March 11, 2022

Mr. Harmanjit Dhaliwal, P.E.
City of Fresno
2600 Fresno Street
Fresno, CA 93721-3616

Via Email Only: Harmanjit.Dhaliwal@fresno.gov

Subject: ***Trip Generation Analysis for the Chestnut Avenue General Plan Amendment located in the City of Fresno (JLB Project No. 004-156)***

Dear Mr. Dhaliwal,

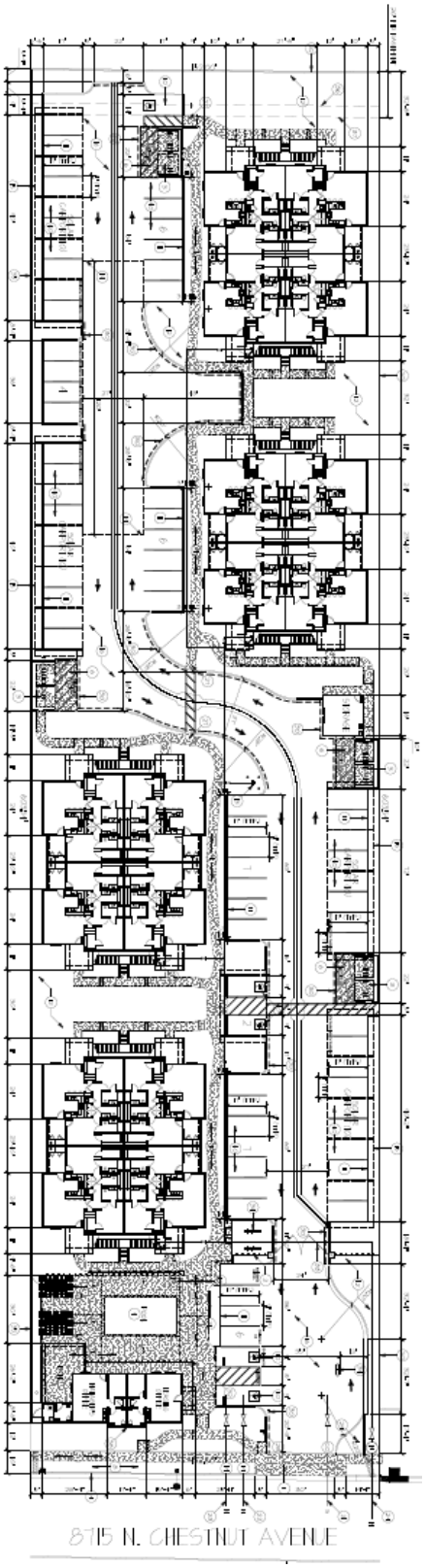
JLB Traffic Engineering, Inc. (JLB) has completed a ***Trip Generation Analysis (TGA)*** for the 8715 North Chestnut Avenue General Plan Amendment (Project) located on the west side of the intersection of Chestnut Avenue and Warwick Avenue in the City of Fresno. The Project proposes to develop a 2.11-acre site with 32 multi-family residential units. Based on information provided to JLB, the proposed Project will undergo a General Plan Amendment to modify the land use from Medium Low Density Residential to RM-1 Medium High Density Residential.

The purpose of the TGA is to evaluate the potential difference in traffic generation of the proposed Project and that which could otherwise be developed per the Fresno General Plan. The TGA will focus primarily on comparing the anticipated driveway trip generation during a weekday, AM peak hour and PM peak hour of the Project and that which could otherwise be developed consistent with the City of Fresno General Plan land use designation.

Project Description

The Project proposes to develop approximately 2.11 acres with up to 32 multi-family residential units. Per information provided to JLB, the proposed Project will undergo a General Plan Amendment to modify the land use from Medium Low Density Residential to RM-1 Medium High Density Residential. Figure 1 presents the latest Project Site Plan.

Figure 1: Project Site Plan



Project 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 I presents the trip generation for the proposed Project with trip generation rates for 32 multi-family residential units. At buildout, the proposed Project is estimated to generate a maximum of 234 daily trips, 15 AM peak hour trips and 18 PM peak hour trips.

Table I: Project Trip Generation

Land Use (ITE Code)	*Size*	*Unit*	*Daily*		*AM (7-9) Peak Hour*						*PM (4-6) Peak Hour*					
			Rate	*Total*	*Trip Rate*	*In %*	*Out %*	*In*	*Out*	*Total*	*Trip Rate*	*In %*	*Out %*	*In*	*Out*	*Total*
Multifamily Housing (220)	32	d.u.	7.32	234	0.46	23	77	3	12	15	0.56	63	37	11	7	18
Total Project Trips				**234**				**3**	**12**	**15**				**11**	**7**	**18**

Note: d.u. = Dwelling Units

General Plan Trip Generation

The General Plan proposes that the Project site be developed with Single-Family Detached Housing units under the Medium Low Density Residential land use (3.5 to 6 dwelling units per acre). For purposes of this comparison, it is assumed that the Project site is developed according to the maximum single-family range allowable under the Medium Low Density Residential of 6 dwelling units per acre. Therefore, this site could be developed with a maximum of 12 Single-Family Detached Housing units (maximum of 6 dwelling units per acre * 2.11 net acres = 12.66 units). Table II presents the trip generation of that which could otherwise be developed consistent with the General Plan with trip generation rates for 12 Single-Family Detached Housing units. Consistent with the General Plan, the Project site is anticipated to generate a maximum of 113 daily trips, 9 AM peak hour trips and 12 PM peak hour trips.

Table II: General Plan Trip Generation

Land Use (ITE Code)	*Size*	*Unit*	*Daily*		*AM (7-9) Peak Hour*						*PM (4-6) Peak Hour*					
			Rate	*Total*	*Trip Rate*	*In %*	*Out %*	*In*	*Out*	*Total*	*Trip Rate*	*In %*	*Out %*	*In*	*Out*	*Total*
Single-Family Detached Housing (210)	12	d.u.	9.44	113	0.74	25	75	2	7	9	0.99	63	37	8	4	12
Total Project Trips				**113**				**2**	**7**	**9**				**8**	**4**	**12**

Note: d.u. = Dwelling Units

Trip Generation Comparison

Compared to that which could be developed consistent with the General Plan, the proposed Project is estimated to generate more traffic by 121 daily trips, 6 AM peak hour trips and 6 PM peak hour trips. The trip generation comparison between the proposed Project and the General Plan is available in Table III.

Table III: Difference in Trip Generation

	Daily	*AM (7-9) Peak Hour*			*PM (4-6) Peak Hour*		
	Total	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Project	234	3	12	15	11	7	18
General Plan	113	2	7	9	8	4	12
Difference in Trip Generation	**121**	**1**	**5**	**6**	**3**	**3**	**6**

Transportation Impact Study Needs

Per the Fresno *Traffic Impact Study Report Guidelines*, a Transportation Impact Study (TIS) Report for a Project may be required when the following thresholds are met:

1. When project-generated traffic is expected to be greater than 100 vehicle trips during any peak hour.
2. When a project includes a General Plan Amendment (GPA) which changes the land use.
3. When the project traffic will substantially affect an intersection or roadway segment already identified as operating at an unacceptable level of service.
4. When the project will substantially change the offsite transportation system or connection to it, as determined by the Traffic Engineering Manager.

Moreover, the Fresno General Plan has established four (4) Traffic Impact Zones (TIZs) within the City of Fresno to assist with areas being incentivized for development. In the City of Fresno, all developments within TIZ-I maintain a LOS standard of F and require a TIS when projected to generate greater than 200 peak hour new vehicle trips. In addition, all developments within TIZ-II maintain a LOS standard of E and require a TIS when projected to generate greater than 200 peak hour new vehicle trips. Also, all developments within TIZ-III maintain a LOS standard of D and require a Traffic Impact Study (TIS) when projected to generate greater than 100 peak hour new vehicle trips. Lastly, all developments within TIZ-IV maintain a LOS standard of E and require a TIS when projected to generate greater than 200 peak hour new vehicle trips.

Considering the Project is located within TIZ-III and its anticipated trip generation will not exceed 20 peak hour trips, a TIS would likely not be necessary. As a result, the preparation of a TIS beyond that which is included in this technical letter is not recommended.

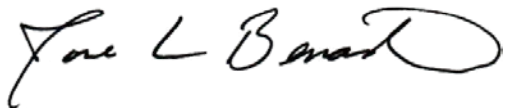
Conclusions and Recommendations

Conclusions and recommendations presented below regarding the Project located on the west side of the intersection of Chestnut Avenue and Warwick Avenue in the City of Fresno are based on the results of the TGA.

- The proposed Project will undergo a General Plan Amendment to modify the land use from Medium Low Density Residential (3.5 to 6 dwelling units per acre) to RM-1 Medium High Density Residential.
- At buildout, the proposed Project is estimated to generate approximately of 234 daily trips, 15 AM peak hour trips and 18 PM peak hour trips.
- Consistent with the General Plan, the Project site could be developed with up to 12 single family residential units and approximately of 113 daily trips, 9 AM peak hour trips and 12 PM peak hour trips.
- Compared to that which could be developed consistent with the General Plan, the proposed Project is estimated to generate more traffic by 121 daily trips, 6 AM peak hour trips and 6 PM peak hour trips.
- The proposed Project is not substantially changing the offsite transportation system or connections to it.
- Based on the findings and knowledge of the proposed Project's surrounding area, JLB believes that this TGA satisfies the City's requirements for the proposed Project to be processed.
- While the proposed Project will not have a significant change in traffic to warrant the completion of a detailed TIS, City of Fresno staff must make the final determination.

If you have any questions or require additional information, please contact me via phone at (559) 570-8991, or via email at jbenavides@jlbtraffic.com.

Sincerely,



Jose Luis Benavides, P.E., T.E.
President

From: Harmanjit Dhaliwal
Sent: Tuesday, April 05, 2022 5:38 PM
To: Thomas Veatch
Cc: Phillip Siegrist
Subject: RE: P22-01086 P21-06232 - TIS question

Categories: From/To Mangement

Good Afternoon Thomas,

We have a had discussions with JLB regarding when an official study would be required. In this instance we would not ask for a study, but since there is a General Plan Amendment/Rezone, we would require the Trip Comparison Letter as they are submitting.

Thanks,

Harmanjit Dhaliwal, PE
Supervising Professional Engineer
Traffic Operations & Planning Division, Public Works Department
2600 Fresno Street, Room 4064
Fresno, CA 93721-3623
Direct: (559) 621-8694
Main: (559) 621-8800
www.fresno.gov
Building a Better Fresno

From: Thomas Veatch <Thomas.Veatch@fresno.gov>
Sent: Tuesday, April 05, 2022 4:43 PM
To: Harmanjit Dhaliwal <Harmanjit.Dhaliwal@fresno.gov>
Cc: Phillip Siegrist <Phillip.Siegrist@fresno.gov>
Subject: P22-01086 P21-06232 - TIS question

Hi Harman,

I have an application for a Development Permit and General Plan Amendment/Rezone in completeness review for a proposed 32 unit apartment complex. They are stating that a trip generation report is enough because peak hour trips is low. Is a TIS required regardless because it involves the GPA/Rezone, or is there discretion on if it's required or not?

Transportation Impact Study Needs

Per the Fresno *Traffic Impact Study Report Guidelines*, a Transportation Impact Study (TIS) Report for a Project may be required when the following thresholds are met:

1. When project-generated traffic is expected to be greater than 100 vehicle trips during any peak hour.
2. When a project includes a General Plan Amendment (GPA) which changes the land use.
3. When the project traffic will substantially affect an intersection or roadway segment already identified as operating at an unacceptable level of service.
4. When the project will substantially change the offsite transportation system or connection to it, as determined by the Traffic Engineering Manager.

Moreover, the Fresno General Plan has established four (4) Traffic Impact Zones (TIZs) within the City of Fresno to assist with areas being incentivized for development. In the City of Fresno, all developments within TIZ-I maintain a LOS standard of F and require a TIS when projected to generate greater than 200 peak hour new vehicle trips. In addition, all developments within TIZ-II maintain a LOS standard of E and require a TIS when projected to generate greater than 200 peak hour new vehicle trips. Also, all developments within TIZ-III maintain a LOS standard of D and require a Traffic Impact Study (TIS) when projected to generate greater than 100 peak hour new vehicle trips. Lastly, all developments within TIZ-IV maintain a LOS standard of E and require a TIS when projected to generate greater than 200 peak hour new vehicle trips.

Considering the Project is located within TIZ-III and its anticipated trip generation will not exceed 20 peak hour trips, a TIS would likely not be necessary. As a result, the preparation of a TIS beyond that which is included in this technical letter is not recommended.

Project Description:
General Plan Amendment/Rezone Application P21-06232 is proposed to rezone subject property from RS-4 (Residential Single Family, Medium Low Density) to RM-1 (Residential Multi-family - Medium High Density) for a proposed apartment project. Related Development Permit Application No. P21-06232 which was filed by John Ashley of Fresno/Newbury LP and pertains to ±2.20 acres of property generally located on the west side of North Chestnut Avenue between the intersections of East Shepherd and East Teague Avenues, at 8175 North Chestnut Avenue (APN: 403-532-28). The applicant proposes a 32 unit apartment complex consisting of 4 5,750 square foot two-story buildings and a 1,069 sq foot leasing and managers office on a vacant parcel. In addition, on and off-site improvements are proposed including but not limited to a new drive approach, 79 new parking stalls, pool, trash enclosures, landscaping, curb, gutter, and sidewalks.

Thomas Veatch
Thomas.Veatch@fresno.gov
559 621 8076
Planner
City of Fresno, Planning and Development Department
2600 Fresno Street, Room 3043 · Fresno, CA 93721

1401 Fulton Street, Suite 918 Fresno, CA 93721
www.soarhere.com • 559.547.8884

March 15, 2022

John Ashley
FRESNO/NEWBURY LP
1554 Shaw Ave
Clovis, CA 93611

Subject: Noise Study: Proposed 32 Unit Apartment Complex, 8715 N. Chestnut Avenue, Clovis, CA 93619

Dear Mr. Ashley:

Soar Environmental Consulting, Inc. is pleased to submit Fresno/Newbury LP the enclosed CalEEMod Noise Study for your proposed 32 Unit Apartment Complex in Clovis, CA. Soar Environmental is grateful for the time and effort in providing us with preliminary information. Our environmental professional team performed this assessment under my supervision in accordance with generally accepted environmental practices and procedures, as of the date of this report. I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in 312.10 of 40 CFR 312. I have employed the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental professionals practicing in this area.

The conclusions contained within this assessment are based upon site conditions readily observed or were reasonably ascertainable.

Soar Environmental Consulting, Inc. appreciates the opportunity to be of service to Fresno/Newbury LP. We look forward to providing you with further services in the future. Please notify us if you have questions or need additional assistance.

Respectfully submitted,
Soar Environmental Consulting, Inc.

Matthew D. Fidel

Matthew D. Fidel, MS Env. Engineering

Enclosure: CalEEMod Noise Study

NOISE STUDY

PROPOSED 32 UNIT APARTMENT COMPLEX
8715 N. Chestnut Avenue, Clovis, CA 93619

FRESNO/NEWBURY LP
1554 Shaw Ave
Clovis, CA 93611

Prepared by

A Certified DVBE Corporation
1401 Fulton St, Suite 918
Fresno, CA 93721

March 2022

Table of Contents

Tables

Appendices

1 Project Description

The proposed project is located at 8715 N Chestnut Avenue, Clovis, CA, and involves the development and construction of the property for a 32-unit apartment complex. The 2.11-acre parcel is currently vacant; therefore, no demolition will be required. The nearest sensitive receptors are the residences adjacent to the project site to the north. The nearest school to the project site is Clovis West High School approximately 1 mile west of the project site. The nearest airport is Fresno Yosemite International Airport approximately 9 miles south of the project site.

2 Assumptions

The following basic assumptions were used in developing the estimates for the proposed project using CalEEMod:

- CalEEMod defaults were applied to all phases of the project unless otherwise specified.
- Institute of Traffic Engineers (ITE) default trip distances for Fresno County, as contained in CalEEMod, were assumed for the operational traffic analysis.
- Some project design features including sizes and number of buildings were defined by the Applicant and replaced some CalEEMod default settings.
- CalEEMod construction timelines are generally accurate unless otherwise stated.
- During the site preparation and grading phases of construction, it is anticipated that no soil will need to be exported from or imported to the project site.
- The default equipment from CalEEMod for each construction phase, is representative of actual construction equipment used during construction.

3 Noise Impacts Analysis

3.1 Noise Impact Methodology

The screening-level noise analysis for project construction was completed based on the methodology developed by the U.S. Department of Transportation Federal Highway Administration (DOT FHWA) at the John A. Volpe National Transportation Systems Center and other technical references consistent with CalEEMod outputs (equipment utilization). The DOT FHWA methodology uses actual noise measurement data collected during the Boston “Big Dig” project (1991-2006) as reference levels for a wide variety of construction equipment in common use, such as on the proposed project. This noise analysis did not include field measurements of ambient noise in the vicinity of the project site.

The FHWA noise model provides relatively conservative predictions because it does not account for site-specific geometry, dimensions of nearby structures, and local environmental conditions that can affect the sound transmission, reflection, and attenuation. As a result, actual measured sound levels at receptors may vary somewhat from predictions, typically lower. Additionally, the impacts of noise upon receptors (persons) are subjective because of differences in individual sensitivities and perceptions.

Noise impacts are evaluated against community noise standards contained in the City or County General Plan or other state or federal agency as applicable to the vicinity of the project site. For this project, the City of Fresno General Plan contains the applicable evaluation criteria (City 2014).

During construction activities, the proposed project would generate noise due to the operation of offroad equipment, portable generating equipment, and vehicles at or near the project site. No strong sources of vibrations are planned to be used during construction activities.

Since the project is near existing streets, the incremental effect of project operation (possible slightly increased traffic) would not be quantifiable against existing traffic noise in the project vicinity (i.e., less than significant impact).

The proposed project is located within 162 feet of a 4-Lane Arterial Street. Due to the nature of the project, the construction of sensitive receptors within this distance meets the criteria provided by the City of Fresno to conduct a Noise Study. Project features designed to reduce the impact of street noise would minimize noise impacts to residents.

3.2 Environmental Setting

3.2.1 Noise Descriptors

Noise is typically described as any dissonant, unwanted, or objectionable sound. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity, the A-weighted decibel scale (dBA). **Table 1** lists common sound characteristics and their intensities in dBA.

Table 1
Typical Sound Level Characteristics

Pressure (N/m2)	Level dB	Sound Level Characteristic
2000	160	Rocket Launch
600	150	Military Jet Plane Takeoff
200	140	Threshold of Pain
60	130	Commercial Jet Plane Takeoff
20	120	Industrial Chipper or Punch Press
6	110	Loud Autoimobile Horn
2	100	Passing Diesel Truck - Curb Line
0.6	90	Factory - Heavy Manufacturing
0.2	80	Factory - Light Manufacturing
0.06	70	Open Floor Office - Cubicles
0.02	60	Conversational Speech
0.006	50	Private Office - Walled
0.002	40	Residence in Daytime
0.0006	30	Bedroom at Night
0.0002	20	Recording or Broadcasting Studio
0.00006	10	Threshold of Good Hearing - Adult
0.00002	0	Threshold of Excellent Hearing - Child

Sources: Broch 1971, Plog 1988

In most situations, a 3-dBA change in sound pressure is considered a "just-detectable" difference. A 5-dBA change (either louder or quieter) is readily noticeable, and a 10-dBA change is a doubling (if louder) or halving (if quieter) of the subjective loudness. Sound from a small, localized source (a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (drops off) at a rate of 6 dBA for each doubling of the distance.

The duration of noise and the period at which it occurs are important factors in determining the impact of noise on sensitive receptors. A single number called the equivalent continuous noise level (Leq) may be used to describe the sound that is changing in level. It is also used to describe the acoustic range of the noise source being measured, which is accomplished through the maximum Leq (Lmax) and minimum Leq (Lmin) indicators.

In determining the daily measure of community noise, it is important to account for the difference in human response to daytime and nighttime noise. Noise is more disturbing at night than during the day, and noise indices have been developed to account for the varying duration of noise events over time, as well as a community response to them. The Community Noise Equivalent Level (CNEL) adds a 5-dB penalty to the "nighttime" hourly noise levels (HNLs) (i.e., 7:00 p.m. to 10:00 p.m.) and the Day-Night Average Level (Ldn) adds a 10-dB penalty to the evening HNLs (Caltrans 2020, FTA 2006).

3.2.2 Vibration Descriptors

A vibration is a unique form of noise because its energy is carried through structures and the earth, whereas noise is carried through the air. Thus, vibration is generally felt rather than heard. Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Actual human and structural response to different vibration levels is influenced by a combination of factors, including soil type, the distance between the source and receptor, duration, and the number of perceived events.

While not a direct health hazard, the energy transmitted through the ground as vibration may result in structural damage, which may be costly to repair and dangerous in the event of structural failure. To assess the potential for structural damage associated with vibration, the vibratory ground motion in the vicinity of the affected structure is measured in terms of point peak velocity/peak particle velocity (PPV) in the vertical and horizontal directions (vector sum). A freight train passing at 100 feet may cause PPVs of 0.1 inch per second, while a strong earthquake may produce PPVs in the range of 10 inches per second. Minor cosmetic damage to buildings may begin in the range of 0.5 inch per second (Caltrans 2020, FTA 2006).

3.2.3 Existing Noise Environment

The project site is in the City of Fresno, in a characteristically urban area subject to noise from local traffic on public streets, buses, trucks, construction, and small power equipment. The City of Fresno General Plan contains guidelines for the maximum allowable noise exposure to sensitive receptors from both Transportation and Non-Transportation sources. These guidelines are shown in **Tables 2 and 3**. For this analysis, the daytime ambient background noise from known sources was set at 50 dBA at the nearest sensitive receptor to the proposed project (residences to the north of the proposed project site). This is based on light to moderate traffic on N. Chestnut Avenue, as well as general urban background noise.

3.2.4 Sensitive Receptors

Some land uses are generally regarded as being more sensitive to noise than others due to the types of population groups or activities involved. Sensitive population groups normally include children and the elderly. The City of Fresno General Plan Health and Safety Element also includes residential areas as noise-sensitive land uses. Other sensitive land uses generally include hospitals, schools, childcare facilities, senior facilities, libraries, churches, and parks.

The nearest school to the project site is Clovis West High School approximately 1 mile west of the site. The nearest church is NorthPark Community Church located approximately 800 feet north of the site. The nearest residential receptors are adjacent to the northern property boundary of the project site, approximately 75 feet from the center of the construction zone.

All construction activities would be short-term and temporary. All construction work is planned to be conducted during daylight hours; no nighttime work is planned to be performed. Upon completion of construction, construction-generated noise would permanently cease. Because the project is in an urban area within 500 feet of an existing surface street, no additional project-related noise is expected over long-term project operations.

3.3 Street Traffic Noise

The project includes dwelling units that are located within 162 feet of a 4-Lane Arterial Road. Due to the nature of the project, the construction of sensitive receptors within this distance to a 4-Lane Arterial Road meets the criteria provided by the City of Fresno to conduct a Noise Study.

3.3.1 Existing Street Traffic Noise Environment

The project site is in the City of Fresno, in a characteristically urban area subject to noise from local traffic on public streets, buses, trucks, construction, and small power equipment. Vehicle noise includes noises produced by the engine, exhaust, tires, and wind-generated by taller vehicles. Other factors that affect the perception of traffic noise include the distance from the highway, terrain, vegetation, and natural and structural obstacles (City 2014). Measured existing noise levels from the City of Fresno General Plan can be seen in **Table 4**.

3.4 Regulatory Setting

3.4.1 State

The State of California does not promulgate statewide standards for environmental noise but requires each city and county to include a noise element in its general plan [California Government Code Section 65302(f)]. In addition, Title 4 of the CCR has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. In general, the guidelines require that community noise standard:

- Protect residents from the harmful and annoying effects of exposure to excessive noise.
- Prevent incompatible land uses from encroaching upon existing or programmed land uses likely to create significant noise impacts.
- Encourage the application of state-of-the-art land use planning methodologies around managing and minimizing potential noise conflicts.

Construction vibration is regulated at the state level by standards established by the Transportation and Construction-Induced Vibration Guidance Manual issued by Caltrans in 2004. Continuous sources include the use of vibratory compaction equipment and other construction equipment that creates vibration other than in single events. Transient sources create a single isolated vibration event, such as blasting. Thresholds for continuous sources are 0.5 and 0.1 inch per second PPV for structural damage and annoyance, respectively. Thresholds for transient sources are 1.0 and 0.9 PPV for structural damage and annoyance, respectively (Caltrans 2020).

3.4.2 Local

City of Fresno General Plan Noise and Safety Element

The City of Fresno General Plan Noise and Safety Element noise level criteria for land use compatibility. The following summarizes the policies and criteria applicable to the proposed project:

- **Policy NS-1-A:**
  - Desirable and Generally Acceptable Exterior Noise Environment: Establish 65 dBA Ldn or CNEL as the standard for the desirable maximum average exterior noise levels for defined usable exterior areas of residential and noise-sensitive uses for noise but designate 60 dBA Ldn or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise-sensitive uses. Maintain 65 dBA Ldn or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses and maintain 70 dBA Ldn or CNEL as maximum average exterior noise level for industrial land uses, both to be measured at the property line of parcels where noise is generated which may impinge on neighboring properties.

- **Policy NS-1-B:**
  - Conditionally Acceptable Exterior Noise Exposure Range: Noise Exposure Range. Establish the conditionally acceptable noise exposure level range for residential and other noise-sensitive uses to be 65 dB Ldn or require appropriate noise-reducing mitigation measures as determined by a site-specific acoustical analysis to comply with the desirable and conditionally acceptable exterior noise level and the required interior noise level standards set in Table 9-2 (**Table 2**).

- **Policy NS-1-G:**
  - Noise mitigation measures that help achieve the noise level targets of this plan include, but are not limited to, the following:
    - Façades with substantial weight and insulation.
    - Installation of sound-rated windows for primary sleeping and activity areas.
    - Installation of sound-rated doors for all exterior entries at primary sleeping and activity areas.
    - Greater building setbacks and exterior barriers.
    - Acoustic baffling of vents for chimneys, attic, and gable ends.
    - Installation of mechanical ventilation systems that provide fresh air under closed window conditions.
  - The measures are not exhaustive and alternative designs may be approved by the city, provided that a qualified Acoustical Consultant submits information demonstrating that the alternative design(s) will achieve and maintain the specific targets for outdoor activity areas and interior spaces.

- **Policy NS-1-H:**
  - Interior Noise Level Requirement: Comply with the S Interior Noise Level Requirement. State Code requires that any new multifamily residential, hotel or dorm buildings must be designed to incorporate noise reduction measures to meet the 45 dB Ldn interior noise criterion and apply this standard as well to all new single-family residential and noise-sensitive uses.

Table 2
Fresno General Plan Table 9-2 Transportation (Non-Aircraft) Noise Sources

TABLE 9-2: TRANSPORTATION (NON-AIRCRAFT) NOISE SOURCES			
Noise-Sensitive Land Use[1]	Outdoor Activity Areas[2]	Interior Spaces	
	L_{dn}/CNEL, dB	L_{dn}/CNEL, dB	L_{eq} dB[2]
Residential	65	45	-
Transient Lodging	65	45	-
Hospitals, Nursing Homes	65	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls	65	-	45
Office Buildings	-	-	45
Schools, Libraries, Museums	-	-	45

1. Where the location of outdoor activity areas is unknown or is not applicable, the exterior noise level standard shall be applied to the property line of the receiving land use.
2. As determined for a typical worst-case hour during periods of use.

Source: City 2014

Table 3
Fresno General Plan Table 9-3 Stationary Noise Sources

TABLE 9-3: STATIONARY NOISE SOURCES[1]		
	Daytime (7:00 a.m. – 10:00 p.m.)	Nighttime (10:00 p.m. – 7:00 a.m.)
Hourly Equivalent Sound Level (Leq), dBA	50	45
Maximum Sound Level (Lmax), dBA	70	60

1. The Department of Development and Resource Management Director, on a case-by-case basis, may designate land uses other than those shown in this table to be noise-sensitive, and may require appropriate noise mitigation measures.
2. As determined at outdoor activity areas. Where the location of outdoor activity areas is unknown or not applicable, the noise exposure standard shall be applied at the property line of the receiving land use. When ambient noise levels exceed or equal the levels in this table, mitigation shall only be required to limit noise to the ambient plus five dB.

Source: City 2014

Table 4
Fresno General Plan Table 9-1 Measured Existing Noise Levels

TABLE 9-1: MEASURED EXISTING NOISE LEVELS[1]	
	Noise Level (dBA L_{dn})
Railroad crossing at Shields Ave.	84
Along Railroad near W. Barstow Ave.	74
SR 41 between W. Barstow & W. Shaw Ave.	76
SR 180 near N. Peach Ave.	76
E. Shaw Ave. near N. Cedar Ave.	72
N. Blackstone Ave. near E. Ashlan Ave.	70
S. Elm Ave. near E. Jensen Ave.	68
N. Valentine Ave. between W. Ashlan & W. Holland Ave.	67
S .Fruit Ave. north of Church Ave.	65
1. Values provided have been normalized to the reference distance of 100 feet.	

Source: City 2014

3.5 Results of Construction Screening Noise Analysis

The proposed project can be characterized as a new residential development on a vacant plot of land. Most noise would occur during the site preparation, grading, construction, and paving when heavy equipment would be operating.

Each of the five construction phases would be a different mix of equipment operating, and cumulative noise levels would vary based on the amount of equipment in operation and the location of each activity on the project site. In general, the use of off-road equipment and portable equipment would generate noise due to engine mechanicals, engine exhaust, driveline mechanicals, shaft-driven devices and accessories, hydraulics operation, ground friction and displacement, and gravity drops (dumping, unloading).

Since no intense percussive actions (e.g., Hard rock-breaking, large pile-driving) are planned to occur during the site work, no strong ground-borne vibrations are expected to be generated that could affect nearby structures or be noticeable to their occupants.

Types of equipment (FHWA 2006) to be used during the project and noise-emitting characteristics (i.e., Usage factors, reference dBA, and percussive source) are shown in **Table 5** consistent with CalEEMod outputs (**Appendix A**). The Project is expected to require up to 12 months of planned work activities (i.e., Mobilization to substantial completion) comprising five construction phases (CalEEMod 2020):

- Site Preparation
- Grading
- Building construction
- Paving
- Architectural coating

Table 5
FHWA Noise Reference Levels and Usage Factors

CalEEMod Construction Detail			FHWA Equipment Type	Ref.	Usage Factor	Ref. Level	Percussive Source
Phase Name	Equipment Description	Qty.			percent	dBA	Yes/No
Site Preparation (1)	Graders	1	Grader	1	40%	85	No
	Scrapers	1	Scraper	1	40	85	No
	Tractors/Loaders/Backhoes	1	Backhoe (with loader)	1	40%	80	No
Grading (2)	Graders	1	Grader	1	40%	85	No
	Rubber Tired Dozers	1	Tractor (rubber tire)	1	40%	84	No
	Tractors/Loaders/Backhoes	2	Backhoe (with loader)	1	40%	80	No
Building Construction (3)	Cranes	1	Crane	1	16%	85	No
	Forklifts	2	Forklift	1	40%	80	No
	Generator Sets	1	Generator (<25 KVA quiet design)	1	50%	70	No
	Tractors/Loaders/Backhoes	1	Backhoe (with loader)	1	40%	80	No
	Welders	3	Welding Machine (arc welding)	1	50%	70	No
Paving (4)	Cement and Mortar Mixers	1	Drum Mixer	1	50%	80	No
	Pavers	1	Paver (asphalt)	1	50%	85	No
	Paving Equipment	1	Pavement Scarifier	1	20%	85	No
	Rollers	2	Roller	1	20%	85	No
	Tractors/Loaders/Backhoes	1	Backhoe (with loader)	1	40%	80	No
Archetectual Coating (5)	Air Compressors	1	Compressor (air)	1	40%	80	No

Source: CalEEMod v 2020.4.0, FHWA 2006

During the construction of the project including related infrastructure, noise from construction activities would add to the noise environment in the project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in **Table 6**, ranging from approximately 74 dBA to approximately 85 dBA at 50 feet from the project site. Construction activities would be temporary and are anticipated to occur during normal daytime working hours. Full FHWA Noise Model outputs are in **Appendix B.**

Table 6
Anticipated Construction Noise at 50 ft

Construction Phases	Anticipated Construction Noise at 50 ft		
	Phase Duration (days)	L(max)	L(eq)
Site Preparation	3	85	83.8
Grading	6	85	83.6
Building Construction	220	85	86.5
Paving	10	89.5	86.9
Architectural Coating	10	77.7	73.7

Source: CalEEMod v 2020.4.0, FHWA 2006

3.6 Operational Noise

Upon completion of construction and occupancy of the proposed project, on-site operational noise would be generated mainly by on-site traffic and vehicles. However, the overall noise levels generated by operations are not expected to increase current noise levels beyond existing significance thresholds. As such, the project would not represent a substantially new type or source of noise in the general vicinity. Therefore, the operational noise impacts of the proposed project would be less than significant.

3.7 Results of Street Traffic Noise Analysis

The City of Fresno General Plan MEIR identified existing noise level measurements taken at various points throughout the city. E McKinley Ave (West Avenue to N Fruit Avenue), a 4-Lane Arterial Road, is shown to have a Measured Noise Level of 64.2 dBA at 25 feet from the noise source (City 2014). N Chestnut Ave, being like E McKinley Ave, can be assumed to have a similar Measured Noise Level at the same distance. The nearest building to N Chestnut Ave included in the project contains the Manager's and Leasing Offices and is approximately 65 feet from the centerline of N Chestnut Ave. The nearest Apartment building is approximately 140 feet from the centerline of N Chestnut Ave.

The City of Fresno MEIR also identifies anticipated noise levels after project buildout for each roadway type at the right-of-way. The anticipated noise contour of a 4-Lane Arterial Road is shown in **Table 7**:

Table 7
Fresno General Plan MEIR Anticipated Noise Contours

Roadway	dBA CNEL at Right-of-Way	Distance to Contour (feet)			
		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
4-Lane Arterial	68	78	169	363	782

Source: City 2014

Table 8 shows the typical reduction in noise levels of building facades by occupancy type. The Manager and Leasing Offices classify as commercial, while the apartment buildings classify as residential.

Table 8
Fresno General Plan MEIR Table 5.11-2 Noise Reduction Afforded by Common Building Construction

Construction Type	Typical Occupancy	General Description	Range of Noise Reduction (dB)[1]
1	Residential, Commercial, Schools	Wood frame, stucco or wood sheathing exterior. Interior drywall or plaster. Sliding glass windows, with windows partially open.	15 to 20
2	Same as 1 above	Same as 1 above, but with windows closed.	25 to 30
3	Commercial, Schools	Same as 1 above, but with fixed 0.25-inch plate glass windows.	30 to 35
4	Commercial, Industrial	Steel or concrete frame, curtain wall, or masonry exterior wall. Fixed 0.25-inch plate glass windows.	30 to 40

Notes:
[1] Range depends on the amount windows are open, degree of window seal, and glass area of windows.
Source: Caltrans 2002: 7-37.

Source: City 2014

The noise generated by vehicle traffic on N Chestnut Avenue could potentially exceed the noise standard of 65 dBA CNEL for noise-sensitive land uses. However, with the implementation of reduction measures detailed in General Plan Policy NS-1-G, roadway noise levels would be reduced to within the City's proposed noise standard.

4 Conclusion

Soar Environmental predicts a less than significant impact for project construction and operation. Soar Environmental further predicts a less than significant impact for the impact of street noise on the project. This would be achieved with Best Management Practices (BMP) incorporated by the City of Fresno General Plan.

4.1 PROJECTED IMPACT: Less Than Significant (LTS) with Best Management Practices (BMP) Incorporated.

4.2 RECOMMENDED MITIGATION: Project Construction Best Management Practices (BMP).

BMP NOI-1: The project contractor shall implement the following measures during the construction of the project:

- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.
- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities.
- Ensure that all general construction-related activities are restricted between the hours of 7:00 a.m. and 10:00 p.m.
- Designate a "disturbance coordinator" at the city who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., Starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

Implementation of **BMP NOI-1** would limit construction hours and require the construction contractor to implement noise-reducing measures during construction, which would reduce short-term construction noise impacts to less than significant.

BMP NOI-2: City of Fresno General Plan Policy NS-1-G. Noise reduction measures that help achieve the noise level targets of this plan include, but are not limited to, the following:

- Façades with substantial weight and insulation.
- Installation of sound-rated windows for primary sleeping and activity areas.
- Installation of sound-rated doors for all exterior entries at primary sleeping and activity areas.
- Greater building setbacks and exterior barriers.
- Acoustic baffling of vents for chimneys, attic, and gable ends.
- Installation of mechanical ventilation systems that provide fresh air under closed window conditions.

The measures are not exhaustive and alternative designs may be approved by the city, provided that a qualified Acoustical Consultant submits information demonstrating that the alternative design(s) will achieve and maintain the specific targets for outdoor activity areas and interior spaces.

5 Limitations

The scope of services performed to complete this assessment is limited in nature. Site conditions can vary with time; therefore, this assessment is not intended to predict future site conditions. Because of the nature of this assessment, site history has been developed based solely upon information provided by the Client or during the review of available regulatory files on this, and nearby sites. This report is not a complete risk assessment, and the scope of services does not include a complete determination of the extent of, nor the environmental or public health impact of, known or suspected hazardous materials or wastes.

The information contained in this report is based upon work performed by trained professional and technical staff by general accepted engineering and scientific practices at the time the work was performed. The conclusions and recommendations presented are representative of the best judgment from Soar Environmental staff and are based upon the information obtained from field reconnaissance and data review. Due to the nature of this investigation, Soar Environmental cannot warrant undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be construed as legal advice.

Should additional information become available that differs significantly from our understanding of conditions presented in this report, we request that this information be brought to our attention so that we may reassess the conclusions provided herein.

6 References

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Appendix A
CalEEMod Outputs

FNLP - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

FNLP

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	32.00	Dwelling Unit	2.11	32,000.00	92

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 2.11 acres

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	2.00	2.11
tblWoodstoves	NumberCatalytic	2.11	0.00
tblWoodstoves	NumberNoncatalytic	2.11	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2022	0.1271	0.9933	0.9734	1.7900e-003	0.0366	0.0468	0.0834	0.0140	0.0448	0.0588	0.0000	150.6724	150.6724	0.0280	8.5000e-004	151.6256
2023	0.3918	0.7123	0.7801	1.4200e-003	0.0106	0.0321	0.0426	2.8300e-003	0.0307	0.0335	0.0000	119.0693	119.0693	0.0216	6.4000e-004	119.7998
Maximum	**0.3918**	**0.9933**	**0.9734**	**1.7900e-003**	**0.0366**	**0.0468**	**0.0834**	**0.0140**	**0.0448**	**0.0588**	**0.0000**	**150.6724**	**150.6724**	**0.0280**	**8.5000e-004**	**151.6256**

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					
2022	0.1271	0.9933	0.9734	1.7900e-003	0.0366	0.0468	0.0834	0.0140	0.0448	0.0588	0.0000	150.6722	150.6722	0.0280	8.5000e-004	151.6254
2023	0.3918	0.7123	0.7801	1.4200e-003	0.0106	0.0321	0.0426	2.8300e-003	0.0307	0.0335	0.0000	119.0692	119.0692	0.0216	6.4000e-004	119.7996
Maximum	**0.3918**	**0.9933**	**0.9734**	**1.7900e-003**	**0.0366**	**0.0468**	**0.0834**	**0.0140**	**0.0448**	**0.0588**	**0.0000**	**150.6722**	**150.6722**	**0.0280**	**8.5000e-004**	**151.6254**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	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	6-1-2022	8-31-2022	0.3899	0.3899
2	9-1-2022	11-30-2022	0.5449	0.5449
3	12-1-2022	2-28-2023	0.5143	0.5143
4	3-1-2023	5-31-2023	0.5151	0.5151
5	6-1-2023	8-31-2023	0.2640	0.2640
		Highest	0.5449	0.5449

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	0.1636	0.0147	0.2426	9.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	14.2508	14.2508	6.4000e-004	2.5000e-004	14.3425
Energy	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	35.5352	35.5352	2.4300e-003	6.7000e-004	35.7946
Mobile	0.1145	0.1939	1.0829	2.5900e-003	0.2562	2.1200e-003	0.2583	0.0685	1.9900e-003	0.0705	0.0000	239.7982	239.7982	0.0126	0.0132	244.0491
Waste						0.0000	0.0000		0.0000	0.0000	2.9880	0.0000	2.9880	0.1766	0.0000	7.4027
Water						0.0000	0.0000		0.0000	0.0000	0.6615	1.4695	2.1309	0.0682	1.6300e-003	4.3219
Total	**0.2804**	**0.2287**	**1.3341**	**2.8100e-003**	**0.2562**	**6.0300e-003**	**0.2622**	**0.0685**	**5.9000e-003**	**0.0745**	**3.6495**	**291.0536**	**294.7031**	**0.2605**	**0.0158**	**305.9108**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1636	0.0147	0.2426	9.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	14.2508	14.2508	6.4000e-004	2.5000e-004	14.3425
Energy	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	35.5352	35.5352	2.4300e-003	6.7000e-004	35.7946
Mobile	0.1145	0.1939	1.0829	2.5900e-003	0.2562	2.1200e-003	0.2583	0.0685	1.9900e-003	0.0705	0.0000	239.7982	239.7982	0.0126	0.0132	244.0491
Waste						0.0000	0.0000		0.0000	0.0000	2.9880	0.0000	2.9880	0.1766	0.0000	7.4027
Water						0.0000	0.0000		0.0000	0.0000	0.6615	1.4695	2.1309	0.0682	1.6300e-003	4.3219
Total	**0.2804**	**0.2287**	**1.3341**	**2.8100e-003**	**0.2562**	**6.0300e-003**	**0.2622**	**0.0685**	**5.9000e-003**	**0.0745**	**3.6495**	**291.0536**	**294.7031**	**0.2605**	**0.0158**	**305.9108**

	ROG	NOx	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	6/29/2022	7/1/2022	5	3	
2	Grading	Grading	7/2/2022	7/11/2022	5	6	
3	Building Construction	Building Construction	7/12/2022	5/15/2023	5	220	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	5/16/2023	5/29/2023	5	10	
5	Architectural Coating	Architectural Coating	5/30/2023	6/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 64,800; Residential Outdoor: 21,600; 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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

FNLP - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	23.00	3.00	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	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2022

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

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	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0779	0.0779	0.0000	0.0000	0.0787
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0779**	**0.0779**	**0.0000**	**0.0000**	**0.0787**

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

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	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0779	0.0779	0.0000	0.0000	0.0787
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0779**	**0.0779**	**0.0000**	**0.0000**	**0.0787**

3.3 Grading - 2022

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					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0213**	**2.2300e-003**	**0.0235**	**0.0103**	**2.0500e-003**	**0.0123**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

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	1.0000e-004	7.0000e-005	7.7000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1948	0.1948	1.0000e-005	1.0000e-005	0.1968
Total	**1.0000e-004**	**7.0000e-005**	**7.7000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1948**	**0.1948**	**1.0000e-005**	**1.0000e-005**	**0.1968**

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					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0213**	**2.2300e-003**	**0.0235**	**0.0103**	**2.0500e-003**	**0.0123**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

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	1.0000e-004	7.0000e-005	7.7000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1948	0.1948	1.0000e-005	1.0000e-005	0.1968
Total	**1.0000e-004**	**7.0000e-005**	**7.7000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1948**	**0.1948**	**1.0000e-005**	**1.0000e-005**	**0.1968**

3.4 Building Construction - 2022

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	0.1150	0.9055	0.8899	1.5500e-003		0.0435	0.0435		0.0417	0.0417	0.0000	128.7617	128.7617	0.0248	0.0000	129.3827
Total	**0.1150**	**0.9055**	**0.8899**	**1.5500e-003**		**0.0435**	**0.0435**		**0.0417**	**0.0417**	**0.0000**	**128.7617**	**128.7617**	**0.0248**	**0.0000**	**129.3827**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

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	3.8000e-004	0.0100	2.8400e-003	4.0000e-005	1.2300e-003	1.1000e-004	1.3400e-003	3.6000e-004	1.0000e-004	4.6000e-004	0.0000	3.7142	3.7142	3.0000e-005	5.6000e-004	3.8817
Worker	4.7900e-003	3.2700e-003	0.0368	1.0000e-004	0.0114	6.0000e-005	0.0115	3.0300e-003	5.0000e-005	3.0800e-003	0.0000	9.2609	9.2609	3.0000e-004	2.8000e-004	9.3528
Total	**5.1700e-003**	**0.0133**	**0.0397**	**1.4000e-004**	**0.0126**	**1.7000e-004**	**0.0128**	**3.3900e-003**	**1.5000e-004**	**3.5400e-003**	**0.0000**	**12.9751**	**12.9751**	**3.3000e-004**	**8.4000e-004**	**13.2345**

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	0.1150	0.9055	0.8899	1.5500e-003		0.0435	0.0435		0.0417	0.0417	0.0000	128.7615	128.7615	0.0248	0.0000	129.3826
Total	**0.1150**	**0.9055**	**0.8899**	**1.5500e-003**		**0.0435**	**0.0435**		**0.0417**	**0.0417**	**0.0000**	**128.7615**	**128.7615**	**0.0248**	**0.0000**	**129.3826**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

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	3.8000e-004	0.0100	2.8400e-003	4.0000e-005	1.2300e-003	1.1000e-004	1.3400e-003	3.6000e-004	1.0000e-004	4.6000e-004	0.0000	3.7142	3.7142	3.0000e-005	5.6000e-004	3.8817
Worker	4.7900e-003	3.2700e-003	0.0368	1.0000e-004	0.0114	6.0000e-005	0.0115	3.0300e-003	5.0000e-005	3.0800e-003	0.0000	9.2609	9.2609	3.0000e-004	2.8000e-004	9.3528
Total	**5.1700e-003**	**0.0133**	**0.0397**	**1.4000e-004**	**0.0126**	**1.7000e-004**	**0.0128**	**3.3900e-003**	**1.5000e-004**	**3.5400e-003**	**0.0000**	**12.9751**	**12.9751**	**3.3000e-004**	**8.4000e-004**	**13.2345**

3.4 Building Construction - 2023

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	0.0823	0.6540	0.6823	1.2000e-003		0.0295	0.0295		0.0282	0.0282	0.0000	99.6970	99.6970	0.0189	0.0000	100.1683
Total	**0.0823**	**0.6540**	**0.6823**	**1.2000e-003**		**0.0295**	**0.0295**		**0.0282**	**0.0282**	**0.0000**	**99.6970**	**99.6970**	**0.0189**	**0.0000**	**100.1683**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

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	1.5000e-004	6.3300e-003	1.9000e-003	3.0000e-005	9.5000e-004	4.0000e-005	1.0000e-003	2.8000e-004	4.0000e-005	3.1000e-004	0.0000	2.7695	2.7695	2.0000e-005	4.2000e-004	2.8941
Worker	3.4200e-003	2.2100e-003	0.0260	8.0000e-005	8.8300e-003	4.0000e-005	8.8700e-003	2.3500e-003	4.0000e-005	2.3900e-003	0.0000	6.9411	6.9411	2.1000e-004	2.0000e-004	7.0063
Total	**3.5700e-003**	**8.5400e-003**	**0.0279**	**1.1000e-004**	**9.7800e-003**	**8.0000e-005**	**9.8700e-003**	**2.6300e-003**	**8.0000e-005**	**2.7000e-003**	**0.0000**	**9.7105**	**9.7105**	**2.3000e-004**	**6.2000e-004**	**9.9004**

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	0.0823	0.6540	0.6823	1.2000e-003		0.0295	0.0295		0.0282	0.0282	0.0000	99.6969	99.6969	0.0189	0.0000	100.1682
Total	**0.0823**	**0.6540**	**0.6823**	**1.2000e-003**		**0.0295**	**0.0295**		**0.0282**	**0.0282**	**0.0000**	**99.6969**	**99.6969**	**0.0189**	**0.0000**	**100.1682**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

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	1.5000e-004	6.3300e-003	1.9000e-003	3.0000e-005	9.5000e-004	4.0000e-005	1.0000e-003	2.8000e-004	4.0000e-005	3.1000e-004	0.0000	2.7695	2.7695	2.0000e-005	4.2000e-004	2.8941
Worker	3.4200e-003	2.2100e-003	0.0260	8.0000e-005	8.8300e-003	4.0000e-005	8.8700e-003	2.3500e-003	4.0000e-005	2.3900e-003	0.0000	6.9411	6.9411	2.1000e-004	2.0000e-004	7.0063
Total	**3.5700e-003**	**8.5400e-003**	**0.0279**	**1.1000e-004**	**9.7800e-003**	**8.0000e-005**	**9.8700e-003**	**2.6300e-003**	**8.0000e-005**	**2.7000e-003**	**0.0000**	**9.7105**	**9.7105**	**2.3000e-004**	**6.2000e-004**	**9.9004**

3.5 Paving - 2023

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8179**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	2.3000e-004	1.5000e-004	1.7700e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4715	0.4715	1.0000e-005	1.0000e-005	0.4760
Total	**2.3000e-004**	**1.5000e-004**	**1.7700e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4715**	**0.4715**	**1.0000e-005**	**1.0000e-005**	**0.4760**

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8178
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8178**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	2.3000e-004	1.5000e-004	1.7700e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4715	0.4715	1.0000e-005	1.0000e-005	0.4760
Total	**2.3000e-004**	**1.5000e-004**	**1.7700e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4715**	**0.4715**	**1.0000e-005**	**1.0000e-005**	**0.4760**

3.6 Architectural Coating - 2023

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	0.3004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**0.3013**	**6.5100e-003**	**9.0600e-003**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

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	5.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1572	0.1572	0.0000	0.0000	0.1587
Total	**8.0000e-005**	**5.0000e-005**	**5.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1572**	**0.1572**	**0.0000**	**0.0000**	**0.1587**

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	0.3004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**0.3013**	**6.5100e-003**	**9.0600e-003**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

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	5.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1572	0.1572	0.0000	0.0000	0.1587
Total	**8.0000e-005**	**5.0000e-005**	**5.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1572**	**0.1572**	**0.0000**	**0.0000**	**0.1587**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1145	0.1939	1.0829	2.5900e-003	0.2562	2.1200e-003	0.2583	0.0685	1.9900e-003	0.0705	0.0000	239.7982	239.7982	0.0126	0.0132	244.0491
Unmitigated	0.1145	0.1939	1.0829	2.5900e-003	0.2562	2.1200e-003	0.2583	0.0685	1.9900e-003	0.0705	0.0000	239.7982	239.7982	0.0126	0.0132	244.0491

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	234.24	260.48	200.96	683,299	683,299
Total	234.24	260.48	200.96	683,299	683,299

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	48.40	15.90	35.70	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	0.515888	0.053153	0.175761	0.156529	0.025865	0.006829	0.014141	0.022504	0.000707	0.000289	0.023863	0.001496	0.002975

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	12.2310	12.2310	1.9800e-003	2.4000e-004	12.3519
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.2310	12.2310	1.9800e-003	2.4000e-004	12.3519
NaturalGas Mitigated	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3042	23.3042	4.5000e-004	4.3000e-004	23.4427
NaturalGas Unmitigated	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3042	23.3042	4.5000e-004	4.3000e-004	23.4427

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	436705	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3042	23.3042	4.5000e-004	4.3000e-004	23.4427
Total		**2.3500e-003**	**0.0201**	**8.5600e-003**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**23.3042**	**23.3042**	**4.5000e-004**	**4.3000e-004**	**23.4427**

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	436705	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3042	23.3042	4.5000e-004	4.3000e-004	23.4427
Total		**2.3500e-003**	**0.0201**	**8.5600e-003**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**23.3042**	**23.3042**	**4.5000e-004**	**4.3000e-004**	**23.4427**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	132193	12.2310	1.9800e-003	2.4000e-004	12.3519
Total		**12.2310**	**1.9800e-003**	**2.4000e-004**	**12.3519**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	132193	12.2310	1.9800e-003	2.4000e-004	12.3519
Total		**12.2310**	**1.9800e-003**	**2.4000e-004**	**12.3519**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.1636	0.0147	0.2426	9.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	14.2508	14.2508	6.4000e-004	2.5000e-004	14.3425
Unmitigated	0.1636	0.0147	0.2426	9.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	14.2508	14.2508	6.4000e-004	2.5000e-004	14.3425

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	0.0300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4000e-003	0.0120	5.0900e-003	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.8626	13.8626	2.7000e-004	2.5000e-004	13.9450
Landscaping	7.1400e-003	2.7400e-003	0.2375	1.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	0.3881	0.3881	3.7000e-004	0.0000	0.3974
Total	**0.1636**	**0.0147**	**0.2426**	**9.0000e-005**		**2.2900e-003**	**2.2900e-003**		**2.2900e-003**	**2.2900e-003**	**0.0000**	**14.2508**	**14.2508**	**6.4000e-004**	**2.5000e-004**	**14.3425**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4000e-003	0.0120	5.0900e-003	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.8626	13.8626	2.7000e-004	2.5000e-004	13.9450
Landscaping	7.1400e-003	2.7400e-003	0.2375	1.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	0.3881	0.3881	3.7000e-004	0.0000	0.3974
Total	**0.1636**	**0.0147**	**0.2426**	**9.0000e-005**		**2.2900e-003**	**2.2900e-003**		**2.2900e-003**	**2.2900e-003**	**0.0000**	**14.2508**	**14.2508**	**6.4000e-004**	**2.5000e-004**	**14.3425**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.1309	0.0682	1.6300e-003	4.3219
Unmitigated	2.1309	0.0682	1.6300e-003	4.3219

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	2.08493 / 1.31441	2.1309	0.0682	1.6300e-003	4.3219
Total		**2.1309**	**0.0682**	**1.6300e-003**	**4.3219**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	2.08493 / 1.31441	2.1309	0.0682	1.6300e-003	4.3219
Total		**2.1309**	**0.0682**	**1.6300e-003**	**4.3219**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.9880	0.1766	0.0000	7.4027
Unmitigated	2.9880	0.1766	0.0000	7.4027

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	14.72	2.9880	0.1766	0.0000	7.4027
Total		**2.9880**	**0.1766**	**0.0000**	**7.4027**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	14.72	2.9880	0.1766	0.0000	7.4027
Total		**2.9880**	**0.1766**	**0.0000**	**7.4027**

9.0 Operational Offroad

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
FHWA Noise Model Outputs

			Roadway Construction Noise Model (RCNM),Version 1.1													
Report date:	3/11/2022															
Case Description:	FNLP Site Prep															
				---- Receptor #1 ----												
		Baselines (dBA)														
Description	Land Use	Daytime	Evening	Night												
Northern Residences	Residential	50	50	45												
				Equipment												
				Spec	Actual	Receptor	Estimated									
		Impact		Lmax	Lmax	Distance	Shielding									
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)									
Grader		No	40	85		50	0									
Scraper		No	40		83.6	50	0									
Backhoe		No	40		77.6	50	0									
				Results												
		Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Grader		85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Scraper		83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Backhoe		77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Total	85	83.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		*Calculated Lmax is the Loudest value.														

			Roadway Construction Noise Model (RCNM),Version 1.1												
Report date:	3/11/2022														
Case Description:	FNLP Grading														
				---- Receptor #1 ----											
		Baselines (dBA)													
Description	Land Use	Daytime	Evening	Night											
Northern Residences	Residential	50	50	45											
				Equipment											
				Spec	Actual	Receptor	Estimated								
		Impact		Lmax	Lmax	Distance	Shielding								
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)								
Grader		No	40	85		50	0								
Dozer		No	40		81.7	50	0								
Backhoe		No	40		77.6	50	0								
Backhoe		No	40		77.6	50	0								
				Results											
		Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	85	83.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.													

			Roadway Construction Noise Model (RCNM),Version 1.1													
Report date:	3/11/2022															
Case Description:	FNLP Construction															
				---- Receptor #1 ----												
		Baselines (dBA)														
Description	Land Use	Daytime	Evening	Night												
Northern Residences	Residential	50	50	45												
				Equipment												
				Spec	Actual	Receptor	Estimated									
		Impact		Lmax	Lmax	Distance	Shielding									
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)									
Crane		No	16		80.6	50	0									
All Other Equipment > 5 HP		No	50	85		50	0									
All Other Equipment > 5 HP		No	50	85		50	0									
Generator		No	50		80.6	50	0									
Backhoe		No	40		77.6	50	0									
Welder / Torch		No	40		74	50	0									
Welder / Torch		No	40		74	50	0									
Welder / Torch		No	40		74	50	0									
				Results												
		Calculated (dBA)			Noise Limits (dBA)							Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Crane		80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
All Other Equipment > 5 HP		85	82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
All Other Equipment > 5 HP		85	82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Generator		80.6	77.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Backhoe		77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Welder / Torch		74	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Welder / Torch		74	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Welder / Torch		74	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Total	85	86.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		*Calculated Lmax is the Loudest value.														

			Roadway Construction Noise Model (RCNM),Version 1.1													
Report date:	3/11/2022															
Case Description:	FNLP Paving															
				---- Receptor #1 ----												
		Baselines (dBA)														
Description	Land Use	Daytime	Evening	Night												
Northern Residences	Residential	50	50	45												
				Equipment												
				Spec	Actual	Receptor	Estimated									
		Impact		Lmax	Lmax	Distance	Shielding									
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)									
Crane		No	16		80.6	50	0									
All Other Equipment > 5 HP		No	50	85		50	0									
Drum Mixer		No	50		80	50	0									
Paver		No	50		77.2	50	0									
Pavement Scarafier		No	20		89.5	50	0									
Roller		No	20		80	50	0									
Roller		No	20		80	50	0									
Backhoe		No	40		77.6	50	0									
				Results												
		Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Crane		80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
All Other Equipment > 5 HP		85	82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Drum Mixer		80	77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Paver		77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Pavement Scarafier		89.5	82.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Roller		80	73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Roller		80	73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Backhoe		77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Total	89.5	86.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		*Calculated Lmax is the Loudest value.														

			Roadway Construction Noise Model (RCNM),Version 1.1													
Report date:	3/11/2022															
Case Description:	FNLP Coating															
				---- Receptor #1 ----												
		Baselines (dBA)														
Description	Land Use	Daytime	Evening	Night												
Northern Residences	Residential	50	50	45												
				Equipment												
				Spec	Actual	Receptor	Estimated									
		Impact		Lmax	Lmax	Distance	Shielding									
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)									
Compressor (air)		No	40		77.7	50	0									
				Results												
		Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Compressor (air)		77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Total	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		*Calculated Lmax is the Loudest value.														

Biological Resource Assessment

8715 N Chestnut Avenue Housing Development Project
Assessor Parcel Number 403-532-28
Fresno, CA

Prepared for

Fresno Newbury LP

Prepared by

1401 Fulton St, Suite 918
Fresno, CA 93721

February 28, 2022

Executive Summary

As lead agency, the City of Fresno has tasked Fresno/Newbury L.P. to provide a Biological Resource Assessment (BRA), as part of the Initial Study (IS) for the development of a 32-unit apartment complex (Project) on the property located at 8715 North Chestnut Avenue within the City of Fresno (City) in accordance with the California Environmental Quality Act (CEQA) prior to implementation of the proposed Project. Fresno – Newbury L.P has tasked Soar Environmental Consulting Inc. (Soar Environmental) to provide the necessary environmental evaluation documentation of an IS/ND or IS/MND. CEQA studies include a Phase 1 Environmental Assessment and Biological Resources Assessment.

The objectives of this Assessment were to: 1) provide a general characterization of biological resources for the property; 2) inventory plant and wildlife species; 3) evaluate the potential for federal or state listed plants and animals species afforded other special regulatory protection; and 4) describe the property's sensitive biological resources and applicable federal, state, and local land use policies.

This BRA provides information about the biological resources within the Project area. Prior to field activities, Soar Environmental researched the California Natural Diversity Database (CNDDB) and the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, to compile a list of special-status species that could potentially be present in the vicinity of the Project area. Soar Environmental researched specific species and habitat requirements for the species noted in the CNDDB, IPaC and CNPS databases and included species listing status, and proximal species observations in this report.

No special-status plant or wildlife species were observed in the Project area during the field survey on February 14, 2022. Special-status wildlife species that have the potential to occur in the Project area based on presence of suitable habitat and/or documented occurrences in the vicinity include:

- California tiger salamander (*Ambystoma californiense*)
- Tricolored blackbird (*Agelaius tricolor*)
- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)
- Vernal pool fairy shrimp (*Branchinecta lynchi*)
- Yellow-billed cuckoo (*Coccyzus americanus*)
- San Joaquin Orcutt grass (*Orcuttia inaequalis*)
- Succulent owl's-clover (*Castilleja campestris ssp. succulenta*)

All other special-status species identified in the record search are unlikely to occur in the Project area, due to lack of suitable habitat. No listed species were observed during the Habitat Assessment of the Project site, and no suitable habitat features, or conditions were observed that would be conducive for any of the special status species identified in this report. Due to habitat quality and proximity of historical occurrences, all species identified in the data records search were found to be unlikely to occur within the vicinity of the project site. Based on the findings of this assessment, the proposed development of this property is unlikely to adversely affect any special-status species and is likely to have no effect for CEQA considerations. Soar Environmental Consulting, Inc. recommends that if any special status species are observed during construction activities, work be stopped immediately and CDFW is contacted.

Contents

List of Figures

List of Tables

1. Introduction

The proposed Project is a 32-unit apartment complex development on 2.11 acres in the City of Fresno. The Project site is located at 8715 N Chestnut Avenue, Fresno, CA 93619, on Assessor Parcel Number (APN) 403-532-28. Fresno/Newbury LP has tasked Soar Environmental Consulting (Soar Environmental) with providing a Biological Resource Assessment (BRA) in accordance with the California Environmental Quality Act (CEQA) within the City of Fresno, California. Soar Environmental prepared this BRA for Fresno/Newbury LP in support of the CEQA requirements.

Based on a review of CNDDB database research it was determined that a Habitat Assessment was necessary to search for the potential suitable habitat or presence for the 9 following sensitive wildlife species: California tiger salamander, Fresno kangaroo rat, least Bell's vireo, San Joaquin kit fox, Swainson's hawk, tricolored blackbird, valley elderberry longhorn beetle, vernal pool fairy shrimp, and the western, yellow-billed cuckoo.

A review of the USFWS IPaC Database indicated a Habitat Assessment should also include analysis for the 8 additional wildlife species: blunt-nosed leopard lizard, California red-legged frog, conservancy fairy shrimp, delta smelt, fisher, giant garter snake, monarch butterfly, and vernal pool tadpole shrimp.

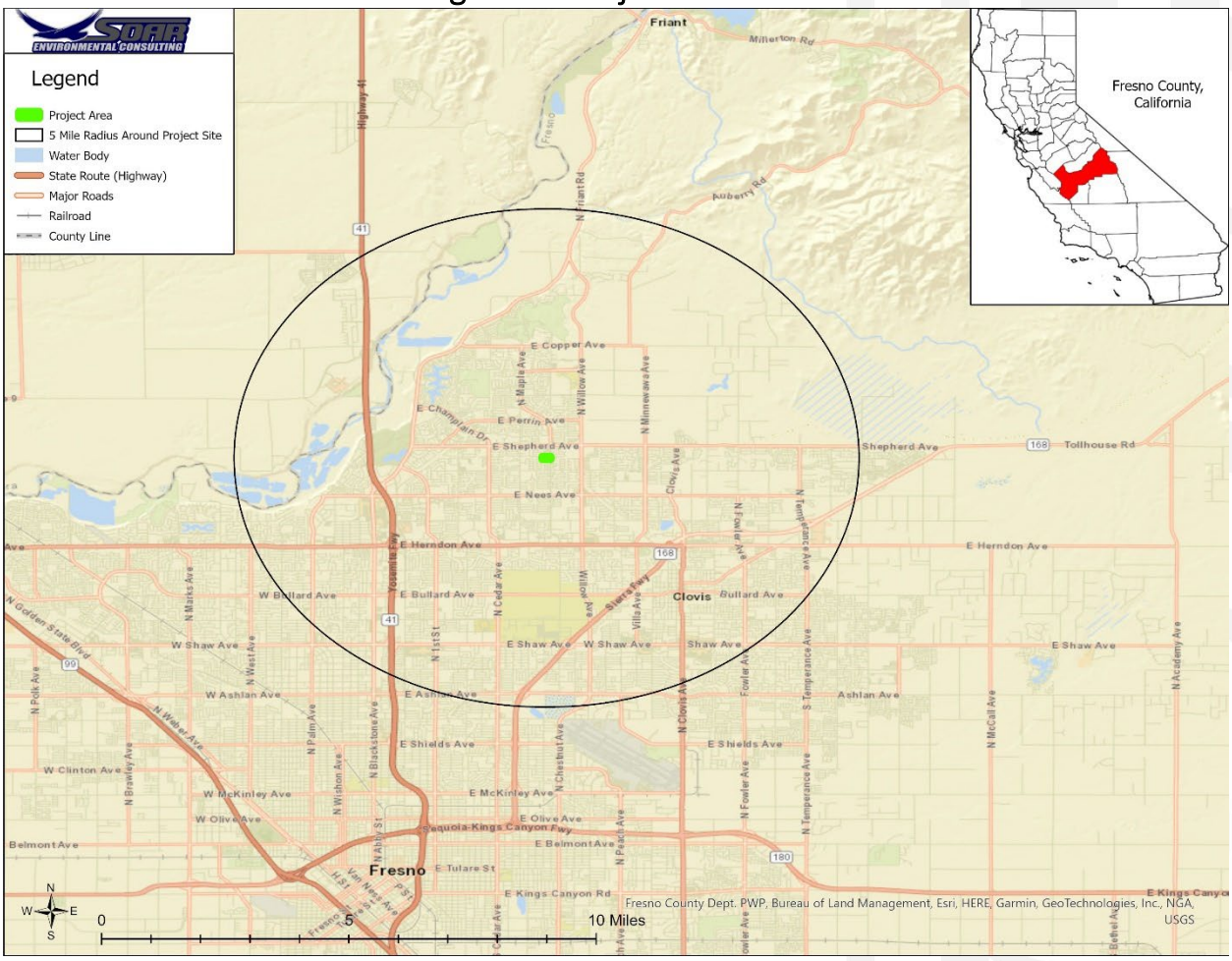
A review of the CNPS Inventory of Rare and Endangered Plants of California identified the following 7 sensitive plant species historically occurring in the vicinity of the Project site: California jewelflower, Greene's tuctoria, hairy Orcutt grass, Hartweg's golden sunburst, San Joaquin adobe sunburst, San Joaquin Orcutt grass, and succulent owl's-clover.

A Habitat Assessment was conducted in the Project area on February 14, 2022, by Soar Environmental biologist Travis Albert. The purpose of the Habitat Assessment survey was to search for the presence of special-status species that have historically been observed within, or surrounding, the Project area. No special-status species were observed during the site visit.

1.1 Project Location

The proposed Project site is located on the north side of the City of Fresno, at 8715 N Chestnut Avenue, on the west side of the road. Approximately 2.9 miles east of State Route (SR) 41, and 1.3 miles north of Herndon Avenue. Located in the USGS Clovis 7.5-minute quadrangle in Township 12S, Range 20E, and north ½ of section 25. The Project involves development of a 2.11-acre lot, Assessor Parcel Number (APN) 403-532-28. The site is topographically flat and is bounded by residential development to the north, east and west. There is a similar grassy lot adjacent to the south, which is also bounded on all other sides by residential development. The Project site is a grassy field with signs of recent ground disturbance from heavy machinery.

Figure 1. Project Location

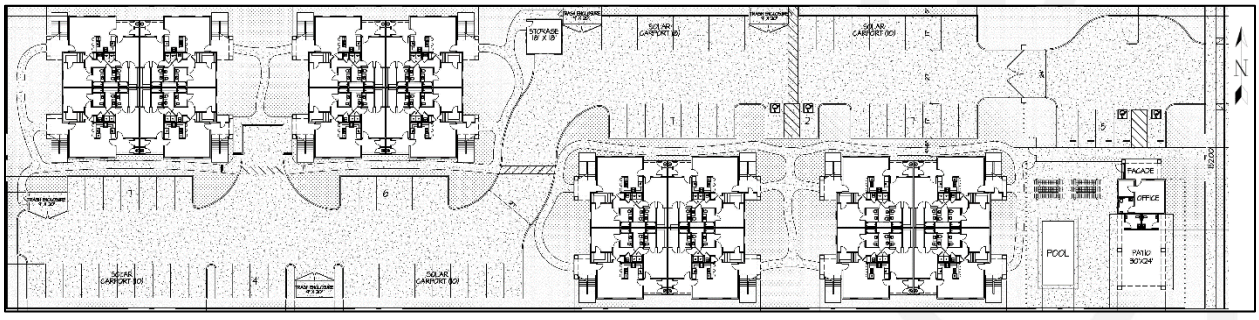


1.2 Environmental Setting

The Project site is a small property of approximately 2.11 acres located in a residential and urban environment on the north side of the City. Groundcover is dominated by ruderal plant species, comprised of a mixture of native and non-native grasses. The property is bounded to the east by Chestnut Avenue, residential housing to the north and west, with a similar grassy field adjacent to the south. There are oak and evergreen trees scattered around the surrounding neighborhoods. The site is topographically flat at an elevation of approximately 350 feet above mean sea level (AMSL). Soil is highly disturbed from heavy machinery and removal of a single family residence. There is an existing underground storm sewer pipe on the property with associated concrete debris and metal valve structures (**Photos 9 - 12**).

Figure 1 – Project Site Boundary

Figure 3 – Site Plan



2. Methods

2.1 Literature Review

Prior to performing the Habitat Assessment, Soar Environmental conducted a records search for threatened or endangered species that could potentially occur in the vicinity of the Project area. The records search included a review of the California Natural Diversity Database (CNDDB), the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and California Native Plant Society (CNPS) Online Rare Plant Inventory. The area covered by the data records search included USGS 7.5 minute quadrangles of *Clovis, Academy, Fresno North, Fresno South, Friant, Lanes Bridge, Malaga, Round Mountain,* and *Sanger* 7.5-minute USGS quadrangles. From these sources a list of special-status plant and animal species was generated. Proximal locations of special-status plant and animal species located within 5 miles of the Project site are shown in (**Figure 4**).

The CNDDB records search indicated 9 State-listed special-status wildlife species most likely to occur within or near the Project Site would include:

- California tiger salamander (*Ambystoma californiense*)
- Fresno kangaroo rat (*Dipodomys nitratoides exilis*)
- Least Bell's vireo (*Vireo belii pusillus*)
- San Joaquin kit fox (*Vulpes macrotis mutica*)
- Swainson's hawk (*Buteo swainsoni*)
- Tricolored blackbird (*Agelaius tricolor*)
- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)
- Vernal pool fairy shrimp (*Branchinecta lynchi*)
- Yellow-billed cuckoo (*Coccyzus americanus*)

The IPaC search revealed 8 additional Federally listed sensitive wildlife species likely to occur within or near the Project Site include:

- Blunt-nosed leopard lizard (*Gambelia silus*)
- California red-legged frog (*Rana draytonii*)
- Conservancy fairy shrimp (*Branchinecta conservatio*)
- Delta smelt (*Hypomesus transpacificus*)
- Fisher (*Pekania pennanti*)
- Giant garter snake (*Thamnophis gigas*)
- Monarch butterfly (*Danaus plexippus*)
- Vernal pool tadpole Shrimp (*Lepidurus packardi*)

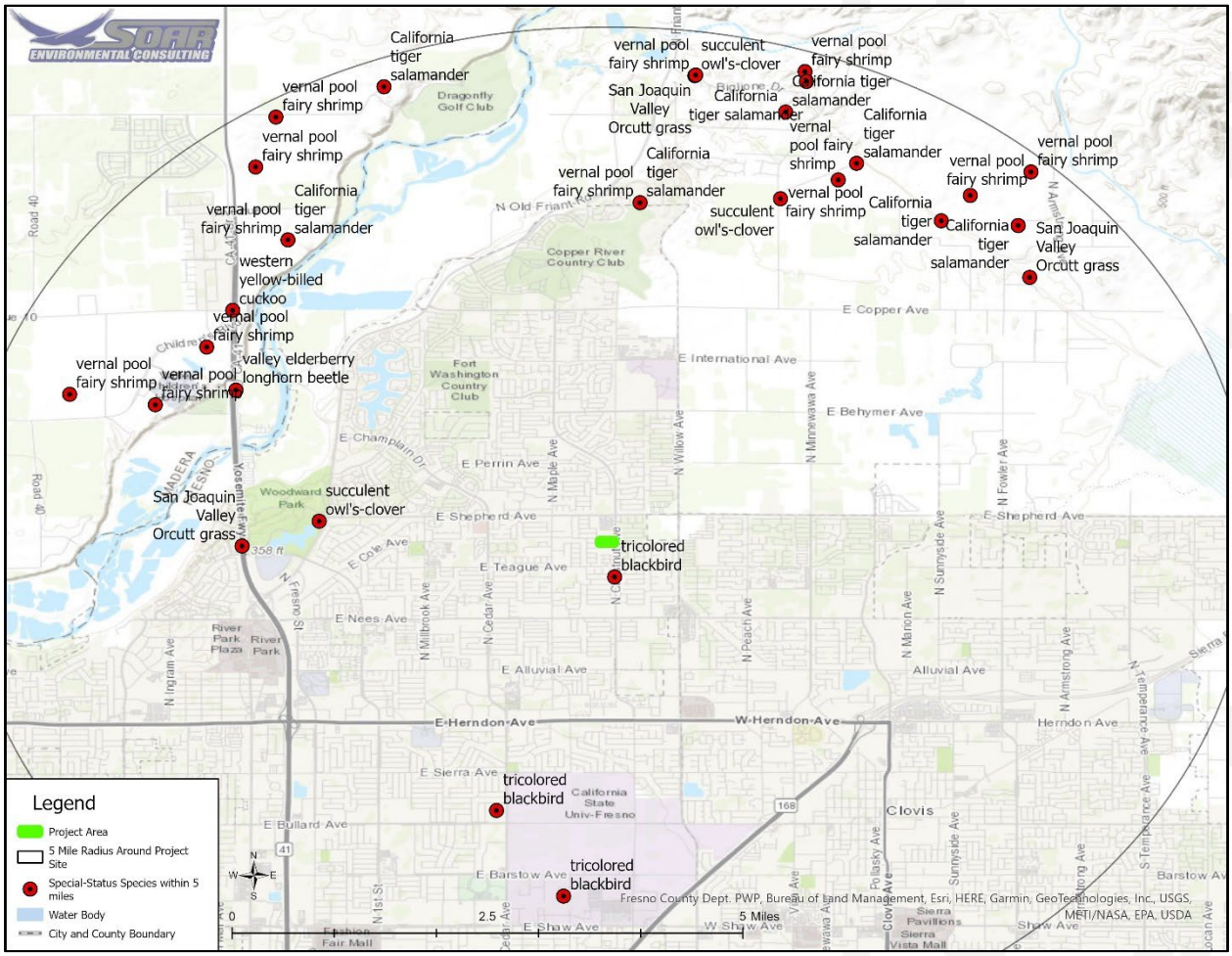
A search of the California Native Plant Society (CNPS) Online Rare Plant Inventory identified the following 7 special-status plant species likely to occur within or proximate to the Project Site:

- California jewelflower (Caulanthus californicus)
- Greene's tuctoria (*Tuctoria greenei*)
- Hairy Orcutt grass (*Orcuttia pilosa*)
- Hartweg's golden sunburst (*Pseudobahia bahiifolia*)
- San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)

- San Joaquin Orcutt grass (*Orcuttia inaequalis*)
- Succulent owl's-clover (*Castilleja campestris ssp. succulenta*)

The Closest and most recent occurrences of special-status species from the data records search are shown in (**Figure 4**).

Figure 4 – Historical Special-Status Species Locations



This map shows the closest and most recent special-status species locations from the CNDDB, and CNPS Online Rare Plant Inventory

2.2 Field Reconnaissance Methodology

On February 14, 2022, Soar Environmental biologist Travis Albert conducted a Habitat Assessment on the property for the above mentioned species. Walking the perimeter of the property, and meandering transects throughout the Project site, the surveyor searched for signs of vernal pools, bird nests, possible

small mammal dens, identified vegetation, and looked for other signs of wildlife occupancy and suitable habitat. Survey efforts emphasized the search for special-status species that had documented occurrences in the data records search of the CNDDB, IPaC, and CNPS databases. Photos were taken of the Project boundaries, and from the center of the Project site in four cardinal directions depicting the habitat (**Photos 1 - 8**). The surveyor drove the roads within 0.5 mile surrounding the Project footprint searching for signs of special-status species and potentially active nests, or vernal pools. No active nests, or suitable habitat for the special-status species identified in this report were observed during the Habitat Assessment.

3. Habitat Assessment Results

During the field reconnaissance, there were no observations of special-status plant or wildlife species. The Project site is in a residential and urban environment on the north side of the City. The surrounding area is mostly residential neighborhoods. Groundcover is dominated by ruderal plant species, comprised of a mixture of native and non-native grasses. The property is surrounded by residential housing, with a similar grassy field adjacent to the south. There are oak and evergreen trees scattered around the surrounding neighborhoods. Soil is highly disturbed from heavy machinery for the removal of a single family residence. There is an existing underground storm sewer pipe on the property with associated concrete debris and metal valve structures (**Photos 9 - 12**). No bird nests, small mammal burrows, riparian habitats, vernal pools, or natural water features were observed on the property. The only wildlife species observed during the habitat assessment was a rock pigeon (Columba livia).

The Habitat Assessment was conducted outside the blooming period for most special status plant species, listed in (**Table 3**). Regardless, no special-status plant species were observed on the Project site. Ground cover was mostly bare earth on the east side near the road, otherwise dominated by a mix of native and non-native ruderal grass and weeds. Trees and shrubs only occur sparsely around the perimeter of the Project site. Habitat conditions did not appear to be conducive for the listed plant species during the site visit.

Although no special-status plant or wildlife species were observed during the site visit, all wildlife observations, and plant species identified during the site visit are identified in (**Table 1**) below. No other wildlife species were observed during the site visit.

Table 1– Species Observed on the Project Site

Wildlife Species Observed	Listing Status
Rock pigeon (*Columba livia*)	None
Plant Species Observed	**Listing Status**
Cheeseweed (*Malva parviflora*)	None

Menzies fiddleneck (*Amsinckia menziesii*)	None
Oat (*Avina sativa*)	None
Poverty brome (*bromus sterilis*)	None
Southern live oak (*Quercus virginiana*	None
Tiny vetch (*Vicia hirsuta*)	None
Wall Barely (*Hordeum murinum*)	None
Wild radish (*Raphanus raphanistrum*)	None

4. Special-Status Species

Special-status plants and animals that have a reasonable possibility to occur in the Project area based on habitat suitability and requirements, elevation and geographic range, soils, topography, surrounding land uses, and proximity of known occurrences in the CNDDB, IPaC, and CNPS databases to the Project area are listed in **Tables 2 and 3**. The likelihood for occurrence of special-status species was assessed using information from the various listed sources, wildlife and botanical surveys. Narratives are provided for species for which there are land use planning and regulatory implications. Special-status species for which there are no habitat features are excluded from consideration due to the lack of suitable habitat and distance from the subject property.

Based upon a review of the resources and databases listed in Section 2.1 (Literature Review) for the *Clovis, Academy, Fresno North, Fresno South, Friant, Lanes Bridge, Malaga, Round Mountain,* and *Sanger* USGS 7.5-minute quadrangles; it was determined that 24 special-status species have been documented in the vicinity of the Project area. Of these 24 special-status species, 7 were determined to have potential for occurrence.

Species with Potential for Occurrence:

- California tiger salamander (*Ambystoma californiense*)
- Tricolored blackbird (*Agelaius tricolor*)
- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)
- Vernal pool fairy shrimp (*Branchinecta lynchi*)
- Yellow-billed cuckoo (*Coccyzus americanus*)
- San Joaquin Orcutt grass (*Orcuttia inaequalis*)
- Succulent owl's-clover (*Castilleja campestris ssp. succulenta*)

Special-status species and sensitive habitats include plant and wildlife taxa, or other unique biological features that are afforded special protection by local land use policies, state and federal regulations. Special-status plant and animal species are those that are listed as rare, threatened, or endangered under the state or federal Endangered Species Acts. Vegetation communities may warrant special-status if they are of limited distribution, have high wildlife value, or are particularly vulnerable to disturbance. Listed and special-status species are defined as:

- Listed or proposed for listing under the state or Federal Endangered Species acts.
- Protected under other regulations (e.g., Migratory Bird Treaty Act).
- CDFG Species of Special Concern.
- Listed as species of concern by CNPS or USFWS; or
- Receive consideration during environmental review under CEQA.

Special-status species considered for this analysis are based on field survey results, review of the CNDDB occurrence records of species, review of the USFWS lists for special-status species occurring in the region, and CNPS literature (**Tables 2 and 3**).

- **Present**: Species known to occur on the site, based on CNDDB records, and/or was observed on the site during the field survey.
- **High**: Species known to occur on or near the site (based on CNDDB records within 8 km or 5 mi) and there is suitable habitat on the site.
- **Low**: Species known to occur in the vicinity of the site, and there is marginal habitat onsite. -**OR**- Species is not known to occur in the vicinity of the site, however there is suitable habitat on the site.
- **None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site. -**OR**- Species was surveyed for during the appropriate season with negative results.

Table 2 – Special-Status Wildlife Species Potentially Occurring on Site or in the Vicinity

Common/ Scientific Name	Listing Status*	Habitat Requirements	Potential for Occurrence
Amphibians			
California red-legged frog (*Rana draytonii*)	FT, SSC	Standing waters and freshwater marshes, wetland. Forest, scrub, and woodland riparian areas. Requires a breeding pond, slow-flowing stream. Will use small mammal burrows.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
California tiger salamander (*Ambystoma californiense*)	FT, ST	Grasslands, oak savannah riparian woodlands and lower elevations of coniferous forests, ditches, vernal pools, and wetlands.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.

Birds			
Least Bell's vireo (*Vireo belii pusillus*)	FE, SE, BCC, MBTA	Willow-cottonwood forests, oak woodlands, shrubby thickets, and dry washes. During the migration- coastal scrub, woodland, and riparian habitats.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Swainson's hawk (*Buteo swainsoni*)	ST, MBTA	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.).	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Tricolored blackbird (*Agelaius tricolor*)	ST, BCC, MBTA	Found in areas near water, such as marshes, grasslands, and wetlands. They require some sort of substrate nearby to build nests.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FT, SE, MBTA	Woodlands near streams or lakes, abandoned farmland, old fruit orchards, successional shrubland and dense thickets.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Fishes			
Delta smelt (*Hypomesus transpacificus*)	FT	Shallow, fresh, or slightly brackish backwater sloughs and edge waters, with good water quality and substrate for spawning.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Invertebrates			
Conservancy fairy shrimp (Branchinecta conservatio)	FE	Inhabit large, cool-water vernal pools from early November to early April, which fill with water in the rainy season, then slowly dry up.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Monarch butterfly (Danaus plexippus)	FC	Closed-cone coniferous forest. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	Occurs only in the Central Valley of California, in association with blue elderberry (Sambucus mexicana), in riparian scrub	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in valley foothills	**None**: Species is not known to occur on or in the vicinity of the site and there is no

		grasslands, vernal pools, and wetlands.	suitable habitat for the species on the site.
Vernal pool tadpole Shrimp (*Lepidurus packardi*)	FE	Vernal pools, (hardpan, duripan, or claypan), grassland. Pools commonly found in grass-bottomed or mud-bottomed swales.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Mammals			
Fisher (Pekania pennanti)	FE	Occurs in intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with a high percent canopy closure.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Fresno kangaroo rat (*Dipodomys nitratoides exilis*)	FE, SE	Arid and alkaline plains under shrub and grass vegetation, coastal scrub, open stages of chaparral, and desert scrub habitats, and in conifer woodlands.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, SE	Arid flat grasslands, scrublands, and alkali meadows with short vegetation.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Reptiles			
Blunt-nosed leopard lizard (*Gambelia sila*)	FE, SE	Semi-arid grasslands, alkali flats, and washes, utilize shrubs and small mammal burrows.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Giant garter snake (Thamnophis gigas)	FT	Marshes, sloughs, drainage canals, irrigation ditches, and prefers locations with vegetation close to water for basking.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.

*Listing Status Notes:

Federal: FE – Federally listed Endangered
FT – Federally listed Threatened
FC – Federal Candidate Species
WL – USFWS Watch list
BCC – USFWS Bird of Conservation Concern
MTBA – Migratory Bird Treaty Act

State: SE – State listed Endangered
ST – State listed Threatened
SC – State Candidate Species
SR – State Rare Species
SA – State Special Animal
FP – CDFW Fully Protected Species
SSC – CDFW Species of Special Concern
WL – CDFW Watch List

Table 3 – Special-Status Plant Species Potentially Occurring on Site or in the Vicinity

Common/ Scientific Name	*Status Fed/CA/CNPS/ Bloom Period	Habitat Description	Habitat Present/ Absent
California jewelflower (*Caulanthus californicus*)	FE/CE/1B.1/ Feb-May	Chenopod scrub, Pinyon-Juniper woodland, valley and foothill grassland	Absent
Greene's tuctoria (*Tuctoria greenei*)	FE/SR/1B.1/ May-Jul	Vernal pools, hardpan, tuffaceous alluvium, or claypan.	Absent
Hairy Orcutt grass (*Orcuttia Pilosa*)	FE/CE/1B.1/ May-Sep	Near streams, alluvial fans and within annual grasslands	Absent
Hartweg's golden sunburst (*Pseudobahia bahiifolia*)	FE/CE.1B.1/ Mar-Apr	Open grasslands and grasslands at the margins of blue oak woodland, foothills	Absent
San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)	FT/CE/1B.1/ Feb-Apr	Cismontane woodland, valley and foothill grassland, adobe clay	Absent
San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*)	FT/CE/1B.1/ Apr-Sep	Vernal pools	Absent
Succulent owl's-clover (*Castilleja campestris var. succulenta*)	1B.2/ Apr-Sep	Vernal pools (50 – 750 m; 165-2460 ft)	Absent

*Listing Status Notes:

Federal: FE – Federally listed Endangered
FT – Federally listed Threatened
FC – Federal Candidate Species

State: SE – State listed Endangered
ST – State listed Threatened
SC – State Candidate Species
SR – State Rare Species

CRPR: California Native Plant Society Rare Plant Rank
CBR – Considered but Rejected
1B – Rare, threatened, or endangered in CA and elsewhere
2 – Rare, threatened, or endangered in CA but common elsewhere
4 – Limited distribution (Watch-list)
CBR – Considered but Rejected

CRPR Extensions 0.1 – Seriously endangered in California
0.2 – Fairly endangered in California
0.3 – Not very endangered in California

4.1 Special-Status Wildlife Species Descriptions

This section describes identifiable physical characteristics and habitat requirements for special-status species identified in the data records search that were within 5 miles of the project site.

4.1.1 California Tiger Salamander (Ambystoma californiense)

California tiger salamander is listed as Threatened on the federal and state level. Adults range in size from 15-22 centimeters (6 to 9 inches) and have a dark background color with distinctive yellow spots. Juveniles look much like adults but lack the yellow spots. Larval are grayish green in color and have the appearance of tadpoles with obvious, external gills. California tiger salamander eggs are clear and are typically laid singly or in groups of three or four in shallow ponds.

Endemic to California, this species is found in grasslands, oak savannah woodlands, edges of mixed woodland, lower elevations of coniferous forests, and in heavily grazed fields along the Central California Coast and within the Central San Joaquin Valley. They may breed in ditches where water is present for a long enough duration for eggs and larvae to metamorphose into adults. During the non-breeding season (approximately late May through early November), California tiger salamander live in small mammal burrows, typically those of ground squirrels and pocket gophers. California tiger salamander spend most of each year on land, emerging from refugia only occasionally, usually on rainy nights, and have been observed on land up to 1.24 miles from potential breeding pools.

During the Habitat Assessment there were no signs of California tiger salamander, and suitable habitat for this species was not observed within the vicinity of the Project Site. A search of CNDDB records indicate the nearest and most recent occurrences of this species are 3.30 miles away at 5° N in 1992, or 4.05 miles away at 37° NE in 2017.

4.1.2 Tricolored Blackbird (*Agelaius tricolor*)

Tricolored blackbird is a state threatened species. Males are larger than females and possess dark red shoulder patches with white median coverts on the wings, giving the species its name. Males have brown plumage in the fall. Females are shades of gray with a lighter gray throat. They are about 22 cm long with a 35.5 cm wingspan. They weigh approximately 59.5 grams.

Tricolored blackbirds are found in areas near water, such as marshes, grasslands, and wetlands. They require some sort of substrate nearby to build nests. This substrate is often in the form of aquatic vegetation. They also need foraging areas, which can consist of grassland or agricultural pastures such as rice, grain, or alfalfa.

There were no observations of tricolored blackbird during the habitat assessment. Wetland habitat normally associated with this species was not present in the vicinity of the project site. According to CNDDB records the closest and most recent occurrence for this species is 0.33 miles away at 176° S, in May of 1974.

4.1.3 Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)

Yellow-billed cuckoos are threatened on the federal level and endangered on the state level. They have uniform grayish-brown plumage on their head and back, and dull white underparts. Their tails are long with two rows of four to six large white circles on the underside. The bill of yellow-billed cuckoos is short to medium in length and curved downward with a black upper mandible and a yellow or orange lower mandible. Yellow-billed cuckoos have zygodactylous feet, meaning that of the four toes, the middle two point forward and the outer two point backward.

Yellow-billed cuckoos prefer open woodlands with clearings and a dense shrub layer. They are often found in woodlands near streams, rivers or lakes. In North America, their preferred habitats include abandoned farmland, old fruit orchards, successional shrubland and dense thickets. In winter, yellow-billed cuckoos can be found in tropical habitats with similar structure, such as scrub forest and mangroves.

During the Habitat Assessment there were no signs of western yellow-billed cuckoo and suitable habitat for this species was not observed within the vicinity of the Project Site. A search of CNDDB records indicate the nearest and most recent occurrences of this species are 3.65 miles away at 308° N in 1883.

4.1.4 Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)

The valley elderberry longhorn beetle is listed as threatened at the federal level. This insect is found in the presence of red or blue elderberry in the San Joaquin Valley of California, often preferring larger (2-8 inch thick stem), stressed elderberry plants (CNDDB). Breeding typically occurs between March and June when adults are most active.

The habitat on the Project Site is not suitable for valley elderberry longhorn beetle as there are no host plant, red or blue valley elderberry. CNDDB records indicate the closest and most recent observations of this species is 3.20 miles at 297° N, along the San Joaquin river in March of 1992.

4.1. 5 Vernal Pool Fairy Shrimp (*Brachinecta lynchi*)

Vernal pool fairy shrimp is listed as threatened on the federal level and has no listing on the state level. Species can be up to 2.5 centimeters (one inch) long, they are translucent crustaceans with 11 pairs of appendages. Vernal pool fairy shrimp are limited to vernal pool habitats in Oregon and California and do not occur in riverine, marine, or other permanent bodies of water where fish are present. During the wet season, the females produce hardy resting eggs, called cysts, which survive the dry season and hatch when the rains come again.

Habitat on the Project Site is not suitable for vernal pool fairy shrimp as there are no vernal pools present on the Project area. A search of CNDDB records indicate the nearest and most recent occurrence of this species is 3.30 miles away at 5° N in 1992. According to CMDB records vernal pool fairy shrimp are potentially extirpated in the local area.

4.1.6 San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*)

San Joaquin Valley Orcutt grass is a Federally Threatened and State Endangered mat-forming, hairy annual grass that grows up to 6 inches (15 cm) tall, with small brown flower clusters that bloom from April to September. San Joaquin Valley Orcutt grass only grows in vernal pool habitats.

During the field survey, the Soar Biologist did not observe signs of San Joaquin Valley Orcutt grass within the Project Site or surrounding area. Due to urbanization and the highly disturbed nature of the area, the potential for this species is unlikely. There are no vernal pool habitats or seasonal wetlands onsite, and there is no evidence that stormwater accumulates for a long enough duration to allow this wetland species to thrive. The closest known occurrence of San Joaquin Valley Orcutt grass is 2.80 miles away at 267° W of the Project Site in in 1927. The most recent occurrence is 4.58 miles away at 9° N in May of 1996. No adverse impacts to San Joaquin Valley Orcutt grass are anticipated to occur during proposed construction activities.

4.1.7 Succulent owl's clover (*Castilleja camperstris*)

Succulent owl's clover is listed as federally threatened and state endangered. It is a small herbaceous annual plant found in vernal pools of the eastern San Joaquin Valley. The stems are generally 5 to 25 cm (2-10 inches) tall and may be branched or unbranched. Branches end in short, dense, green inflorescences. The leaves are succulent and brittle. Yellow or white flowers bloom in May. SOC is found in vernal pools along the eastern San Joaquin Valley in the Southern Sierra Foothills.

During the field survey, no succulent owl's clover was observed within the Project Site or surrounding area. CNDDB records indicate the nearest occurrence of succulent owl's clover is 2.20 miles away at 276° W. There is no evidence of vernal pools occurring on the Project Site, and the proposed project is not likely to adversely affect the species.

5. Findings

During the Habitat Assessment, Soar Environmental did not observe any of the referenced special-status species within the Project site or environmental footprint. A records search of the CNDDB, IPaC, and CNPS Online Rare Plant Inventory indicated proximal locations of the following species within 5 miles of the Project site: California tiger salamander, tricolored blackbird, western yellow-billed cuckoo, valley elderberry longhorn beetle, vernal pool fairy shrimp, San Joaquin Orcutt grass, and succulent owl's-clover (**Figure 4**). The findings for this report are summarized below.

California tiger salamander are not likely to occur in the vicinity of the Project site due to the proximity of the historical occurrences and lack of suitable habitat. California tiger salamander typically inhabit shallow vernal pools that contain standing water for at least 10 continuous weeks in the year. Their physical development is dependent on annual shrinkage of the ponded water. There are no water features on the Project site that would provide suitable breeding habitat, or burrows that would provide refugia for this species. A search of CNDDB records indicate the nearest and most recent occurrences of this species are 3.30 miles away in 1992, and 4.05 miles away in 2017. During the Habitat Assessment there were no signs

of California tiger salamander, and suitable habitat for this species was not observed within the vicinity of the Project site.

There were no observations of tricolored blackbird or western yellow-billed cuckoo during the habitat assessment. Although observations of tricolored blackbird were recorded 0.33 miles from the Project site in 1974, land use in the area has been greatly developed since, and suitable habitat for both bird species is no longer present.

Two invertebrate species were identified in the records search: valley elderberry longhorn beetle and vernal pool fairy shrimp. Suitable habitat for either species does not occur in the vicinity of the Project site. There are no red or blue valley elderberry in the vicinity of the Project site, necessary for valley elderberry longhorn beetle occupancy, and there is no vernal pool habitat required for vernal pool fairy shrimp.

As there is no vernal pool habitat on the Project site, suitable habitat for both plant species identified in the data records search; San Joaquin Valley Orcutt grass, and succulent owl's clover, is not present in the vicinity of the Project site. These are both wetland plant species. There are no vernal pool habitats or seasonal wetlands onsite, and there is no evidence that stormwater accumulates for a long enough duration to allow these wetland plant species to thrive.

From the information gathered in the data records search and analysis of the habitat on site, these species were found to have the highest potential for occurrence in the vicinity of the project site. However, due to habitat quality and proximity of historical occurrences, all of these species were found to be unlikely to occur within the vicinity of the Project site. Based on the findings of this assessment, the proposed development of this property is unlikely to adversely affect any special-status species and is likely to have no effect for CEQA considerations.

6. Recommendations

No listed species were observed during the Habitat Assessment of the Project site, and no suitable habitat features, or conditions were observed that would be conducive for any of the aforementioned species. The proposed development of this parcel is unlikely to adversely affect any special-status species. Soar Environmental Consulting, Inc. recommends that if any special status species are observed during construction activities, work be stopped immediately and CDFW is contacted.

7. Study Limitations

This Report has been prepared in accordance with generally accepted environmental methodologies and contains all the limitations inherent in these methodologies. The Report documents site conditions that were observed during field reconnaissance and do not apply to future conditions. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this Report.

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APPENDIX A: Project Site Photographs

Photo 1 – Northern Boundary (View West)

Photo 2 – Eastern Boundary (View South)

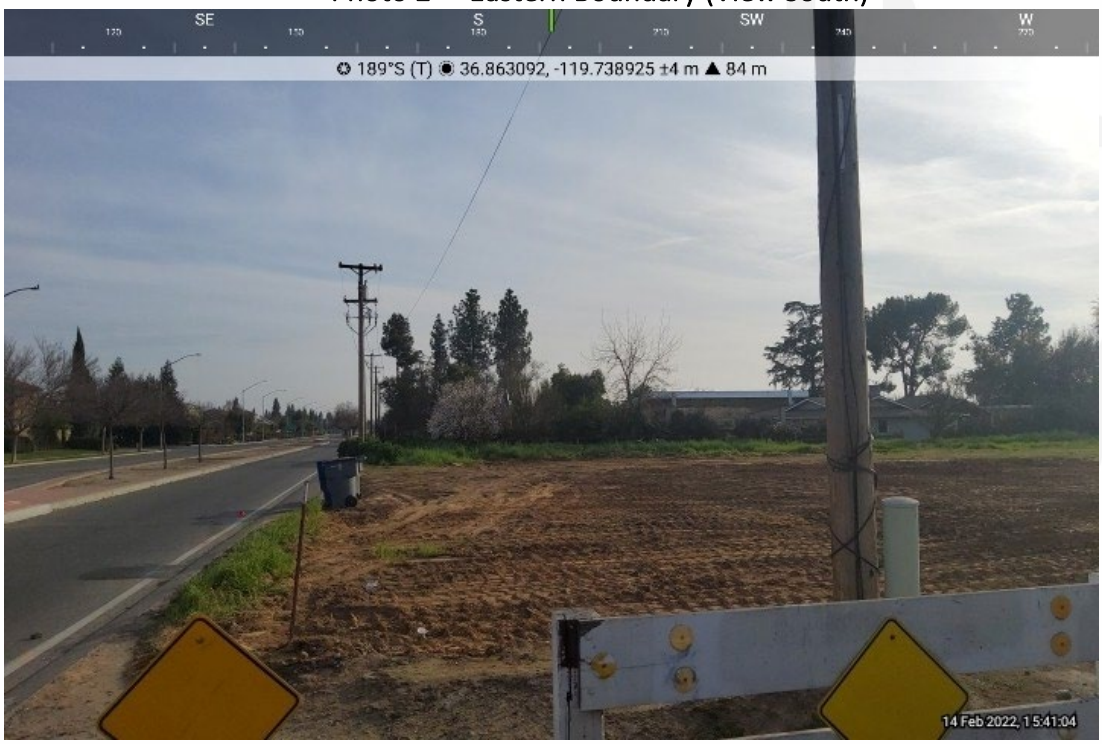


Photo 3 – Southern Boundary (View West)

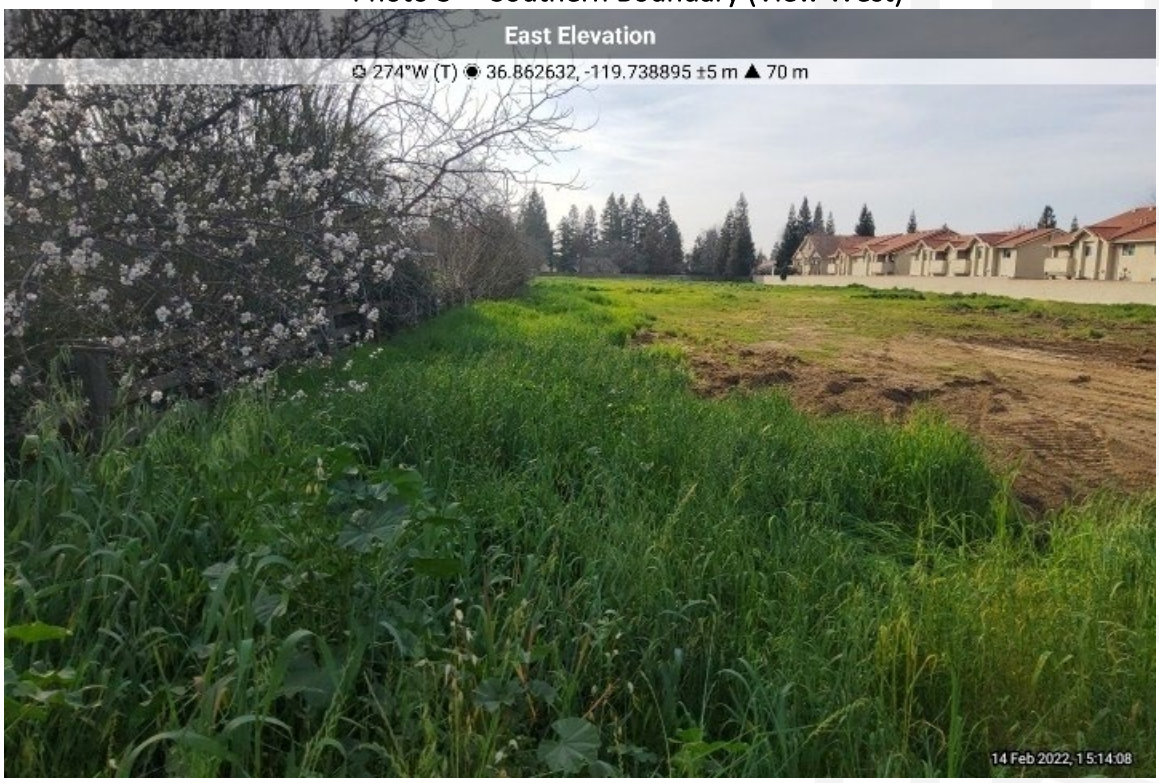


Photo 4 – Eastern Boundary (View South)

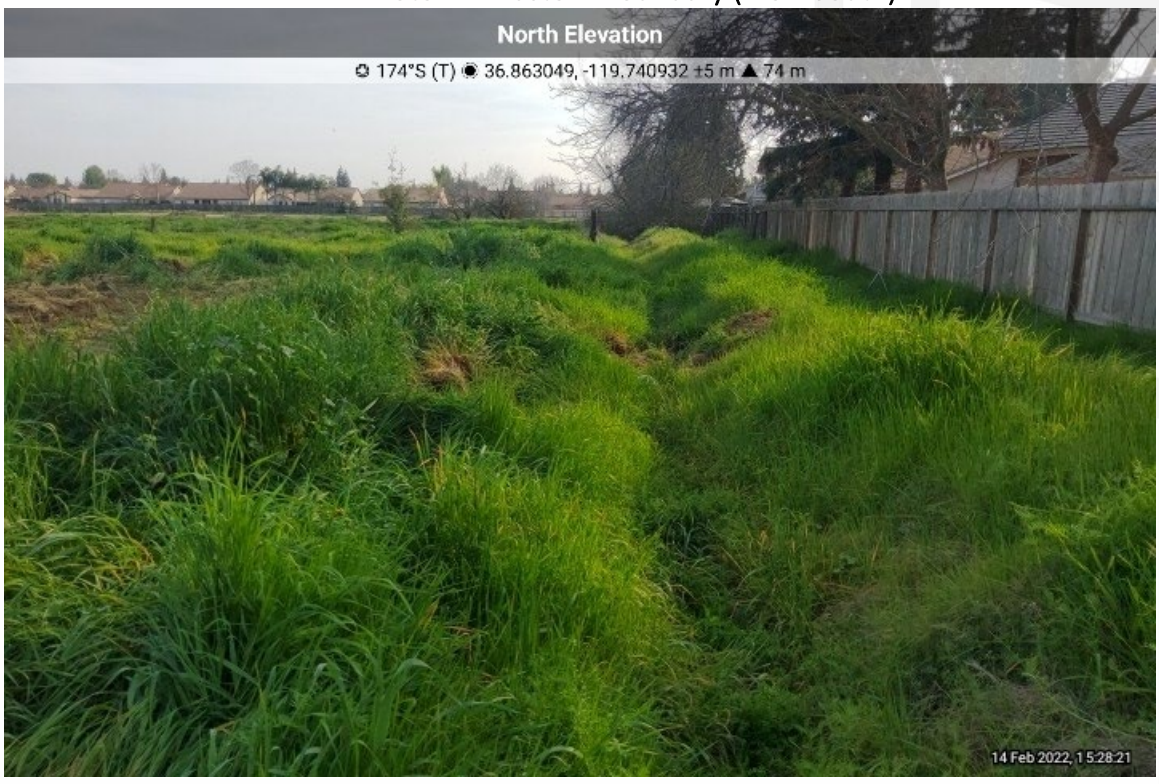


Photo 5 – Center of Project Site (View North)

Photo 6 – Center of Project Area (View East)

Photo 7 – Center of Project Area (View South)

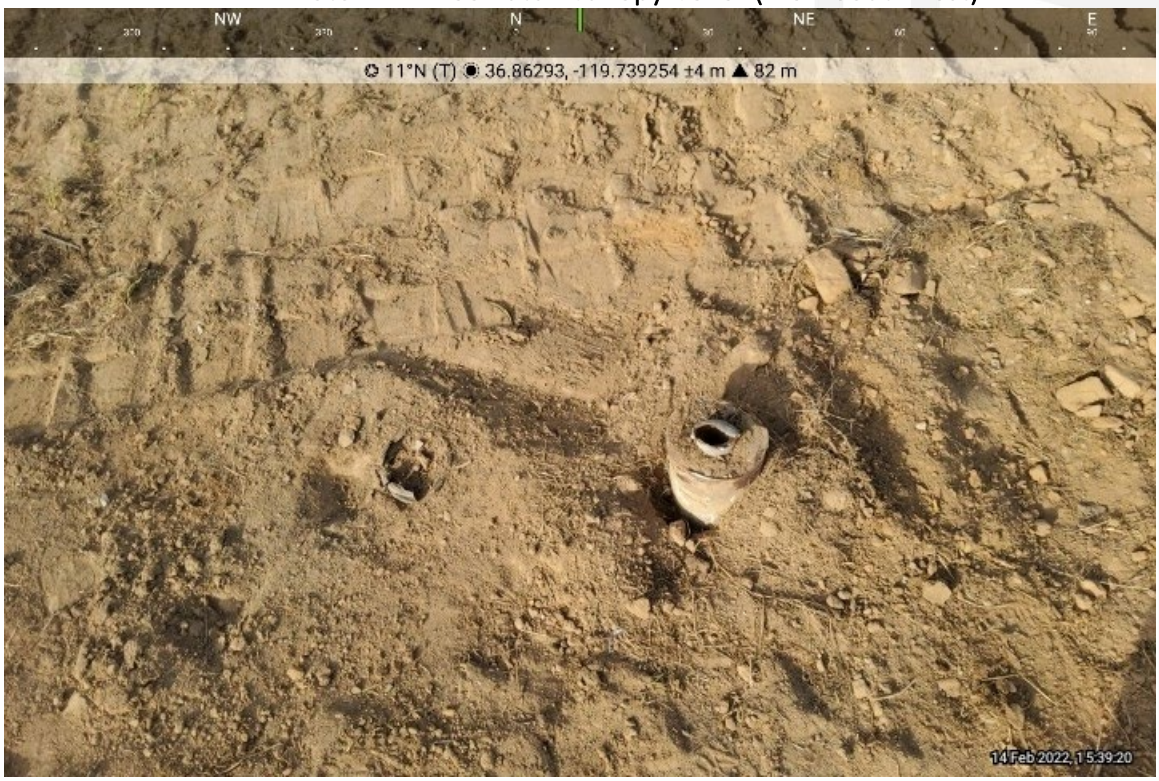
Photo 8 – Center of Project Area (View West)

Photo 9 – South Boundary of Project Site (View East)

Photo 10 – Water Irrigation Valve (View Northwest)

Photo 11 – Stormwater Retention Pond Along Western Boundary (View Northwest)

Photo 12 – Tree Patch Canopy Cover (View Southwest)



Fresno COG Vehicle Miles Traveled Analysis Tool Summary Report

Tool Version: *Version 1.38* *Report Date:* *2/13/2023*

Project Information

Name:	Chestnut Apartments
Jurisdiction	Fresno
APN No.	40353228

Project Land Use

Residential	Single-family:	0	DU	Multi-family:	32	DU
	Total:	32	DU	Percent Affordable:	0	%
Non-Residential	Office:	0	EMP	Others:		TSF

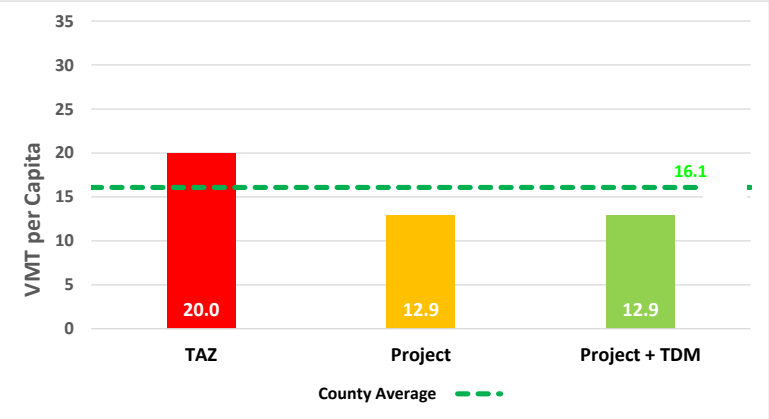
Project TDM measures (VMT reduction strategies)

TDM Strategy	Included in the project	TDM Quantification	% VMT/Capita Reduction	% VMT/Employment Reduction	
Implement Project Specific Vanpool Program	No		N/A		
Implement Project Specific Carpool Program	No			N/A	

Project VMT Results

Residential

Project's VMT/Capita (12.9) is less than County VMT/Capita (14.0 using 13% as threshold)



Project VMT per Capita:	12.9
County VMT / Capita:	16.1
Significant Impact:	No
Project VMT per Capita with TDM Measures:	12.9
Significant Impact with TDM measures:	No

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	32.00	Dwelling Unit	2.11	32,000.00	92

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 2.11 acres

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	2.00	2.11
tblWoodstoves	NumberCatalytic	2.11	0.00
tblWoodstoves	NumberNoncatalytic	2.11	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2022	0.1271	0.9933	0.9734	1.7900e-003	0.0366	0.0468	0.0834	0.0140	0.0448	0.0588	0.0000	150.6724	150.6724	0.0280	8.5000e-004	151.6256
2023	0.3918	0.7123	0.7801	1.4200e-003	0.0106	0.0321	0.0426	2.8300e-003	0.0307	0.0335	0.0000	119.0693	119.0693	0.0216	6.4000e-004	119.7998
Maximum	**0.3918**	**0.9933**	**0.9734**	**1.7900e-003**	**0.0366**	**0.0468**	**0.0834**	**0.0140**	**0.0448**	**0.0588**	**0.0000**	**150.6724**	**150.6724**	**0.0280**	**8.5000e-004**	**151.6256**

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					
2022	0.1271	0.9933	0.9734	1.7900e-003	0.0366	0.0468	0.0834	0.0140	0.0448	0.0588	0.0000	150.6722	150.6722	0.0280	8.5000e-004	151.6254
2023	0.3918	0.7123	0.7801	1.4200e-003	0.0106	0.0321	0.0426	2.8300e-003	0.0307	0.0335	0.0000	119.0692	119.0692	0.0216	6.4000e-004	119.7996
Maximum	**0.3918**	**0.9933**	**0.9734**	**1.7900e-003**	**0.0366**	**0.0468**	**0.0834**	**0.0140**	**0.0448**	**0.0588**	**0.0000**	**150.6722**	**150.6722**	**0.0280**	**8.5000e-004**	**151.6254**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	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	6-1-2022	8-31-2022	0.3899	0.3899
2	9-1-2022	11-30-2022	0.5449	0.5449
3	12-1-2022	2-28-2023	0.5143	0.5143
4	3-1-2023	5-31-2023	0.5151	0.5151
5	6-1-2023	8-31-2023	0.2640	0.2640
		Highest	0.5449	0.5449

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	0.1636	0.0147	0.2426	9.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	14.2508	14.2508	6.4000e-004	2.5000e-004	14.3425
Energy	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	35.5352	35.5352	2.4300e-003	6.7000e-004	35.7946
Mobile	0.1145	0.1939	1.0829	2.5900e-003	0.2562	2.1200e-003	0.2583	0.0685	1.9900e-003	0.0705	0.0000	239.7982	239.7982	0.0126	0.0132	244.0491
Waste						0.0000	0.0000		0.0000	0.0000	2.9880	0.0000	2.9880	0.1766	0.0000	7.4027
Water						0.0000	0.0000		0.0000	0.0000	0.6615	1.4695	2.1309	0.0682	1.6300e-003	4.3219
Total	**0.2804**	**0.2287**	**1.3341**	**2.8100e-003**	**0.2562**	**6.0300e-003**	**0.2622**	**0.0685**	**5.9000e-003**	**0.0745**	**3.6495**	**291.0536**	**294.7031**	**0.2605**	**0.0158**	**305.9108**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1636	0.0147	0.2426	9.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	14.2508	14.2508	6.4000e-004	2.5000e-004	14.3425
Energy	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	35.5352	35.5352	2.4300e-003	6.7000e-004	35.7946
Mobile	0.1145	0.1939	1.0829	2.5900e-003	0.2562	2.1200e-003	0.2583	0.0685	1.9900e-003	0.0705	0.0000	239.7982	239.7982	0.0126	0.0132	244.0491
Waste						0.0000	0.0000		0.0000	0.0000	2.9880	0.0000	2.9880	0.1766	0.0000	7.4027
Water						0.0000	0.0000		0.0000	0.0000	0.6615	1.4695	2.1309	0.0682	1.6300e-003	4.3219
Total	**0.2804**	**0.2287**	**1.3341**	**2.8100e-003**	**0.2562**	**6.0300e-003**	**0.2622**	**0.0685**	**5.9000e-003**	**0.0745**	**3.6495**	**291.0536**	**294.7031**	**0.2605**	**0.0158**	**305.9108**

	ROG	NOx	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	6/29/2022	7/1/2022	5	3	
2	Grading	Grading	7/2/2022	7/11/2022	5	6	
3	Building Construction	Building Construction	7/12/2022	5/15/2023	5	220	

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4	Paving	Paving	5/16/2023	5/29/2023	5	10	
5	Architectural Coating	Architectural Coating	5/30/2023	6/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 64,800; Residential Outdoor: 21,600; 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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

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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	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	23.00	3.00	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	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2022

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

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	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0779	0.0779	0.0000	0.0000	0.0787
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0779**	**0.0779**	**0.0000**	**0.0000**	**0.0787**

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

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	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0779	0.0779	0.0000	0.0000	0.0787
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0779**	**0.0779**	**0.0000**	**0.0000**	**0.0787**

3.3 Grading - 2022

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					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0213**	**2.2300e-003**	**0.0235**	**0.0103**	**2.0500e-003**	**0.0123**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

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	1.0000e-004	7.0000e-005	7.7000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1948	0.1948	1.0000e-005	1.0000e-005	0.1968
Total	**1.0000e-004**	**7.0000e-005**	**7.7000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1948**	**0.1948**	**1.0000e-005**	**1.0000e-005**	**0.1968**

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					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0213**	**2.2300e-003**	**0.0235**	**0.0103**	**2.0500e-003**	**0.0123**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

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	1.0000e-004	7.0000e-005	7.7000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1948	0.1948	1.0000e-005	1.0000e-005	0.1968
Total	**1.0000e-004**	**7.0000e-005**	**7.7000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1948**	**0.1948**	**1.0000e-005**	**1.0000e-005**	**0.1968**

3.4 Building Construction - 2022

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	0.1150	0.9055	0.8899	1.5500e-003		0.0435	0.0435		0.0417	0.0417	0.0000	128.7617	128.7617	0.0248	0.0000	129.3827
Total	**0.1150**	**0.9055**	**0.8899**	**1.5500e-003**		**0.0435**	**0.0435**		**0.0417**	**0.0417**	**0.0000**	**128.7617**	**128.7617**	**0.0248**	**0.0000**	**129.3827**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

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	3.8000e-004	0.0100	2.8400e-003	4.0000e-005	1.2300e-003	1.1000e-004	1.3400e-003	3.6000e-004	1.0000e-004	4.6000e-004	0.0000	3.7142	3.7142	3.0000e-005	5.6000e-004	3.8817
Worker	4.7900e-003	3.2700e-003	0.0368	1.0000e-004	0.0114	6.0000e-005	0.0115	3.0300e-003	5.0000e-005	3.0800e-003	0.0000	9.2609	9.2609	3.0000e-004	2.8000e-004	9.3528
Total	**5.1700e-003**	**0.0133**	**0.0397**	**1.4000e-004**	**0.0126**	**1.7000e-004**	**0.0128**	**3.3900e-003**	**1.5000e-004**	**3.5400e-003**	**0.0000**	**12.9751**	**12.9751**	**3.3000e-004**	**8.4000e-004**	**13.2345**

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	0.1150	0.9055	0.8899	1.5500e-003		0.0435	0.0435		0.0417	0.0417	0.0000	128.7615	128.7615	0.0248	0.0000	129.3826
Total	**0.1150**	**0.9055**	**0.8899**	**1.5500e-003**		**0.0435**	**0.0435**		**0.0417**	**0.0417**	**0.0000**	**128.7615**	**128.7615**	**0.0248**	**0.0000**	**129.3826**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

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	3.8000e-004	0.0100	2.8400e-003	4.0000e-005	1.2300e-003	1.1000e-004	1.3400e-003	3.6000e-004	1.0000e-004	4.6000e-004	0.0000	3.7142	3.7142	3.0000e-005	5.6000e-004	3.8817
Worker	4.7900e-003	3.2700e-003	0.0368	1.0000e-004	0.0114	6.0000e-005	0.0115	3.0300e-003	5.0000e-005	3.0800e-003	0.0000	9.2609	9.2609	3.0000e-004	2.8000e-004	9.3528
Total	**5.1700e-003**	**0.0133**	**0.0397**	**1.4000e-004**	**0.0126**	**1.7000e-004**	**0.0128**	**3.3900e-003**	**1.5000e-004**	**3.5400e-003**	**0.0000**	**12.9751**	**12.9751**	**3.3000e-004**	**8.4000e-004**	**13.2345**

3.4 Building Construction - 2023

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	0.0823	0.6540	0.6823	1.2000e-003		0.0295	0.0295		0.0282	0.0282	0.0000	99.6970	99.6970	0.0189	0.0000	100.1683
Total	**0.0823**	**0.6540**	**0.6823**	**1.2000e-003**		**0.0295**	**0.0295**		**0.0282**	**0.0282**	**0.0000**	**99.6970**	**99.6970**	**0.0189**	**0.0000**	**100.1683**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

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	1.5000e-004	6.3300e-003	1.9000e-003	3.0000e-005	9.5000e-004	4.0000e-005	1.0000e-003	2.8000e-004	4.0000e-005	3.1000e-004	0.0000	2.7695	2.7695	2.0000e-005	4.2000e-004	2.8941
Worker	3.4200e-003	2.2100e-003	0.0260	8.0000e-005	8.8300e-003	4.0000e-005	8.8700e-003	2.3500e-003	4.0000e-005	2.3900e-003	0.0000	6.9411	6.9411	2.1000e-004	2.0000e-004	7.0063
Total	**3.5700e-003**	**8.5400e-003**	**0.0279**	**1.1000e-004**	**9.7800e-003**	**8.0000e-005**	**9.8700e-003**	**2.6300e-003**	**8.0000e-005**	**2.7000e-003**	**0.0000**	**9.7105**	**9.7105**	**2.3000e-004**	**6.2000e-004**	**9.9004**

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	0.0823	0.6540	0.6823	1.2000e-003		0.0295	0.0295		0.0282	0.0282	0.0000	99.6969	99.6969	0.0189	0.0000	100.1682
Total	**0.0823**	**0.6540**	**0.6823**	**1.2000e-003**		**0.0295**	**0.0295**		**0.0282**	**0.0282**	**0.0000**	**99.6969**	**99.6969**	**0.0189**	**0.0000**	**100.1682**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

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	1.5000e-004	6.3300e-003	1.9000e-003	3.0000e-005	9.5000e-004	4.0000e-005	1.0000e-003	2.8000e-004	4.0000e-005	3.1000e-004	0.0000	2.7695	2.7695	2.0000e-005	4.2000e-004	2.8941
Worker	3.4200e-003	2.2100e-003	0.0260	8.0000e-005	8.8300e-003	4.0000e-005	8.8700e-003	2.3500e-003	4.0000e-005	2.3900e-003	0.0000	6.9411	6.9411	2.1000e-004	2.0000e-004	7.0063
Total	**3.5700e-003**	**8.5400e-003**	**0.0279**	**1.1000e-004**	**9.7800e-003**	**8.0000e-005**	**9.8700e-003**	**2.6300e-003**	**8.0000e-005**	**2.7000e-003**	**0.0000**	**9.7105**	**9.7105**	**2.3000e-004**	**6.2000e-004**	**9.9004**

3.5 Paving - 2023

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8179**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	2.3000e-004	1.5000e-004	1.7700e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4715	0.4715	1.0000e-005	1.0000e-005	0.4760
Total	**2.3000e-004**	**1.5000e-004**	**1.7700e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4715**	**0.4715**	**1.0000e-005**	**1.0000e-005**	**0.4760**

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8178
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8178**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	2.3000e-004	1.5000e-004	1.7700e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4715	0.4715	1.0000e-005	1.0000e-005	0.4760
Total	**2.3000e-004**	**1.5000e-004**	**1.7700e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4715**	**0.4715**	**1.0000e-005**	**1.0000e-005**	**0.4760**

3.6 Architectural Coating - 2023

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	0.3004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**0.3013**	**6.5100e-003**	**9.0600e-003**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

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	5.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1572	0.1572	0.0000	0.0000	0.1587
Total	**8.0000e-005**	**5.0000e-005**	**5.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1572**	**0.1572**	**0.0000**	**0.0000**	**0.1587**

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	0.3004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**0.3013**	**6.5100e-003**	**9.0600e-003**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

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	5.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1572	0.1572	0.0000	0.0000	0.1587
Total	**8.0000e-005**	**5.0000e-005**	**5.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1572**	**0.1572**	**0.0000**	**0.0000**	**0.1587**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1145	0.1939	1.0829	2.5900e-003	0.2562	2.1200e-003	0.2583	0.0685	1.9900e-003	0.0705	0.0000	239.7982	239.7982	0.0126	0.0132	244.0491
Unmitigated	0.1145	0.1939	1.0829	2.5900e-003	0.2562	2.1200e-003	0.2583	0.0685	1.9900e-003	0.0705	0.0000	239.7982	239.7982	0.0126	0.0132	244.0491

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	234.24	260.48	200.96	683,299	683,299
Total	234.24	260.48	200.96	683,299	683,299

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	48.40	15.90	35.70	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	0.515888	0.053153	0.175761	0.156529	0.025865	0.006829	0.014141	0.022504	0.000707	0.000289	0.023863	0.001496	0.002975

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	12.2310	12.2310	1.9800e-003	2.4000e-004	12.3519
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.2310	12.2310	1.9800e-003	2.4000e-004	12.3519
NaturalGas Mitigated	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3042	23.3042	4.5000e-004	4.3000e-004	23.4427
NaturalGas Unmitigated	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3042	23.3042	4.5000e-004	4.3000e-004	23.4427

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	436705	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3042	23.3042	4.5000e-004	4.3000e-004	23.4427
Total		**2.3500e-003**	**0.0201**	**8.5600e-003**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**23.3042**	**23.3042**	**4.5000e-004**	**4.3000e-004**	**23.4427**

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	436705	2.3500e-003	0.0201	8.5600e-003	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3042	23.3042	4.5000e-004	4.3000e-004	23.4427
Total		**2.3500e-003**	**0.0201**	**8.5600e-003**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**23.3042**	**23.3042**	**4.5000e-004**	**4.3000e-004**	**23.4427**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	132193	12.2310	1.9800e-003	2.4000e-004	12.3519
Total		**12.2310**	**1.9800e-003**	**2.4000e-004**	**12.3519**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	132193	12.2310	1.9800e-003	2.4000e-004	12.3519
Total		**12.2310**	**1.9800e-003**	**2.4000e-004**	**12.3519**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.1636	0.0147	0.2426	9.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	14.2508	14.2508	6.4000e-004	2.5000e-004	14.3425
Unmitigated	0.1636	0.0147	0.2426	9.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	14.2508	14.2508	6.4000e-004	2.5000e-004	14.3425

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	0.0300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4000e-003	0.0120	5.0900e-003	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.8626	13.8626	2.7000e-004	2.5000e-004	13.9450
Landscaping	7.1400e-003	2.7400e-003	0.2375	1.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	0.3881	0.3881	3.7000e-004	0.0000	0.3974
Total	**0.1636**	**0.0147**	**0.2426**	**9.0000e-005**		**2.2900e-003**	**2.2900e-003**		**2.2900e-003**	**2.2900e-003**	**0.0000**	**14.2508**	**14.2508**	**6.4000e-004**	**2.5000e-004**	**14.3425**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4000e-003	0.0120	5.0900e-003	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.8626	13.8626	2.7000e-004	2.5000e-004	13.9450
Landscaping	7.1400e-003	2.7400e-003	0.2375	1.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	0.3881	0.3881	3.7000e-004	0.0000	0.3974
Total	**0.1636**	**0.0147**	**0.2426**	**9.0000e-005**		**2.2900e-003**	**2.2900e-003**		**2.2900e-003**	**2.2900e-003**	**0.0000**	**14.2508**	**14.2508**	**6.4000e-004**	**2.5000e-004**	**14.3425**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.1309	0.0682	1.6300e-003	4.3219
Unmitigated	2.1309	0.0682	1.6300e-003	4.3219

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	2.08493 / 1.31441	2.1309	0.0682	1.6300e-003	4.3219
Total		**2.1309**	**0.0682**	**1.6300e-003**	**4.3219**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	2.08493 / 1.31441	2.1309	0.0682	1.6300e-003	4.3219
Total		**2.1309**	**0.0682**	**1.6300e-003**	**4.3219**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.9880	0.1766	0.0000	7.4027
Unmitigated	2.9880	0.1766	0.0000	7.4027

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	14.72	2.9880	0.1766	0.0000	7.4027
Total		**2.9880**	**0.1766**	**0.0000**	**7.4027**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	14.72	2.9880	0.1766	0.0000	7.4027
Total		**2.9880**	**0.1766**	**0.0000**	**7.4027**

9.0 Operational Offroad

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

FRESNO GREENHOUSE GAS (GHG) REDUCTION PLAN UPDATE

CEQA PROJECT CONSISTENCY CHECKLIST

March 2020

City of FRESNO

Fresno Greenhouse Gas (GHG) Reduction Plan Update – CEQA Project Consistency Checklist

INTRODUCTION

The City of Fresno updated its 2014 Greenhouse Gas (GHG) Reduction Plan (the Plan) in the year 2020 to conform with existing applicable State climate change policies and regulations. The GHG Plan Update outlines strategies that the City will undertake to achieve its proportional share of GHG emission reductions. The purpose of this GHG Reduction Plan Update Consistency Checklist (Checklist) is to help the City provide a streamlined review process for new development projects that are subject to discretionary review pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15183.5.

This Checklist has been developed as part of the GHG Plan Update implementation and monitoring process and will support the achievement of individual GHG reduction strategies as well as the City's overall GHG reduction goals. In addition, this Checklist will further the City's sustainability goals and policies that encourage sustainable development and aim to conserve and reduce the consumption of resources, such as energy and water. Projects that meet the requirements of this Checklist will be deemed to be consistent with the Fresno GHG Reduction Plan Update and will be found to have a less than significant contribution to cumulative GHG (i.e., the project's incremental contribution to cumulative GHG effects is not cumulatively considerable), pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b). Projects that do not meet the requirements in this Checklist will be deemed to be inconsistent with the Fresno GHG Reduction Plan Update and must prepare a project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible. This GHG Checklist can be updated to reflect adoption of new GHG reduction strategies or to comply with any changes and updates in the Plan or local, State or federal regulations. Note that not all the measures in the checklist are applicable to all projects. The projects should comply with applicable measures from the checklist.

1. Project Information	
Contact Information	
Project No./Name:	Development Permit Application No. P21-06232
Address:	8715 N. Chestnut Avenue, Clovis, CA 93619
Applicant Name/Co:	Fresno/Newbury LP
Contact Information:	Mr. John Ashley
	1554 Shaw Ave
	Clovis CA 93611
Project Information	
1. What is the Site acreage of the Project?	2.11
2. Identify all Applicable Proposed Land uses:	Residential Medium High Density
a. Residential (Indicate number of single-family units)	0
b. Residential (Indicate number of multi-family units)	32
c. Commercial (total square footage)	0
d. Industrial (total square footage)	0
e. Other (describe)	N/A
3. Is the project or a portion of the project located in a transit priority area? (Y/N)	No
4. Provide a brief description of the project proposed:	Replace an existing vacant lot with 32 unit apartment complex.

2. Determining Land Use Consistency		
Checklist Item		
As the first step in determining the consistency with the GHG Reduction Plan for discretionary development projects, this section allows the City to determine the project's consistency with the land use assumptions used in the GHG Reduction Plan.		
	Yes	**No**
1. Is the proposed project consistent with the approved General Plan, Specific Plan, and Community Plan planned land use and zoning designations? If the answer is **Yes**, then proceed to the GHG Plan Update Consistency Checklist. If the answer is **No**, then proceed to question 2.		X
2. If the proposed project is not consistent with the approved planned land use and zoning designation(s), then provide estimated GHG project emissions under both existing and proposed designation(s) for comparison. Compare the maximum buildout of the existing designation with the maximum buildout of the proposed designation. If the estimated project emissions at maximum buildout of the proposed designation(s) **is equivalent to or less than** the estimated project emissions at maximum buildout of the existing designation(s), then in accordance with the City's Significance Determination Thresholds, the project's GHG impact is less than significant. If there is a proposed development project associated with this plan amendment and or rezone then complete the GHG Plan Update Consistency Checklist and incorporate applicable measures, otherwise there is no further step required. If the estimated project emission at maximum buildout of the proposed designation(s) is **greater than** the estimated project emissions at maximum buildout of the existing designation(s), then in accordance with the City's Significance Determination Thresholds, the project's GHG impact is significant. The project must either show consistency with applicable GP objectives and policies (provide applicable GP objectives and policies here) or provide analysis and measures to incorporate into the project to bring the GHG emissions to a level that is less than or equal to the estimated project emission at maximum buildout of the existing designation(s) unless the decision-maker finds that a measure is infeasible in accordance with CEQA Guidelines Section 15091. If there is a proposed development project associated with this plan amendment and or rezone then complete the GHG Plan Update Consistency Checklist and incorporate applicable measures, otherwise there is no further step required.		

3. Greenhouse Gas (GHG) Reduction Plan Update - CEQA Project Consistency Checklist

GHG Plan Update consistency review involves the evaluation of project consistency with the applicable strategies of the GHG Plan Update. This checklist was developed based on the key local GHG reduction strategies and actions identified in the GHG Plan Update that are applicable to new development projects.

Checklist Item (Check the appropriate box and provide an explanation for your answer)	Yes	No	Not Applicable (NA)	Explanation
Strategy 1: Land Use and Transportation Demand Management				
Does the project provide complete streets for all roadway improvements? (Complete streets are roadways that include curb, gutter, and sidewalks on both sides of the street. For local and collector streets, adequate roadway width is provided to accommodate two-way vehicle traffic and bicycles and arterial streets include striping for bike lanes.)			X	No roadways constructed
Is the project a large employer (over 100 employees) and if so will the project comply with SJVAPCD Rule 9410 and provide an Employer Trip Reduction Implementation Plan that will include trip reduction methods such as increasing transit use, carpooling, vanpooling, bicycling, or other measures? See the SJVAPCD website link for details: https://www.valleyair.org/rules/currntrules/r9410.pdf			X	Residential project
Strategy 2: Energy Conservation and Renewable Energy				
Does the project meet the mandatory energy efficiency measures of the California Green Building Standards Code (CalGreen)? If the Project exceeds mandatory CalGreen measures then provide the tier number that the project will meet in the explanation.	X			
For commercial projects, does it achieve net zero electricity? Mark NA if project will be permitted before 2030. Mark Yes if voluntary. Add source and capacity in explanation.			X	Residential project
Does the project include onsite energy generation using renewable energy? If no, mark NA. If yes, provide source and capacity in the explanation.	X			Solar carports
Strategy 3: Water Conservation				
Does the project meet the mandatory indoor water use measures of the CalGreen Code? If the project exceeds CalGreen Code mandatory measures provide methods in excess of requirements in the explanation. Examples may include water pipe insulation, pressure reducing valves, energy efficient appliances such as Energy Star Certified dishwashers, washing machines, dual flush toilets, point of use and/or tankless water heaters. Provide the measures, devices, or systems that the project will include in the explanation.	X			
Does the project meet the mandatory outdoor water use measures of the CalGreen Code? If the project exceeds CalGreen Code mandatory measures provide methods in excess of requirements in the explanation? Examples may include any outdoor water conservation measures such as; drought tolerant landscaping plants, compliant irrigation systems, xeriscapes etc. Provide the conservation measure that the project will include in the explanation.	X			
Strategy 4: Solid Waste Diversion and Recycling				
When completed will the project implement techniques for solid waste diversion and reduction (i.e., recycling, composting, waste to energy technology, waste separation)?	X			
During construction will the project recycle construction and demolition waste?	X			

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

FNLP - single family analysis GHG

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	12.00	Dwelling Unit	2.11	21,600.00	34

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - lot acreage

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	3.90	2.11
tblWoodstoves	NumberCatalytic	2.11	0.00
tblWoodstoves	NumberNoncatalytic	2.11	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	0.1762	1.4120	1.4525	2.6100e-003	0.0278	0.0631	0.0909	0.0117	0.0604	0.0720	0.0000	217.8850	217.8850	0.0416	3.6000e-004	219.0333
2024	0.2266	0.1948	0.2326	4.0000e-004	1.0800e-003	8.4800e-003	9.5600e-003	2.9000e-004	8.0600e-003	8.3500e-003	0.0000	33.9046	33.9046	7.0000e-003	5.0000e-005	34.0957
Maximum	**0.2266**	**1.4120**	**1.4525**	**2.6100e-003**	**0.0278**	**0.0631**	**0.0909**	**0.0117**	**0.0604**	**0.0720**	**0.0000**	**217.8850**	**217.8850**	**0.0416**	**3.6000e-004**	**219.0333**

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					
2023	0.1762	1.4120	1.4525	2.6100e-003	0.0278	0.0631	0.0909	0.0117	0.0604	0.0720	0.0000	217.8847	217.8847	0.0416	3.6000e-004	219.0330
2024	0.2266	0.1948	0.2326	4.0000e-004	1.0800e-003	8.4800e-003	9.5600e-003	2.9000e-004	8.0600e-003	8.3500e-003	0.0000	33.9045	33.9045	7.0000e-003	5.0000e-005	34.0957
Maximum	**0.2266**	**1.4120**	**1.4525**	**2.6100e-003**	**0.0278**	**0.0631**	**0.0909**	**0.0117**	**0.0604**	**0.0720**	**0.0000**	**217.8847**	**217.8847**	**0.0416**	**3.6000e-004**	**219.0330**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	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	**2-17-2023**	**5-16-2023**	0.3372	0.3372
2	**5-17-2023**	**8-16-2023**	0.5061	0.5061
3	**8-17-2023**	**11-16-2023**	0.5061	0.5061
4	**11-17-2023**	**2-16-2024**	0.4830	0.4830
5	**2-17-2024**	**5-16-2024**	0.1798	0.1798
		Highest	0.5061	0.5061

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	0.1078	5.5100e-003	0.0909	3.0000e-005		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	5.3440	5.3440	2.4000e-004	1.0000e-004	5.3784
Energy	1.5600e-003	0.0133	5.6600e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	24.2462	24.2462	1.7300e-003	4.6000e-004	24.4252
Mobile	0.0521	0.0884	0.4928	1.2000e-003	0.1229	9.8000e-004	0.1239	0.0329	9.2000e-004	0.0338	0.0000	111.3438	111.3438	5.7400e-003	6.1000e-003	113.3059
Waste						0.0000	0.0000		0.0000	0.0000	2.4846	0.0000	2.4846	0.1468	0.0000	6.1555
Water						0.0000	0.0000		0.0000	0.0000	0.2480	0.5511	0.7991	0.0256	6.1000e-004	1.6207
Total	**0.1615**	**0.1072**	**0.5894**	**1.3100e-003**	**0.1229**	**2.9100e-003**	**0.1258**	**0.0329**	**2.8500e-003**	**0.0357**	**2.7327**	**141.4850**	**144.2177**	**0.1801**	**7.2700e-003**	**150.8857**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1078	5.5100e-003	0.0909	3.0000e-005		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	5.3440	5.3440	2.4000e-004	1.0000e-004	5.3784
Energy	1.5600e-003	0.0133	5.6600e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	24.2462	24.2462	1.7300e-003	4.6000e-004	24.4252
Mobile	0.0521	0.0884	0.4928	1.2000e-003	0.1229	9.8000e-004	0.1239	0.0329	9.2000e-004	0.0338	0.0000	111.3438	111.3438	5.7400e-003	6.1000e-003	113.3059
Waste						0.0000	0.0000		0.0000	0.0000	2.4846	0.0000	2.4846	0.1468	0.0000	6.1555
Water						0.0000	0.0000		0.0000	0.0000	0.2480	0.5511	0.7991	0.0256	6.1000e-004	1.6207
Total	**0.1615**	**0.1072**	**0.5894**	**1.3100e-003**	**0.1229**	**2.9100e-003**	**0.1258**	**0.0329**	**2.8500e-003**	**0.0357**	**2.7327**	**141.4850**	**144.2177**	**0.1801**	**7.2700e-003**	**150.8857**

	ROG	NOx	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	3/17/2023	3/21/2023	5	3	
2	Grading	Grading	3/22/2023	3/29/2023	5	6	
3	Building Construction	Building Construction	3/30/2023	1/31/2024	5	220	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	2/1/2024	2/14/2024	5	10	
5	Architectural Coating	Architectural Coating	2/15/2024	2/28/2024	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 43,740; Residential Outdoor: 14,580; 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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	4.00	1.00	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
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9500e-003	0.0214	0.0147	4.0000e-005		8.1000e-004	8.1000e-004		7.5000e-004	7.5000e-004	0.0000	3.2317	3.2317	1.0500e-003	0.0000	3.2578
Total	**1.9500e-003**	**0.0214**	**0.0147**	**4.0000e-005**	**2.3900e-003**	**8.1000e-004**	**3.2000e-003**	**2.6000e-004**	**7.5000e-004**	**1.0100e-003**	**0.0000**	**3.2317**	**3.2317**	**1.0500e-003**	**0.0000**	**3.2578**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

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	4.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0755	0.0755	0.0000	0.0000	0.0762
Total	**4.0000e-005**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0755**	**0.0755**	**0.0000**	**0.0000**	**0.0762**

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9500e-003	0.0214	0.0147	4.0000e-005		8.1000e-004	8.1000e-004		7.5000e-004	7.5000e-004	0.0000	3.2317	3.2317	1.0500e-003	0.0000	3.2578
Total	**1.9500e-003**	**0.0214**	**0.0147**	**4.0000e-005**	**2.3900e-003**	**8.1000e-004**	**3.2000e-003**	**2.6000e-004**	**7.5000e-004**	**1.0100e-003**	**0.0000**	**3.2317**	**3.2317**	**1.0500e-003**	**0.0000**	**3.2578**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

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	4.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0755	0.0755	0.0000	0.0000	0.0762
Total	**4.0000e-005**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0755**	**0.0755**	**0.0000**	**0.0000**	**0.0762**

3.3 Grading - 2023

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					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-003	0.0434	0.0261	6.0000e-005		1.8100e-003	1.8100e-003		1.6700e-003	1.6700e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	**4.0000e-003**	**0.0434**	**0.0261**	**6.0000e-005**	**0.0213**	**1.8100e-003**	**0.0231**	**0.0103**	**1.6700e-003**	**0.0119**	**0.0000**	**5.4312**	**5.4312**	**1.7600e-003**	**0.0000**	**5.4751**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

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	9.0000e-005	6.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1886	0.1886	1.0000e-005	1.0000e-005	0.1904
Total	**9.0000e-005**	**6.0000e-005**	**7.1000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1886**	**0.1886**	**1.0000e-005**	**1.0000e-005**	**0.1904**

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					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-003	0.0434	0.0261	6.0000e-005		1.8100e-003	1.8100e-003		1.6700e-003	1.6700e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	**4.0000e-003**	**0.0434**	**0.0261**	**6.0000e-005**	**0.0213**	**1.8100e-003**	**0.0231**	**0.0103**	**1.6700e-003**	**0.0119**	**0.0000**	**5.4312**	**5.4312**	**1.7600e-003**	**0.0000**	**5.4751**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

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	9.0000e-005	6.0000e-005	7.1000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1886	0.1886	1.0000e-005	1.0000e-005	0.1904
Total	**9.0000e-005**	**6.0000e-005**	**7.1000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1886**	**0.1886**	**1.0000e-005**	**1.0000e-005**	**0.1904**

3.4 Building Construction - 2023

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	0.1688	1.3420	1.4001	2.4700e-003		0.0604	0.0604		0.0579	0.0579	0.0000	204.5865	204.5865	0.0387	0.0000	205.5538
Total	**0.1688**	**1.3420**	**1.4001**	**2.4700e-003**		**0.0604**	**0.0604**		**0.0579**	**0.0579**	**0.0000**	**204.5865**	**204.5865**	**0.0387**	**0.0000**	**205.5538**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

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	1.1000e-004	4.3300e-003	1.3000e-003	2.0000e-005	6.5000e-004	3.0000e-005	6.8000e-004	1.9000e-004	3.0000e-005	2.2000e-004	0.0000	1.8944	1.8944	1.0000e-005	2.9000e-004	1.9796
Worker	1.2200e-003	7.9000e-004	9.2900e-003	3.0000e-005	3.1500e-003	2.0000e-005	3.1700e-003	8.4000e-004	1.0000e-005	8.5000e-004	0.0000	2.4772	2.4772	8.0000e-005	7.0000e-005	2.5004
Total	**1.3300e-003**	**5.1200e-003**	**0.0106**	**5.0000e-005**	**3.8000e-003**	**5.0000e-005**	**3.8500e-003**	**1.0300e-003**	**4.0000e-005**	**1.0700e-003**	**0.0000**	**4.3716**	**4.3716**	**9.0000e-005**	**3.6000e-004**	**4.4801**

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	0.1688	1.3420	1.4001	2.4700e-003		0.0604	0.0604		0.0579	0.0579	0.0000	204.5863	204.5863	0.0387	0.0000	205.5535
Total	**0.1688**	**1.3420**	**1.4001**	**2.4700e-003**		**0.0604**	**0.0604**		**0.0579**	**0.0579**	**0.0000**	**204.5863**	**204.5863**	**0.0387**	**0.0000**	**205.5535**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

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	1.1000e-004	4.3300e-003	1.3000e-003	2.0000e-005	6.5000e-004	3.0000e-005	6.8000e-004	1.9000e-004	3.0000e-005	2.2000e-004	0.0000	1.8944	1.8944	1.0000e-005	2.9000e-004	1.9796
Worker	1.2200e-003	7.9000e-004	9.2900e-003	3.0000e-005	3.1500e-003	2.0000e-005	3.1700e-003	8.4000e-004	1.0000e-005	8.5000e-004	0.0000	2.4772	2.4772	8.0000e-005	7.0000e-005	2.5004
Total	**1.3300e-003**	**5.1200e-003**	**0.0106**	**5.0000e-005**	**3.8000e-003**	**5.0000e-005**	**3.8500e-003**	**1.0300e-003**	**4.0000e-005**	**1.0700e-003**	**0.0000**	**4.3716**	**4.3716**	**9.0000e-005**	**3.6000e-004**	**4.4801**

3.4 Building Construction - 2024

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	0.0184	0.1475	0.1622	2.9000e-004		6.1900e-003	6.1900e-003		5.9300e-003	5.9300e-003	0.0000	23.8871	23.8871	4.4500e-003	0.0000	23.9983
Total	**0.0184**	**0.1475**	**0.1622**	**2.9000e-004**		**6.1900e-003**	**6.1900e-003**		**5.9300e-003**	**5.9300e-003**	**0.0000**	**23.8871**	**23.8871**	**4.4500e-003**	**0.0000**	**23.9983**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

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	1.0000e-005	5.1000e-004	1.5000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.2174	0.2174	0.0000	3.0000e-005	0.2272
Worker	1.3000e-004	8.0000e-005	1.0000e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2797	0.2797	1.0000e-005	1.0000e-005	0.2822
Total	**1.4000e-004**	**5.9000e-004**	**1.1500e-003**	**0.0000**	**4.5000e-004**	**0.0000**	**4.5000e-004**	**1.2000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4971**	**0.4971**	**1.0000e-005**	**4.0000e-005**	**0.5094**

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	0.0184	0.1475	0.1622	2.9000e-004		6.1900e-003	6.1900e-003		5.9300e-003	5.9300e-003	0.0000	23.8871	23.8871	4.4500e-003	0.0000	23.9983
Total	**0.0184**	**0.1475**	**0.1622**	**2.9000e-004**		**6.1900e-003**	**6.1900e-003**		**5.9300e-003**	**5.9300e-003**	**0.0000**	**23.8871**	**23.8871**	**4.4500e-003**	**0.0000**	**23.9983**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

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	1.0000e-005	5.1000e-004	1.5000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.2174	0.2174	0.0000	3.0000e-005	0.2272
Worker	1.3000e-004	8.0000e-005	1.0000e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2797	0.2797	1.0000e-005	1.0000e-005	0.2822
Total	**1.4000e-004**	**5.9000e-004**	**1.1500e-003**	**0.0000**	**4.5000e-004**	**0.0000**	**4.5000e-004**	**1.2000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4971**	**0.4971**	**1.0000e-005**	**4.0000e-005**	**0.5094**

3.5 Paving - 2024

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	4.2100e-003	0.0405	0.0585	9.0000e-005		1.9800e-003	1.9800e-003		1.8300e-003	1.8300e-003	0.0000	7.7574	7.7574	2.4600e-003	0.0000	7.8188
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2100e-003**	**0.0405**	**0.0585**	**9.0000e-005**		**1.9800e-003**	**1.9800e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**7.7574**	**7.7574**	**2.4600e-003**	**0.0000**	**7.8188**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

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	2.1000e-004	1.3000e-004	1.6300e-003	0.0000	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4560	0.4560	1.0000e-005	1.0000e-005	0.4601
Total	**2.1000e-004**	**1.3000e-004**	**1.6300e-003**	**0.0000**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4560**	**0.4560**	**1.0000e-005**	**1.0000e-005**	**0.4601**

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	4.2100e-003	0.0405	0.0585	9.0000e-005		1.9800e-003	1.9800e-003		1.8300e-003	1.8300e-003	0.0000	7.7573	7.7573	2.4600e-003	0.0000	7.8188
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2100e-003**	**0.0405**	**0.0585**	**9.0000e-005**		**1.9800e-003**	**1.9800e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**7.7573**	**7.7573**	**2.4600e-003**	**0.0000**	**7.8188**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

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	2.1000e-004	1.3000e-004	1.6300e-003	0.0000	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4560	0.4560	1.0000e-005	1.0000e-005	0.4601
Total	**2.1000e-004**	**1.3000e-004**	**1.6300e-003**	**0.0000**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4560**	**0.4560**	**1.0000e-005**	**1.0000e-005**	**0.4601**

3.6 Architectural Coating - 2024

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	0.2027					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.2036**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

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	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0304	0.0304	0.0000	0.0000	0.0307
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0304**	**0.0304**	**0.0000**	**0.0000**	**0.0307**

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	0.2027					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.2036**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

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	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0304	0.0304	0.0000	0.0000	0.0307
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0304**	**0.0304**	**0.0000**	**0.0000**	**0.0307**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0521	0.0884	0.4928	1.2000e-003	0.1229	9.8000e-004	0.1239	0.0329	9.2000e-004	0.0338	0.0000	111.3438	111.3438	5.7400e-003	6.1000e-003	113.3059
Unmitigated	0.0521	0.0884	0.4928	1.2000e-003	0.1229	9.8000e-004	0.1239	0.0329	9.2000e-004	0.0338	0.0000	111.3438	111.3438	5.7400e-003	6.1000e-003	113.3059

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	113.28	114.48	102.60	327,905	327,905
Total	113.28	114.48	102.60	327,905	327,905

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
Single Family Housing	10.80	7.30	7.50	48.40	15.90	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.521458	0.053308	0.175656	0.151963	0.025001	0.006656	0.014407	0.022718	0.000702	0.000287	0.023515	0.001463	0.002865

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.8534	8.8534	1.4300e-003	1.7000e-004	8.9409
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8.8534	8.8534	1.4300e-003	1.7000e-004	8.9409
NaturalGas Mitigated	1.5600e-003	0.0133	5.6600e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.3928	15.3928	3.0000e-004	2.8000e-004	15.4843
NaturalGas Unmitigated	1.5600e-003	0.0133	5.6600e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.3928	15.3928	3.0000e-004	2.8000e-004	15.4843

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
Single Family Housing	288451	1.5600e-003	0.0133	5.6600e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.3928	15.3928	3.0000e-004	2.8000e-004	15.4843
Total		**1.5600e-003**	**0.0133**	**5.6600e-003**	**8.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**15.3928**	**15.3928**	**3.0000e-004**	**2.8000e-004**	**15.4843**

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					
Single Family Housing	288451	1.5600e-003	0.0133	5.6600e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.3928	15.3928	3.0000e-004	2.8000e-004	15.4843
Total		**1.5600e-003**	**0.0133**	**5.6600e-003**	**8.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**15.3928**	**15.3928**	**3.0000e-004**	**2.8000e-004**	**15.4843**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	95687.5	8.8534	1.4300e-003	1.7000e-004	8.9409
Total		**8.8534**	**1.4300e-003**	**1.7000e-004**	**8.9409**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	95687.5	8.8534	1.4300e-003	1.7000e-004	8.9409
Total		**8.8534**	**1.4300e-003**	**1.7000e-004**	**8.9409**

6.0 Area Detail

6.1 Mitigation Measures Area

FNLP - single family analysis GHG - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.1078	5.5100e-003	0.0909	3.0000e-005		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	5.3440	5.3440	2.4000e-004	1.0000e-004	5.3784
Unmitigated	0.1078	5.5100e-003	0.0909	3.0000e-005		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	5.3440	5.3440	2.4000e-004	1.0000e-004	5.3784

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	0.0203					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0844					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.3000e-004	4.4900e-003	1.9100e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1985	5.1985	1.0000e-004	1.0000e-004	5.2294
Landscaping	2.6700e-003	1.0300e-003	0.0890	0.0000		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.1456	0.1456	1.4000e-004	0.0000	0.1490
Total	**0.1078**	**5.5200e-003**	**0.0909**	**3.0000e-005**		**8.5000e-004**	**8.5000e-004**		**8.5000e-004**	**8.5000e-004**	**0.0000**	**5.3440**	**5.3440**	**2.4000e-004**	**1.0000e-004**	**5.3784**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0203					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0844					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.3000e-004	4.4900e-003	1.9100e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1985	5.1985	1.0000e-004	1.0000e-004	5.2294
Landscaping	2.6700e-003	1.0300e-003	0.0890	0.0000		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.1456	0.1456	1.4000e-004	0.0000	0.1490
Total	**0.1078**	**5.5200e-003**	**0.0909**	**3.0000e-005**		**8.5000e-004**	**8.5000e-004**		**8.5000e-004**	**8.5000e-004**	**0.0000**	**5.3440**	**5.3440**	**2.4000e-004**	**1.0000e-004**	**5.3784**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.7991	0.0256	6.1000e-004	1.6207
Unmitigated	0.7991	0.0256	6.1000e-004	1.6207

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.781848 / 0.492904	0.7991	0.0256	6.1000e-004	1.6207
Total		**0.7991**	**0.0256**	**6.1000e-004**	**1.6207**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.781848 / 0.492904	0.7991	0.0256	6.1000e-004	1.6207
Total		**0.7991**	**0.0256**	**6.1000e-004**	**1.6207**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.4846	0.1468	0.0000	6.1555
Unmitigated	2.4846	0.1468	0.0000	6.1555

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	12.24	2.4846	0.1468	0.0000	6.1555
Total		**2.4846**	**0.1468**	**0.0000**	**6.1555**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	12.24	2.4846	0.1468	0.0000	6.1555
Total		**2.4846**	**0.1468**	**0.0000**	**6.1555**

9.0 Operational Offroad

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

EXHIBIT B

MEIR Mitigation Measure Monitoring Checklist for Environmental Assessment

Plan Amendment/Rezone Application No. P22-01086 and Development Permit Application No. P21-06232 April 5, 2023

PURSUANT TO CERTIFIED MASTER ENVIRONMENTAL IMPACT REPORT (MEIR) SCH No. 2012111015

This mitigation measure monitoring and reporting checklist was prepared pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15097 and Section 21081.6 of the Public Resources Code (PRC). It was certified as part of the Fresno City Council's approval of the MEIR for the Fresno General Plan (Fresno City Council Resolution 2014-225, adopted December 18, 2014).

Letter designations to the right of each MEIR mitigation measure listed in this Exhibit note how the mitigation measure relates to the environmental assessment of the above-listed project, according to the key found at right and at the bottoms of the following pages:

A - Incorporated into Project

B - Mitigated

C - Mitigation in Progress

D - Responsible Agency Contacted

E - Part of City-wide Program

F - Not Applicable

The timing of implementing each mitigation measure is identified in in the checklist, as well as identifies the entity responsible for verifying that the mitigation measures applied to a project are performed. Project applicants are responsible for providing evidence that mitigation measures are implemented. As lead agency, the City of Fresno is responsible for verifying that mitigation is performed/completed.

MITIGATION MEASURE - AESTHETICS	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
MM AES-1. Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences.	Prior to issuance of building permits	Public Works Department and Planning and Development Department	X					
MM AES-2: Lighting for Public Facilities. Lighting systems for public facilities such as active play areas shall provide adequate illumination for the activity; however, low intensity light fixtures and shields shall be used to minimize spillover light onto adjacent properties.	Prior to issuance of building permits	Public Works Department and Planning and Development Department	X					
MM AES-3: Lighting for Non-Residential Uses. Lighting systems for non-residential uses, not including public facilities, shall provide shields on the light fixtures and orient the lighting system away from adjacent properties. Low intensity light fixtures shall also be used if excessive spillover light onto adjacent properties will occur.	Prior to issuance of building permits	Public Works Department and Planning and Development Department	X					
MM AES-4: Signage Lighting. Lighting systems for freestanding signs shall not exceed 100 foot Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets which have an average light intensity of 2.0 horizontal footcandles or greater.	Prior to issuance of building permits	Public Works Department and Planning and Development Department						X
MM AES-5: Use of Non-Reflective Materials. Materials used on building facades shall be non-reflective.	Prior to issuance of building permits	Public Works Department and Planning and Development Department	X					
MITIGATION MEASURE – AGRICULTURAL RESOURCES	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**

MM AG-1: Consistent with Policy RC-9-c of the approved General Plan, the City, in coordination with regional partners or independently, shall establish a Farmland Preservation Program by 2025. The intent of the Farmland Preservation Program would be that, when Prime Farmland, Unique Farmland, or Farmland of Statewide Importance are proposed for development and converted to urban uses within the Sphere of Influence outside City limits, this program would require that the developer of such a project mitigate the loss of farmland consistent with the requirements of CEQA. The Farmland Preservation Program shall establish thresholds of significance and provide several mitigation options that may include, but are not limited to, the following: • Restrictive Covenants or Deeds • In Lieu Fees • Mitigation Banks • Fee Title Acquisition • Conservation Easements • Land Use Regulations The Farmland Preservation Program may be modeled after some or all of the programs described by the California Council of Land Trusts. Prior to the adoption of the Farmland Preservation Program, projects shall be required to comply with CEQA to address potential environmental impacts on an individual basis.								X
MITIGATION MEASURE – AIR QUALITY	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**
MM AIR-1: Prior to future discretionary project approval, development project applicants shall prepare and submit to the Director of the City Planning and Development Department, or designee, a technical assessment evaluating potential project construction phase-related air quality impacts. The evaluation shall be prepared in conformance with SJVAPCD methodology for assessing construction impacts. If construction related air	Prior to issuance of grading or construction permits	Planning and Development Department	X					

pollutants are determined to have the potential to exceed the SJVAPCD adopted threshold of significance, the Planning and Development Department shall require that applicants for new development projects incorporate mitigation measures into construction plans to reduce air pollutant emissions during construction activities. The identified measures shall be included as part of the Project Conditions of Approval. Possible mitigation measures to reduce construction emissions include but are not limited to: • Install temporary construction power supply meters on site and use these to provide power to electric power tools whenever feasible. If temporary electric power is available on site, forbid the use of portable gasoline- or diesel-fueled electric generators. • Use of diesel oxidation catalysts and/or catalyzed diesel particulate traps on diesel equipment, as feasible. • Maintain equipment according to manufacturers' specifications. • Restrict idling of equipment and trucks to a maximum of 5 minutes (per California Air Resources Board [CARB] regulation). • Phase grading operations to reduce disturbed areas and times of exposure. • Avoid excavation and grading during wet weather. • Limit on-site construction routes and stabilize construction entrance(s). • Remove existing vegetation only when absolutely necessary. • Sweep up spilled dry materials (e.g., cement, mortar, or dirt track-out) immediately. Never attempt to wash them away with water. Use only minimal water for dust control. • Store stockpiled materials and wastes under a temporary roof or secured plastic sheeting or tarp.								

MM AIR-2: Prior to future discretionary project approval, development project applicants shall prepare and submit to the Director of the City Planning and Development Department, or designee, a technical assessment evaluating potential project operation-related air quality impacts. The evaluation shall be prepared in conformance with SJVAPCD methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SJVAPCD-adopted thresholds of significance, the Planning and Development Department shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the Project Conditions of Approval. Possible mitigation measures to reduce long-term emissions include but are not limited to: • For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plugging in the anticipated number of refrigerated trailers to reduce idling time and emissions. • Applicants for manufacturing and light industrial uses shall consider energy storage (i.e., battery) and combined heat and power (CHP, also known as cogeneration) in appropriate applications to optimize renewable energy generation systems and avoid peak energy use. • Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with CARB Rule 2845 (13 California Code of Regulations [CCR] Chapter 10, Section 2485). • Require that 240-volt electrical outlets or Level 3 chargers be installed in parking lots that would enable charging of	Prior to issuance of grading or construction permits	Planning and Development Department	X					

neighborhood electric vehicles (NEVs) and/or battery powered vehicles. • Maximize use of solar energy including solar panels; installing the maximum possible number of solar energy arrays on building roofs throughout the city to generate solar energy. • Maximize the planting of trees in landscaping and parking lots. • Use light-colored paving and roofing materials. • Require use of electric or alternatively fueled street-sweepers with HEPA filters. • Require use of electric lawn mowers and leaf blowers. • Utilize only Energy Star heating, cooling, and lighting devices, and appliances. • Use of water-based or low volatile organic compound (VOC) cleaning products.								
MM AIR-3: Prior to future discretionary approval for projects that require environmental evaluation under CEQA, the City of Fresno shall evaluate new development proposals for new industrial or warehousing land uses that: (1) have the potential to generate 100 or more truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and (2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, or nursing homes), as measured from the property line of the project to the property line of the nearest sensitive use. Such projects shall submit a Health Risk Assessment (HRA) to the City Planning and Development Department. The HRA shall be prepared in accordance with policies and procedures of the most current State Office of Environmental Health Hazard Assessment (OEHHA) and the SJVAPCD. If the HRA shows that the incremental health risks exceed their respective thresholds, as established by the SJVAPCD at the time a project is considered, the Applicant will be required to identify and demonstrate that	Prior to issuance of grading or construction permits	Planning and Development Department						X

best available control technologies for toxics (T-BACTs), including appropriate enforcement mechanisms to reduce risks to an acceptable level. T-BACTs may include, but are not limited to: • Restricting idling on site or electrifying warehousing docks to reduce diesel particulate matter; • Requiring use of newer equipment and/or vehicles; • Provide charging infrastructure for: electric forklifts, electric yard trucks, local drayage trucks, last mile delivery trucks, electric and fuel-cell heavy duty trucks; and/or • Install solar panels, zero-emission backup electricity generators, and energy storage to minimize emissions associated with electricity generation at the project site. T-BACTs identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan. <u>The City will, in addition to noticing procedures in the Development Code, notice all residents within 1,000 feet of a proposed warehouse project before any discretionary project approval, and consider "Warehouse Projects: Best Practices and Mitigation Measure to comply with the California Environmental Quality Act" published in March 2021 by Xavier Becerra, Attorney General State of California before any discretionary approval of a specific warehouse project where applicable."</u>								
MM AIR-4: Locate sensitive land uses (e.g., residences, schools, and daycare centers) to avoid incompatibilities with recommended buffer distances identified in the most current version of the CARB Air Quality and Land Use Handbook: A Community Health Perspective (CARB Handbook). Sensitive land uses that are within the recommended buffer distances listed in the CARB Handbook shall provide enhanced filtration units or submit a Health Risk Assessment (HRA) to the City. If the HRA shows that the project would exceed the applicable SJVAPCD	Prior to issuance of grading or construction permits	Planning and Development Department	X					

thresholds, mitigation measures capable of reducing potential impacts to an acceptable level must be identified and approved by the City.								
MM AIR-5: Require developers of projects with the potential to generate significant odor impacts as determined through review of SJVAPCD odor complaint history for similar facilities and consultation with the SJVAPCD, to prepare an odor impact assessment and to implement odor control measures recommended by the SJVAPCD or the City as needed to reduce the impact to a level deemed acceptable by the SJVAPCD. The City's Planning and Development Department shall verify that all odor control measures have been incorporated into the project design specifications prior to issuing a permit to operate.	Prior to issuance of occupancy permits or permits to operate	Planning and Development Department						X
MITIGATION MEASURE – BIOLOGICAL RESOURCES	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**
MM BIO-1: Construction of a proposed project shall avoid, where possible, vegetation communities that provide suitable habitat for a special-status species known to occur within the Planning Area. If construction within potentially suitable habitat must occur, the presence/absence of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If a special-status species are determined to occupy any portion of a project site, avoidance and minimization measures shall be incorporated into the construction phase of a project to avoid direct or incidental take of a listed species to the greatest extent feasible. Specific mitigation measures for direct or incidental impacts to special-status species shall be determined on a case-by-case basis through agency consultation during the review process for discretionary projects, and shall be consistent with survey protocols and mitigations measures recommended by the agency at the time of consultation.	Prior to issuance of grading or construction permits	Planning and Development Department						X
MM BIO-2: Direct or incidental take of any state or federally listed species shall be avoided to the greatest extent feasible. If	Prior to issuance	Planning and Development						X

construction of a proposed project will result in the direct or incidental take of a listed species, consultation with the resources agencies and/or additional permitting may be required. Agency consultation through the CDFW 2081 and USFWS Section 7 or Section 10 permitting processes shall take place prior to any action that may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to special-status species shall be determined on a case-by-case basis through agency consultation during the review process for discretionary projects, and shall be consistent with survey protocols and mitigations measures recommended by the agency at the time of consultation.	of grading or construction permits	Department, California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS)						
MM BIO-3: Development within the Planning Area shall avoid, where possible, special-status natural communities and vegetation communities that provide suitable habitat for special-status species. If a proposed project will result in the loss of a special-status natural community or suitable habitat for special-status species, compensatory habitat-based mitigation is required under CEQA and CESA. Mitigation shall consist of preserving on-site habitat, restoring similar habitat or purchasing off-site credits from an approved mitigation bank. Compensatory mitigation shall be determined through consultation with the City and/or resource agencies. An appropriate mitigation strategy and ratio shall be agreed upon by the developer and lead agency to reduce project impacts to special-status natural communities to a less than significant level. Agreed-upon mitigation ratios shall depend on the quality of the habitat and presence/absence of a special-status species. Specific mitigation measures for direct or incidental impacts to special-status natural communities and vegetation communities shall be determined on a case-by-case basis through agency consultation during the review process for discretionary projects, and shall be consistent with survey protocols and mitigations measures recommended by the agency at the time of consultation.	Prior to project approval	Planning and Development Department, CDFW						X

MM BIO-4: Proposed projects within the Planning Area should avoid, if possible, construction within the general nesting season of February through August for avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA), if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey shall be conducted by a qualified biologist to determine if any nesting birds or nesting activity is observed on or within 500-feet of a project site. If an active nest is observed during the survey, a biological monitor shall be on site to ensure that no proposed project activities would impact the active nest. A suitable buffer shall be established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities may continue in the vicinity of the nest only at the discretion of the biological monitor. Prior to commencement of grading activities and issuance of any building permits, the Director of the City of Fresno Planning and Development Department, or designee, shall verify that all proposed project grading and construction plans include specific documentation regarding the requirements of the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503, that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field. Specific mitigation measures for direct or incidental impacts to avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA) shall be determined on a case-by-case basis through agency consultation during the review process for discretionary projects, and shall be consistent with survey protocols and mitigations measures recommended by the agency at the time of consultation.	Prior to project approval	Planning and Development Department, CDFW	X					
MM BIO-5: A pre-construction clearance survey, following current CDFW protocols, shall be conducted by a qualified	Prior to project approval	Planning and Development						X

biologist to determine if a proposed project will result in the removal or impact to any riparian habitat and/or a special-status natural community with potential to occur in the Planning Area, compensatory habitat-based mitigation shall be required to reduce project impacts. Compensatory mitigation must involve the preservation or restoration or the purchase of off-site mitigation credits for impacts to riparian habitat and/or a special-status natural community. Mitigation must be conducted in-kind or within an approved mitigation bank in the region. The specific mitigation ratio for habitat-based mitigation shall be determined through consultation with the appropriate agency (i.e., CDFW or USFWS) on a case-by-case basis. The project applicant/developer for a proposed project shall develop and implement appropriate mitigation regarding impacts on their respective jurisdictions.		Department, CDFW, USFWS						
MM BIO-6: A pre-construction clearance survey, following current USACE protocols, shall be conducted by a qualified biologist to determine if a proposed project will result in significant impacts to streambeds or waterways protected under Section 1600 of Fish and Wildlife Code and Section 404 of the CWA. The project applicant/developer for a proposed project shall consult with partner agencies such as CDFW and/or USACE to develop and implement appropriate mitigation regarding impacts on their respective jurisdictions, determination of mitigation strategy, and regulatory permitting to reduce impacts, as required for projects that remove riparian habitat and/or alter a streambed or waterway. The project applicant/developer shall implement mitigation as directed by the agency with jurisdiction over the particular impact identified.	Prior to project approval	Planning and Development Department, CDFW						X
MM BIO-7: Prior to project approval, a pre-construction clearance survey, following current CDFW protocols, shall be conducted by a qualified biologist to determine if a proposed project will result in project-related impacts to riparian habitat or a special-status natural community or if it may result in direct or incidental impacts to special-status species associated with	Prior to project approval	Planning and Development Department, CDFW						X

riparian or wetland habitats. The project applicant/developer for a proposed project shall be obligated to address project-specific impacts to special-status species associated with riparian habitat through agency consultation, development of a mitigation strategy, and/or issuing incidental take permits for the specific special-status species, as determined by the CDFW and/or USFWS.								
MM BIO-8: If a proposed project will result in the significant alteration or fill of a federally protected wetland, a formal wetland delineation conducted according to USACE accepted methodology is required for each project to determine the extent of wetlands on a project site. The delineation shall be used to determine if federal permitting and mitigation strategy are required to reduce project impacts. Acquisition of permits from USACE for the fill of wetlands and USACE approval of a wetland mitigation plan would ensure a "no net loss" of wetland habitat within the Planning Area. Appropriate wetland mitigation/creation shall be implemented in a ratio according to the size of the impacted wetland.	Prior to project approval	Planning and Development Department, CDFW						X
MM BIO-9: In addition to regulatory agency permitting, Best Management Practices identified from a list provided by the USACE shall be incorporated into the design and construction phase of the project to ensure that no pollutants or siltation drain into a federally protected wetland. Project design features such as fencing, appropriate drainage and incorporating detention basins shall assist in ensuring project-related impacts to wetland habitat are minimized to the greatest extent feasible.	Prior to issuance of grading or construction permits	Planning and Development Department, CDFW	X					
MITIGATION MEASURE – CULTURAL RESOURCES	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**
MM CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist	Planning and Development Department to review contract specifications to	Planning and Development Department	X					

shall make recommendations to the City on 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 Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.	ensure inclusion of provisions included in project-specific mitigation measure.							
MM CUL-2: Prior to approval of any discretionary project that could result in an adverse change to a potential historic and/or cultural resource, the City shall require a site-specific evaluation of historic and/or cultural resources by a professional who meets the Secretary of Interior's Qualifications. The evaluation shall provide recommendations to mitigate potential impacts to historic and/or cultural resources and shall be approved by the Director of Planning and Development.	Prior to project approval	Planning and Development Department						X
MM CUL-2: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for prehistoric archaeological resources shall be conducted. The following procedures shall be followed.	Prior to project approval	Planning and Development Department						X

• If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that buried prehistoric archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the City on 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 Section 15064.5 of the CEQA Guidelines. If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any prehistoric archaeological artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. • If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be evaluated for significance. If the resources are found to be significant, measures								

shall be identified by the qualified archaeologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist. If additional prehistoric archaeological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.								
MM CUL-3: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into	Planning and Development Department to review construction specifications to ensure inclusion of provisions included in mitigation measure.	Planning and Development Department	X					

account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.								
MITIGATION MEASURE – GEOLOGY AND SOILS	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**
MM GEO-1: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed: • If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on 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. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any	Prior to issuance of grading permits	Planning and Development Department						X

paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. • If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.								
MM GEO-2: If the total area of ground disturbance from installation of the cultivation operation is one (1) acre or more, the cultivator must enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ).	Prior to issuance of grading permits	Planning and Development Department	X					
MITIGATION MEASURE – GREENHOUSE GAS EMISSIONS	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**
MM GHG-1: Prior to the City's approval of subsequent discretionary projects, the Director of the City Planning and Development Department, or designee, shall confirm that development are consistent with the Recirculated GHG Reduction	Planning and Development Department shall review	Planning and Development Department	X					

Plan Update (2021) and shall implement all measures deemed applicable to the project through the GHG Reduction Plan Update-Project Consistency Checklist (Appendix B to the GHG Reduction Plan Update).	project plans during environmental review of proposed project, and shall review construction specifications to ensure inclusion of applicable measures.							
MITIGATION MEASURE – HAZARDS AND HAZARDOUS MATERIALS	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**
MM HAZ-1: The City shall establish an alternative Emergency Operations Center in the event the current Emergency Operations Center is under redevelopment or inaccessible.	Planning and Development Department to establish alternative Emergency Operations Center prior to commencement of redevelopment or inaccessibility of existing Emergency Operations Center.	Fresno Fire Department and Mayor/ City Manager's Office						X
MITIGATION MEASURE – HYDROLOGY AND WATER QUALITY	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**

MM HYD-1: The City shall continue to be an active participant in the North Kings Groundwater Sustainability Agency and the implementation of the North Kings Groundwater Sustainability Plan in order to ensure that the Kings Subbasin has balanced levels of pumping and recharge.	Ongoing	Planning and Development Department						X
MM HYD-2: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP collection systems: • Coordinate with FMFCD to implement the existing Storm Drainage and Flood Control Master Plan (SDFCMP) for collection systems in drainage areas where the amount of imperviousness is unaffected by the change in land uses. • Coordinate with FMFCD to update the SDFCMP in those drainage areas where the amount of imperviousness increased due to the change in land uses to determine the changes in the collection systems that would need to occur to provide adequate capacity for the stormwater runoff from the increased imperviousness. • As development is proposed, implement current SDFCMP to provide stormwater collection systems that have sufficient capacity to convey the peak runoff rates from the areas of increased imperviousness. • Require developments that increase site imperviousness to install, operate, and maintain FMFCD approved on-site detention systems to reduce the peak runoff rates resulting from the increased imperviousness to the peak runoff rates that will not exceed the capacity of the existing stormwater collection systems.	Ongoing	Fresno Metropolitan Flood Control District (FMFCD), Planning and Development Department, and PW	X					
MM HYD-3: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP retention basins: Prior to approval of development projects, coordinate with FMFCD to analyze the impacts to existing and planned retention basins to determine remedial	Ongoing	FMFCD, Planning and Development Department, and PW	X					

measures required to reduce the impact on retention basin capacity to less than significant. Remedial measures would include: 1. Increase the size of the retention basin through the purchase of more land or deepening the basin or a combination for planned retention basins. 2. Require developments that increase runoff volume to install, operate, and maintain, Low Impact Development (LID) measures to reduce runoff volume to the runoff volume that will not exceed the capacity of the existing retention basins.								
MM HYD-4: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP urban detention (stormwater quality) basins: Prior to approval of development projects, coordinate with FMFCD to determine the impacts to the urban detention basin weir overflow rates and determine remedial measures required to reduce the impact on the detention basin capacity to less than significant. Remedial measures would include: 1. Modify overflow weir to maintain the suspended solids removal rates adopted by the FMFCD Board of Directors. 2. Increase the size of the urban detention basin to increase residence time by purchasing more land. The existing detention basins are already at the adopted design depth. 3. Require developments that increase runoff volume to install, operate, and maintain, Low Impact Development (LID) measures to reduce peak runoff rates and runoff volume to the runoff rates and volumes that will not exceed the weir overflow rates of the existing urban detention basins.	Ongoing	FMFCD, Planning and Development Department, and PW	X					

MM HYD-5: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP pump disposal systems: 1. Prior to approval of development projects, coordinate with FMFCD to determine the extent and degree to which the capacity of the existing pump system will be exceeded. 2. Require new developments to install, operate, and maintain on-site detention facilities, consistent with FMFCD design standards, to reduce peak stormwater runoff rates to existing planned peak runoff rates. 3. Provide additional pump system capacity to maximum allowed by existing permitting to increase the capacity to match or exceed the peak runoff rates determined by the SDFCMP.	Ongoing	FMFCD, Planning and Development Department, and PW						
MM HYD-6: The City shall coordinate with FMFCD to develop and adopt a storm drainage update to the SDFCMP for the Southeast Development Area that is designed to collect, convey and dispose of runoff rates and volumes based on the planned land uses of the approved General Plan.	Ongoing	Planning and Development Department	X					
MITIGATION MEASURE – NOISE	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**
MM NOI-2: Construction Vibration. The use of heavy construction equipment within 25 feet of existing structures shall be prohibited.	Prior to issuance of any grading or construction permits	Planning and Development Department	X					
MITIGATION MEASURE – PUBLIC SERVICES	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**
MM PSR-1: As future fire facilities are planned, environmental review of proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from fire facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting.	Prior to project approval	Planning and Development Department	X					

MM PSR-2: As future police facilities are planned, environmental review of proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from police facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting.	Prior to project approval	Planning and Development Department	X					
MM PSR-3: As future parks and recreational facilities are planned, environmental review of proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from park facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting.	Prior to project approval	Planning and Development Department	X					
MM PSR-4: As future public facilities are planned by the City of Fresno (e.g., court, library, and hospital facilities), environmental review of the proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from public facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting.	Prior to project approval	Planning and Development Department	X					
MITIGATION MEASURE – UTILITIES	**WHEN IMPLEMENTED**	**COMPLIANCE VERIFIED BY**	**A**	**B**	**C**	**D**	**E**	**F**
MM UTL-1: The City shall evaluate the water conveyance system and, at the time that discretionary projects are submitted for approval by the City, the City shall not approve development that would demand additional water and exceed the capacity of a facility until additional capacity is provided. The following capacity improvements shall be evaluated for potential environmental impacts and constructed by the City by approximately 2025. • Construct 65 new groundwater wells, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 2.0 million gallon potable water reservoir (Reservoir T2) near the intersection of Clovis and California Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 4.0 million gallon potable water reservoir (Reservoir T5) near the intersection of Ashlan and	Prior to project approval	Planning and Development Department	X					

Chestnut Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 4.0 million gallon potable water reservoir (Reservoir T6) near the intersection of Ashlan Avenue and Highway 99, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct 50.3 miles of regional water transmission mains ranging in size from 24- inch to 48-inch, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct 95.9 miles of 16-inch transmission grid mains, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Prior to initiating construction of any of the capacity improvement projects identified above, the City shall conduct appropriate environmental analyses for each project to determine whether environmental impacts would occur.								
MM UTL-2: The City shall evaluate the water conveyance system at the time discretionary projects are submitted and shall not approve development that would demand additional water and exceed the capacity of a facility until additional capacity is provided. The following capacity improvements shall be evaluated for potential environmental impacts and constructed by the City after approximately the year 2035 and additional water conveyance facilities shall be provided prior to exceedance of capacity within the water conveyance facilities to accommodate full buildout of the approved General Plan. • Construct a 4.0 million gallon potable water reservoir (SEDA Reservoir 1) within the northern part of the Southeast Development Area. • Construct a 4.0 million gallon potable water reservoir (SEDA Reservoir 2) within the southern part of the Southeast Development Area.	Prior to project approval	Planning and Development Department	X					

MM UTL-3: The City shall evaluate the water supply system at the time discretionary projects are submitted and shall not approve development that would demand additional water until additional capacity is provided. By approximately the year 2025, the following capacity improvements shall be evaluated for potential environmental impacts and constructed by the City. • Construct an approximately 30 mgd expansion of the existing northeast surface water treatment facility for a total capacity of 60 mgd, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct an approximately 20 mgd surface water treatment facility in the southwest portion of the City, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 25,000 AF/year recycled water facility as an expansion to the RWRF in accordance with the January 2014 City of Fresno Metropolitan Water Resources Management Plan. This improvement is required after the year 2025.	Prior to project approval	Planning and Development Department	X					
MM UTL-4: The City shall evaluate the wastewater system at the time discretionary projects are submitted and shall not approve development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. By approximately the year 2025, the City shall evaluate the potential environmental impacts and construct the following improvements. • Construct an approximately 70 mgd expansion of the Regional Wastewater Treatment Facility prior to flows reaching 80 percent of rated capacity, and obtain revised waste discharge permits as the generation of wastewater is increased.	Prior to project approval	Planning and Development Department	X					

• Construct an approximately 0.49 mgd expansion of the North Facility and obtain revised waste discharge permits as the generation of wastewater is increased.								
MM UTL-5: The City shall evaluate the wastewater system at the time discretionary projects are submitted and shall not approve development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. After approximately the year 2025, the City shall evaluate the potential environmental impacts of, and construct the following improvements. • Construct an approximately 24 mgd Wastewater Treatment Facility within the Southeast Development Area and obtain revised waste discharge permits as the generation of wastewater is increased. Construct an approximately 9.6 mgd expansion of the Regional Wastewater Treatment Facility and obtain revised waste discharge permits as the generation of wastewater is increased.	Prior to project approval	Planning and Development Department	X					
MM UTL-6: Consistent with the Sewer System Management Plan, the City shall evaluate the wastewater collection system at the time discretionary projects are submitted, and shall not approve development that would generate additional wastewater and exceed the capacity of a facility until additional capacity is provided.	Prior to project approval	Planning and Development Department	X					
MM UTL-7: At the time discretionary projects are submitted, the City shall require project-specific environmental evaluations for the expansion or relocation of electric, natural gas, or telecommunication facilities be completed prior to project approval.	Prior to project approval	DPU and Planning and Development Department	X					
MM UTL-8: The City shall evaluate additional landfill locations at the time discretionary projects are submitted, and shall not approve development that could contribute solid waste to a landfill that is at capacity until additional capacity is provided.	Prior to project approval	DPU and Planning and Development Department	X					