adverse effect on the environment. At the request of Developer, City shall cooperate with and assist Developer in its defense of any such claim, action, suit, proceeding, loss, cost, damage, liability, deficiency, fine, penalty, punitive damage, or expense; provided that City shall not be obligated to incur any expense in connection with such cooperation or assistance. The indemnity obligations herein shall not extend to, and Developer shall not be required to indemnify the City for occurrences caused directly by the City, its employees, contractors, or agents; or for claims, actions, fines, penalties, or the like resulting from the City's passive ownership of the Property.

ARTICLE 2
CONSTRUCTION COVENANT

A. Construction Covenant. Within three (3) business days of the Effective Date, this Agreement shall be recorded against the Property and constitute a covenant running with the land, governing the development of the Property ("Construction Covenant").

B. Covenants Run With Land. During the Term of this Agreement, all covenants and agreements contained in this Agreement shall be construed as covenants running with the land and all rights and powers given to and obligations imposed upon the respective parties shall be construed as binding upon the successors and assigns of the parties hereto. All of Developer's Obligations to Construct Developer Improvements related to a given parcel, except as provided hereunder shall terminate and shall become null and void upon completion of the Developer Improvements and the recordation of a Release of Construction Covenant with respect to the given Parcel or Parcels. All of City's Obligations to Construct City Improvements shall terminate upon City's completion and acceptance of such improvements in accordance with this Agreement.

C. Covenants For Benefit of City. All covenants without regard to technical classification or designation shall be binding for the benefit of City, and such covenants shall run in favor of City for the entire period during which such covenants shall be in force and effect, without regard to whether City is or remains an owner of any land or interest therein to which such covenants relate. City, in the event of any breach of any such covenants, shall have the right to exercise all the rights and remedies and to maintain any actions at law or suits in equity or other proper proceedings to enforce the curing of such breach.

D. Partial Release of Construction Covenant.

(1) Upon completion of construction and City's issuance of a certificate of occupancy, with respect to any single Parcel, or group of Parcels, as the case may be, City shall promptly cause to be recorded a "Release of Construction Covenant," substantially in the form of **Attachment No. 6,** as it relates to that Parcel or Parcels.

(2) City shall not unreasonably withhold such Release of Construction Covenant.

(3) The Release of Construction Covenant shall relieve the Parcel, Parcel or Property, as the case may be, and the owner thereof, from all Developer Obligations related to that Parcel, Parcels, or Property under this Agreement and the Release of Construction Covenants shall so state.

(4) If City refuses or fails to record the Release of Construction Covenant, after written request from Developer, City shall, within fifteen (15) days of written request therefor, provide Developer with a written statement of the reasons City refused or failed to furnish the Release of Construction Covenant. The statement shall also contain City's opinion of the actions the Developer must take to obtain the Release of Construction Covenant. The Release of Construction Covenants is not a notice of completion as referred to in Section 3093 of the California Civil Code.

E. Partial Assignment and Assumption of Development Agreement. The Parties acknowledge that in developing the Property, the Developer may have the need or opportunity to sell a Parcel prior to the completion of Developer Improvements on that Parcel. The City further acknowledges that the sale of Parcels to third party who intend to own and develop a Parcel consistent with the terms and conditions of this Agreement, is consistent with the goals of the Project and will lead to the ultimate buildout of the Project. Therefore, notwithstanding subsection (1) above, upon the written request of Developer, City may approve a Partial Assignment and Assumption Agreement between Developer and the third-party purchaser, wherein Developer assigns and the third party purchaser assumes all of Developer's rights, title, interests and obligations in this Agreement, except with respect to the reversionary interest of City in the Parcel, which shall be specifically excluded from the Partial Assignment and Assumption Agreement. Assignments will be considered on a case by case basis where the City finds that the third-party purchaser has experience and financial ability to complete Developer Improvements related to that Parcel. City's consent to such assignment shall not be unreasonably withheld. Developer shall be credited with completion of Developer Improvements on assigned Parcels and shall remain responsible to fulfill the total Developer Improvement obligations in this Agreement.

F. Subordination. Notwithstanding the forgoing, Developer's commercial lenders may request the City to subordinate this Agreement to Developer's construction financing. In such event, and upon such request from Developer, City shall cooperate with Developer and Developer's commercial lender in the execution and recordation of a Subordination Agreement, in a form acceptable to Developer's commercial lender. City's consent to subordination shall not be unreasonably withheld, so long as the proposed development is consistent with this Agreement.

ARTICLE 3
DEVELOPMENT OF THE PROPERTY

A. Developer's Obligation to Construct Developer Improvements. Developer shall develop or cause the development in accordance with the Schedule of Performance (**Attachment No. 5**); the Approved Preliminary Site Plan (**Attachment No. 2**); the Approved Preliminary Elevations (**Attachment No. 3**); the

City of Lemoore Municipal Code; and the Parcel Specific Site Plans and Improvement Plans as submitted by Developer and approved by City as set forth in this Article 3. Before commencement of construction of the Developer Improvements or other related works of improvement upon or adjacent to the Property, Developer shall, at its own expense, secure or cause to be secured any and all necessary governmental approvals, including, but not limited to the approval of Parcel Specific Site Plans, Improvement Plans, building permits, and grading permits. Nothing in this Agreement is intended to or shall operate to commit City's discretion with respect to any such approvals which may be required by Developer with respect to the Developer Improvements.

(1) Approved Preliminary Site Plan. As of the Effective Date, the Preliminary Site Plan attached hereto as **Attachment No. 2** shall be known as the "Approved Preliminary Site Plan." Developer shall construct the Project consistent with the Approved Preliminary Site Plan ("Approved Preliminary Site Plan").

a. Parcel Specific Site Plan. For each Parcel being developed by Developer, Developer shall submit to the City Manager, for initial review, a Parcel Specific Site Plan. The City Manager shall have five (5) business days to review and confirm whether the Parcel Specific Site Plan is materially consistent with the Approved Preliminary Site Plan. Provided the Parcel Specific Site Plan is deemed a complete submission by the City and materially consistent with the Approved Preliminary Site Plan, within the same five (5) business days, the City Manager shall distribute the Parcel Specific Site Plan for Expedited Review In the event the City Manager determines that the Parcel Specific Site Plan is not consistent with the Approved Preliminary Site Plan, the City Manager shall notify Developer, in writing, within the same five (5) business days with an explanation of the inconsistency. Developer shall then have the option of meeting and conferring with the City Manager regarding the inconsistency; submitting the Parcel Specific Site Plan to the Planning Commission for approval; or, submitting a revised Parcel Specific Site Plan, consistent with the City Manager's comments. For purposes this Agreement, Expedited Review means the City shall have fourteen (14) business days from the date distributed by City Manager to either "review and respond" or "review and approve" the Parcel Specific Site Plan. Notwithstanding the foregoing, if City staff, via the Expedited Review process approves the Parcel Specific Site Plan with conditions unacceptable to Developer, or disapproves Parcel Specific Site Plan, Developer may file an appeal to the Planning Commission provided such appeal is made in writing and delivered to the City Manager not later than fifteen (15) days following the decision of City staff which is the subject of Developer's appeal.

(2) Approved Preliminary Elevations. As of the Effective Date, the Elevations attached hereto as **Attachment No. 3** shall be known as the "Approved Preliminary Elevations." Developer shall construct the Project consistent with the Approved Preliminary Elevations.

a. Improvement Plans. Prior to construction of any portion of the Project, Developer shall submit to City Manager detailed construction plans and drawings with respect to the Developer Improvements for that particular Parcel, including, as necessary, a grading plan, which shall have been prepared by a registered civil engineer ("**Improvement Plans**"). For each Parcel being developed by Developer, Developer shall submit to the City Manager, for initial review, a Parcel Specific Improvement Plans. The City Manager shall have five (5) business days to review and confirm whether the Parcel Specific Improvement Plans are materially consistent with the Approved Preliminary Elevations and Approved Preliminary Site Plan. Provided the Parcel Specific Improvement Plans are deemed complete by the City and materially consistent with the Approved Preliminary Elevations and Site Plan, within the same five (5) business days, the City Manager shall distribute the Parcel Specific Improvement Plans for Expedited Review In the event the City Manager determines that the Parcel Specific Improvement Plans are not consistent with the Approved Preliminary Elevations and Site Plan, the City Manager shall notify Developer, in writing, within the same five (5) business days with an explanation of the inconsistency.

Developer shall then have the option of meeting and conferring with the City Manager regarding the inconsistency; submitting the Parcel Specific Improvement Plans to the Planning Commission for approval; or, submitting a revised Parcel Specific Site Plan, consistent with the City Manager's comments. For purposes this Agreement, Expedited Review means the City shall have fourteen (14) business days from the date distributed by City Manager to either "review and respond" or "review and approve" the Parcel Specific Improvement Plans. Notwithstanding the foregoing, if City staff, via the Expedited Review process approves the Parcel Specific Site Plan with conditions unacceptable to Developer, or disapproves Parcel Specific Site Plan, Developer may file an appeal to the Planning Commission provided such appeal is made in writing and delivered to the City Manager not later than fifteen (15) days following the decision of City staff which is the subject of Developer's appeal.

(3) Permits. Prior to construction of any portion of the Project, Developer shall obtain from City, or other governmental agency with jurisdiction over the Project, or a portion of the Project, any required permits, including, but not limited to grading permits and building permits.

(4) City Review and Approval. Subject to the provisions of this subsection (4) City shall have the right to review and approve the above described Plans and Permits in its reasonable discretion. Developer shall not be entitled to any monetary damages or compensation as a result of the City's disapproval or failure to approve or disapprove such Plans and Permits.

Notwithstanding any provision of this Agreement to contrary effect, the times for review and action upon plans or drawings by City shall not be deemed to be commenced unless and until the corresponding submittals by Developer are deemed by the City to be complete and in accordance with all normal requirements of City for the consideration of plans or drawings.

(5) Consultation and Coordination. During the preparation of Parcel Specific Site Plans or any related Improvement Plans, staff of City and Developer shall hold regular progress meetings to coordinate the preparation of, submission to, and review of the Parcel Specific Site Plans and/or Improvement Plans. The staff of City and Developer shall communicate and consult informally as frequently as is necessary to ensure that the formal submittal of any documents to City can receive prompt and thorough consideration. The City Manager shall designate an employee to serve as the project manager, on behalf of the City, who is responsible for the coordination of City's activities under this Agreement and for expediting approval of Parcel Specific Site Plans, Elevation modifications and/or Improvement Plans.

(6) Defects in Plans. City shall not be responsible either to Developer or to third parties in any way for any defects in the Plans and Permits, nor for any structural or other defects in any work done according to the approved Plans and Permits, nor for any delays reasonably caused by the review and approval processes established by this Article. Developer shall hold harmless, indemnify and defend City, and its officers, agents, employees, and volunteers, from and against any claims, suits for damages to property or injuries to persons arising out of or in any way relating to defects in the Plans and Permits, including without limitation the violation of any laws, and for defects in any work done according to the approved Plans and Permits.

(7) Plans and Permits. For purposes of this Agreement, the phrase Plans and Permits refers to the Approved Preliminary Site Plan, the Approved Elevations, the Approved Parcel Specific Site Plan, the Approved Improvement Plans and Permits (Building and Grading).

(8) Cost of Construction. All of the costs of planning, designing, developing, and constructing the Developer Improvements, including site preparation and grading, shall be borne solely by the Developer.

(9) Insurance Requirements. Developer shall take out prior to commencement of construction of the Developer Improvements, and maintain or shall cause its contractor to take out and maintain until the issuance of the Release of Construction Covenants pursuant to Article 3.K of this Agreement, a comprehensive general liability policy in the amount of Five Million Dollars ($5,000,000) combined single limit policy, and if Developer owns automobiles, a comprehensive automobile liability policy in the amount of Two Million Dollars ($2,000,000), combined single limit, or such other policy limits as City may approve at its discretion, including contractual liability, as shall protect Developer and City from claims for such damages, and which policy shall be issued by an "A" rated insurance carrier. Such policy or policies shall be written on an occurrence form. Developer shall also furnish or cause to be furnished to City evidence satisfactory to City that the Developer and any contractor with whom it has contracted for the performance of work on The Property or otherwise pursuant to this Agreement carries workers' compensation insurance as required by law. Developer shall furnish a notarized certificate of insurance countersigned by an authorized agent of the insurance carrier on a form approved by City setting forth the general provisions of the insurance coverage. This countersigned certificate shall name City and its respective officers, agents, employees, and volunteers, as additionally insured parties under the policy, and the certificate shall be accompanied by a duly executed endorsement evidencing such additional insured status. The certificate and endorsement by the insurance carrier shall contain a statement of obligation on the part of the carrier to notify City of any material change, cancellation or termination of the coverage at least thirty (30) days in advance of the effective date of any such material change, cancellation or termination. Coverage provided hereunder by Developer shall be primary insurance and not be contributing with any insurance maintained by City, and the policy shall contain such an endorsement. The insurance policy or the endorsement shall contain a waiver of subrogation for the benefit of City. The required certificate shall be furnished by Developer at the time set forth therefor in the Schedule of Performance or, if no time is specified, prior to the commencement of construction of the Developer Improvements.

(10) Rights of Access. Prior to the issuance of a Release of Construction Covenants (as specified in Section II.K of this Agreement), for purposes of assuring compliance with this Agreement, including construction of the Developer Improvements, representatives of City shall have the right of access to the Property conveyed to Developer without charges or fees, at normal construction hours during the period of construction. City representatives shall comply with all safety rules during any such inspection.

(11) Compliance with Laws. Developer shall carry out the design, construction and operation of the Developer Improvements in conformity with all applicable laws, including all applicable state labor standards, City zoning and development standards, building, plumbing, mechanical and electrical codes, and all other provisions of the City Municipal Code, and all applicable disabled and handicapped access requirements, including without limitation the Americans With Disabilities Act, 42 U.S.C. Section 12101, et seq., California Government Code Section 4450, et seq., California Government Code Section 11135, et seq., and the Unruh Civil Rights Act, Civil Code Section 51, et seq.

(12) Nondiscrimination in Employment. Developer certifies and agrees that all persons employed or applying for employment by it, its affiliates, subsidiaries, or holding companies, and all subcontractors, bidders and vendors, are and will be treated equally by it without regard to, or because of any protected class under State of California or federal law.

(13) Taxes and Assessments. Developer shall pay prior to delinquency all ad valorem real estate taxes and assessments on the Property conveyed to Developer. Developer shall remove or have removed any levy or attachment made on any portion of the Property or assure the satisfaction thereof within a reasonable time. Developer shall not apply for or receive any exemption from the payment of property taxes or assessments on any interest in or to the Property or the Developer Improvements.

(14) No Encumbrances. Developer shall not encumber by deed of trust, mortgage or any other

security instrument, all or a part of the Property at any time prior to the City's Release of Construction Covenants, on any particular Parcel or Parcels, without the advance and express written consent of City, and upon such terms and conditions as City may require.

B. City's Obligation to Construct City Improvements. City shall develop or cause substantial development of the City Improvements, as described in **Attachment No. 8**, in accordance with the Schedule of Performance (**Attachment No. 5**), consistent with the City approved Infrastructure and Improvement Plans, and the terms and conditions of this Agreement. City's development and construction of City Improvements is a material term of this Agreement and a material factor which induced Developer to enter into this Agreement.

(1) Consultation and Coordination. During the preparation of the City's Infrastructure and Improvement Plans, staff of City and Developer shall hold regular progress meetings to coordinate the preparation of, submission to, and review of the City's Improvement Plans. The staff of City and Developer shall communicate and consult informally as frequently as is necessary to ensure that the City's Improvement Plans are approved in a time and manner consistent with the Performance Schedule and the terms and conditions of this Agreement.

(2) Failure to Approve Infrastructure and Improvement Plans. City's failure to approve City's Infrastructure and Improvement Plans which are consistent with this Agreement within a reasonable time following execution of this Agreement shall constitute a material breach of this Agreement by City.

(3) Cost of Construction. All of the costs of planning, designing, developing, and constructing the City's Improvements, including site preparation and grading, shall be borne solely by the City, at no cost to Developer. The cost of the City Improvements shall not in any way cloud the title of the Property, including but not limited any covenant or lien imposed on the Property, by City, requiring future reimbursement for the cost of City's Improvements. City shall keep the Property free and clear of mechanic's or materialmen liens, or other similar type liens.

(4) Rights of Access. At all times from and after the Effective Date, Developer grants the City a temporary license to enter upon the Property for purposes of planning and constructing to completion, City's Improvements.

(5) Indemnity. City shall indemnify, defend and hold Developer and the Property free and harmless from all loss, cost, expense (including court costs and fees of consultants, experts, and attorneys), damage, claim, lien, or liability to the extent arising from such activities of City upon the Property and from all mechanics liens and other liens to the extent resulting from any such conduct of City, or its agents, employees, contractors and subcontractors.

(6) Compliance with Laws. Developer shall carry out the design, construction and operation of the Developer Improvements in conformity with all applicable laws, including all applicable state labor standards, City zoning and development standards, building, plumbing, mechanical and electrical codes, and all other provisions of the City Municipal Code, and all applicable disabled and handicapped access requirements, including without limitation the Americans With Disabilities Act, 42 U.S.C. Section 12101, et seq., California Government Code Section 4450, et seq., California Government Code Section 11135, et seq., and the Unruh Civil Rights Act, Civil Code Section 51, et seq.

(7) Dedication to City. Upon completion of the City Improvements and upon City request, Developer shall dedicate to the City and the City shall accept from Developer, by way of an Easement for Right of Way and Utility Purpose, all City Improvements on, under or within the Property.

ARTICLE 4
PARCEL MAP

A. Parcel Map. From and after the Effective Date, and concurrent with City's development of City's construction of City's Improvements, Developer, at Developer's sole cost and expense, shall process and obtain City approval of a Parcel Map which subdivides the Property consistent with the Approved Preliminary Site Plan.

ARTICLE 5
DEFAULTS AND REMEDIES

A. Default Remedies. Subject to the extensions of time set forth in Article 6.B. of this Agreement, failure by either party to perform any action or covenant required by this Agreement within the time periods provided herein following notice and failure to cure as described hereafter, constitutes a "Default" under this Agreement. A party claiming a Default shall give written Notice of Default to the other party specifying the Default complained of. Except as otherwise expressly provided in this Agreement, the claimant shall not institute any proceeding against any other party, and the other party shall not be in Default if such party within thirty (30) days from receipt of such Notice immediately, with due diligence, commences to cure, correct or remedy such failure or delay and shall complete such cure, correction or remedy with diligence.

B. Institution of Legal Actions. In addition to any other rights or remedies and subject to the restrictions otherwise set forth in this Agreement, either party may institute an action at law or equity to seek specific performance of the terms of this Agreement, or to cure, correct or remedy any Default, to recover damages for any Default, or to obtain any other remedy consistent with the purpose of this Agreement. Such legal actions must be instituted in the Superior Court of the County of Kings, State of California.

C. Termination by the Developer Prior to Conveyance of the Property. In the event that prior to the conveyance of the Property Developer is not in default under this Agreement and: (1) City does not tender title pursuant to the Grant Deed in the manner and condition and by the date provided in this Agreement; or (2) one or more of the Developer Conditions of Closing is not fulfilled on or before the time set forth in the Schedule of Performance and such failure is not caused by Developer; or (3) any default of City prior to Closing is not cured within the time set forth in Article 3.A. hereof, after written demand by Developer; or (5) Developer timely disapproves the environmental condition of the Property pursuant to Article 1.N. hereof; then this Agreement may, at the option of Developer, be terminated by written Notice thereof to City. From the date of the Notice of termination of this Agreement by Developer to City and thereafter this Agreement shall be deemed terminated and there shall be no further rights or obligations between the parties with respect to the Property by virtue of or with respect to this Agreement. Under these circumstances, Developer shall be entitled to a return of the Developer Deposit.

D. Termination by the City Prior to Conveyance of the Property. In the event that prior to conveyance of the Property City is not in Default under this Agreement and: (1) Developer (or any successor in interest) assigns or attempts to assign the Agreement or any rights therein or in the Property in violation of this Agreement; or (2) one or more of the City Conditions of Closing is not fulfilled on or before the time set forth in the Schedule of Performance and such failure is not caused by City; or (3) Developer is otherwise in default of this Agreement and fails to cure such default within the time set forth in Article 3.A. hereof; then this Agreement and any rights of Developer or any assignee or transferee with respect to or arising

out of the Agreement, shall, at the option of City, be terminated by City by written Notice thereof to Developer. From the date of the Notice of termination of this Agreement by City to Developer and thereafter this Agreement shall be deemed terminated and there shall be no further rights or obligations between the parties.

E. Reentry and Revesting of Title in the City for Failure to Timely Commence and Complete Developer Improvements or for an Unlawful Transfer.

(1) After the Closing and Prior to Completion of the Developer Improvements. With respect to Parcels currently affected by the Construction Covenant, and not with respect to Parcels for which the Construction Covenant has been released, in whole or part, City has the right, at its election, to reenter and take possession of the Property transferred to Developer by Grant Deed pursuant to this Agreement, with all improvements thereon, and terminate and revest in City the estate conveyed to Developer if after the Closing and before the furnishing of the Release of Construction Covenants, Developer (or its successors in interest) shall:

a. Fail to start the construction of the Developer Improvements as required by this Agreement for a period of thirty (30) days after written notice thereof from City; or

b. Abandon or substantially suspend construction of the Developer Improvements required by this Agreement for a period of thirty (30) days after written notice thereof from the City, unless such abandonment or suspension is not caused by Developer's acts or omissions or as provided for in Article 4.B.; or

c. Fail to complete the Developer Improvements and open Conforming Business Activities within the time limits set forth in the Schedule of Performance; or

d. Contrary to the provisions of Article 4.C., Transfer or suffer any involuntary Transfer in violation of this Agreement.

(2) Conditions of Reentry and Revesting Rights. Except where the City has agreed to subordinate the Construction Covenant, City's right to reenter, terminate and revest is not subject to any mortgage or deed of trust. The Grant Deed shall contain appropriate reference and provision to give effect to City's right as set forth in this Article, to reenter and take possession of the Property, with all improvements thereon, and to terminate and revest in City the estate conveyed to Developer.

(3) Perfecting Reversionary Interest. City may perfect its revisionary interest by recording a Notice of Reversionary Interest in substantially the form set forth in **Attachment No. 6**.

ARTICLE 6
GENERAL PROVISIONS

A. Notices, Demands and Communications Between the Parties. Any approval, disapproval, demand, document or other notice ("Notice") which either party may desire to give to the other party under this Agreement must be in writing and may be given by any commercially acceptable means to the party to whom the Notice is directed at the address of the party as set forth below, or at any other address as that party may later designate by Notice.

To City: City Manager
City of Lemoore
119 Fox Street
Lemoore, California 93245
Email: nolson@lemoore.com
Tel: (559) 924–6700

To Developer: KKAL, LP,
265 E River Park Circle Suite 270
Fresno CA 93720
Attn: John Kashian
Email: jkashian@lance-kashian.com
Tel: (559) 437-4812

Any written notice, demand or communication shall be deemed received: immediately if delivered by hand; 24 hours after delivery to a receipted, overnight delivery service such as Federal Express; 24 hours after delivery be e-mail with an acknowledgement of receipt by the intended recipient; and on the fourth (4th) day from the date it is postmarked if delivered by registered or certified mail.

B. Enforced Delay; Extension of Times of Performance. In addition to specific provisions of this Agreement, performance by either party hereunder shall not be deemed to be in default, and all performance and other dates specified in this Agreement shall be extended, where delays or defaults are due to: War; insurrection; riots; floods; earthquakes; fires; casualties; acts of God; acts of the public enemy; governmental restrictions; litigation; acts or omissions of the other party; or acts or failures to act of City or any other public or governmental agency or entity (other than the acts or failures to act of City which shall not excuse performance by City). Notwithstanding anything to the contrary in this Agreement, an extension of time for any such cause shall be for the period of the enforced delay and shall commence to run from the time of the commencement of the cause, if Notice by the party claiming such extension is sent to the other party within thirty (30) days of the commencement of the cause. Times of performance under this Agreement may also be extended in writing by the mutual agreement of City and Developer. Notwithstanding any provision of this Agreement to the contrary, the lack of funding to complete the Developer Improvements shall not constitute grounds of enforced delay pursuant to this Article.

C. Transfers of Interest in Property or Agreement.

(1) Prohibition. The qualifications and identity of Developer, as well as Developer's proposal, are of particular concern and benefit to City. Therefore, for the period commencing upon the date of this Agreement and until furnishing of the Release of Construction Covenants: (a) no voluntary or involuntary successor in interest of Developer shall acquire any rights or powers under this Agreement; (b) nor shall Developer make any total or partial sale, transfer, conveyance, assignment, subdivision, refinancing or lease of the whole or any part of the Property or the Developer Improvements thereon; (c) nor shall Developer make an assignment for financing purposes or otherwise encumber the Property; collectively referred to herein as a "**Transfer,**" without the prior written approval of the City, except as expressly set forth herein.

(2) Permitted Transfers. Except as provided in Article 2 of this Agreement, City approval of a Transfer shall not be required in connection with any of the following:

a. Any Transfer to an entity or entities in which Developer retains a minimum of fifty-one percent (51%) of the ownership or beneficial interest and retains management and control of the transferee

entity or entities.

b. Leases for the operation of office, retail or other similar businesses after completion of the Developer Improvements.

In the event of a Transfer by Developer under subparagraph (a) above not requiring the City's prior approval, Developer nevertheless agrees that at least thirty (30) days prior to such Transfer it shall give written notice to City of such assignment and satisfactory evidence that the assignee has assumed in writing, through an assignment and assumption agreement in a form satisfactory to City's legal counsel, all of the obligations of this Agreement. Such assignment shall not, however, release the assigning Developer from any obligations to City hereunder.

(3) City Consideration of Requested Transfer. Except as provided in Article 2 of this Agreement, City agrees that it will not unreasonably withhold approval of a request for approval of a Transfer made pursuant to this Article, provided Developer delivers written Notice to City requesting such approval. Such Notice shall be accompanied by evidence regarding the proposed transferee's development and/or operational qualifications and experience, and its financial commitments and resources, in sufficient detail to enable City to evaluate the proposed assignee or purchaser pursuant to the criteria set forth in this Article and as reasonably determined by City. City may, in considering any such request, take into consideration such factors as: (a) the quality of any new and/or replacement operator; (b) the sales tax revenues projected to be received from the Property; (c) the transferee's past performance as developer and operator of commercial facilities; (d) the current financial condition of the transferee, and similar factors. City agrees not to unreasonably withhold its approval of any such requested Transfer, taking into consideration the foregoing factors.

An assignment and assumption agreement in form satisfactory to City's legal counsel shall also be required for all proposed Transfers requiring City approval. Within thirty (30) days after the receipt of Developer's written Notice requesting City approval of a Transfer pursuant to this Article, City shall either approve or disapprove such proposed assignment or shall respond in writing by stating what further information, if any, City reasonably requires in order to determine the request complete and determine whether or not to grant the requested approval. Upon receipt of such a response, Developer shall promptly furnish to City such further information as may be reasonably requested.

D. Successors and Assigns. All of the terms, covenants and conditions of this Agreement shall be binding upon Developer and its permitted successors and assigns. Whenever the term "Developer" is used in this Agreement, such term shall include any other permitted successors and assigns as herein provided.

E. Assignment by City. The City may assign or transfer any of its rights or obligations under this Agreement with the approval of Developer, which approval shall not be unreasonably withheld.

F. Relationship Between City and Developer. It is hereby acknowledged that the relationship between City and Developer is not that of a partnership or joint venture, and that City and Developer shall not be deemed or construed for any purpose to be the agent of the other. Except as expressly provided herein or in the Attachments hereto, City shall not have any rights, powers, duties or obligations with respect to the development, operation, maintenance or management of the Developer Improvements.

G. City Approvals and Actions. City shall maintain authority over this Agreement and the authority to implement this Agreement through the City Manager (or his/her duly authorized representative). The City Manager shall have the authority to make approvals, issue interpretations, waive provisions, and/or enter into certain amendments of this Agreement on behalf of City so long as such actions do not materially

change the uses or development permitted on the Property, and such approvals, interpretations, waivers and/or amendments may include extensions of time to perform as specified in the Schedule of Performance. All other material and/or substantive interpretations, waivers, or amendments shall require the consideration, action and written consent of the City Council.

H. Counterparts. This Agreement may be signed in multiple counterparts which, when signed by all parties, shall constitute a binding agreement. This Agreement shall be executed in three (3) originals, each of which is deemed to be an original.

I. Integration. This Agreement contains the entire understanding between the parties relating to the transaction contemplated by this Agreement, notwithstanding any previous negotiations or agreements between the parties or their predecessors in interest with respect to all or any part of the subject matter hereof. All prior or contemporaneous agreements, understandings, representations and statements, oral or written, are merged in this Agreement and shall be of no further force or effect. Each party is entering this Agreement based solely upon the representations set forth herein and upon each party's own independent investigation of any and all facts such party deems material. This Agreement includes Attachment Nos. 1 through 9, which are incorporated herein.

J. Real Estate Brokerage Commission. City and Developer each represent and warrant to the other that no broker or finder is entitled to any commission or finder's fee in connection with Developer's acquisition of the Property from the City. The parties agree to defend and hold harmless the other party from any claim to any such commission or fee from any other broker, agent or finder with respect to this Agreement which is payable by such party.

K. Interpretation. As used in this Agreement, masculine, feminine or neuter gender and the singular or plural number shall each be deemed to include the others where and when the context so dictates. The word "including" shall be construed as if followed by the words "without limitation." This Agreement has been prepared with input from both parties and shall be interpreted as though prepared jointly by both parties.

L. No Waiver. Any failures or delays by either party in asserting any of its rights and remedies as to any Default shall not operate as a waiver of any Default or of any such rights or remedies or deprive either such party of its right to institute and maintain any actions or proceedings which it may deem necessary to protect, assert or enforce any such rights or remedies. Nor shall a waiver by either party of a breach of any of the covenants, conditions or agreements under this Agreement to be performed by the other party shall not be construed as a waiver of any succeeding breach of the same or other covenants, agreements, restrictions or conditions of this Agreement.

M. Modifications. Any alteration, change, or modification of or to this Agreement, in order to become effective, shall be made in writing, and in each instance signed on behalf of each party.

N. Severability. If any term, provision, condition or covenant of this Agreement or its application to any party or circumstances shall be held, to any extent, invalid or unenforceable, the remainder of this Agreement, or the application of the term, provision, condition or covenant to persons or circumstances other than those as to whom or which it is held invalid or unenforceable, shall not be affected, and shall be valid and enforceable to the fullest extent permitted by law.

O. Legal Advice. Each party represents and warrants to the other the following: they have carefully read this Agreement, and in signing this Agreement, they do so with full knowledge of any right which they may have; they have received independent legal advice from their respective legal counsel as to the matters set forth in this Agreement, or have knowingly chosen not to consult legal counsel as to the matters set forth

in this Agreement; and, they have freely signed this Agreement without any reliance upon any agreement, promise, statement or representation by or on behalf of the other party, or their respective agents, employees, or attorneys, except as specifically set forth in this Agreement, and without duress or coercion, whether economic or otherwise.

P. Prevailing Wages. City makes no representation whether prevailing wages apply to the Development. Developer is solely responsible to determine the applicability of prevailing wages and pay and cause its contractor and subcontractors to pay prevailing wages as applicable to the Development. Developer shall indemnify, defend and hold City harmless against any claim for damages, compensation, fines, penalties or other amounts arising out of the failure or alleged failure of any person or entity (including Developer, its contractors and subcontractors) to pay prevailing wages.

Q. Cooperation. Each party agrees to cooperate with the other in this transaction and, in that regard, to sign any and all documents which may be reasonably necessary, helpful, or appropriate to carry out the purposes and intent of this Agreement including, but not limited to, releases or additional agreements consistent with this Agreement.

R. Rights and Remedies Are Cumulative. Except as otherwise expressly stated in this Agreement, the rights and remedies of the parties are cumulative, and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

S. Applicable Law. The laws of the State of California shall govern the interpretation and enforcement of this Agreement. Venue for any suit arising from this Agreement shall be in Kings County Superior Court.

T. Non-Liability of Officials and Employees of the City. No member, official or employee of the City shall be personally liable to the Developer, or any successor in interest, in the event of any Default or breach by the City or for any amount which may become due to the Developer or its successors, or on any obligations under the terms of this Agreement.

U. Attorneys' Fees. In any action between the parties to interpret, enforce, reform, modify, rescind, or otherwise in connection with any of the terms or provisions of this Agreement, the prevailing party in the action shall be entitled, in addition to damages, injunctive relief, or any other relief to which it might be entitled, reasonable costs and expenses including, without limitation, litigation costs and reasonable attorneys' fees.

V. Precedence of Documents. If there is any conflict between this Agreement, supplemental escrow instructions, and the Developer proposal, the order of precedence for resolving conflicts shall be as follows: first this Agreement, second the supplemental escrow instructions, and third the Developer proposal.

W. Term. The term of this Agreement shall be consistent with buildout of 14 years from the Effective Date unless otherwise extended by the Parties, in writing. Any such extension requires the express approval of the City Council of the City of Lemoore.

X. Effective Date. The Effective Date of this Agreement shall be the later to occur of the following: (a) the last date set forth opposite the signatures of the parties at the end of this Agreement; or, (b) the date the City Council approves this Agreement, provided, that the City Manager shall execute this Agreement not later than five (5) business days following City Council approval.

Z. Representation of Developer. Developer represents and warrants to City as follows:

Developer shall not, and does hereby waive, any and all claims or defenses Developer may have as to City's right to exercise its reversionary interest, as set forth in Article 5. E. of this Agreement, based upon the fact that this Agreement, the Grant Deed, and/or the Notice of Reversionary Interest are vague, ambiguous, or unenforceable; or, because the specific terms of this Agreement are not set forth in the Grant Deed.

IN WITNESS WHEREOF, the City and the Developer have executed this Disposition and Development Agreement as of the date set forth above.

_____

_____ Date: _____
Principal

CITY OF LEMOORE

_____ Date: _____
City Manager

ATTEST:

_____ Date: _____
City Clerk

APPROVED AS TO FORM:

LOZANO SMITH

_____ Date: _____
Jenell Van Bindsbergen, City Attorney

J:\wdocs\01943\006\agt\00600165.DOC

ATTACHMENT NO. 1
LEGAL DESCRIPTION AND DEPICTION OF PROPERTY
1655 South 19th Avenue, Lemoore, CA 93245

The land referred to is situated in the County of Kings, City of Lemoore, State of California, and is described as follows:

That certain parcel of land lying in both the North half of the Northeast quarter of Section 21, and the Southeast quarter of Section 16, Township 19 South, Range 20 East, Mount Diablo Baseline and Meridian, according to the United States Government Township Plat approved October 28, 1869, in the City of Lemoore, County of Kings, State of California, more particularly described as follows:

All of Lot 11 of Tract No. 614, recorded in Volume 14 of Licensed Surveyor's Plats at Page 42, in said County.

TOGETHER WITH the North half of the Northeast quarter of said Section 21;

EXCEPTING THEREFROM the West thirty feet of the Northeast quarter of said Section 21; and the South five acres of the North half of the Northeast quarter of said Section 21.

ALSO EXCEPTING THEREFROM, the following described property:

COMMENCING at the North quarter corner of said Section 21; thence along the West line of said North half of the Northeast quarter, South 00° 26' 45" West, a distance of 153.84 feet; thence perpendicular to said West line, South 89° 33' 15" East, a distance of 30.00 feet to a point on the Easterly right-of-way line of California Highway 41, said point being the true point of beginning; thence continuing along a line perpendicular to said West line, South 89° 33' 15" East, a distance of 208.00 feet; thence South 84° 14' 00" East, a distance of 125.01 feet to a point 155.00 feet Southerly from (measured at right angle to) the North line of said Northeast quarter of Section 21; thence parallel with said North line, South 87° 54' 56" East, a distance of 525.74 feet; thence along a line parallel with said West line, South 00° 26' 45" West, a distance of 1083.85 feet to the North line of the South 5 acres of said North half; thence along said North line of the, South 5 acres, North 88° 00' 10" West, a distance of 858.31 feet to a line 30.00 feet East from (measured at right angle to) the West line of the aforementioned North half, also being the aforementioned Easterly right-of-way line of California Highway 41; thence along said Easterly right-of way line, North 00° 26' 45" East, a distance of 1087.24 feet to the true point of beginning.

Basis of Bearings is the North line of the Northeast quarter of Section 21, Township 19 South, Range 20 East, Mount Diablo Baseline and Meridian, which bears South 87° 54' 56" East, as shown on the Map recorded in Book 8 of Parcel Maps at Page 80, Kings County Records.

EXCEPTING THEREFROM that portion thereof described in the Grant Deed to the State of California, recorded January 19, 1996, as Instrument No. 96-01168 of Official Records.

ALSO EXCEPTING THEREFROM those portions thereof granted to City of Lemoore, a municipal corporation, "for public road and utility purposes," in the Grant Deeds recorded August 21, 2002, as Instrument Nos. 02-18214 and 02-18216 of Official Records.

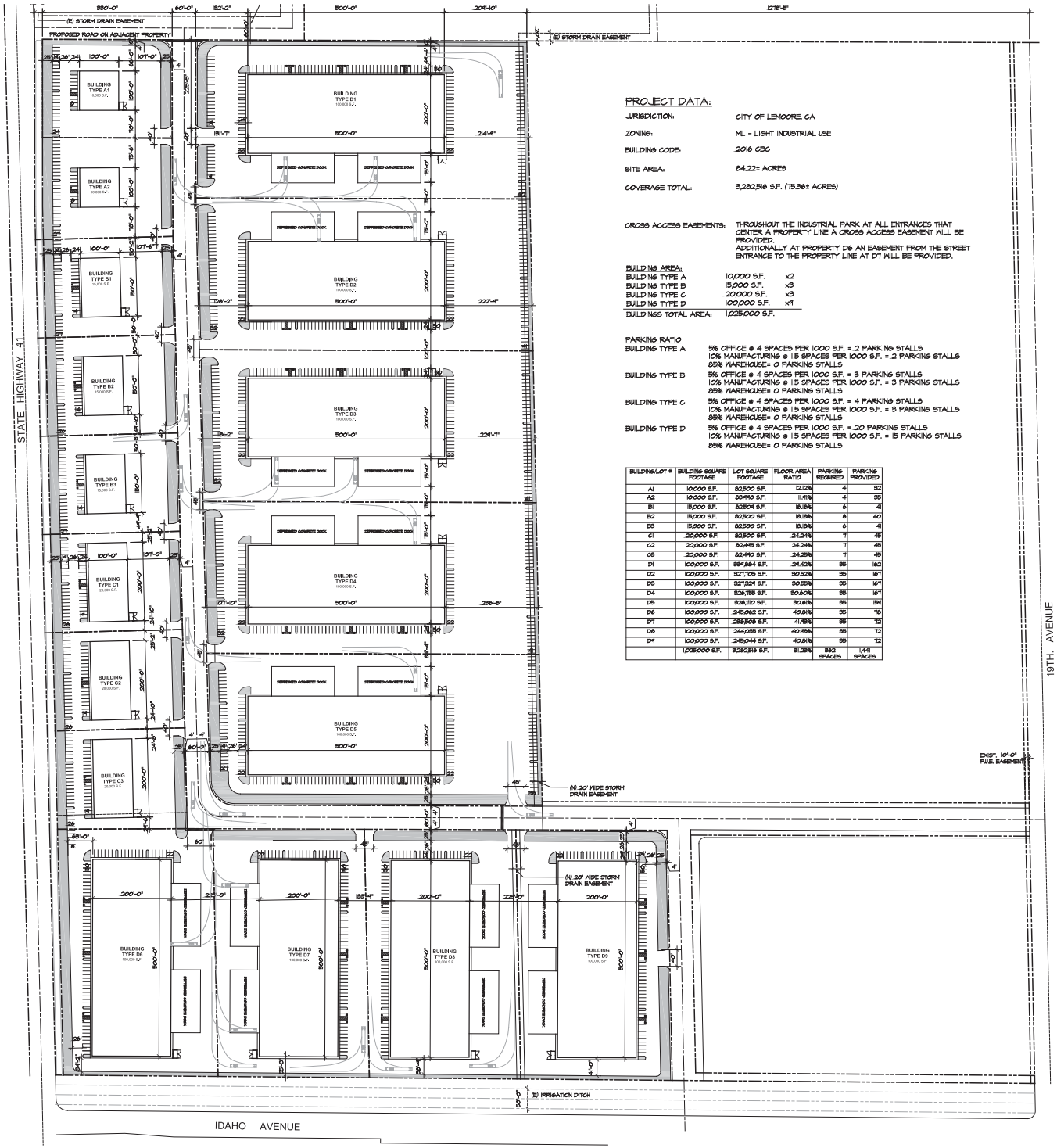
ALSO EXCEPTING THEREFROM that portion thereof granted to The Artesia Companies, Inc. in the Grant Deed dated August 5, 2002, and recorded September 5, 2002, as Instrument No. 02-19417 of Official Records.

ALSO EXCEPTING THEREFROM that portion thereof lying within the lands granted to Richard C. Wills, et al, in the Grant Deed dated December 2, 2002, and recorded April 18, 2003, as Instrument No. 03-09947 of Official Records.

ALSO EXCEPTING all mineral's every kind end nature whatsoever including, without limiting the generality of the foregoing, petroleum, oil, asphaltum, gas, and all other hydrocarbon substances, carbon dioxide, nitrogen, sulphur dioxide, helium and all other natural gases, together with the exclusive right to prospect, bore, drill for and produce any or all of such minerals, either by means of facilities located on said land or located on adjoining or nearby lands; and further reserving the exclusive easements and right to bore or drill in and through said above-described property to explore for and extract petroleum, oil, asphaltum, gas, and other hydrocarbon substances, nitrogen, carbon dioxide, sulphur dioxide, helium and all other natural gases and minerals of every kind and nature whatsoever from adjoining or nearby lands; also reserving the right to drill for, develop, and use such water on said above-described property as may be required for drilling and/or producing operations only; as excepted, retained and reserved in that certain Deed from Socony Mobil Oil Company, Inc., a New York Corporation, to Thomas H. Hess, etal, dated December 30, 1963 in Book 844 at Page 306 of Official Records, as Document No. 16709.

APN: 024-051-031
024-080-066
024-080-069

ATTACHMENT NO. 2
APPROVED PRELIMINARY SITE PLAN
[See Attached]



PROJECT DATA:

JURISDICTION:	CITY OF LEMOORE, CA
ZONING:	ML - LIGHT INDUSTRIAL USE
BUILDING CODE:	2016 CBC
SITE AREA:	84.22± ACRES
COVERAGE TOTAL:	3,282,516 S.F. (75.36± ACRES)

CROSS ACCESS EASEMENTS: THROUGHOUT THE INDUSTRIAL PARK AT ALL ENTRANCES THAT CENTER A PROPERTY LINE A CROSS ACCESS EASEMENT WILL BE PROVIDED. ADDITIONALLY AT PROPERTY D6 AN EASEMENT FROM THE STREET ENTRANCE TO THE PROPERTY LINE AT D7 WILL BE PROVIDED.

BUILDING AREA:

BUILDING TYPE A	10,000 S.F.	x2
BUILDING TYPE B	15,000 S.F.	x3
BUILDING TYPE C	20,000 S.F.	x3
BUILDING TYPE D	100,000 S.F.	x9
BUILDINGS TOTAL AREA:	1,025,000 S.F.	

PARKING RATIO

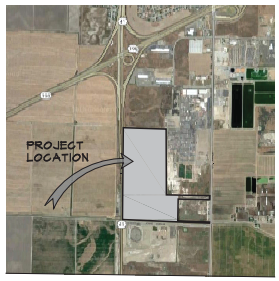
BUILDING TYPE A
5% OFFICE @ 4 SPACES PER 1000 S.F. = 2 PARKING STALLS
10% MANUFACTURING @ 1.5 SPACES PER 1000 S.F. = 2 PARKING STALLS
85% WAREHOUSE= 0 PARKING STALLS

BUILDING TYPE B
5% OFFICE @ 4 SPACES PER 1000 S.F. = 3 PARKING STALLS
10% MANUFACTURING @ 1.5 SPACES PER 1000 S.F. = 3 PARKING STALLS
85% WAREHOUSE= 0 PARKING STALLS

BUILDING TYPE C
5% OFFICE @ 4 SPACES PER 1000 S.F. = 4 PARKING STALLS
10% MANUFACTURING @ 1.5 SPACES PER 1000 S.F. = 3 PARKING STALLS
85% WAREHOUSE= 0 PARKING STALLS

BUILDING TYPE D
5% OFFICE @ 4 SPACES PER 1000 S.F. = 20 PARKING STALLS
10% MANUFACTURING @ 1.5 SPACES PER 1000 S.F. = 15 PARKING STALLS
85% WAREHOUSE= 0 PARKING STALLS

BUILDING/LOT #	BUILDING SQUARE FOOTAGE	LOT SQUARE FOOTAGE	FLOOR AREA RATIO	PARKING REQUIRED	PARKING PROVIDED
A1	10,000 S.F.	82,500 S.F.	12.12%	4	82
A2	10,000 S.F.	88,440 S.F.	11.41%	4	85
B1	15,000 S.F.	82,504 S.F.	18.18%	6	41
B2	15,000 S.F.	82,500 S.F.	18.18%	6	40
B3	15,000 S.F.	82,500 S.F.	18.18%	6	41
C1	20,000 S.F.	82,500 S.F.	24.24%	7	45
C2	20,000 S.F.	82,445 S.F.	24.24%	7	45
C3	20,000 S.F.	82,440 S.F.	24.25%	7	45
D1	100,000 S.F.	559,884 S.F.	29.42%	55	162
D2	100,000 S.F.	537,705 S.F.	30.52%	55	167
D3	100,000 S.F.	537,324 S.F.	30.55%	55	167
D4	100,000 S.F.	536,785 S.F.	30.60%	55	167
D5	100,000 S.F.	536,710 S.F.	30.61%	55	154
D6	100,000 S.F.	245,062 S.F.	40.81%	55	78
D7	100,000 S.F.	258,508 S.F.	41.45%	55	72
D8	100,000 S.F.	244,088 S.F.	40.45%	55	72
D9	100,000 S.F.	245,244 S.F.	40.84%	55	72
	1,025,000 S.F.	3,282,516 S.F.	31.23%	362 SPACES	1441 SPACES



GBDH
DESIGN GROUP, INC.
ARCHITECTURE + ENGINEERING
9806 Old Winery Place, Suite 1
Sacramento, California 95827
Tel 916.854.9901 Fax 916.854.9840

No. C34833 Exp. 9-30-19 STATE OF CALIFORNIA

Consultants

09/05/18

Project
HWY 41 / IDAHO AVENUE
MASTER PLAN
LEMOORE, CA

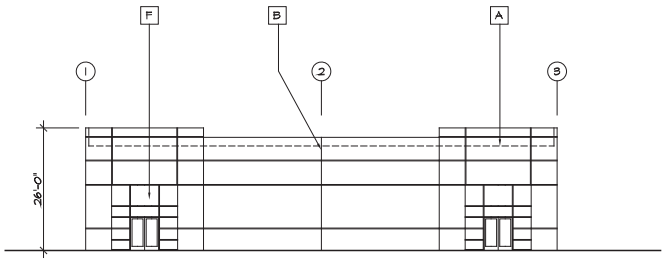
No.	Revision	Date

Client
CADDIS PROPERTIES LLC
8365 N. FRESNO STREET, STE 450
Fresno, CA 93720
Ph 559.417.4850 Fx 559.261.3586

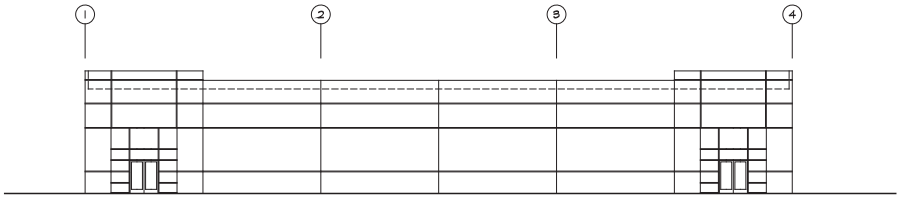
Sheet Title
PRELIMINARY SITE PLAN

Date	Project No.
00/00/18	C61-3715
Drawn By: JDC	Sheet No. A1.1
Checked By: RAH	

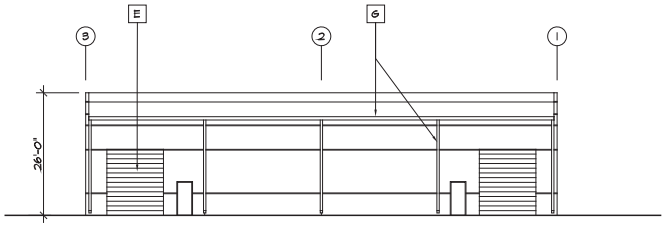
ATTACHMENT NO. 3
APPROVED PRELIMINARY ELEVATIONS
[See Attached]



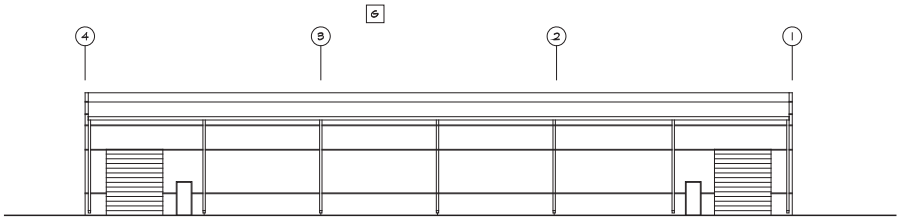
A A3.1A ELEVATION WEST ELEVATION - TYP 10K BLDG. - BLDGS A1 - A2
SCALE: 3/32" = 1'-0"



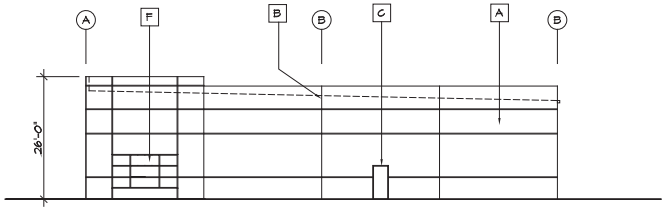
A A3.1A ELEVATION WEST ELEVATION - TYP 15K BLDGS. - BLDGS B1 - B3 (20K BLDGS, C1 - C3 SIM.)
SCALE: 3/32" = 1'-0"



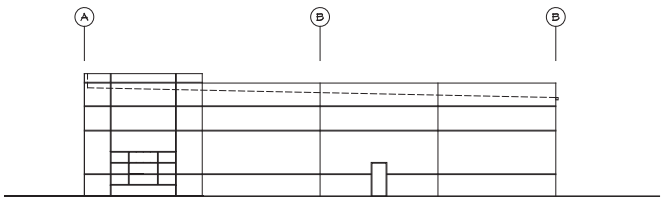
B A3.1A ELEVATION EAST ELEVATION - TYP 10K BLDG. - BLDGS A1 - A2
SCALE: 3/32" = 1'-0"



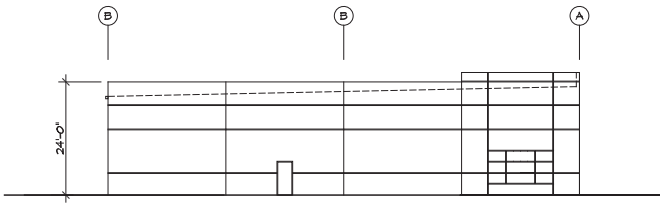
B A3.1A ELEVATION EAST ELEVATION - TYP 15K BLDGS. - BLDGS B1 - B3 (20K BLDGS, C1 - C3 SIM.)
SCALE: 3/32" = 1'-0"



C A3.1A ELEVATION SOUTH ELEVATION - TYP 10K BLDG. - BLDGS A1 - A2
SCALE: 3/32" = 1'-0"



C A3.1A ELEVATION SOUTH ELEVATION - TYP 15K BLDGS. - BLDGS B1 - B3 (20K BLDGS, C1 - C3 SIM.)
SCALE: 3/32" = 1'-0"



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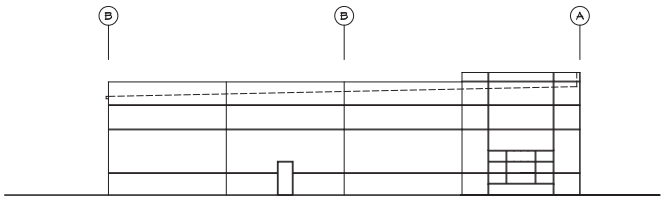
SCALE: 3/32" = 1'-0"



D A3.1A ELEVATION NORTH ELEVATION - TYP 15K BLDGS. - BLDGS B1 - B3 (20K BLDGS, C1 - C3 SIM.)
SCALE: 3/32" = 1'-0"

LEGEND:

- A TILT-UP, CMU OR PRECAST CONC. PANEL CONSTRUCTION
- B PANEL JOINT.
- C 3' x 7' MAN DOOR
- D NOT USED
- E 12' x 14' GRADE LEVEL DOOR
- F RECESSED STOREFRONT
- G GUTTER & DOWNSPOUT (NOT USED)
- H ROOFING
- J STOREFRONT
- K NOT USED
- L PUNCHED-IN WINDOW
- M NOT USED
- N NOT USED

GBDH
DESIGN GROUP, INC.
ARCHITECTURE
ENGINEERING
9806 Old Winery Place, Suite 1
Sacramento, California 95827
Tel 916.854.9901 Fax 916.854.9840

No. C34833
Exp. 9-30-19
CIVIL
STATE OF CALIFORNIA

Consultants

09/05/18

Project
HWY 41 / IDAHO AVENUE
MASTER PLAN
LEMOORE, CA

No.	Revision	Date

Client
CADDIS PROPERTIES LLC
8365 N. FRESNO STREET, STE 450
Fresno, CA 93720
Ph 559 417 4850 Fx 559 261 3586

Sheet Title
EXTERIOR ELEVATIONS
BUILDINGS:
A1, A2, B1, B2 & B3

Date	Project No.
00/00/18	C61-3715
Drawn By: MAV	Sheet No.
Checked By: RAH	A3.1A

ATTAHCEMENT 4
FORM OF GRANT DEED

Recording Requested By: Old Republic Title Company **When Recorded Mail To:** KKAL, LP	

(Space Above for Recorder's Use)

GRANT DEED

For valuable consideration, receipt of which is hereby acknowledged,

The City of Lemoore, a California municipal corporation ("City"), hereby grants to KKAL, LP, a California limited partnership ("Developer") the real property hereinafter referred to as the "Property," described in **Exhibit A** attached hereto and incorporated herein, subject to the terms and conditions of the Disposition and Development and Joint Escrow Instructions between the City and Developer, incorporated herein by reference, recorded concurrently herewith.

CITY OF LEMOORE

_____ Date: _____
City Manager

ATTEST:

_____ Date: _____
City Clerk

APPROVED AS TO FORM:

LOZANO SMITH

_____ Date: _____
Jenell Van Bindsbergen, City Attorney

INSERT EXHIBIT A TO ATTACHMENT NO. 4
LEGAL DESCRIPTION OF PROPERTY

ATTACHMENT NO. 5
SCHEDULE OF PERFORMANCE

Developer will develop 12 acres every two years over six phases of development ("Development Schedule"). Developer may lease or sell parcels for immediate development consistent with this Agreement and receive credit for construction on the leased or sold parcels. Except as provide herein, the Development Schedule shall commence from the date City completes City's Improvements in accordance with this Agreement. For purposes of the Schedule of Performance, City shall not be required to complete construction of and/or relocation of the existing canal on the Property. For avoidance of doubt, Developers obligation to comply with the Schedule of Performance shall commence when City has completed all of City's Improvements, except such improvements related to the construction and/or relocation of the canal.

ATTACHMENT NO. 6
RELEASE OF CONSTRUCTION COVENANTS

Recording Requested By: When Recorded Mail To:	

(Space Above for Recorder's Use)

RELEASE OF CONSTRUCTION COVENANTS

THIS RELEASE OF CONSTRUCTION COVENANTS ("Release") is made by the City of Lemoore, a California municipal corporation ("City"), in favor of _____ ("Developer"), as of the date set forth below.

RECITALS

A. City and Developer have entered into that certain Disposition and Development Agreement and Joint Escrow Instructions dated _____, 2018 ("Agreement") recorded on _____ as Instrument No. _____ in Book _____, Page ____ of _____ Kings County Records, concerning the development of certain real property situated in the City of Lemoore, California as more fully described in **Exhibit A** attached hereto and made a part hereof.

B. On _____, 2018, City approved Parcel Map No. _____ recorded on _____, 2018, as Instrument No. _____, at Book _____, Page _____ of Maps, Kings County Records, which subdivided the Property.

C. As referenced in Article 2.C of the Agreement, City is required to furnish Developer or its successors with a Release of Construction Covenants upon completion of construction of the Developer Improvements, with respect to a specific Parcel or Parcels, which Release is required to be in such form as to permit it to be recorded in the Recorder's office of Kings County. This Release is conclusive determination of satisfactory completion of the construction and development required by the Agreement for the Developer Improvements, with respect to such Parcel or Parcels described in Exhibit B attached hereto.

D. City has conclusively determined that such construction and development of the Developer Improvements has been satisfactorily completed with respect to such Parcel or Parcels described in Exhibit B attached hereto.

NOW, THEREFORE, the City hereby certifies as follows:

1. The Developer Improvements to be constructed by Developer have been fully and

satisfactorily completed in conformance with the Agreement, with respect to such Parcel or Parcels described in Exhibit B attached hereto. The Agreement, together with any and all covenants and obligations of Developer with respect to the Parcel or Parcels described in Exhibit B attached hereto are hereby released and Developer and its successors and assigns have no further obligation to the City.

2. Nothing contained in this Release shall modify in any other way any other provisions of the DDA.

IN WITNESS WHEREOF, the City has executed this Release this _____ day of _____ 201___.

CITY OF LEMOORE,
a California municipal corporation

By: _____
City Manager

ATTEST:

_____
City Clerk

APPROVED BY DEVELOPER:

_____

By: _____
Principal

INSERT EXHIBIT A TO ATTACHMENT NO. 6
LEGAL DESCRIPTION OF PROPERTY

INSERT EXHIBIT B TO ATTACHMENT NO. 6
LEGAL DESCRIPTION OF PARCEL OR PARCELS RELEASED FROM CONSTRUCTION COVENANT.

ATTACHMENT NO. 7
NOTICE OF REVERSIONARY INTEREST

Recorded By and For the Benefit of, *And When Recorded Return to:* CITY OF LEMOORE 119 Fox Street Lemoore, California 93245 ATTN: City Clerk	

(Space Above for Recorder's Use)

NOTICE OF REVERSIONARY INTEREST
(Insert Address and APN)
RECITALS

WHEREAS, the City of Lemoore, a California municipal corporation ("City"), and _____("Developer"), entered into that certain Disposition and Development Agreement dated _____, 2018 ("Agreement") concerning the development of certain real property situated in the City of Lemoore, County of Kings, State of California ("Property") as more fully described in **Exhibit A** attached hereto and made a part hereof; and

WHEREAS, pursuant to Article 5 of the Agreement, Developer failed to complete certain Improvements by specified dates or otherwise failed to timely cure a breach of the Agreement, and therefore Title to the Property has reverted back to City.

NOW, THEREFORE, City does hereby give notice that Title has reverted to City for the Property and City intends to exercise all rights to the Property.

IN WITNESS WHEREOF, City has duly executed this instrument this ____ day of _____, 201_.

CITY OF LEMOORE

By: _____
City Manager

INSERT EXHIBIT A TO ATTACHMENT NO. 6
LEGAL DESCRIPTION OF PROPERTY

ATTACHMENT NO. 8

CITY IMPROVEMENTS

City Improvements, Kashian Development Agreement

Streets

- 60’ Right Of Way (ROW) extending approximately 3175 Linear Feet (LF) from Enterprise Lane south towards Idaho. Estimated cost $650,000.
- 60’ ROW running east/west approximately 2000 LF to connect to 19th Ave. Estimated cost $409,000
- 60’ ROW running north/south approximately 725 LF to connect access to Idaho. Estimated cost $148,000.

The 60’ ROW will include the following improvements:

- Rolled curb/Gutter. Estimated cost $295,000
- All asphalt work for roadway
- City water infrastructure and hookups w/ laterals behind curb. Estimated cost $600,000
- Sanitary sewer infrastructure and hookups laterals to clean out. Estimated cost $600,000
- Storm drain infrastructure as required by design. Estimated cost $600,000.
    - Lift station to push water to property south of Idaho Estimated cost $250,000

Canal

- Underground approx. 1600 LF of Lemoore Canal and Irrigation ditch. Estimated cost $560,000

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

CITY OF LEMOORE

KASHIAN INDUSTRIAL DEVELOPMENT

Comments must be received by: August 21, 2018 (20 days after notice)

JULY 2018

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

KASHIAN INDUSTRIAL DEVELOPMENT

Prepared for:

711 W Cinnamon Drive
Lemoore, CA 93245
Contact Person: Judy Holwell, Development Services Director
Phone: 559) 924-6740

Consultant:

901 East Main Street
Visalia, CA 93292
Contact: Steve Brandt, City Planner
Phone: (559) 733-0440
Fax: (559) 733-7821

July 2018

Project #L170002.02

Table of Contents

Appendices

List of Figures

List of Tables

MITIGATED NEGATIVE DECLARATION

As Lead Agency under the California Environmental Quality Act (CEQA), the City of Lemoore reviewed the Project described below to determine whether it could have a significant effect on the environment because of its development. In accordance with CEQA Guidelines Section 15382, "[s]ignificant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

Project Name

Kashian Industrial Development

Project Location

The proposed site is located at the northeast corner of Idaho Avenue and SR 41 in southern region of the City of Lemoore. The project is within Assessor's Parcel Number (APN) 024-051-031, which totals 81.9 acres in size.

Project Description

A request by Lance-Kashian & Company for a site plan review for new industrial development (project). The project includes the construction of industrial buildings of varying sizes, with a total of approximately 1,025,000 square feet. This development will be built in phases, with a plan to develop 12 acres every two years until the site is built out. The site size is 81.9 acres. Each phase will be subject to additional review in accordance with City ordinances.

Mailing Address and Phone Number of Contact Person

John Kashian
Owner/Applicant
265 E. River Park Circle – Suite 270
Fresno, CA 93720
(559) 696-9584

Findings

As Lead Agency, the Kings County finds that the project will not have a significant effect on the environment. The Environmental Checklist (CEQA Guidelines Appendix G) or Initial Study (IS) (see *Section 3 - Environmental Checklist*) identified one or more potentially significant effects on the environment, but revisions to the project have been made before the release of this Mitigated Negative Declaration (MND) or mitigation measures would be implemented that reduce all potentially significant impacts less-than-significant levels. The

Lead Agency further finds that there is no substantial evidence that this project would have a significant effect on the environment.

Mitigation Measures Included in the Project to Avoid Potentially Significant Effects

MM AQ-1: Construction and operation of the proposed project shall be conducted in compliance with applicable rules and regulations set forth by the San Joaquin Valley Air Pollution Control District. Dust control measures outlined below shall be implemented where they are applicable and feasible. The list shall not be considered all-inclusive, and any other measures to reduce fugitive dust emissions not listed shall be encouraged.

a. Land Preparation, Excavation, and/or Demolition. The following dust control measures shall be implemented:

    1. All soil excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering shall take place a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.
    2. All clearing, grading, earth moving, and excavation activities shall cease during periods of winds greater than 20 miles per hour (averaged over 1 hour), if disturbed material is easily windblown, or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property.
    3. All fine material transported on-site a freeboard limit of at least 6 inches shall be maintained and fine material shall be either sufficiently watered or securely covered to prevent excessive dust.
    4. Areas disturbed by clearing, earth moving, or excavation activities shall be minimized at all times.
    5. Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
    6. Where acceptable to the Fire Department, weed control shall be accomplished by mowing instead of discing, thereby leaving the ground undisturbed and with a mulch covering.

b. Site Construction. After clearing, grading, earth moving, and/or excavating, the following dust control practices shall be implemented:

    1. Once initial leveling has ceased, all inactive soil areas within the construction site shall be (1) seeded and watered until plant growth is evident, (2) treated with a dust palliative, or (3) watered twice daily until soil has sufficiently crusted to prevent fugitive dust emissions.
    2. All active disturbed soil areas shall be sufficiently watered at least twice daily to prevent excessive dust.
    3. The project proponent and/or its contractor(s) shall comply with the provisions of SJVAPCD Rule 4601 - Architectural Coatings, during the construction of all

buildings and facilities. Application of architectural coatings shall be completed in a manner that poses the least emissions impacts whenever such application is deemed proficient.

4. The project proponent and/or its contractor(s) shall comply with the provisions of SJVAPCD Rule 4641 during the construction and pavement of all roads and parking areas within the project area. Specifically, the applicant shall not allow the use of rapid cure cutback asphalt, medium cure cutback, or slow cure cutback or emulsified asphalt.

c. Vehicular Activities. During all phases of construction, the following vehicular control measures shall be implemented:

1. On-site vehicle speed shall be limited to 15 miles per hour.
2. All areas with vehicle traffic shall be paved, treated with dust palliatives, or watered a minimum of twice daily.
3. Streets adjacent to the project site shall be kept clean, and project-related accumulated silt shall be removed.
4. Access to the site shall be by means of an apron into the project site from adjoining surfaced roadways. The apron shall be surfaced or treated with dust palliatives. If operating on soils that cling to the wheels of vehicles, a grizzly or other such device shall be used on the road exiting the project site, immediately prior to the pavement, in order to remove most of the soil material from vehicle tires.

MM AQ-2: The project proponent and/or its contractor(s) shall implement the following measures during construction of the proposed project:

a. All equipment shall be maintained as recommended by manufacturer manuals.
b. Equipment shall be shut down when not in use for extended periods of time.
c. Construction equipment shall operate no longer than eight cumulative hours per day.
d. Electric equipment shall be used whenever possible in lieu of diesel- or gasoline-powered equipment.
e. All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_X emissions.
f. On- and off-road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines.
g. On- and off-road diesel equipment shall use cooled exhaust gas recirculation (EGR) if permitted under manufacturer's guidelines.
h. All construction workers shall be encouraged to shuttle (car-pool) to retail establishments or to remain on-site during lunch breaks.
i. All construction activities within the project area shall be discontinued during the first stage smog alerts.
j. Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (1-hour average).

MM AQ-3: Prior to the issuance of building and grading permits, the project proponent shall provide the City of Lemoore Development Services Department with proof that an Indirect Source Review application has been approved by the San Joaquin Valley Air Pollution Control District, if applicable.

MM AQ-4: Prior to the issuance of demolition permits, the project proponent shall provide the City of Lemoore Development Services Department with proof that a Demolition Permit has been issued by the San Joaquin Valley Air Pollution Control District, if applicable.

MM-BIO-1 (protection of San Joaquin kit fox): The U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (2011) shall be enacted. These recommendations include but are not limited to:

- Pre-construction surveys shall be conducted no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities, or any Project activity likely to impact the San Joaquin kit fox at Action Area 2.
- Project-related vehicles shall observe a daytime speed limit of 20-mph throughout the Action Area 2, except on County roads and State and federal highways; this is particularly important at night when kit fox is the most active. Night-time construction shall be minimized to the extent possible. However, if night construction should occur, then the speed limit shall be reduced to 10-mph. Off-road traffic outside of designated project areas shall be prohibited.
- To prevent inadvertent entrapment of kit fox or other animals during the construction phase of a Project, all excavated, steep-walled holes or trenches more than 2-feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals.
- Kit fox are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way.
- All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the Action Area 2.
- No pets, such as dogs or cats, shall be permitted at the Action Area 2 to prevent harassment, mortality of kit fox, or destruction of dens.
- Use of rodenticides and herbicides in project areas shall be restricted. This is necessary to prevent primary or secondary poisoning of kit fox and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation, as well as additional project-related restrictions deemed necessary by the

Service. If rodent control must be conducted, zinc phosphide shall be used because of a proven lower risk to kit fox.

- A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might observes a kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the USFWS.
- An employee education program shall be conducted for any Project that has anticipated impacts to kit fox or other endangered species. The program shall consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the Project. The program shall include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
- In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for guidance.
- New sightings of kit fox shall be reported to the CNDDB. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the USFWS at the address below.

MM BIO-2 (protection of Swainson's hawk): If all Project activities are completed outside of the Swainson' hawk nesting season (February 15 through August 31), no mitigation shall be required. If construction is planned during the nesting season, a preconstruction survey shall be conducted by a qualified biologist to evaluate the site and a 0.5-mile buffer for active Swainson's hawk nests. If potential Swainson's hawk nests or nesting substrates are located within 0.5 mile of the Project sites, then those nests or substrates must be monitored for activity on a routine and repeating basis throughout the breeding season, or until Swainson's hawks or other raptor species are verified to be using them. Monitoring will be conducted according to the protocol outlined in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). The protocol recommends that ten visits be made to each nest or nesting site: one during January 1-March 20 to identify potential nest sites, three during March 20-April 5, three during April 5-April 20, and three during June 10-July 30. To meet the minimum level of protection for the species, surveys shall be completed for at least the two survey periods immediately prior to Project-related ground disturbance activities. During the nesting period, active Swainson's hawk nests shall be avoided by 0.5 mile unless this avoidance buffer is reduced through consultation with the CDFW and/or USFWS. If an active Swainson's hawk nest is located within 250 feet of the Project or within the Project, including the stick nest located within the Project, CDFW will require an Incidental Take Permit.

MM BIO-3 (protection of western burrowing owl): A qualified biologist shall conduct a pre-construction survey on the Project site and within 250 feet of its perimeter where feasible, to identify the presence of the western burrowing owl. The survey should be conducted between 14 and 30 days prior to the start of construction activities. If any burrowing owl burrows are observed during the preconstruction survey, avoidance measures shall be consistent with those included in the CDFW staff report on burrowing owl mitigation (CDFG 2012). If occupied burrowing owl burrows are observed outside of the breeding season (September 1 through January 31) and within 500 feet of proposed construction activities, a passive relocation effort may be instituted in accordance with the guidelines established by the California Burrowing Owl Consortium (1993) and the California Department of Fish and Wildlife (2012). During the breeding season (February 1 through August 31), a 250-foot (minimum) buffer zone should be maintained unless a qualified biologist verifies through noninvasive methods that either the birds have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

MM BIO-4 (protection of migratory birds and raptors): If construction is planned outside the nesting period for raptors and migratory birds (February 15 to August 31), no mitigation shall be required. If construction is planned during the nesting season for migratory birds and raptors, a preconstruction survey to identify active bird nests shall be conducted by a qualified biologist to evaluate the site and a 250-foot buffer for migratory birds and a 500-foot buffer for raptors. If nesting birds are identified during the survey, active raptor nests shall be avoided by 500 feet and all other migratory bird nests shall be avoided by 250 feet. Avoidance buffers may be reduced if a qualified on-site monitor determines that encroachment into the buffer area is not affecting nest building, the rearing of young, or otherwise affecting the breeding behaviors of the resident birds.

No construction or earth-moving activity shall occur within a non-disturbance buffer until it is determined by a qualified biologist that the young have fledged (left the nest) and have attained sufficient flight skills to avoid Project construction areas. Once the migratory birds or raptors have completed nesting and young have fledged, disturbance buffers will no longer be needed and can be removed, and monitoring can cease.

BIO-5 (WEAP training): Prior to ground disturbance activities, within one week of employment all new construction workers at the Project site shall attend a Construction Worker Environmental Awareness Training and Education Program, developed and presented by a qualified biologist.

The Construction Worker Environmental Awareness Training and Education Program would be presented by the biologist and should include information on the life history wildlife and plant species that may be encountered during construction activities, their legal protections, the definition of "take" under the Endangered Species Act, measures the Project operator is implementing to protect the San Joaquin kit fox and other species, reporting requirements, specific measures that each worker would employ to avoid take of the wildlife species, and penalties for violation of the Act. Identification and information regarding

sensitive or other special status plant species should also be provided to construction personnel.

- An acknowledgement form signed by each worker indicating that environmental training has been completed.
- A sticker that shall be placed on hard hats indicating that the worker has completed the environmental training. Construction workers should not be permitted to operate equipment within the construction area unless they have attended the training and are wearing hard hats with the required sticker;
- A copy of the training transcript and/or training video/CD, as well as a list of the names of all personnel who attended the training and copies of the signed acknowledgement forms should be maintain on site for the duration of construction activities.
- The construction crews and contractor(s) would be responsible for unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by Project permits.

MM BIO-6 (riparian vegetation): It is recommended that the project be designed to avoid the 0.957 acres of riparian habitat. To ensure avoidance, ESA fencing shall be placed around the riparian areas prior to beginning of construction and maintained throughout construction. The Project shall be designed to allow sufficient water to maintain the riparian area.

If it is not possible to avoid the riparian habitat then one of the following two options for mitigating the loss of riparian habitat will be implemented.

1. On-site mitigation: In-kind compensation of 2.871 acres shall be provided within the Project site. Removal of riparian trees equal to or greater than 4 inches in DBH will be mitigated by the replacement of those trees at a 3:1 ratio for each tree type within the mitigation land.
2. Off-site mitigation: In-kind compensation of 2.871 acres shall be provided outside of the Project site. Removal of riparian trees equal to or greater than 4 inches in DBH will be mitigated by the replacement of those trees at a 3:1 ratio for each tree type within the mitigation land.

MM BIO-7 (water quality): Best management practices (BMPs) would serve to reduce impacts to waters of the U.S. and waters of the State to less than significant levels. Impacts to the banks of the canal on the south side of the Project will require a Streambed Alteration Agreement from CDFW through Section 1600. Compliance with these permits may require implementation of additional measures.

The Project will employ best management practices (BMPs) to prevent all construction pollutants from contacting storm water, with the intent of keeping sedimentation or any other pollutants from moving offsite and into receiving waters. Some of these BMPs may include the following:

- Construction materials, including topsoil and chemicals, should be stored, covered, and isolated to prevent runoff losses and contamination of storm water and groundwater;
- Topsoil removed during construction should be carefully stored and treated as an important resource. Berms should be placed around topsoil stockpiles to prevent runoff during storm events;
- Fuel and vehicle maintenance areas should be established away from all drainage courses and these areas should be designed to control runoff;
- Disturbed areas should be revegetated after completion of construction activities;
- Sanitary facilities should be provided for construction workers; and
- Hazardous materials should be stored in appropriate and approved containers, maintaining required clearances. Materials should be handled in accordance with applicable federal, state and/or local regulatory agency protocols.

MM BIO-8 (valley sink scrub): Construction equipment and vehicles shall not be permitted in the area of Valley Sink Scrub located to the southeast of the Project. This area shall be excluded from the Project by ESA fencing.

MM CUL-1 (Archaeological Monitoring): Prior to any ground disturbance, a surface inspection of the Index Project site shall be conducted by a qualified archeologist. The qualified archeologist shall monitor the site during grading activities. The archeologist shall provide pre-construction briefings to supervisory personnel, any excavation contractor, and any person who will perform unsupervised, ground disturbing work on the project in connection with construction or decommissioning. The briefings will include information on potential cultural material finds and, on the procedures, to be enacted if resources are found.

MM CUL-2 (Native American Monitoring): Prior to any ground disturbance, the applicant shall offer interested Tribes the opportunity to provide a Native American Monitor during ground disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the Tribe.

MM CUL-3 (Stop Work in the Event of Unanticipated Discoveries): In the event that cultural resources, paleontological resources or unique geologic features are discovered during construction, operations shall stop within 100 feet of the find, and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall determine the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Any previously undiscovered resources found during construction within the Project area shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance. No further ground disturbance shall occur in the immediate vicinity of the discovery until approved by the qualified archaeologist. Upon discovery of cultural resources, in addition to other procedures described in this mitigation measure, the Kings County Community Development Agency,

along with other relevant agency or Tribal officials, shall be contacted to begin coordination on the disposition of the find(s), and treatment of any significant cultural resource shall be undertaken pursuant to the Plan. In the event of any conflict between this mitigation measure and the Plan, the stipulations of the Plan shall control.

MM-CUL 4 (Disposition of Cultural Resources): Upon coordination with the Kings County Community Development Agency, any archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded long-term preservation. Documentation for the work shall be provided in accordance with applicable cultural resource laws and guidelines.

MM CUL-5: During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or other appropriate facility regarding any discoveries of paleontological resources. If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

MM CUL-6: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the county coroner.

MM GEO-1: Prior to final design, a geotechnical study shall be prepared for the project site and recommendations of the study shall be incorporated into final design of the project. A copy of the report shall be submitted to the Kings County Community Development Agency for review.

MM GHG-1: Prior to the issuance of building or grading permits, and continually throughout Project operations, the Project proponent shall comply with applicable policies of the City of Lemoore General Plan, as well as all applicable rules and regulations set forth by San Joaquin Valley Air Pollution Control District.

MM GHG-2: Prior to the issuance of building or grading permits, and continually throughout Project operations, the Project proponent shall comply with applicable policies of the City of Lemoore General Plan, as well as all applicable rules and regulations set forth by San Joaquin Valley Air Pollution Control District.

MM HYD-1: Prior to ground-disturbing activities, the City shall prepare and implement a Storm water Pollution Prevention Plan (SWPPP) that specifies best management practices (BMP), with the intent of keeping all products of erosion from moving offsite. The SWPPP shall include contain a site map that shows the construction site perimeter, existing and proposed man-made facilities, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the Project site. Additionally, the SWPPP shall contain a visual monitoring program and a chemical monitoring program for non-visible pollutants to be implemented (if there is a failure of best management practices). The requirements of the SWPPP and BMPs shall be incorporated into design specifications and construction contracts. Recommended best management practices for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Protecting any existing storm drain inlets and stabilizing disturbed areas;
- Implementing erosion controls;
- Properly managing construction materials; and
- Managing waste, aggressively controlling litter, and implementing sediment controls.

SECTION 1 - INTRODUCTION

1.1 - Overview

A request by Lance-Kashian & Company for tentative parcel map and site plan review for new industrial development (project). The project includes the construction of industrial buildings of varying sizes, with a total of approximately 1,025,000 square feet. This development will be built in phases, with a plan to develop 12 acres every two years until the site is built out. The site size is 81.9 acres.

1.2 - CEQA Requirements

The City of Lemoore is the Lead Agency for this Project pursuant to the CEQA Guidelines (Public Resources Code Section 15000 et seq.). The Environmental Checklist (CEQA Guidelines Appendix G) or Initial Study (IS) (see *Section 3 – Initial Study*) provides analysis that examines the potential environmental effects of the construction and operation of the Project. Section 15063 of the CEQA Guidelines requires the Lead Agency to prepare an IS to determine whether a discretionary project will have a significant effect on the environment. A Negative Declaration (ND) is appropriate when an IS has been prepared and a determination can be made that no significant environmental effects will occur.

Based on the IS, the Lead Agency has determined that the environmental review for the proposed application can be completed with a ND.

1.3 - Impact Terminology

The following terminology is used to describe the level of significance of project environmental impacts.

- A finding of "no impact" is appropriate if the analysis concludes that the project would not affect a topic area in any way.
- An impact is considered "less than significant" if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered "less than significant with mitigation incorporated" if the analysis concludes that it would cause no substantial adverse change to the environment with the inclusion of environmental commitments that have been agreed to by the proponent.
- An impact is considered "potentially significant" if the analysis concludes that it could have a substantial adverse effect on the environment.

1.4 - Document Organization and Contents

The content and format of this IS/MND is designed to meet the requirements of CEQA. The report contains the following sections:

- *Section 1 – Introduction:* This section provides an overview of CEQA requirements, intended uses of the IS/MND, document organization, and a list of regulations that have been incorporated by reference.
- *Section 2– Project Description:* This section describes the Project and provides data on the site's location.
- *Section 3 – Environmental Checklist:* This chapter contains the evaluation of 18 different environmental resource factors contained in Appendix G of the CEQA Guidelines. Each environmental resource factor is analyzed to determine whether the proposed Project would have an impact. One of four findings is made which include: no impact, less-than-significant impact, less than significant with mitigation, or significant and unavoidable. If the evaluation results in a finding of significant and unavoidable for any of the 18 environmental resource factors, then an Environmental Impact Report will be required.
- *Section 4 – References:* This chapter contains a full list of references that were used in the preparation of this IS/MND.

SECTION 2 - PROJECT DESCRIPTION

2.1 - Introduction

Lance-Kashian & Company (KKAL) is a real estate development and management company based in Fresno, California. Their services include asset management, property management, and development. The company plans to build an industrial development complex in Lemoore in order to allow new business to come to Lemoore and existing businesses in the area to expand.

2.2 - Project Location

The proposed site is located at the northeast corner of Idaho Avenue and SR 41 in southern region of the City of Lemoore as shown in Figures 2-1, 2-2, and 2-3. The project is within Assessor's Parcel Number (APN) 024-051-031, which totals 81.9 acres in size.

The site is in Section 16, Township 19 South, Range 20 East, Mount Diablo Base and Meridian (MDB&M) within the Lemoore United States Geological Survey (USGS) 7.5-minute topographic quadrangle.

2.3 - Surrounding Land Uses

The area surrounding the proposed industrial site consists of undeveloped farmland to the west (beyond SR 41). The southern portion of the site currently contains a storm drainage pond. The pond will be relocated south of Idaho Avenue, outside of the proposed site area. East of the site is light industrial development, and there is vacant land directly north of the site. Land uses and development surrounding the site are depicted in Figure 2-4.

2.4 - Proposed Project

Lance-Kashian & Company requests approval of a tentative parcel map and site plan review for light industrial development in a site in southwest Lemoore (project). The project includes the construction of industrial buildings of varying sizes, with a total of approximately 1,025,000 square feet. The development will also include the provision of onsite parking, loading spaces, refuse collection, landscaping, and the dedication of a public road. This development will be built in phases. The 81.9-acre site is located at the northeast corner of Highway 41 and Idaho Avenue as shown in Figure 2-1. The site is currently undeveloped except for a ponding basin that will be relocated to a new site as part of this project.

Figure 2-1
Project Site Map

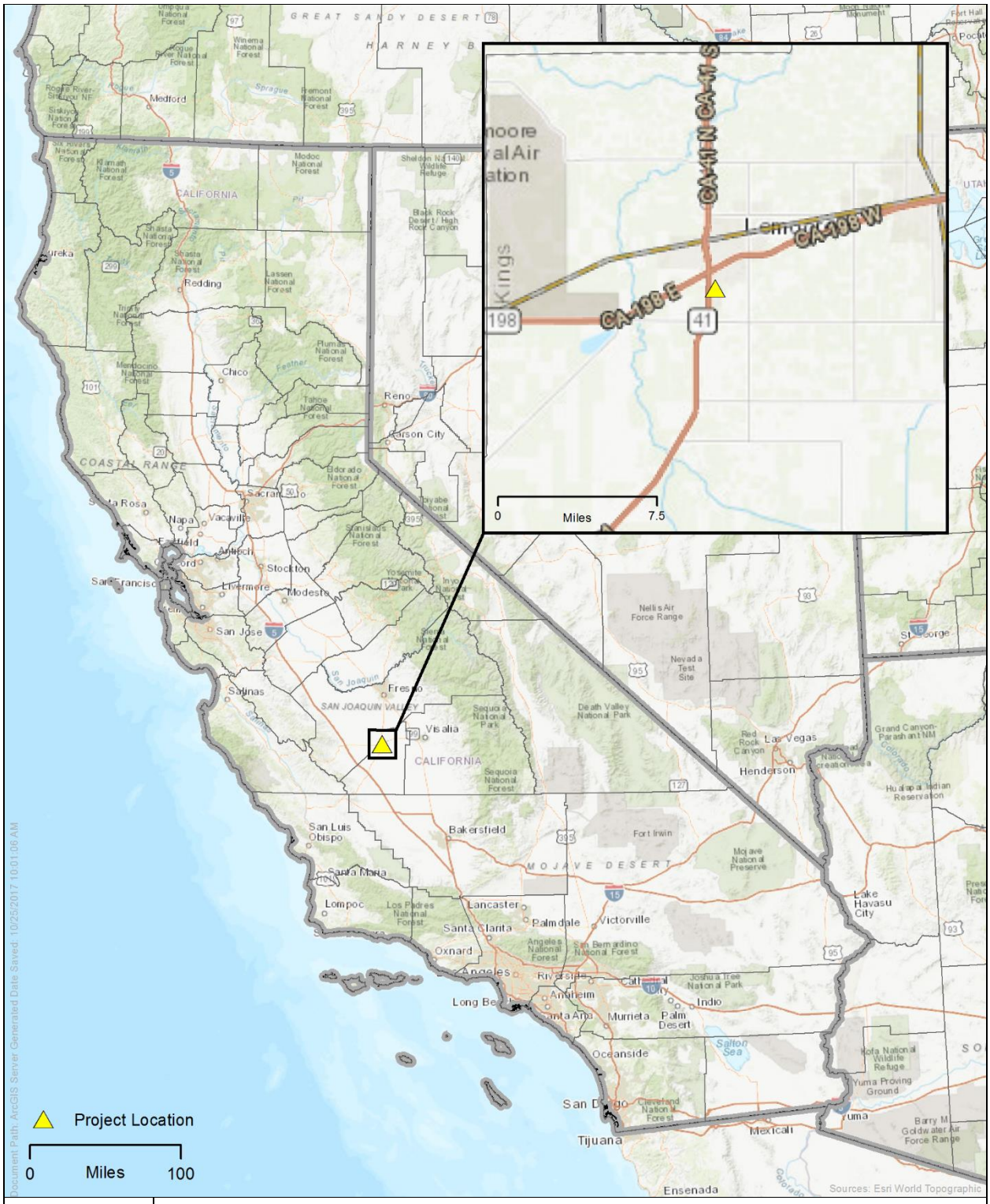


Figure 2-2
Regional Location

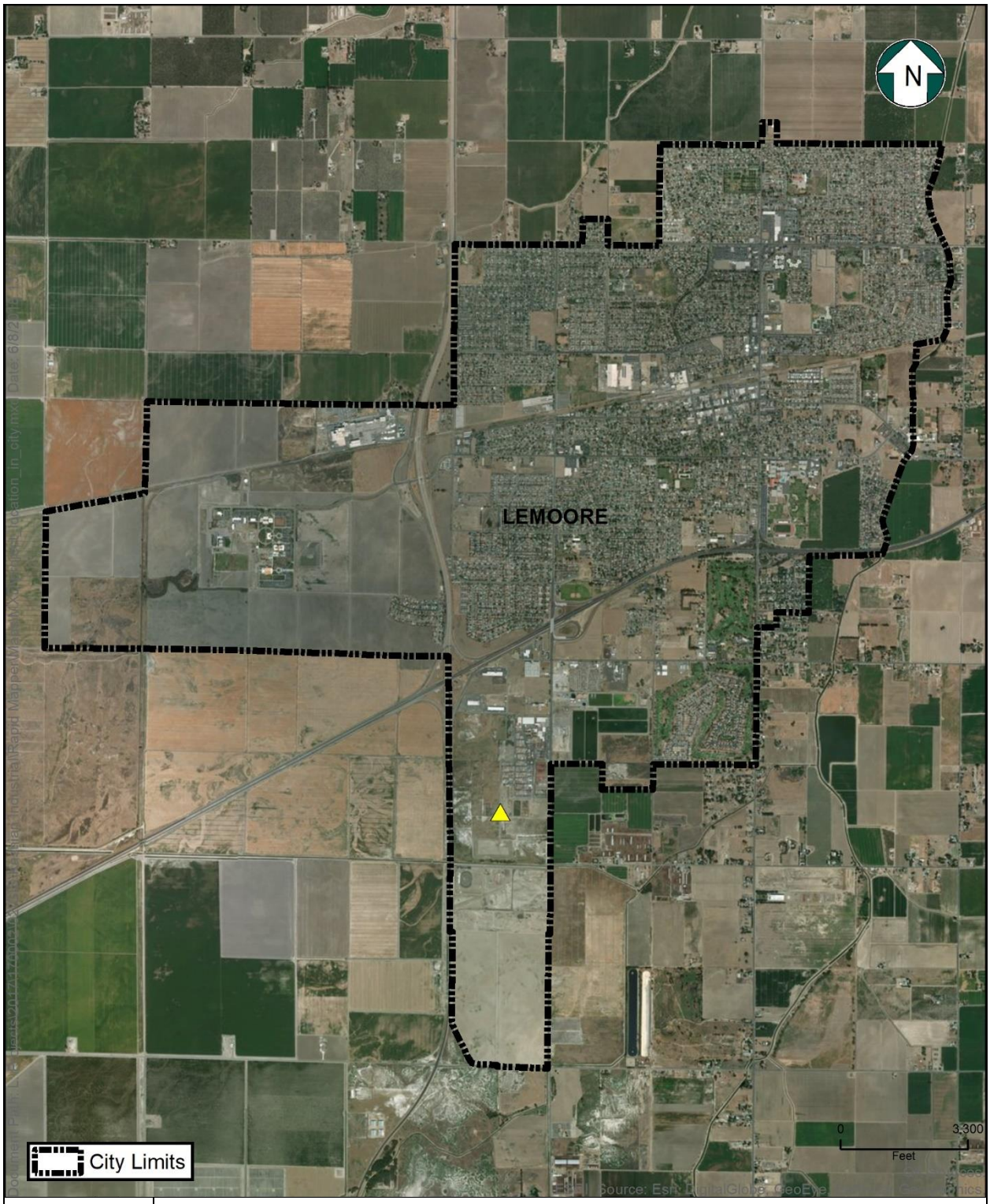


Figure 2-3
Project Location in City

Figure 2-4
Surrounding Land Uses

SECTION 3 - EVALUATION OF ENVIRONMENTAL IMPACTS

3.1 - Environmental Checklist and Discussion

1. **Project Title:**

   Kashian Industrial Development

2. **Lead Agency Name and Address:**

   City of Lemoore
   119 Fox Street
   Lemoore, CA 93245

3. **Contact Person and Phone Number:**

   Judy Holwell, Development Services Director
   (559) 924-6740

4. **Project Location:**

   The proposed site is located at the northeast corner of Idaho Avenue and SR 41 in western region of the City of Lemoore. The project is within Assessor's Parcel Number (APN) 024-051-031.

5. **Project Sponsor's Name and Address:**

   John Kashian
   Owner/Applicant
   265 E. River Park Circle – Suite 270
   Fresno, CA 93720
   (559) 696-9584

6. **General Plan Designation:**

   Light Industrial

7. **Zoning:**

   Light Industrial - ML

8. **Description of Project:**

   See *Section 2.4 – Proposed Project*.

9. **Surrounding Land Uses and Setting:**

   See *Section 2.3 – Surrounding Land Uses* and Figure 2-4.

10. Other Public Agencies Approval Required:

None.

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

Yes, the Santa Rosa Rancheria Tachi Tribe has requested consultation with the City of Lemoore. A letter was sent to the tribe on July 3, 2018, informing them of the Project.

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

3.2 - Environmental Factors Potentially Affected:

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

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

3.3 - Determination

On the basis of this initial evaluation:

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

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

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

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

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable

standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Judy Holwell, Development Services Director

Date

3.4 - Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    a. the significance criteria or threshold, if any, used to evaluate each question; and

    b. the mitigation measure identified, if any, to reduce the impact to less than significance.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.1 - AESTHETICS					
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion

Impact #3.4.1a – Would the Project have a substantial adverse effect on a scenic vista?

As seen in Figure 2-4, the project is located in undeveloped land and is surrounded by either vacant land or light industry. It is at the northeast corner of Idaho Avenue and SR 41 in the western region of Lemoore.

The City of Lemoore 2030 General Plan states there are currently no buildings or structures listed in the National Register of Historic Places or as California Historic Landmarks. However, there are 37 sites listed as having local historic significance located within the downtown district (City of Lemoore , 2008). There are no local historic resources within the vicinity of the Project site. The Project is not located in an area that would result in substantial adverse effects on any scenic vistas and no impact would occur.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.1b – Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no listed State scenic highways within Kings County; therefore, the site would not damage scenic resources within a state scenic highway (California Department of Transportation, 2011).

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.1c – Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?

The proposed project would be similar in nature to the existing light industrial development next to the site. The project is consistent with zoning and land use designations for the area and would not result in a substantial degradation to the existing visual character or quality of the site and its surroundings.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.1d – Would the Project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

The proposed development would comply with all lighting standards established in the City's Zoning Ordinance (Title 9, Chapter 5, Article B, Section 4), and therefore impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact

3.4.2 - AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b.	Conflict with existing zoning for agricultural use or a Williamson Act Contract?	☐	☐	☐	☒
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

Discussion

Impact #3.4.2a – Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

The proposed project will not convert any farmland. According to the Department of Conservation's Farmland Mapping and Monitoring Program (FMMP), the project site is

classified as 'Vacant or Disturbed Land' (see Figure 3.4.2-1). ((CA Department of Conservation, 2016) Therefore, the proposed project will have no impact on conversion of agricultural resources.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.2b – Would the Project conflict with existing zoning for agricultural use or a Williamson Act Contract?

The project site is currently zoned Light Industrial within both the *City of Lemoore 2030 General Plan* and the City of Lemoore's Zoning Ordinance. The project site is not under Williamson Act Contract and does not conflict with any current Williamson Act Contract (see Figure 3.4.2-2).

MITIGATION MEASURE(S)

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.2c – Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The project site and the surrounding areas are not zoned for forest land or timberland by the City of Lemoore Zoning Map. The site is zoned Light Industrial (ML), which allows for this type of industrial development. The project will have no impact on land designated for forest land use.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

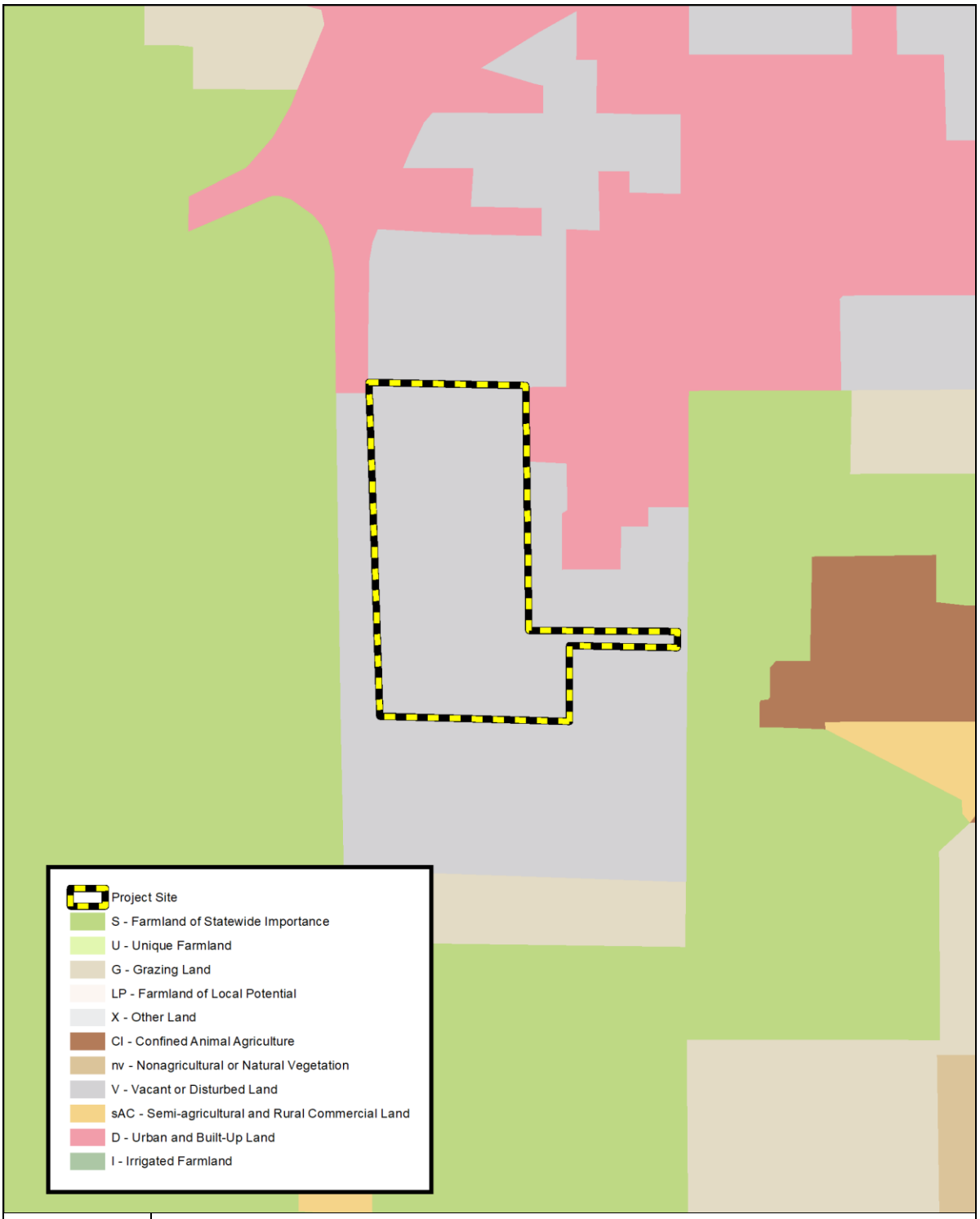


Figure 3.4.2-1
Farmland Mapping and Monitoring Program (FMMP)

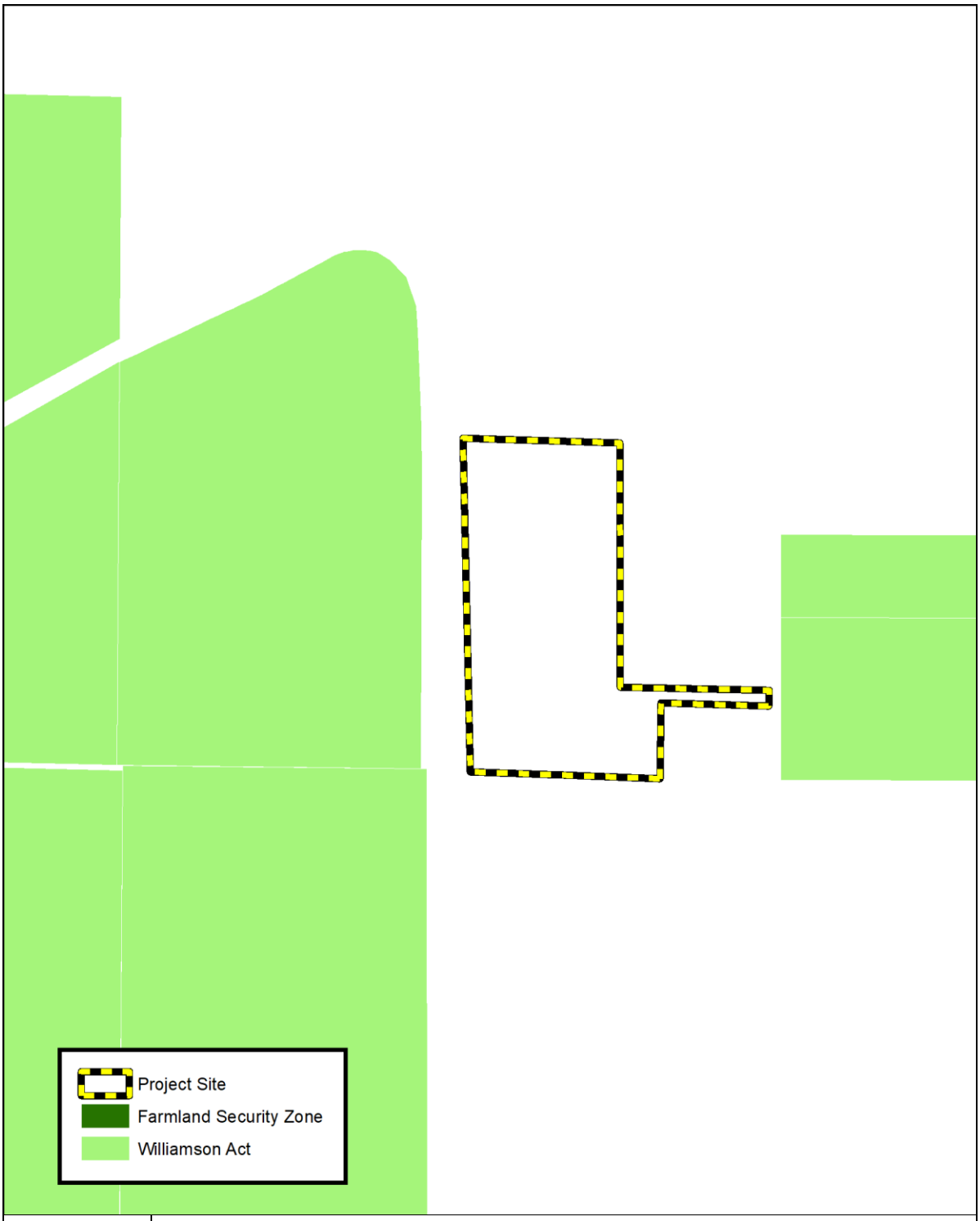


Figure 3.4.2-2
Williamson Act Contracts

Impact #3.4.2d – Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

The proposed project site is not considered to be forest land or timberland. The project is considered an industrial use within the existing zone district. It is currently undeveloped and surrounded by either undeveloped land or light industrial development. Further development of the associated use would be consistent with the existing zoning and would not result in the conversion of forest land to non-forest use. The proposed project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.2e – 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?

The proposed project will allow for the development of a light industrial complex. The project site is zoned Light Industrial (ML), for which light industry is an allowable use. The project will not change the existing zoning of the site; therefore, the project would not involve changes in the existing environment that could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

The properties to the east and west of the project site are currently used for agricultural production and are under a Williamson Act contract. Though some development pressure on surrounding properties could result from this development, it is unlikely. The agricultural land to the east and west is outside of the current city limits. The proposed project is expected to develop slowly over a number of years and focuses development onto land that is not farmland or forest land. State Route 41 is in between the project site and the agricultural land to the west of the site, so the agricultural land is further protected from development pressures. The impacts to surrounding agricultural land would be deemed less than significant, as the project will contain development to the predetermined boundaries shown in Figure 2-1.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact

3.4.3 - AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e.	Create objectionable odors affecting a substantial number of people?	☐	☒	☐	☐

Discussion

Impact #3.4.3a – Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The SJVAB is designated nonattainment of state and Federal health-based air quality standards for ozone and PM2.5. The SJVAB is designated nonattainment of state PM10. To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP) documents, including:

- 2016 Ozone Plan;
- 2007 PM10 Maintenance Plan and Request for Redesignation; and
- 2016 PM2.5 Plan.

The SJVAPCD's AQAPs account for projections of population growth and vehicle miles traveled (VMT) provided by the Council of Governments (COG) in the SJVAB and identify strategies to bring regional emissions into compliance with federal and State air quality standards. It is assumed that the existing and future pollutant emissions computed in the

AQAPs were based on land uses from area general plans that were prepared prior to the AQAP's adoption. Because population growth and VMT projections are the basis of the AQAPs' strategies, a project would conflict with the plans if it results in more growth or VMT than the plans' projections. The proposed Project would result in the construction and operation of a light industrial development. This development will result in new vehicle trips per day in the area and only temporary vehicle trips during the construction period. Additionally, the proposed Project is consistent with the current General Plan designation for the site. Therefore, if the proposed Project's VMT are consistent with the General Plan, then the proposed Project is consistent with the growth assumptions used in the applicable AQAPs. In conclusion, the proposed Project is consistent with the General Plan and would not require a general plan amendment. Therefore, the proposed Project is consistent with the applicable AQAPs.

MITIGATION MEASURE(S)

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.3b – Would the Project Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The proposed Project is located within the San Joaquin Valley Air Basin (SJVAB). The proposed Project consists of the construction and operation of a light industrial development. The Project is consistent with the City of Lemoore 2030 General Plan and Zoning Ordinance and therefore, an allowable use at the Project site.

The General Plan analyzed activities that disturb the soil, such as grading and excavation, infrastructure construction, building demolition, and a variety of construction activities. The General Plan also analyzed operational air quality impacts that would likely occur based on the various land use designations and possible resultant land uses that could occur during buildout of the City in compliance with the General Plan. Because the proposed Project is consistent with the General Plan, construction and operational air emissions as a result have already been analyzed in the General Plan EIR.

The General Plan EIR requires that all new development that is consistent with the General Plan land use designations, such as the proposed Project, be subject to Best Management Practices to reduce dust and other air pollutant emissions, as well as mandatory compliance with all applicable SJVAPCDs rules and regulations. These rules and regulations include, but are not limited to, Rule 2201 (New and Modified Station Source Review), Rule 4002 (National Emission Standards for Hazardous Air Pollutants), Regulation VIII (Fugitive PM10 Prohibitions), and Rule 9510 (Indirect Source Review [ISR]). The construction and operation of the proposed Project would also be subject to SJVAPCD's Regulation VIII (Fugitive PM10 Prohibitions). Implementation of Mitigation Measures MM AQ-1 through MM AQ-3 requires

that the proposed Project comply with applicable SJVAPCD rules and regulations to reduce construction and operational impacts as described in the mitigation.

With implementation of this mitigation, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant.

MITIGATION MEASURE(S)

MM AQ-1: Construction and operation of the proposed project shall be conducted in compliance with applicable rules and regulations set forth by the San Joaquin Valley Air Pollution Control District. Dust control measures outlined below shall be implemented where they are applicable and feasible. The list shall not be considered all-inclusive, and any other measures to reduce fugitive dust emissions not listed shall be encouraged.

d. Land Preparation, Excavation, and/or Demolition. The following dust control measures shall be implemented:

    7. All soil excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering shall take place a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.
    8. All clearing, grading, earth moving, and excavation activities shall cease during periods of winds greater than 20 miles per hour (averaged over 1 hour), if disturbed material is easily windblown, or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property.
    9. All fine material transported on-site a freeboard limit of at least 6 inches shall be maintained and fine material shall be either sufficiently watered or securely covered to prevent excessive dust.
    10. Areas disturbed by clearing, earth moving, or excavation activities shall be minimized at all times.
    11. Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
    12. Where acceptable to the Fire Department, weed control shall be accomplished by mowing instead of discing, thereby leaving the ground undisturbed and with a mulch covering.

e. Site Construction. After clearing, grading, earth moving, and/or excavating, the following dust control practices shall be implemented:

    5. Once initial leveling has ceased, all inactive soil areas within the construction site shall be (1) seeded and watered until plant growth is evident, (2) treated with a dust palliative, or (3) watered twice daily until soil has sufficiently crusted to prevent fugitive dust emissions.

6. All active disturbed soil areas shall be sufficiently watered at least twice daily to prevent excessive dust.
7. The project proponent and/or its contractor(s) shall comply with the provisions of SJVAPCD Rule 4601 - Architectural Coatings, during the construction of all buildings and facilities. Application of architectural coatings shall be completed in a manner that poses the least emissions impacts whenever such application is deemed proficient.
8. The project proponent and/or its contractor(s) shall comply with the provisions of SJVAPCD Rule 4641 during the construction and pavement of all roads and parking areas within the project area. Specifically, the applicant shall not allow the use of rapid cure cutback asphalt, medium cure cutback, or slow cure cutback or emulsified asphalt.

f. Vehicular Activities. During all phases of construction, the following vehicular control measures shall be implemented:

5. On-site vehicle speed shall be limited to 15 miles per hour.
6. All areas with vehicle traffic shall be paved, treated with dust palliatives, or watered a minimum of twice daily.
7. Streets adjacent to the project site shall be kept clean, and project-related accumulated silt shall be removed.
8. Access to the site shall be by means of an apron into the project site from adjoining surfaced roadways. The apron shall be surfaced or treated with dust palliatives. If operating on soils that cling to the wheels of vehicles, a grizzly or other such device shall be used on the road exiting the project site, immediately prior to the pavement, in order to remove most of the soil material from vehicle tires.

MM AQ-2: The project proponent and/or its contractor(s) shall implement the following measures during construction of the proposed project:

k. All equipment shall be maintained as recommended by manufacturer manuals.
l. Equipment shall be shut down when not in use for extended periods of time.
m. Construction equipment shall operate no longer than eight cumulative hours per day.
n. Electric equipment shall be used whenever possible in lieu of diesel- or gasoline-powered equipment.
o. All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_X emissions.
p. On- and off-road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines.
q. On- and off-road diesel equipment shall use cooled exhaust gas recirculation (EGR) if permitted under manufacturer's guidelines.
r. All construction workers shall be encouraged to shuttle (car-pool) to retail establishments or to remain on-site during lunch breaks.
s. All construction activities within the project area shall be discontinued during the first stage smog alerts.

t. Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (1-hour average).

MM AQ-3: Prior to the issuance of building and grading permits, the project proponent shall provide the City of Lemoore Development Services Department with proof that an Indirect Source Review application has been approved by the San Joaquin Valley Air Pollution Control District, if applicable.

MM AQ-4: Prior to the issuance of demolition permits, the project proponent shall provide the City of Lemoore Development Services Department with proof that a Demolition Permit has been issued by the San Joaquin Valley Air Pollution Control District, if applicable

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.3c – Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

See Response (b), above.

MITIGATION MEASURE(S)

Implement MM AQ-1 through MM AQ-4.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.3d – Would the Project Expose sensitive receptors to substantial pollutant concentrations?

As noted in Response (b), the proposed Project is consistent with the surrounding land uses and would not create or expose sensitive receptors to substantial pollutant concentrations or emissions. With implementation of MM AQ-1 through MM AQ-4, impacts would be considered less than significant.

MITIGATION MEASURE(S)

Implement MM AQ-1 through MM AQ-4.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.3e – Would the Project Create objectionable odors affecting a substantial number of people?

According to the 2015 SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI), analysis of potential odor impacts should be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate; and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

As proposed, the Project would not generate odors that would impact sensitive receptors. With implementation of MM QA-1 through MM AQ-4, odor impacts that may be generated during temporary construction activities would be reduced to less than significant levels.

MITIGATION MEASURE(S)

Implement MM AQ-1 through MM AQ-4.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.4 - BIOLOGICAL RESOURCES					
Would the project:					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f.	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion

The analysis presented in this section is based on literature reviews, database searches, and a biological reconnaissance-level survey that was conducted by QK Environmental Scientist Alex Single at the proposed Project on June 20, 2018.

This section focuses on the impacts of the Project on sensitive biological resources including sensitive natural communities, special-status plants and wildlife, riparian habitat, aquatic resources, and the potential interference with wildlife movement corridors. The Project was also evaluated for consistency with locally adopted environmental policies, habitat conservation plans, and recovery plans.

Methodology

Literature reviews and database searches were conducted to determine if the Project site has historically been occupied by special-status species (Figures 3.4.4-1 through 3.4.4-5). The California Natural Diversity Database (CNDDB; 2018), California Native Plants Society (CNPS) database (CNPS 2018), U.S. Fish and Wildlife Service (USFWS) Threatened and Endangered Species List (USFWS 2018a), and USFWS Critical Habitat database (USFWS 2018b) were reviewed to identify State and federal special-status species that have been historically documented within the Lemoore 7.5-minute U.S. Geological Survey (USGS) quadrangle. The search also included the eight surrounding quadrangles: Burrel, Riverdale, Laton, Vanguard, Hanford, Westhaven, Stratford, and Guernsey. Wildlife species designated as "Fully Protected" by the California Fish and Game Code Sections 5050 (Fully Protected reptiles and amphibians), 3511 (Fully Protected birds), 5515 (Full Protected Fish), and 4700 (Fully Protected mammals) were added to the list.

Additional databases that were accessed included the USFWS National Wetlands Inventory (NWI) Map (NWI 2018), the USGS topographical maps, National Hydrography Dataset (NHD; 2018), Federal Emergency Management Agency (FEMA) 100-year floodplain database (FEMA 2018), the Recovery Plan for Upland Species of the San Joaquin Valley (USFWS 1998), and Essential Connectivity Habitat Areas for wildlife corridors (Spencer 2010).

A reconnaissance-level survey was conducted on the Project site and within a 250-foot survey buffer surrounding all sides of the site, where access was available (Figure 3.4.4-1). Access was prohibited in areas where the survey buffer encroached on fenced commercial properties. Pedestrian transects were walked at approximately 50-foot intervals, which provided a 100 percent visual coverage of the Project and survey buffer. The survey focused on mapping the extent of habitats including wetlands and other waters, completing a species inventory, and evaluating the potential for sensitive natural communities, special-status species, and other sensitive biological resources to occur.

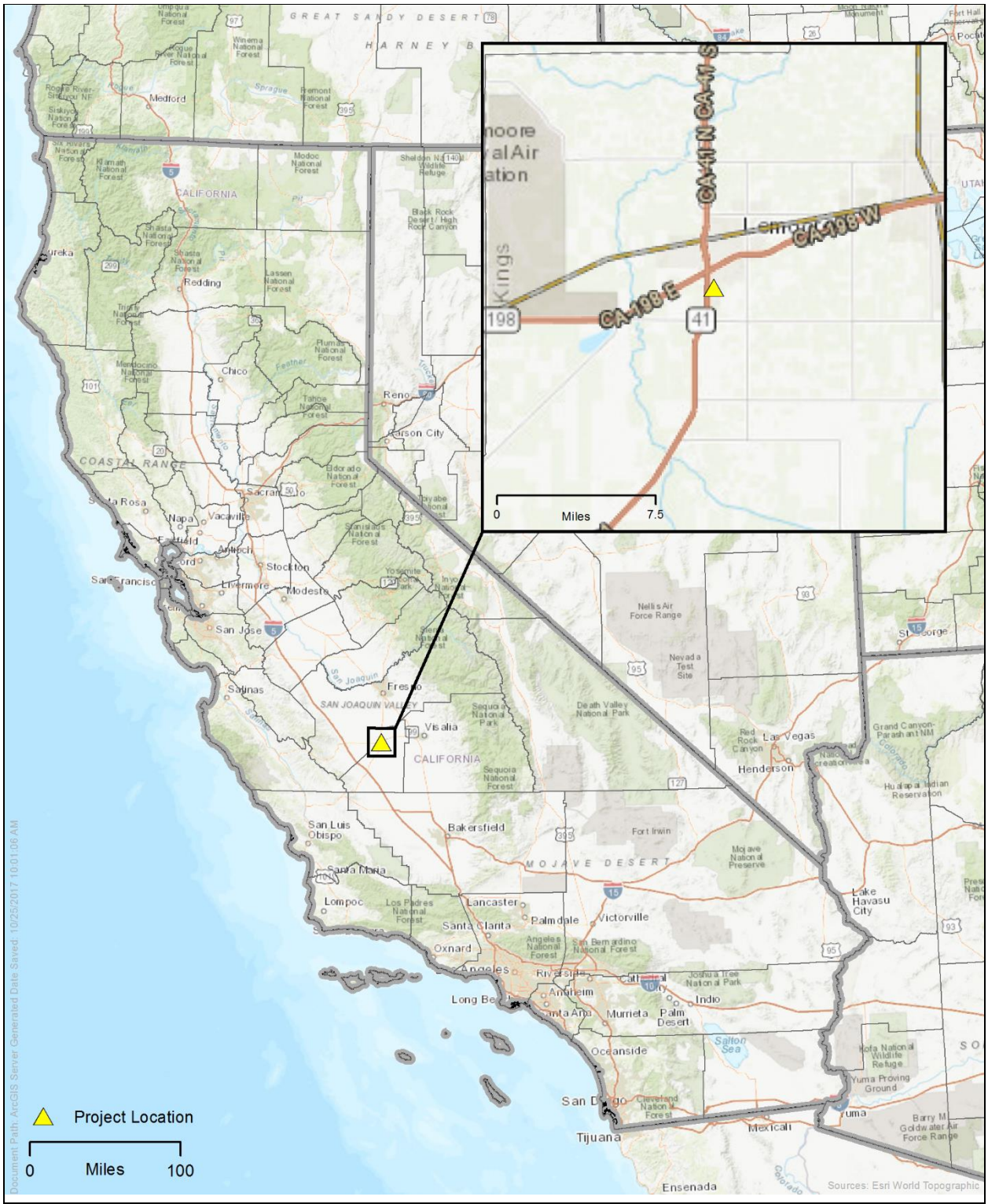


Figure 3.4.4-1
Project Site and Survey Area, Lemoore Industrial Project, Lemoore, California

Potential impacts to biological resources were determined by analyzing the change(s) to the existing setting and associated disturbances that would be anticipated from the Project and relating those changes in conditions to effects to biological resources. Potential impacts that on sensitive biological resources of concern are described and discussed below based on the following topics:

a. Each potentially affected special-status species that could be subject to Project impacts are addressed individually and breeding and/or foraging migratory birds are addressed as a group;

b. Each potentially affected riparian habitat or other sensitive natural community that could be subject to Project impacts are addressed individually;

c. Potentially affected federal or State waters or wetlands are addressed;

d. Potentially affected wildlife corridor, migratory fish habitat, or native wildlife nursery that could be subject to Project impacts are addressed individually;

e. Potentially affected local policy or ordinance related to biological resources are addressed individually; and

f. Potentially affected adopted habitat conservation plan, natural community conservation plan, or other approved habitat conservation plan are addressed individually.

This section includes a general description of the plant and wildlife observed on the Project site, historic records of special-status species that were obtained from the database searches, and the evaluation and findings for species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW or USFWS.

Results

DATABASE RESULTS

Database searches listed historical occurrences of seven special-status plant species and one sensitive natural community within the nine USGS 7.5-minute quadrangles that were queried. Of the seven special-status plant species, none are federally-listed species and one is a State-listed species. Five species were listed as 1B by the CNPS and two were listed as rank 2 or 3 by CNPS. The sensitive natural community was Valley Sink Scrub.

No records of plants or sensitive natural communities were located on the project site. One sensitive natural community and three plants have historic CNDDB records within a 10-mile radius of the Project. A record of the sensitive natural community Valley Sink Scrub is located one mile south of the project, records of recurved larkspur (*Delphinium recurvatum*) and mud nama (*Nama stenocarpa*) are located approximately 9 miles southeast of the Project, and a record of California alkali grass (*Puccinellia simplex*) is located approximately 10 miles north of the Project.

Database searches listed historic occurrences of 24 special-status wildlife species within the nine USGS 7.5-minute quadrangles queried, including five invertebrates, one fish, three amphibians, four reptiles, six birds, and five mammals. Two additional species, one bird and one mammal, were added to the table. The white-tailed kite (*Elanus leucurus*) was added due to recent records not included in CNDDB, and the Buena Vista Lake ornate shrew (*Sorex ornatus relictus*) was added due to the presence of Critical Habitat for the species within ten miles of the Project. This brought the total number of special-status animals considered in this report to 26. Eight of these wildlife species are federally- and State- listed species, seven are federally-listed, two are State-listed, seven are California species of special concern, and two are CDFW Fully Protected. The remaining three have no special status but are tracked by the CNDDB and included in the list of special-status wildlife species.

There are 14 special-status wildlife species with historical CNDDB records that occurred within 10 miles of the Project (Figures 3.4.4-2, 3.4.4-3, and 3.4.4-4). Of these, 3 species are not federally-listed, State-listed or State species of concern, but are tracked by CNDDB. No CNDDB records for wildlife occurred on the Project site. The nearest CNDDB records of special-status wildlife include records of the Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*) one mile south of the project, San Joaquin kit fox (*Vulpes macrotis mutica*) approximately three miles northwest and five miles southeast of the Project, and western pond turtle (*Emys marmorata*).

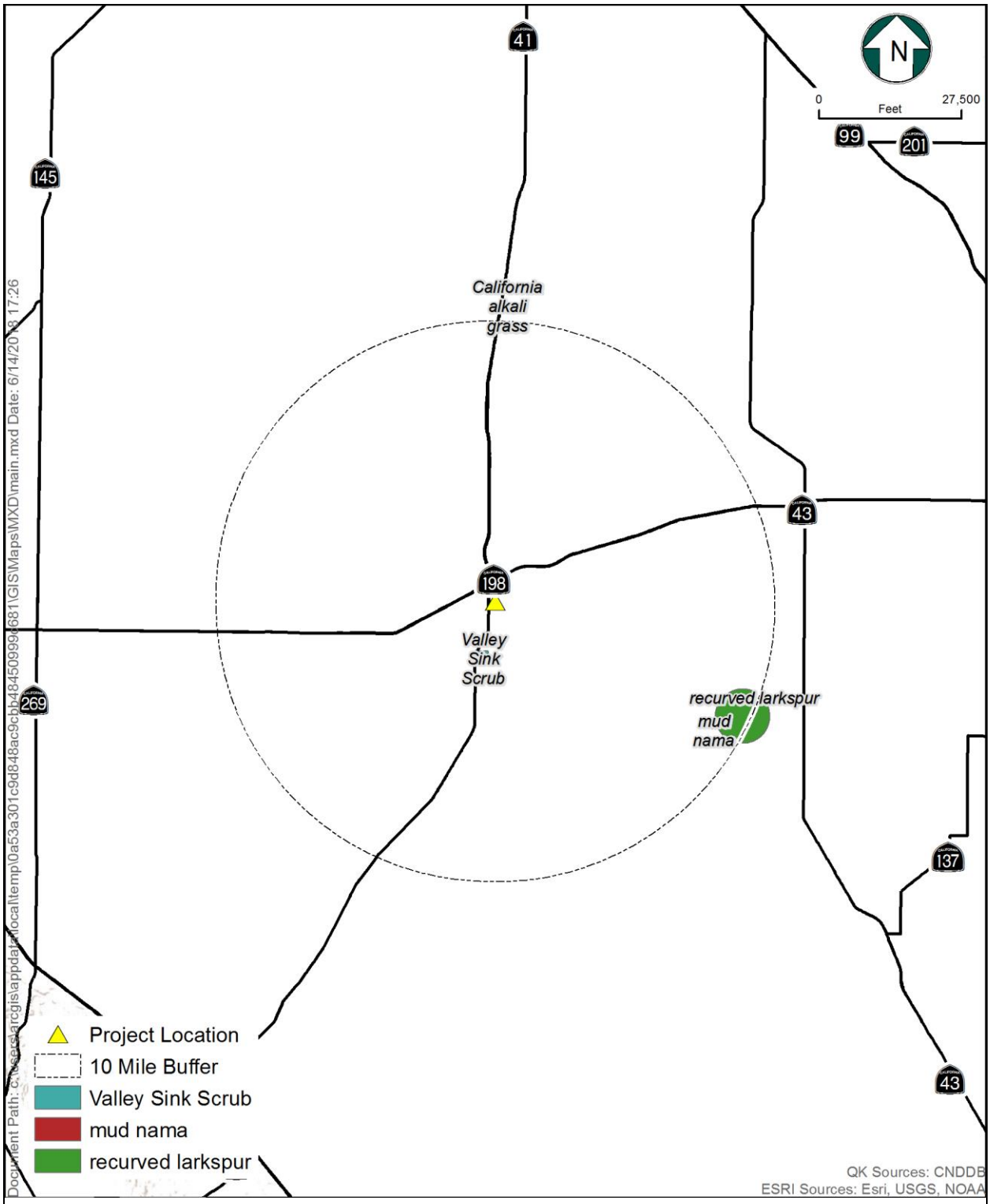


Figure 3.4.4-2
CNDDB Sensitive Natural Communities and Special-Status Plant Species, Lemoore Industrial Project, Lemoore, California

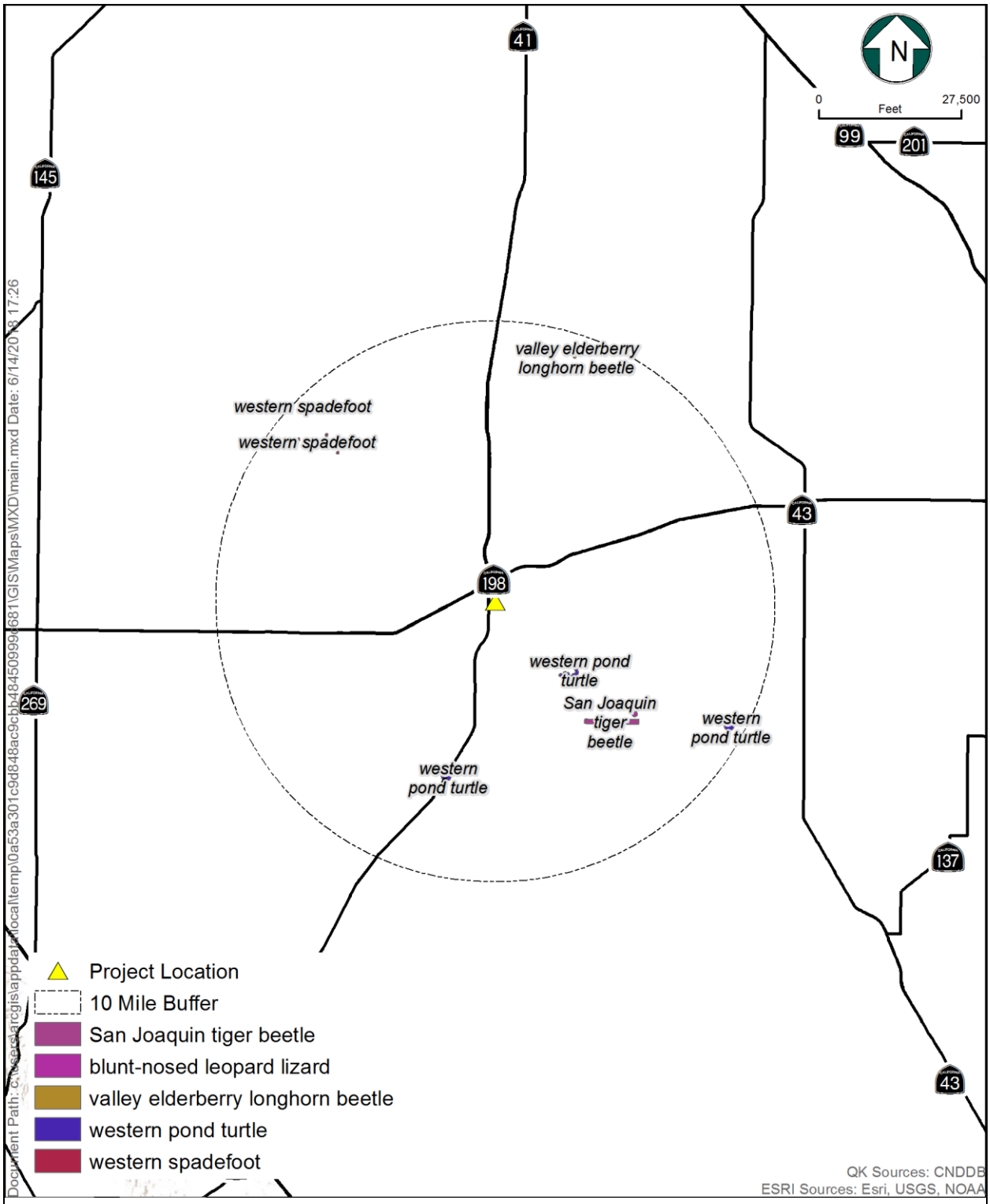


Figure 3.4.4-3
CNDDB Special-Status Reptile, Amphibian, and Invertebrate Species, Lemoore Industrial Project, Lemoore, California

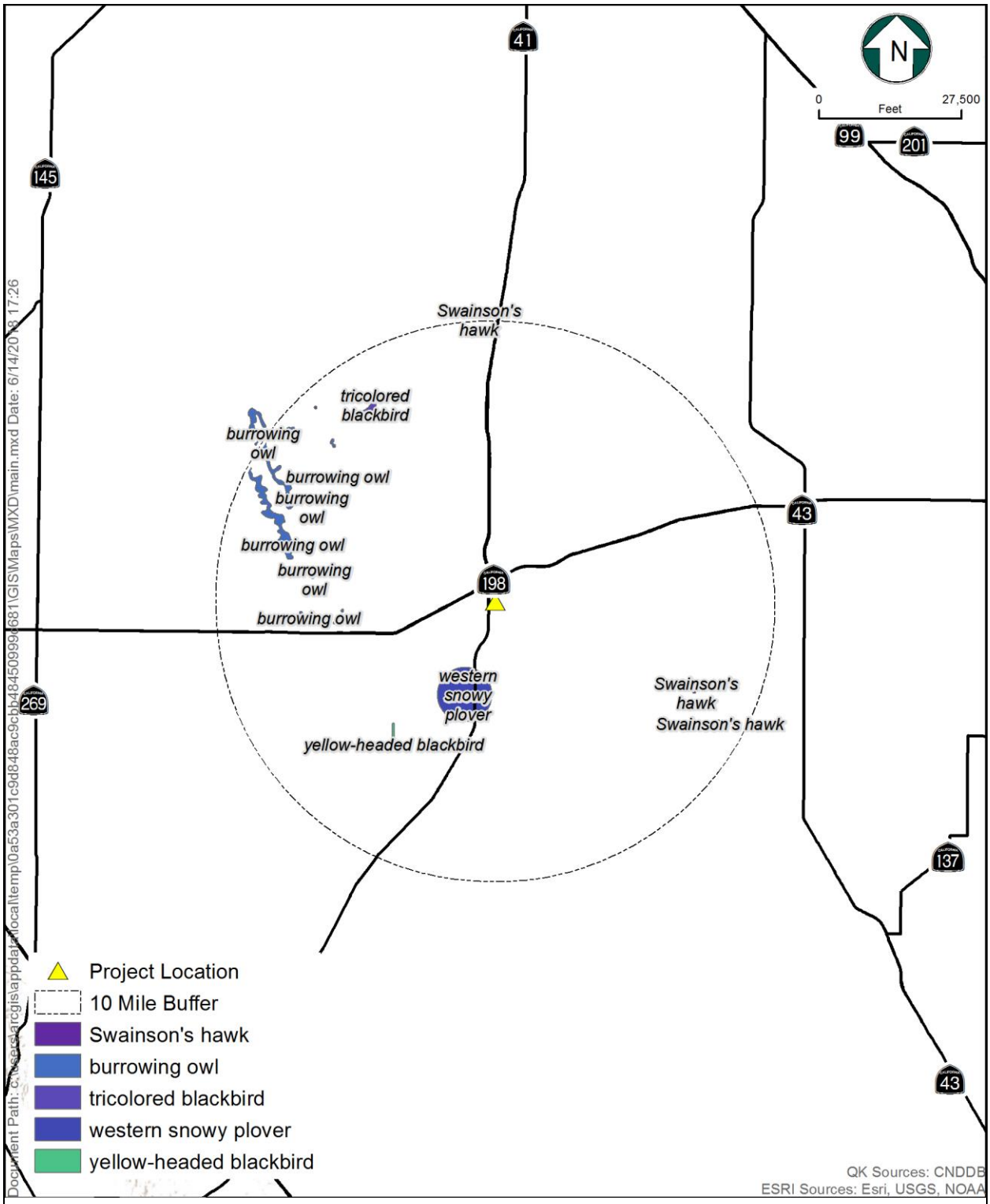


Figure 3.4.4-4
CNDDB Special-Status Bird Species, Lemoore Industrial Project, Lemoore, California

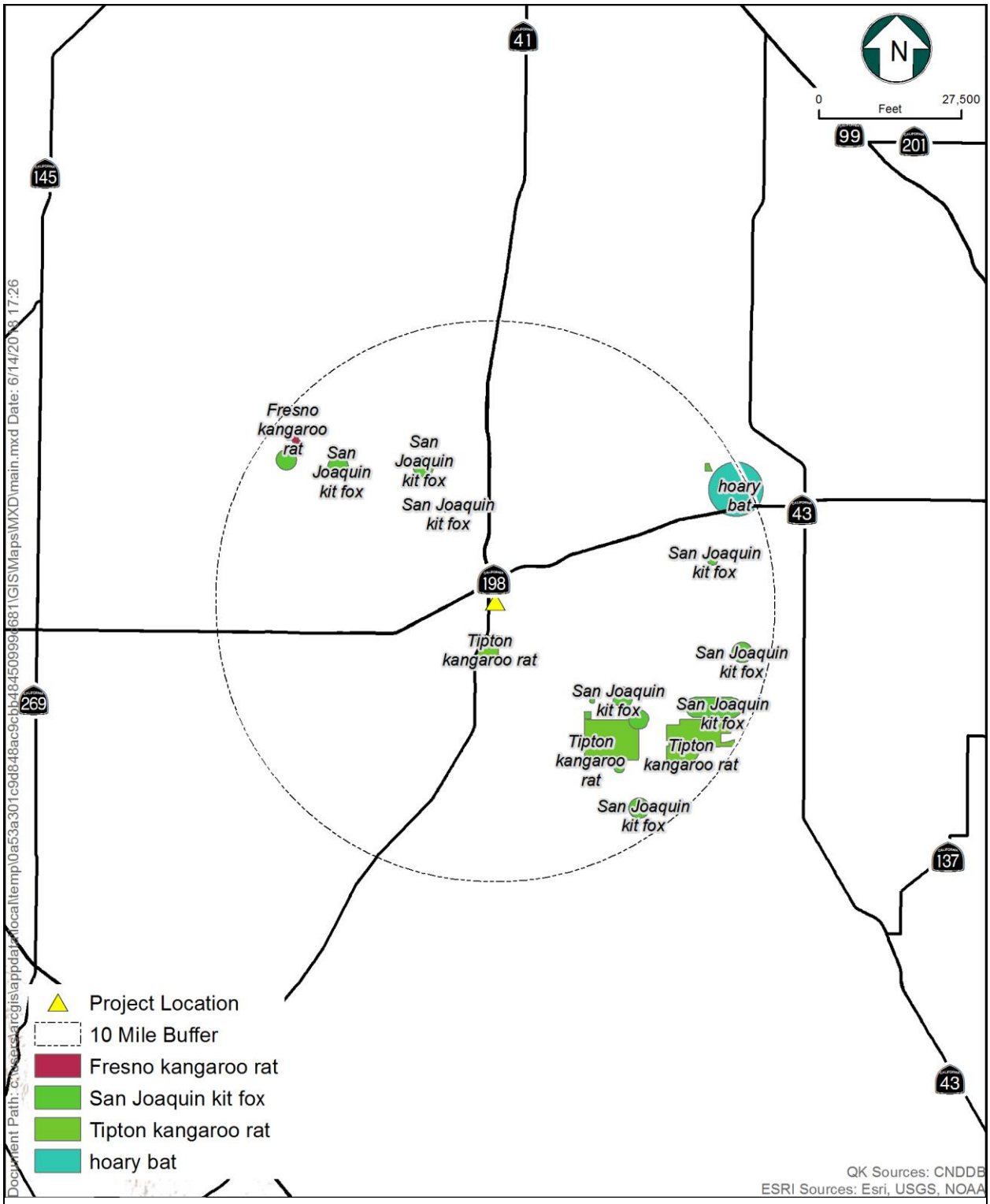


Figure 3.4.4-5
CNDDB Special-Status Mammal Species, Lemoore Industrial Project, Lemoore, California

Plant Communities Occurring on the Project Site

The Project and surrounding survey buffer contain a matrix of disturbed Non-native Grassland (Holland Code 42200) and Valley Sink Scrub (Holland Code 36210) vegetation associations (Holland 1986). Past disturbances to the on-site habitat on the Project site have occurred through disking of the site, resulting in the conversion of Valley Sink Scrub to Non-native Grassland, although many bush seepweed (*Suaeda nigra*) and some scattered quailbush (*Atriplex lentiformis*) and iodine bush (*Allenrolfea occidentalis*) remain. The Valley Sink Scrub in the area surveyed lies in the eastern portion of the Project and surrounding buffer, where the project extends through a thin corridor to allow road access to South 19th Avenue. In this area, the Project extends east in a narrow corridor (Figure 3.4.4-6). This corridor is covered by a dirt road and is not habitat, but Valley Sink Scrub habitat exists south of this road within the Project buffer. Dominant plant species identified on the Project site (Table 3.4.4-1) included Bermuda grass (*Cynodon dactylon*), Russian thistle (*Salsola tragus*), and black mustard (*Brassica nigra*), with smaller amounts of Iodine bush present only on the eastern section of the Project. Willow (*Salix* sp.) were present primarily on a canal and drainage basin on the southern edge of the Project and were the dominant vegetation in that small area. The canal banks on the south side of the Project were not vegetated. Representative photographs of the Project site and surrounding area are presented in Appendix A.

Table 3.4.4-1
Plants Observed on the Lemoore Industrial Project, Lemoore, California

Scientific Name	*Common Name*
Ailanthus altissima	tree of heaven
Allenrolfea occidentalis	iodine bush
Asclepias fascicularis	narrow leaf milkweed
Atriplex lentiformis	quailbush
Bassia hyssopifolia	fivehook bassia
Brassica nigra	black mustard
Bromus diandrus	ripgut brome
Cuscuta sp.	dodder sp.
Cynodon dactylon	Bermuda grass
Helianthus annus	common sunflower
Heliotropium curassavicum	salt heliotrope
Lactuca serriola	prickly wild lettuce
Malva neglecta	common mallow
Medicago sativa	alfalfa
Salix sp.	willow
Salsola tragus	Russian thistle
Suaeda nigra	bush seepweed
Veronica peregrina	neckweed

Figure 3.4.4-6
Biological Resources, Lemoore Industrial Project, Lemoore, California

Wildlife Occurring on the Project Site

Wildlife observed on the Project included two amphibian species, one reptile species, thirteen bird species, and three mammal species (Table 3.4.4-2). The most common species observed were western kingbird (*Tyrannus verticalis*), house sparrow (*Passer domesticus*), and larval Sierran treefrogs (*Pseudacris sierra*). One inactive stick nest was observed on the Project, and one active house sparrow nest was observed south of the Project within the survey buffer.

Table 3.4.4-2
Wildlife Observed on the Lemoore Industrial Project, Lemoore, California

Scientific Name	*Common Name*
Aphelocoma californica	California scrub jay
Buteo jamaicensis	red-tailed hawk
Buteo swainsoni	Swainson's hawk
Canis latrans	coyote
Charadrius vocifeus	killdeer
Columba livia	rock pigeon
Eremophila alpestris	horned lark
Euphagus cyanocephalus	Brewer's blackbird
Falco sparverius	American kestrel
Haemorhous mexicanus	house finch
*Lepus californicus**	black-tailed jackrabbit*
Lithobates catesbeianus	bullfrog
Otospermophilus beecheyi	California ground squirrel
Passer domesticus	house sparrow
Pituophis catenifer	gopher snake
Pseudacris sierra	Sierran treefrog
Streptopelia decaocto	Eurasian collared-dove
Tyrannus verticalis	western kingbird
Zenaida macroura	mourning dove

**Indicates that only sign (scat, tracks, digs, etc.) of this species was observed and no individuals were observed.*

Impact #3.4.4a – Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special-status Plant Species

Habitat on the Project site could potentially support five special-status plant species, but it is not likely that the species would occur because of the high level of disturbance and low quality of habitat. There are no CNDDB records for any special-status plant species on the

site or within the survey buffer. Three special-status plant species, recurved larkspur, California alkali grass, and mud nama, were historically present within 10 miles of the Project. One of these species, mud nama, is associated with wetland habitats that do not occur on the Project. Recurved larkspur and California alkali grass are unlikely to occur on the Project because of previous grading, disking for fire control efforts, construction of a flood-control basin, and because of the prevalence of non-native grasses and other invasive plants. It is unlikely that any of these special-status plant species would occur on the Project, and no impacts would occur to special-status plant species.

Special-status Wildlife Species

Based on database searches, 26 wildlife species were found to have the potential to occur in the nine USGS topographic quads surrounding the Project. Of these species, 11 were found not to have a potential to occur on the Project due to the absence of suitable habitat such as vernal pools, streams, and open beaches. Further detail on these species is provided in the species table (Appendix A).

Based upon the database searches, there are 12 special-status wildlife species and three additional wildlife species that are tracked by the CNDDB that have the potential to be present on the Project site. Federally-listed species with the potential to occur are the western snowy plover (*Charadrius alexandrinus nivosus*) and Buena Vista Lake ornate shrew. Species with the potential to occur on the site withat are both State- and federally-listed are the Fresno kangaroo rat (*Dipodomys nitratoides exilis*), Tipton kangaroo rat, and San Joaquin kit fox (*Vulpes macrotis mutica*). The State-listed Swainson's hawk and tricolored blackbird (*Agelaius tricolor*) potentially occur on the Project site. The western spadefoot (*Spea hammondii*), California glossy snake (*Arizona elegans occidentalis*), western pond turtle, and western burrowing owl (*Athene cunicularia*), which are CDFW species of special concern could potentially occur. The site could support the white-tailed kite, which is a CDFW Fully Protected species.

Based upon the database searches, there are three non-listed wildlife species which could be present on the Project site. Those are the black-crowned night heron (*Nycticorax nycticorax*), San Joaquin tiger beetle (*Cicindela tranquebarica ssp.*), and hoary bat (*Lasiurus cinereus*). The San Joaquin tiger beetle and hoary bat lack any formal listing or protection, while the black-crowned night heron is protected by the Migratory Bird Treaty Act (MBTA). The tiger beetle and hoary bat require no further analysis because of their lack of listing status. The black-crowned night heron is discussed along with other migratory birds.

Based upon site conditions observed during the field survey of the Project site, the listed species that have potential to occur on this project are ones that can use small amounts of low quality habitat. The San Joaquin kit fox could forage in the ruderal vegetation that is present on most of the Project. Poor potential breeding habitat for the tricolored blackbird is available on the Project in the willow thicket in the southern portion of the Project, but as this is low quality habitat for that species, it is unlikely to inhabit the Project. A pair of Swainson's hawk were observed soaring above the Project. It is possible that this species is nesting near the Project and using the Project as foraging habitat. Suitable nesting trees exist

adjacent to the project, but no nests were observed on the project or in the buffer area that was examined. The Fresno kangaroo rat is likely extinct, but the Tipton kangaroo rat has one CNDDB occurrence a mile south of the Project. The disked, ruderal land making up the Project is of minimal value to any kangaroo rat, but the presence of a population a mile away makes dispersal of Tipton kangaroo rats to the Project possible. There were no kangaroo rat burrows observed on the Project site thus making it unlikely that this species is present.

The white-tailed kite and blunt-nosed leopard lizard are the two Fully Protected species that were listed in database searches. The white-tailed kite is possible in any open habitat but is rare in the southern San Joaquin Valley and is unlikely to be present on the Project. None were observed during the site examination. The disked habitat on the Project is not suitable for the blunt-nosed leopard lizard.

Four California species of special concern could make use of the Project. The western spadefoot could potentially breed in temporary pools of water on the Project, including intermittently full ditches and drainage basins on the Project. The California glossy snake lives in arid scrub habitat like that of the Project, and it could pass through the Project while foraging, but the Project is composed of low quality foraging habitat for this species. The western pond turtle is unlikely to live on or near the Project site because the only habitat that could support this species is the irrigation ditch at the south end of the project, which is low-quality habitat for this species. The western burrowing owl could forage and nest in the open ruderal terrain of the Project, but no burrowing owls or burrowing owl sign was observed during the reconnaissance survey.

Removal of the small amount of willows in the middle and on the southern edge of the Project could potentially impact nesting Swainson's hawk or white-tailed kite. Removal of riparian trees and shrubs could potentially impact nesting tricolored blackbird. Loss of tree habitat could also reduce breeding success of other nesting migratory birds.

Critical Habitat

No Critical Habitat occurs on the Project site. One USFWS Critical Habitat unit is located within 10 miles of the Project (Figure 3.4.4-7). This Critical Habitat is for the Buena Vista Lake ornate shrew.

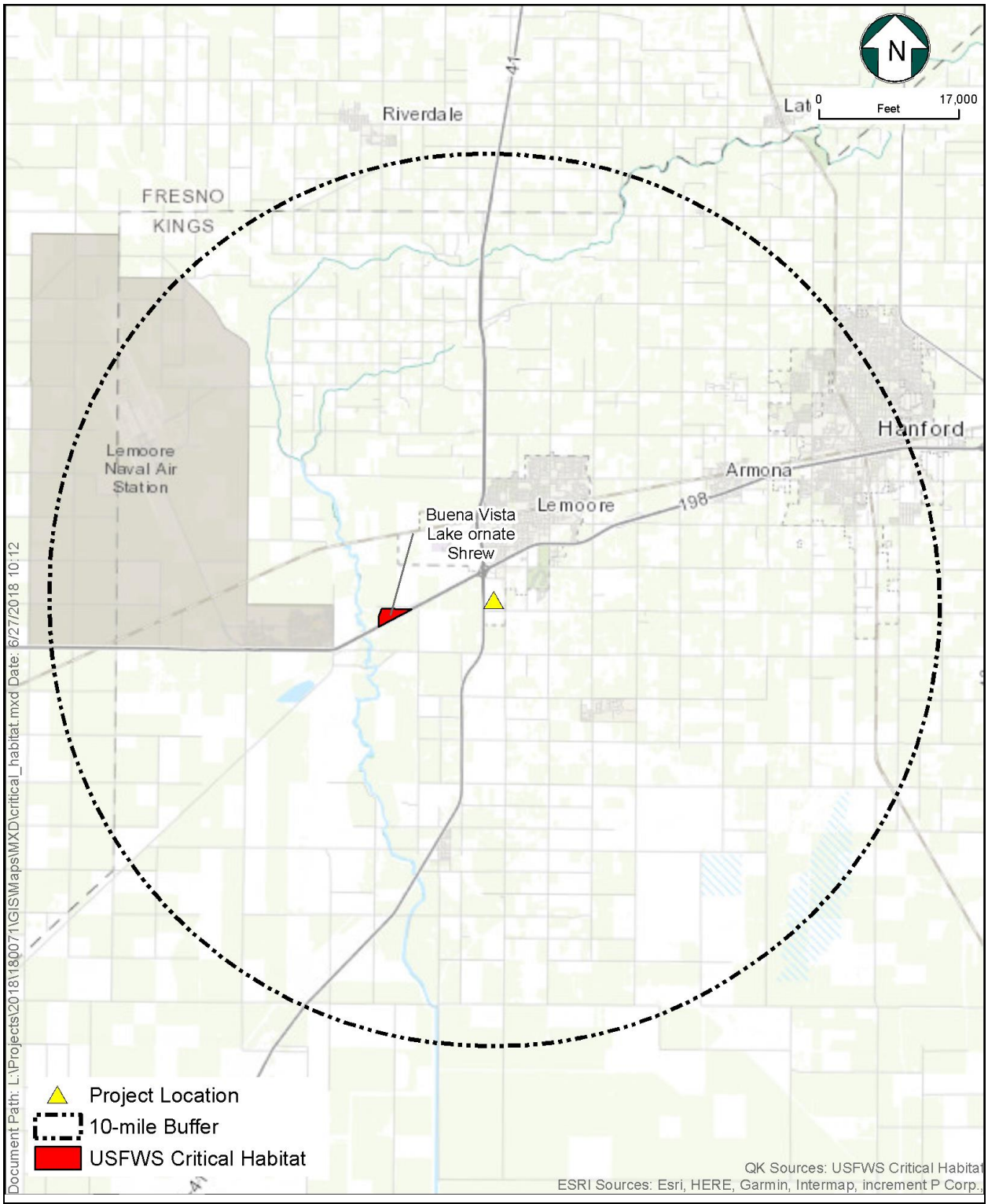


Figure 3.4.4-7
Critical Habitat, Lemoore Industrial Project, Lemoore, California

MITIGATION MEASURE(S)

Special-status plant species are unlikely to be impacted by Project activities and no mitigation measures to protect, avoid, or minimize impacts to special-status plant species are warranted. There is the potential for some special-status or protected wildlife species to be impacted by Project activities. Mitigation measures to protect, avoid, and minimize impacts to special-status wildlife species are provided below. When implemented, these measures would reduce impacts to these species to below significant levels.

MM-BIO-1 (protection of San Joaquin kit fox): The U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (2011) shall be enacted. These recommendations include but are not limited to:

- Pre-construction surveys shall be conducted no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities, or any Project activity likely to impact the San Joaquin kit fox at Action Area 2.
- Project-related vehicles shall observe a daytime speed limit of 20-mph throughout the Action Area 2, except on County roads and State and federal highways; this is particularly important at night when kit fox is the most active. Night-time construction shall be minimized to the extent possible. However, if night construction should occur, then the speed limit shall be reduced to 10-mph. Off-road traffic outside of designated project areas shall be prohibited.
- To prevent inadvertent entrapment of kit fox or other animals during the construction phase of a Project, all excavated, steep-walled holes or trenches more than 2-feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals.
- Kit fox are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way.
- All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the Action Area 2.
- No pets, such as dogs or cats, shall be permitted at the Action Area 2 to prevent harassment, mortality of kit fox, or destruction of dens.
- Use of rodenticides and herbicides in project areas shall be restricted. This is necessary to prevent primary or secondary poisoning of kit fox and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation, as well as additional project-related restrictions deemed necessary by the

Service. If rodent control must be conducted, zinc phosphide shall be used because of a proven lower risk to kit fox.

- A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might observes a kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the USFWS.
- An employee education program shall be conducted for any Project that has anticipated impacts to kit fox or other endangered species. The program shall consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the Project. The program shall include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
- In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for guidance.
- New sightings of kit fox shall be reported to the CNDDB. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the USFWS at the address below.

MM BIO-2 (protection of Swainson's hawk): If all Project activities are completed outside of the Swainson' hawk nesting season (February 15 through August 31), no mitigation shall be required. If construction is planned during the nesting season, a preconstruction survey shall be conducted by a qualified biologist to evaluate the site and a 0.5-mile buffer for active Swainson's hawk nests. If potential Swainson's hawk nests or nesting substrates are located within 0.5 mile of the Project sites, then those nests or substrates must be monitored for activity on a routine and repeating basis throughout the breeding season, or until Swainson's hawks or other raptor species are verified to be using them. Monitoring will be conducted according to the protocol outlined in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). The protocol recommends that ten visits be made to each nest or nesting site: one during January 1-March 20 to identify potential nest sites, three during March 20-April 5, three during April 5-April 20, and three during June 10-July 30. To meet the minimum level of protection for the species, surveys shall be completed for at least the two survey periods immediately prior to Project-related ground disturbance activities. During the nesting period, active Swainson's hawk nests shall be avoided by 0.5 mile unless this avoidance buffer is reduced through consultation with the CDFW and/or USFWS. If an active Swainson's hawk nest is located within 250 feet of the Project or within the Project, including the stick nest located within the Project, CDFW will require an Incidental Take Permit.

MM BIO-3 (protection of western burrowing owl): A qualified biologist shall conduct a pre-construction survey on the Project site and within 250 feet of its perimeter where feasible, to identify the presence of the western burrowing owl. The survey should be conducted between 14 and 30 days prior to the start of construction activities. If any burrowing owl burrows are observed during the preconstruction survey, avoidance measures shall be consistent with those included in the CDFW staff report on burrowing owl mitigation (CDFG 2012). If occupied burrowing owl burrows are observed outside of the breeding season (September 1 through January 31) and within 500 feet of proposed construction activities, a passive relocation effort may be instituted in accordance with the guidelines established by the California Burrowing Owl Consortium (1993) and the California Department of Fish and Wildlife (2012). During the breeding season (February 1 through August 31), a 250-foot (minimum) buffer zone should be maintained unless a qualified biologist verifies through noninvasive methods that either the birds have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

MM BIO-4 (protection of migratory birds and raptors): If construction is planned outside the nesting period for raptors and migratory birds (February 15 to August 31), no mitigation shall be required. If construction is planned during the nesting season for migratory birds and raptors, a preconstruction survey to identify active bird nests shall be conducted by a qualified biologist to evaluate the site and a 250-foot buffer for migratory birds and a 500-foot buffer for raptors. If nesting birds are identified during the survey, active raptor nests shall be avoided by 500 feet and all other migratory bird nests shall be avoided by 250 feet. Avoidance buffers may be reduced if a qualified on-site monitor determines that encroachment into the buffer area is not affecting nest building, the rearing of young, or otherwise affecting the breeding behaviors of the resident birds.

No construction or earth-moving activity shall occur within a non-disturbance buffer until it is determined by a qualified biologist that the young have fledged (left the nest) and have attained sufficient flight skills to avoid Project construction areas. Once the migratory birds or raptors have completed nesting and young have fledged, disturbance buffers will no longer be needed and can be removed, and monitoring can cease.

BIO-5 (WEAP training): Prior to ground disturbance activities, within one week of employment all new construction workers at the Project site shall attend a Construction Worker Environmental Awareness Training and Education Program, developed and presented by a qualified biologist.

The Construction Worker Environmental Awareness Training and Education Program would be presented by the biologist and should include information on the life history wildlife and plant species that may be encountered during construction activities, their legal protections, the definition of "take" under the Endangered Species Act, measures the Project operator is implementing to protect the San Joaquin kit fox and other species, reporting requirements, specific measures that each worker would employ to avoid take of the wildlife species, and penalties for violation of the Act. Identification and information regarding

sensitive or other special status plant species should also be provided to construction personnel.

- An acknowledgement form signed by each worker indicating that environmental training has been completed.
- A sticker that shall be placed on hard hats indicating that the worker has completed the environmental training. Construction workers should not be permitted to operate equipment within the construction area unless they have attended the training and are wearing hard hats with the required sticker;
- A copy of the training transcript and/or training video/CD, as well as a list of the names of all personnel who attended the training and copies of the signed acknowledgement forms should be maintain on site for the duration of construction activities.
- The construction crews and contractor(s) would be responsible for unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by Project permits.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.4b – Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Riparian habitats are defined as vegetative communities that are influenced by a river or stream, specifically the land area that encompasses the water channel and its current or potential floodplain. Some willows and cottonwoods near the canal on the south side of the project compose a riparian are of 0.957 acres, which is the total amount of riparian habitat occurring on the Project site. Three individually standing willow trees also occur in the center of the Project site, but these do not constitute riparian habitat because they are isolated individuals in the middle of ruderal habitat unaffected by streams or rivers. Up to 0.957 acres of riparian habitat may potentially be impacted by the Project. The California Department of Fish and Wildlife may require a Streambed Alteration Agreement for impacts to this riparian habitat and for impacts to the canal e canal on the south side of the Project.

MITIGATION MEASURE(S)

MM BIO-6 (riparian vegetation): It is recommended that the project be designed to avoid the 0.957 acres of riparian habitat. To ensure avoidance, ESA fencing shall be placed around the riparian areas prior to beginning of construction and maintained throughout construction. The Project shall be designed to allow sufficient water to maintain the riparian area.

If it is not possible to avoid the riparian habitat then one of the following two options for mitigating the loss of riparian habitat will be implemented.

3. On-site mitigation: In-kind compensation of 2.871 acres shall be provided within the Project site. Removal of riparian trees equal to or greater than 4 inches in DBH will be mitigated by the replacement of those trees at a 3:1 ratio for each tree type within the mitigation land.
4. Off-site mitigation: In-kind compensation of 2.871 acres shall be provided outside of the Project site. Removal of riparian trees equal to or greater than 4 inches in DBH will be mitigated by the replacement of those trees at a 3:1 ratio for each tree type within the mitigation land.

MM BIO-7 (water quality): Best management practices (BMPs) would serve to reduce impacts to waters of the U.S. and waters of the State to less than significant levels. Impacts to the banks of the canal on the south side of the Project will require a Streambed Alteration Agreement from CDFW through Section 1600. Compliance with these permits may require implementation of additional measures.

The Project will employ best management practices (BMPs) to prevent all construction pollutants from contacting storm water, with the intent of keeping sedimentation or any other pollutants from moving offsite and into receiving waters. Some of these BMPs may include the following:

- Construction materials, including topsoil and chemicals, should be stored, covered, and isolated to prevent runoff losses and contamination of storm water and groundwater;
- Topsoil removed during construction should be carefully stored and treated as an important resource. Berms should be placed around topsoil stockpiles to prevent runoff during storm events;
- Fuel and vehicle maintenance areas should be established away from all drainage courses and these areas should be designed to control runoff;
- Disturbed areas should be revegetated after completion of construction activities;
- Sanitary facilities should be provided for construction workers; and
- Hazardous materials should be stored in appropriate and approved containers, maintaining required clearances. Materials should be handled in accordance with applicable federal, state and/or local regulatory agency protocols.

MM BIO-8 (valley sink scrub): Construction equipment and vehicles shall not be permitted in the area of Valley Sink Scrub located to the southeast of the Project. This area shall be excluded from the Project by ESA fencing.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.4c – Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Federally protected wetlands will not be affected by the Project, as none occur on the Project site. Note that the intermittent stream shown in the National Wetlands Inventory Map (Figure 3.4.4-8) no longer existent. The drainage has been altered by a ditch running north-south along the eastern side of the Project (Figure 3.4.4-6).

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.4d – Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife movement corridors are routes that provide shelter and sufficient food supplies to support regular movements of wildlife species. A movement corridor is a continuous geographic extent of habitat that either spatially or functionally links ecosystems across fragmented, or otherwise inhospitable, landscapes. Faunal movement may include seasonal or migration movement, life cycle links, species dispersal, re-colonization of an area, and movement in response to external pressures. Movement corridors typically include riparian habitats, ridgelines, and ravines, as well as other contiguous expanses of natural habitats. Movement corridors may be functional on regional, sub-regional, or local scales.

The proposed Project and surrounding area does not occur within a known terrestrial migration route, significant wildlife corridor, or linkage area as identified in the Recovery Plan for Upland Species in the San Joaquin Valley (USFWS 1998) or in habitat identified by the Essential Habitat Connectivity Project (Spencer 2010). The survey conducted for the Project did not provide evidence of a wildlife nursery or important migratory habitat being present on the Project site. Migratory birds and raptors could use habitat on or near the Project for foraging and/or as stopover sites during migrations or movement between local areas.

The canal on the south site of the Project may serve as a local movement corridor for frogs, toads, and fish. The Project would not substantially affect migrating birds or other wildlife. The Project will not restrict, eliminate, or significantly alter a wildlife movement corridor, wildlife core area, or Essential Habitat Connectivity area, either during construction or after the Project has been constructed. Project construction will not substantially interfere with wildlife movements or reduce breeding opportunities.

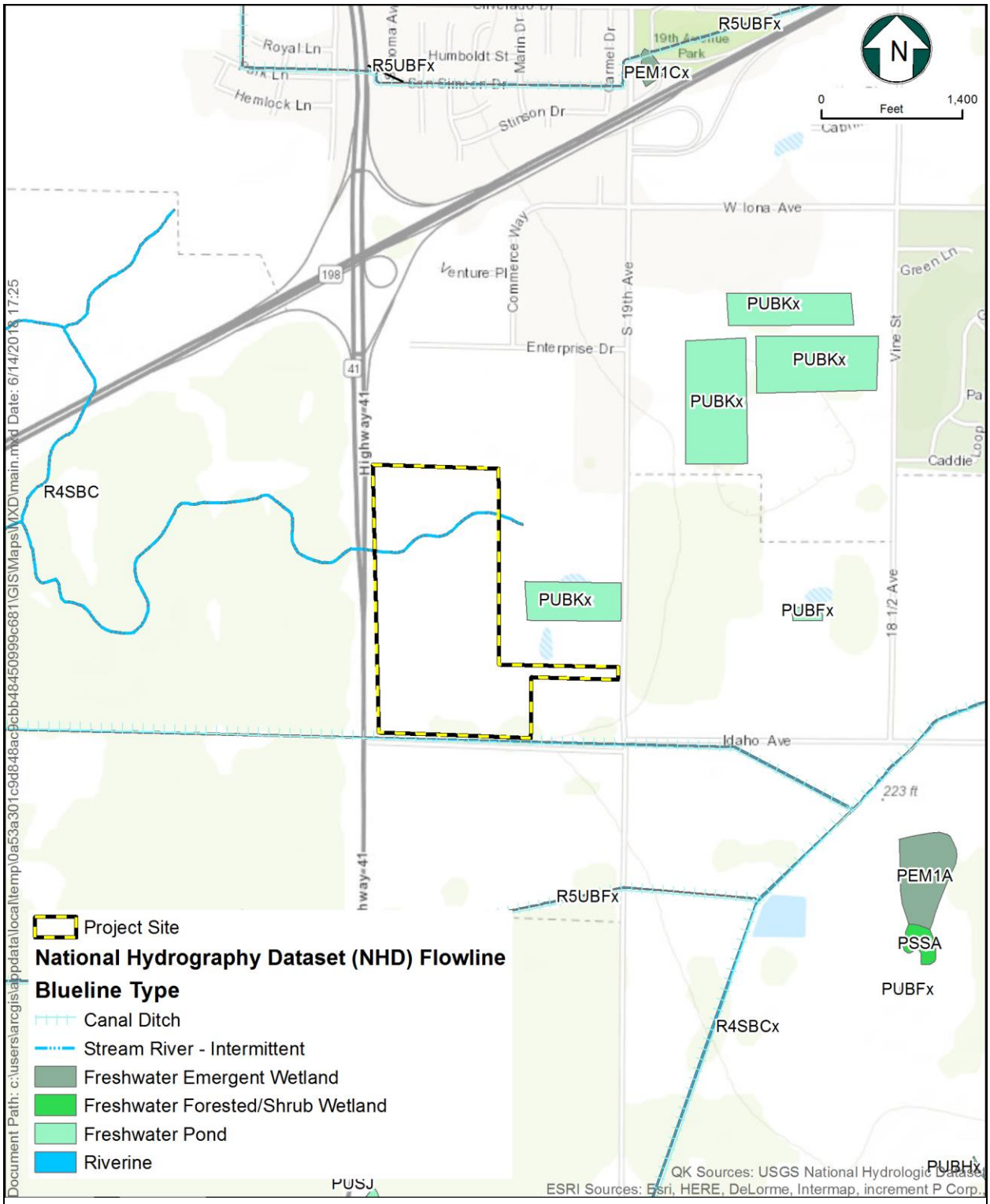


Figure 3.4.4-8
National Wetlands Inventory and National Hydrography Dataset, Lemoore Industrial Project, Lemoore, California

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.4e and #3.4.4f – Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

The City of Lemoore does not have any local policies or ordinances protecting biological resources nor an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, there would be no impact.

MITIGATION MEASURE(S)

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact

3.4.5 - CULTURAL RESOURCES

Would the project:

a.	Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	☐	☒	☐	☐
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☒	☐	☐
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion

Impact #3.4.5a – Would the Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

The "Resource Conservation Element" of the 2035 Kings County General Plan states that the county has a number of historical sites, four of which are included on the National Register of Historic Places, three are designated as California Historical Landmarks, and the remaining are identified as being historic sites of local importance (Kings County, 2010). The proposed project is located within an undeveloped area and does not contain any historic resources, nor is it located within an identified historic district. The project would have no impact on registered historic resources.

The records search conducted at the SSJVIC indicated that two previous cultural resource surveys had included small portions (est. 2 acres) in the far northwest and eastern extremities of the project. (Wren 1989; California Department of Transportation 1992). One additional survey was conducted along the western boundary of the property (Leach-Palm et al. 2010). No further cultural resource surveys have been performed within a half mile of the project. No cultural resources have been recorded on or within a half mile of the subject property and it is not known if any exist there.

A SLF record search response was received from the Native American Heritage Commission (NAHC) on June 29 (Appendix B). The NAHC responded that there are no known sacred lands within the APE or a one-mile radius of the project. The County identified the Santa Rosa Rancheria Tachi-Yokut Tribe (Tribe) as being the only Tribe that would be involved in projects within Kings County. The Tribe has been notified of the project, pursuant to Public Resources Code section 21080.3.1.

The project site is in an undeveloped portion of the city and does not contain any structures that could be potentially historic. There are no tribal lands within the vicinity of the project. Although no historic resources have been discovered on the project site, there would be a potentially significant impact if historical resources were uncovered during project construction. Implementation of MM CUL-1 through MM CUL-4 would reduce potential impacts to a less than significant level.

MITIGATION MEASURES

MM CUL-1 (Archaeological Monitoring): Prior to any ground disturbance, a surface inspection of the Index Project site shall be conducted by a qualified archeologist. The qualified archeologist shall monitor the site during grading activities. The archeologist shall provide pre-construction briefings to supervisory personnel, any excavation contractor, and any person who will perform unsupervised, ground disturbing work on the project in connection with construction or decommissioning. The briefings will include information on potential cultural material finds and, on the procedures, to be enacted if resources are found.

MM CUL-2 (Native American Monitoring): Prior to any ground disturbance, the applicant shall offer interested Tribes the opportunity to provide a Native American Monitor during ground disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the Tribe.

MM CUL-3 (Stop Work in the Event of Unanticipated Discoveries): In the event that cultural resources, paleontological resources or unique geologic features are discovered during construction, operations shall stop within 100 feet of the find, and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall determine the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Any previously undiscovered resources found during construction within the Project area shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance. No further ground disturbance shall occur in the immediate vicinity of the discovery until approved by the qualified archaeologist. Upon discovery of cultural resources, in addition to other procedures described in this mitigation measure, the Kings County Community Development Agency, along with other relevant agency or Tribal officials, shall be contacted to begin coordination on the disposition of the find(s), and treatment of any significant cultural resource shall be

undertaken pursuant to the Plan. In the event of any conflict between this mitigation measure and the Plan, the stipulations of the Plan shall control.

MM-CUL 4 (Disposition of Cultural Resources): Upon coordination with the Kings County Community Development Agency, any archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded long-term preservation. Documentation for the work shall be provided in accordance with applicable cultural resource laws and guidelines.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.5b – Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

See discussion for Impact 3.4.5a above.

Although considered unlikely since there is no indication of any historic resources on the project site, subsurface construction activities associated with the proposed project could potentially damage or destroy previously undiscovered archaeological resources. This is considered a *potentially significant impact*. Mitigation is proposed requiring implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface historic and archaeological resources.

MITIGATION MEASURES

Implementation of MM CUL-1 through MM CUL-4

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.5c – Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

There are no unique geological features or known fossil-bearing sediments in the vicinity of the project site. It is unlikely that any ground disturbance activities would be of a depth to uncover paleontological resources. However, there remains the possibility for previously unknown, buried paleontological resources or unique geological sites to be uncovered during subsurface construction activities. Therefore, this would be a potentially significant impact. Mitigation is proposed requiring standard inadvertent discovery procedures to be implemented to reduce this impact to a level of less than significant.

MITIGATION MEASURES

MM CUL-5: During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or other appropriate facility regarding any discoveries of paleontological resources. If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.5d – Would the Project disturb any human remains, including those interred outside of formal cemeteries?

As previously noted, a search of the California NAHC Sacred Lands File search revealed no records of known sensitive cultural resources in the vicinity of the project area. Human remains are not known to exist within the project area. However, construction would involve earth-disturbing activities, and it is still possible that human remains may be discovered, possibly in association with archaeological sites. MM CUL-6 has been included in the unlikely event that human remains are found during ground-disturbing activities. Impacts would be less than significant with implementation of mitigation.

MITIGATION MEASURES

MM CUL-6: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American

involvement, in the event of discovery of human remains, at the direction of the county coroner.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

3.4.6 - GEOLOGY AND SOILS

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

Discussion

Impact #3.4.6a(i) – Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The project site is not located within an Alquist-Priolo Earthquake Fault Zone. Per the Department of Conservation, California Geologic Survey Regulatory Maps (Department of Conservation, 2017), the nearest fault line is the Nunez fault, which lies in the Alcade Hills 7.5-minute quadrangle, northwest of Coalinga in Fresno County approximately 35 miles west of the project site. According to the *2035 Kings County General Plan*, there are no known major fault systems within Kings County. The greatest potential for geologic disaster in Kings County is posed by the San Andres Fault, which is located approximately four miles west of the Kings County boundary line with Monterey County (Kings County, 2010). The distance from the nearest active faults precludes the possibility of fault rupture on the project site. Therefore, there would be no impact.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.6a(ii) – Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

According to the Seismic Safety Map contained within the Health and Safety Element of the 2035 Kings County General Plan (Figure HS-2, page HS-10), the project site is located within an area designated as Zone V1 or Valley Zone 1, which is identified as the area of least expected seismic shaking by the Kings County Seismic Zone Description in the 2035 General Plan (Kings County, 2010). The potential for ground shaking is discussed in terms of the percent probability of exceeding peak ground acceleration (% g) in the next 50 years (Kings County, 2010). The project site's exceedance probability in the next 50 years is between 20-30%, which is the lowest within the county. Although the project area could potentially experience ground shaking, the magnitude of the hazard would not be severe as indicated by the Health and Safety Element of the 2035 Kings County General Plan. Therefore, a less than significant impact would occur.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.6a(ii) – Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

The project site is illustrated in Figure HS-2 Seismic Safety Map of the 2035 Kings County General Plan as an area subject to potential liquefaction. Liquefaction could result in local areas during a strong earthquake or seismic ground shaking where unconsolidated sediments and a high-water table coincide. The soils within the project area have been identified as having an extremely high-water table ranging from two to four feet below ground surface (United States Department of Agriculture, 1986).

Structures constructed as part of the project would be required by State law to be constructed in accordance with all applicable International Building Code (IBC) and California Building Code (CBC) earthquake construction standards, including those relating to soil characteristics. Adherence to all applicable regulations would avoid any potential impacts to structures resulting from liquefaction at the project site.

Since the project includes the construction of structures and residences the potential for liquefaction is considered significant. Implementation of MM GEO-1 would require the preparation of a geotechnical study that would include recommendations to engineer the site's soils to prevent potential liquefaction in the future. With implementation of this mitigation measure, the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure including liquefaction. Therefore, the impact would be less than significant with mitigation incorporated.

MITIGATION MEASURES

MM GEO-1: Prior to final design, a geotechnical study shall be prepared for the project site and recommendations of the study shall be incorporated into final design of the project. A copy of the report shall be submitted to the Kings County Community Development Agency for review.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.6a(ii) – Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The project site currently consists of undeveloped land and the surrounding area is essentially flat. The site's topography would not change substantially as a result of project development. The project site is illustrated in Figure HS-3 California Landslide Hazards Map of the *2035 Kings County General Plan* as having "Low" (less than 1.5 percent of area involved) for landslide incidents. Since the site is essentially flat in nature from the previous agricultural activities with no surrounding slopes and it is not considered to be prone to landslides, the project would not expose people or structures to potential substantial adverse effects from landslides. Therefore, there would be no impact.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.6b – Would the Project result in substantial soil erosion or the loss of topsoil?

There are three types of soils found within the project site (Figure 3.4.6-1). The three soils include Lakeside loam, Grangeville sandy loan, and Lemoore sandy loam. The project site currently consists of undeveloped land and the surrounding area is essentially flat. The site's topography would not change substantially as a result of project development.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.6c – Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

As previously discussed, the site soils are considered stable in that there is not a potential of on- or offsite landslides, lateral spreading, subsidence or collapse. However, as discussed in Impact #3.4.6a(iii), the project site soils are subject to potential liquefaction as identified in the 2035 General Plan. The project is potentially located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in liquefaction. Furthermore, the structures would be subject to all applicable ordinances of the Kings County Building Ordinance (Chapter 5), as well as all applicable IBC and CBC earthquake construction standards, including those relating to soil characteristics (Kings County, 2015). In addition, the implementation of MM GEO-1, which requires the preparation of a geotechnical study, would reduce project impacts to a less-than-significant impact.

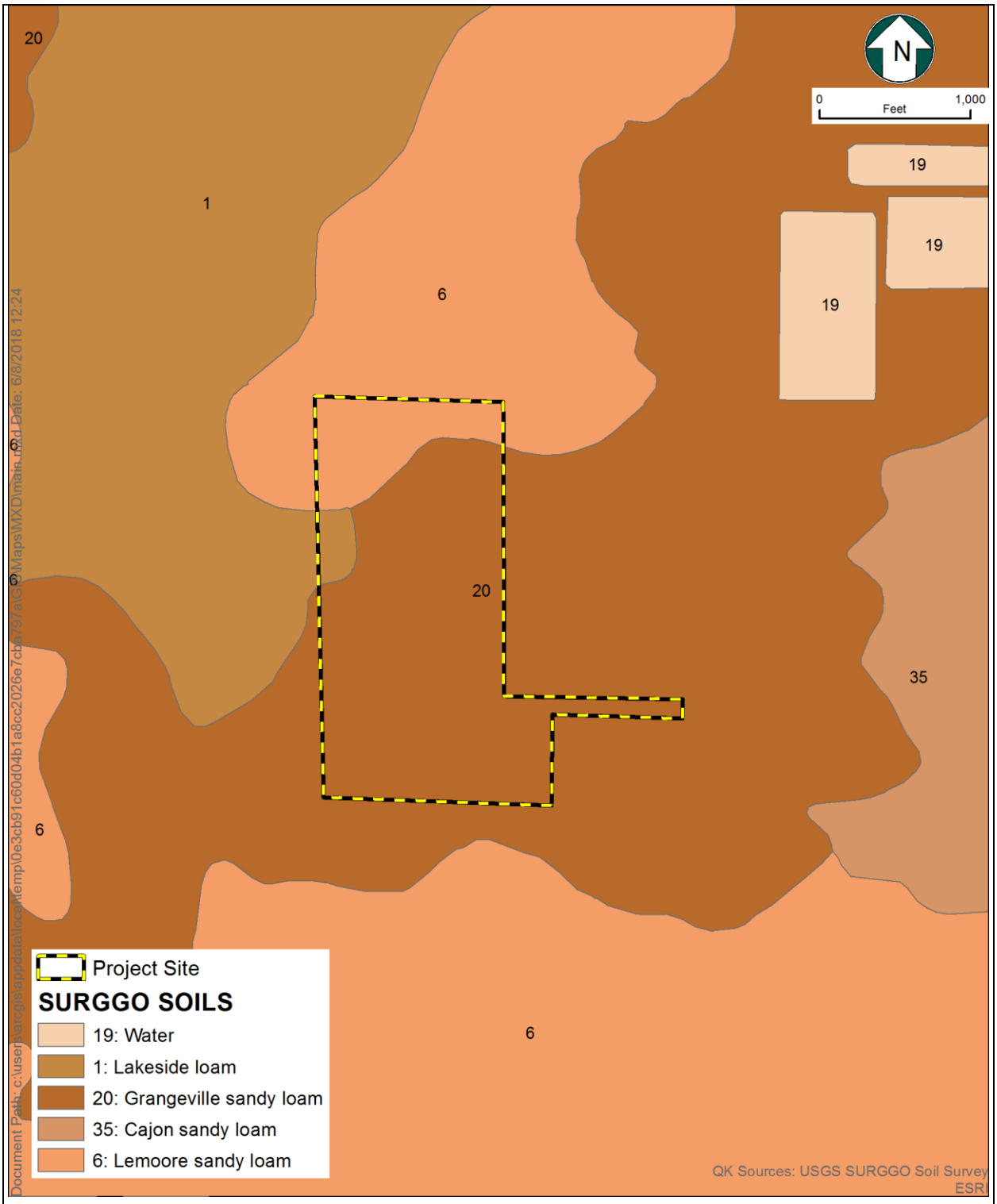


Figure 3.4.6-1
Project Site Soil Map

MITIGATION MEASURES

Implementation of MM GEO-1 and MM HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.6d – Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Expansive clay soils are subject to shrinking and swelling due to changes in moisture content over the seasons. These changes can cause damage or failure of foundations, utilities, and pavements. During periods of high moisture content, expansive soils under foundations can heave and result in structures lifting. In dry periods, the same soils can collapse and result in settlement of structures. According to Table 15 – Physical and Chemical Properties of the Soils in the USDA Kings County Soil Survey, the upper 5 feet of onsite soils are considered to have low to moderate shrink-swell or expansion potential. In addition, the site is not located in an area of expansive soils as shown in Figure HS-4 of the Health and Safety Element of the 2035 Kings County General Plan (Kings County, 2010). Compliance with the policies of the Kings County General Plan, Development Code, and the CBC, as well as implementation of MM GEO-1, would reduce potential site-specific impacts to less than significant levels.

MITIGATION MEASURES

Implementation of MM GEO-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.6e – Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

The proposed Project does not include the development of septic tanks or alternative wastewater disposal systems as the Project would hook up to the City's existing sewer system.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

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

Discussion

There have been significant legislative and regulatory activities that directly and indirectly affect climate change and GHGs in California. The primary climate change legislation in California is AB 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing GHG emissions in California. GHGs, as defined under AB 32, include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and Nitrogen trifluoride. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. The California Air Resources Board (ARB) is the state agency charged with monitoring and regulating sources of emissions of GHGs that cause global warning in order to reduce emissions of GHGs. SB 32 was signed by the Governor in 2016, which would require the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.

Impact #3.4.7a – Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has adopted the Final Draft Staff Report, addressing Greenhouse Gas Emissions Impacts under the California Environmental Quality Act (November 5, 2009), that included a recommended methodology for determining significance for stationary source projects and traditional development projects (such as residential, commercial, or industrial projects).

The proposed project would emit greenhouse gases such as carbon dioxide (CO_2), methane, and nitrous oxide from the exhaust of equipment and the exhaust of vehicles for employees and hauling trips. The increased rate of greenhouse gas emissions would not be considered cumulatively significant per the California Global Warming Solutions Act of 2006. As stated in the *San Joaquin Valley Unified Air Pollution Control District Guidance for Assessing and Mitigating Air Quality Impacts,* projects whose emissions have been reduced or mitigated

consistent with the *California Global Warming Solutions Act of 2006* should be considered to have a less than significant impact on global climate change.

The *City of Lemoore 2030 General Plan* has analyzed greenhouse gas emissions for the city based on land use designations, including emissions for areas designated as Light Industrial. Because the proposed project is consistent with its General Plan, construction and operational greenhouse gas emissions as a result have already been analyzed in the General Plan EIR. With implementation of these and other applicable City policies, as well as mandatory compliance with the applicable San Joaquin Valley Unified Air Pollution Control District rules and regulations, as required in MM GHG-1, Project GHG emissions will be reduced to less than significant levels.

MITIGATION MEASURES

MM GHG-1: Prior to the issuance of building or grading permits, and continually throughout Project operations, the Project proponent shall comply with applicable policies of the City of Lemoore General Plan, as well as all applicable rules and regulations set forth by San Joaquin Valley Air Pollution Control District.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.7b – Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As previously mentioned, the proposed project falls within the jurisdiction of the San Joaquin Valley Unified Air Pollution Control District and the *City of Lemoore 2030 General Plan*. Both of these entities take into account baseline emissions inventory for light industrial uses for the City of Lemoore. Since the proposed project is consistent with the applicable General Plan designation of Light Industrial, it can be concluded that the proposed project would also be in conformance with the approved General Plan.

Because the proposed Project is consistent with the *City of Lemoore 2030 General Plan*, construction and operational GHG emissions as a result have already been analyzed in the General Plan EIR. With implementation of these and other applicable City policies, as well as mandatory compliance with all applicable San Joaquin Valley Unified Air Pollution Control District rules and regulations, as required in MM GHG-1, Project GHG emissions will be reduced to less than significant levels

MITIGATION MEASURES

MM GHG-2: Prior to the issuance of building or grading permits, and continually throughout Project operations, the Project proponent shall comply with applicable policies of the City of Lemoore General Plan, as well as all applicable rules and regulations set forth by San Joaquin Valley Air Pollution Control District.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.8 - HAZARDS AND HAZARDOUS MATERIALS				
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Impact #3.4.8a, #3.4.8b, and #3.4.8c – Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; or emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The proposed project includes the construction of industrial buildings that will house various industrial uses such as warehousing, manufacturing, and processing. The transport use and storage of hazardous materials would be required to comply with all applicable state and federal regulations, such as requirements that spills would be cleaned up immediately and all wastes and spills control materials would be properly disposed of at approved disposal facilities. Compliance with CCR Title 23, Chapter 16 would also be required for maintenance and monitoring of the USTs for potential leaks. Mitigation Measure HYD-1 in *Section 3.12 - Hydrology and Water Quality* requires the preparation of a Stormwater Pollution Prevention Program (SWPPP), which includes a list of Best Management Practices (BMPs) to be implemented on the site both during and after construction to minimize potential impacts from accidental spills. With compliance of the SWPPP as well as all local, State, and Federal regulations regarding hazardous materials, impacts associated with the use or accidental spill of hazardous materials would be less than significant.

Engvall Elementary School is located approximately 1.15-mile northeast of the proposed Project site. Given the proximity and the intervening uses there is a very limited potential for the project to affect Engvall Elementary School. The proposed Project would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing school.

MITIGATION MEASURES

Implement Mitigation Measure HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.8d – Would the Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Per the Cortese List, there are no hazardous waste and substances sites in the vicinity of the Project site (Cal EPA, 2017). Additionally, the State Water Resources Control Board GeoTracker compiles a list of Leaking Underground Storage Tank (LUST) Sites. There are two LUST Cleanup Sites within the vicinity of the Project site (California Water Resources Board, 2017). Both LUST Cleanup Sites were for gasoline spills; however, have been cleaned up and are closed. The proposed Project site is not located on a site that is included on a list

of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would therefore not create a significant hazard to the public or the environment.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.8e and #3.4.8f – Would the Project for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area; or for a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

There are two private airstrips and no public airports within the Lemoore area including Reeves Field at the Naval Air Station and Stone Airstrip. There is no adopted airport land use plan for the City of Lemoore. Both are located outside of the City's limits and would not impact the proposed Project.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.8g – Would the Project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan

The City of Lemoore published an Emergency Operations Plan in 2005, which provides guidance to City staff in the event of extraordinary emergency situation associated with natural disaster and technological incidents (City of Lemoore , 2008). The proposed Project would not interfere with the City's adopted emergency response plan; therefore, there would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.8h – Would the Project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The proposed Project site is in an unzoned area of the Kings County Fire Hazard Severity Zone Map Local Responsibility Area (LRA). However, Cal Fire has determined that portions of the City of Lemoore are categorized as a Moderate Fire Hazard Severity Zone in LRA. The Project site is not within a wildland area nor is there within the vicinity of the Project site. The Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, there would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.9 - HYDROLOGY AND WATER QUALITY					
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?	☐	☐	☒	☐
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?	☐	☐	☒	☐
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f.	Otherwise substantially degrade water quality?	☐	☒	☐	☐
g.	Place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or flood insurance rate map or other flood hazard delineation map?	☐	☐	☐	☒
h.	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒

i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j.	Contribute to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion

Impact #3.4.9a – Would the Project violate any water quality standards or waste discharge requirements?

Project construction would cause ground disturbance that could result in soil erosion or siltation and subsequent water quality degradation offsite, which is a potentially significant impact. Construction-related activities would also involve the use of materials such as vehicle fuels, lubricating fluids, solvents, and other materials that could result in polluted runoff, which is also a potentially significant impact. However, the potential consequences of any spill or release of these types of materials are generally small due to the localized, short-term nature of such releases because of construction. The volume of any spills would likely be relatively small because the volume in any single vehicle or container would generally be anticipated to be less than 50 gallons.

As required by the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit (No. 2012-0006-DWQ) for storm water discharges associated with construction and land disturbance activities, the City must develop and implement a SWPPP that specifies BMPs to prevent construction pollutants from contacting storm water, with the intent of keeping all products of erosion from moving offsite. The City is required to comply with the Construction General Permit because Project-related construction activities result in soil disturbances of least 1 one acre of total land area. Mitigation Measure MM HYD-1 below requires the preparation and implementation of a SWPPP to comply with the Construction General Permit requirements.

With implementation of Mitigation Measures MM HYD-1, the Project would not violate any water quality standards or waste discharge requirements (WDRs) during the construction period, and impacts would be less than significant.

Project operation would not violate any water quality standards or WDRs because it: 1) does not result in point-source pollution (e.g., outfall pipe) discharges into surface waters that require WDRs and 2) would be developed in compliance with the General Permit for the Discharge of Storm water from Small MS4s (No. 2013-0001-DWQ) in which the City is one of the permittees. Operators of MS4s[1], like the City, serve urbanized areas with populations fewer than 100,000. To comply with the MS4 General Permit, the Project would have to

[1] MS4s are defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains): 1) designed or used for collecting and/or conveying storm water; 2) which is not a combined sewer; and 3) which is not part or a Publicly Owned Treatment Works.

comply with City design standards to maximize the reduction of pollutant loading in runoff to the maximum extent practicable. The City Building Department would review grading and site plans to ensure compliance before approving such plans. The site plan review process ensures that operations of the Project would not violate water quality standards outlined in the MS4 General Permit, and operational impacts would be less than significant.

MITIGATION MEASURES

MM HYD-1: Prior to ground-disturbing activities, the City shall prepare and implement a Storm water Pollution Prevention Plan (SWPPP) that specifies best management practices (BMP), with the intent of keeping all products of erosion from moving offsite. The SWPPP shall include contain a site map that shows the construction site perimeter, existing and proposed man-made facilities, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the Project site. Additionally, the SWPPP shall contain a visual monitoring program and a chemical monitoring program for non-visible pollutants to be implemented (if there is a failure of best management practices). The requirements of the SWPPP and BMPs shall be incorporated into design specifications and construction contracts. Recommended best management practices for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Protecting any existing storm drain inlets and stabilizing disturbed areas;
- Implementing erosion controls;
- Properly managing construction materials; and
- Managing waste, aggressively controlling litter, and implementing sediment controls.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.9b – Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

The City of Lemoore currently utilizes local groundwater as its sole source of supply from underground aquifers via ten active groundwater wells. The groundwater basin underlying the City is the Tulare Lake Basin and the City of Lemoore is immediately adjacent to the south boundary of the Kings subbasin. Water for construction and operation would come from the City of Lemoore's existing water system. Per the City's Urban Water Management Plan, the City's existing system has a total supply capacity of 21,674,000 gallons per day with an average day demand of 8,769,000 gallons (City of Lemoore, 2013). The proposed Project would make a minor contribution to the City's current demand and would comply with the City's water conservation measures and regulations. Since the proposed Project would have minimal impacts on the City's water supply, impacts would be less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.9c – Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?

The Project site is relatively flat, and the project grading would be minimal and consist of mostly grubbing the site to remove vegetation. The topography of the site would not appreciably change because of grading activities. The site does not contain any blue-line water features, including streams or rivers. Impacts would be less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.9d – Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?

Please see response (c) above. Therefore, the project would not substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-or offsite. Impacts would be less than significant.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.9e – Would the Project create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Please see response (a) above. Therefore, the project would not otherwise substantially degrade water quality. With implementation of MM HYD-1, impacts would be less than significant.

MITIGATION MEASURES

Implementation of MM HYD-1

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.9f – Would the Project otherwise substantially degrade water quality?

Please see response (a) above. Therefore, the project would not otherwise substantially degrade water quality. With implementation of MM HYD-1, impacts would be less than significant.

MITIGATION MEASURES

Implementation of MM HYD-1

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.9g – Would the Project place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or flood insurance map or other flood hazard delineation map?

As shown in Figure 3.4.9-1, the Project is not located within a FEMA 100-year floodplain. According to FEMA, the site is located in an 'area of minimal flood hazard. As this project does not include any housing development, the project would not place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or flood insurance rate map or other flood hazard delineation map. There would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

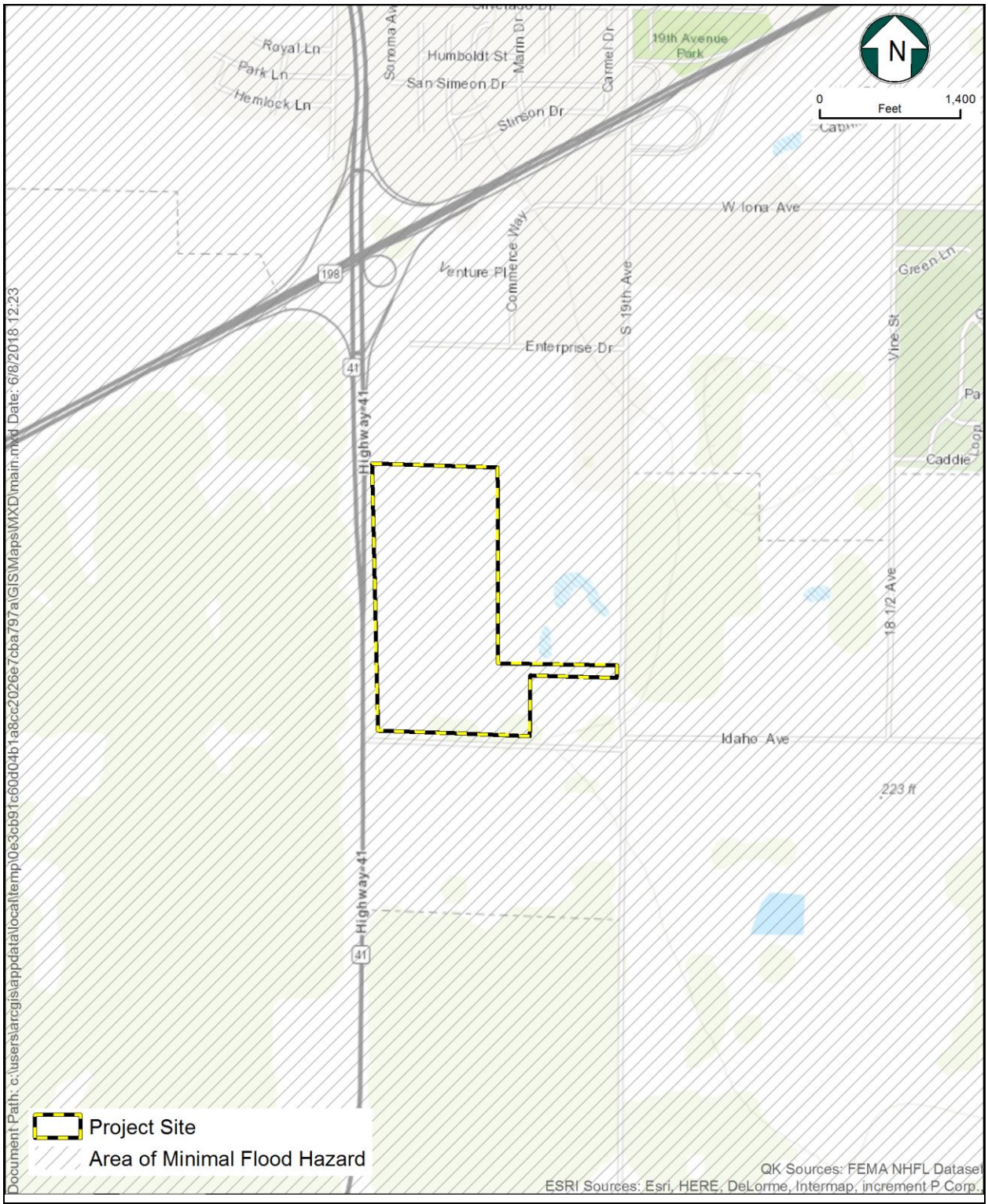


Figure 3.4.9-1
100-Year Floodplain

Impact #3.4.9h – Would the Project place within a 100-year flood hazard area structures that would impede or redirect flood flows?

See response to Impact #3.4.9g above. Therefore, the project would not place within a 100-year flood hazard area structures that would impede or redirect flood flaws. There would be no impact.

MITIGATION MEASURES

No mitigation is required

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.9i – Would the Project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure or a levee or dam?

According the Flood Hazards Area map (Figure HS-7, page HS-16) included in the Health and Safety Element of the *2035 Kings County General Plan*, the project site is located within the Pine Flat Dam inundation zone (Kings County, 2010). If Pine Flat Dam failed while at full capacity, its floodwaters would arrive in Kings County within approximately five hours (Kings County 2010). Dam failure has been adequately planned for through the Kings County Multi-Hazard Mitigation Plan, which identifies a dam failure hazard to be of medium significance and unlikely to occur in the City of Lemoore (Kings County, 2007). With the implementation of the Kings County Multi-Hazard Mitigation Plan, impacts related to dam failure would be less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.9j – Would the Project contribute to inundation by seiche, tsunami, or mudflow?

The project site is not located near the ocean or a steep topographic feature (i.e., mountain, hill, bluff, etc.). Therefore, there is no potential for the site to be inundated by seiche, tsunami or mudflow. There would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.10 - LAND USE AND PLANNING					
Would the project:					
a.	Physically divide an established community?	☐	☐	☐	☒
b.	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?	☐	☐	☐	☒
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion

Impact #3.4.10a – Would the Project physically divide an established community?

The project is in a rural undeveloped area. The project complies with the zoning of the General Plan and Zoning Ordinance. The project does not include the construction of roads or any other physical barrier that would divide a community. The project would not result in any surrounding land use change; therefore, there would be no impact.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.10b – 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?

The project site has a General Plan land use designation of Light Industrial (ML) and is zoned Light Industrial. The project involves the development of a light industrial complex. The

proposed project would not conflict with the goals and policies of the Lemoore General Plan because the proposed uses are consistent with the General Plan land use designation and zoning.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.10c – Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan?

The project site is not within the boundaries of an adopted habitat or natural community conservation plan. Therefore, there would be no impact.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

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

Discussion

Impact #3.4.11a – Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The City of Lemoore and the surrounding area are designated as Mineral Resources Zone 1 (MRZ-1) by the State Mining and Geology Board (SMGB). MRZ-1 areas are described as those for which adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence. The project site is not being used for mineral extraction. Additionally, per the California Division of Oil, Gas, and Geothermal Resources (DOGGR), there are no active, inactive, or capped oil wells located within the Project site, and it is not within a DOGGR-recognized oilfield. Therefore, there would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.11b – Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The Kings County General Plan states that few commercial mining and mineral extraction activities occur in the county and currently, only limited excavation of soil, sand, and some gravel is used for commercial purposes (Kings County, 2010). Additionally, the General Plan does not designate the site for mineral and petroleum resources activities. The project site

and surrounding lands are zoned for light industrial uses. No mining occurs in the project area or in the nearby vicinity, and there are no anticipated mineral extraction activities to be conducted in the future as a result of the project. The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan and would therefore have no impact.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.12 - NOISE					
Would the project result in:					
a.	Exposure of persons to, or generate, noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☐	☐	☒	☐
b.	Exposure of persons to or generate excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f.	For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion:

Impact #3.4.12a – Would the Project result in exposure of persons to, or generate, noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?

Project construction would generate temporary increases in noise levels. Title 5, Chapter 6 of the City's Municipal Code establishes regulations and enforcement procedures for noise generated in the city. The regulations do not apply to the operation on days other than Sunday of construction equipment or of a construction vehicle, or the performance on days other than Sunday of construction work, between the hours of 7:00 A.M. and 8:00 P.M., provided that all required permits for the operation of such construction equipment or

construction vehicle or the performance of such construction work have been obtained from the appropriate city department (Lemoore Municipal Code 5-6-1-C.4). The City of Lemoore 2030 General Plan (City of Lemoore , 2008) has objectives to minimize residential development noise levels. The proposed Project would comply with all regulations, standards and policies within the City's General Plan and Municipal Code. Therefore, the Project would not result in the exposure of persons to, or generate, noise levels more than standards established in a local general plan or noise ordinance or applicable standards of other agencies. Impacts would be less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.12b – Would the Project result in exposure of persons to or generate excessive groundborne vibration or groundborne noise levels?

Construction of the project would generate temporary ground borne vibrations. However, like construction noise, such vibrations would be attenuated over distance to the point where they would not be felt by the nearest receptors. The impacts would be less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.12c – Would the Project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As shown in Figure 2-4, the project would be consistent with the surrounding land uses and would not cause out of the ordinary noise levels than what is currently established in the area. The construction noise would be attenuated over distance to the point where it would not be bothersome to the nearest receptors. The noise levels would not result in a substantial permanent increase in ambient noise levels above the existing environment. The impacts would be less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.12d – Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction of the project would generate temporary noise levels. However, construction would be done during the daylight hours and would be temporary so that the surrounding land uses would not be affected by construction of the new development. The project is consistent with the surrounding land uses and would not cause out of the ordinary noise levels than what is currently established in the area. The impacts would be less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.12e – Would the Project result in for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

There are no airports within two miles of the Project site. The project would not expose people residing or working in the project area to excessive noise levels. There would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.12f – Would the Project result in for a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The project is not within the vicinity of a private airstrip. The project would not expose people residing or working in the project area to excessive noise levels. There would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

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

Discussion

Impact #3.4.13a – 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 roads or other infrastructure)?

The proposed project does not include plans for the development of housing or other habitable structures, nor does it propose extensions of other infrastructure that would support each structure. The proposed project would not result in substantial population growth.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.13b – Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The proposed project would not require demolition of any housing, as the project site is currently vacant. Therefore, there would be no need to construct replacement housing elsewhere. There would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.13c – Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The project would not require the displacement of substantial numbers of people due to the fact that there are currently no people on the project site to displace. As no housing currently exists, there would be no need to construct replacement housing elsewhere. There would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.14 - PUBLIC SERVICES					
Would the project:					
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services:					
i.	Fire protection?	☐	☐	☒	☐
ii.	Police protection?	☐	☐	☒	☐
iii.	Schools?	☐	☐	☒	☐
iv.	Parks?	☐	☐	☐	☒
v.	Other public facilities?	☐	☐	☒	☐

Discussion:

Impact #3.4.14a(i) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Fire Protection?

Construction and operation of the proposed project would not be expected to result in an increase in demand of fire protection services leading to the construction of new or physically altered facilities. Fire suppression support is provided by the City of Lemoore Volunteer Fire Department (LVFD). The LVFD has is located at 210 Fox Street, approximately 3.4 miles from the project site. The proposed project would result in the construction and operation of a light industrial complex in Lemoore. The City of Lemoore will ensure that construction activities would be in accordance with local and State fire codes. Services are adequately planned for within the City's General Plan through policies to ensure the City maintains Fire Department performance and response standards by allocating the appropriate resources. As stated, the project applicant is responsible for constructing any

infrastructure needed to serve the project and pay the appropriate impact fees, which would reduce impacts to less than significant.

State building codes require that all commercial/industrial buildings over 5,000 square feet must include sprinklers.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.14a(ii) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Police protection?

Law enforcement and public protection are provided by the City of Lemoore Police Department. The City's police station is located at 657 Fox Street on the northwest corner of Fox Street and Cinnamon Drive. The station is approximately 4.4 miles northeast of the Project site. As discussed, the proposed Project would not induce population growth, and therefore would not increase demands for public safety protection. As stated, the Project applicant is responsible for constructing any infrastructure needed to serve the project and pay the appropriate impact fees. Impacts on police protection services related to population growth would therefore be considered less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.14a(iii) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Schools?

The project would not result in population growth for the City and would not increase demand for public services or require construction of new school facilities. There would be no impact to existing schools.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.14a(iv) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Parks?

The proposed Project would not result in population growth for the City and would not increase demand for public parks. The City is currently maintaining a 5-acre to 1,000 residents park ratio, which exceeds current City Park Standards and Quimby Act requirements (City of Lemoore, 2008). The Project would have no impact to the City park system.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.14a(v) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Other public facilities?

The proposed project does not include any other impacts to public facilities.

In general, impacts to public services from implementation of a Project are due to its ability to induce population growth and, in turn, result in a greater need for fire and police protection, etc. to serve the increased population. The proposed Project does not include plans for the development of housing or other habitable structures and would not be inducing population growth; however, the project would require amenities provided by public services. Additionally, the Project would require the relocation of a ponding basin. The new ponding basin will be located on undeveloped urban land, similar to the project site. Impacts will be less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less–than-Significant Impact	No Impact
3.4.15 - RECREATION				
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

Impact #3.4.15a – Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

As stated in *Section 3.18.a.iv*, the proposed Project would not induce population growth or affect the City's park system. The City's General Plan indicates that the City is continuing to maintain its parkland dedication standard of 5 acres of park land per 1,000 residents. There would be no increase to the use of existing parks or the need to construct or expand existing recreational facilities. There would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.15b – Would the Project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The project does not include construction of any recreational facility; therefore, it would not generate an adverse physical effect on the environment. There would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.16 - TRANSPORTATION AND TRAFFIC					
Would the project:					
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e.	Result in inadequate emergency access?	☐	☐	☐	☒
f.	Conflict with adopted policies, plans, or Programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Discussion

Potential transportation and circulation impacts that may result from the proposed project primary involves determining whether a net change would occur in traffic generated by

personnel commuting to or from the project site and by truck trips related to the development of facility operations.

Site access will be provided by the construction of a roadway within in the project site. The road will extend west of South 19th Avenue for approximately 0.38 miles and then turn north for approximately 0.35 miles, continuing outside of the project boundaries to eventually connect with Enterprise Drive. The Lemoore General Plan designates 19th Avenue and Idaho Avenue as truck routes. These roadways, along with Highway 198 and Highway 41 will serve the project.

The City's General Plan includes a table of Existing and Buildout Traffic Volumes and Levels of Service for Roadway Segments. The roadway segments surrounding the project are currently operating at a level of service A or B. The table includes the future lanes and capacities for these road segments. At buildout of the planning area, the surrounding road segments are expected to operate at a level of service of C or better. The proposed project is consistent with the General Plan and the buildout of this site was anticipated in this traffic table.

Impact #3.4.16a – Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The City's transportation policies and requirements are incorporated in its General Plan. The only such policy which is affected by this Project is that requiring that no Level of Service violations be engendered by a project. Per the City's Circulation Element of the City of Lemoore 2030 General Plan Update (City of Lemoore , 2008), the "City of Lemoore does not currently have any adopted level of service (LOS) standard. However, recent traffic studies have used level of service D as the standard for evaluating project impacts at intersections." A LOS of D is characterized by congestion with average vehicle speeds decreasing below the user's desired level for two and four lane roads.

The proposed Project was considered in the buildout of the 2030 General Plan. The buildout was evaluated by the General Plan table of Existing and Buildout Traffic Volumes and Levels of Service for Roadway Segments and shows surrounding roadways operating at a level of service of a C or better. Therefore, operational traffic impacts will be less than significant. Additionally, trips to bring materials for construction to the site would be temporary. Therefore, the Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. Impacts would be less than significant.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.16b – Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Neither the City of Lemoore or Kings County has an adopted congestion management program. Therefore, there would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.16c – Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

There are no public airports or private airstrips within the vicinity of the Project site and the Project does not include the construction of any structures that would interfere with air traffic patterns. Therefore, there would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.16d – Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project would not involve design features that would increase hazards or involve the development of incompatible uses. All new roads would be designed according to all applicable City and County safety regulations and standards. Therefore, there would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.16e – Would the Project result in inadequate emergency access?

Construction and operation of the proposed project would not interfere with emergency access for emergency vehicles or nearby uses as all activities would be done on the site and would not interfere with the adjacent street traffic. The project design includes road connection to Enterprise Drive and Idaho Avenue, which would allow for improved access to the proposed industrial development. No facilities are proposed as part of the proposed project that would change emergency access to the site or that would affect access to nearby uses. The project would not result in inadequate emergency access and would therefore result in no impact.

The Project would not involve design features that would increase hazards or involve the development of incompatible uses. It would also not result in inadequate emergency access. Therefore, there would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.16f – Would the Project conflict with adopted policies, plans, or Programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The Project would not affect existing pedestrian and bicycle facilities within the surrounding area. There is no conflict with the Kings County's 2005 Regional Bicycle Plan; therefore, there would be no impact.

MITIGATION MEASURES

None are required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less–than-Significant Impact	No Impact

3.4.17 - TRIBAL CULTURAL RESOURCES

Would the project:

a.	Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
	i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒
	ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

Discussion

Impact #3.4.17a(i) - Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Please see Impacts #3.4.5a and #3.4.5b above. With implementation of Mitigation Measures MM CUL-2 through MM CUL-4, and MM CUL-6 the project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources.

MITIGATION MEASURES

Implementation of MM CUL-2 through MM CUL-4, and MM CUL-6.

LEVEL OF SIGNIFICANCE

Impact would be *less than significant with mitigation incorporated.*

Impact #3.4.17a(ii) - Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Please see Impacts #3.4.5a and #3.4.5b above. With implementation of Mitigation Measures MM CUL-2 through MM CUL-4, and MM CUL-6, the project would not cause a substantial adverse change in the significance of a tribal cultural resource that is a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

MITIGATION MEASURES

Implementation of MM CUL-2 through MM CUL-4, and MM CUL-6.

LEVEL OF SIGNIFICANCE

Impact would be *less than significant with mitigation incorporated.*

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.18 - UTILITIES AND SERVICE SYSTEMS					
Would the project:					
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	☐	☐	☒	☐
e.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion:

Impact #3.4.18a – Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Please see Section 3.4.9 (Hydrology and Water Quality) for a discussion of poultry wastewater disposal and compliance with RWQCB requirements. The project would not

necessitate the Regional Water Quality Control Board (RWQCB) to expand their facilities because of the project. The project would not exceed wastewater treatment requirements of the applicable RWQCB.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.18b – Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The project can hook up to the existing water line on Enterprise Drive, north of the site. The generation of wastewater and water would be consistent with the City requirements. The proposed increase in water and wastewater usage at the project site is not anticipated to require the construction of new water or wastewater treatment facilities or the expansion of existing facilities. Impacts would be less than significant.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.18c – Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The project can hook up to the existing storm drain line on Enterprise Drive, north of the site. The project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities. Therefore, there is no impact.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.18d – Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?

No surface water entitlements are needed to service the project as the existing groundwater resources are available and adequate to serve the site. The impact would be less than significant.

MITIGATION MEASURES

No mitigation is required

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.18e – Would the Project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The City's wastewater treatment plant has capacity for, or are planned to maintain capacity for, community growth in accord with the adopted General Plan. As this project is in accordance with the General Plan, the impacts would be less than significant.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.18f – Would the Project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

The City's solid waste disposal program has capacity for, or are planned to maintain capacity for, community growth in accord with the adopted General Plan. As this project is in accordance with the General Plan, the impacts would be less than significant.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.18g – Would the Project comply with federal, state, and local statutes and regulations related to solid waste?

The project is subject to the solid disposal ordinance of the City of Lemoore as well as the rules of the contracted waste franchise. The project is also subject to Chapter 1 of Title 4 of the Lemoore Municipal Code that regulates all solid waste activities from disposal, sorting, and recycling of materials. According to CalRecycle, the implementation of the local requirements has led to Kings County meeting their required diversion and disposal targets. Therefore, the implementation and compliance with the local regulations would lead to a less than significant impact for the project (California Department of Resources Recycling and Recovery, 2017).

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
3.4.19 - 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c.	Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

Impact #3.4.19a - 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

As evaluated in this IS/MND, the proposed Project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation measures have been included to lessen the significance of

potential impacts. Similar mitigation measures would be expected of other projects in the surrounding area, most of which share a similar cultural paleontological and biological resources. Consequently, the incremental effects of the proposed project, after mitigation, would not contribute to an adverse cumulative impact on these resources. Therefore, the Project would have a less-than-significant impact with mitigation incorporated.

MITIGATION MEASURES

Implement Mitigation Measures MM AQ-1 through MM AQ-4, MM BIO-1 through MM BIO-8, MM CUL-1 through MM CUL-6, MM GEO-1, MM GHG-1, and MM HYD-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.19b - Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

As described in the impact analyses in Sections 3.4.1 through 3.4.18 of this IS/MND, any potentially significant impacts of the proposed Project would be reduced to a less-than significant level following incorporation of the mitigation measures listed in the Mitigated Negative Declaration of this IS/MND. All planned projects in the vicinity of the proposed Project would be subject to review in separate environmental documents and required to conform to the City of Lemoore General Plan, zoning, mitigate for project-specific impacts, and provide appropriate engineering to ensure the development meets are applicable federal, State and local regulations and codes. As currently designed, and with compliance of the recommended mitigation measures, the proposed Project would not contribute to a cumulative impact. Thus, the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than cumulatively considerable.

MITIGATION MEASURES

Implement Mitigation Measures MM CUL-1 thru MM CUL-6, MM GEO-1, MM HYD-1, and MM GHG-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.19c - Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

All of the Project's impacts, both direct and indirect, that are attributable to the Project were identified and mitigated to a less than significant level. As shown in the Mitigated Negative Declaration, the Project proponent has agreed to implement mitigation substantially

reducing or eliminating impacts of the Project. All planned projects in the vicinity of the proposed Project would be subject to review in separate environmental documents and required to conform to the City of Lemoore General Plan, zoning, mitigate for project-specific impacts, and provide appropriate engineering to ensure the development meets are applicable federal, State and local regulations and codes. Thus, the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than cumulatively considerable. Therefore, the proposed Project would not either directly or indirectly cause substantial adverse effects on human beings because all potentially adverse direct impacts of the proposed Project are identified as having no impact, less than significant impact, or less than significant impact with mitigation incorporated.

MITIGATION MEASURES

Implement Mitigation Measures MM CUL-1 thru MM CUL-6, MM GEO-1, MM HYD-1, and MM GHG-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

SECTION 4 - REFERENCES

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APPENDIX A

BIOLOGICAL ANALYSIS

APPENDIX A

REPRESENTATIVE PHOTOS

Photograph 1: Canal on southern edge of Project with ruderal vegetation in the background. 36.2622, -119.8074, facing north. Photographed on 6/20/2018 by Alex Single.

Photograph 2: Ruderal vegetation in disked land. 36.2712, -119.8068, facing east. Photographed on 6/20/2018 by Alex Single.

Photographs 1 and 2
Lemoore Industrial Project, Lemoore, California

Photograph 3: Riparian vegetation on left and flood control basin on right. 36.2695, -119.802, facing west. Photographed on 6/20/2018 by Alex Single.

Photograph 4: Drainage ditch. 36.2715, -119.8034, facing north. Photographed on 6/20/2018 by Alex Single.

QK	**Photographs 3 and 4** **Lemoore Industrial Project, Lemoore, California**

Photograph 5: Ruderal vegetation on north side of Project. 36.2749, -119.8061, facing west. Photographed on 6/20/2018 by Alex Single.

Photograph 6: Valley Sink Scrub southeast of Project. 36.271, -119.8006, facing south. Photographed on 6/20/2018 by Alex Single.

QK	**Photographs 5 and 6** **Lemoore Industrial Project, Lemoore, California**

Photograph 7: Lone willow with industrial park in background. 36.2726, -119.8047, facing northeast. Photographed on 6/20/2018 by Alex Single.

Photograph 8: Road access on eastern part of Project. 36.2711, -119.7989, facing west. Photographed on 6/20/2018 by Alex Single.

QK	**Photographs 7 and 8** **Lemoore Industrial Project, Lemoore, California**

Special-Status Species Table

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
SENSITIVE NATURAL COMMUNITIES				
Valley Sink Scrub	Valley Sink Scrub	G1, S1.1	This community consists of low, open to dense succulent shrublands dominated by alkali-tolerant *Chenopodiaceae*, especially *Allenrolfea occidentalis* or several *Sueda* species. Understories usually are lacking, though sparse herbaceous cover dominated by *Bromus rubens* develop occasionally. Also consists of saline or alkaline clays.	**Absent.** Valley Sink Scrub is present adjacent to but not within the eastern portion of the Project. The Project will not impact this community.
SPECIAL-STATUS PLANTS				
Atriplex depressa	brittlescale	1B.2	This annual herb occurs in Chenopod scrubland, grassland, and alkali sink habitats, but it also is known to occur in wet areas. It flowers between April and October, and it ranges in elevation from 1 to 1050 feet.	**Unlikely.** Marginal habitat for this species occurs on the Project, but no CNDDB records exist within 10 miles of the Project. The Project is not expected to impact this species.
Delphinium recurvatum	recurved larkspur	1B.2	This perennial plant is commonly found in chenopod scrub, valley and foothill grassland and cismontane woodland. It is most common on sandy or clay alkaline soils. It flowers from March to May, and it ranges in elevation from 10 to 2,592 feet.	**Unlikely.** Marginal habitat to support this species occurs on the Project. One CNDDB record is located within 10 miles of the Project, approximately 9 miles to the southeast. The Project is not expected to impact this species.
Hordeum intercedens	vernal barley	3.2	This annual plant occurs in coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), and vernal pools. It flowers between March and June and its elevation ranges from 15 to 3,280 feet.	**Unlikely.** Marginal habitat for this species occurs on the Project, but no CNDDB records exist within 10 miles of the Project. The Project is not expected to impact this species.
Lepidium jaredii ssp. album	Panoche pepper-grass	1B.2	This annual herb occurs in valley and foothill grassland on steep slopes and usually in clay soils, sometimes in alkaline soils. It flowers between February and June and it ranges in elevation from 605 to 2,445 feet.	**Absent.** The Project is located well outside of the elevational and geographic range of this species. The Project will not impact this species.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
Monolopia congdonii	San Joaquin woollythreads	CE, 1B.2	This annual herb prefers chenopod scrub, and/or valley and foothill grassland. It flowers between February and May, and it ranges in elevation from 197 to 2,625 feet.	**Unlikely.** Marginal habitat for this species occurs on the Project, but no CNDDB records exist within 10 miles of the Project. The Project is not expected to impact this species.
Nama stenocarpa	mud nama	2B.2	This annual herb occurs in marshes and swamps such as lake margins and riverbanks. It flowers between January and July and it ranges in elevation from 15 to 1,640 feet.	**Absent.** Appropriate habitat to support this species does not occur on the Project. One CNDDB record is located within 10 miles of the Project, approximately 9 miles to the southeast. The Project will not impact this species.
Puccinellia simplex	California alkali-grass	1B.2	This annual herb occurs in Chenopod scrub, meadows and seeps, valley and foothill grassland, and vernal pools, including alkaline, vernally mesic habitat, sinks, flats, and lake margins. It occurs in alkaline, vernally mesic soil, and in sinks, flats, and lake margins. It flowers between March and May, and it ranges in elevation from 6 to 3,051 feet.	**Unlikely.** Marginal habitat for this species occurs on the Project. One CNDDB record is located within 10 miles of the Project, approximately 10 miles to the north. The Project is not expected to impact this species.
INVERTEBRATES				
Branchinecta conservatio	Conservancy fairy shrimp	FE	This fairy shrimp species occurs in and is endemic to the grasslands of the northern two-thirds of the central valley. It is found in large, turbid pools and inhabits astatic pools located in swales formed by old, braided alluvium filled by winter/spring rains.	**Absent.** Vernal pool habitat that could support this species is absent from the Project. No CNDDB records of this species occur within 10 miles of the Project. The Project will not impact this species.
Branchinecta lynchi	vernal pool fairy shrimp	FT	This fairy shrimp species occurs in a variety of vernal pool habitats from small, clear sandstone rock pools to large, turbid, alkaline, grassland valley floor pools.	**Absent.** Vernal pool habitat that could support this species is absent from the Project. No CNDDB records of this species occur within 10 miles of the Project. The Project will not impact this species.
Cicindela tranquebarica ssp.	San Joaquin tiger beetle	G5 S1	This beetle species is a spring/fall species that occurs in a wide variety of open sandy habitats. It prefers sandy substrates with sparse to moderate	**Possible.** Habitat occurs on the Project, and there is one CNDDB record within 10 miles of the Project. Impacts are not expected with appropriate mitigation measures.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
			vegetation. It is a gregarious species and can be found along road side ditches, sandy washes, edges of sandy lakes and rivers, blowouts, and sand dunes.	
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	FT	This beetle species is associated with and entirely dependent on elderberry bushes (*Sambucus* spp.). Its range extends throughout the San Joaquin Valley, except in Fresno, Kern, Kings, and Tulare Counties.	**Absent.** Large elderberry bushes that could support this species are absent from the Project. One CNDDB record of this species occurs 10 miles of the Project, approximately nine miles north of the Project. The Project will not impact this species.
Lepidurus packardi	vernal pool tadpole shrimp	FE	This fairy shrimp species occurs in vernal pools with clear to high turbidity.	**Absent.** Vernal pool habitat that could support this species is absent from the Project. No CNDDB records of this species occur within 10 miles of the Project. The Project will not impact this species.
FISH				
Hypomesus transpacificus	Delta smelt	FE, CT	This species occurs in the Sacramento and San Joaquin estuaries of the San Francisco Bay. Occurs primarily in main water bodies and sloughs of the Delta and Suisun Bay. Not directly associated with small stream systems.	**Absent.** Aquatic habitat that could support this species is absent from the Project. No CNDDB records of this species occur within 10 miles of the Project. The Project will not impact this species.
AMPHIBIANS				
Ambystoma californiense	California tiger salamander	FT, CT	This species occurs in natural ephemeral pools or ponds that mimic them, and that remain inundated for 12 weeks or more. It requires nearby upland habitat containing small mammal burrows or crevices that provide refugia.	**Absent.** Vernal pool habitat that could support this species is absent from the Project. No CNDDB records of this species occur within 10 miles of the Project. The Project will not impact this species.
Rana draytonii	California red-legged frog	FT, CSC	This species occurs in small streams, ponds and marshes, preferably with dense shrubby vegetation such as cattails and willows near deep water pools.	**Absent.** No aquatic habitat with emergent vegetation that could support this species is present on the Project. No CNDDB records of this species occur within 10 miles of the Project. The Project will not impact this species.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
Spea hammondii	western spadefoot	CSC	This species occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	**Possible.** Habitat occurs on the Project, and there are two CNDDB records within 10 miles of the Project. Impacts are not expected with appropriate mitigation measures.
REPTILES				
Arizona elegans occidentalis	California glossy snake	CSC	This species occurs in arid scrub habitat, rocky washes, grasslands, and chaparral. It prefers open areas with loose soil for easy burrowing.	**Unlikely.** Adequate habitat occurs on the Project, but there are no CNDDB records within 10 miles of the Project. Impacts are not expected with appropriate mitigation measures.
Emys marmorata	western pond turtle	CSC	This species occurs in ponds and small lakes with abundant vegetation; also found in marshes, slow moving streams, reservoirs, and brackish water. Require basking sites.	**Unlikely.** Poor habitat occurs on the Project, and there are two CNDDB records within 10 miles of the Project. Impacts are not expected with appropriate mitigation measures.
Gambelia sila	blunt-nosed leopard lizard	FE, CE, FP	This species occurs in sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. It seeks cover in mammal burrows, under shrubs, or structures such as fence posts.	**Absent.** Habitat on the Project is too overgrown to support this species. One CNDDB records of this species occurs within 10 miles of the Project, approximately 7 miles southeast of the Project. The Project will not impact this species.
Thamnophis gigas	giant garter snake	FT, CT	This species primarily occurs in permanent or semi-permanent marshes and sloughs, drainage canals, and irrigation ditches, particularly around rice fields. It prefers to reside in sloughs that are flooded in summer and dry in winter. It can occasionally be found in slow-moving creeks. It prefers locations with vegetation close to the water for basking.	**Absent.** No aquatic habitat with emergent vegetation that could support this species is present on the Project. No CNDDB records of this species occur within 10 miles of the Project. The Project will not impact this species.
BIRDS				
Agelaius tricolor	tricolored blackbird	CT, MBTA	This species occurs near fresh water, and prefer emergent wetland vegetation with tall, dense cattails or tules, but is also	**Unlikely.** Potential foraging habitat is present near the Project and poor breeding habitat is present in the patch of willows on

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
			found in thickets of willow, blackberry, wild rose, and tall herbs. It has been found to nest and forage in grassland and agricultural fields (pastures, dairies, rice fields). A highly social nester, it occurs in large colonies.	the southern portion of the site. One CNDDB record of this species occurs within 10 miles of the Project, approximately eight miles to the northwest. With appropriate mitigation, the Project will not impact this species.
Athene cunicularia	burrowing owl	CSC, MBTA	This species occurs in open annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	**Possible.** Adequate habitat is present on the Project, and several CNDDB records occur within 10 miles of the Project. Impacts are not expected with appropriate mitigation measures.
Buteo swainsoni	Swainson's hawk	CT, MBTA	This species occurs in riparian forests and other forested areas. It roosts in a variety of trees and forage widely over forests, grasslands, and shrublands. It is easily disturbed by human activities.	**Present.** This species was observed during a site survey. Impacts are not expected with appropriate mitigation measures.
Charadrius alexandrinus nivosus	western snowy plover	FT, CSC, MBTA	This species occurs along sandy beaches, salt pond levees and shores of large alkali lakes. It needs sandy, gravelly or friable soils for nesting.	**Absent.** Open beach habitat that could support this species is absent from the Project. One CNDDB record of this species occur within 10 miles of the Project, approximately four miles south of the Project. The Project will not impact this species.
Elanus leucururs	white-tailed kite	FP, MBTA	This species occurs in savanna, open woodlands, marshes, desert grassland, partially cleared lands, and cultivated fields. It nests in the upper third of trees, which can be open-country trees growing in isolation, or at the edge of or within a forest. Nests have been reported in more than 20 tree species.	**Possible.** Appropriate habitat exists on the Project but no CNDDB records occur within 10 miles of the Project. Impacts are not expected with appropriate mitigation measures.
Nycticorax nycticorax	Black-crowned night heron	G5, S3S4, MBTA	This species occurs in wetlands, including saltmarshes, freshwater marshes, swamps, streams, rivers, lakes, ponds, lagoons, tidal mudflats, canals, reservoirs, and wet agricultural fields. The species requires aquatic habitat for	**Unlikely.** This species may use the southern portion of the site where appropriate habitat exists. No CNDDB records occur within 10 miles of the Project. Impacts are not expected with appropriate mitigation measures.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
			foraging and terrestrial vegetation for cover, and may use mangroves, marshes, swamps, lagoons, and flooded rice fields.	
Xanthocephalus xanthocephalus	yellow-headed Blackbird	CSC, MBTA	This species nests in fresh emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. It forages in emergent wetlands and moist, open areas, especially cropland and muddy shores of lacustrine habitat. It has a restricted distribution in the Central Valley in the winter, occurring mainly in the western portion.	**Absent.** No aquatic habitat with emergent vegetation that could support this species is present on the Project. No CNDDB records of this species occur within 10 miles of the Project. The Project will not impact this species.
MAMMALS				
Dipodomys ingens	giant kangaroo rat	FE, CE	This species is associated with annual grasslands on the western side of the San Joaquin valley and have marginal habitat in alkali scrub. It requires level terrain and sandy loam soils for burrowing.	**Absent.** No CNDDB records of this species occur within 10 miles of the Project. The Project will not impact this species.
Dipodomys nitratoides exilis	Fresno kangaroo rat	FE, CE	This species historically occurred in alkali sink and open grassland habitats on the valley floor in Fresno County and portions of Tulare, Kings, and Madera counties. The last confirmed specimen was captured in 1992 and it may be extinct.	**Unlikely.** Habitat that could support this species is present on and adjacent to the Project, and a CNDDB occurrence is located approximately 9 miles to the northwest of the Project. Impacts are not expected with appropriate mitigation measures.
Dipodomys nitratoides nitratoides	Tipton kangaroo rat	FE, CE	This species occurs in saltbrush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin valley. It needs soft friable soils which escape seasonal flooding to dig burrows in elevated soil mounds at the base of shrubs.	**Possible.** Habitat that could support this species is present on and adjacent to the Project, and a CNDDB occurrence is located one mile south of the Project. Impacts are not expected with appropriate mitigation measures.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
Lasiurus cinereus	hoary bat	G5, S4	This species occurs in deciduous and coniferous forests and woodlands, including areas altered by humans. Roost sites usually occur in tree foliage with dense foliage above and open flying room below, often at the edge of a clearing and commonly in hedgerow trees. Sometimes it roosts in rock crevices, but rarely in caves. When hibernating, it has been found on tree trunks, in a tree cavity, in a squirrel's nest, and in a clump of Spanish-moss.	**Absent.** Habitat that could support this species is absent from the Project site. There was one CNDDB record of this species occurring within 10 miles of the Project site, approximately 9 miles to the northeast. The Project will not impact this species.
Sorex ornatus relictus	Buena Vista Lake shrew	FE	This species occurs in areas with a dense mesophytic cover and an abundant layer of litter. Historically, it occupied Valley Freshwater Marsh near Buena Vista Lake. It has been identified in areas with dense wetland vegetative cover and an abundant layer of detritus.	**Absent.** The areas of moist and dense cover and leaf litter required by this species does not exist on the Project. The Project will not impact this species.
Vulpes macrotis mutica	San Joaquin Kit fox	FE, CT	This species occurs in annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	**Possible.** Habitat that could support this species is present on and adjacent to the Project, and a CNDDB occurrence is located one mile south of the Project. Impacts are not expected with appropriate mitigation measures.

Sources:
California Department of Fish and Wildlife. 2018. California Natural Diversity Data Base
California Native Plant Society (CNPS). 2018. Inventory of Rare and Endangered Plants, Rare Plant Scientific Advisory Committee.
United States Fish and Wildlife Service (USFWS). 2018. Critical Habitat Portal, Critical Habitat Map, United States Fish and Wildlife Service, Sacramento, CA.
United States Fish and Wildlife Service (USFWS). 2018. Federal Endangered and Threatened Species List, Sacramento Fish and Wildlife Office.

Abbreviations:
FD Federal Delisted Species
FE Federal Endangered Species
FT Federal Threatened Species

FP Fully Protected (CDFW code)
MBTA Species Protected Under the Auspices of the Migratory Bird Treaty Act
MMPA Species Protected Under the Auspices of the Marine Mammal Protection Act
CE California Endangered Species
CT California Threatened Species
CSC California Department of Fish and Game Species of Special Concern
1B California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere
1B.1 California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere; Seriously Threatened in California
1B.2 California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California

CDFW State Rating System
The *state rank* (S-rank) is assigned much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries.
S1 = **Critically Imperiled**—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or
because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
S2 = **Imperiled**—Imperiled in the state because of rarity due to very restricted range, very few populations (often 20
or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
S3 = **Vulnerable**—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer),
recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
S4 = **Apparently Secure**—Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
S5 = **Secure**—Common, widespread, and abundant in the state.

CDFW Global Ranking System
G1 = **Critically Imperiled**—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = **Imperiled**—At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = **Vulnerable**—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = **Apparently Secure**—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = **Secure**—Common; widespread and abundant.

Potential Occurrence Definitions:
Present: Species or sign of their presence observed on site at time of the field survey.
Likely: Species not observed on site, but may reasonably be expected to occur there on a regular basis. Or, species not observed on the site, exceptional habitat exists, and additional surveys needed to verify presence.
Possible: Species not observed on site, but could occur there from time to time. Or, species not observed on the site, suitable habitat exists, and additional surveys needed to verify presence.
Unlikely: Species not observed on site, and would not be expected to occur there except, perhaps, as a transient. Or, species not observed on the site, marginally suitable habitat exists, and additional surveys needed to verify presence.
Absent: Species or sign of their presence not observed on site, and precluded from occurring there because habitat requirements are not met.

APPENDIX B

CULTURAL RESOURCES RECORDS

5080 California Avenue, Ste. 220 I Bakersfield, CA 93309

June 22, 2018

RE: Cultural Resource Records Search for Kashian Industrial Development project, Lemoore, CA

A cultural resources records search (RS# 18-278) was conducted at the Southern San Joaquin Valley Information Center, CSU Bakersfield, for the Kashian Industrial Development project, located in incorporated Lemoore, Kings County, CA. The proposed project consists of roughly 85 acres of land located south of the community of Lemoore.

The records search covered an area within one half mile of the subject property and included a review of the National Register of Historic Places, California Points of Historical Interest, California Registry of Historic Resources, California Historical Landmarks, California State Historic Resources Inventory, and a review of cultural resource reports on file.

The records search indicated that two previous cultural resource surveys had included small portions (approximately 2 acres) in the far northwest and eastern extremities of the project. (Wren 1989; California Department of Transportation 1992). One additional survey was conducted along the western boundary of the property (Leach-Palm et al. 2010). No further cultural resource surveys have been performed within a half mile of the project. No cultural resources have been recorded on or within a half mile of the subject property.

No cultural resources were identified within the footprint of the project site as a result of the study and no further cultural resource work is recommended for the project at this time. With implementation of standard mitigation measures, impacts of the proposed project to cultural resources is anticipated to be less than significant.

Robert E. Parr

Robert E. Parr, MS, RPA
Senior Archaeologist

References

California Department of Transportation

1992 Historic Property Survey Report 6-Kin-41 39.4/42.0 293500 for the Construction of a Four Lane Expressway in Lemoore. (KI-68)

Leach-Palm, Laura, Paul Brandy, Jay King, Pat Mikkelsen, Libby Seil, Lindsay Hartman and Jill Bradeen

2010 Cultural Resources Inventory of Caltrans District 6 Rural Conventional Highways in Fresno, Western Kern, Kings, Madera, and Tulare Counties. Report prepared for California Department of Transportation District 6, Fresno. (KI-196)

Wren, Donald G.

1989 An Archaeological Reconnaissance for a Proposed Tomato Paste Plant, Lemoore, California. Report prepared for Michael Paoli & Associates, Fresno, CA. (KI-68)

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

June 29, 2018

Jaymie Brauer
QK Inc.

Sent by Email: Jaymie.brauer@qkinc.com
Number of Pages: 2

RE: Kashian Industrial Development, Lemoore, Kings County

Dear Ms. Brauer:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. **Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.**

I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. **By contacting all those on the list, your organization will be better able to respond to claims of failure to consult.** If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: Sharaya.Souza@nahc.ca.gov.

Sincerely,

Sharaya Souza
Staff Services Analyst
(916) 573-0168